PUBLIC WORKS AGENDA
CITY OF CROSSLAKE
MONDAY, JANUARY 4, 2021
4:00 P.M. – CITY HALL

1. Call to Order
2. Approve December 7, 2020 Meeting Minutes (Motion)
3. Review Ordinance Amendment Related to Vacation of Road Right of Way
4. Review Feasibility Study for 2021 Street Improvements
5. Projects Update from Bolton & Menk
6. Discuss Assessment Policy for Sewer Connections
7. Other Business That May Arise
8. Adjourn

2.

Public Works Meeting Notes City of Crosslake, December 7, 2020

Members Present: Doug Vierzba, Tom Swenson, Gordy Wagner (via Zoom), Dale Melberg, Mic Tchida
Others Present: Ted Strand, Phil Martin from B & M, Dave Schrupp (via Zoom), John Andrews, Aaron Herzog (via Zoom), Jon Kolstad.

1. **Call to Order**. Meeting called to order at 4:00 am.
2. **Approve** November 19, 2020 Special Meeting Minutes. ***Motion*** *to approve by Tchida, second by Melberg to approve, all in favor.*
3. **Consider Vacation** of Road Right of Way Request from Property Owners on Lake Trail (Motion). The commission discussed the 9-17-2020 request from the Orths, Evensons and McCormicks to have the City vacation a portion of the ROW on the Crosslake side of the property, north of the ROW of Lake Trail, currently recorded as Pine Avenue. Shown on PID 14110000017B009. Request below:

Attn: Mike Lyonais
City Administrator
13888 Daggett Bay Road
Crosslake, MN 56442

The residents effected by the platted road of Oak Street in the plat of Bowers Point. Do herby request to vacate that part of platted right of way lying north of the right of way of Lake Trail (recorded plat name Pine Avenue).

The roadway vacation is requested due to the circumstances not created by the current owners (Orth, Evenson, McCormick) of the adjacent lands of said roadway.

Prior to the 1989 shoreland ordinance the previous owners, Crow Wing County, The State of Minnesota and the City of Crosslake allowed the wetlands to be filled creating the hardship to the current land owners(Orth, Evenson, McCormick) . The owners of those portions of Lot 17 (Orth & Evenson) said plat have existing legal descriptions designating riparian rights to the lakeshore.

The filling of the wetland changed the configuration and the intent of the recorded plat. However, the plat dedication specifies the right of way of Oak Street to be extended to the water's edge

The Orth family would no longer have riparian rights to the water way. The Evenson family would also lose a portion of riparian ownership to their property. The McCormick family would gain a considerable amount of shoreline. None of these were the intent of the original plat. The former land owners, the State of Minnesota and the local governing units are culpable in the activities prior to the 1989 shoreland ordinance.

The current owners, and the previous land owners have been taxed for a considerable amount of time as having riparian rights to the lake. Due to the current circumstances outlined in this petition we would ask that the City of Crosslake consider vacating the roadway as shown on the enclosed Certificate of Survey drawing and the land be divided as a shown and described in the legal descriptions provided.

Thank you for time and consideration in this matter.

It was noted that the Park and Recreation Committee had reviewed the request and denied same. A discussion of the request ensued, noting that it has not been the position of the city to sell, vacate or give away any of the Right of Ways that access the Chain of lakes within the city. In an effort to provide some relief to the land owner(s), Tom Swenson made the following **motion**:

"Based on the fact that the circumstances discussed are beyond the homeowner's control, the commission requests the council (1) denies the said request to vacate and (2) directs the City Attorney to

consider creating a land use agreement for the Orth landowner that will allow them to have ONE dock, ONE boatlift and ONE boat within the ROW area". The motion failed for lack of a second.

The following ***motion*** was then made by Vierzba as a result of the first motion failing: ***The Commission recommends that the Council denies the requested ROW vacation as City Code does not allow such vacations. Second by Swenson, all in favor.***

4. **Update on Clarifier Inspection.** One of the clarifiers was emptied on December 1 and inspected with Bolton and Menk Engineers present. Ted explained the findings and plan:
    1. Concrete in the inspected clarifier was good.
    2. Mechanisms good
    3. Turnbuckles need replacement due to extensive corrosion (12). Ted has ordered galvanized replacements which should arrive on around December 15th.
    4. Aluminum baffles need to be replaced due to corrosion resulting in many holes in the material
    5. Weirs will also need to be replaced due to corrosion
    6. New Motors will be ordered
    7. No Roof work will be required as the plan is to replace worn out components of the original design. So no new design as proposed by Bolton and Menk.
    8. Cost to rebuild are not known at this time but felt to be considerably less than the estimated Bolton and Menk redesign with a budgeted cost of $350k-$450K.
    9. Current Plan is to rebuild clarifiers near term in original design with a life of another 20-25 years.

    Photos of component corrosion below:

5. **Projects Update** from Bolton & Menk. Phil Martin presented the attached updates (below) on their two projects.

BOLTON & MENK

Real People. Real Solutions.

MEMORANDUM

Date: December 1, 2020
To: Ted Strand, Public Works Director
From: Phil Martin, PE
Subject: Projects Update for December 7, 2020 Public Works Meeting

---

CSAH 66 Sanitary Sewer Extension / Storm Water Quality Improvements

Design/Plan Preparation - We have brought the design and plan preparation to a 90% review standard. Before we submit to City and County for review and comment, we would like input regarding replacement of the trail along CSAH 66.

1. Trail Replacement - Currently, the trail does not meet Americans with Disabilities Act (ADA) standards. The deficiency generally occurs at driveway locations that cross the trail. (Refer to exhibit) The sanitary sewer installation along the west side of CSAH 66 would impact the bituminous trail requiring it to be replaced and impact all but two driveway locations up to CSAH 16. The County has indicated it's completely a City decision.

   If the City chose to replace the trail meeting ADA standards, we would need to acquire a temporary construction easement at driveways. We believe 10-feet would be adequate. (Refer to exhibit) The need at the southerly Moonlite Bay entrance may be greater depending upon how they see that use as their handicap access route to the restaurant level.

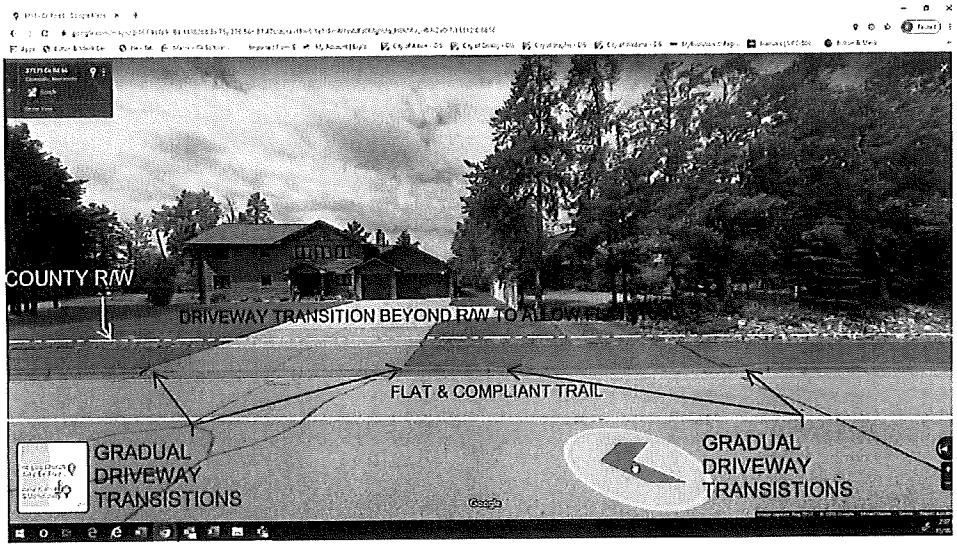
2. Easements – We recommend obtaining a 10-foot temporary construction easement along the entire length of trail impact to allow the sanitary sewer services installed below the trail to be set onto private property so that when property owners connect to the system future damage to the trail can be avoided.

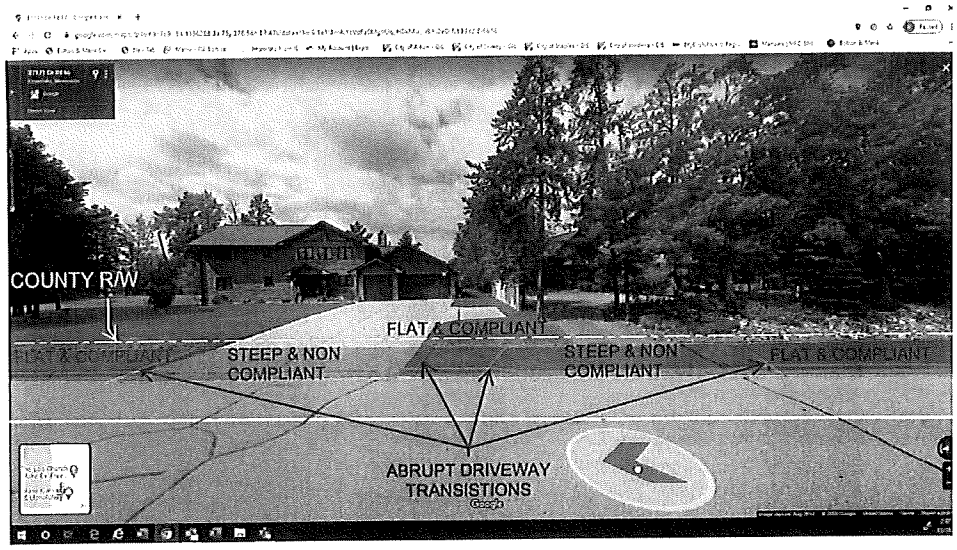
   We have submitted the stormwater quality design layout to Simonson Lumber and the Old Log Church for review and comment. We also proposed to them that the City would be interested in obtaining a temporary and permanent construction easement at the stormwater quality basin locations.

Storm Sewer Replacement – The County storm sewer was installed in 1978 and will be impacted during sanitary sewer and storm water quality improvement.

We have worked with the County to discuss storm sewer impact due to the installation of the sanitary sewer and storm water quality. The storm sewer impact falls into 4 categories which I have added our cost share understanding:

1) Pipe impacted within the sanitary sewer construction trench – City/County (50/50)
2) Remaining pipe segments that were directly impacted with the construction trench -- County
3) Existing pipe impacted by storm water quality improvements – Grant/City/County
4) Existing pipe that would not be impacted - County





Phil Martin discussed the need to obtain temporary easements from the impacted landowners to address the ADA issues with the current Path on #66. Tom Swenson was concerned about the stability of the fence along the concrete section of pathway just south of Moonlite Bay. Ted stated steel long reinforcing posts are on order to provide more stability to the fencing. Phil stated the trail in this area will not be impacted by the construction. Phil stated the plan will be to extend piping connections toward each home so that connection construction will not disturb the new trail. This will also require temporary easements. Tom Swenson recommended we add steel to each standpipe so they can easily be located. He stated that we had an issue in the past where the contractor could not locate the standpipe which cost the city a considerable amount to remedy.

6. **Discuss Assessment Policy** for Sewer Connections. The commission reviewed the October 26, 2019 excel spreadsheet created by Bolton and Menk.
   Total sewer assessments on this document are $594,681.80. No road assessments will be made as this is a county road. Connection charges (SAC) are listed as $4,000 for residential and $6,500 for commercial properties. The total connection charges on this document were not summarized as they are based on ERUs. The total cost of the project is estimated at $1.3 million but as times goes on, this cost will undoubtedly increase. The figures on the document pertaining to the sewer assessment s are based on an independent appraiser's estimate of the increased value a resident or landowner will receive as a result of the improvement. Mike Lyonais felt we should not alter the current structure for connection charges but focus on the assessments. It should be made clear that we have adopted an assessment policy for roads, sewers and other public improvements and we are applying that policy to this project. The commission was looking for ways to implement the policy on the #66 sewer extension. The following paragraphs summarize the thoughts of the commission at the end of the discussion. The commission will discuss this again at the January 2021 PW meeting.

Public Works Commission

Per the Mayor's recent request, the PW Comm. discussed possible changes to the proposed special assessment of a portion of the costs for the proposed sanitary sewer extension on CR 66 on Dec. 7th. The Commission discussed a potential "motion" by the PWC, for consideration by the City Council. The motion could be as follows—

1. *Consider spreading the proposed special assessments for sanitary sewer to benefitting properties over a 20-year period rather than over a 10-year period.*
2. *Consider assessing the proposed SAC charges to benefitting properties over a 20-year period rather than collecting the SAC charge at time of sewer service connection in a lump sum amount.*
3. *Consider allowing property owners with newer septic systems more time to connect to the new sewer system rather than the normal requirement to connect within 12 months of sewer construction. Once their existing septic system reaches 10 years old (or 10 years after a major rehab of an older system), owners would be required to connect to the new system within 12 months.*
4. *Consider allowing "assessment deferments" to property owners who might qualify. The assessment would be "held" by the City and not activated until such time as the property is sold or developed.*
5. *Consider continuing City efforts to get the proposed local sales tax approved by the State Legislature in time for local voter approval at next election in 2022 so that funding would be available to help pay for project costs not recovered from assessments, County Highway Department, and grants.*
6. *Residential, $7,500 for lake-front property vs. $6,500 for non-lakefront--use average of $7,000 for all? Commercial--maybe reducing high-end of $0.50 per SF to something less because heavy water users are already paying a much higher SAC. Consensus today was to leave all rates as presented in B&M mock roll for now. The Comm. was concerned about possibly forcing property owners to sell.*

Notes pertaining to above items—

1. *By spreading the costs out over a longer payment period, yearly payments would be much smaller. Other cities have used longer payment periods for this type of Non-petitioned public improvement. Property owners can still pay off the assessment at any time to avoid future interest charges. Assessments are normally paid off at time of property sale.*

2. *City Code Sec. 42-95(c, 1) allows the City to assess costs for Sanitary Sewer Access Charges (SAC). The SAC charge for residential is $4,000 per home and $6,500 per "residential equivalent unit" for Commercial properties. These funds are not used for payment of project costs but are used for upgrades and maintenance of the City's Sewer Treatment Plant. By assessing the SAC fee, payment is spread out over time, easing financial burden. Assessments can be paid off at any time or at time of sale of property.*
3. *There may be some properties that recently installed a new septic system or made a major rehab at considerable cost. It seems to make sense that these newer systems should be used for at least a portion of their useful life before they are removed and connection made to City sewer. City Code requires connection to City sewer within 12 months of sewer completion.*
4. *City Code Section 42-97 and 42-149 provide for deferment of special assessments for older residents. The Leo Fraser property, located on the East side of CR 66 and north of CR 16 is a good example. The property contains two parcels totaling 7.8 acres, zoned Commercial. The resulting proposed assessment, using the low end of benefit range for Comm., is over $68,000. This would be a financial burden for most people. In this case, it may make sense for the City Planner to talk to the owners about possible rezoning of the property to Residential if this proposed sewer project moves forward. Does the City Planning Comm. feel that this property should remain Commercial?*

   This may also be the case for the Church property which is zoned Commercial with a proposed assessment of $68,000 for 7.8 acres. Is Commercial the best use of this property? Could a deferment of assessments be considered for this property?

7. Other Business that may arise.

1. Easement update for Bill Reed. Ted stated that Dave Reese and he had reviewed the request and felt the City could reduce the easement size by 50% to accommodate Bill Reed's request. From 66 feet to 33 feet. This will be discussed at the next council meeting.
2. Tom Swenson stated he felt the replacement fencing around the drainage pond on West Shore Drive near the Larson residence looked very nice. Ted stated this was a joint project between the employees in the PW and Parks group. Ted is always working with TJ on his needs and sharing employees on projects as needed.

8. Adjourn. Meeting adjourned at 6:05 pm.

Proposal to change the language of
Chapter 42 – Streets, Sidewalks and Rights-of-way

1. Article V
    - Division 2 – Vacation by the City
        - Section 42-232 – No Vacation of Public Water Accesses

2. Article V
    - Division 3 – Vacation by Petition
        - Sec 42-265 - No Vacation of Public Water Accesses

PROPOSED CHANGES

Chapter 42 - STREETS, SIDEWALKS AND RIGHTS-OF-WAY[1]

Footnotes:--- *(1)* ---

State Law reference— *Vacation of streets, M.S.A. §§ 412.851, 440.13; municipal authority regarding streets and other public ways, M.S.A. §§ 412.221, 429.021; street and road improvements outside municipal boundaries, M.S.A. § 429.052; stopping and parking in certain places prohibited, M.S.A. § 169.34.*

ARTICLE V. - VACATING STREETS

DIVISION 2. - VACATION BY CITY

Sec. 42-232. - ~~No~~ Vacation of public water accesses.

If the street, alley, public ground, public way or any part thereof terminates at, ~~or~~ abuts upon, or is adjacent to any public water, ~~no vacation petition shall be accepted or approved by the city. The city has determined through a comprehensive study of all streets, alleys, public grounds, plats and public ways that abut or provide access to any public water (collectively the "public water accesses") that those public water accesses serve a public purpose and said purpose is not "useless for the purpose" for which the public water access was established. Further, the public interest will best be served by not vacating public water accesses.~~ The City Council may vacate the public water access according to Minnesota State Statutes 412.851 or Section 440.13.

DIVISION 3. - VACATION BY PETITION

Sec. 42-265. - ~~No~~ Vacation of public water accesses.

If the street, alley, public ground, public way or any part thereof terminates at, ~~or~~ abuts upon, or is adjacent to any public water, ~~no vacation petition shall be accepted or approved by the city. The city has determined through a comprehensive study of all streets, alleys, public grounds, plats and public ways that abut or provide access to any public water (collectively the "public water accesses") that those public water accesses serve a public purpose and said purpose is not "useless for the purpose" for which the public water access was established. Further, the public interest will best be served by not vacating public water accesses.~~ The City Council may vacate the public water access according to Minnesota State Statutes 412.851 or Section 440.13.

Minnesota State Statute

412.851 VACATION OF STREETS

The council may by resolution vacate any street, alley, public grounds, public way, or any part thereof, on its own motion or on petition of a majority of the owners of land abutting on the street, alley, public grounds, public way, or part thereof to be vacated. When there has been no petition, the resolution may be adopted only by a vote of four-fifths of all members of the council. **No vacation shall be made unless it appears in the interest of the public to do so after a hearing preceded by two weeks' published and posted notice.** The council shall cause written notice of the hearing to be mailed to each property owner affected by the proposed vacation at least ten days before the hearing. The notice must contain, at minimum, a copy of the petition or proposed resolution as well as the time, place, and date of the hearing. In addition, if the street, alley, public grounds, public way, or any part thereof terminates at, abuts upon, or is adjacent to any public water, written notice of the petition or proposed resolution must be served by certified mail upon the commissioner of natural resources at least 60 days before the hearing on the matter. The notice to the commissioner of natural resources does not create a right of intervention by the commissioner. At least 15 days prior to convening the hearing required under this section, the council or its designee must consult with the commissioner of natural resources to review the proposed vacation. The commissioner must evaluate:

(1) the proposed vacation and the public benefits to do so;

(2) the present and potential use of the land for access to public waters; and

(3) how the vacation would impact conservation of natural resources.

The commissioner must advise the city council or its designee accordingly upon the evaluation. After a resolution of vacation is adopted, the clerk shall prepare a notice of completion of the proceedings which shall contain the name of the city, an identification of the vacation, a statement of the time of completion thereof, and a description of the real estate and lands affected thereby. The notice shall be presented to the county auditor who shall enter the same in the transfer records and note upon the instrument, over official signature, the words "entered in the transfer record." The notice shall then be recorded with the county recorder. Any failure to file the notice shall not invalidate any vacation proceedings.

Minnesota State Statute

440.13 COUNCIL MAY VACATE STREETS IN CITIES OF THE FOURTH CLASS.

In any city of the fourth class organized under a home rule charter, the council thereof shall have power by a majority vote of the council to vacate any street or highway, or any part of any street or highway therein, upon the petition of all the owners of lands abutting both sides of the street or highway, or part thereof, proposed to be vacated wherein one end of the street or highway, or part thereof proposed to be vacated does not connect with any other street or highway. If any part of the street or highway proposed to be vacated terminates at or abuts upon any public water, the petitioners shall serve notice of the petition by certified mail upon the commissioner of natural resources at least 30 days before the council hearing on the matter. The notice under this subdivision is for notification purposes only and does not create a right of intervention by the commissioner of natural resources. Except as herein provided all other provisions of the home rule charter shall apply to and govern the proceeding.

According to the League of Minnesota Cities, Information Memo regarding Vacation of City Streets, dated 9/30/2019:

Paragraph I, B. Standards for granting a vacation

- Minnesota statutes establish that a city council may vacate a street only upon finding that the vacation is "in the interest of the public." This means the public must benefit, in some manner, from the vacation. The public includes persons other than those in the immediate vicinity of the vacation. A private benefit derived from the vacation does not bar the vacation, so long as a concurrent benefit to the public can be substantiated.

Paragraph II, A. Fourth-class Charter Cities

- Discusses Dead-End streets and a city does not require a finding of public benefit.

Paragraph III. Vacation of platted lands upon court order

- When a property owner pursues a court-ordered vacation, as opposed to a petition to the city council, the standard of " in the interest of the public" is changed to "Useless for the purpose for which it was laid out."
- The standard of uselessness is a more stringent standard than the public benefit standard for a vacation by resolution of a city council. A petitioner must prove that the land to be vacated has no present or future use consistent with the land's original purpose as a public way or ground.

FEASIBILITY REPORT

FOR

2021 CROSSLAKE STREET IMPROVEMENTS

Prepared for:

City of Crosslake, Minnesota

Issued: December 2020

WSN No. 32324 2020-11828

Brainerd/Baxter Office:
7804 Industrial Park Road
P.O. Box 2720
Baxter, MN
56425-2720
Phone: 218-829-5117
Fax: 218-829-2517

CERTIFICATION

FEASIBILITY REPORT FOR

2021 CROSSLAKE STREET IMPROVEMENTS

CROSSLAKE, MINNESOTA

By

WIDSETH

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

12/31/20

David S. Reese, P.E. Reg. No. 23432 Date
Professional Engineer

Table of Contents

Feasibility Report

2021 CROSSLAKE STREET IMPROVEMENTS

Crosslake, Minnesota

STATEMENT OF PURPOSE

The City of Crosslake has initiated a feasibility study, in accordance with the procedures for Minnesota Statutes Ch. 429 Special Assessments, for the Full-Depth Reclamation (FDR)/Reconstruction of Rushmoor Boulevard and Rushmoor Trail (2,690 feet), Harbor Lane (1,740 feet), Birch Narrows Road (3,365 feet), Wild Wind Ranch Drive (1,480 feet) and bituminous overlay of Whitefish Avenue (10,410 feet), Hilltop Drive (340 feet), Woodland Drive (445 feet) and Cool Haven Lane (1,125 feet). These are non-petitioned projects that have been initiated by the City Council in accordance with its Capital Improvement Plan and 2021 budget for capital roadway improvements. The project areas are shown on the location map provided as **EXHIBIT-1**.

The Wild Wind Ranch Drive feasibility study was prepared and issued in January of 2020 in accordance with the procedures for Minnesota Statutes Ch. 429 Special Assessments. After the bidding process, it was determined that re-bidding the project with the proposed 2021 Crosslake Street Improvements project could bring a more favorable price. Since more than 6 months has elapsed since the original improvement hearing, and to be compliant with the Minnesota Statutes Ch 429 Special Assessments, Wild Wind Ranch Drive was added to this feasibility study, the cost estimate was updated and another improvement hearing will be held. Therefore, the information from the prior feasibility report for Wild Wind Ranch Drive is incorporated by reference and supplemented with additional information and revised costs in this report.

A listing of the parcels proposed to be assessed in this project are listed in **Appendix E** and were obtained from the Crow Wing GIS Parcel Database, December 9, 2020. The purpose of this report is to provide the following:

- Summary of existing conditions,
- Outline of proposed improvements,
- Estimate of improvement costs,
- Estimate of the assessments to benefited properties based on the current Cityassessment policies and ordinances.

EXISTING CONDITIONS

PROJECT AREA # 1 - WILD WIND RANCH DRIVE

A map of the Project Area #1 - Wild Wind Ranch Drive is provided as **EXHIBIT-2**.
Wild Wind Ranch Drive is approximately 1,480 feet in total length. The point of beginning is the intersection with County Road 103. The eastern point of ending is at a cul-de-sac at the end of Wild Wind Ranch Drive. Wild Wind Ranch Drive is a publicly dedicated 66-foot wide right-of-way within the Plat of Wild Wind Ranch Estates. There is currently one residential parcel with a primary access from CSAH 103 and a secondary improved direct access to Wild Wind Ranch Drive. A second lot, a portion of platted Outlot C, also has a primary shared access from CSAH 103 and (currently) no developed access from Wild Wind Ranch Drive. Both parcels are located on the north/east side of the road. There are ten residential platted lots with direct access. Outlot B provides a buffer around the backyards of the platted residential lots and encompasses the wetland; Outlot B is not considered assessable. The City of Crosslake has maintained the roadway since approximately 2001 when the road was constructed.

A survey of the existing roadway location, with respect to the right of way location, has been completed at the time of this study; the centerline of the road is very close to the centerline of the platted right of way. Natural gas, cable, telephone, and electric utilities are located along the edge of the right-of-way at various locations. There are no City-owned utilities within the right-of- way and no City-owned utilities are proposed in any long-range plans for this area at this time.

The roadway serves residential properties, currently zoned Rural Residential, on both sides of the roadway. Clearing width exceeds 10’ from the edge of the bituminous pavement on each side of the road. The bituminous road surface is 18 feet in width and the cul-de-sac pavement is roughly 40 feet in radius. Ditching and drainage from the roadway surface is good. One drainage concern has been raised near Lot 1 Block 2 that will be examined and addressed, if possible, should the project move forward to design and construction. No significant erosion was noted along the edges of the roadway section. There are driveway culverts and a centerline culvert that maintain drainage toward the natural wetland located within Outlot B. The thickness of the bituminous material was not cored as part of this feasibility study. Other items that were noted during the field review and study:

- Initial observations are that utility relocation does not appear to be necessary based on locations of utility and communications pedestals; however, underground utilities may cross beneath the traveled way.

- Electric utility is underground with ground transformers along the edge of the right of way.
- Road runoff currently sheds to adjacent ditching, culverts, and wetlands.
- The roadway is not striped.
- Mailboxes are ganged on CSAH 103; some have swing-away supports and some do not.
- No soil borings were completed for this study. The soil survey for this area indicates soils that may be anticipated within the project area consist of loamy sands. A copy of the Soil Survey Map is included in the Appendices.
- Existing driveway approaches consist of both bituminous pavement and gravel.
- Traffic count data has not been obtained for Wild Wind Ranch Drive. Traffic type is anticipated to be normal passenger vehicles and service vehicles. The heaviest traffic loading is anticipated from garbage trucks and school buses.
- Areas of deep transverse cracking were noted in a few areas and along a centerline culvert alignment.
- Drainage was noted to be directed toward Lot 1 Block 2 causing some erosion and seasonal issues with runoff near the driveway entrance.

PROJECT AREA # 2 - RUSHMOOR BOULEVARD AND RUSHMOOR TRAIL

A map of the Project Area #2 - Rushmoor Boulevard and Rushmoor Trail is provided as **EXHIBIT-3**. Rushmoor Boulevard and Trail are approximately 2,690 feet in total length. The point of beginning is the intersection with County Road 16. The eastern point of ending is at the end of Rushmoor Boulevard and the western point of ending is at the end of Rushmoor Trail to the extent the City has maintained (approximately the end of each platted right-of-way). Rushmoor Boulevard has a publicly dedicated 66-foot wide right-of-way from CSAH 16 northward to the "T"-intersection that contains a grassed island area. A 33-foot wide dedicated right-of way extends east and west that contain the remainder of the Rushmoor Boulevard and Rushmoor Trail segments.

A Gopher One Utility Locate Call was conducted. Utilities that were marked were surveyed. These include natural gas, cable, telephone, and electric utilities buried along the edge of the right-of-way at various locations. There are no City-owned utilities within the right-of- way and no City-owned utilities are proposed in any long-range plans for this area at this time.

The roadway serves residential properties, currently zoned Shoreland District, on both sides of the roadway. Clearing width exceeds 10' from the edge of the bituminous pavement on each side of the

roadway segments in most areas. The bituminous road surface consist of deteriorated bituminous surfacing and the pavement width varies between 17 and 22-feet. Records indicate the last time the roadway segments were re-surfaced was a bituminous overlay in 1990. Ditching and drainage from the roadway surface is fair to good. No significant erosion was noted along the edges of the roadway section. There are two catch basins within the road right-of-way with a storm sewer pipe at the end of Rushmoor Boulevard that drain to the east into Rush Lake. This storm water project was completed in 1999. The thickness of the bituminous pavement was not cored as part of this feasibility study.

Other items that were noted during the field review and study:

- Initial observations are that utility relocation does not appear to be necessary based on locations of utility and communications pedestals; however, underground utilities do cross beneath the traveled way.
- Electric utility is overhead with poles along the edge of the right of way.
- Road runoff currently sheds to adjacent ditching, culverts, and lake.
- The roadway is not striped.
- There are 18 mailboxes located near the edge of pavement.
- No soil borings were completed for this study. The soil survey for this area indicates soils that may be anticipated within the project area consist of loamy sands. A copy of the Soil Survey Map is included in the Appendices.
- Existing driveway approaches consist of both bituminous pavement and gravel.
- Traffic count data has not been obtained for Rushmoor Boulevard-Trail. Traffic type is anticipated to be normal passenger vehicles and service vehicles. The heaviest traffic loading is anticipated from garbage trucks and school buses.
- Some transverse cracking was noted in a few areas.

PROJECT AREA # 3 - HARBOR LANE

A map of the Project Area #3 Harbor Lane is provided as **EXHIBIT-4**. The Harbor Lane project area is approximately 1,740 feet in total length. The point of beginning is the intersection with County Road 16. The northern point of ending is at the intersection of Harbor Lane where the directional change is west. Harbor Lane does not appear to have publicly dedicated right-of-way. The paved surface and area maintained by the City for public road purposes and drainage comprise a prescriptive easement.

A Gopher One Utility Locate Call was conducted. Utilities that were marked were surveyed. These include natural gas, cable, telephone, and electric utilities buried along the edge of the right-of-way at

various locations. There are no City-owned utilities within the right-of- way and no City-owned utilities are proposed in any long-range plans for this area at this time.

The roadway primarily serves residential properties and some commercial property, currently zoned Shoreland District and Waterfront Commercial. Harbor Lane continues to the west into Ideal Township and intersects with Silver Peak Road, providing access to many resort and residential lake properties located in the City of Crosslake and Ideal Township. The clearing width exceeds 10' from the edge of the bituminous pavement on each side of the road. The bituminous road surface consists of deteriorated bituminous surfacing and the pavement width varies between 21 and 25 feet. Ditching and drainage from the roadway surface is fair. Erosion has been a continual maintenance issue for the City along the east side of the road in one location and this project proposes to address that issue. The thickness of the bituminous material was not cored as part of this feasibility study. City street history reports that the original road pavement was covered with class 5 and then overlaid with bituminous pavement
Other items that were noted during the field review and study:

- Initial observations are that utility relocation does not appear to be necessary based on locations of utility and communications pedestals; however, underground utilities do cross beneath the traveled way.
- Electric utility appeared to be overhead on the north end of the project area only.
- Road runoff currently sheds to adjacent ditching, culverts, and wetlands.
- An 18" diameter culvert lies within the intersection of County Rd 16 and Harbor Lane.
- The roadway is not striped.
- There are 2 mailboxes located near the edge of pavement within the project area.
- No soil borings were completed for this study. The soil survey for this area indicates loamy sands. A copy of the Soil Survey Map is included in the Appendices.
- Existing driveway approaches consist of both bituminous pavement and gravel.
- Traffic count data has not been obtained for Harbor Lane. Traffic type is anticipated to be normal passenger vehicles and service vehicles. The heaviest traffic loading is anticipated from garbage trucks and school buses. This roadway is a major thru-way and provides access to multiple properties including commercial resorts.
- Transverse pavement cracking was noted. The last surfacing project for this road segment occurred with a bituminous overlay in 1997.

PROJECT AREA # 4 - BIRCH NARROWS ROAD

A map of the Project Area #4 - Birch Narrows Road is provided as **EXHIBIT-5**. Birch Narrows Road is approximately 3,365 feet in total length. Birch Narrows Road begins at County State Aid Highway (CSAH) 3 and appears to cross private property prior to aligning within a publicly dedicated 33-foot wide right-of and ending within a 66-foot wide right-of-way. The project point of beginning is the intersection with CSAH 3. The western point of ending is at that part of Birch Narrows Road where the 66' road right-of-way terminates in the Plat of Birch Narrows. There are 10 lake lots west of the Birch Narrows Plat that use Birch Narrows Road to access their properties. These properties benefit from the public roadway but do not abut it.

A Gopher One Utility Locate Call was conducted. Utilities that were marked were surveyed. These include natural gas, cable, telephone, and electric utilities buried along the edge of the right-of-way at various locations. There are no City-owned utilities within the right-of- way and no City-owned utilities are proposed in any long-range plans for this area at this time.

The roadway serves residential properties, currently zoned Shoreland District, on both sides of the roadway. Clearing width exceeds 10' from the edge of the bituminous pavement on each side of the road. The bituminous road surface consists of deteriorated bituminous surfacing and the pavement width is approximately 24-feet. Ditching and drainage from the roadway surface is good. No significant erosion was noted along the edges of the roadway section. The thickness of the bituminous material was not cored as part of this feasibility study.

Other items that were noted during the field review and study:

- Initial observations are that utility relocation does not appear to be necessary based on locations of utility and communications pedestals; however, underground utilities do cross beneath the traveled way.
- There is some overhead electrical crossing with poles but must of the electrical is overhead.
- Road runoff currently sheds to adjacent ditching, culverts, and lake.
- The roadway is not striped.
- There are 29 mailboxes located near the edge of pavement.
- No soil borings were completed for this study. The soil survey for this area indicates soils that may be anticipated within the project area consist of loamy sands. A copy of the Soil Survey Map is included in the Appendices.
- Existing driveway approaches consist of both bituminous pavement and gravel.
- Traffic count data has not been obtained for Birch Narrows Road. Traffic type is anticipated

to be normal passenger vehicles and service vehicles. The heaviest traffic loading is anticipated from garbage trucks and school buses.

- Transverse cracking was noted in a few areas.

PROJECT AREA #5 - WHITEFISH AVENUE, HILLTOP DRIVE, WOODLAND DRIVE, COOL HAVEN LANE

A map of the Project Area #5 - Whitefish Avenue (10,410-feet), Hilltop Drive (340-feet), Woodland Drive (445-feet), and Cool Haven Lane (1,125-feet) street areas are provided as **EXHIBIT-5**. Project Area #5 is approximately 12,320-feet in total length. The project point of beginning for Whitefish Avenue is near the entrance to Camp Knutson and extends eastward to the intersection of Whitefish Avenue and Manhattan Point Boulevard. Hilltop Drive and Woodland Drive begin at Whitefish Avenue and end at Manhattan Point Boulevard. These three roadways are generally located within 66-foot and 40-foot wide public right-of-ways that were dedicated in the original Manhattan Beach Second Addition, Manhattan Beach (a replat of Twin Beach) and Myrtle Beach Plats in the early 1920's. Cool Haven Lane begins at the intersection with South Landing Road and ends to the west at the paved turn-around which was constructed as part of the 2001 road improvement project and is the area maintained by the City. Cool Haven Lane lies within a prescriptive easement.

A survey was not conducted but it is known that natural gas, cable, telephone, and electric utilities are buried along the edge of the roadways and right-of-way at various locations. There are no City-owned utilities within the project areas and no City-owned utilities are proposed in any long-range plans for this area at this time.

The roadways serve residential properties, currently zoned Shoreland District, on both sides of the roadway. Clearing widths vary from the edge of the bituminous pavement on each road. Whitefish Avenue has many mature red and white pine trees within 10 feet of the road edge while Hilltop and Woodland Drive and Cool Haven Lane generally have good clear zones. The road surfaces consist of bituminous surfacing with varying severity of longitudinal and transverse cracking, a few isolated areas of block cracking and pavement failure along the edges where erosion occurs. Pavement widths vary between 16 and 24-feet as indicated on the Exhibits. Ditching and drainage from the roadway surface is good in most areas with some isolated areas of ongoing erosion cited by Public Works staff. The thickness of the bituminous material was not cored as part of this feasibility study.

Whitefish Avenue once existed as County Road 140 and was maintained by Crow Wing County. The County overlaid CR 140 in 2002 and turned the roadway back to the City of Crosslake for maintenance.

Record of Hilltop Drive first paving is not available; however, it may have been paved when Whitefish Avenue was overlaid in 2002. Cool Haven Lane was first paved in 2001 and Woodland Drive was first paved in 2002. In general, the soil and subgrade construction of these roadways is known and recognized as being sound material that has withstood several years of service.

Other items that were noted during the field review and study:

- Initial observations are that utility relocation does not appear to be necessary based on locations of utility and communications pedestals; however, underground utilities do cross beneath the traveled ways.
- Some electric utility is overhead with poles along some edges of the roadways.
- Road runoff currently sheds to adjacent ditching, culverts, with some areas that will need to be addressed if the project moves forward.
- Whitefish Avenue and Hilltop Drive are striped (double yellow).
- There are approximately 86 mailboxes located near the edge of pavement.
- No soil borings were completed for this study. The soil survey for this area indicates soils consist of loamy sands. A copy of the Soil Survey Map is included in the Appendices.
- Existing driveway approaches consist of both bituminous pavement and gravel.
- Traffic count data has not been obtained for Whitefish Avenue, Hilltop Drive, Woodland Drive, and Cool Haven Lane. Traffic type is anticipated to be normal passenger vehicles and service vehicles. The heaviest traffic loading is anticipated from garbage trucks and school buses.

PROPOSED IMPROVEMENTS

PROJECT AREA # 1 - WILD WIND RANCH DRIVE

The proposed full depth reclamation (FDR) of approximately 1,480 feet of Wild Wind Ranch Drive will consist of constructing a rural roadway design section with an 18-foot wide pavement width consistent with City Road Standards. Wild Wind Ranch Drive is proposed as a rural roadway design section with an 18-foot wide pavement section and a grass shoulder of a 1-foot width each side. Driveway culverts and a centerline culvert that maintain drainage will be replaced and a section of soft subgrade from 0+75 to 1+00 will be removed and replaced with geotextile fabric and 12-inches of granular borrow. The proposed reclamation depth will not exceed 8-inches of the existing bituminous and a minimum depth of 4-5-inch section of reclaimed bituminous millings will be graded and compacted. Then 3-inches of aggregate class 5 will be added as necessary to match existing driveways and facilitate proper drainage then a 2-1/2-inch thickness of bituminous asphalt surfacing will be placed (**EXHIBIT-10)**.
The elevation of the roadway will increase with the additional aggregate base and bituminous thickness over the reclaimed base material. Driveway accesses will require adjustment to the new pavement surface on each roadway which will be completed as part of the project. Mailboxes will be replaced with swing-away mailboxes in accordance with City policy.

PROJECT AREA # 2 - RUSHMOOR BOULEVARD

The proposed full depth reclamation (FDR) of approximately 2,690-feet of Rushmoor Boulevard and Trail will consist of constructing a rural roadway design section with a 22-foot wide pavement width consistent with City Road Standards. Rushmoor Boulevard and Trail is proposed as a rural roadway design section with a 22-foot wide pavement section and a grass shoulder of a 1-foot width each side. The proposed reclamation depth will not exceed 8-inches of the existing bituminous and a minimum depth of 3-inch section of reclaimed bituminous millings will be graded and compacted. Then 3-inches of aggregate class 5 will be added as necessary to match existing driveways and facilitate proper drainage then a 2-1/2-inch thickness of bituminous asphalt surfacing will be placed (**EXHIBIT-11)**.

The elevation of the roadway will increase with the additional aggregate base and bituminous thickness over the reclaimed base material. Driveway accesses will require adjustment to the new pavement surface on each roadway which will be completed as part of the project. The grass island area that currently exists at the “T” intersection of Rushmoor Boulevard and Rushmoor Trail will be removed and paved. The incline of the approach to CSAH 16 will be improved as is feasible.

PROJECT AREA # 3 - HARBOR LANE

The proposed full depth reclamation (FDR) of approximately 1,740-feet of Harbor Lane will consist of constructing a rural roadway design section with a 24-foot wide pavement width consistent with City Road Standards. Harbor Lane is proposed as a rural roadway design section with a 24-foot wide pavement section and a grass shoulder of a 1-foot width each side. The proposed reclamation depth will not exceed 8-inches of the existing bituminous and a minimum depth of 3-inch section of reclaimed bituminous millings will be graded and compacted. Then 3-inches of aggregate class 5 will be added as necessary to match existing driveways and facilitate proper drainage then a 2-1/2-inch thickness of bituminous asphalt surfacing will be placed (**EXHIBIT-12)**. The elevation of the roadway will increase with the additional aggregate base and bituminous thickness over the reclaimed base material. Driveway accesses will require adjustment to the new pavement surface on each roadway which will be completed as part of the project. Mailboxes will be replaced with swing-away mailboxes in accordance with City policy.

PROJECT AREA # 4 - BIRCH NARROWS ROAD

The proposed full depth reclamation (FDR) of approximately 3,365-feet of Birch Narrows Road will consist of constructing a rural roadway design section with a 24-foot wide pavement width consistent with City Road Standards, and a grass shoulder of a 1-foot width each side. The proposed reclamation depth will not exceed 8-inches of the existing bituminous and a minimum depth of 3-inch section of reclaimed bituminous millings will be graded and compacted. Then 3-inches of aggregate class 5 will be added as necessary to match existing driveways and facilitate drainage then a 2-1/2-inch thickness of bituminous asphalt surfacing will be placed (**EXHIBIT-13)**.

The elevation of the roadways will increase with the additional aggregate base and bituminous thickness over the reclaimed base material. Driveway accesses will require adjustment to the new pavement surface on each roadway which will be completed as part of the project. Mailboxes will be replaced with swing-away mailboxes in accordance with City policy.

PROJECT AREA #5 - WHITEFISH AVENUE, HILLTOP DRIVE, WOODLAND DRIVE, COOL HAVEN LANE

The proposed bituminous overlay of approximately 12,320-feet of Project Area #5 will consist of placing a 1-1/2-inch thick compacted section of bituminous wear course overlay mixture that varies to match existing roadway widths but are generally as follows: 24-foot wide section for Whitefish Avenue and Hilltop Drive, 18-foot wide section for Woodland Drive and 16-foot wide section for Cool Haven Lane. Aggregate class 5 will be added as necessary to match existing driveways and paved driveways will be

sawcut and matched to transition to the new pavement surface as necessary (**EXHIBITS-14and 15)**.
Concrete curb and gutter will be evaluated for placement to promote proper drainage to proposed concrete spill ways in the two locations where City staff have had recurring maintenance issues.

The elevation of the roadways will increase with the additional 1-1/2-inch bituminous overlay placed over the existing bituminous surface material. Driveways and connecting roadways will be milled to blend the new bituminous material and terminate the new overlay pavement. Driveway accesses will require adjustment to the new pavement surface on each roadway which will be completed as part of the project.
Mailboxes will be replaced with swing-away mailboxes in accordance with City policy.

SUMMARY OF ESTIMATED PROJECT COSTS

The estimated project costs, based on the proposed improvements, are detailed in **Appendix A** and have been summarized below. These estimated project costs are based on a comprehensive single construction contract that includes all five project areas. The City should expect higher individual project costs if these roads were let for bids as individual projects.

PROJECT AREA # 1 - WILD WIND RANCH DRIVE

TOTAL ESTIMATED CONSTRUCTION COST	$137,000.00
CONSTRUCTION CONTINGENCY (10%)	$13,700.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$150,700.00
ENGR, ADMIN, LEGAL (22%)	$30,200.00
TOTAL ESTIMATED PROJECT COST	**$180,900.00**

PROJECT AREA # 2 - RUSHMOOR BOULEVARD AND RUSHMOOR TRAIL

TOTAL ESTIMATED CONSTRUCTION COST	$162,800.00
CONSTRUCTION CONTINGENCY (10%)	$16,300.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$179,100.00
ENGR, ADMIN, LEGAL (22%)	$35,900.00
TOTAL ESTIMATED PROJECT COST	**$215,000.00**

PROJECT AREA # 3 - HARBOR LANE

TOTAL ESTIMATED CONSTRUCTION COST	$122,000.00
CONSTRUCTION CONTINGENCY (10%)	$12,200.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$134,200.00
ENGR, ADMIN, LEGAL (22%)	$26,900.00
TOTAL ESTIMATED PROJECT COST	**$161,100.00**

PROJECT AREA # 4 - BIRCH NARROWS ROAD

TOTAL ESTIMATEDCONSTRUCTION COST	$216,700.00
CONSTRUCTION CONTINGENCY (10%)	$21,700.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$238,400.00
ENGR, ADMIN, LEGAL (22%)	$47,700.00
TOTAL ESTIMATED PROJECT COST	**$286,100.00**

PROJECT AREA #5 - WHITEFISH AVENUE, HILLTOP DRIVE, WOODLAND DRIVE, COOL HAVEN LANE

TOTAL ESTIMATED CONSTRUCTION COST	$383,700.00
CONSTRUCTION CONTINGENCY (10%)	$38,600.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$422,300.00
ENGR, ADMIN, LEGAL (22%)	$84,600.00
TOTAL ESTIMATED PROJECT COST	**$506,900.00**

PROPOSED METHOD OF ASSESSMENT

PROJECT AREA # 1 - WILD WIND RANCH DRIVE

The City of Crosslake proposes to assess each parcel based on the benefit opinion provided by Nagell Appraisals for roadway improvements on Wild Wind Ranch Drive (report dated December 13, 2019). The special benefit is based on several factors including Zoning and uses of properties in the area and the benefit, in terms of appreciation in value of the properties, that the road improvement is anticipated to bring

Proposed Assessable Parcels	13
Special Benefit Value (Range) Per Lot Type	
Single Family/Residential Land (direct access)	$3,000-7,000 per lot
Proposed Assessment	$4,000 per lot
Total Project Cost Estimate	$180,900
Total Estimated Assessments	$52,000
Total Estimated City Cost	$128,900

A copy of the appraiser's benefit opinion report file #V1912001 – Wild Wind Ranch Road is attached in **Appendix B**.

PROJECT AREA # 2 - RUSHMOOR BOULEVARD AND RUSHMOOR TRAIL

The City of Crosslake proposes to assess each parcel based on the benefit opinions provided by Nagell Appraisals for roadway improvements on Rushmoor Boulevard and Rushmoor Trail (report dated December 9, 2020). The special benefit is based on several factors including Zoning and uses of properties in the area and the benefit, in terms of appreciation in value of the properties, that the road improvement is anticipated to bring.

Proposed Assessable Parcels	39
Special Benefit Value (Range) Per Lot Type	
Single-Family Residential Homes – Lake Frontage	$5,000-10,000 per lot
Single-Family Residential Homes – Non-Lake Frontage	$4,000-8,000 per lot

Vacant Residential Land – Lake Frontage	$4,000-8,000 per lot
Vacant Residential Land – Non-Lake Frontage	$2,000-6,000 per lot
Proposed Assessment	$4,000 per lot
Total Project Cost Estimate	$215,000
Total Estimated Assessments	$156,000
Total Estimated City Cost	$59,000

A copy of the appraiser's benefit opinion report file #V2010002 – Harbor & Rushmoor is attached in **Appendix B**.

PROJECT AREA # 3 - HARBOR LANE

The City of Crosslake proposes to assess each parcel based on the benefit opinions provided by Nagell Appraisals for roadway improvements on Harbor Lane (report dated December 9, 2020). The special benefit is based on several factors including Zoning and uses of properties in the area and the benefit, in terms of appreciation in value of the properties, that the road improvement is anticipated to bring

Proposed Assessable Parcels	10
Special Benefit Value (Range) Per Lot Type	
Single-Family Residential Homes – Lake Frontage	$5,000-10,000 per lot
Single-Family Residential Homes – Non-Lake Frontage	$4,000-8,000 per lot
Vacant Residential Land – Lake Frontage	$4,000-8,000 per lot
Vacant Residential Land – Non-Lake Frontage	$2,000-6,000 per lot
Proposed Assessment	$4,000 per lot
Total Project Cost Estimate	$161,100
Total Estimated Assessments	$40,000
Total Estimated City Cost	$121,100

A copy of the appraiser's benefit opinion report file #V2010002 – Harbor & Rushmoor is attached in **Appendix B**.

PROJECT AREA # 4 - BIRCH NARROWS ROAD

The City of Crosslake proposes to assess each parcel based on the benefit opinions provided by Nagell Appraisals for roadway improvements on Birch Narrows Road (report dated December 9, 2020). The special benefit is based on several factors including Zoning and uses of properties in the area and the benefit, in terms of appreciation in value of the properties, that the road improvement is anticipated to bring

Proposed Assessable Parcels	37
Special Benefit Value (Range) Per Lot Type	
Single-Family Residential Homes – Lake Frontage	$5,000-10,000 per lot
Single-Family Residential Homes – Non-Lake Frontage	$4,000-8,000 per lot
Vacant Residential Land – Lake Frontage	$4,000-8,000 per lot
Vacant Residential Land – Non-Lake Frontage	$2,000-6,000 per lot
Proposed Assessment	$4,000 per lot
Total Project Cost Estimate	$286,100
Total Estimated Assessments	$148,000
Total Estimated City Cost	$138,100

A copy of the appraiser's benefit opinion report file #V2010002 – Birch Narrows Road is attached in **Appendix B**.

PROJECT AREA #5 - WHITEFISH AVENUE, HILLTOP DRIVE, WOODLAND AVENUE, COOL HAVEN LANE

The City of Crosslake proposes to assess each parcel based on the benefit opinions provided by Nagell Appraisals for roadway improvements on Whitefish Avenue (report dated December 9, 2020). The special benefit is based on several factors including Zoning and uses of properties in the area and the benefit, in terms of appreciation in value of the properties, that the road improvement is anticipated to bring

Proposed Assessable Parcels	160
Special Benefit Value (Range) Per Lot Type	
Single-Family Residential Homes – Lake Frontage	$1,500-3,000 per lot
Single-Family Residential Homes – Non-Lake Frontage	$1,000-2,500 per lot
Vacant Residential Land – Lake Frontage	$1,500-3,000 per lot
Vacant Residential Land – Non-Lake Frontage	$1,000-2,500 per lot
Proposed Assessment	$1,000 per lot
Total Project Cost Estimate	$506,900
Total Estimated Assessments	$160,000
Total Estimated City Cost	$346,900

A copy of the appraiser's benefit opinion report file #V2010002 – Whitefish Avenue is attached in **Appendix B**.

The City Council will determine the term and interest rate of the assessments. Past assessments were based on a term of 10 years at an interest rate that is 1-2% over the City's bonding rate. Property owners have the option to pay the assessment in full within 30 days of adoption of the assessment roll to avoid paying any interest on the assessment. Assessments may be paid within 30 days of adoption of the assessment roll by the City Council without incurring interest. Assessments paid after that period has expired will incur interest at the rate set by the City Council and will be amortized over the period of years set by the City Council.

As discussed previously in this report, the basis of the 2021 Street Improvement project is to include all the streets in one construction contract to realize the benefit of bid pricing with the corresponding construction scale. The City must assess a minimum of 20% of the bonded funds allocated for the 2021 Street Improvements. The total project cost breakdown, based on the proposed assessments presented in this report are as follows:

Total Estimated 2021 Project Cost	$1,350,000
Total Proposed Assessments	$556,000 (41%)
Total City Cost	$794,000 (59%)

CONCLUSIONS

The proposed street improvements have been reviewed and can feasibly be constructed with no apparent insurmountable construction issues. The improvements that are proposed are consistent with the City's Capital Improvement Plan and fulfill the scope and intent of the project. The establishment of benefit to properties has been determined and is consistent with the methods implemented in other communities in Minnesota and are based on the special benefit recommended by a licensed land appraiser.

RECOMMENDATIONS

We recommend the City proceed with the project as proposed in this report based on the feasibility, cost, and need. The next steps, should the City Council wish to proceed, are outlined in the City's Special Assessment Ordinance beginning with approval of this Feasibility Study and setting dates for the public hearings where this information will be presented to property owners in each project area where their testimony will be received by the City Council. A tentative project schedule is as follows:

November 12, 2020	Resolution Ordering Preparation of Report on Improvement
January 11, 2021	Resolution Receiving Feasibility Report and Calling Hearings
January 19, 2021	Notice of Hearings on Improvement
February 2-4, 2021	Hearings on Improvement
February 4, 2021	Resolution Ordering Improvement and Preparation of Plans
March 1, 2021	Resolution Approving Plans and Ordering Advertisement for Bids
March 31, 2021	Bid Opening
April 12, 2021	Resolution Accepting Bid (Note: The City Council may, at its discretion, proceed at this point with preparation of the assessment roll and schedule the final hearing on assessment)
May-August 2021	Construction
September 2021	Resolution Declaring Cost to be Assessed and Ordering Preparation of Assessment
September 2021	Resolution for Hearing on Proposed Assessment
October 2021	Hearing on Assessment
October 2021	Resolution Adopting Assessment
November 2021	Certification of Assessments to County Auditor

APPENDIX A

CITY OF CROSSLAKE
SUMMARY OF 2021 STREET IMPROVEMENTS TOTAL PROJECT COSTS

December 30, 2020

TOTAL ESTIMATED CONSTRUCTION COST	$1,022,200
CONSTRUCTION CONTINGENCY (10%)	$102,500
SUBTOTAL CONSTRUCTION (ROUNDED)	$1,124,700
ENGR, ADMIN, LEGAL (20%)	$225,300
TOTAL ESTIMATED PROJECT COST	**$1,350,000**

CITY OF CROSSLAKE
PROPOSED WILD WIND RANCH DRIVE IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

WILD WIND RANCH DRIVE					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$8,000.00	$8,000.00
2	2104.502	REMOVE MAIL BOX SUPPORT	4	EACH	$60.00	$240.00
3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	112	LIN FT	$6.00	$672.00
4	2104.503	REMOVE PIPE CULVERTS	120	LIN FT	$13.00	$1,560.00
5	2104.503	REMOVE METAL CULVERT	35	LIN FT	$12.00	$420.00
6	2104.504	REMOVE BITUMINOUS PAVEMENT	142	SQ YD	$5.00	$710.00
7	2105.504	GEOTEXTILE FABRIC TYPE 5	1131	SQ YD	$1.75	$1,979.25
8	2105.507	COMMON EXCAVATION (EV) (P)	553	CU YD	$20.00	$11,060.00
9	2105.507	SELECT GRANULAR BORROW (CV) (P)	343	CU YD	$20.00	$6,860.00
10	2118.509	AGGREGATE SURFACING (CV) CLASS 5	30	TON	$25.00	$750.00
11	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	8	HOUR	$155.00	$1,240.00
12	2211.507	AGGREGATE BASE (CV) CLASS 5	315	CU YD	$36.00	$11,340.00
13	2215.504	FULL DEPTH RECLAMATION	3466	SQ YD	$1.00	$3,466.00
14	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	540	TON	$85.00	$45,900.00
15	2501.502	6" CAS PIPE APRON	8	EACH	$255.00	$2,040.00
16	2501.502	15" CAS PIPE APRON	1	EACH	$260.00	$260.00
17	2501.503	6" CAS PIPE CULVERT	120	LIN FT	$30.00	$3,600.00
18	2501.503	15" CAS PIPE CULVERT	64	LIN FT	$45.00	$2,880.00
19	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN SD-48	7.19	LIN FT	$950.00	$6,830.50
20	2506.602	NEENAH R4340-A BEEHIVE FRAME AND GRATE	2	EACH	$875.00	$1,750.00
21	2540.602	MAIL BOX SUPPORT	4	EACH	$85.00	$340.00
22	2573.501	STABILIZED CONSTRUCTION EXIT	1	LUMP SUM	$2,000.00	$2,000.00
23	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
24	2573.502	STORM DRAIN INLET PROTECTION	2	EACH	$165.00	$330.00
25	2573.503	SILT FENCE, TYPE MS	275	LIN FT	$5.00	$1,375.00
26	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	260	LIN FT	$4.50	$1,170.00
27	2574.507	SCREENED TOPSOIL BORROW (CV)	260	CU YD	$45.00	$11,700.00
28	2574.508	FERTILIZER TYPE 1	100	POUND	$1.00	$100.00
29	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	77	SQ YD	$3.50	$269.50
30	2575.504	TURF REINFORCEMENT MAT CATEGORY 1	12	SQ YD	$15.00	$180.00
31	2575.505	SEEDING	0.5	ACRE	$1,100.00	$550.00
32	2575.505	SEED MIXTURE 25-121	30	POUND	$4.00	$120.00
33	2575.508	SEED MIXTURE 25-151	100	POUND	$4.00	$400.00
34	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	2250	POUND	$2.50	$5,625.00

TOTAL ESTIMATED CONSTRUCTION COST	$137,000.00
CONSTRUCTION CONTINGENCY (10%)	$13,700.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$150,700.00
ENGR, ADMIN, LEGAL (20%)	$30,200.00
TOTAL ESTIMATED PROJECT COST	**$180,900.00**

CITY OF CROSSLAKE
PROPOSED RUSHMOOR BOULEVARD AND RUSHMOOR TRAIL IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

RUSHMOOR BOULEVARD AND RUSHMOOR TRAIL					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$8,000.00	$8,000.00
2	2104.502	REMOVE MAIL BOX SUPPORT	18	EACH	$60.00	$1,080.00
3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	600	LIN FT	$6.00	$3,600.00
4	2105.504	GEOTEXTILE FABRIC TYPE 5	300	SQ YD	$1.75	$525.00
5	2105.507	COMMON EXCAVATION (EV) (P)	100	CU YD	$20.00	$2,000.00
6	2105.507	SELECT GRANULAR BORROW (CV) (P)	100	CU YD	$20.00	$2,000.00
7	2118.509	AGGREGATE SURFACING (CV) CLASS 5	30	TON	$25.00	$750.00
8	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	8	HOUR	$155.00	$1,240.00
9	2211.507	AGGREGATE BASE (CV) CLASS 5	600	CU YD	$36.00	$21,600.00
10	2215.504	FULL DEPTH RECLAMATION	6580	SQ YD	$1.00	$6,580.00
11	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	1050	TON	$85.00	$89,250.00
12	2506.602	ADJUST FRAME AND RING CASTING	2	EACH	$800.00	$1,600.00
13	2540.602	MAIL BOX SUPPORT	18	EACH	$85.00	$1,530.00
14	2573.501	STABILIZED CONSTRUCTION EXIT	1	LUMP SUM	$2,000.00	$2,000.00
15	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
16	2573.502	STORM DRAIN INLET PROTECTION	2	EACH	$165.00	$330.00
17	2573.503	SILT FENCE, TYPE MS	500	LIN FT	$5.00	$2,500.00
18	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	500	LIN FT	$4.50	$2,250.00
19	2574.507	SCREENED TOPSOIL BORROW (CV)	170	CU YD	$45.00	$7,650.00
20	2574.508	FERTILIZER TYPE 1	100	POUND	$1.00	$100.00
21	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	150	SQ YD	$3.50	$525.00
22	2575.504	TURF REINFORCEMENT MAT CATEGORY 1	25	SQ YD	$15.00	$375.00
23	2575.505	SEEDING	0.5	ACRE	$1,100.00	$550.00
24	2575.505	SEED MIXTURE 25-121	60	POUND	$4.00	$240.00
25	2575.508	SEED MIXTURE 25-151	100	POUND	$4.00	$400.00
26	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	1950	POUND	$2.50	$4,875.00

TOTAL ESTIMATED CONSTRUCTION COST	$162,800.00
CONSTRUCTION CONTINGENCY (10%)	$16,300.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$179,100.00
ENGR, ADMIN, LEGAL (20%)	$35,900.00
TOTAL ESTIMATED PROJECT COST	**$215,000.00**

CITY OF CROSSLAKE
PROPOSED HARBOR LANE IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

HARBOR LANE					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$8,000.00	$8,000.00
2	2104.502	REMOVE MAIL BOX SUPPORT	2	EACH	$60.00	$120.00
3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	214	LIN FT	$6.00	$1,284.00
4	2104.503	REMOVE METAL CULVERT	110	LIN FT	$13.00	$1,430.00
5	2105.504	GEOTEXTILE FABRIC TYPE 5	300	SQ YD	$1.75	$525.00
6	2105.507	COMMON EXCAVATION (EV) (P)	100	CU YD	$20.00	$2,000.00
7	2105.507	SELECT GRANULAR BORROW (CV) (P)	100	CU YD	$20.00	$2,000.00
8	2118.509	AGGREGATE SURFACING (CV) CLASS 5	40	TON	$25.00	$1,000.00
9	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	8	HOUR	$155.00	$1,240.00
10	2211.507	AGGREGATE BASE (CV) CLASS 5	425	CU YD	$36.00	$15,300.00
11	2215.504	FULL DEPTH RECLAMATION	3870	SQ YD	$1.00	$3,870.00
12	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	800	TON	$85.00	$68,000.00
13	2540.602	MAIL BOX SUPPORT	2	EACH	$85.00	$170.00
14	2573.501	STABILIZED CONSTRUCTION EXIT	1	LUMP SUM	$2,000.00	$2,000.00
15	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
16	2573.503	SILT FENCE, TYPE MS	750	LIN FT	$5.00	$3,750.00
17	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	320	LIN FT	$4.50	$1,440.00
18	2574.507	SCREENED TOPSOIL BORROW (CV)	110	CU YD	$45.00	$4,950.00
19	2574.508	FERTILIZER TYPE 1	50	POUND	$1.00	$50.00
20	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	100	SQ YD	$3.50	$350.00
21	2575.504	TURF REINFORCEMENT MAT CATEGORY 1	15	SQ YD	$15.00	$225.00
22	2575.505	SEEDING	0.25	ACRE	$1,100.00	$275.00
23	2575.505	SEED MIXTURE 25-121	40	POUND	$4.00	$160.00
24	2575.508	SEED MIXTURE 25-151	50	POUND	$4.00	$200.00
25	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	975	POUND	$2.50	$2,437.50

TOTAL ESTIMATED CONSTRUCTION COST	$122,000.00
CONSTRUCTION CONTINGENCY (10%)	$12,200.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$134,200.00
ENGR, ADMIN, LEGAL (20%)	$26,900.00
TOTAL ESTIMATED PROJECT COST	**$161,100.00**

CITY OF CROSSLAKE
PROPOSED BIRCH NARROWS ROAD IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

BIRCH NARROWS ROAD					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$8,000.00	$8,000.00
2	2104.502	REMOVE MAIL BOX SUPPORT	29	EACH	$60.00	$1,740.00
3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	610	LIN FT	$6.00	$3,660.00
4	2104.503	REMOVE PIPE CULVERTS	50	LIN FT	$13.00	$650.00
5	2105.504	GEOTEXTILE FABRIC TYPE 5	300	SQ YD	$1.75	$525.00
6	2105.507	COMMON EXCAVATION (EV) (P)	100	CU YD	$20.00	$2,000.00
7	2105.507	SELECT GRANULAR BORROW (CV) (P)	100	CU YD	$20.00	$2,000.00
8	2118.509	AGGREGATE SURFACING (CV) CLASS 5	210	TON	$25.00	$5,250.00
9	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	8	HOUR	$155.00	$1,240.00
10	2211.507	AGGREGATE BASE (CV) CLASS 5	815	CU YD	$36.00	$29,340.00
11	2215.504	FULL DEPTH RECLAMATION	8975	SQ YD	$1.00	$8,975.00
12	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	1450	TON	$85.00	$123,250.00
13	2501.502	15" RCP PIPE APRON	2	EACH	$260.00	$520.00
14	2501.503	15" RCP PIPE CULVERT	50	LIN FT	$45.00	$2,250.00
15	2540.602	MAIL BOX SUPPORT	29	EACH	$85.00	$2,465.00
16	2573.501	STABILIZED CONSTRUCTION EXIT	1	LUMP SUM	$2,000.00	$2,000.00
17	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
18	2573.503	SILT FENCE, TYPE MS	400	LIN FT	$5.00	$2,000.00
19	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	620	LIN FT	$4.50	$2,790.00
20	2574.507	SCREENED TOPSOIL BORROW (CV)	210	CU YD	$45.00	$9,450.00
21	2574.508	FERTILIZER TYPE 1	100	POUND	$1.00	$100.00
22	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	180	SQ YD	$3.50	$630.00
23	2575.504	TURF REINFORCEMENT MAT CATEGORY 1	30	SQ YD	$15.00	$450.00
24	2575.505	SEEDING	0.5	ACRE	$1,100.00	$550.00
25	2575.505	SEED MIXTURE 25-121	75	POUND	$4.00	$300.00
26	2575.508	SEED MIXTURE 25-151	100	POUND	$4.00	$400.00
27	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	1950	POUND	$2.50	$4,875.00

TOTAL ESTIMATED CONSTRUCTION COST	$216,700.00
CONSTRUCTION CONTINGENCY (10%)	$21,700.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$238,400.00
ENGR, ADMIN, LEGAL (20%)	$47,700.00
TOTAL ESTIMATED PROJECT COST	**$286,100.00**

CITY OF CROSSLAKE
PROPOSED WHITEFISH AVENUE IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

WHITEFISH AVENUE					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$8,000.00	$8,000.00
2	2104.502	REMOVE MAIL BOX SUPPORT	86	EACH	$60.00	$5,160.00
3	2104.504	MILL BITUMINOUS PAVEMENT	25	SQ YD	$5.00	$125.00
4	2105.507	COMMON EXCAVATION	200	CU YD	$20.00	$4,000.00
5	2105.507	SELECT GRANULAR BORROW (CV) (P)	100	CU YD	$20.00	$2,000.00
6	2118.509	AGGREGATE SURFACING (CV) CLASS 5	40	TON	$25.00	$1,000.00
7	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	12	HOUR	$155.00	$1,860.00
8	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	2650	TON	$85.00	$225,250.00
9	2511.507	RANDOM RIPRAP CLASS III	20	CY	$85.00	$1,700.00
10	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	300	LF	$24.00	$7,200.00
11	2540.602	MAIL BOX SUPPORT	86	EACH	$70.00	$6,020.00
12	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
13	2573.503	SEDIMENT CONTROL LOG TYPE STRAW	200	LIN FT	$4.50	$900.00
14	2574.507	SCREENED TOPSOIL BORROW (CV)	500	CU YD	$45.00	$22,500.00
15	2574.508	FERTILIZER TYPE 1	250	POUND	$1.00	$250.00
16	2575.505	SEEDING	1.25	ACRE	$1,100.00	$1,375.00
17	2575.508	SEED MIXTURE 25-151	250	POUND	$4.00	$1,000.00
18	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	4875	POUND	$2.50	$12,187.50
19	2575.508	PAVEMENT STRIPING	10410	LF	$1.50	$15,615.00

TOTAL ESTIMATED CONSTRUCTION COST	$317,400.00
CONSTRUCTION CONTINGENCY (10%)	$31,800.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$349,200.00
ENGR, ADMIN, LEGAL (20%)	$69,900.00
TOTAL ESTIMATED PROJECT COST	**$419,100.00**

CITY OF CROSSLAKE
PROPOSED HILLTOP DRIVE IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

HILLTOP DRIVE					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$5,000.00	$5,000.00
2	2104.504	MILL BITUMINOUS PAVEMENT	25	SQ YD	$5.00	$125.00
3	2118.509	AGGREGATE SURFACING (CV) CLASS 5	40	TON	$25.00	$1,000.00
4	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	4	HOUR	$155.00	$620.00
5	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	90	TON	$85.00	$7,650.00
6	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
7	2574.507	SCREENED TOPSOIL BORROW (CV)	25	CU YD	$45.00	$1,125.00
8	2574.508	FERTILIZER TYPE 1	20	POUND	$1.00	$20.00
9	2575.505	SEEDING	0.1	ACRE	$1,100.00	$110.00
10	2575.508	SEED MIXTURE 25-151	20	POUND	$4.00	$80.00
11	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	390	POUND	$2.50	$975.00
12	2575.508	PAVEMENT STRIPING	340	LF	$1.50	$510.00

TOTAL ESTIMATED CONSTRUCTION COST	$18,500.00
CONSTRUCTION CONTINGENCY (10%)	$1,900.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$20,400.00
ENGR, ADMIN, LEGAL (20%)	$4,100.00
TOTAL ESTIMATED PROJECT COST	**$24,500.00**

CITY OF CROSSLAKE
PROPOSED WOODLAND DRIVE IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

WOODLAND DRIVE					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$5,000.00	$5,000.00
2	2104.504	MILL BITUMINOUS PAVEMENT	20	SQ YD	$5.00	$100.00
3	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	4	HOUR	$155.00	$620.00
4	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	85	TON	$85.00	$7,225.00
5	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
6	2574.507	SCREENED TOPSOIL BORROW (CV)	30	CU YD	$45.00	$1,350.00
7	2574.508	FERTILIZER TYPE 1	20	POUND	$1.00	$20.00
8	2575.505	SEEDING	0.1	ACRE	$1,100.00	$110.00
9	2575.508	SEED MIXTURE 25-151	20	POUND	$4.00	$80.00
10	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	390	POUND	$2.50	$975.00

TOTAL ESTIMATED CONSTRUCTION COST	$16,700.00
CONSTRUCTION CONTINGENCY (10%)	$1,700.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$18,400.00
ENGR, ADMIN, LEGAL (20%)	$3,700.00
TOTAL ESTIMATED PROJECT COST	**$22,100.00**

CITY OF CROSSLAKE
PROPOSED COOL HAVEN LANE IMPROVEMENTS
ESTIMATE OF PROJECT COSTS
December 30, 2020

COOL HAVEN LANE					ESTIMATED PROJECT TOTALS	
ITEM NO.	SPEC NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	2021.501	MOBILIZATION	1	LUMP SUM	$5,000.00	$5,000.00
2	2104.504	MILL BITUMINOUS PAVEMENT	20	SQ YD	$5.00	$100.00
3	2118.509	AGGREGATE SURFACING (CV) CLASS 5	20	TON	$25.00	$500.00
4	2123.61	STREET SWEEPER (WITH PICKUP BROOM)	6	HOUR	$155.00	$930.00
5	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (2,C)	200	TON	$85.00	$17,000.00
6	2573.501	EROSION CONTROL SUPERVISOR	1	LUMP SUM	$1,200.00	$1,200.00
7	2574.507	SCREENED TOPSOIL BORROW (CV)	75	CU YD	$45.00	$3,375.00
8	2574.508	FERTILIZER TYPE 1	50	POUND	$1.00	$50.00
9	2575.505	SEEDING	0.25	ACRE	$1,100.00	$275.00
10	2575.508	SEED MIXTURE 25-151	50	POUND	$4.00	$200.00
11	2575.508	HYDRAULIC REINFORCED FIBER MATRIX	975	POUND	$2.50	$2,437.50

TOTAL ESTIMATED CONSTRUCTION COST	$31,100.00
CONSTRUCTION CONTINGENCY (10%)	$3,200.00
SUBTOTAL CONSTRUCTION (ROUNDED)	$34,300.00
ENGR, ADMIN, LEGAL (20%)	$6,900.00
TOTAL ESTIMATED PROJECT COST	**$41,200.00**

APPENDIX B

Report Type
Real Estate Consulting
Letter Report

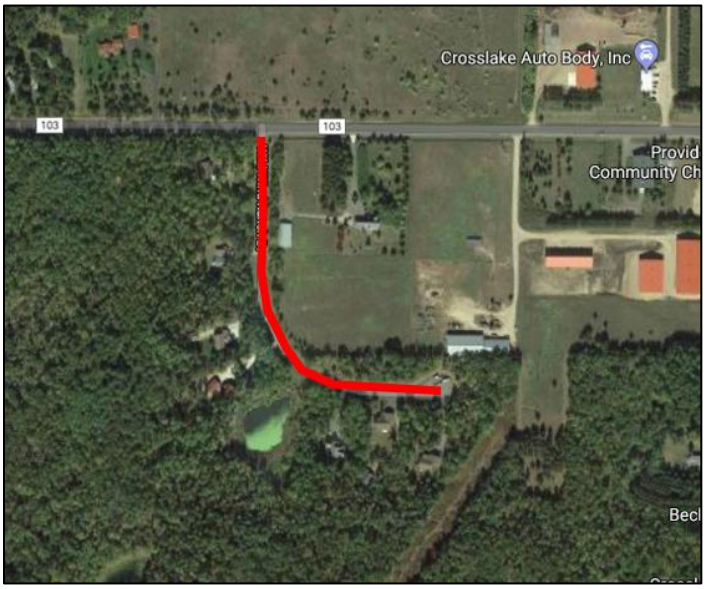
Effective Date
December 13, 2019

Client

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

Subject Property

Street Project
Wild Wind Ranch Drive
Crosslake, MN 56442



File # V1912001

Prepared By:
Ethan Waytas, MAI, Appraiser
William R. Waytas, SRA, Appraiser

Nagell Appraisal Incorporated
12805 Highway 55, Suite 300
Plymouth, Minnesota 55441
Tel: 952.544.8966 | Fax: 952.544.8969

NAGELL APPRAISAL INCORPORATED

12805 Highway 55 #300
Plymouth, MN 55441
Established in 1968

Minneapolis 952-544-8966
St. Paul 651-209-6159
Central Fax 952-544-8969

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

January 3, 2020

To Dave Reese:

Per your request, this is a letter report to assist the city for guidance regarding a potential street improvement project within the city (see attached map for the location of the street in the project). The proposed project is the reconstruction of Wild Wind Ranch Drive.

This report is not an appraisal, but rather provides a preliminary opinion of a general range of market benefit, if any, for similar properties. The letter can function as a test of reasonableness for the proposed assessments.

SCOPE OF ASSIGNMENT

In accordance with your request, a drive-by viewing of the properties has been made along with some general market comments regarding benefit (if any) for the proposed street improvement project as it relates to the subject market. As noted in the engagement letter, no specific sales data has been collected for this assignment. The general market comments are based on past appraisals, experience, and market information.

Pictures of the streets were taken on December 13, 2019 by William R. Waytas. At the time of inspection the streets were snow covered. The appraiser also viewed aerial/satellite image on the county GIS website and Google street view images. A project feasibility report was not provided.

PROJECT

The City of Crosslake is proposing to reconstruct Wild Wind Ranch Drive.

Per request, you desire to know the benefit (if any) as it impacts properties in the project area.

Motivation for the road improvement project stems from deteriorating road base, which the city indicates will impact the road surface in the near future. In addition, there are areas of poor water drainage which the road project will correct.

AREA DESCRIPTION

The City of Crosslake is a northern Minnesota Community located just north of Brainerd. The Twin Cities are about 2.5 hours to the south, which makes the area an appealing summer destination for cabin owners. The Whitefish Chain of Lakes is a set of 14 interconnected lakes situated between the communities of Crosslake, Pequot Lakes, and Pine River. The chain has some of the highest valued lakefront in Minnesota. Access to most shopping and surrounding communities is within 30 minutes. Highway 3 is the major road that provides access to surrounding communities. Most existing buildings in the area are of average to good+ quality. No apparent adverse influences.

The population for Crosslake in 2010 was 2,141, up from 1,893 in 2000—a 13.1% increase. The 2018 estimated population is 2,277, a 6.4% increase.

Single family homes generally range in value between $50,000 and $2,000,000+ (lake property) in the City Limits with an average of about $445,000 (MLS statistics). The city is a mixture of residential (lake front and non-lake front), industrial, and commercial. Most homes are average to good quality.

SUBJECT PROPERTIES

The project area consists of single-family residential homes, city owned land, and a horse facility.

EXISTING STREETS & UTILITIES

Physical Condition of the Existing Road: The existing road improvements are asphalt with no concrete curb or gutter. Wild Wind Ranch Drive is about 18' to 19' wide. The city did not indicate when the road was originally paved. The road condition is rated to be "Average –". There are signs of transverse, alligator, and longitudinal cracking. Typically cracks allow for water intrusion and compromises the road base. Reportedly the road was installed in 2001.

Note: While the surface is rated Average -, the road base is considered to be fair (per city comment). It's likely, due to the fair road base, that the road surface will continue to deteriorate at a faster pace.

Physical Condition of Existing Utilities: There is no existing sanitary sewer, public water, or storm sewer in the project area.

Functional Design of the Road: The existing paved road is in "Average –" condition. The road condition is rated to be "Average –". There are signs of transverse, alligator, and longitudinal cracking.

Roads in poor to "Average –" condition do not meet the expectations of typical market participants in this suburban market for re-development, resale price, and/or updating the current uses. Overall, the existing street improvements are in "Average –" condition, are beginning to look dated and reflect likewise on the adjoining and side street properties.

PROPOSED ROAD IMPROVEMENT

The city is proposing to reconstruct Wild Wind Ranch Drive. This road serves the immediate neighborhood.

It appears that Wild Wind Ranch Drive will have the same road width before and after the project. The city will grind the existing asphalt down and repack the base. This will improve the road base. On top of the improved base will be new asphalt.

Note: Per city, full depth pavement reclamation (FDR):

> Consists of utilizing a road reclaimer machine to grind and blend the full depth of the existing bituminous pavement thickness to a gravel consistency for use as road base material prior to paving a new bituminous pavement surface on top of the reclaimed material. This method minimizes the recurrence of crack reflection through an overlay of the existing pavement and supplements the existing road base material lending additional strength to the roadway.

The city is not extending sanitary sewer or public water at this time.

Given the existing condition of the road and traffic, the proposed project is logical.

If any of the above descriptions change, the benefit due to the project could differ.

HIGHEST AND BEST USE

The subject project area is located in the southern portion of the city. The properties in the project area are single-family residential, city owned land, and a horse facility.

Owners in the subject area appear to typically update their property as needed when site and building components wear out or become dated. Owners in the overall area commonly pave their driveways or maintain parking lots as needed, recognizing it adds value when done. Therefore, it is logical to update the road to the subject properties as needed, as these are essential property characteristics that are expected in this market.

An informed buyer would consider the condition of the road and traffic flow/management. A well-constructed and good condition road provides aesthetic appeal to a property and efficient/safe traffic flow. Given a choice, a potential informed buyer would likely prefer a newer road with good traffic flow over a deteriorating road with fair traffic flow.

If replacement of components of real estate near the end of their economic life in a home or building is postponed, it can be costlier in the long run; delays in replacing components can result in incurring higher interim maintenance costs and potential difficulty in marketing the property. Also, it is typical for the cost of the replacement of an improvement to increase over time. That said it is logical and prudent for market participants to update/replace dated components when needed. Therefore, the highest and best use of the surrounding properties in the project area is for the continued residential, commercial, industrial, and public use with the proposed infrastructure improvements.

DISCUSSION OF MARKET BENEFIT

Listed below are the factors that will be taken into consideration concerning the potential benefit to the properties.

Description	Existing Improvements	Change
1) Road Surface	**Average -**	**New, paved, good**
2) Base Condition	**Old, fair**	**Appears to be regraded and compacted**
3) Curb	None	None
4) Drainage	**Some ponding in areas**	**Drainage issues corrected**
5) Storm Sewer	None	None
6) City water	None	None
7) City sewer	None	None
8) Sidewalk	None	None
9) Street Lights	Average	Average
10) Functional Design of Road	**Dated**	**Good**
11) Traffic Management	Average	Average
12) Pedestrian Use (biking, walking, etc.)	**Average -**	**Good**
13) Median	n/a	n/a
14) Road Proximity to Properties	n/a	n/a
15) Dust	n/a	n/a
16) Visual Impact on Properties	**Average -**	**Good**

Based on the preceding grid, the subject properties will improve in 6 of the 16 categories. Market participants generally recognize that roads need replacing when nearing the end of a long economic life. A typical buyer in the subject market commonly prefers a good condition paved road surface road versus an inferior condition paved road surface. In addition to visual benefit, new street improvements provide better and safer use for pedestrians (biking, walking, stroller, rollerblading, etc.) and drivers. The new streets will enhance potential for re-development and/or updating the current properties. Properties that indirectly/directly abut or have driveways/access that exit on the new street will benefit.

Based on past appraisals, experience, and general market information, it is not uncommon for properties similar to those in the subject market to realize an increase in price for new street improvements.

Discussion of Market Benefit – Continued

Given the scope of the project and the age/quality/condition of houses, properties in the area with newer **street improvements** could see an average price benefit of:

- **Single family / residential land (direct access)** — $3,000 to $7,000 per lot (larger lots on the upper end of range)

Corner lots are based at a pro-rata percentage using street frontage. So if 75% of the frontage is being improved while 25% on the side street(s) is not, then the multiplier would be 75% of the benefit.

CONCLUSION

The benefit amount noted above should not be construed or relied on as being an appraisal, but are general observations based on the overall market. If an appraisal were made on the individual properties, the actual benefit amount could vary from market observations above.

If you have additional questions, please do not hesitate to contact us.

Sincerely,

Ethan Waytas, MAI
Certified General MN 40368613

William R. Waytas, SRA
Certified General MN 4000813

Enclosures: Location Map, Aerial Map View of Project, Subject Photos, Qualifications, Engagement Letter

LOCATION MAP

AERIAL VIEW OF PROJECT MAP

Red line reflects the road project area

AERIAL VIEW OF PROJECT MAP

The project is outlined in red, map per county

SUBJECT PHOTOGRAPHS

Street scene

Typical home within project

Typical home within project

Street scene

Subject Photographs – continued

Street scene

Street scene

Street scene

Street scene

Subject Photographs – continued

Google Street View

Google Street View

Google Street View

Google Street View

QUALIFICATIONS

Appraisal Experience

Presently and since 2006, **Ethan Waytas, MAI** has been employed as an employee of Nagell Appraisal Incorporated, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. He is currently a full time licensed certified general real estate appraiser, partner, and director of the company's IT department.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, cinema, numerous special use properties, golf courses, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Testimony

-- Court, commission, mediation testimony, etc. has been given

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #40368613
Holds the MAI designation from the Appraisal Institute

Education

-- Graduate of the University of Minnesota: College of Science and Engineering, Twin Cities Campus
Bachelor of Science in Computer Science, with distinction, 3.86 GPA.

-- **General & Professional Practice Courses & Seminars**
-- Basic Appraisal Procedures
-- Basic Appraisal Principles
-- 2012-2013 15-Hour National Uniform Standards of Professional Appraisal Practice
-- General Appraiser Sales Comparison Approach
-- General Appraiser Income Approach – Part 1
-- General Appraiser Income Approach – Part 2
-- Advanced Income Capitalization
-- General Appraiser Report Writing and Case Studies
-- Real Estate Finance, Statistics and Valuation Modeling
-- 2014-2015 7-hour National USPAP Update Course
-- General Appraiser Site Valuation & Cost Approach
-- Advanced Market Analysis and Highest & Best Use
-- Advanced Concepts & Case Studies
-- Quantitative Analysis

Appraisal Experience

Presently and since 1985, **William R. Waytas** has been employed as a full-time real estate appraiser. Currently a partner and President of the Nagell Appraisal & Consulting, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. Mr. Waytas was employed with Iver C. Johnson & Company, Ltd., Phoenix, AZ from 1985 to 1987.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, hotel, hotel water park, bed & breakfast, cinema, marina, numerous special use properties, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Review*** *– residential, commercial and land development.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #4000813.
Appraisal Institute: SRA, Senior Residential Appraiser Designation,
General Associate Member
Employee Relocation Council: CRP Certified Relocation Professional Designation.
International Right-Of-Way Association: Member
HUD/FHA: On Lender Selection Roster and Review Appraiser
DNR: Approved appraiser for Department of Natural Resources

Testimony

-- Court, deposition, commission, arbitration & administrative testimony given.

Mediator

-- Court appointed in Wright County.

Committees

-- President of Metro/Minnesota Chapter, 2002, Appraisal Institute.
-- Chairman of Residential Admissions, Metro/MN Chapter, AI.
-- Chairman Residential Candidate Guidance, Metro/Minnesota Chapter, AI.
-- Elm Creek Watershed Commission, Medina representative 3 years.
-- Medina Park Commission, 3 years.

Education

-- Graduate of Bemidji State University, Minnesota. B.S. degree in Bus. Ad.
-- During college, summer employment in building trades (residential and commercial).
-- Graduate of Cecil Lawter Real Estate School. Past Arizona Real Estate License.

-- **General & Professional Practice Courses & Seminars**
-- Course 101-Introduction to Appraising Real Property.
-- Numerous Standards of Professional Practice Seminar.
-- Fair Lending Seminar.
-- Eminent Domain & Condemnation Appraising.
-- Eminent Domain (An In-Depth Analysis)
-- Property Tax Appeal
-- Eminent Domain
-- Business Practices and Ethics
-- Scope of Work
-- Construction Disturbances and Temporary Loss of Going Concern
-- Uniform Standards for Federal Land Acquisitions (Yellow Book Seminar)
-- Partial Interest Valuation Divided (conservation easements, historic preservation easements, life estates, subsurface rights, access easements, air rights, water rights, transferable development rights)

Commercial/Industrial/Subdivision Courses & Seminars
-- Capitalization Theory & Techniques
-- Highest & Best Use Seminar
-- General & Residential State Certification Review Seminar
-- Subdivision Analysis Seminar.
-- Narrative Report Writing Seminar (general)
-- Advanced Income Capitalization Seminar
-- Advanced Industrial Valuation
-- Appraisal of Local Retail Properties
-- Appraising Convenience Stores
-- Analyzing Distressed Real Estate
-- Evaluating Commercial Construction
-- Fundamentals of Separating Real Property, Personal Property and Intangible Business Assets

Residential Courses & Seminars
-- Course 102-Applied Residential Appraising
-- Narrative Report Writing Seminar (residential)
-- HUD Training session local office for FHA appraisals
-- Familiar with HUD Handbook 4150.1 REV-1 & other material from local FHA office.
-- Appraiser/Underwriter FHA Training
-- Residential Property Construction and Inspection
-- Numerous other continuing education seminars for state licensing & AI

Speaking Engagements

-- Bankers
-- Auditors
-- Assessors
-- Relocation (Panel Discussion)

Publications

-- Real Estate Appraisal Practice (book): Acknowledgement
-- Articles for Finance & Commerce and Minnesota Real Estate Journal

Report Type
Real Estate Consulting
Letter Report (Restricted Appraisal)

Effective Date
December 9, 2020

Client

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

Subject Property

Street Improvement Project
Harbor Lane and Rushmoor Boulevard
Crosslake, MN 56442

File # V2010002 – Harbor & Rushmoor

Prepared By:
Ethan Waytas, MAI, Appraiser
William R. Waytas, SRA, Appraiser

Nagell Appraisal Incorporated
12805 Highway 55, Suite 300
Plymouth, Minnesota 55441
Tel: 952.544.8966 | Fax: 952.544.8969

NAGELL APPRAISAL INCORPORATED

12805 Highway 55 #300
Plymouth, MN 55441
Established in 1968

Phone **952-544-8966**
Fax **952-544-8969**

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

December 10, 2020

To Dave Reese:

Per your request, this is a letter report to assist the city for guidance regarding a street improvement project within Plymouth (see attached map for the location of the streets in the project). The project is a street improvement of Harbor Lane and Rushmoor Boulevard.

This report is not an appraisal of a specific property, but rather provides a preliminary opinion of a general range of market benefit, if any, for similar properties. Relevant information, including USPAP, is retained in the workfile. If an appraisal of a specific property was performed, the findings of that report are considered likely to be consistent with the findings in this document (but could vary). The letter can function as a test of reasonableness for the proposed assessments.

SCOPE OF ASSIGNMENT

In accordance with your request, a drive-by viewing of the properties has been made along with some general market comments regarding benefit (if any) for the street improvement project as it relates to the subject market. As noted in the engagement letter, no specific sales data has been collected for this assignment. The general market comments are based on past appraisals, experience, and market information.

Pictures of the streets were taken on December 9, 2020 by William R. Waytas. The appraiser also viewed aerial/satellite image on the county GIS website and Google street view images. Project information and documents were provided; the conclusions and information from the report were a part of the overall consulting letter analysis. The preliminary engineering information is retained in the appraiser's workfile.

PROJECT

The City of Crosslake is proposing to complete reconstruction of the existing streets within the project area.

Per request, you desire to know the benefit (if any) as it impacts properties in the project area.

Motivation for the road improvement project stemmed from deteriorating road surface and/or base.

AREA DESCRIPTION

The City of Crosslake is a northern Minnesota Community located just north of Brainerd. The Twin Cities are about 2.5 hours to the south, which makes the area an appealing summer destination for cabin owners. The Whitefish Chain of Lakes is a set of 14 interconnected lakes situated between the communities of Crosslake, Pequot Lakes, and Pine River. The chain has some of the highest valued lakefront in Minnesota. Access to most shopping and surrounding communities is within 30 minutes. Highway 3 is the major road that provides access to surrounding communities. Most existing buildings in the area are of average to good+ quality. No apparent adverse influences.

The population for Crosslake in 2010 was 2,141, up from 1,893 in 2000—a 13.1% increase. The 2019 estimated population is 2,354, a 9.9% increase.

Single family homes generally range in value between $50,000 and $2,000,000+ (lake property) in the City Limits with an average of about $475,000 (MLS statistics). The city is a mixture of residential (lake front and non-lake front), industrial, and commercial. Most homes are average to good quality.

SUBJECT PROPERTIES

The project area consists of single-family residential, with a mixture of lake frontage and non-lake frontage sites. There are also some vacant lots. The city did not provide the total number of assessed properties at this time.

EXISTING STREETS & UTILITIES

Physical Condition of the Existing Road: The existing road improvements are paved with no curb or gutter. The road condition, based on the visual inspection of the streets, is rated to be Fair +. There are signs of transverse, longitudinal, and alligator cracking on the paved road. There are also areas of raveling.

Physical Condition of Existing Utilities: The utilities in the area are private well, private septic, electricity and gas.

Functional Design of the Road: The existing road is dated, in Fair + condition, and does have substantial large cracks, heaving, raveling, etc. The road condition is rated to be Fair +.

Road and utility infrastructure in poor to average - condition do not meet the expectations of typical market participants in this suburban market for re-development, resale price, and/or updating the current uses. Overall, the existing street improvements are in Fair + condition, are beginning to look dated (or function) and reflect likewise on the adjoining properties.

PROPOSED IMPROVEMENTS

The city is proposing a full reconstruction of the street. Per city, the project is described as:

> Consists of utilizing a road reclaimer machine to grind and blend the full depth of the existing bituminous pavement thickness to a gravel consistency for use as road base material prior to paving a new bituminous pavement surface on top of the reclaimed material. This method minimizes the recurrence of crack reflection through an overlay of the existing pavement and supplements the existing road base material lending additional strength to the roadway.

The city indicated that utilities are not being worked on at this time.

Given the existing condition of the road, the proposed project is logical.

If any of the above descriptions change, the benefit due to the project could differ.

HIGHEST AND BEST USE

The subject project area is located in the central portion of the city in an area of residential uses.

Owners in the subject area appear to update their property as needed when site and building components wear out or become dated. Owners in the overall area commonly pave their driveways or maintain parking lots as needed, recognizing it adds value when done. Therefore, it is logical to update the road and/or utility infrastructure to the subject properties as needed, as these are essential property characteristics that are expected in this market.

An informed buyer would consider the condition of the road, traffic flow/management, and utilities. A well-constructed and good condition road provides aesthetic appeal to a property and efficient/safe traffic flow. Given a choice, a potential informed buyer would likely prefer a newer road with good traffic flow over a deteriorating road with fair traffic flow. Additionally, a potential informed buyer would likely prefer newer utility infrastructure as compared to older, dated and inferior utility infrastructure.

If replacement of components of real estate near the end of their economic life in a home or building is postponed, it can be costlier in the long run; delays in replacing components can result in incurring higher interim maintenance costs and potential difficulty in marketing the property. Also, it is typical for the cost of the replacement of an improvement to increase over time. That said it is logical and prudent for market participants to update/replace dated components when needed. Therefore, the highest and best use of the surrounding properties in the project area is for the continued various uses with the proposed infrastructure improvements.

DISCUSSION OF MARKET BENEFIT

Listed below are the factors that will be taken into consideration concerning the potential benefit to the properties.

Description	Existing Improvements	Change
1) Road Surface	**Fair +**	**New, asphalt**
2) Base Condition	**Fair to Average**	**Compacted, graded, improved**
3) Curb	None	None
4) Drainage	n/a	n/a
5) Storm Sewer	Surface	Surface
6) City water	n/a	n/a
7) City sewer	n/a	n/a
8) Sidewalk	None	None
9) Street Lights	Average	Average
10) Functional Design of Road	**Dated**	**Good, new**
11) Traffic Management	Average	Average
12) Pedestrian Use (biking, walking, etc.)	**Fair**	**Good**
13) Median	n/a	n/a
14) Road Proximity to Properties	n/a	n/a
15) Dust	n/a	n/a
16) Visual Impact on Properties	**Fair**	**Good**

Based on the preceding grid, the subject properties will improve in 5 of the 16 categories. Market participants generally recognize that roads and utilities need replacing when nearing the end of a long economic life. A typical buyer in the subject market commonly prefers a good condition paved road surface versus an inferior condition paved road surface. Similarly for utilities, market participants prefer new or newer utilities versus older utilities. In addition to visual benefit, new street improvements provide better and safer use for pedestrians (biking, walking, stroller, rollerblading, etc.) and drivers. The new streets and utilities will enhance potential for re-development and/or updating the current properties. Properties that indirectly/directly abut or have driveways/access that exit on the new street will benefit.

Based on past appraisals, experience, and general market information, it is not uncommon for properties similar to those in the subject market to realize an increase in price for new street improvements.

Given the scope of the project, the age/quality/condition of houses, properties in the area with newer street improvements could see an average price benefit of:

- **Single-Family Residential Homes – Lake Frontage** — $5,000 to $10,000 per buildable lot
- **Single-Family Residential Homes – Non-Lake Frontage** — $4,000 to $8,000 per buildable lot
- **Vacant Residential Land – Lake Frontage** — $4,000 to $8,000 per buildable lot
- **Vacant Residential Land – Non-Lake Frontage** — $2,000 to $6,000 per buildable lot

Note: The above benefit considers only the scope of the project. Higher value buildings/homes or larger lots are on the upper end of the range. Properties on corners, with one street being improved and the other not, might receive less than the above ranges (for example 50% of the benefit).

CONCLUSION

The benefit amounts noted above should not be construed or relied on as being an appraisal of a specific property, but are general observations based on the overall market. If an appraisal were made on the individual properties, the actual benefit amount could vary from market observations above.

If you have additional questions, please do not hesitate to contact us.

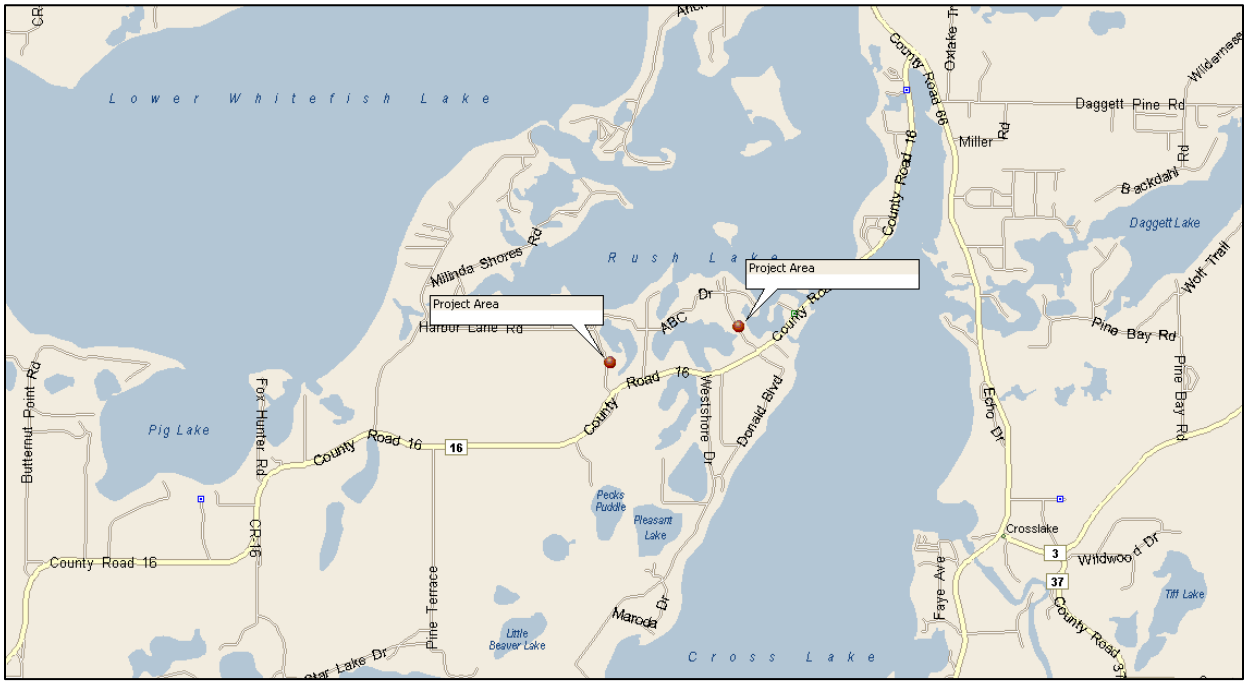
Sincerely,

Ethan Waytas, MAI
Certified General MN 40368613

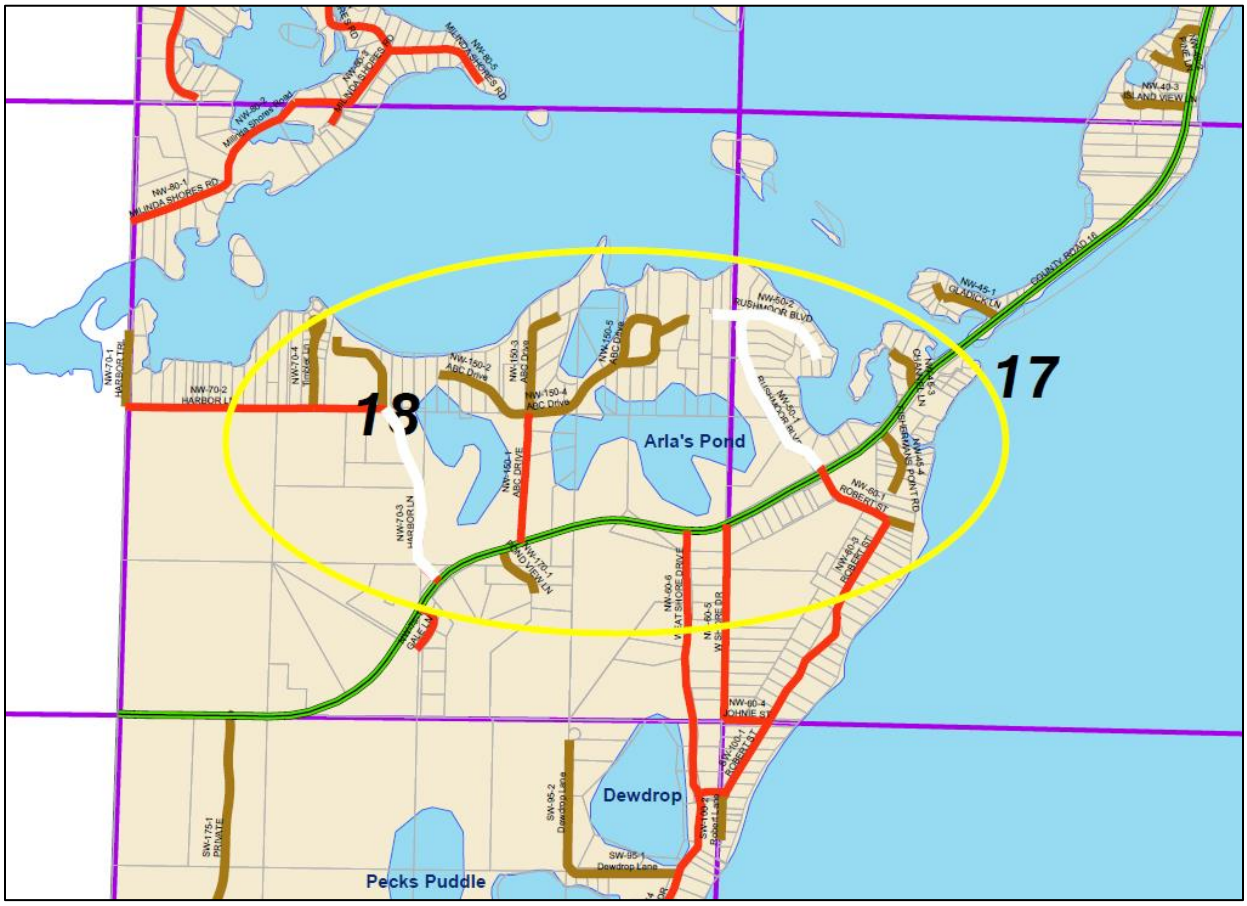
William R. Waytas, SRA
Certified General MN 4000813

Enclosures: Location Map, Aerial Map View of Project, Subject Photos, Qualifications

LOCATION MAP



PROJECT MAP



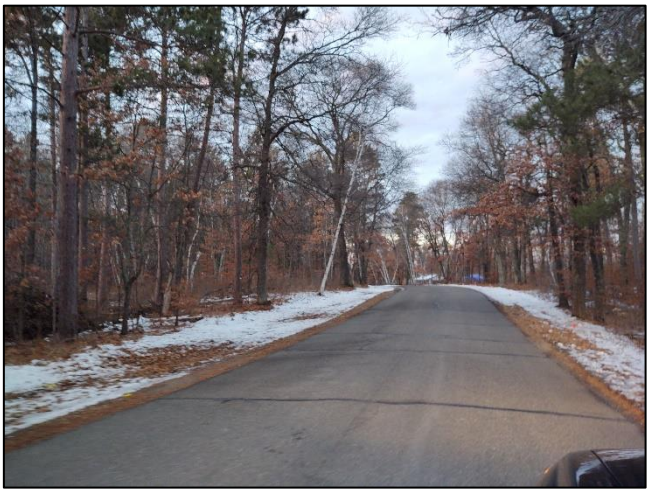
The streets in the project are highlighted in white or are circled in white.

AERIAL VIEW OF PROJECT MAP

*Red line reflects the project areas

SUBJECT PHOTOGRAPHS

Street view



Street view

Street view

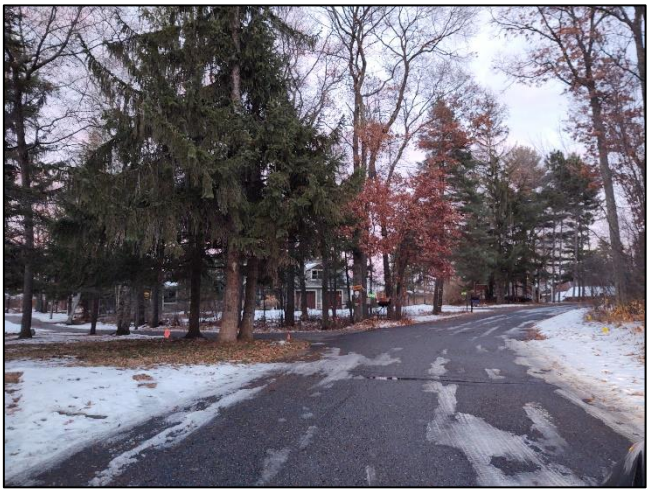
Street view

Subject Photographs – continued

Street view

Street view

Street view



Street view

QUALIFICATIONS

Appraisal Experience

Presently and since 2006, **Ethan Waytas, MAI** has been employed as an employee of Nagell Appraisal Incorporated, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. He is currently a full time licensed certified general real estate appraiser, partner, and director of the company's IT department.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, cinema, numerous special use properties, golf courses, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Testimony

-- Court, commission, mediation testimony, etc. has been given

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #40368613
Holds the MAI designation from the Appraisal Institute

Education

-- Graduate of the University of Minnesota: College of Science and Engineering, Twin Cities Campus
Bachelor of Science in Computer Science, with distinction, 3.86 GPA.

-- **General & Professional Practice Courses & Seminars**
-- Basic Appraisal Procedures
-- Basic Appraisal Principles
-- 2012-2013 15-Hour National Uniform Standards of Professional Appraisal Practice
-- General Appraiser Sales Comparison Approach
-- General Appraiser Income Approach – Part 1
-- General Appraiser Income Approach – Part 2
-- Advanced Income Capitalization
-- General Appraiser Report Writing and Case Studies
-- Real Estate Finance, Statistics and Valuation Modeling
-- 2014-2015 7-hour National USPAP Update Course
-- General Appraiser Site Valuation & Cost Approach
-- Advanced Market Analysis and Highest & Best Use
-- Advanced Concepts & Case Studies
-- Quantitative Analysis

Appraisal Experience

Presently and since 1985, **William R. Waytas** has been employed as a full time real estate appraiser. Currently a partner and President of the Nagell Appraisal & Consulting, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. Mr. Waytas was employed with Iver C. Johnson & Company, Ltd., Phoenix, AZ from 1985 to 1987.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, hotel, hotel water park, bed & breakfast, cinema, marina, numerous special use properties, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Review*** *– residential, commercial and land development.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #4000813.
Appraisal Institute: SRA, Senior Residential Appraiser Designation,
General Associate Member
Employee Relocation Council: CRP Certified Relocation Professional Designation.
International Right-Of-Way Association: Member
HUD/FHA: On Lender Selection Roster and Review Appraiser
DNR: Approved appraiser for Department of Natural Resources

Testimony

-- Court, deposition, commission, arbitration & administrative testimony given.

Mediator

-- Court appointed in Wright County.

Committees

-- President of Metro/Minnesota Chapter, 2002, Appraisal Institute.
-- Chairman of Residential Admissions, Metro/MN Chapter, AI.
-- Chairman Residential Candidate Guidance, Metro/Minnesota Chapter, AI.
-- Elm Creek Watershed Commission, Medina representative 3 years.
-- Medina Park Commission, 3 years.

Education

-- Graduate of Bemidji State University, Minnesota. B.S. degree in Bus. Ad.
-- During college, summer employment in building trades (residential and commercial).
-- Graduate of Cecil Lawter Real Estate School. Past Arizona Real Estate License.

-- **General & Professional Practice Courses & Seminars**
-- Course 101-Introduction to Appraising Real Property.
-- Numerous Standards of Professional Practice Seminar.
-- Fair Lending Seminar.
-- Eminent Domain & Condemnation Appraising.
-- Eminent Domain (An In-Depth Analysis)
-- Property Tax Appeal
-- Eminent Domain
-- Business Practices and Ethics
-- Scope of Work
-- Construction Disturbances and Temporary Loss of Going Concern
-- Uniform Standards for Federal Land Acquisitions (Yellow Book Seminar)
-- Partial Interest Valuation Divided (conservation easements, historic preservation easements, life estates, subsurface rights, access easements, air rights, water rights, transferable development rights)

Commercial/Industrial/Subdivision Courses & Seminars
-- Capitalization Theory & Techniques
-- Highest & Best Use Seminar
-- General & Residential State Certification Review Seminar
-- Subdivision Analysis Seminar.
-- Narrative Report Writing Seminar (general)
-- Advanced Income Capitalization Seminar
-- Advanced Industrial Valuation
-- Appraisal of Local Retail Properties
-- Appraising Convenience Stores
-- Analyzing Distressed Real Estate
-- Evaluating Commercial Construction
-- Fundamentals of Separating Real Property, Personal Property and Intangible Business Assets

Residential Courses & Seminars
-- Course 102-Applied Residential Appraising
-- Narrative Report Writing Seminar (residential)
-- HUD Training session local office for FHA appraisals
-- Familiar with HUD Handbook 4150.1 REV-1 & other material from local FHA office.
-- Appraiser/Underwriter FHA Training
-- Residential Property Construction and Inspection
-- Numerous other continuing education seminars for state licensing & AI

Speaking Engagements

-- Bankers
-- Auditors
-- Assessors
-- Relocation (Panel Discussion)

Publications

-- Real Estate Appraisal Practice (book): Acknowledgement
-- Articles for Finance & Commerce and Minnesota Real Estate Journal

Report Type
Real Estate Consulting
Letter Report (Restricted Appraisal)

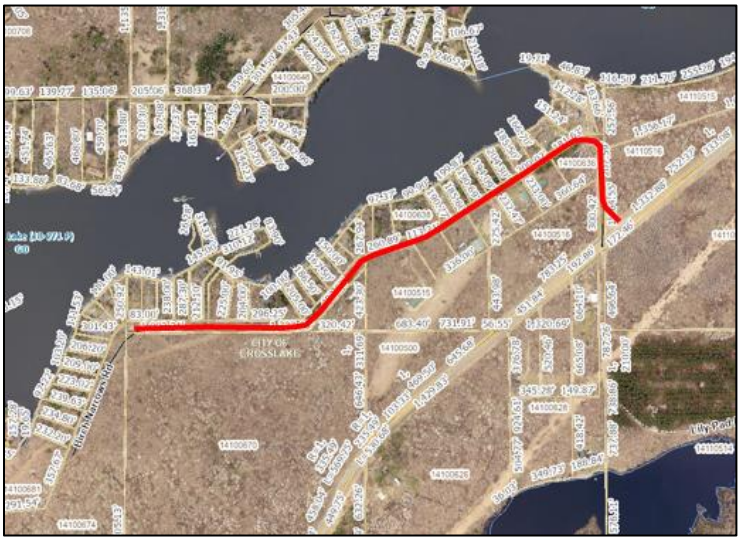
Effective Date
December 9, 2020

Client

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

Subject Property

Street Improvement Project
Birch Narrows Road
Crosslake, MN 56442



File # V2010002 – Birch Narrows Road

Prepared By:
Ethan Waytas, MAI, Appraiser
William R. Waytas, SRA, Appraiser

Nagell Appraisal Incorporated
12805 Highway 55, Suite 300
Plymouth, Minnesota 55441
Tel: 952.544.8966 | Fax: 952.544.8969

NAGELL APPRAISAL INCORPORATED

12805 Highway 55 #300
Plymouth, MN 55441
Established in 1968

Phone **952-544-8966**
Fax **952-544-8969**

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

December 10, 2020

To Dave Reese:

Per your request, this is a letter report to assist the city for guidance regarding a street improvement project within Plymouth (see attached map for the location of the streets in the project). The project is a street improvement of Birch Narrows Road.

This report is not an appraisal of a specific property, but rather provides a preliminary opinion of a general range of market benefit, if any, for similar properties. Relevant information, including USPAP, is retained in the workfile. If an appraisal of a specific property was performed, the findings of that report are considered likely to be consistent with the findings in this document (but could vary). The letter can function as a test of reasonableness for the proposed assessments.

SCOPE OF ASSIGNMENT

In accordance with your request, a drive-by viewing of the properties has been made along with some general market comments regarding benefit (if any) for the street improvement project as it relates to the subject market. As noted in the engagement letter, no specific sales data has been collected for this assignment. The general market comments are based on past appraisals, experience, and market information.

Pictures of the streets were taken on December 9, 2020 by William R. Waytas. The appraiser also viewed aerial/satellite image on the county GIS website and Google street view images. Project information and documents were provided; the conclusions and information from the report were a part of the overall consulting letter analysis. The preliminary engineering information is retained in the appraiser's workfile.

PROJECT

The City of Crosslake is proposing to complete reconstruction of the existing streets within the project area.

Per request, you desire to know the benefit (if any) as it impacts properties in the project area.

Motivation for the road improvement project stemmed from deteriorating road surface and/or base.

AREA DESCRIPTION

The City of Crosslake is a northern Minnesota Community located just north of Brainerd. The Twin Cities are about 2.5 hours to the south, which makes the area an appealing summer destination for cabin owners. The Whitefish Chain of Lakes is a set of 14 interconnected lakes situated between the communities of Crosslake, Pequot Lakes, and Pine River. The chain has some of the highest valued lakefront in Minnesota. Access to most shopping and surrounding communities is within 30 minutes. Highway 3 is the major road that provides access to surrounding communities. Most existing buildings in the area are of average to good+ quality. No apparent adverse influences.

The population for Crosslake in 2010 was 2,141, up from 1,893 in 2000—a 13.1% increase. The 2019 estimated population is 2,354, a 9.9% increase.

Single family homes generally range in value between $50,000 and $2,000,000+ (lake property) in the City Limits with an average of about $475,000 (MLS statistics). The city is a mixture of residential (lake front and non-lake front), industrial, and commercial. Most homes are average to good quality.

SUBJECT PROPERTIES

The project area consists of single-family residential, with a mixture of lake frontage and non-lake frontage sites. There are also some vacant lots. The city did not provide the total number of assessed properties at this time.

EXISTING STREETS & UTILITIES

Physical Condition of the Existing Road: The existing road improvements are paved with no curb or gutter. The road condition, based on the visual inspection of the streets, is rated to be Fair +. There are signs of transverse, longitudinal, and alligator cracking on the paved road. There are also areas of raveling.

Physical Condition of Existing Utilities: The utilities in the area are private well, private septic, electricity and gas.

Functional Design of the Road: The existing road is dated, in Fair + condition, and does have substantial large cracks, heaving, raveling, etc. The road condition is rated to be Fair +.

Road and utility infrastructure in poor to average - condition do not meet the expectations of typical market participants in this suburban market for re-development, resale price, and/or updating the current uses. Overall, the existing street improvements are in Fair + condition, are beginning to look dated (or function) and reflect likewise on the adjoining properties.

PROPOSED IMPROVEMENTS

The city is proposing a full reconstruction of the street. Per city, the project is described as:

> Consists of utilizing a road reclaimer machine to grind and blend the full depth of the existing bituminous pavement thickness to a gravel consistency for use as road base material prior to paving a new bituminous pavement surface on top of the reclaimed material. This method minimizes the recurrence of crack reflection through an overlay of the existing pavement and supplements the existing road base material lending additional strength to the roadway.

The city indicated that utilities are not being worked on at this time.

Given the existing condition of the road, the proposed project is logical.

If any of the above descriptions change, the benefit due to the project could differ.

HIGHEST AND BEST USE

The subject project area is located in the central portion of the city in an area of residential uses.

Owners in the subject area appear to update their property as needed when site and building components wear out or become dated. Owners in the overall area commonly pave their driveways or maintain parking lots as needed, recognizing it adds value when done. Therefore, it is logical to update the road and/or utility infrastructure to the subject properties as needed, as these are essential property characteristics that are expected in this market.

An informed buyer would consider the condition of the road, traffic flow/management, and utilities. A well-constructed and good condition road provides aesthetic appeal to a property and efficient/safe traffic flow. Given a choice, a potential informed buyer would likely prefer a newer road with good traffic flow over a deteriorating road with fair traffic flow. Additionally, a potential informed buyer would likely prefer newer utility infrastructure as compared to older, dated and inferior utility infrastructure.

If replacement of components of real estate near the end of their economic life in a home or building is postponed, it can be costlier in the long run; delays in replacing components can result in incurring higher interim maintenance costs and potential difficulty in marketing the property. Also, it is typical for the cost of the replacement of an improvement to increase over time. That said it is logical and prudent for market participants to update/replace dated components when needed. Therefore, the highest and best use of the surrounding properties in the project area is for the continued various uses with the proposed infrastructure improvements.

DISCUSSION OF MARKET BENEFIT

Listed below are the factors that will be taken into consideration concerning the potential benefit to the properties.

Description	Existing Improvements	Change
1) Road Surface	**Fair +**	**New, asphalt**
2) Base Condition	**Fair to Average**	**Compacted, graded, improved**
3) Curb	None	None
4) Drainage	n/a	n/a
5) Storm Sewer	Surface	Surface
6) City water	n/a	n/a
7) City sewer	n/a	n/a
8) Sidewalk	None	None
9) Street Lights	Average	Average
10) Functional Design of Road	**Dated**	**Good, new**
11) Traffic Management	Average	Average
12) Pedestrian Use (biking, walking, etc.)	**Fair**	**Good**
13) Median	n/a	n/a
14) Road Proximity to Properties	n/a	n/a
15) Dust	n/a	n/a
16) Visual Impact on Properties	**Fair**	**Good**

Based on the preceding grid, the subject properties will improve in 5 of the 16 categories. Market participants generally recognize that roads and utilities need replacing when nearing the end of a long economic life. A typical buyer in the subject market commonly prefers a good condition paved road surface versus an inferior condition paved road surface. Similarly for utilities, market participants prefer new or newer utilities versus older utilities. In addition to visual benefit, new street improvements provide better and safer use for pedestrians (biking, walking, stroller, rollerblading, etc.) and drivers. The new streets and utilities will enhance potential for re-development and/or updating the current properties. Properties that indirectly/directly abut or have driveways/access that exit on the new street will benefit.

Based on past appraisals, experience, and general market information, it is not uncommon for properties similar to those in the subject market to realize an increase in price for new street improvements.

Given the scope of the project, the age/quality/condition of houses, properties in the area with newer street improvements could see an average price benefit of:

- **Single-Family Residential Homes – Lake Frontage** — $5,000 to $10,000 per buildable lot
- **Single-Family Residential Homes – Non-Lake Frontage** — $4,000 to $8,000 per buildable lot
- **Vacant Residential Land – Lake Frontage** — $4,000 to $8,000 per buildable lot
- **Vacant Residential Land – Non-Lake Frontage** — $2,000 to $6,000 per buildable lot

Note: The above benefit considers only the scope of the project. Higher value buildings/homes or larger lots are on the upper end of the range. Properties on corners, with one street being improved and the other not, might receive less than the above ranges (for example 50% of the benefit).

CONCLUSION

The benefit amounts noted above should not be construed or relied on as being an appraisal of a specific property, but are general observations based on the overall market. If an appraisal were made on the individual properties, the actual benefit amount could vary from market observations above.

If you have additional questions, please do not hesitate to contact us.

Sincerely,

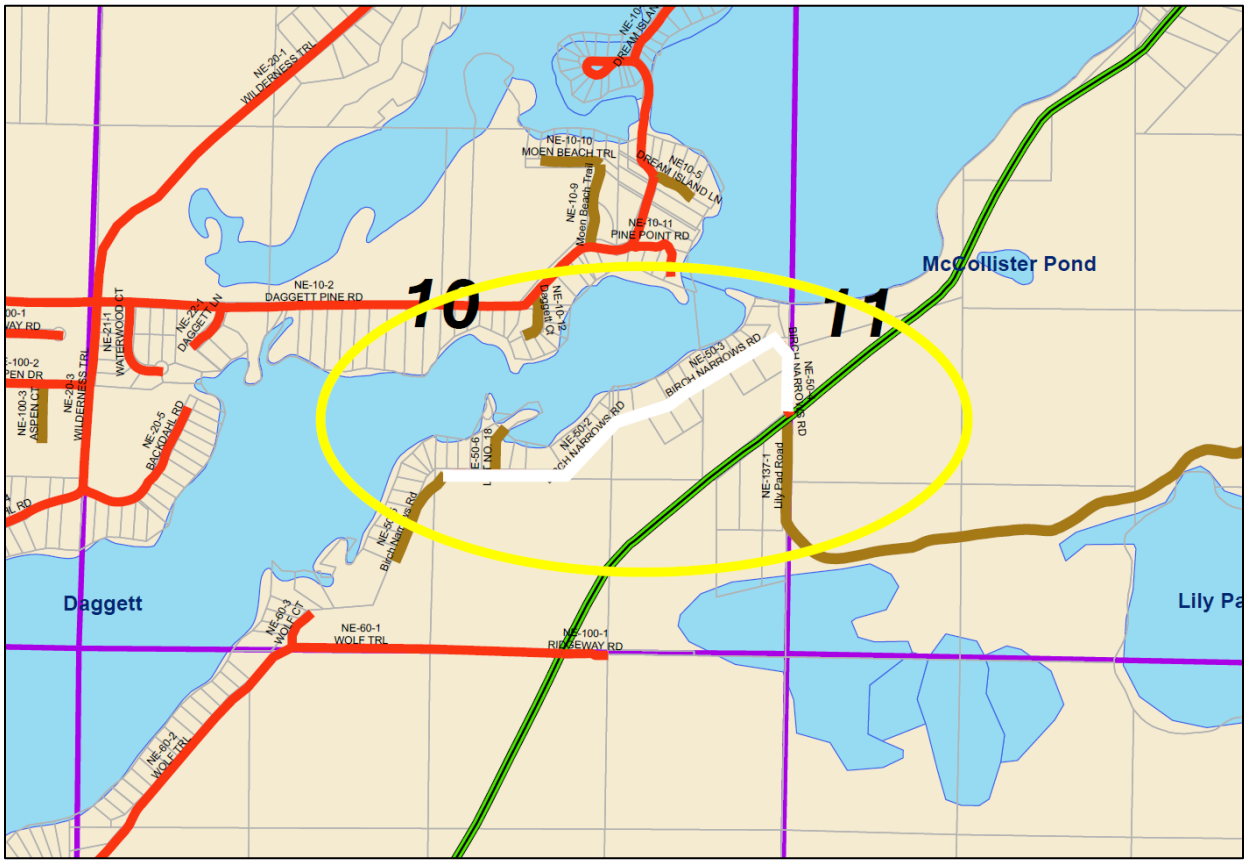
Ethan Waytas, MAI
Certified General MN 40368613

William R. Waytas, SRA
Certified General MN 4000813

Enclosures: Location Map, Aerial Map View of Project, Subject Photos, Qualifications

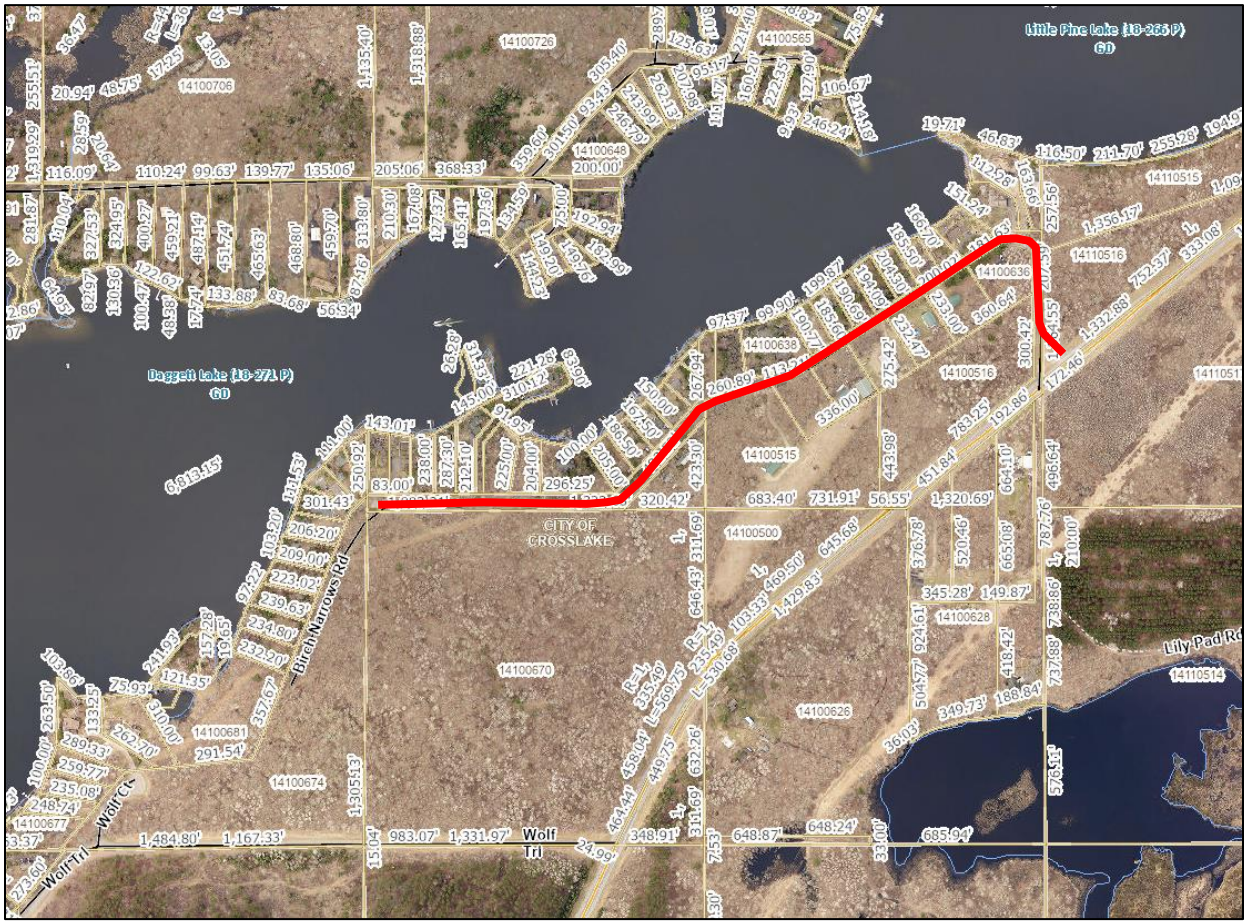
LOCATION MAP

PROJECT MAP



The streets in the project are highlighted in white or are circled in white.

AERIAL VIEW OF PROJECT MAP



*Red line reflects the project areas

SUBJECT PHOTOGRAPHS

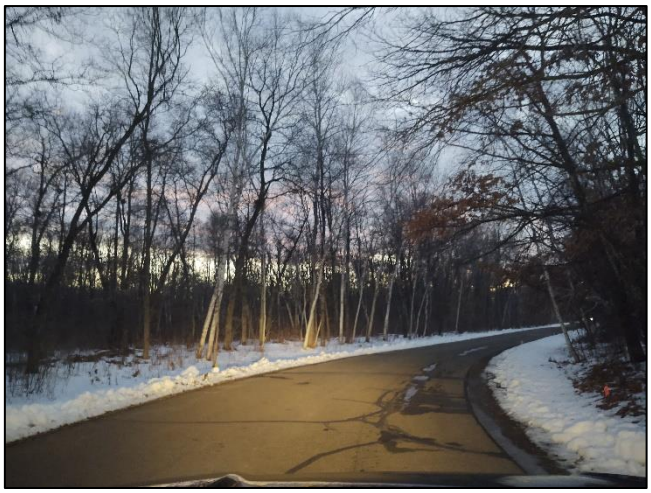
Street view

Street view

Street view

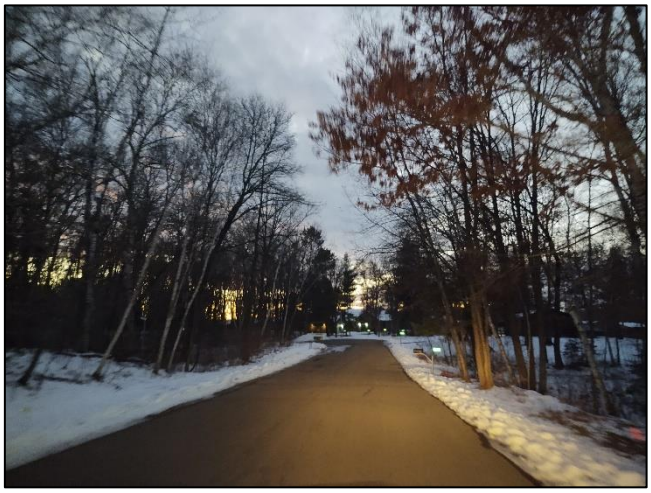
Street view

Subject Photographs – continued



Street view

Street view



Street view

Street view

QUALIFICATIONS

Appraisal Experience

Presently and since 2006, **Ethan Waytas, MAI** has been employed as an employee of Nagell Appraisal Incorporated, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. He is currently a full time licensed certified general real estate appraiser, partner, and director of the company's IT department.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, cinema, numerous special use properties, golf courses, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Testimony

-- Court, commission, mediation testimony, etc. has been given

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #40368613
Holds the MAI designation from the Appraisal Institute

Education

-- Graduate of the University of Minnesota: College of Science and Engineering, Twin Cities Campus
Bachelor of Science in Computer Science, with distinction, 3.86 GPA.

-- **General & Professional Practice Courses & Seminars**
-- Basic Appraisal Procedures
-- Basic Appraisal Principles
-- 2012-2013 15-Hour National Uniform Standards of Professional Appraisal Practice
-- General Appraiser Sales Comparison Approach
-- General Appraiser Income Approach – Part 1
-- General Appraiser Income Approach – Part 2
-- Advanced Income Capitalization
-- General Appraiser Report Writing and Case Studies
-- Real Estate Finance, Statistics and Valuation Modeling
-- 2014-2015 7-hour National USPAP Update Course
-- General Appraiser Site Valuation & Cost Approach
-- Advanced Market Analysis and Highest & Best Use
-- Advanced Concepts & Case Studies
-- Quantitative Analysis

Appraisal Experience

Presently and since 1985, **William R. Waytas** has been employed as a full time real estate appraiser. Currently a partner and President of the Nagell Appraisal & Consulting, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. Mr. Waytas was employed with Iver C. Johnson & Company, Ltd., Phoenix, AZ from 1985 to 1987.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, hotel, hotel water park, bed & breakfast, cinema, marina, numerous special use properties, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Review*** *– residential, commercial and land development.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #4000813.
Appraisal Institute: SRA, Senior Residential Appraiser Designation,
General Associate Member
Employee Relocation Council: CRP Certified Relocation Professional Designation.
International Right-Of-Way Association: Member
HUD/FHA: On Lender Selection Roster and Review Appraiser
DNR: Approved appraiser for Department of Natural Resources

Testimony

-- Court, deposition, commission, arbitration & administrative testimony given.

Mediator

-- Court appointed in Wright County.

Committees

-- President of Metro/Minnesota Chapter, 2002, Appraisal Institute.
-- Chairman of Residential Admissions, Metro/MN Chapter, AI.
-- Chairman Residential Candidate Guidance, Metro/Minnesota Chapter, AI.
-- Elm Creek Watershed Commission, Medina representative 3 years.
-- Medina Park Commission, 3 years.

Education

-- Graduate of Bemidji State University, Minnesota. B.S. degree in Bus. Ad.
-- During college, summer employment in building trades (residential and commercial).
-- Graduate of Cecil Lawter Real Estate School. Past Arizona Real Estate License.

-- **General & Professional Practice Courses & Seminars**
-- Course 101-Introduction to Appraising Real Property.
-- Numerous Standards of Professional Practice Seminar.
-- Fair Lending Seminar.
-- Eminent Domain & Condemnation Appraising.
-- Eminent Domain (An In-Depth Analysis)
-- Property Tax Appeal
-- Eminent Domain
-- Business Practices and Ethics
-- Scope of Work
-- Construction Disturbances and Temporary Loss of Going Concern
-- Uniform Standards for Federal Land Acquisitions (Yellow Book Seminar)
-- Partial Interest Valuation Divided (conservation easements, historic preservation easements, life estates, subsurface rights, access easements, air rights, water rights, transferable development rights)

Commercial/Industrial/Subdivision Courses & Seminars
-- Capitalization Theory & Techniques
-- Highest & Best Use Seminar
-- General & Residential State Certification Review Seminar
-- Subdivision Analysis Seminar.
-- Narrative Report Writing Seminar (general)
-- Advanced Income Capitalization Seminar
-- Advanced Industrial Valuation
-- Appraisal of Local Retail Properties
-- Appraising Convenience Stores
-- Analyzing Distressed Real Estate
-- Evaluating Commercial Construction
-- Fundamentals of Separating Real Property, Personal Property and Intangible Business Assets

Residential Courses & Seminars
-- Course 102-Applied Residential Appraising
-- Narrative Report Writing Seminar (residential)
-- HUD Training session local office for FHA appraisals
-- Familiar with HUD Handbook 4150.1 REV-1 & other material from local FHA office.
-- Appraiser/Underwriter FHA Training
-- Residential Property Construction and Inspection
-- Numerous other continuing education seminars for state licensing & AI

Speaking Engagements

-- Bankers
-- Auditors
-- Assessors
-- Relocation (Panel Discussion)

Publications

-- Real Estate Appraisal Practice (book): Acknowledgement
-- Articles for Finance & Commerce and Minnesota Real Estate Journal

Report Type
Real Estate Consulting
Letter Report (Restricted Appraisal)

Effective Date
December 9, 2020

Client

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

Subject Property

Street Improvement Project
Whitefish Avenue, Hilltop Drive, Woodland Drive,
& Cool Haven Lane
Crosslake, MN 56442

File # V2010002 – Whitefish Avenue

Prepared By:
Ethan Waytas, MAI, Appraiser
William R. Waytas, SRA, Appraiser

Nagell Appraisal Incorporated
12805 Highway 55, Suite 300
Plymouth, Minnesota 55441
Tel: 952.544.8966 | Fax: 952.544.8969

NAGELL APPRAISAL INCORPORATED

12805 Highway 55 #300
Plymouth, MN 55441
Established in 1968

Phone **952-544-8966**
Fax **952-544-8969**

City of Crosslake
Attn: Dave Reese, PE, City Engineer
7804 Industrial Park Road
Baxter, MN 56425

December 10, 2020

To Dave Reese:

Per your request, this is a letter report to assist the city for guidance regarding a street improvement project within Plymouth (see attached map for the location of the streets in the project). The project is a street improvement of Whitefish Avenue, Woodland Drive, Hilltop Drive, and Cool Haven Lane.

This report is not an appraisal of a specific property, but rather provides a preliminary opinion of a general range of market benefit, if any, for similar properties. Relevant information, including USPAP, is retained in the workfile. If an appraisal of a specific property was performed, the findings of that report are considered likely to be consistent with the findings in this document (but could vary). The letter can function as a test of reasonableness for the proposed assessments.

SCOPE OF ASSIGNMENT

In accordance with your request, a drive-by viewing of the properties has been made along with some general market comments regarding benefit (if any) for the street improvement project as it relates to the subject market. As noted in the engagement letter, no specific sales data has been collected for this assignment. The general market comments are based on past appraisals, experience, and market information.

Pictures of the streets were taken on December 9, 2020 by William R. Waytas. The appraiser also viewed aerial/satellite image on the county GIS website and Google street view images. Project information and documents were provided; the conclusions and information from the report were a part of the overall consulting letter analysis. The preliminary engineering information is retained in the appraiser's workfile.

PROJECT

The City of Crosslake is proposing to complete a mill and overlay of the existing streets within the project area.

Per request, you desire to know the benefit (if any) as it impacts properties in the project area.

Motivation for the road improvement project stemmed from deteriorating road surface.

AREA DESCRIPTION

The City of Crosslake is a northern Minnesota Community located just north of Brainerd. The Twin Cities are about 2.5 hours to the south, which makes the area an appealing summer destination for cabin owners. The Whitefish Chain of Lakes is a set of 14 interconnected lakes situated between the communities of Crosslake, Pequot Lakes, and Pine River. The chain has some of the highest valued lakefront in Minnesota. Access to most shopping and surrounding communities is within 30 minutes. Highway 3 is the major road that provides access to surrounding communities. Most existing buildings in the area are of average to good+ quality. No apparent adverse influences.

The population for Crosslake in 2010 was 2,141, up from 1,893 in 2000—a 13.1% increase. The 2019 estimated population is 2,354, a 9.9% increase.

Single family homes generally range in value between $50,000 and $2,000,000+ (lake property) in the City Limits with an average of about $475,000 (MLS statistics). The city is a mixture of residential (lake front and non-lake front), industrial, and commercial. Most homes are average to good quality.

SUBJECT PROPERTIES

The project area consists of single-family residential, with a mixture of lake frontage and non-lake frontage sites. There are also some vacant lots. The city did not provide the total number of assessed properties at this time.

EXISTING STREETS & UTILITIES

Physical Condition of the Existing Road: The existing road improvements are paved with no curb or gutter. The road condition, based on the visual inspection of the streets, is rated to be Average -. There are signs of transverse, longitudinal, and alligator cracking on the paved road. There are also areas of raveling.

Physical Condition of Existing Utilities: The utilities in the area are private well, private septic, electricity and propane gas.

Functional Design of the Road: The existing road is dated, in Average - condition, and does have substantial large cracks, heaving, raveling, etc. The road condition is rated to be Average -.

Road and utility infrastructure in poor to average - condition do not meet the expectations of typical market participants in this suburban market for re-development, resale price, and/or updating the current uses. Overall, the existing street improvements are in Average - condition, are beginning to look dated (or function) and reflect likewise on the adjoining properties.

PROPOSED IMPROVEMENTS

The city is proposing a mill and overlay of the existing road. Per engineer, the top 1.5” would be removed and then 1.5” of new asphalt will be re-paved.

The city indicated that utilities are not being worked on at this time.

Given the existing condition of the road, the proposed project is logical.

If any of the above descriptions change, the benefit due to the project could differ.

HIGHEST AND BEST USE

The subject project area is located in the northwestern portion of the city in an area of residential uses.

Owners in the subject area appear to update their property as needed when site and building components wear out or become dated. Owners in the overall area commonly pave their driveways or maintain parking lots as needed, recognizing it adds value when done. Therefore, it is logical to update the road and/or utility infrastructure to the subject properties as needed, as these are essential property characteristics that are expected in this market.

An informed buyer would consider the condition of the road, traffic flow/management, and utilities. A well-constructed and good condition road provides aesthetic appeal to a property and efficient/safe traffic flow. Given a choice, a potential informed buyer would likely prefer a newer road with good traffic flow over a deteriorating road with fair traffic flow. Additionally, a potential informed buyer would likely prefer newer utility infrastructure as compared to older, dated and inferior utility infrastructure.

If replacement of components of real estate near the end of their economic life in a home or building is postponed, it can be costlier in the long run; delays in replacing components can result in incurring higher interim maintenance costs and potential difficulty in marketing the property. Also, it is typical for the cost of the replacement of an improvement to increase over time. That said it is logical and prudent for market participants to update/replace dated components when needed. Therefore, the highest and best use of the surrounding properties in the project area is for the continued various uses with the proposed infrastructure improvements.

Note: The existing road is in Average – condition at this time, however, if the road is not maintained, the condition can deteriorate quickly. This can eventually lead to damaging of the road base.

DISCUSSION OF MARKET BENEFIT

Listed below are the factors that will be taken into consideration concerning the potential benefit to the properties.

Description	Existing Improvements	Change
1) Road Surface	**Average -**	**New, asphalt**
2) Base Condition	Assumed Average	Assumed Average
3) Curb	None	None
4) Drainage	n/a	n/a
5) Storm Sewer	Surface	Surface
6) City water	n/a	n/a
7) City sewer	n/a	n/a
8) Sidewalk	None	None
9) Street Lights	Average	Average
10) Functional Design of Road	**Dated**	**Good, new**
11) Traffic Management	Average	Average
12) Pedestrian Use (biking, walking, etc.)	**Fair (surface deterioration)**	**Good**
13) Median	n/a	n/a
14) Road Proximity to Properties	n/a	n/a
15) Dust	n/a	n/a
16) Visual Impact on Properties	**Fair**	**Good**

Based on the preceding grid, the subject properties will improve in 4 of the 16 categories. Market participants generally recognize that roads and utilities need replacing when nearing the end of a long economic life. A typical buyer in the subject market commonly prefers a good condition paved road surface versus an inferior condition paved road surface. Similarly for utilities, market participants prefer new or newer utilities versus older utilities. In addition to visual benefit, new street improvements provide better and safer use for pedestrians (biking, walking, stroller, rollerblading, etc.) and drivers. The new streets and utilities will enhance potential for re-development and/or updating the current properties. Properties that indirectly/directly abut or have driveways/access that exit on the new street will benefit.

Based on past appraisals, experience, and general market information, it is not uncommon for properties similar to those in the subject market to realize an increase in price for new street improvements.

Given the scope of the project, the age/quality/condition of houses, properties in the area with newer street improvements could see an average price benefit of:

- **Single-Family Residential Homes – Lake Frontage** — $1,500 to $3,000 per buildable lot
- **Single-Family Residential Homes – Non-Lake Frontage** — $1,000 to $2,500 per buildable lot
- **Vacant Residential Land – Lake Frontage** — $1,500 to $3,000 per buildable lot
- **Vacant Residential Land – Non-Lake Frontage** — $1,000 to $2,500 per buildable lot

Note: The above benefit considers only the scope of the project. Higher value buildings/homes or larger lots are on the upper end of the range. Properties on corners, with one street being improved and the other not, might receive less than the above ranges (for example 50% of the benefit).

CONCLUSION

The benefit amounts noted above should not be construed or relied on as being an appraisal of a specific property, but are general observations based on the overall market. If an appraisal were made on the individual properties, the actual benefit amount could vary from market observations above.

If you have additional questions, please do not hesitate to contact us.

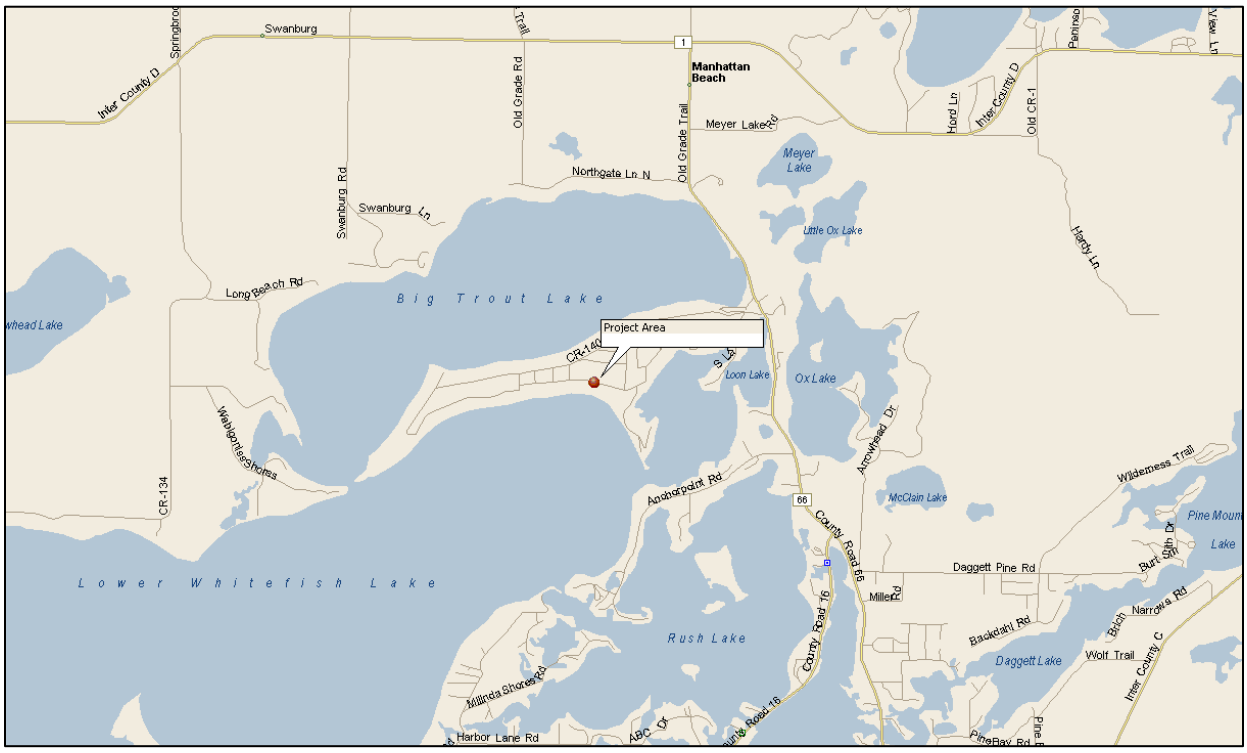
Sincerely,

Ethan Waytas, MAI
Certified General MN 40368613

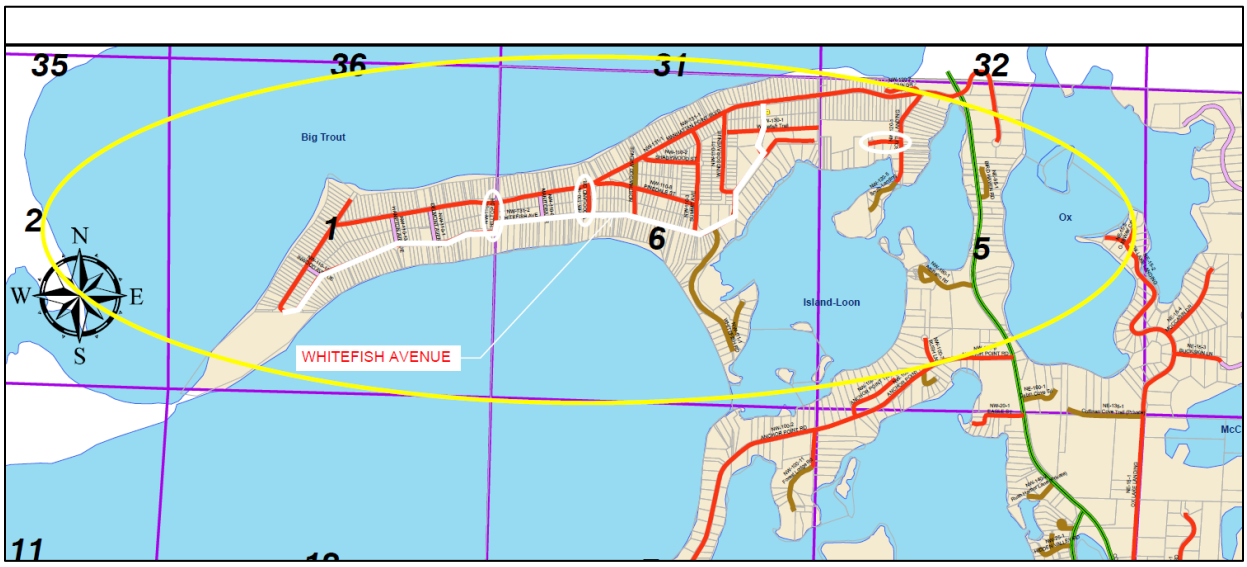
William R. Waytas, SRA
Certified General MN 4000813

Enclosures: Location Map, Aerial Map View of Project, Subject Photos, Qualifications

LOCATION MAP



PROJECT MAP



The streets in the project are highlighted in white or are circled in white.

AERIAL VIEW OF PROJECT MAP

*Red line reflects the project areas

SUBJECT PHOTOGRAPHS

Street view

Street view

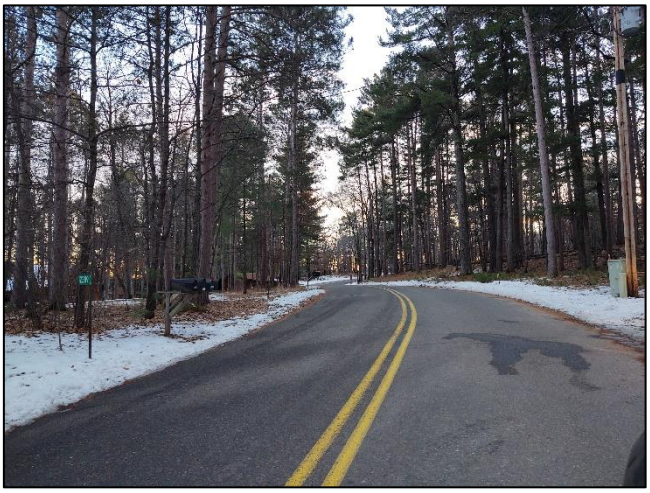
Street view

Street view

Subject Photographs – continued

Street view

Street view



Street view

Street view

Subject Photographs – continued

Street view

Street view

Street view

Street view

QUALIFICATIONS

Appraisal Experience

Presently and since 2006, **Ethan Waytas, MAI** has been employed as an employee of Nagell Appraisal Incorporated, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. He is currently a full time licensed certified general real estate appraiser, partner, and director of the company's IT department.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, cinema, numerous special use properties, golf courses, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Testimony

-- Court, commission, mediation testimony, etc. has been given

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #40368613
Holds the MAI designation from the Appraisal Institute

Education

-- Graduate of the University of Minnesota: College of Science and Engineering, Twin Cities Campus
Bachelor of Science in Computer Science, with distinction, 3.86 GPA.

-- **General & Professional Practice Courses & Seminars**
-- Basic Appraisal Procedures
-- Basic Appraisal Principles
-- 2012-2013 15-Hour National Uniform Standards of Professional Appraisal Practice
-- General Appraiser Sales Comparison Approach
-- General Appraiser Income Approach – Part 1
-- General Appraiser Income Approach – Part 2
-- Advanced Income Capitalization
-- General Appraiser Report Writing and Case Studies
-- Real Estate Finance, Statistics and Valuation Modeling
-- 2014-2015 7-hour National USPAP Update Course
-- General Appraiser Site Valuation & Cost Approach
-- Advanced Market Analysis and Highest & Best Use
-- Advanced Concepts & Case Studies
-- Quantitative Analysis

Curriculum Vitae -- continued

Appraisal Experience

Presently and since 1985, **William R. Waytas** has been employed as a full time real estate appraiser. Currently a partner and President of the Nagell Appraisal & Consulting, an independent appraisal firm (11 employees) who annually prepare 1,500 +/- appraisal reports of all types. Mr. Waytas was employed with Iver C. Johnson & Company, Ltd., Phoenix, AZ from 1985 to 1987.

Properties appraised:

- ***Commercial*** *- low and high-density multi-family, retail, office, industrial, restaurant, church, strip-mall, fast-food, convenience stores, auto-service and repair, hotel, hotel water park, bed & breakfast, cinema, marina, numerous special use properties, and subdivision analysis.*
- ***Residential*** *– single-family residences, hobby farms, lakeshore, condominiums, townhouses, REO and land.*
- ***Eminent Domain*** *– extensive partial and total acquisition appraisal services provided to numerous governmental agencies and private owners.*
- ***Special Assessment*** *– numerous street improvement and utilities projects for both governmental and private owners.*
- ***Review*** *– residential, commercial and land development.*
- ***Clients*** *- served include banks, savings and loan associations, trust companies, corporations, governmental bodies, relocation companies, attorneys, REO companies, accountants and private individuals.*
- ***Area of Service -*** *most appraisal experience is in the greater Twin Cities Metro Area (typically an hour from downtown metro). Numerous assignments throughout Minnesota.*

Professional Membership, Associations & Affiliations

License: Certified General Real Property Appraiser, MN License #4000813.
Appraisal Institute: SRA, Senior Residential Appraiser Designation,
General Associate Member
Employee Relocation Council: CRP Certified Relocation Professional Designation.
International Right-Of-Way Association: Member
HUD/FHA: On Lender Selection Roster and Review Appraiser
DNR: Approved appraiser for Department of Natural Resources

Testimony

-- Court, deposition, commission, arbitration & administrative testimony given.

Mediator

-- Court appointed in Wright County.

Committees

-- President of Metro/Minnesota Chapter, 2002, Appraisal Institute.
-- Chairman of Residential Admissions, Metro/MN Chapter, AI.
-- Chairman Residential Candidate Guidance, Metro/Minnesota Chapter, AI.
-- Elm Creek Watershed Commission, Medina representative 3 years.
-- Medina Park Commission, 3 years.

Education

-- Graduate of Bemidji State University, Minnesota. B.S. degree in Bus. Ad.
-- During college, summer employment in building trades (residential and commercial).
-- Graduate of Cecil Lawter Real Estate School. Past Arizona Real Estate License.

-- **General & Professional Practice Courses & Seminars**
-- Course 101-Introduction to Appraising Real Property.
-- Numerous Standards of Professional Practice Seminar.
-- Fair Lending Seminar.
-- Eminent Domain & Condemnation Appraising.
-- Eminent Domain (An In-Depth Analysis)
-- Property Tax Appeal
-- Eminent Domain
-- Business Practices and Ethics
-- Scope of Work
-- Construction Disturbances and Temporary Loss of Going Concern
-- Uniform Standards for Federal Land Acquisitions (Yellow Book Seminar)
-- Partial Interest Valuation Divided (conservation easements, historic preservation easements, life estates, subsurface rights, access easements, air rights, water rights, transferable development rights)

Commercial/Industrial/Subdivision Courses & Seminars
-- Capitalization Theory & Techniques
-- Highest & Best Use Seminar
-- General & Residential State Certification Review Seminar
-- Subdivision Analysis Seminar.
-- Narrative Report Writing Seminar (general)
-- Advanced Income Capitalization Seminar
-- Advanced Industrial Valuation
-- Appraisal of Local Retail Properties
-- Appraising Convenience Stores
-- Analyzing Distressed Real Estate
-- Evaluating Commercial Construction
-- Fundamentals of Separating Real Property, Personal Property and Intangible Business Assets

Residential Courses & Seminars
-- Course 102-Applied Residential Appraising
-- Narrative Report Writing Seminar (residential)
-- HUD Training session local office for FHA appraisals
-- Familiar with HUD Handbook 4150.1 REV-1 & other material from local FHA office.
-- Appraiser/Underwriter FHA Training
-- Residential Property Construction and Inspection
-- Numerous other continuing education seminars for state licensing & AI

Speaking Engagements

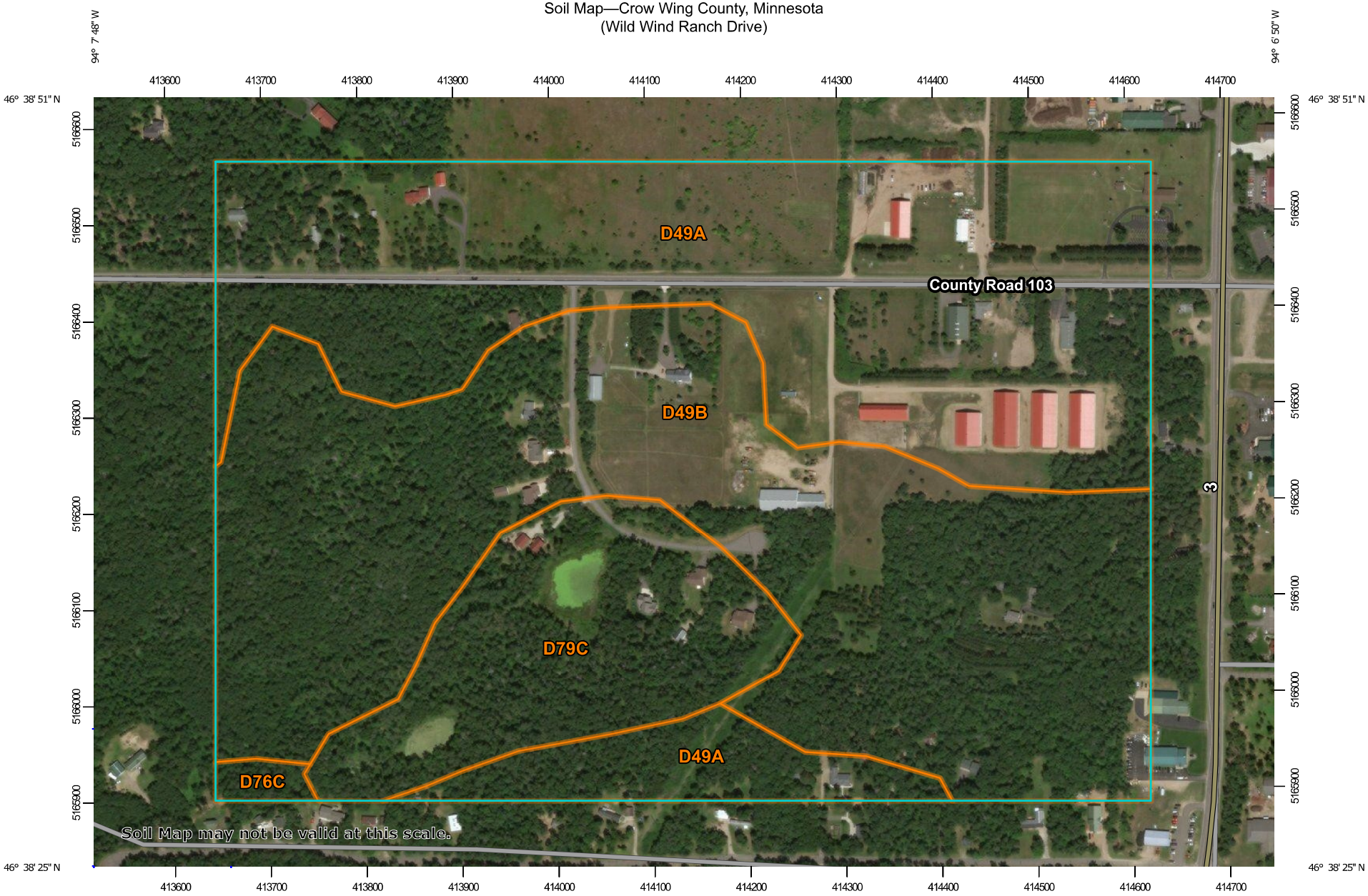
-- Bankers
-- Auditors
-- Assessors
-- Relocation (Panel Discussion)

Publications

-- Real Estate Appraisal Practice (book): Acknowledgement
-- Articles for Finance & Commerce and Minnesota Real Estate Journal

APPENDIX C

Soil Map—Crow Wing County, Minnesota
(Wild Wind Ranch Drive)



Map Scale: 1:5,620 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crow Wing County, Minnesota
Survey Area Data: Version 15, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 12, 2014—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
D49A	Graycalm loamy sand, 0 to 2 percent slopes	67.2	41.8%
D49B	Graycalm loamy sand, 2 to 8 percent slopes	70.9	44.1%
D76C	Graycalm-Grayling complex, pitted, 2 to 15 percent slopes	1.0	0.6%
D79C	Graycalm-Rifle complex, 0 to 10 percent slopes	21.5	13.4%
Totals for Area of Interest		**160.7**	**100.0%**

Soil Map—Crow Wing County, Minnesota
(Rushmoor Boulevard)

Map Scale: 1:5,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crow Wing County, Minnesota
Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 12, 2014—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
D49B	Graycalm loamy sand, 2 to 8 percent slopes	10.0	9.6%
D77C	Graycalm-Grayling complex, 2 to 15 percent slopes	4.7	4.5%
D77D	Graycalm-Grayling complex, 12 to 25 percent slopes	17.0	16.4%
D79C	Graycalm-Rifle complex, 0 to 10 percent slopes	29.2	28.2%
D82D	Graycalm-Grayling-Water complex, 0 to 25 percent slopes	4.0	3.9%
W	Water	38.8	37.4%
Totals for Area of Interest		**103.6**	**100.0%**

Soil Map—Crow Wing County, Minnesota
(Harbor Lane)

Map Scale: 1:4,000 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crow Wing County, Minnesota
Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 12, 2014—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
D49A	Graycalm loamy sand, 0 to 2 percent slopes	23.6	33.9%
D76C	Graycalm-Grayling complex, pitted, 2 to 15 percent slopes	0.6	0.9%
D76D	Graycalm-Grayling complex, pitted, 2 to 20 percent slopes	3.7	5.2%
D77D	Graycalm-Grayling complex, 12 to 25 percent slopes	12.0	17.2%
D82D	Graycalm-Grayling-Water complex, 0 to 25 percent slopes	21.3	30.5%
W	Water	8.6	12.4%
Totals for Area of Interest		**69.8**	**100.0%**

Soil Map—Crow Wing County, Minnesota
(Birch Narrows Rd)

Map Scale: 1:5,340 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crow Wing County, Minnesota
Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

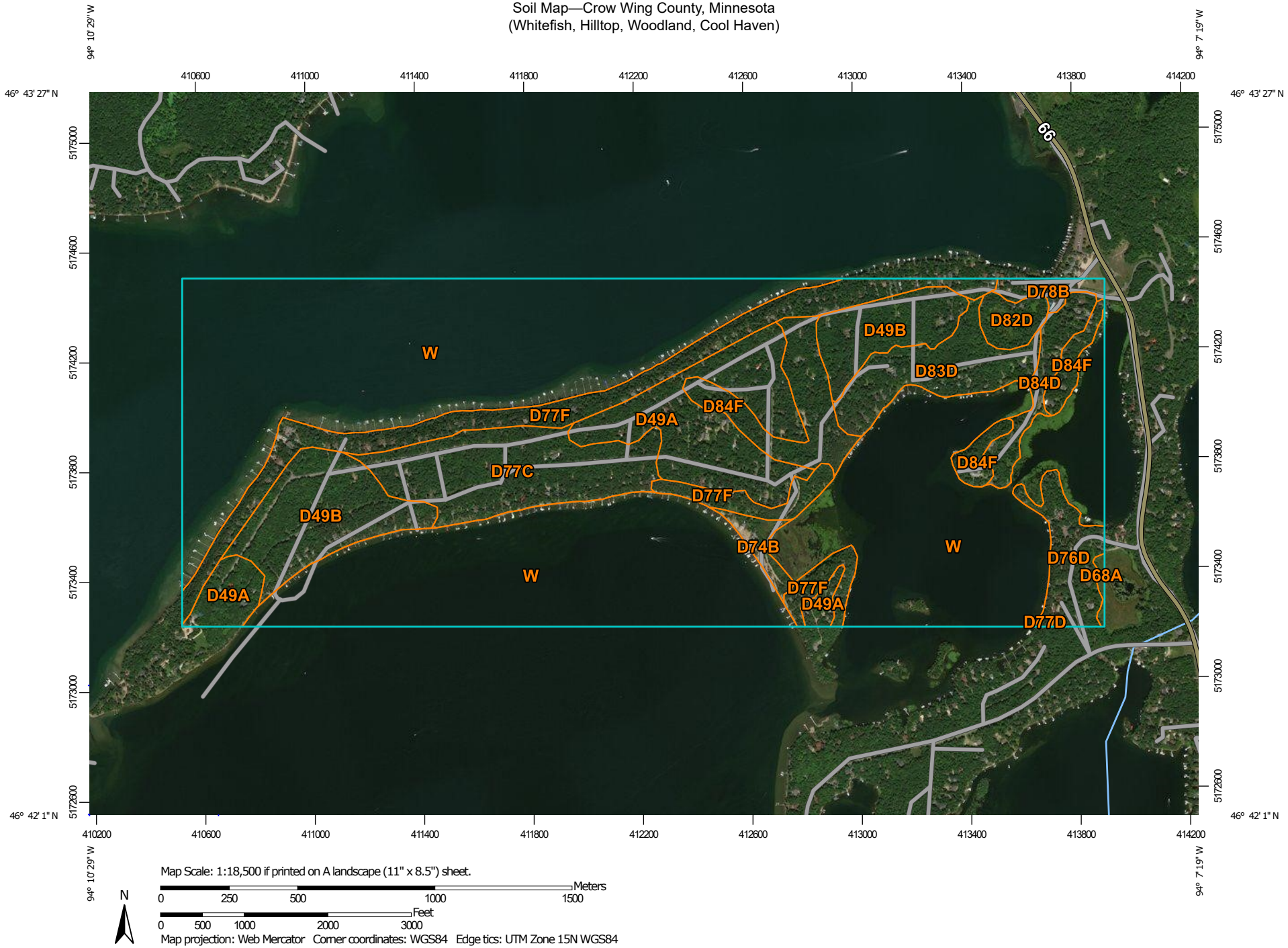
Date(s) aerial images were photographed: Jun 12, 2014—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
D49A	Graycalm loamy sand, 0 to 2 percent slopes	47.8	52.2%
D75A	Graycalm loamy sand, pitted, 0 to 3 percent slopes	0.8	0.8%
D77D	Graycalm-Grayling complex, 12 to 25 percent slopes	15.1	16.5%
W	Water	27.9	30.4%
Totals for Area of Interest		**91.6**	**100.0%**

Soil Map—Crow Wing County, Minnesota
(Whitefish, Hilltop, Woodland, Cool Haven)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Crow Wing County, Minnesota
Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 12, 2014—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

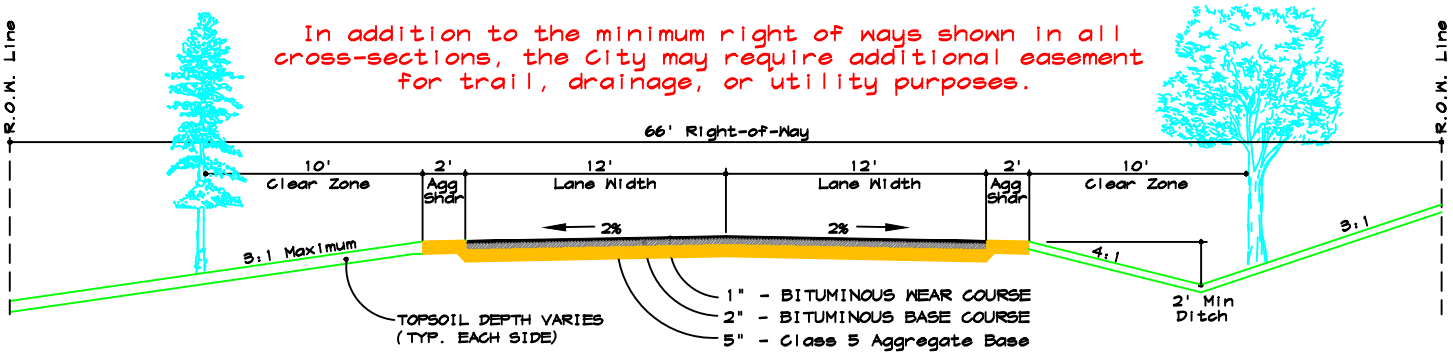
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
D49A	Graycalm loamy sand, 0 to 2 percent slopes	81.7	7.7%
D49B	Graycalm loamy sand, 2 to 8 percent slopes	77.0	7.3%
D68A	Uskabwanka-Rifle-Lougee complex, 0 to 1 percent slopes	1.5	0.1%
D74B	Wurtsmith-Meehan-Beach complex, 1 to 8 percent slopes	7.1	0.7%
D76D	Graycalm-Grayling complex, pitted, 2 to 20 percent slopes	22.8	2.2%
D77C	Graycalm-Grayling complex, 2 to 15 percent slopes	65.0	6.1%
D77D	Graycalm-Grayling complex, 12 to 25 percent slopes	0.5	0.0%
D77F	Graycalm-Grayling complex, 25 to 45 percent slopes	81.5	7.7%
D78B	Graycalm-Grayling-Meehan complex, 1 to 8 percent slopes	7.2	0.7%
D82D	Graycalm-Grayling-Water complex, 0 to 25 percent slopes	9.9	0.9%
D83D	Eutrudepts-Graycalm-Rollins complex, pitted, 10 to 20 percent slopes	35.5	3.3%
D84D	Eutrudepts-Graycalm-Rollins complex, 10 to 20 percent slopes	16.3	1.5%
D84F	Eutrudepts-Graycalm-Rollins complex, 20 to 45 percent slopes	42.2	4.0%
W	Water	612.4	57.7%
Totals for Area of Interest		**1,060.7**	**100.0%**

APPENDIX D

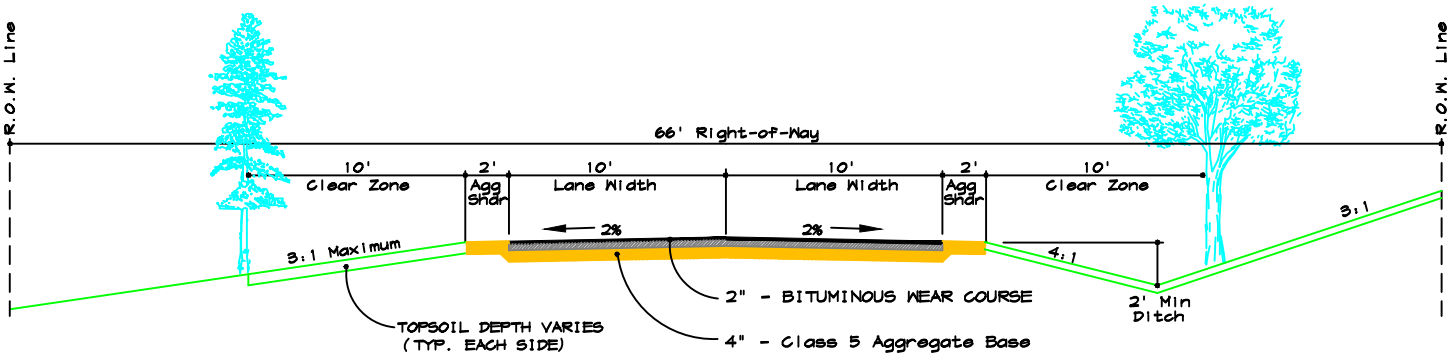
CITY OF CROSSLAKE
Minimum Sections
for City Maintained Roadways

Assumes 30 mph Design Speed and Granular Subgrade Material

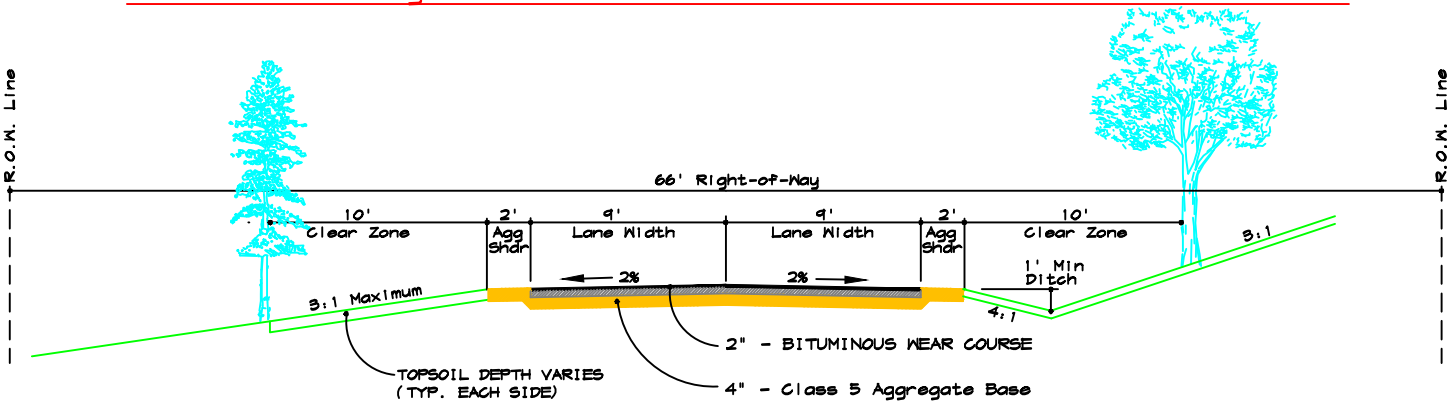
In addition to the minimum right of ways shown in all cross-sections, the city may require additional easement for trail, drainage, or utility purposes.



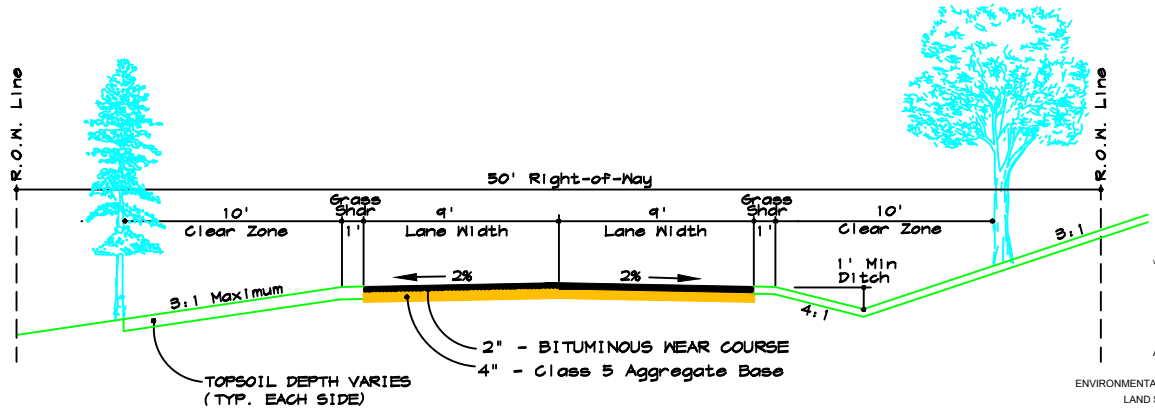
Major Rural Roadway (RJ) - Over 40 lots (410+ ADT)



Rural Roadway (RR) - 26 lots to 40 lots (260 to 400 ADT)



Minor Rural Roadway (RN) - 11 to 25 lots (110 to 250 ADT)



Lanes and Accesses (L or A) - 0 to 10 lots (0 to 100 ADT)

www.wsn.us.com
WIDSETH SMITH NOLTING
ARCHITECTS
ENGINEERS
ENVIRONMENTAL SERVICES
LAND SURVEYORS
WATER RESOURCES
ALEXANDRIA, MN
BAXTER, MN
BEMIDJI, MN
CROOKSTON, MN
GRAND FORKS, ND
RED WING, MN
ROCHESTER, MN

DATE: JUNE 2011

RURSECT.DWG

APPENDIX E

WILD WIND RANCH DRIVE

Assessments #		SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
0		Vacant, non lakefront	2000-6000	14320580	R/W
0		Vacant, non lakefront	2000-6000	14320579	COMMON OUTLOT B
1	1	SF, non lakefront	4000-8000	14320578	13525 COUNTY ROAD 103
1	2	SF, non lakefront	4000-8000	14320577	33985 WILD WIND RANCH DR
1	3	Vacant, non lakefront	2000-6000	14320576	33965 WILD WIND RANCH DR
1	4	SF, non lakefront	4000-8000	14320575	33941 WILD WIND RANCH DR
1	5	SF, non lakefront	4000-8000	14320574	33929 WILD WIND RANCH DR
1	6	SF, non lakefront	4000-8000	14320573	33921 WILD WIND RANCH DR
1	7	SF, non lakefront	4000-8000	14320572	33909 WILD WIND RANCH DR
1	8	SF, non lakefront	4000-8000	14320571	33873 WILD WIND RANCH DR
1	9	SF, non lakefront	4000-8000	14320570	33853 WILD WIND RANCH DR
1	10	SF, non lakefront	4000-8000	14320569	33833 WILD WIND RANCH DR
1	11	SF, non lakefront	4000-8000	14320567	13423 COUNTY ROAD 103
1	12	Vacant, non lakefront	2000-6000	14320568	
1		SF, non lakefront	4000-8000	14320697	33885 COUNTY ROAD 3
13					

Wild Wind Ranch Drive

Date: 1/3/2021 Time: 7:47:59 AM

CROW WING COUNTY MINNESOTA

RUSHMOOR BOULEVARD AND RUSHMOOR TRAIL

Assessments #		SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
1	1	SF, lakefront	5000-10000	14170629	
1	2	Vacant, lakefront	4000-8000	14170628	
1	3	SF, lakefront	5000-10000	14170627	36412 RUSHMOOR BLVD
1	4	Vacant, lakefront	4000-8000	14170626	36394 RUSHMOOR BLVD
1	5	SF, lakefront	5000-10000	14170625	36374 RUSHMOOR BLVD
1	6	Vacant, lakefront	4000-8000	14170556	
1	7	SF, lakefront	5000-10000	14170555	36421 RUSHMOOR BLVD
1	8	SF, lakefront	5000-10000	14170536	36556 RUSHMOOR BLVD
1	9	SF, lakefront	5000-10000	14170535	36544 RUSHMOOR BLVD
1	10	SF, lakefront	5000-10000	14170534	36522 RUSHMOOR BLVD
1	11	SF, lakefront	5000-10000	14170533	
1	12	SF, lakefront	5000-10000	14170532	36498 RUSHMOOR BLVD
1	13	SF, lakefront	5000-10000	14170531	36484 RUSHMOOR BLVD
1	14	Vacant, non lakefront	2000-6000	14170507	
1	15	Vacant, non lakefront	2000-6000	14170506	
1	16	Vacant, non lakefront	2000-6000	14170505	
1	17	Vacant, lakefront	4000-8000	14170504	
1	18	Vacant, lakefront	4000-8000	14170503	
1	19	Vacant, lakefront	4000-8000	14170537	
1	20	Vacant, non lakefront	2000-6000	14170508	
1	21	Vacant, lakefront	4000-8000	14170552	
1	22	SF, lakefront	5000-10000	14170550	12780 RUSHMOOR BLVD
1	23	SF, lakefront	5000-10000	14170549	12798 RUSHMOOR BLVD
1	24	SF, lakefront	5000-10000	14170548	12818 RUSHMOOR BLVD
1	25	SF, lakefront	5000-10000	14170547	12838 RUSHMOOR BLVD
1	26	SF, lakefront	5000-10000	14170546	12850 RUSHMOOR BLVD
1	27	SF, lakefront	5000-10000	14170545	12880 RUSHMOOR BLVD
1	28	SF, lakefront	5000-10000	14170544	12896 RUSHMOOR BLVD
1	29	SF, lakefront	5000-10000	14170543	12902 RUSHMOOR BLVD
1	30	SF, lakefront	5000-10000	14170542	12910 RUSHMOOR BLVD
1	31	SF, lakefront	5000-10000	14170541	12916 RUSHMOOR BLVD
1	32	SF, lakefront	5000-10000	14170540	12905 RUSHMOOR BLVD
1	33	SF, lakefront	5000-10000	14170539	12897 RUSHMOOR BLVD
1	34	SF, lakefront	5000-10000	14170538	
1	1	SF, lakefront	5000-10000	14180651	12701 RUSHMOOR TRL
1	2	SF, non lakefront	4000-8000	14180653	
1	3	SF, lakefront	5000-10000	14170554	12710 RUSHMOOR TRL
1	4	SF, lakefront	5000-10000	14170553	12738 RUSHMOOR TRL
1	5	SF, lakefront	5000-10000	14170551	12756 RUSHMOOR TRL

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Rushmoor 1

Date: 1/2/2021 Time: 4:55:27 PM

CROW WING COUNTY MINNESOTA

Rushmoor 1

Date: 1/2/2021 Time: 5:05:55 PM

CROW WING COUNTY MINNESOTA

Rushmoor 1

Date: 1/2/2021 Time: 5:05:08 PM

CROW WING COUNTY MINNESOTA

HARBOR LANE

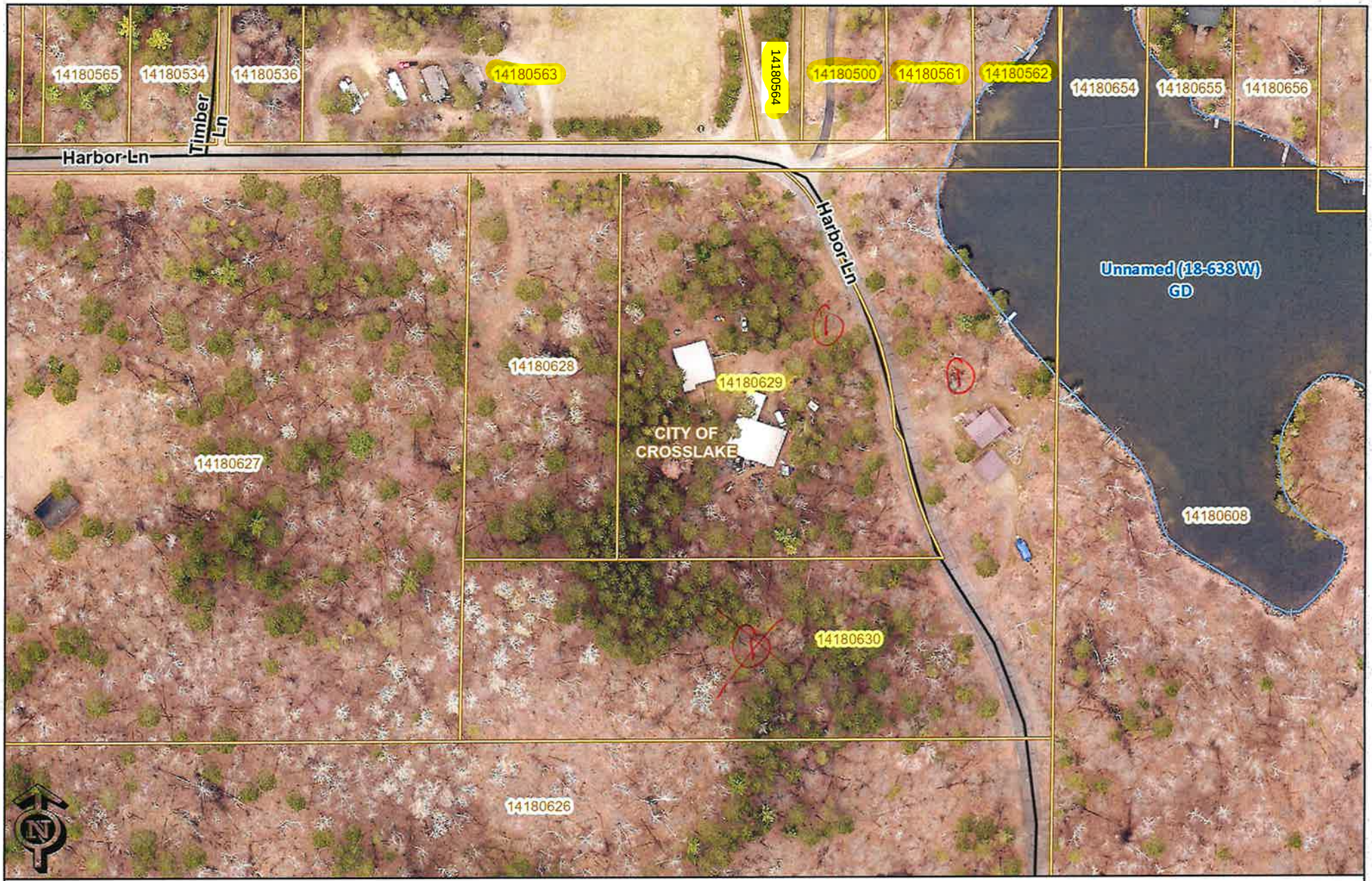
Assessments #		SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
1	1	Vacant, non lakefront	2000-6000	14180630	12114 HARBOR LN
1	2	SF, non lakefront	4000-8000	14180629	12067 HARBOR LN
1	3	SF, non lakefront	4000-8000	14180626	12195 HARBOR LN
1	4	SF, non lakefront	4000-8000	14180623	12225 HARBOR LN
1	5	Vacant, lakefront	4000-8000	14180608	36405 ABC DR
0	6	Vacant, non lakefront	2000-6000	14180502	CWC R/W
1	7	Lakefront	5000-10000	14180563	12038 HARBOR LN
1	8	Lakefront	5000-10000	14180564	12044 HARBOR LN
1	9	Lakefront	5000-10000	14180500	12046 HARBOR LN
1	10	Lakefront	5000-10000	14180561	12048 HARBOR LN
1	11	Lakefront	5000-10000	14180562	12050 HARBOR LN
10					

Harbor

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Date: 1/2/2021 Time: 5:06:53 PM

CROW WING COUNTY MINNESOTA



Harbor

Date: 1/2/2021 Time: 5:07:28 PM

CROW WING COUNTY MINNESOTA

Harbor

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Date: 1/3/2021 Time: 6:40:54 AM

CROW WING COUNTY MINNESOTA

BIRCH NARROWS ROAD

Assessments #		SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
1	1	SF, lakefront	5000-10000	14100712	15658 BIRCH NARROWS RD
1	2	SF, lakefront	5000-10000	14100711	15652 BIRCH NARROWS RD
1	7	Vacant, non lakefront	2000-6000	14100670	
1	8	Vacant, non lakefront	2000-6000	14110516	
0	9	Vacant, lakefront	4000-8000	14110515	USA
1		SF, lakefront	5000-10000	14100669	15452 BIRCH NARROWS RD
1	10	SF, lakefront	5000-10000	14100668	15448 BIRCH NARROWS RD
1	11	SF, lakefront	5000-10000	14100667	15434 BIRCH NARROWS RD
1	12	SF, lakefront	5000-10000	14100666	15422 BIRCH NARROWS RD
1	13	SF, lakefront	5000-10000	14100665	15410 BIRCH NARROWS RD
1	14	SF, lakefront	5000-10000	14100664	15394 BIRCH NARROWS RD
1	15	SF, lakefront	5000-10000	14100663	15356 BIRCH NARROWS RD
1	16	Vacant, lakefront	4000-8000	14100662	15336 BIRCH NARROWS RD
1	17	SF, lakefront	5000-10000	14100661	15318 BIRCH NARROWS RD
1	18	SF, lakefront	5000-10000	14100660	15304 BIRCH NARROWS RD
1	19	SF, lakefront	5000-10000	14100659	15294 BIRCH NARROWS RD
1	20	SF, lakefront	5000-10000	14100658	15274 BIRCH NARROWS RD
1	21	SF, lakefront	5000-10000	14100657	15266 BIRCH NARROWS RD
1	22	SF, lakefront	5000-10000	14100656	15262 BIRCH NARROWS RD
1	23	SF, lakefront	5000-10000	14100655	15310 BIRCH NARROWS RD
1	24	SF, non lakefront	4000-8000	14100654	15413 BIRCH NARROWS RD
1	25	SF, lakefront	5000-10000	14100647	15640 BIRCH NARROWS RD
1	26	SF, lakefront	5000-10000	14100646	15612 BIRCH NARROWS RD
1	27	SF, lakefront	5000-10000	14100645	15594 BIRCH NARROWS RD
1	28	SF, lakefront	5000-10000	14100644	15588 BIRCH NARROWS RD
1	29	SF, lakefront	5000-10000	14100643	15572 BIRCH NARROWS RD
1	30	SF, lakefront	5000-10000	14100642	15564 BIRCH NARROWS RD
1	31	SF, lakefront	5000-10000	14100641	15550 BIRCH NARROWS RD
1	32	SF, lakefront	5000-10000	14100640	15536 BIRCH NARROWS RD
1	33	SF, lakefront	5000-10000	14100639	15520 BIRCH NARROWS RD
1	34	SF, lakefront	5000-10000	14100638	15486 BIRCH NARROWS RD
1	35	SF, lakefront	5000-10000	14100637	15464 BIRCH NARROWS RD
1	36	SF, non lakefront	4000-8000	14100636	
1	37	SF, non lakefront	4000-8000	14100635	15609 BIRCH NARROWS RD
1	38	SF, non lakefront	4000-8000	14100634	15577 BIRCH NARROWS RD
1	39	Vacant, non lakefront	2000-6000	14100633	
1	40	SF, non lakefront	4000-8000	14100632	15533 BIRCH NARROWS RD
1	41	Vacant, non lakefront	2000-6000	14100516	
1	42	SF, non lakefront	4000-8000	14100515	
1	43	SF, non lakefront	4000-8000	14100514	15559 BIRCH NARROWS RD

37

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Birch Narrows Rd 1

Date: 1/1/2021 Time: 9:27:14 AM

CROW WING COUNTY MINNESOTA

Birch Narrows Rd 2

Date: 1/1/2021 Time: 9:28:41 AM

CROW WING COUNTY MINNESOTA

WHITEFISH AVENUE

Assessments #	SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
1	Lutheran Social Service		14010743	11148 MANHATTAN POINT BLVD
1	SF, lakefront	1500-3000	14060921	12365 WHITEFISH AVE
	SF, lakefront	1500-3000	14060920	12509 WHITEFISH TRL
1	Vacant land, non-lakefront	1000-2500	14060821	0
1	Vacant land, non-lakefront	1000-2500	14060820	0
	Vacant land, non-lakefront	1000-2500	14060819	0
1	Vacant land, non-lakefront	1000-2500	14060818	0
	Vacant land, non-lakefront	1000-2500	14060817	0
1	Vacant land, non-lakefront	1000-2500	14060816	11804 WHITEFISH AVE
1	SF, non-lakefront	1000-2500	14060815	11816 WHITEFISH AVE
1	Vacant land, non-lakefront	1000-2500	14060802	0
1	Vacant land, non-lakefront	1000-2500	14060801	0
1	Vacant land, non-lakefront	1000-2500	14060800	0
1	Vacant land, non-lakefront	1000-2500	14060799	0
1	Vacant land, non-lakefront	1000-2500	14060798	0
1	Vacant land, non-lakefront	1000-2500	14060797	0
1	Vacant land, non-lakefront	1000-2500	14060796	0
	Vacant land, non-lakefront	1000-2500	14060795	0
1	Vacant land, non-lakefront	1000-2500	14060794	0
	Vacant land, non-lakefront	1000-2500	14060793	0
	Vacant land, non-lakefront	1000-2500	14060792	0
1	SF, non-lakefront	1000-2500	14060780	0
1	Vacant land, non-lakefront	1000-2500	14060779	0
1	Vacant land, non-lakefront	1000-2500	14060778	0
	Vacant land, non-lakefront	1000-2500	14060777	0
	Vacant land, non-lakefront	1000-2500	14060776	0
	Vacant land, non-lakefront	1000-2500	14060775	0
	Vacant land, non-lakefront	1000-2500	14060774	0
1	SF, non-lakefront	1000-2500	14060773	0
1	Vacant land, non-lakefront	1000-2500	14060703	0
1	SF, non-lakefront	1000-2500	14060686	12482 WHITEFISH AVE
1	Vacant land, non-lakefront	1000-2500	14060675	0
1	SF, non-lakefront	1000-2500	14060674	12533 WHITEFISH AVE

1	SF, non-lakefront	1000-2500	14060658	0
1	Vacant land, non-lakefront	1000-2500	14060626	0
1	SF, non-lakefront	1000-2500	14060625	12042 WHITEFISH AVE
1	SF, non-lakefront	1000-2500	14060624	12054 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14060623	0
1	SF, non-lakefront	1000-2500	14060622	12066 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14060621	0
	Vacant land, non-lakefront	1000-2500	14060620	0
1	Vacant land, non-lakefront	1000-2500	14060619	12086 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14060618	0
1	SF, non-lakefront	1000-2500	14060617	0
	SF, non-lakefront	1000-2500	14060616	12098 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14060615	12118 WHITEFISH AVE
1	Vacant land, non-lakefront	1000-2500	14060614	0
	SF, non-lakefront	1000-2500	14060613	0
1	SF, non-lakefront	1000-2500	14060612	0
	SF, non-lakefront	1000-2500	14060611	38579 SUMMIT AVE
1	Vacant land, non-lakefront	1000-2500	14060610	0
1	Vacant land, non-lakefront	1000-2500	14060609	0
	Vacant land, non-lakefront	1000-2500	14060608	0
	Vacant land, non-lakefront	1000-2500	14060607	0
1	Vacant land, non-lakefront	1000-2500	14060606	0
1	SF, non-lakefront	1000-2500	14060605	12204 WHITEFISH AVE
1	Vacant land, non-lakefront	1000-2500	14060602	38576 SUMMIT AVE
1	Vacant land, lakefront	1500-3000	14060601	0
1	Vacant land, lakefront	1500-3000	14060600	0
1	Vacant land, non-lakefront	1000-2500	14060599	12171 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14060598	0
	SF, non-lakefront	1000-2500	14060597	0
1	SF, non-lakefront	1000-2500	14060596	
	SF, non-lakefront	1000-2500	14060595	12165 WHITEFISH AVE
1	Vacant land, non-lakefront	1000-2500	14060594	12159 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14060593	0
1	Vacant land, non-lakefront	1000-2500	14060592	
	SF, non-lakefront	1000-2500	14060591	12153 WHITEFISH AVE

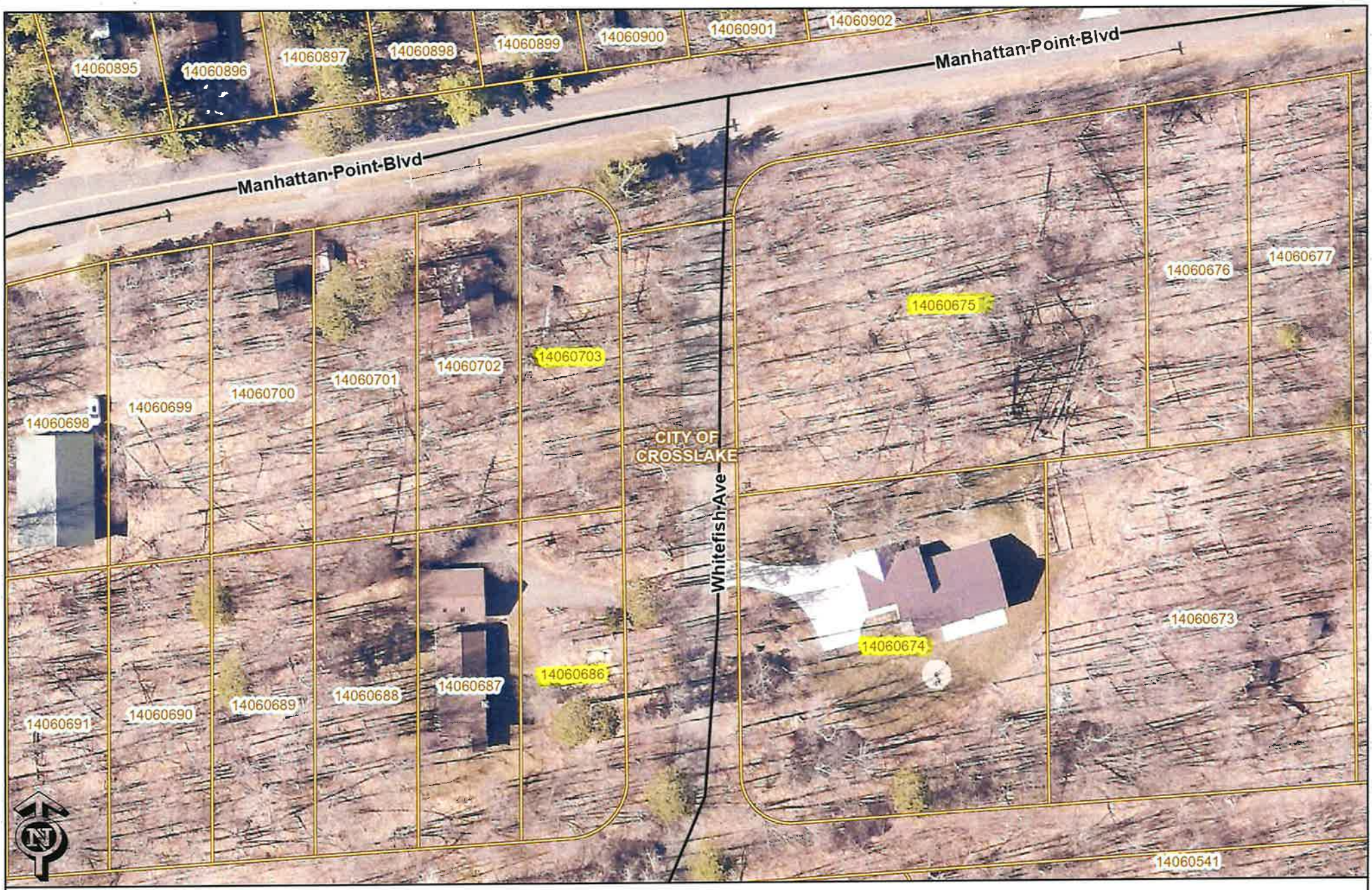
1	SF, lakefront	1500-3000	14060590	12141 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060589	12133 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060588	12125 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060587	12115 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060586	12105 WHITEFISH AVE
	SF, lakefront	1500-3000	14060585	12091 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060584	0
	SF, lakefront	1500-3000	14060583	12081 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060582	0
	SF, lakefront	1500-3000	14060581	12075 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060580	0
	SF, lakefront	1500-3000	14060579	12047 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060578	12043 WHITEFISH AVE
	SF, lakefront	1500-3000	14060577	0
1	Vacant land, lakefront	1500-3000	14060576	12017 WHITEFISH AVE
	SF, lakefront	1500-3000	14060575	0
1	SF, lakefront	1500-3000	14060574	12005 WHITEFISH AVE
	SF, lakefront	1500-3000	14060573	0
	SF, lakefront	1500-3000	14060572	11995 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060571	11995 WHITEFISH AVE
	SF, lakefront	1500-3000	14060570	0
1	SF, lakefront	1500-3000	14060569	11979 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060568	11959 WHITEFISH AVE
1	Vacant land, lakefront	1500-3000	14060567	0
	SF, lakefront	1500-3000	14060566	11913 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060565	11905 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060564	0
	SF, lakefront	1500-3000	14060563	11881 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060562	11871 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060561	11865 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060560	11861 WHITEFISH AVE
	SF, lakefront	1500-3000	14060559	0
1	SF, lakefront	1500-3000	14060558	11853 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060557	11841 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060556	0

1	SF, lakefront	1500-3000	14060555	11831 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060554	11815 WHITEFISH AVE
	SF, lakefront	1500-3000	14060553	0
1	SF, lakefront	1500-3000	14060552	11805 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010742	11729 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010741	11717 WHITEFISH AVE
	SF, lakefront	1500-3000	14010740	0
1	SF, lakefront	1500-3000	14010739	11705 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010738	11663 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010737	11657 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010736	11651 WHITEFISH AVE
	Vacant land, lakefront	1500-3000	14010735	0
1	SF, lakefront	1500-3000	14010734	0
	SF, lakefront	1500-3000	14010733	11623 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010732	0
	SF, lakefront	1500-3000	14010731	11609 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010730	11595 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010729	0
	SF, lakefront	1500-3000	14010728	11581 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010727	11565 WHITEFISH AVE
	Vacant land, lakefront	1500-3000	14010726	0
1	SF, lakefront	1500-3000	14010725	11551 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010724	11537 WHITEFISH AVE
	SF, lakefront	1500-3000	14010723	0
1	SF, lakefront	1500-3000	14010722	11521 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010721	11503 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010720	11491 WHITEFISH AVE
1	Vacant land, lakefront	1500-3000	14010719	0
	Vacant land, lakefront	1500-3000	14010718	11451 WHITEFISH AVE
1	Vacant land, lakefront	1500-3000	14010717	0
	SF, lakefront	1500-3000	14010716	11441 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010715	11435 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010714	11419 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010713	11417 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010712	11405 WHITEFISH AVE

1	SF, lakefront	1500-3000	14010711	11393 WHITEFISH AVE
	SF, lakefront	1500-3000	14010710	0
1	Vacant land, lakefront	1500-3000	1401P000	11373 WHITEFISH AVE
	Vacant land, lakefront	1500-3000	14010706	11373 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010705	11355 WHITEFISH AVE
	SF, lakefront	1500-3000	14010704	11341 WHITEFISH AVE
	SF, lakefront	1500-3000	14010703	0
1	SF, lakefront	1500-3000	14010702	11325 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010701	11319 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010700	11305 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010699	11281 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010698	11277 WHITEFISH AVE
1	SF, lakefront	1500-3000	14010697	11261 WHITEFISH AVE
1	Vacant land, lakefront	1500-3000	14010696	0
	Vacant land, lakefront	1500-3000	14010695	0
1	SF, lakefront	1500-3000	14010694	11231 WHITEFISH AVE
	SF, lakefront	1500-3000	14010693	0
1	SF, lakefront	1500-3000	14010692	11195 WHITEFISH AVE
1	Vacant land, non-lakefront	1000-2500	14010691	0
	Vacant land, non-lakefront	1000-2500	14010690	0
	Vacant land, non-lakefront	1000-2500	14010689	0
1	Vacant land, non-lakefront	1000-2500	14010688	0
	Vacant land, non-lakefront	1000-2500	14010687	0
	Vacant land, non-lakefront	1000-2500	14010686	0
1	Vacant land, non-lakefront	1000-2500	14010685	0
1	Vacant land, non-lakefront	1000-2500	14010684	0
1	SF, non-lakefront	1000-2500	14010683	11143 MANHATTAN POINT BLVD
1	Vacant land, non-lakefront	1000-2500	14010662	0
	Vacant land, non-lakefront	1000-2500	14010661	11316 WHITEFISH AVE
	Vacant land, non-lakefront	1000-2500	14010660	0
1	SF, non-lakefront	1000-2500	14010659	11330 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010658	0
1	Vacant land, non-lakefront	1000-2500	14010657	11338 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010656	0
1	SF, non-lakefront	1000-2500	14010655	11370 WHITEFISH AVE

	Vacant land, non-lakefront	1000-2500	14010654	0
1	SF, non-lakefront	1000-2500	14010653	11390 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010652	0
1	SF, non-lakefront	1000-2500	14010651	11412 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010650	0
1	SF, non-lakefront	1000-2500	14010649	11424 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010648	0
1	Vacant land, non-lakefront	1000-2500	14010647	0
	Vacant land, non-lakefront	1000-2500	14010646	0
1	Vacant land, non-lakefront	1000-2500	14010645	0
	Vacant land, non-lakefront	1000-2500	14010644	0
	Vacant land, non-lakefront	1000-2500	14010643	0
1	Vacant land, non-lakefront	1000-2500	14010633	0
	Vacant land, non-lakefront	1000-2500	14010632	0
1	SF, non-lakefront	1000-2500	14010631	0
	SF, non-lakefront	1000-2500	14010630	0
1	SF, non-lakefront	1000-2500	14010629	0
	SF, non-lakefront	1000-2500	14010628	0
1	SF, non-lakefront	1000-2500	14010626	11568 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010609	0
1	SF, non-lakefront	1000-2500	14010608	11592 WHITEFISH AVE
	SF, non-lakefront	1000-2500	14010607	0
1	Vacant land, non-lakefront	1000-2500	14010606	0
1	Vacant land, non-lakefront	1000-2500	14010605	0
	Vacant land, non-lakefront	1000-2500	14010604	0
1	Vacant land, non-lakefront	1000-2500	14010603	0
	Vacant land, non-lakefront	1000-2500	14010602	0
	Vacant land, non-lakefront	1000-2500	14010601	0
1	Vacant land, non-lakefront	1000-2500	14010600	0
	Vacant land, non-lakefront	1000-2500	14010599	0
1	Vacant land, non-lakefront	1000-2500	14010598	0
1	Vacant land, non-lakefront	1000-2500	14010597	0
	SF, non-lakefront	1000-2500	14010596	11714 WHITEFISH AVE
1	SF, non-lakefront	1000-2500	14010595	0
1	Vacant land, lakefront	1500-2999	14060551	0

1	Vacant land, lakefront	1500-3000	14060550	12253 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060549	12275 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060548	12289 WHITEFISH AVE
1	SF, non-lakefront	1000-2500	14060506	0
1	SF, non-lakefront	1000-2500	14060539	
1	Vacant land, non-lakefront	1000-2500	14060538	12398 WHITEFISH AVE
1	SF, non-lakefront	1000-2500	14060537	12472 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060536	11737 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060535	11769 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060534	11787 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060533	11797 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060532	11933 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060531	11951 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060922	12353 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060547	0
1	SF, lakefront	1500-3000	14060546	12307 WHITEFISH AVE
1	SF, lakefront	1500-3000	14060545	12329 WHITEFISH AVE



MHPT

Date: 1/2/2021 Time: 5:22:47 PM

CROW WING COUNTY MINNESOTA

MHPT

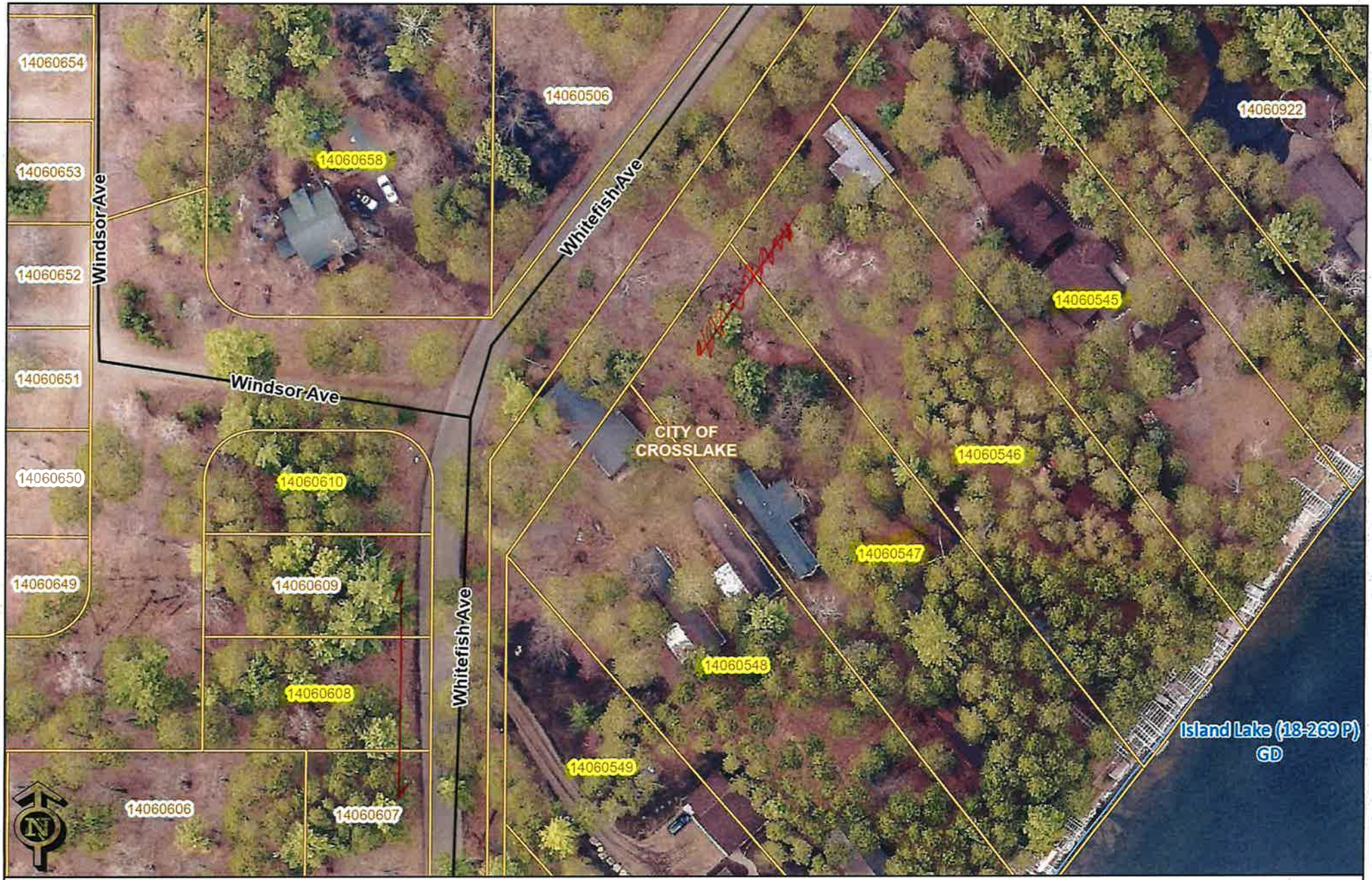
Date: 1/2/2021 Time: 5:22:24 PM

CROW WING COUNTY MINNESOTA

MHPT

Date: 1/2/2021 Time: 5:21:58 PM

CROW WING COUNTY MINNESOTA



MHPT

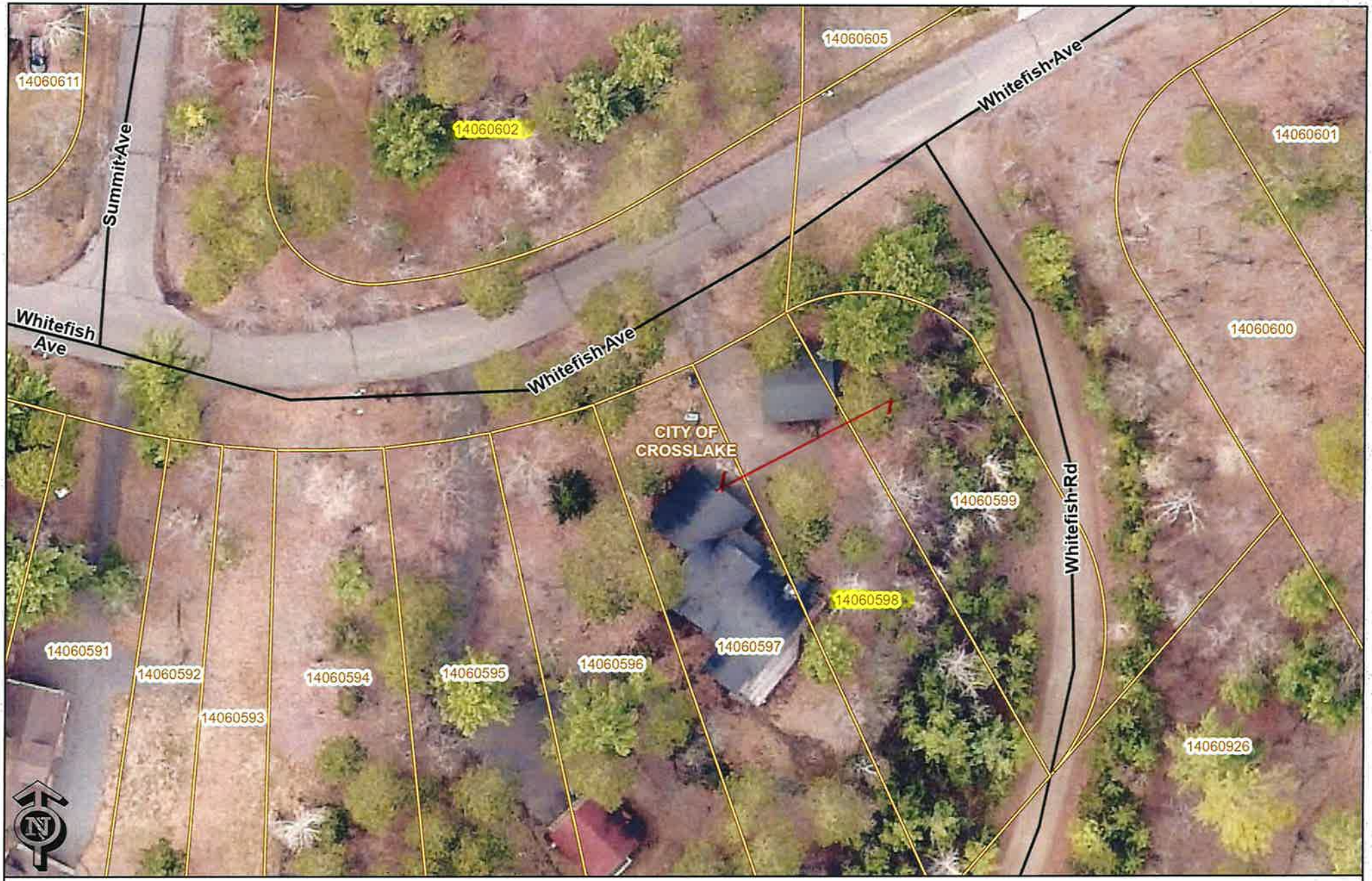
Date: 1/2/2021 Time: 5:21:16 PM

CROW WING COUNTY MINNESOTA

MHPT

Date: 1/2/2021 Time: 5:20:44 PM

CROW WING COUNTY MINNESOTA



MHPT

Date: 1/2/2021 Time: 5:20:10 PM

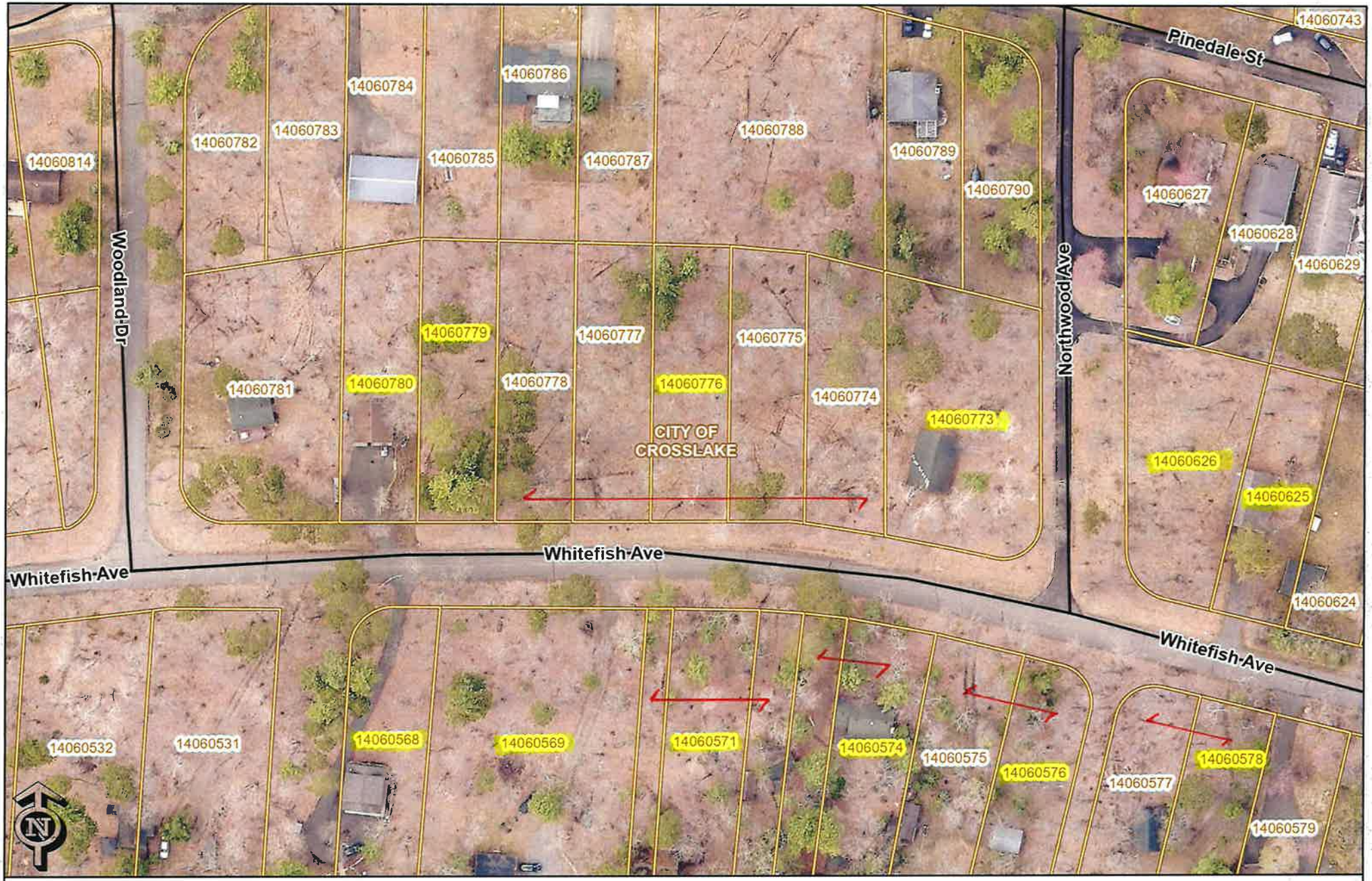
CROW WING COUNTY MINNESOTA

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

MHPT

Date: 1/2/2021 Time: 5:19:10 PM

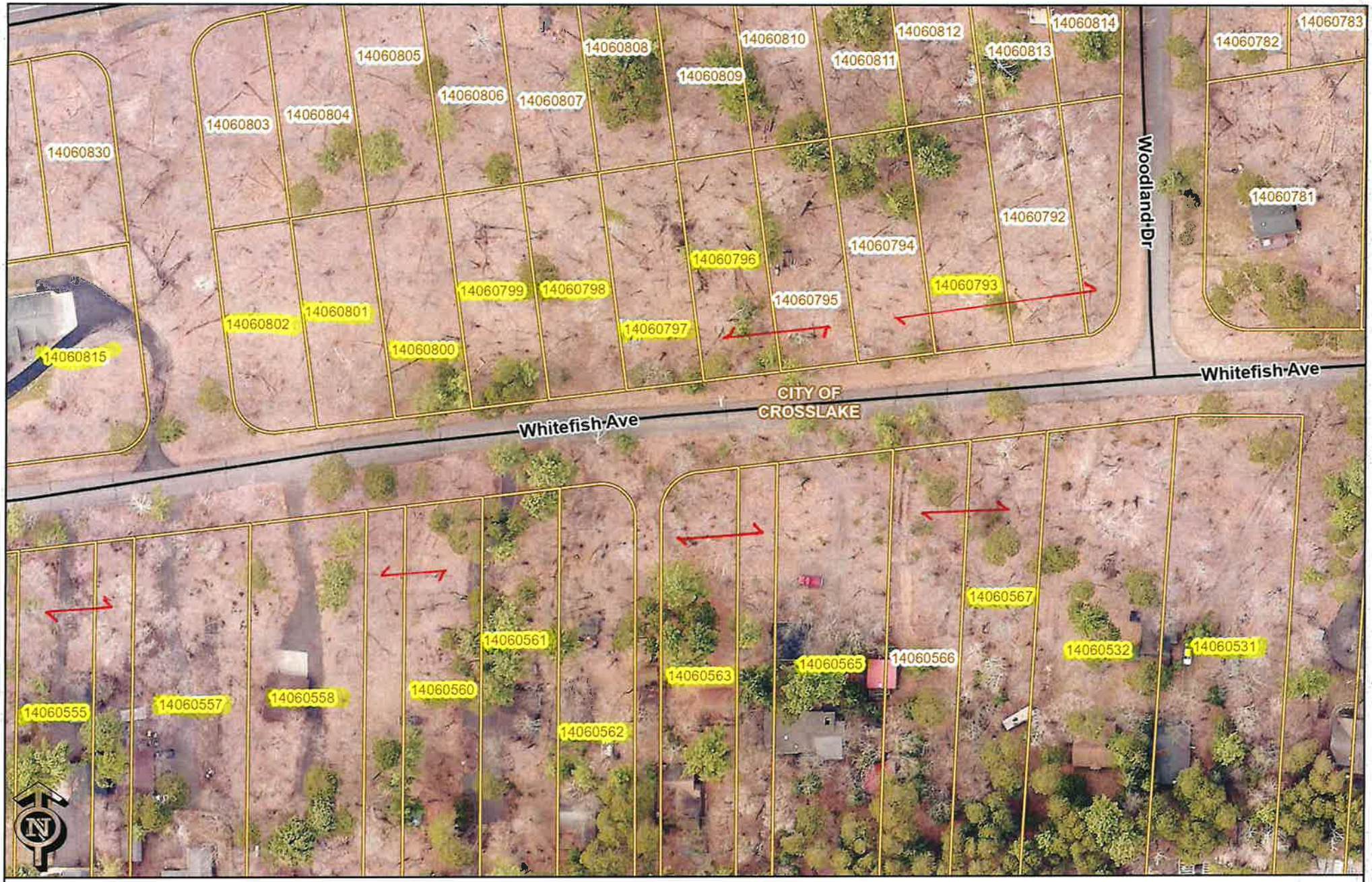
CROW WING COUNTY MINNESOTA



MHPT

Date: 1/2/2021 Time: 5:18:20 PM

CROW WING COUNTY MINNESOTA



MHPT

Date: 1/2/2021 Time: 5:17:25 PM

CROW WING COUNTY MINNESOTA

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

MHPT

Date: 1/2/2021 Time: 5:16:03 PM

CROW WING COUNTY MINNESOTA

MHPT

Date: 1/2/2021 Time: 5:15:09 PM

CROW WING COUNTY MINNESOTA

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

MHPT

Date: 1/2/2021 Time: 5:14:26 PM

CROW WING COUNTY MINNESOTA

MHPT

Date: 1/2/2021 Time: 5:13:48 PM

CROW WING COUNTY MINNESOTA

MHPT

Date: 1/2/2021 Time: 5:13:03 PM

CROW WING COUNTY MINNESOTA

HILLTOP DRIVE

Assessments #	SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
1	SF, non-lakefront	4000-8000	14060823	11789 MANHATTAN POINT BLVD
1	Vacant, non-lakefront	2000-6000	14010625	
2				

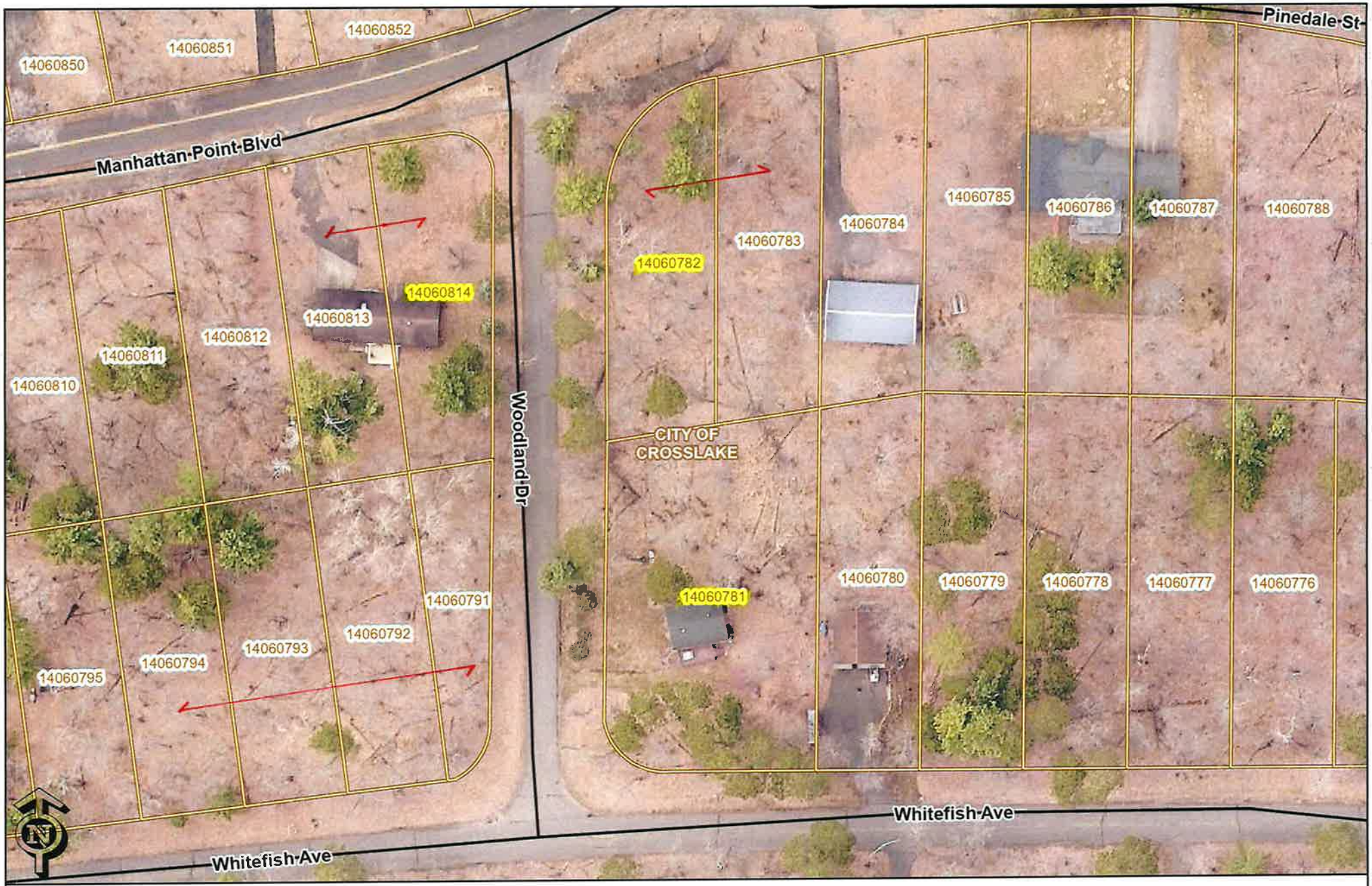
Hilltop Drive

Date: 1/3/2021 Time: 9:13:42 AM

CROW WING COUNTY MINNESOTA

WOODLAND DRIVE

Assessments #	SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
0	Vacant, non-lakefront	2000-6000	14060791	
1	SF, non-lakefront	4000-8000	14060781	11954 WHITEFISH AVE
1	SF, non-lakefront	4000-8000	14060814	0
1	Vacant, non-lakefront	2000-6000	14060782	0
3				



Woodland Drive

Date: 1/3/2021 Time: 9:02:25 AM

CROW WING COUNTY MINNESOTA

COOL HAVEN LANE

Assessment #	SF/Vacant, Lakefront/Non Lakefront	Estimate	PIN	Physical Address
1	Vacant, non-lakefront	2000-6000	14050729	
1	SF, lakefront	5000-10000	14050728	12851 COOL HAVEN LN
1	Vacant, lakefront	4000-8000	14050515	12831 COOL HAVEN LN
1	SF, lakefront	5000-10000	14050727	12817 COOL HAVEN LN
1	SF, lakefront	5000-10000	14050726	12787 COOL HAVEN LN
	SF, lakefront	5000-10000	14050725	
1	Vacant, lakefront	4000-8000	14050724	12761 COOL HAVEN LN
	SF, lakefront	5000-10000	14050723	
0	SF, non-lakefront	4000-8000	14050525	
1	Vacant, lakefront	4000-8000	14050524	
1	SF, lakefront	5000-10000	14050522	12963 COOL HAVEN LN
1	SF, lakefront	5000-10000	14050521	12977 COOL HAVEN LN
0	SF, lakefront	5000-10000	14060543	12751 COOL HAVEN LN
0	SF, lakefront	5000-10000	14050721	12751 COOL HAVEN LN
9				

These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Cool Haven Lane

Date: 1/3/2021 Time: 8:37:16 AM

CROW WING COUNTY MINNESOTA

NORTH

0 1400 2800

SCALE (IN FEET)

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-EBAS-2020-11828 - EXHIBIT AERIAL PHOTO.dwg Plotted by Emma Young 12/28/2020 10:14:12 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

DATE	REV#	REVISIONS DESCRIPTION	BY

DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA

OVERALL AERIAL MAP

SHEET NO.
EXH 1

COUNTY RD 103

14320577

14320576

14320575

14320574

14320573

14320572

14320579

WILD WIND RANCH DRIVE

18'

66'

14320567

14320578

14320697

14320571

14320570

14320569

14320568

NOTE: PAVEMENT WIDTHS SHOWN ARE EXISTING WIDTHS.

PROPOSED ROAD WIDTH (FT)
MATCH EXISTING - 18' AVG.

NORTH

0 100 200

SCALE (IN FEET)

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by:Emma Young 12/28/2020 10:14:16 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: #### LIC. NO. 21432

DATE	REV#	REVISIONS DESCRIPTION	BY

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE,MN

PROJECT AREA #1 - WILD WIND RANCH DRIVE

SHEET NO.
EXH 2

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by:Emma Young 12/28/2020 10:14:19 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DAVID S. REESE
DATE: DEC 2020 LIC. NO. 21432

DATE	REV#	REVISIONS DESCRIPTION	BY

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PRJT AREA #2 - RUSHMOOR BLVD AND RUSHMOOR TRAIL

SHEET NO.
EXH 3

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

BY	REVISIONS DESCRIPTION	REV#	DATE

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PROJECT AREA #3 - HARBOR LANE

SHEET NO.
EXH 4

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by: Emma Young 12/28/2020 10:14:21 AM

LITTLE PINE LAKE

BIRCH NARROWS RD

COUNTY RD 3

14100712
14100711
14100647
14110515
14100646
14100645
14100644
14100643
14100642
14100641
14100640
14100639
14100638
14100637
14100636
14100635
14100634
14100514
14110516
14100516
14100669
14100668
14100667
14100666
14100665
14100664
14100663
14100662
14100661
14100660
14100659
14100658
14100657
14100656
14100655
14100695
14100674
14100670
14100654
14100515
14100633
14100632

33'
24'
24'
66'

NORTH

0 100 200

SCALE (IN FEET)

PROPOSED ROAD WIDTH (FT)

MATCH EXISTING - 24' AVG.

NOTE: PAVEMENT WIDTHS SHOWN ARE EXISTING WIDTHS.

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by:Emma Young 12/28/2020 10:14:24 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC.2020 LIC. NO. 21432

BY	DESCRIPTION	REV#	DATE
	REVISIONS		

DATE: DEC.2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR

JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PROEJCT AREA #4 - BIRCH NARROWS ROAD

SHEET NO.
EXH 5

BIG TROUT LAKE

MANHATTAN POINT BLVD

WHITEFISH AVE

LOWER WHITEFISH LAKE

14010610 14010611 14010609 14010626 14010628 14010629 14010630 14010631 14010632 14010633 14010634 14010635 14010636 14010637 14010638 14010639 14010640 14010641 14010642 14010643 14010644 14010645 14010646 14010647 14010648 14010649 14010650 14010651 14010652 14010653 14010654 14010655 14010656 14010657 14010658 14010659 14010660 14010661 14010662 14010663 14010664 14010665 14010666 14010667 14010668 14010669 14010670 14010671 14010672 14010673 14010674 14010675 14010676 14010677 14010678 14010679 14010680 14010681 14010682 14010683 14010684 14010685 14010686 14010687 14010688 14010689 14010690 14010691 14010692 14010693 14010694 14010695 14010696 14010697 14010698 14010699 14010700 14010701 14010702 14010703 14010704 1401P000 14010706 14010710 14010711 14010712 14010713 14010714 14010715 14010716 14010717 14010718 14010719 14010720 14010721 14010722 14010723 14010724 14010725 14010726 14010727 14010728 14010729 14010743

68'

24'

NOTE: PAVEMENT WIDTHS SHOWN ARE EXISTING WIDTHS.

PROPOSED ROAD WIDTH (FT)
MATCH EXISTING - 24' AVG.

NORTH

0 100 200

SCALE (IN FEET)

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by:Emma Young 12/28/2020 10:14:29 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 23432

REV#	DATE	REVISIONS DESCRIPTION	BY

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PROJECT AREA #5 - WHITEFISH AVENUE - WEST

SHEET NO.
EXH 6

PROPOSED ROAD WIDTH (FT)	
WHITEFISH AVE	MATCH EXISTING - 24' AVG.
HILLTOP DR	MATCH EXISTING - 24' AVG.
WOODLAND DR	MATCH EXISTING - 18' AVG.

NOTE: PAVEMENT WIDTHS SHOWN ARE EXISTING WIDTHS.

NORTH

0 100 200

SCALE (IN FEET)

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by:Emma Young 12/28/2020 10:14:34 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

REVISIONS DESCRIPTION	BY	DATE	REV#

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PRJT AREA #5-WHITEFISH AVE, HILLTOP DR, WOODLAND DR

SHEET NO.
EXH 7

SHADYWOOD ST

PINEDALE ST

SUMMIT AVE

WHITEFISH AVE

WHITEFISH AVE

66'

24'

80'

24'

ISLAND LAKE

14060537
14060539
14060538
14060918
14060919
14060506
14060920
14060921
14060658
14060922
14060545
14060546
14060610
14060609
14060547
14060608
14060548
14060549
14060604
14060606
14060607
14060550
14060605
14060603
14060602
14060551
14060601
14060600
14060599
14060598
14060597
14060596
14060595
14060594
14060593
14060592
14060591
14060590
14060589
14060588
14060587
14060586
14060585
14060584
14060583
14060582
14060581
14060580
14060579
14060578
14060577
14060576
14060575
14060574
14060573
14060572
14060571
14060570
14060773
14060774
14060775
14060776
14060777
14060788
14060787
14060789
14060790
14060627
14060628
14060629
14060630
14060631
14060632
14060633
14060634
14060635
14060636
14060637
14060638
14060639
14060626
14060625
14060624
14060623
14060622
14060621
14060620
14060619
14060618
14060617
14060616
14060614
14060615
14060613
14060612
14060611

NOTE: PAVEMENT WIDTHS SHOWN ARE EXISTING WIDTHS.

PROPOSED ROAD WIDTH (FT)
MATCH EXISTING - 24' AVG.

NORTH

0 100 200

SCALE (IN FEET)

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by:Emma Young 12/28/2020 10:14:41 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

REVISIONS DESCRIPTION	DATE	REV#	BY

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PROJECT AREA #5 - WHITEFISH AVENUE - CENTRAL

SHEET NO.
EXH 8

MANHATTAN POINT BLVD

WHITEFISH AVE

COOL HAVEN LANE

16'

24'

66'

14060537
14060538
14060539
14060506
14060658
14060918
14060919
14060920
14060921
14060922
14060543
14060544
14050721
14050722
14050723
14050724
14050726
14050727
14050728
14050729
14050515
14050524
14050522
14050521
14050526

ISLAND LAKE

NOTE: PAVEMENT WIDTHS SHOWN ARE EXISTING WIDTHS.

PROPOSED ROAD WIDTH (FT)	
WHITEFISH AVE	MATCH EXISTING - 24' AVG.
COOL HAVEN LN	MATCH EXISTING - 16' AVG.

NORTH

0 100 200

SCALE (IN FEET)

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-EXHIBIT-02.dwg Plotted by: Emma Young 12/28/2020 10:14:44 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC.2020 LIC. NO. 21432

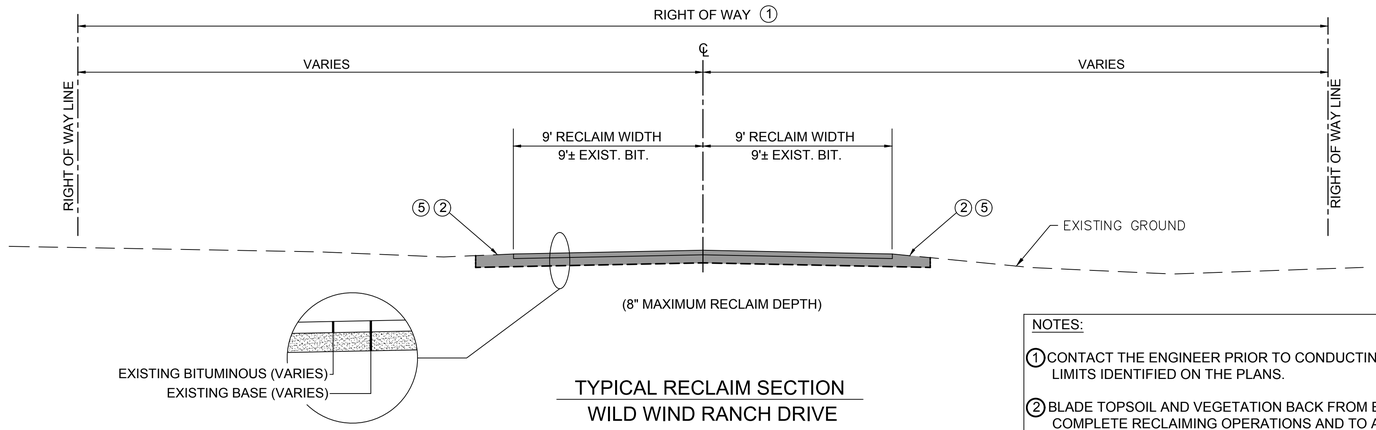
BY	REVISIONS DESCRIPTION	REV#	DATE

DATE: DEC 2020
SCALE: AS SHOWN
DRAWN BY: ERY
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MN

PROJECT AREA #5 - WHITEFISH AVE AND COOL HAVEN LANE

SHEET NO.
EXH 9



TYPICAL RECLAIM SECTION
WILD WIND RANCH DRIVE

NOTES:

(1) CONTACT THE ENGINEER PRIOR TO CONDUCTING ANY OPERATIONS BEYOND THE CONSTRUCTION LIMITS IDENTIFIED ON THE PLANS.

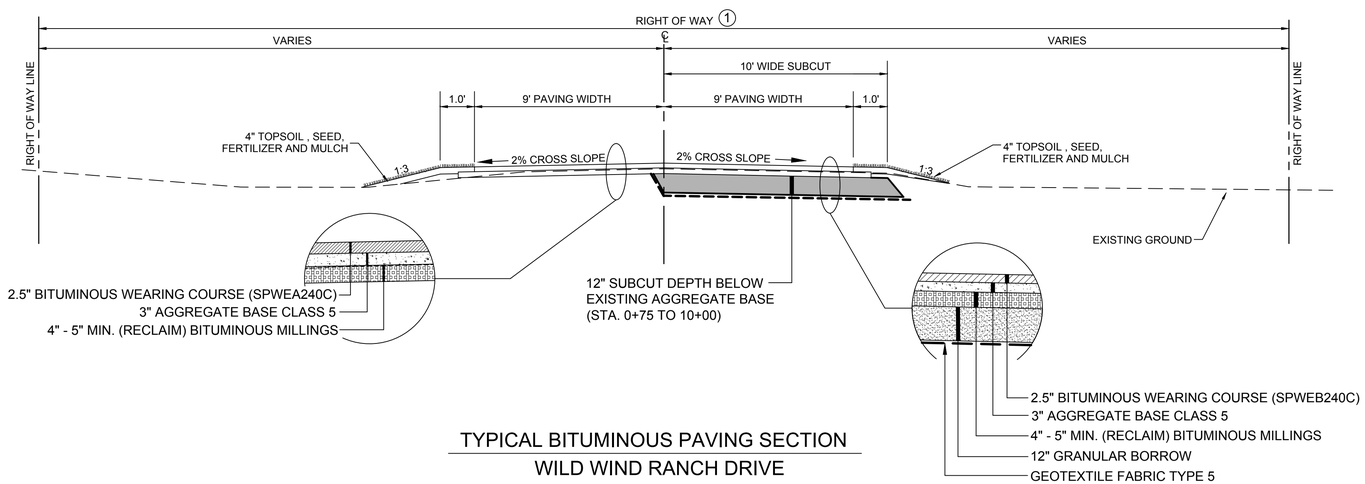
(2) BLADE TOPSOIL AND VEGETATION BACK FROM EXISTING PAVEMENT EDGE (2'-4') AS NEEDED TO COMPLETE RECLAIMING OPERATIONS AND TO AVOID MIXING OF ORGANICS INTO THE WIDENED BASE. TOPSOIL SHALL BE PLACED AS AN EROSION CONTROL BERM DURING CONSTRUCTION. SALVAGED TOPSOIL MAY BE RE-USED.

(3) A STANDARD 2% CROWN IS PROPOSED IN ALL AREAS NOT OTHERWISE IDENTIFIED BY THE ENGINEER. IN CERTAIN AREAS, THE CROSS-SLOPE MAY BE MODIFIED BY THE ENGINEER TO ACCOMMODATE LOCAL DRAINAGE AND/OR EXISTING DRIVEWAY ENTRANCES.

(4) DEPTH OF UNDERGROUND UTILITIES MARKED WITHIN THE PROPOSED RECLAIM AREA, OR OTHER EXCAVATION AREAS, MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE LOWERING OR RELOCATION OF UNDERGROUND UTILITIES, IF NECESSARY, IN ADVANCE OF RECLAIMING OR EXCAVATION OPERATIONS. ANY COSTS ASSOCIATED WITH DELAYS OR DAMAGES TO UTILITIES ARE THE CONTRACTOR'S RESPONSIBILITY.

(5) PRIVATE LAWN IRRIGATION SYSTEMS LOCATED IN THE CONSTRUCTION AREA SHALL BE TEMPORARILY RELOCATED BY THE CONTRACTOR AND PROTECTED FROM DAMAGE DUE TO RECLAIMING OR OTHER OPERATIONS PERFORMED BY THE CONTRACTOR, AND RE-INSTALLED DURING FINAL TURF RESTORATION BY THE CONTRACTOR.

(6) AGGREGATE BASE COMPACTED THICKNESS IS BASED ON 3", BUT MAY VARY IN AREAS REQUIRING A MODIFIED SECTION TO MATCH EXISTING CONCRETE DRIVEWAYS OR TO FACILITATE DRAINAGE. REVIEW SUBGRADE PREP WITH THE ENGINEER.



TYPICAL BITUMINOUS PAVING SECTION
WILD WIND RANCH DRIVE

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-TYP SECTIONS.dwg Plotted by:Emma Young 12/28/2020 10:14:51 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

REVISIONS DESCRIPTION	BY

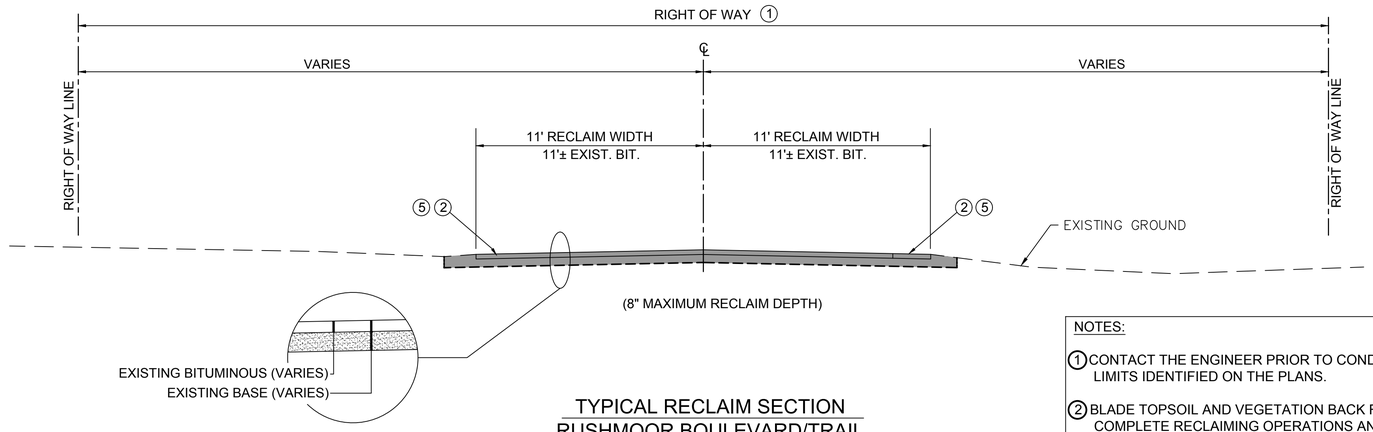
DATE	REV#

DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA

EXHIBIT- FULL DEPTH RECLAMATION

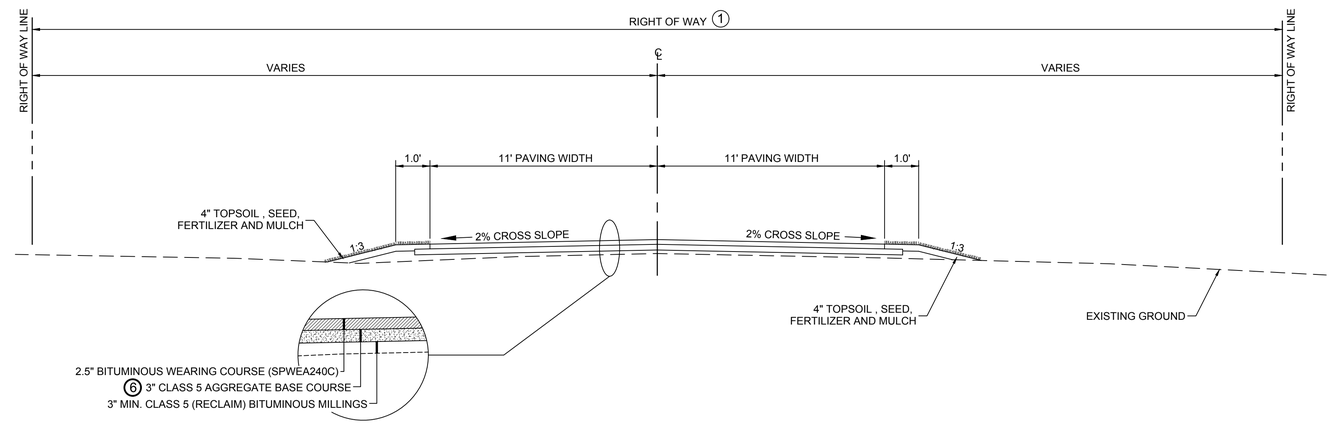
SHEET NO.
EXH 10



TYPICAL RECLAIM SECTION
RUSHMOOR BOULEVARD/TRAIL

NOTES:

1. CONTACT THE ENGINEER PRIOR TO CONDUCTING ANY OPERATIONS BEYOND THE CONSTRUCTION LIMITS IDENTIFIED ON THE PLANS.
2. BLADE TOPSOIL AND VEGETATION BACK FROM EXISTING PAVEMENT EDGE (2'-4') AS NEEDED TO COMPLETE RECLAIMING OPERATIONS AND TO AVOID MIXING OF ORGANICS INTO THE WIDENED BASE. TOPSOIL SHALL BE PLACED AS AN EROSION CONTROL BERM DURING CONSTRUCTION. SALVAGED TOPSOIL MAY BE RE-USED.
3. A STANDARD 2% CROWN IS PROPOSED IN ALL AREAS NOT OTHERWISE IDENTIFIED BY THE ENGINEER. IN CERTAIN AREAS, THE CROSS-SLOPE MAY BE MODIFIED BY THE ENGINEER TO ACCOMMODATE LOCAL DRAINAGE AND/OR EXISTING DRIVEWAY ENTRANCES.
4. DEPTH OF UNDERGROUND UTILITIES MARKED WITHIN THE PROPOSED RECLAIM AREA, OR OTHER EXCAVATION AREAS, MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE LOWERING OR RELOCATION OF UNDERGROUND UTILITIES, IF NECESSARY, IN ADVANCE OF RECLAIMING OR EXCAVATION OPERATIONS. ANY COSTS ASSOCIATED WITH DELAYS OR DAMAGES TO UTILITIES ARE THE CONTRACTOR'S RESPONSIBILITY.
5. PRIVATE LAWN IRRIGATION SYSTEMS LOCATED IN THE CONSTRUCTION AREA SHALL BE TEMPORARILY RELOCATED BY THE CONTRACTOR AND PROTECTED FROM DAMAGE DUE TO RECLAIMING OR OTHER OPERATIONS PERFORMED BY THE CONTRACTOR, AND RE-INSTALLED DURING FINAL TURF RESTORATION BY THE CONTRACTOR.
6. AGGREGATE BASE COMPACTED THICKNESS IS BASED ON 3", BUT MAY VARY IN AREAS REQUIRING A MODIFIED SECTION TO MATCH EXISTING CONCRETE DRIVEWAYS OR TO FACILITATE DRAINAGE. REVIEW SUBGRADE PREP WITH THE ENGINEER.



TYPICAL BITUMINOUS PAVING SECTION
RUSHMOOR BOULEVARD/TRAIL

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-TYP SECTIONS.dwg Plotted by:Emma Young 12/28/2020 10:14:52 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

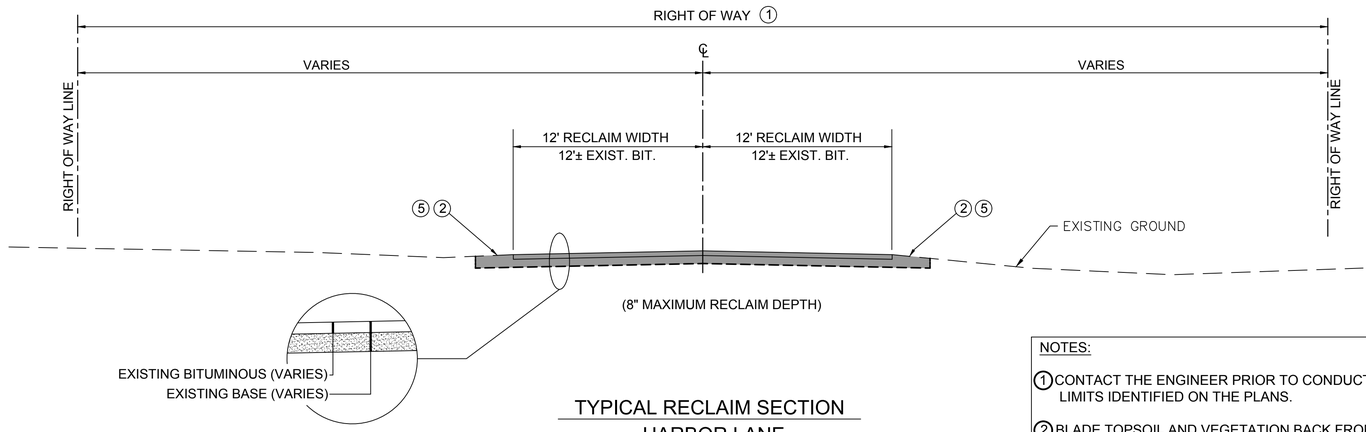
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

REVISIONS DESCRIPTION	BY	REV#	DATE

DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA
EXHIBIT- FULL DEPTH RECLAMATION

SHEET NO.
EXH 11



TYPICAL RECLAIM SECTION
HARBOR LANE

NOTES:

(1) CONTACT THE ENGINEER PRIOR TO CONDUCTING ANY OPERATIONS BEYOND THE CONSTRUCTION LIMITS IDENTIFIED ON THE PLANS.

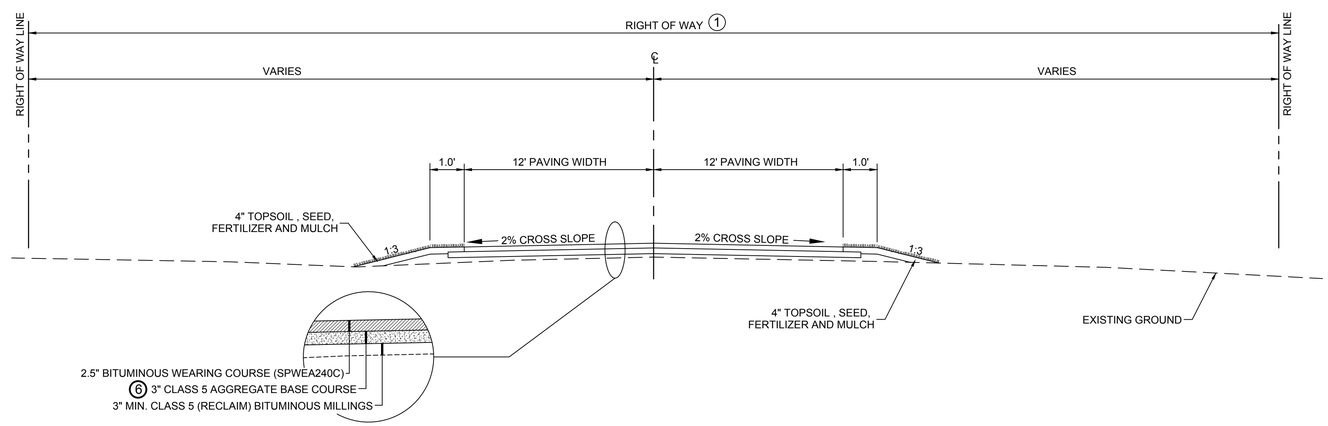
(2) BLADE TOPSOIL AND VEGETATION BACK FROM EXISTING PAVEMENT EDGE (2'-4') AS NEEDED TO COMPLETE RECLAIMING OPERATIONS AND TO AVOID MIXING OF ORGANICS INTO THE WIDENED BASE. TOPSOIL SHALL BE PLACED AS AN EROSION CONTROL BERM DURING CONSTRUCTION. SALVAGED TOPSOIL MAY BE RE-USED.

(3) A STANDARD 2% CROWN IS PROPOSED IN ALL AREAS NOT OTHERWISE IDENTIFIED BY THE ENGINEER. IN CERTAIN AREAS, THE CROSS-SLOPE MAY BE MODIFIED BY THE ENGINEER TO ACCOMMODATE LOCAL DRAINAGE AND/OR EXISTING DRIVEWAY ENTRANCES.

(4) DEPTH OF UNDERGROUND UTILITIES MARKED WITHIN THE PROPOSED RECLAIM AREA, OR OTHER EXCAVATION AREAS, MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE LOWERING OR RELOCATION OF UNDERGROUND UTILITIES, IF NECESSARY, IN ADVANCE OF RECLAIMING OR EXCAVATION OPERATIONS. ANY COSTS ASSOCIATED WITH DELAYS OR DAMAGES TO UTILITIES ARE THE CONTRACTOR'S RESPONSIBILITY.

(5) PRIVATE LAWN IRRIGATION SYSTEMS LOCATED IN THE CONSTRUCTION AREA SHALL BE TEMPORARILY RELOCATED BY THE CONTRACTOR AND PROTECTED FROM DAMAGE DUE TO RECLAIMING OR OTHER OPERATIONS PERFORMED BY THE CONTRACTOR, AND RE-INSTALLED DURING FINAL TURF RESTORATION BY THE CONTRACTOR.

(6) AGGREGATE BASE COMPACTED THICKNESS IS BASED ON 3", BUT MAY VARY IN AREAS REQUIRING A MODIFIED SECTION TO MATCH EXISTING CONCRETE DRIVEWAYS OR TO FACILITATE DRAINAGE. REVIEW SUBGRADE PREP WITH THE ENGINEER.



TYPICAL BITUMINOUS PAVING SECTION
HARBOR LANE

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-TYP SECTIONS.dwg Plotted by:Emma Young 12/28/2020 10:14:53 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

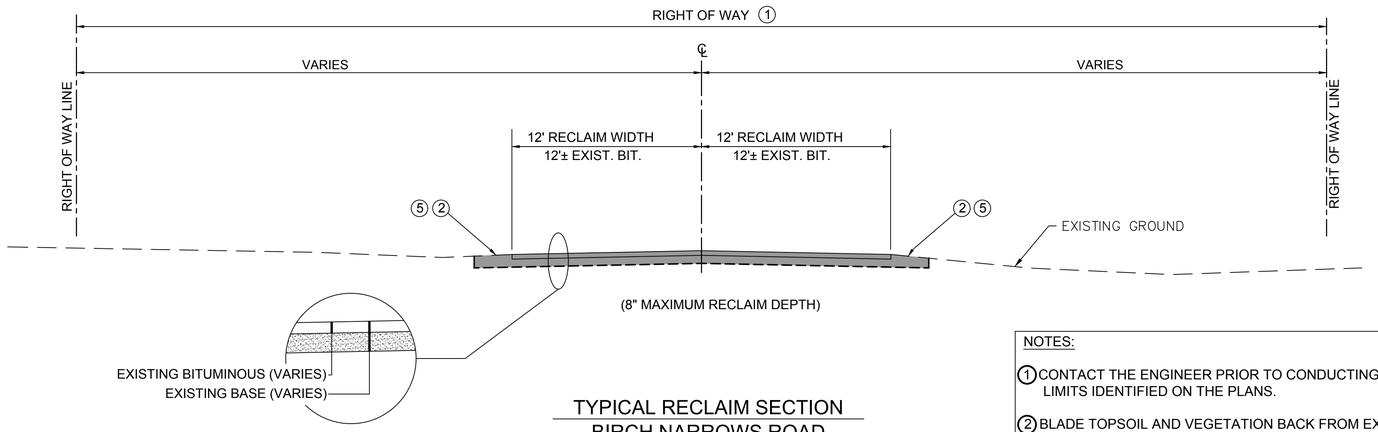
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

BY	REVISIONS DESCRIPTION	REV#	DATE

DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA
EXHIBIT- FULL DEPTH RECLAMATION

SHEET NO.
EXH 12



TYPICAL RECLAIM SECTION
BIRCH NARROWS ROAD

NOTES:

(1) CONTACT THE ENGINEER PRIOR TO CONDUCTING ANY OPERATIONS BEYOND THE CONSTRUCTION LIMITS IDENTIFIED ON THE PLANS.

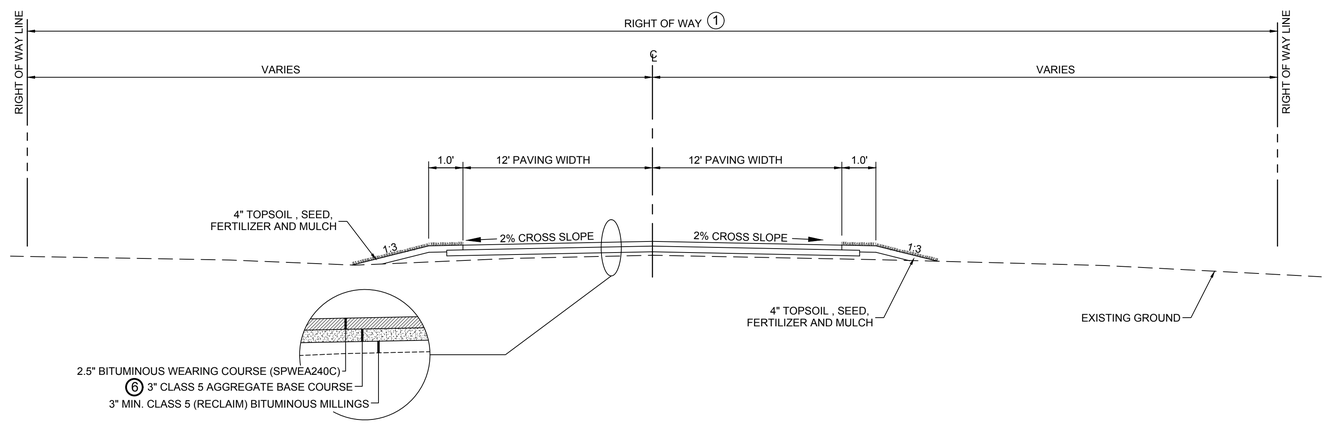
(2) BLADE TOPSOIL AND VEGETATION BACK FROM EXISTING PAVEMENT EDGE (2'-4') AS NEEDED TO COMPLETE RECLAIMING OPERATIONS AND TO AVOID MIXING OF ORGANICS INTO THE WIDENED BASE. TOPSOIL SHALL BE PLACED AS AN EROSION CONTROL BERM DURING CONSTRUCTION. SALVAGED TOPSOIL MAY BE RE-USED.

(3) A STANDARD 2% CROWN IS PROPOSED IN ALL AREAS NOT OTHERWISE IDENTIFIED BY THE ENGINEER. IN CERTAIN AREAS, THE CROSS-SLOPE MAY BE MODIFIED BY THE ENGINEER TO ACCOMMODATE LOCAL DRAINAGE AND/OR EXISTING DRIVEWAY ENTRANCES.

(4) DEPTH OF UNDERGROUND UTILITIES MARKED WITHIN THE PROPOSED RECLAIM AREA, OR OTHER EXCAVATION AREAS, MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE LOWERING OR RELOCATION OF UNDERGROUND UTILITIES, IF NECESSARY, IN ADVANCE OF RECLAIMING OR EXCAVATION OPERATIONS. ANY COSTS ASSOCIATED WITH DELAYS OR DAMAGES TO UTILITIES ARE THE CONTRACTOR'S RESPONSIBILITY.

(5) PRIVATE LAWN IRRIGATION SYSTEMS LOCATED IN THE CONSTRUCTION AREA SHALL BE TEMPORARILY RELOCATED BY THE CONTRACTOR AND PROTECTED FROM DAMAGE DUE TO RECLAIMING OR OTHER OPERATIONS PERFORMED BY THE CONTRACTOR, AND RE-INSTALLED DURING FINAL TURF RESTORATION BY THE CONTRACTOR.

(6) AGGREGATE BASE COMPACTED THICKNESS IS BASED ON 3", BUT MAY VARY IN AREAS REQUIRING A MODIFIED SECTION TO MATCH EXISTING CONCRETE DRIVEWAYS OR TO FACILITATE DRAINAGE. REVIEW SUBGRADE PREP WITH THE ENGINEER.



TYPICAL BITUMINOUS PAVING SECTION
BIRCH NARROWS ROAD

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-TYP SECTIONS.dwg Plotted by:Emma Young 12/28/2020 10:14:54 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

DATE	REV#	REVISIONS DESCRIPTION	BY

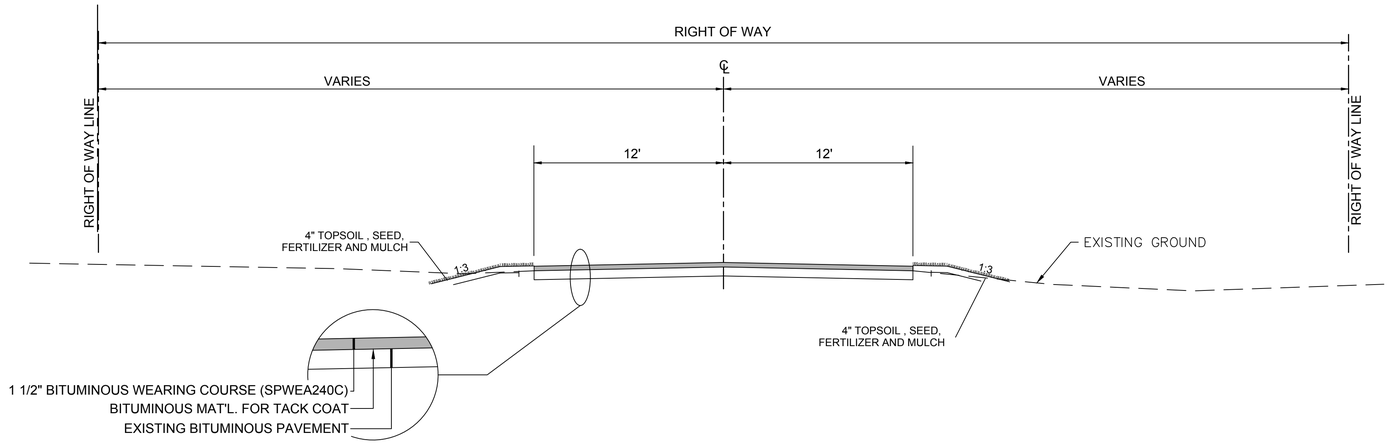
DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA

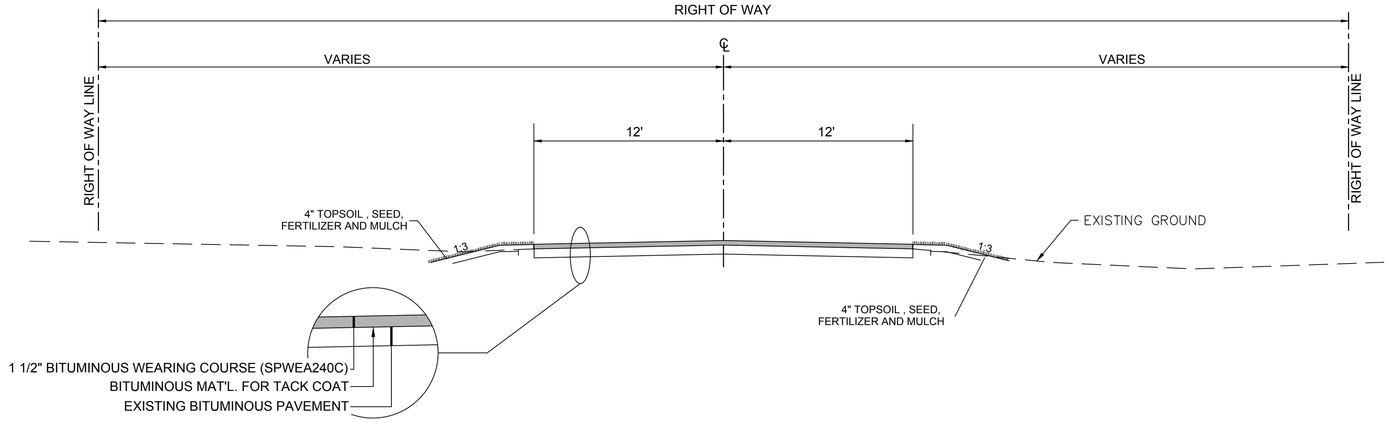
EXHIBIT- FULL DEPTH RECLAMATION

SHEET NO.
EXH 13

NOTE: PAVEMENT WIDTHS MAY VARY TO MATCH EXISTING WIDTHS.



TYPICAL BITUMINOUS OVERLAY SECTION
WHITEFISH AVENUE



TYPICAL BITUMINOUS OVERLAY SECTION
HILLTOP DRIVE

J:\City of Crosslake-32324\2020-11828\CADD\Civil\C-FEAS-2020-11828-TYP SECTIONS.dwg Plotted by:Emma Young 12/28/2020 10:14:55 AM

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

REVISIONS DESCRIPTION	REV#	DATE	BY

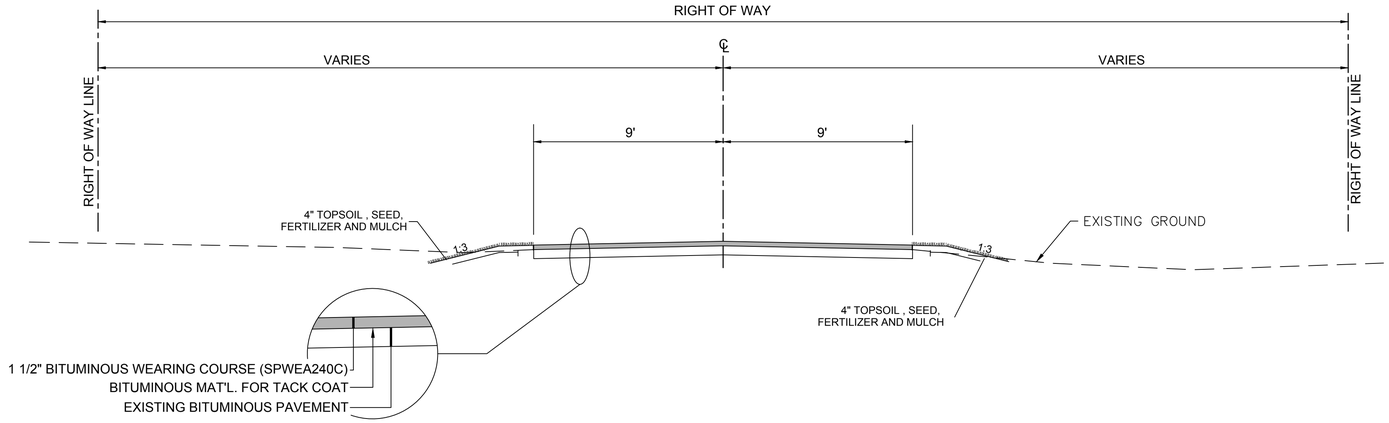
DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA

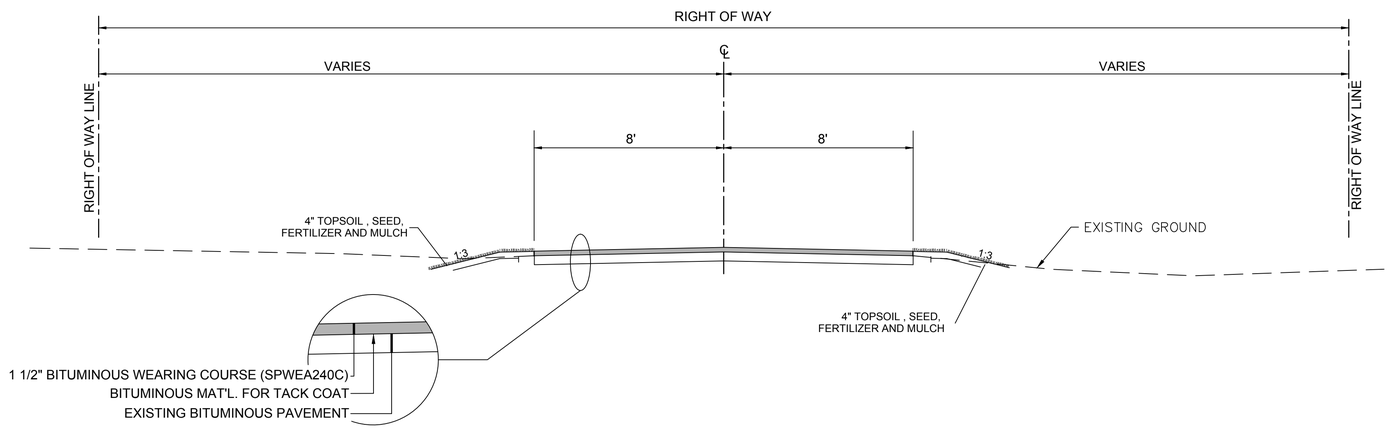
EXHIBIT - TYPICAL SECTIONS OVERLAYS

SHEET NO.
EXH 14

NOTE: PAVEMENT WIDTHS MAY VARY TO MATCH EXISTING WIDTHS.



TYPICAL BITUMINOUS OVERLAY SECTION
WOODLAND DRIVE



TYPICAL BITUMINOUS OVERLAY SECTION
COOL HAVEN LANE

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DAVID S. REESE DATE: DEC 2020 LIC. NO. 21432

REVISIONS DESCRIPTION	REV#	DATE	BY

DATE: NOVEMBER, 2020
SCALE: AS SHOWN
DRAWN BY: PMB
CHECKED BY: DSR
JOB NUMBER: 2020-11828

CROSSLAKE 2021 FEASIBILITY STUDY
CITY OF CROSSLAKE
CROSSLAKE, MINNESOTA

EXHIBIT - TYPICAL SECTIONS OVERLAYS

SHEET NO.
EXH 15

5.

City of Crosslake

From: Phil Martin <Phillip.Martin@bolton-menk.com>
Sent: Thursday, December 31, 2020 1:09 PM
To: Char Nelson
Cc: Ted Strand
Subject: Update for Jan 4, 2021 Public Works

Hi Char

We are proceeding up wrapping up the CSAH 66 sanitary and storm water quality improvement plans. With the direction we received regarding making the trail meet ADA requirements, we are defining the easement impact need so property owners can be contacted.

Once plans are completed, we will submit for City and County review. We believe that review will be completed in January. We will also submit for utility company notification and review. At that point, the remaining item will be to acquire easements for ADA, sanitary service connection, and storm water quality bioretention need.

Let me know if there are questions.

Thanks

Phil Martin P.E.
Principal Engineer
Bolton & Menk, Inc.
7656 Design Road
Suite 200
Baxter, MN 56425-8676
Phone: 218-825-0684 ext. 2864
Mobile: 218-821-7265
Bolton-Menk.com