



Pavement Management Booklet

White Bear Township, Minnesota

TKDA Project No. 16627.011

January 2, 2019



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January 2, 2019

RE: Pavement Management Program
White Bear Township, Minnesota
TKDA Project No. 16627.011

Town Board
White Bear Township
1281 Hammond Road
White Bear Township, MN 55110

Dear Town Board:

TKDA is pleased to provide the attached booklet regarding pavement management for White Bear Township's 42.9 miles of streets. If the street system were built today it would cost over \$80 million in today's dollars. The report provides the following:

- General Pavement Management Background
- Data and Analysis of White Bear Township Streets
- Improvement Costs
- Funding
- Communication Plan

The goal of this work is to provide a plan for proactive management of the street improvements to provide the best value to the Township.

Thank you for allowing TKDA to prepare this document and assisting White Bear Township in advancing its Pavement Management Program.

Sincerely,

A handwritten signature in black ink, appearing to read 'Larry Poppler'.

Larry Poppler, PE
Group Manager

LP:ksb

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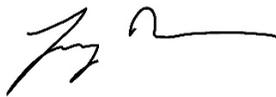
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White Bear Township, Minnesota

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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.



Larry Poppler, PE
Group Manager

Date: January 2, 2019

Lic. No.: 41005

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Executive Summary

White Bear Township Pavement Management

White Bear Township maintains 42.9 miles of Township roadways. If built today, the cost of these roadways would be over \$80 million. In order to manage this costly investment, pavement management planning is necessary to assure White Bear Township residents are receiving the best value for the costs paid to construct the roadway system. Pavement management also assures streets are safe and that property values and pride in the community are preserved.

Township Staff rate the pavement of each street in the community on a scale of 0 to 5 and use this information to prioritize improvements. Using the current street ratings, the overall rating of the street system is 3.4 which is good overall. The goal of the Township should be to preserve the overall rating between 3.4-3.6. Today, nearly 11 miles of street are at or below a rating of 2.2 which is a rating where rehabilitation or reconstruction should be considered. These 11 miles represent nearly a quarter of the street system, which is a high percentage.

Performing street improvements at the right time provides the best value in preserving the costly initial construction investment. Strategically completing crack sealing, seal coating, and mill and overlay improvements is smart management of the Township dollars. More costly rehabilitation or reconstruction is needed once the streets have degraded to a point where mill and overlay improvements would have limited value.

Costs per square foot were prepared for various types of improvements. The costs include mill and overlay with bituminous curb \$3.00/SF; mill and overlay with concrete curb and gutter \$4.00/SF; rehabilitation with concrete curb and gutter \$5.00/SF; reclamation adding new concrete curb and gutter \$9.00/SF; and reconstruction adding concrete curb and gutter \$12.00/SF.

In order to receive 60 years of street life, the Township should be completing at least \$2.2 million in today's dollars in street improvements per year, not including crack sealing and seal coating. Without this yearly investment, some streets will slide into more costly repairs and future Township property owners will bear the burden of these street improvements. This minimum yearly investment is needed to keep the overall street network rating within the desired range.

Using the costs per square foot, project groupings were analyzed over the next five years. The analysis assisted in the creation of a recommended funding plan for street improvements. The funding plan also analyzed the assessment rates comparing assessments for 100%, 50%, and 40% of the street costs. It is recommended that the assessment policy be revised to assess 50% of the street improvement costs to assure that the assessment meets State Statute criteria for benefit. It is also recommended the Township bond for the improvements over a 10-year period. This bonding will allow the Township to phase in their street investments over a 10-year period to lessen the tax burden.

A communication plan was prepared for consideration by the Town Board. The communication plan utilized a variety of communication tools to inform the public including, mailed brochures, informational meetings, open houses, project questionnaires, project newsletters, Township website, and individual meetings or communication. The annual Town Board meeting is also an opportunity to discuss this topic with the residents of the community.

TKDA is pleased to present this pavement management booklet and looks forward to assisting White Bear Township in refining the recommendations for implementation of a proactive plan providing the best value to the Township.

Executive Summary (Continued)

Summary of Recommendations:

1. Maintain average overall street rating of within desired range of 3.4-3.6.
2. Rate streets every three years and track ratings to define degradation curve for each street
3. Prioritize mill and overlay, crack sealing, and seal coating projects
4. Add concrete curb and gutter for reconstructed streets
5. Utilize reclamation, adding concrete curb and gutter to upgrade streets
6. Amend assessment policy to assess 50% of the street improvement costs
7. Utilize storm fund to pay for storm sewer improvements
8. Utilize water and sewer funds to pay for water and sanitary sewer improvements
9. Tax levy should be evaluated over a 10-year period to fund the remaining costs
10. Approve funding plan and schedule as prepared for this report for 50% assessment
11. Enhance communication and involvement with residents as outlined in the communication section of this report

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Pavement Management Booklet

Prepared for White Bear Township, Minnesota

1.0 Pavement Management Overview

Pavement management is the act of purposeful planning for maintenance activities which can prolong the life of a street. As discussed in this section, roadways begin degrading from the moment they are constructed. However, with completion of maintenance and mill and overlay projects at the right time, the street section can be extended to a life of 60 years. Initial construction or reconstruction costs are incredibly expensive and construction costs continue to climb, so it is critically important to perform seal coating, crack sealing, and mill and overlays at the right time to get the best value on the initial construction.

1.1 Pavement Degradation

Many factors account for roadway deterioration including the following:

- Drainage
- Underlying soil conditions
- Original street construction
- Traffic volumes / loading
- Time
- Weather
- Utility impacts / patches



Drainage – The most important contributor in road deterioration is drainage. If surface water is not controlled properly and removed from the roadway as well as the roadway base, the street will begin to deteriorate at a pace much higher than a street with good drainage control. Water at the street surface can freeze which can break apart the roadway surface. In a similar manner, water that cannot drain beneath the street freezes and thaws, causing material to move beneath the street. The addition of curb and gutter and storm sewer pipe assists in the control of drainage. In some instances it may be useful to add drain tile to the roadway section to help remove water from the street base material.

Underlying soil conditions – The second most important contributor to road deterioration is the underlying soils in which the street was constructed. In general, if the roadway is built over sand materials, the roadways tend to perform very well. However, if the same roadway was constructed over clay or silt material the roadway will have cracking, settlement, or potholes much sooner in the life of the street.

Original Street Construction – Over the last couple of decades, much has been learned in the industry about the degradation of pavement. Today’s recommendations for streets are more robust simply because we have learned so much more about how these streets will perform over time. Streets originally build in the 1970s or 1980s may not have been built to last 60 years. In some cases, original roads are simply paved over existing material without any soil correction. If constructed properly and with good maintenance, new streets can last 60 years before major reconstruction.

Traffic Volumes and Loading – Another important contributor to roadway degradation is the amount of traffic as well as the weight of the traffic on a street. Interstate highways carry the heaviest traffic and are therefore built in the most robust way. For a local roadway system, collector streets in and out of neighborhoods carry more traffic and are normally built to a higher standard. Loading over time can also degrade the aggregate beneath the roadway.

Time – Bituminous pavement is a flexible material and will flex as a vehicle is travelling over the pavement. Over time, however, bituminous oxidizes which makes the pavement more brittle and susceptible to cracking. The process of oxidation can be seen as the pavement starts at a dark black state and gradually lightens.

Weather – In Minnesota, we are exposed to many different weather conditions. As discussed, if moisture is not removed from the street it can add to the degradation of the street.

Utility Impacts – The roadway corridor is home for many utilities including: water, sewer, storm sewer, gas, electric, cable, and telephone. Any one of these utilities may require maintenance which may mean digging through the street section. Patching of the street may be necessary to perform utility maintenance. The act of patching disturbs the pavement section and the underlying soils which can lead to settlement. A number of patches on one roadway can create ride-ability issues.

These factors lead to degradation of the roadway. In general, the roadway will degrade on a curve as shown on the next chart:



The ratings shown on the graphic are described as follows:

5 – New Roadway



Figure 1 – Rating 5 Pine Hill Lane

4 – Roadway still in good condition but some initial cracking starting to develop



Figure 2 – Rating 4 Feather Court

3 – More structural cracking starting to develop



Figure 3 – Rating 3.03 Hobe Lane

2 – Roadway cracking extensive



Figure 4 – Rating 2.03 O'Connors Alley

1 – Roadway Failure



Figure 5 – Rating 1.87 Reed Place



Figure 6 – Rating 1.53 Hoxie Avenue

0 – Gravel or fully deteriorated roadway



Figure 7 – Rating 0 Peterson Road



Figure 8 – Rating 0 Peterson Road

Each and every roadway has a different degradation curve based on the factors that the road is experiencing.

1.2 Pavement Improvements

Crack Sealing / Seal Coat

Crack sealing is important to help prevent existing cracks from widening or developing other cracks nearby, and is done ahead of seal coating. It can also prevent water from entering the unsealed cracks and causing softening of the pavement. Seal coating consists of applying an asphalt emulsion followed by placing small graded aggregate. Seal coating provides a road with a new layer of protection from the effects of moisture and other elements.

Asphalt Patching

Milling and asphalt patching is a temporary measure to keep streets drivable, plowable, and functioning until a street improvement is performed. This type of repair of the roadway has limited value in extending the life of the street, but is more of a temporary fix.

Mill and Overlay

Mill and overlay improves the existing road in place. Milling consists of grinding and removing the top layer of the pavement, typically 1.5 to 2 inches. Once removed, a new layer of bituminous is placed. Performing mill and overlay will extend the life of the existing pavement typically by 15 years.

Rehabilitation

If the roadway already has concrete curb and gutter and it is in good condition, a pavement rehabilitation can be used to upgrade the street conditions. Rehabilitation includes removal or milling of the full depth of bituminous, checking aggregate base materials, and paving over the upgraded or existing base material.

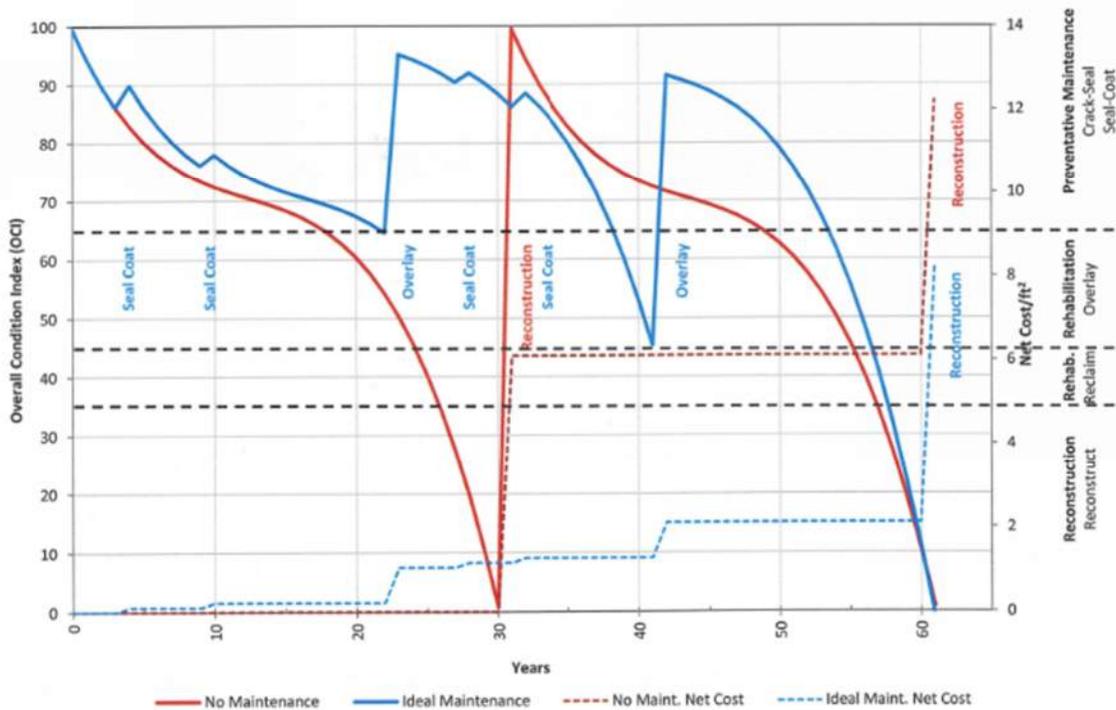
Reconstruction

Reconstruction includes the complete removal of pavement, curb, and base material and replacement with class 5 aggregate, bituminous, new concrete curb and gutter, storm sewer, and in some cases granular borrow (sand material).

1.3 Optimal Pavement Life Cycle

Performing the right maintenance at the right time extends the life of the street up to 60 years. Maintenance activities including crack sealing, seal coating, as well as mill and overlay are important during the life of the street. The next graphic illustrates the value that is created by performing maintenance activities at the right time.

Traditional vs. Optimal Life-Cycle



Because construction or reconstruction projects are so expensive, performing maintenance at the right time can save 32% over the life of a street versus letting a street degrade and performing two reconstruction projects during the 50-60 year span. **Completing mill and overlay projects as well as seal coating at proper intervals is the BEST VALUE to the Township.**

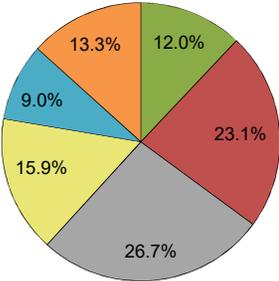
2.0 White Bear Township Pavements

With 42.9 miles of Township Streets, if the White Bear Township's street system were to be constructed now it is estimated to cost over \$80 million in today's dollars.

2.1 Township Street System

In the 1960s, White Bear Township began paving the road network that is known today. The majority of new roads added to the road network were constructed in the 1980s. Very few of these roads constructed in the 1980s included concrete curb and gutter, but rather bituminous curb. All roads constructed before 1980 either did not include curb or were constructed with bituminous curb. Over the course of time and evolution of street construction practices, storm sewer and concrete curb and gutter became common practice after 1980.

INITIAL STREET CONSTRUCTION

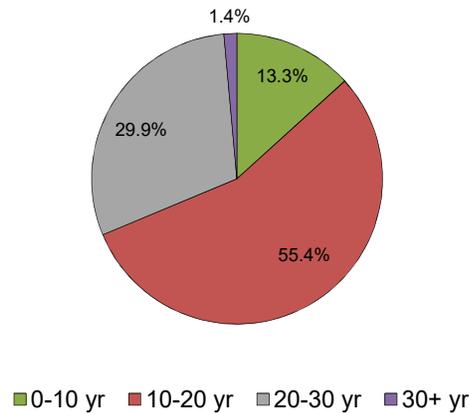


■ 1960-1969 ■ 1970-1979 ■ 1980-1989 ■ 1990-1999 ■ 2000-2009 ■ 2010-Present

An even distribution of construction age allows the Township to spread out costs over time instead of a large amount of roadway mileage requiring reconstruction in a short period of time. Other communities have experienced the reconstruction bubble and it has been difficult for them to manage. Overall, this distribution of initial street construction is somewhat favorable because it shows a spread of the construction. A larger volume of street was constructed between 1980 and 1989 which will mean larger expenditures when these streets are ready for reconstruction.



PAVEMENT AGE



With over 30% of the Township streets over 20 years of age, we must get started with reconstruction projects before the demand is burdensome for the Township.

Concrete Curb and Gutter – Approximately 36% of streets within the Township have concrete curb and gutter. There are advantages concrete curb and gutter have on street network systems such as:

- Drainage improvement / water quality
- Reduced edge failure
- Safety – defines the street
- Reduced plow damage to yards or pavement edge
- More defined street sweeping edge
- Mowing edge
- More rigid as compared to bituminous material that is flexible during summer temperatures
- Improved aesthetics / improved property values

Because of these considerations, it is recommended that concrete curb and gutter be the Township standard for reconstruction projects. This is especially important for drainage, as controlling the drainage is critical to pavement preservation.

2.2 Township Pavement Evaluation

Township staff rate streets within White Bear Township to understand the condition and degradation. This information is then used by staff to prioritize improvements. Streets are rated on a scale of 0 to 5. A rating of 5 would indicate that the street is in good or new condition. A rating of 0 would indicate a very poor roadway or a gravel roadway. Recent evaluation of the street system was completed over one year ago; therefore, the street ratings were adjusted for one year of degradation. Based on evaluation and degradation since the rating, the average rating of the street system is 3.4. The overall system goal should be to keep the average street rating between 3.4-3.6. The current overall condition is at the lower end of the preferred range and generally means the Township to this point in time has kept up with overall maintenance activities.

MILEAGE OF STREETS BY RATING (2018)



Average Rating = 3.4

■ MORE THAN 3.25 RATING ■ BETWEEN 2.2 & 3.25 ■ LESS THAN 2.2 RATING

While the overall rating is good, there are almost 11 miles (25%) of streets in the Township at or below a 2.2 rating. Streets below a 2.2 rating should be considered for reconstruction. Ideally, this amount should be under 10%. In some cases these streets are below 2.0 and have drainage issues. Residents living on these streets have indicated their dissatisfaction with the condition of their streets. Considering continued degradation, more residents may express dissatisfaction if the Township does not perform street improvements.

TKDA has evaluated the entire White Bear Township street system using the previously prepared "Street Master Spreadsheet." This spreadsheet is attached in Appendix A. The master spreadsheet provided by White Bear Township staff included street segments, length of each segment, width of each segment, pavement rating, maintenance activity history, pavement edge information, and anticipated maintenance activity. This information was very thorough and was critical to the analysis of the Township street network. Using that information, the following was completed:

Street Network Research to verify street measurements – The street network spreadsheet was reviewed and checked. Measurements of street width and length were verified by using geographic information. In some cases streets were added to the system.

Field verify street width – As measurements were verified, there were some instances where the measurements did not align with the master spreadsheet. Field measurements of select areas were completed to verify the correct measurements.

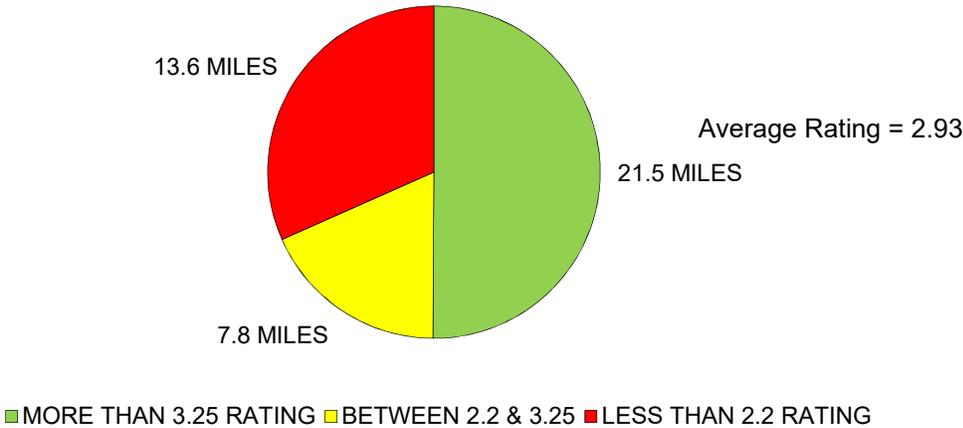
Map existing street network ratings – The ratings completed by Township staff were mapped and color coded based on their rating. The map is attached in Appendix B. Green was used for streets with a rating above 3.25. Yellow was used for streets with a rating between 2.2 and 3.25. Red was utilized for streets with a rating 2.2 and below. Streets below 3.25 but above 2.2 are in the category for consideration of a mill and overlay. Streets at or below 2.2 are in the category where reconstruction should be considered.

Analysis of the data – Using the updated information, scenarios were analyzed to determine what would happen if certain maintenance or construction activities occurred at specific times. For the purposes of this analysis, a linear decay rate of 0.10 was used to perform this analysis. The linear degradation rate was a reduction in the rating of 4 divided over 40 years. This degradation rate was selected as the general rate of degradation of White Bear Township streets based on history of maintenance activities and overall experience working with the Township. While streets degrade on a curve, a simple linear decay rate was

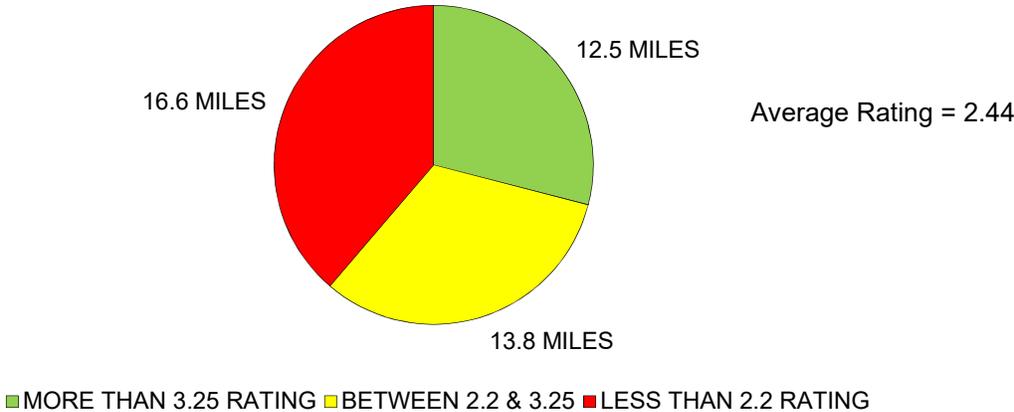
appropriate for the high level purposes of this analysis. While the Township began rating its streets in 2010, there is not enough history of the ratings for the street system to build degradation curves. Township staff should save the ratings for each street segment for each year of rating so that the degradation curve for each street can be prepared in the future.

If street improvement projects are not undertaken, the overall street network rating will decline. After five years without street improvement projects, there will be an additional 2.8 miles of roadway below a rating of 2.2 as compared to 2018. After 10 years without street improvement projects, there will be an additional 5.8 miles of road below a rating of 2.2 as compared to 2018. A map showing the street network ratings after five years without street improvement projects is attached as Appendix C.

MILEAGE OF STREETS BY RATING 2023



MILEAGE OF STREETS BY RATING 2028



2.3 Best Management Practices for Street Improvements

Initial street construction or reconstruction is by far the most costly street improvement for consideration. Performing the right maintenance at the right time is critical to maximizing the life of the street. With proper maintenance, streets can last 60 years between costly reconstruction projects. The following are best management practices and recommendations for the frequency and timing for these activities.

2.3.1 Crack Sealing / Seal Coating

Crack sealing and seal coating can extend the life of a road by 7 to 15 years if performed at the correct time. Crack sealing is done prior to seal coating. Crack sealing is important to help prevent existing cracks from widening or developing other cracks nearby. It can also prevent water from entering the unsealed cracks and causing softening of the pavement. Seal coating consists of applying an asphalt emulsion followed by placing small graded aggregate. Seal coating provides a road with a new layer of protection from the effects of moisture and other elements. The road will then need to be re-rated to determine the increased rating after the crack sealing and seal coating is complete.

Recommendation: Crack sealing and seal coating should be considered at year 3 and year 8 after initial paving or overlay. Crack sealing should also be considered at later intervals as needed. A third seal coat could be considered if the oxidation level of the bituminous is acceptable.

2.3.2 Mill and Overlay

Mill and overlay improves the existing road in place. Milling consists of grinding and removing the top layer of the pavement, typically 1.5 to 2 inches. Once removed, a new layer of bituminous is placed. Performing mill and overlay will extend the life of the existing pavement typically by 15 years. Since mill and overlay is only an improvement of the existing road, the rating will increase to as high as 4.75, but will not reach the maximum rating of 5. Normally streets have cracking by the time mill and overlay is considered. These cracks will reflect into the new overlay mat, so it is important to crack seal and seal coat within three years of a mill and overlay project to seal the roadway surface.

Recommendation: Mill and overlay should be considered when the pavement rating has fallen below 2.7 and/or the age of the street is around 20 years old.

2.3.3 Rehabilitation

If the roadway already has concrete curb and gutter and it is in good condition, a pavement rehabilitation can be used to upgrade the street conditions. Rehabilitation includes removal or milling of the full depth of bituminous, checking aggregate base materials, and paving over the upgraded or existing base material.

Recommendation: Rehabilitation should be considered when the pavement rating has fallen below 2.2 and/or the age of the street is over 40 years old and the street already has concrete curb and gutter which is in good condition.

2.3.4 Reconstruction

Reconstruction includes the complete removal of pavement, curb, and base material and replacement with class 5 aggregate, bituminous, new concrete curb and gutter, storm sewer, and in some cases granular borrow (sand material). The rating of the pavement condition will increase to the maximum of 5 after reconstruction. With correct and continued maintenance, the newly reconstructed streets can last up to 60 years. Streets built in the past may not have been built to today's standards and may require reconstruction after 40 years of age.

Recommendation: Reconstruction should be considered when the pavement rating has fallen below 2.2 and/or the age of the street is over 40 years old.



3.0 Improvement Costs

Street improvements are expensive. To provide a funding plan for pavement management, cost estimates were prepared for various improvements. For the purposes of this report, crack sealing and seal coating costs were not computed. The current budget for those activities appears to be on par with yearly needs. Each of the estimates below were derived from an estimate for a 100 foot length of roadway, 30 feet in width. These estimates are attached in the appendix as Appendix D. From the estimates, a square foot cost was computed. The quantities and unit pricing was computed based on a standard roadway needs and historic pricing.

3.1 General Improvement Costs

1. Mill and Overlay 1 – With this option, 2” of bituminous is removed (milled) and a new 2” of bituminous is placed over the remaining bituminous pavement. The street has bituminous curb, and that bituminous curb is replaced.

COST = \$3.00 / Square Foot \$475,000 / Mile *

2. Mill and Overlay 2 – This option assumes 2” of bituminous is removed (milled) and a new 2” of bituminous is placed over the remaining bituminous pavement. The street has concrete curb and gutter, and 30% of the curb needs replacement. Some of the curb replacement may be located at driveways, so the estimate includes costs for driveway restoration as well as yard restoration.

COST = \$4.00 / Square Foot \$635,000 / Mile *

3. Rehabilitation – This option assumes full removal of the bituminous, but the underlying base is in good condition and that new bituminous can be placed over the existing base material. The street has concrete curb and gutter, and 30% of the curb need replacement.

Some of the curb replacement may be located at driveways, so the estimate includes costs for driveway restoration as well as yard restoration.

COST = \$5.00 / Square Foot \$792,000 / Mile *

4. Reclamation / Add Curb and Gutter – This option assumes grinding the bituminous material to be added to the existing base material and new pavement is installed over the reclaimed bituminous and existing base material. This effectively raises the profile of the roadway by approximately 4”. New concrete curb and gutter and storm sewer pipe is added to the street to improve drainage. Yard and driveway restoration is needed. The Township implemented this type of improvement in 2011 for the Southwest Area neighborhood. The overall costs per square foot at that time appeared to be around \$3. This was an extremely low price even for the time. Since 2011 costs have risen sharply as contractors recovered from the great recession and material costs increased.

COST = \$9.00 / Square Foot \$1,425,000 / Mile *

5. Reconstruction / Add Curb and Gutter – This option assumes removal and replacement the bituminous material and base material. If soil correction is needed, this cost per square foot will increase. New concrete curb and gutter and storm sewer pipe is added to the street to improve drainage. Yard and driveway restoration is needed.

COST = \$12.00 / Square Foot \$1,900,000 / Mile *

*For all options, the cost per square foot increases if the streets are narrower than 30 feet in width.

3.2 General Street System Improvement Recommendations

Dividing the Township's 42.9 miles of streets by 60 years would result in the Township reconstructing 0.70 miles of roadway per year and performing mill and overlay for 1.4 miles per year.

Using the cost figures above means that the Township should be spending \$1.3 million for reconstruction and \$900,000 for mill and overlay projects per year. **In today's dollars the Township should be spending at least \$2.2 million per year on reconstruction, rehabilitation, and mill and overlay per year.**

As a cost saving measure, an option that retains existing base material was evaluated, which reclaims the existing pavement, and adds curb and gutter for a cost of \$9.00 per square foot. This reduces the reconstruction amount by \$300,000 meaning the Township could expect to spend \$1.9 million per year.

If the Township is unable to dedicate that amount of money to their pavement management, crack sealing, seal coating, and mill and overlay projects should not be delayed and in fact should be increased to extend the life of the streets. Up to two mill and overlay projects can be completed over the life of a street. Unfortunately, adding a third mill and overlay project to a street has limited value because the underlying pavement and base has reached its life expectancy.

3.3 Project Groupings

Crack sealing, seal coating, and mill and overlay projects are most important to preserving the initial construction investment. Based on review of the White Bear Township system, it is recommended that a large mill and overlay project be completed as soon as possible. There is approximately 7 miles of street between a rating of 2.2 and 3.25. If a mill and overlay is not performed in the near future, they will slip into the category of costly reconstruction or rehabilitation.

Other projects were selected for reclamation, adding curb and gutter out to five years. This type of construction project provides similar construction at a lower cost than reconstruction. The geotechnical exploration for these specific projects will reveal which type of improvement is recommended.

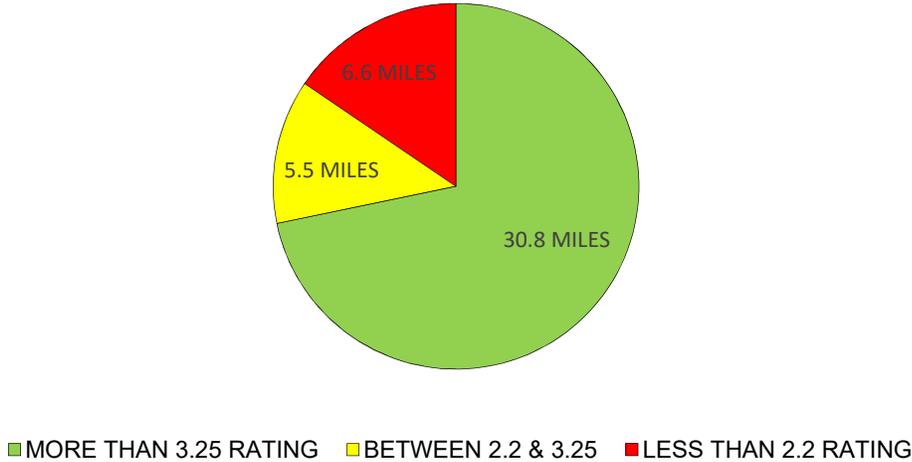


Because nearly 11 miles of street are at or below 2.2, a larger mileage of projects is recommended in the short term. Below are the recommended projects for the next five years:

Year	Project Type	Area	Streets Included	Project Cost
2019	Mill & Overlay	Parkview	Parkview Dr / Parkview Ct / Fenway Ct	\$410,868
2019	Mill & Overlay	Weston Woods	Weston Woods Way / Moon Lake Cir / Gilfillan Ct	\$244,728
2019	Reclamation	White Bear Pkwy	White Bear Pkwy (Oakmede to Otter Lake Rd)	\$472,410
2019	Mill & Overlay (Bit. Curb)	4th St & 5th St	4th St (TH 61 to Portland) / 5th St	\$244,269
2019	Mill & Overlay (Bit. Curb)	Hobe	Hobe Ln / West Hobe Ct / N Hobe Ct	\$346,113
2020	Reclaim (Adding Curb)	SE Area 1	Homewood / Lakewood / Ralph / Arbor / Hillaire / Summit / Forrest / Glen Oaks	\$1,612,548
2021	Reclaim (Adding Curb)	SE Area 2	Birch Knoll / Portland / Martin / Effress	\$1,579,338
2022	Reclaim (Adding Curb)	SE Area 3	Lakewood / Stacker / Portland / Randy / Roth / Homewood	\$1,924,884
2023	Reclaim (Adding Curb)	Williams & Hoxie	Williams / Ridgeway / Hoxie / Shadyside / Gaston / O'Connors / Gilbert / 5th Ct / 4th St / Hugo Ct	\$838,593
2023	Mill & Overlay (Curb Varies)	Silver Fox Rd & Franklin Ave	Silver Fox / Jenni / Christine / Katie / Suzanne / Richard / Paul / Buffalo / Westergren / Ridge / Franklin	\$931,365

The overall rating for the street system is predicted to be 3.52 after the first five years, if the proposed projects are completed. Attached in the appendix as Appendix E is the rating map after five years accounting for degradation and completion of the recommended projects.

MILEAGE OF STREETS BY RATING 2023



4.0 Funding

While it is important to perform the right improvement at the right time, it is equally important to keep Township taxes low to reduce the impact of the projects. Historically, the Township has assessed 100% of the improvements to property owners. However, in today's market, construction costs have exceeded the benefit that was historically received for these projects. This means the Township budget should include costs for pavement improvement projects.

4.1 Funding Options

The funding sources for street improvement projects include Tax Levy, Assessments, Water Fund, Sanitary Sewer Fund, and Storm Sewer Fund. In some cases a grant can be pursued or costs split between the County/Municipalities (border roadways).

The Township continues to review the use of a franchise fee which could generate up to \$300,000 per year and could be incorporated into the construction fund to offset using Tax Levy dollars.

If bonding is used to fund projects, the costs are spread over a period of 10 years. This strategy may be useful in adding street improvements to the Township budget. For example, if the Township were to invest \$2.2 million each year and 50% were covered by assessments, the first year Tax Levy portion would be \$110,000 (plus interest), second year \$220,000, third year \$330,000, and so on. After the tenth year, the first bond issuance would expire and the program would balance at \$1.10 million (plus interest) each year in today's dollars.

4.2 Funding Plan

Based on the project grouping recommendations, funding plans were prepared using assessment rates of 100%, 50%, and 40%. This funding plans are located in Appendix F. The funding plan shows the projects proposed over the next five years in today's dollars with costs broken out by funding source as well as the anticipated assessment amount.

4.3 Assessments

Assessment rates of 100%, 50%, and 40% of the project costs were analyzed as a part of this report for the project groupings recommended over the next five years. It was found that the construction costs have increased to a point that assessing 100% of the costs is not practical considering the State Statute requirement of assessing only up to the benefit received.

It is recommended that the Township consider amending the assessment policy to establish a rate of 50%.

5.0 Communication Plan

Communicating information at the right time is important to build project support and inform residents of upcoming plans. The typical questions are shown below:

“When is my street up for improvement?”

“How much will the improvement cost?”

“What are the impacts to my property?”

“When will the work be completed?”

The Township has several points in time in which it can communicate to property owners regarding the pavement program and their specific project.

1. Overall Program – Prior to a project, general program information can be shared, including the planned year for the improvements as well as preliminary costs.



2. Pre-Project – As the project is being studied, the Township should start to engage neighborhoods to collect information
3. Project Design – Once a project is ordered and during the design, neighborhood or individual meetings assist in fine tuning the design to be responsive to the needs of the neighborhood.
4. Construction – Construction can be long and impactful to property and it is important to share updated information on the project schedule, safety information, emergency contact information, and more. Individual meetings are necessary to assure restoration is being performed satisfactorily.

An overall communication outline and brochure have been prepared and included as Appendix G.

5.1 Overall Pavement Management Plan Communication

The Township website should be the portal for communication of the overall pavement management plan. This booklet as well as updated mapping and a funding plan should be placed on the website to allow property owners to find out when their street may be considered for improvements. If they have additional questions, a contact person should be placed prominently on this webpage. That person must be ready to answer the general questions as shown above.

5.2 Project Specific Communication

During the preliminary planning, project design, and construction, a number of communication strategies should be applied to assure property owners are informed. The strategies recommended include the following:

- Project Brochure – Mailed during the summer prior to a proposed improvement to give general information and alert property owners of the upcoming project. An example is attached in Appendix G.
- Informational Meeting #1 – Completed prior to feasibility report to give general information and begin to collect history or explore specific neighborhood issues such as drainage, traffic, etc.
- Project Questionnaire – Mailed and returned during the feasibility report preparation to gather information about the neighborhood.
- Informational Meeting #2 – Completed after the feasibility report is complete to share the report information and communicate next steps.
- Open House – Completed when the project plans are at 90% completion to share project design information including property impacts. Gather any final design feedback.
- Informational Meeting #3 – Completed once assessment amounts are computed to share the cost implications and to inform property owners of the next steps in the process.
- Project Newsletters – Mailed during construction to inform property owners on project information including schedule, emergency contact information, safety, restoration, and frequently asked questions.
- Township Website – A daily note regarding activities for the day can be placed on the Township website. This can also be a clearing house for all the previous communication information.

- Individual Meetings or Communication – Once a project is started, the construction inspector will have daily interaction with property owners on the project to assure work is completed satisfactorily. Tools such as emails, phone, texts, and social media are options for this direct communication. The project engineer is also a resource as more complicated items evolve.

6.0 Summary

The pavement management program is an important endeavor to assure White Bear Township is making the right decisions to extend the life of the street network. The supporting pavement master spreadsheet should become a living document and should be updated as new information is collected on the street network. Rating information should be saved over time to help in creating specific pavement degradation curves for each roadway segment. This tracking will assist in predicting degradation and planning for roadway improvements. Cost information should also be tracked as improvements are completed. These costs can then be further refined.

Summary of Recommendations:

1. Maintain average overall street rating of within desired range of 3.4-3.6.
2. Rate streets every three years and track ratings to define degradation curve for each street
3. Prioritize mill and overlay, crack sealing, and seal coating projects
4. Add concrete curb and gutter for reconstructed streets
5. Utilize reclamation, adding concrete curb and gutter to upgrade streets
6. Amend assessment policy to assess 50% of the street improvement costs
7. Utilize storm fund to pay for storm sewer improvements
8. Utilize water and sewer funds to pay for water and sanitary sewer improvements
9. Tax levy should be evaluated over a 10-year period to fund the remaining costs
10. Approve funding plan and schedule as prepared for this report for 50% assessment
11. Enhance communication and involvement with residents as outlined in the communication section of this report

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Appendix A

Master Spreadsheet

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Pavement Management Master

Oakridge Ct	Anderlie Ln	West	4.5	4.4	29	97	782	1323	Bit	1987	2006	10, 15	3	5821.2
Pleasant Ct. West	Anderlie Ln	West	4.5	4.4	28	157		1109	Bit	1987	2006	10, 15	6	4879.6
Pleasant Ct. East	Anderlie Ln	East	4.5	4.4	28	113		956	Bit	1987	2006	10, 15	4	4206.4
Seneca Trail	Otter Lake Rd.	Hammerhead	4.2	4.1	21	497		1144	Bit	1980	2006	10, 15	8	4690.4
Seneca Trail	Hammerhead		4.2	4.1				284	Bit	1980	2006	10, 15		1164.4
Hennessy Vista	Otter Lake Rd.	Cul-de-Sac	3.87	3.77	21	496		1120	Bit	1981	2006	10, 15	10	4222.4
Hennessy Vista	Cul-de-Sac		3.87	3.77				756	Bit	1981	2006	10, 15		2850.12
Hammond Road	Otter Lake Rd.	East	4.2	4.1	18	1324		2878	None	1979	2006	10, 15	25	11799.8
3rd Street	Grand Ave.	Portland Ave.	4.2	4.1	19	363		820	None	1980	2004	09, 15	3	3362
2nd Street	Northwest Blvd.	Portland Ave.	4	3.9	18.5	1077		2365	None	1980	2004	09, 15	9	9223.5
1st Street	Northwest Blvd.	Portland Ave.	4	3.9	19	827		1776	None	1980	2004	09, 15	9	6926.4
1st Street	Portland Ave.	East Co. Ln.	4	3.9	19	1290		2723	Bit	1980	2004	09, 15	14	10619.7
Stillwater Street	Northwest Blvd.	Portland Ave.	3.5	3.4	20	528		1286	None	1980	2004	09, 15	5	4372.4
Stillwater Street	Portland Ave.	East Co. Ln.	3.5	3.4	20	1323		3022	None	1980	2004	09, 15	18	10274.8
Hope Street	1st Street	2nd Street	4.5	4.4	22	345		846	Conc	1980	2004	09, 15	3	3722.4
Aydee Cir.	2nd Street	Cul-de-Sac	4.5	4.4	31	232		1485	Bit	1980	2004	09, 15	5	6534
Grand Ave.	Hwy 96	3rd Street	4	3.9	20	1520		3378	Bit	1980	2004	09, 15	15	13174.2
Grand Ave.	4th	Buffalo St.	4	3.9	20	835		1856	None	1980	2004	09, 15	10	7238.4
Park Ave.	Hwy 96	1st Street	4	3.9	19	387		1534	None	1980	2004	09, 15	6	5982.6
Evergreen Cir.	E. Co. Line	Cul-de-Sac	3.3	3.2	30	425	991	2152	Bit	1987	2004	09, 15	12	6886.4
East Co. Ln.	Evergreen (300' so.)	Hwy 96	3.3	3.2	20	1494		3508	Bit	1980	2004	09, 15	8	11225.6
Selena Way	East Co Ln	Cul-de-Sac	5	4.9	30	235		1432	Bit	2014			5	7016.8
East Co. Ln.	Evergreen (300' so.)	Evergreen Cir.	3.3	3.2	29	330		1071	Bit	1980	2004	09, 15	0	3427.2
Evergreen Cir.	Cul-de-Sac		3.3	3.2				1283	Bit	1987	2004	09, 15	NA	4105.6
4th Street	Portland Ave.	Northwest Ave.	2.3	2.2	19	1638		3501	None	1980	2003	09, 15	20	7702.2
Montgomery's Alley	Park Ave.	Portland Ave.	3.75	3.65	12	641		846	None	1980	2004	09, 15	9	3087.9
Barry Ln.	5328 Barry Ln.	Cul-de-Sac	3.7	3.6	31	287	870	1655	Conc	1992		06, 11, 16	8	5958
Provence Ln.	H-2	Cul-de-Sac	4.26	4.16	31	523		2555	Conc	2002		11, 16	11	10628.8
Meadowlands Dr.	Centerville Rd.	Allendale Dr.	3.75	3.65	33	1271		5608	Conc	2005		11, 16		20469.2
Allendale Dr.	Hwy 96	Stoddart Ln.	4.35	4.25	30	2585		8873	Conc	2007		11, 16		37710.25
Stoddart Ln.	Cul-de-Sac	Centerville Rd.	4.43	4.33	29	1081		4206	Conc	2007		11, 16	21	18211.98
Stoddart Cir.	Stoddart Ln.	Cul-de-Sac	4.53	4.43	29	382		1948	Conc	2007		06, 11, 16	7	8629.64
Saxony Ct.	H-2	Cul-de-Sac	4.36	4.26	30	248		700	Conc	1997		06, 11, 16	8	2982
Saxony Ct. Cul-de-Sac			4.36	4.26				829	Conc	1997		05, 11, 16		3531.54
Constellation Dr.	Centerville Rd.	Cul-de-Sac	4.26	4.16	30	979		4113	Conc	1998		16		17110.08
Parkridge Dr.	White Bear Pkwy.	Oakmede Ln.	5	4.9	31	1500		5167	Conc	2011		16	23	25318.3
Park Valley Ln.	Parkridge Dr.	White Bear Pkwy.	5	4.9	31	1370		4719	Conc	2011		16	23	23123.1
Parkway Ponds Ln.	Park Valley Ln.	White Bear Pkwy.	5	4.9	32	940		3342	Conc	2011		16	21	16375.8
Wild Goose Ln.	Parkridge Dr.	White Bear Pkwy.	5	4.9	31	810		2790	Conc	2011		16	17	13671
White Bear Pkwy.	Bibeau Rd.	Fox Meadow Park	5	4.9	30	2003		7406	Conc	2011		16		36289.4
White Bear Pkwy.	Fox Meadow Park	Oakmede Ln.	5	4.9	30	3820		12733	Conc	2011		16		62391.7
Bartylla Ct.	Portland Ave.	Circle	4	3.9	30	681		2751	Conc	2004		11, 16	18	10728.9
Overlake Ave.	Hugo Rd.	Auburn Ave.	3.86	3.76	30	1263		4210	Conc	2005		16		15829.6
Top Lane	So. Birch Lk. Rd.	Hammerhead	5	4.9	26	337	277	1175	Conc	2011		2007	6	5757.5
Birchcrest Dr.	So. Birch Lk. Rd.	Cul-de-Sac	5	4.9	30	1294		4537	Conc	2011		2007	20	22231.3
Pinefield Ct.	Birchcrest Dr.	Cul-de-Sac	5	4.9	30	365		1883	Conc	2011		2007	12	9226.7
Preserve Place	White Bear Pkwy.	Oakmede Ln.	5	4.9	30	409		1429	Conc	2011		2007	7	7002.1
Oakmede Ln.	Birchcrest Dr.	White Bear Pkwy.	5	4.9	30	4264		14519	Conc	2011		2007	67	71143.1
Fisher Ln.	Oakmede Ln.	Oakmede Ln.	5	4.9	30	1642		5569	Conc	2011		2007	25	27288.1
Bambi Ln.	So. Birch Lk. Rd.	Bibeau Rd.	5	4.9	32	1000		3556	Conc	2011		2007	15	17424.4
Doe Cir.	Bambi Ln.	Cul-de-Sac	5	4.9	30	320		1780	Conc	2011		2007	10	8722
Bibeau Rd.	White Bear Pkwy.	Hammerhead	5	4.9	23	1932		5455	Conc	2011		2007	16	26729.5
South Birch Lake Road	White Bear Pkwy.	Highway 96	5	4.9	24.5	3437		10057	Conc	2011		2007		49279.3
Park St.	Otter Lake Rd.	Columbia Park	4.8	4.7	23	2133		5345	Bit	1985	2007	12	31	25121.5
Grace Ave.	Park St.	Hammerhead	4.75	4.65	17	270		510	None	1980	2007	12	3	2371.5

Pavement Management Master

Grace Ave.	Park St.	Hwy 96	4.53	4.43	22	614		1656	None	1980	2007	12	11	7336.08
Margaret St.	Whitaker Ave.	Hwy 96	4.75	4.65	30	1255		4367	Bit	1980	2007	12	41	20306.55
Whitaker Ave.	Whitaker Ct.	Otter Lake Rd.	4.75	4.65	22	2606		6437	None	1980	2007	12	33	29932.05
Brittany Ct.	H-2	Cul-de-Sac	4.03	3.93	30	462	879	2253	Bit	1979	2004	2007, 12	9	8854.29
Normandy Ct.	H-2	Cul-de-Sac	3.95	3.85	29	462	884	2182	Bit	1978	2004	2007, 12	12	8400.7
Pine Hill Dr	H-2	Cul-de-Sac	5	4.9	30	1520		5790	Conc	2016		2007, 12	27	28371
Mehegan Ln	Centerville	Peterson	5	5	32	1034		3679	Conc	2018				18395
Mehegan Ct	Mehegan Ln	Cul-de-Sac	5	5	32	346	908	1927	Conc	2018				9635
Township Dr.	Stuart Ave.	Jonquil Ln.	4.37	4.27	30	410		1417	None	1978	2004	2007, 12	8	6050.59
Township Dr.	H-2	Stuart Ave.	4.37	4.27	30	1288		4424	None	1978	2004	2007, 12	20	18890.48
Fisher St.	Co.Rd. H-2	Stuart Ave.	4.37	4.27	30	1286		4338	Bit	1978	2004	2007, 12	19	18523.26
Stuart Ave.	Otterview Ct.	Fisher St.	4.37	4.27	30	1059		3588	None	1978	2004	2007, 12	11	15320.76
Daisy Ct.	Stuart Ave.	Cul-de-Sac	3.53	3.43	30	440	876	2139	Bit	1978	2004	2007, 12	12	7336.77
Otterview Ct.	Stuart Ave.	Cul-de-Sac	3.53	3.43	30	455	916	2276	None	1978	2004	2007, 12	12	7806.68
Lynx Road	Fisher St.	Feather Ct.	4.12	4.02	30	300		1000	Bit	1978	2004	2007, 12	2	4020
Feather Ct.	H-2	Cul-de-Sac	4	3.9	30	1115		4479	Bit	1978	2004	2007, 12	22	17468.1
Otterview Tr.	Otterview Ct.	Otter Ridge Rd.	3.87	3.77	31	4080		14053	Bit	1978	2004	2007, 13	87	52979.81
Homewood Avenue	So.Shore Blvd	Arbor Dr.	2.03	1.93	25	679		1886	Bit	1962	1996	2000	18	3639.98
Arbor Dr.	Homewood Ave.	Lakewood	2	1.9	20	270		605	Bit	1962	1996	2000	3	1149.5
Lakewood	So.Shore Blvd	Arbor Dr.	2.03	1.93	28	574		1786	Bit	1962	1996	2000	10	3446.98
Lakewood	Arbor Dr.	Co.Rd F	1.86	1.76	24	947		2710	Bit	1962	1996	2000	12	4769.6
Ralph Street	Lakewood	Dead End	2.03	1.93	30	417		1390	Bit	1962	1996	2000	6	2682.7
Arbor Dr.	Lakewood	Co.Rd F	1.6	1.5	25	1860		5167	Bit	1962	1996	2000	23	7750.5
Hillaire Road	Arbor Dr.	So.Shore Blvd	2.03	1.93	20	568		1337	Bit	1962	1996	2000	7	2580.41
Summit Lane	So.Shore Blvd	Arbor Dr.	1.53	1.43	14	712		1201	Bit	1962	1996	2000	12	1717.43
Forest Court	Arbor Dr.	So.Shore Blvd	2.03	1.93	20	806		1825	Bit	1962	1996	2000	16	3522.25
Glen Oaks	So.Shore Blvd	Arbor Dr.	1.53	1.43	25	697		2001	Bit	1962	1996	2000	11	2861.43
Otter Ridge Cir.	Meadowview Dr.	Otter Ridge Rd.	2	1.9	30	444		1633	Conc	1994		2007	7	3102.7
Birch Knoll Dr.	Co.Rd F	Cul-de-Sac	2.12	2.02	28	1109		4054	Bit	1963	1997	2000	25	8189.08
Portland Ave.	Co.Rd F	Martin Way	1.83	1.73	30	978		3260	Bit	1963	1997	2000	16	5639.8
Martin Way	Portland	East Co. Line	1.93	1.83	29	1288		4086	Bit	1963	1997	2000	18	7477.38
Effress Road	Martin Way	Lakewood	2.53	2.43	30	525		1750	Bit	1963	1997	2000	9	4252.5
Effress Way	Martin Way	South Tower Entr.	2.53	2.43	28	263		600	Bit	1963	1997	2000	4 (&City Prop)	1458
Lakewood	Effress Road	Randy Ave.	2.11	2.01	30	1300		4333	Bit	1963	1997	2000	28	8709.33
Stacker Blvd	Lakewood	Portland Ave.	1.83	1.73	30	793		2643	Bit	1963	1997	2000	12	4572.39
Portland Ave.	Martin Way	Randy Ave.	1.7	1.6	30	781		2727	Bit	1963	1997	2000	7	4363.2
Randy Ave	Martin Way	Roth Pl.	2.1	2	29	1490		4801	None	1963	1997	2000	25	9602
Roth Pl.	Grand Ave.	Belleaire Ave.	2.1	2	31	958		3222	Bit	1963	1997	2000	14	6444
Homewood Avenue	Roth Pl.	Martin Way	1.87	1.77	31	1133		3903	Bit	1963	1997	2000	25	6908.31
Martin Way	Belleaire Ave.	Portland Ave.	1.93	1.83	30	1761		5748	Bit	1963	1997	2000	27	10518.84
Stacker Pl.	Stacker Blvd	Stacker Blvd	1.7	1.6	30	614		2135	None	1963	1997	2000	7	3416
Gilfillan Lane	Greenhaven Dr.	Greenhaven Dr.	1.86	1.76	24	965		2729	Conc	1999		2006, 11	32 & HOA	4803.04
Gilfillan Court	Greenhaven Dr.	Hammerhead	2.36	2.26	26	320	183	1041	Conc	1999		2006, 11	12 & HOA	2352.66
Greenhaven Dr.	Hwy 96	Gilfillan Ct.	1.76	1.66	31	1462		5340	Conc	1999		2006, 11		8864.4
Birch Bend Ln.	Hwy 96	Meadowlands Dr.	2.5	2.4	30	288		1113	Conc	1998		2006, 11		2671.2
Ridgeway Ave.	Williams Ave.	Hammerhead	1.53	1.43	10	265		334		1998		2005	8	477.62
Oakwood Dr.	East St.	Hammerhead	2.11	2.01	16	598		1527	Bit	1998		2005	14	3069.27
Stillwater Ct.	Stillwater St.	Cul-de-Sac	2.03	1.93	31	170		1313	Bit	1979		2005	6	2534.09
5425 Eagle St.	Easment	East St. Alley	2.87	2.77	10	78		91		1971				252.07
East St. Alley	Buffalo St.	Hammerhead	2.87	2.77	11	352		466	None	1998		2005	8	1290.82
Fifth Ct.	Eagle St.	East	1.7	1.6	16	340		604	None	1998		2005	6	966.4

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Shadyside Ln.	Taylor Ave.	North	2.03	1.93	13	348		601	None	1971	1998		2005	8	1159.93
White Bear Pkwy.	Oakmede Ln.	Otter Lake Rd.	2.3	2.2	30	2869		10498	Conc	1998			2004		23095.6
St. Anthony Ave.	Stillwater St.	W. Bald Eagle	2.95	2.85	17	378		758	Bit	1971	1998		2005	5	2160.3
West Ave.	W. Bald Eagle	Stillwater St.	2.2	2.1	17	415		882	Bit	1971	1998		2005	1	1852.2
Pleasant St.	West Ave.	Summit St.	1.87	1.77	15	673		1135	None	1971	1998		2005	11	2008.95
Summit St.	W. Bald Eagle	Stillwater St.	2.53	2.43	19	798		1725	Bit	1971	1998		2005	10	4191.75
Milner St.	Stillwater St.	Hammerhead	3.5	3.4	14	190		405	None	1997			2005	3	1377
Mead Rd.	Stillwater St.	Cul-de-Sac	2.2	2.1	20	1186		2842	Bit	1971	1998		2005	22	5968.2
West Ave.	Stillwater St.	Ridgewood Ave.	2.53	2.43	17	450		906	Bit	1971	1998		2005	10	2201.58
Ridgewood Ave.	West Ave.	Bald Eagle Ave.	3.53	3.43	21	1260		2940	None	1971	1998		2005	23	10084.2
St. Anthony Ave.	Ridgewood Ave.	Hammerhead	2.7	2.6	19	219		585	Bit	1970	1995		2005	2 (Mostly City)	1521
Latta St.	Stillwater St.	Cul-de-Sac	2.45	2.35	19	849		1978	None	1970	1998		2005	15	4648.3
Anderlie Ln.	5290 Anderlie Ln.	H-2	1.87	1.77	30	1320		4400	Bit	1971	1998		2005	27	7788
Township Pkwy	Hammond Road	White Bear Parkway	3.67	3.57	39	1733		7510	Conc	1992			2000, 12		26810.7
Greenhaven Dr.	Allendale Dr.	Giffillan Ct.	3.86	3.76	31	2510		8538	Conc	2001			2008, 14	52 & HOA	32102.88
Moon Lake Cir.	Greenhaven Dr.	Cul-de-Sac	3.45	3.35	32	1412		5552	Conc	2001			2008, 13	40 & HOA	18599.2
Crescent Curve	Greenhaven Dr.	Cul-de-Sac	3.61	3.51	32	852	875	3663	Conc	2001			2008, 13	22 & HOA	12857.13
Weston Woods Way	Greenhaven Dr.	Hwy 96	2.76	2.66	30	1382		4810	Conc	2001			2008, 13	40 & HOA	12794.6
North Birch Lake Blvd.	Centerville Rd.	Cul-de-Sac	3.86	3.76	26	674		2877	Conc	2001			2008, 11	nd apt complex	10817.52
Moon Lake Ct.	Weston Woods Way	East	3.2	3.1	30	284		947	Conc	2003			2008, 13	7 & HOA	2935.7
Hoxie Ave.	Taylor Ave.	Williams Ave.	1.53	1.43	20	814		1809	Bit	1971	1998		2005	13	2586.87
Gaston Ave.	Hoxie Ave.	Hugo Rd.	1.7	1.6	18	726		1754	Bit	1971	1998		2005	6	2806.4
O'Connors Alley	Taylor Ave.	Gaston Ave.	2.03	1.93	14	512		839	None	1971	1998		2005	7	1619.27
Williams Ave.	Buffalo St.	E. Bald Eagle	2.2	2.1	17	957		1882	None	1971	1998		2005	14	3952.2
Ridgeway Ave.	Williams Ave.	Buffalo St.	2.03	1.93	13	763		1102	Bit	1971	1998		2005	10	2126.86
East St. Alley	Park Ave.	Hammerhead	3.2	3.1	18	426	147	920	None	1971	1998		2005	5 (& City)	2852
East St.	Buffalo St.	Park Ave.	3.53	3.43	19	1523		3197	None	1971	1998		2005	21	10965.71
Short St.	East St.	E. Bald Eagle	2.07	1.97	16	650		1156	Bit	1971	1998		2005	6 (HOA?)	2277.32
Elk St.	Park Ave.	Hammerhead	3.53	3.43	18	831		1751	None	1971	1998		2005	17	6005.93
Beaver St.	E. Bald Eagle	Stillwater St.	3.11	3.01	18	953		1919	Bit	1971	1998		2005	14	5776.19
Fourth St.	Eagle St.	East	2.7	2.6	17	333		629	Bit	1971	1998		2005	6	1635.4
Hugo Ct.	Hugo Road	West	2.2	2.1	14	337		524	None	1971	1998		2005	10	1100.4
Gilbert Ave.	Hugo Road	Cul-de-Sac	2.86	2.76	21	118		275	None	1971	1998		2005	5	759
Parker Ave.	Lorane Ave.	Cul-de-Sac	2	1.9	30	522		2404	Bit	1986			2007	8	4567.6
Mill St.	Parker Ave.	Cul-de-Sac	2	1.9	30	367		1863	Bit	1986			2007	10	3539.7
Reed Pl.	H-2	Cul-de-Sac	1.87	1.77	30	704	700	2889	Bit	1978			2005	14	5113.53
Ross Ln.	Reed Pl.	Barry Ln.	1.87	1.77	30	341	605	1585	Bit	1978			2005	8	2805.45
Barry Ln.	Ross Ln.	5328 Barry Ln.	2	1.9	30	274		894	Bit	1978			2005	3	1698.6
Lavalle Ct.	H-2	Cul-de-Sac	1.67	1.57	29	493		2416	Bit	1979			2005	9	3793.12
Cottage Ave.	H-2	Cul-de-Sac	1.82	1.72	25	1248	173	3490	Bit	1977	1998		2005	22	6002.8
Prospect Ave.	H-2	Hammerhead	1.82	1.72	28	1255		3904	Bit	1977	1998		2005	22	6714.88
Lakeview Ave.	H-2	Cul-de-Sac	2.28	2.18	27	1245		3948	Bit	1977	1998		2005	15	8606.64
Anderson Ln.	Centerville Rd.	Cul-de-Sac	3.26	3.16	22	1278		3384	Bit	1970	1999		2005, 11	16	10693.44
Mallard Ponds Dr.	Norway Pine Dr.	Portland Ave.	2.1	2	32	779		2728	Conc	1999			2006, 12	13	5456
Mallard Ponds Dr.	Norway Pine Dr.	Sandterra Cir.	2.1	2	31	2090		7192	Conc	1999			2006, 12	32	14384
Blue Bill Cir.	Mallard Ponds Dr.	Cul-de-Sac	2.03	1.93	32	569		2726	Conc	1999			2006, 12	11	5261.18
Sandterra Cir.	Pintail Ln.	Cul-de-Sac	2.03	1.93	32	617	686	2702	Conc	1999			2006, 12	5	5214.86
Pintail Ln.	Cul-de-Sac	Mallard Ponds Dr.	1.82	1.72	32	1300		4607	Conc	1999			2006, 12	27	7924.04
Pintail Ct.	Cul-de-Sac		2.2	2.1		50	907	907	Conc	2004			2006, 12	included above	1904.7
Mallard Ponds Blvd.	Mallard Ponds Dr.	Portland Ave.	2.1	2	32	387		1384	Conc	1999			2006, 12	3	2768
Hammond Road	Otter Lake Rd.	Polar Lakes Park	3.95	3.85	30	3316		11366	Conc	2001			2006, 12		43759.1
Windmill Dr.	Brandlwood Rd.	Meadowview Dr.	4.27	4.17	30	1055		3556	Bit	1987	2004		2007, 13, 18	21	14828.52
Fisher St.	Brandlwood Rd.	Meadowview Dr.	4.62	4.52	30	1222		4035	Bit	1987	2004		2007, 13, 18	23	18238.2
Brandlwood Ct.	Brandlwood Rd.	Cul-de-Sac	4.28	4.18	31	168		4919	Bit	1985	2004		2007, 13, 18	js - diff. owners	20561.42
Brandlwood Road	Otter Lake Rd.	Otterview Tr.	4.02	3.92	30	1961		6537	Bit	1986	2004		2007, 13, 18	apt, MN, TWP	25625.04

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Appendix B

Existing Street Network Ratings Map

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1. HICKORY TR.
2. WHISPERWOOD TR.
3. FISHER CT.
4. BRANDLWOOD CT.
5. OTTER RIDGE CIR.
6. OTTER VIEW CIR.
7. WAGONWHEEL CT.
8. HORSESHOE CT.

20. CONNERS ALLEY
21. GASTON AVE.
22. MALLARD POND BLVD.
23. SHADYSIDE LA.

LEGEND

- RATING 0-2.2
- RATING 2.2-3.25
- RATING 3.25 AND UP
- TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 10.8
 TOTAL YELLOW MILEAGE = 6.6
 TOTAL GREEN MILEAGE = 25.5



JAN 2019



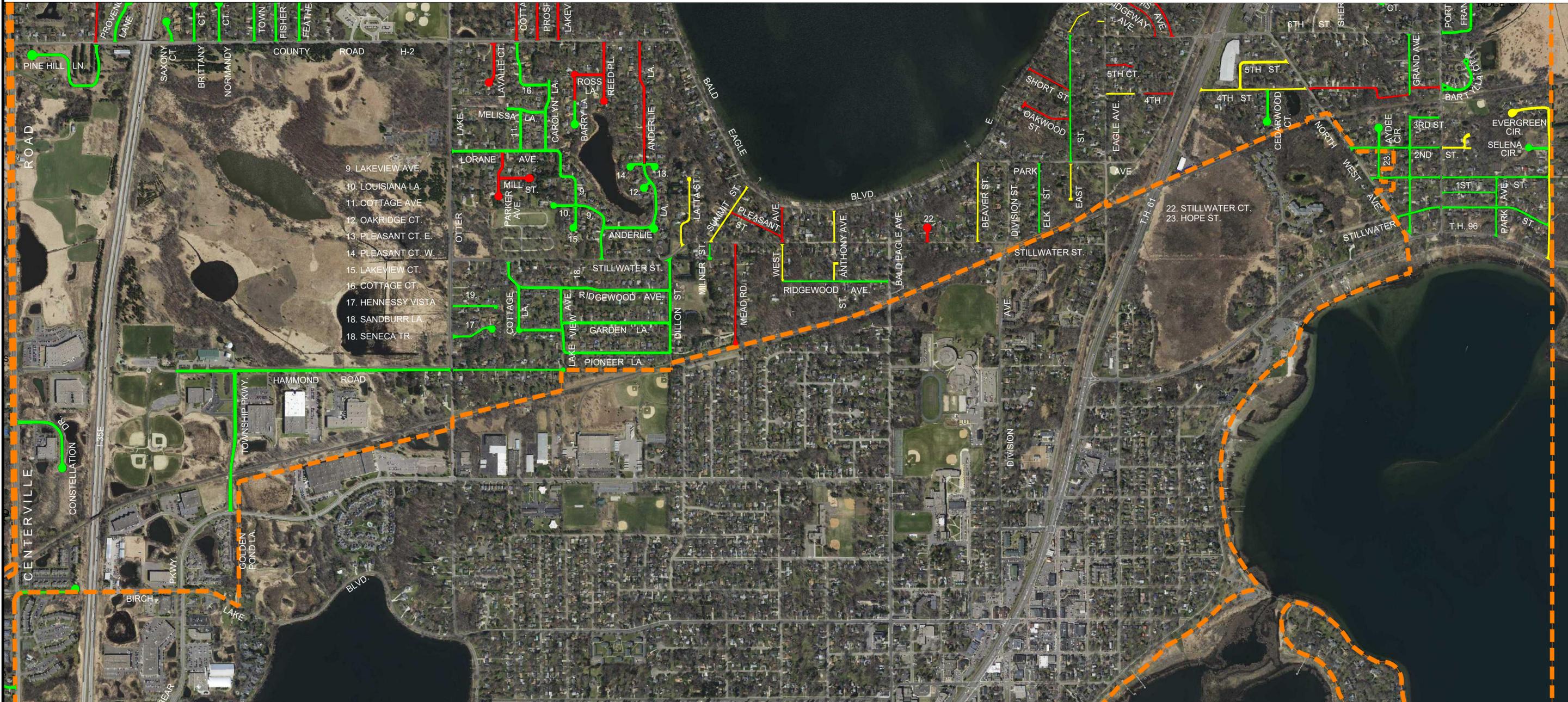
444 Cedar Street, Suite 1500
 Saint Paul, MN 55101
 651.292.4400
 tkda.com

WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT

STREET NETWORK RATINGS MAP
 2018

16627.011

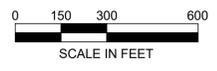
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LEGEND

- RATING 0-2.2
- RATING 2.2-3.25
- RATING 3.25 AND UP
- TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 10.8
 TOTAL YELLOW MILEAGE = 6.6
 TOTAL GREEN MILEAGE = 25.5



JAN 2019



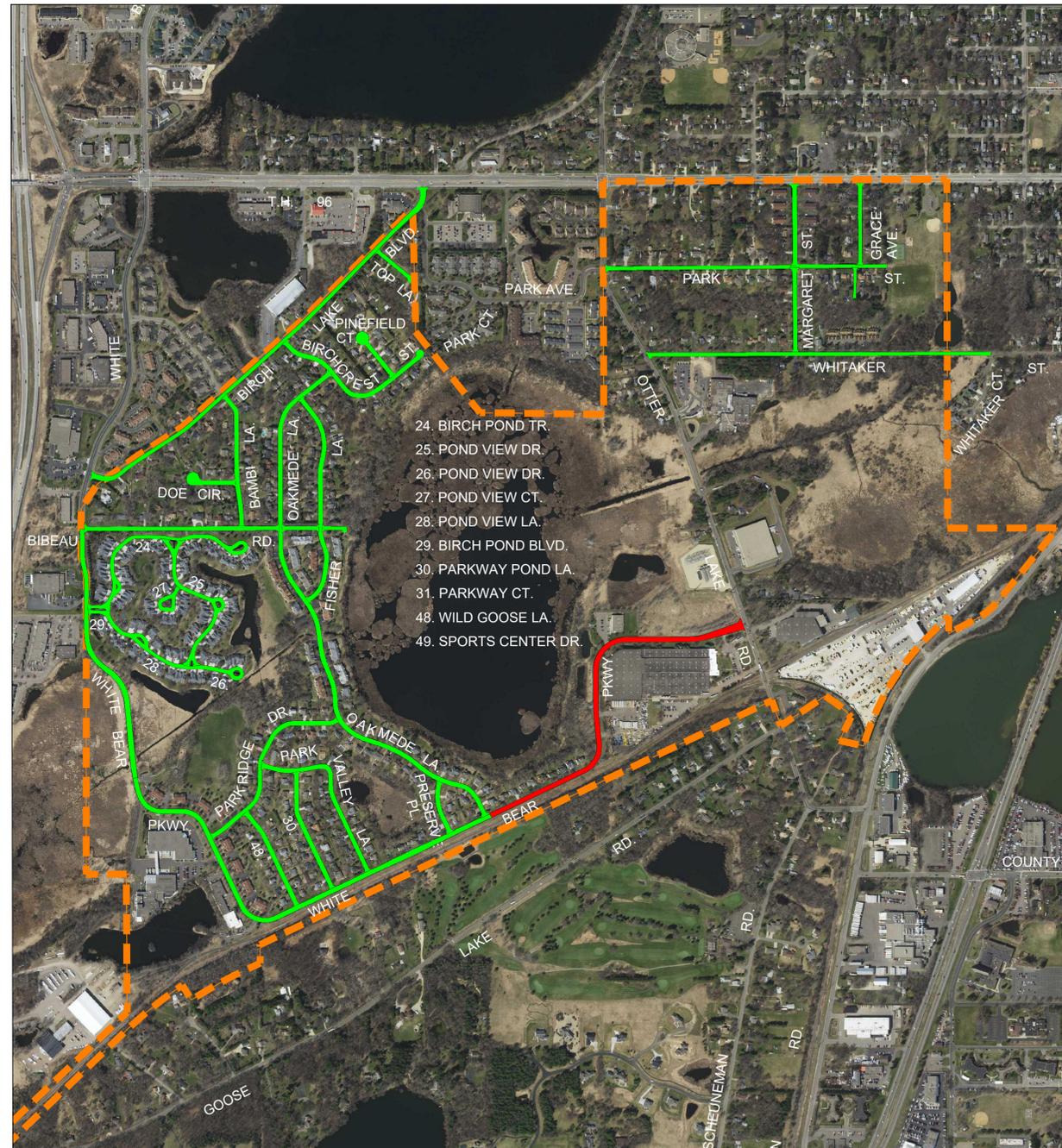
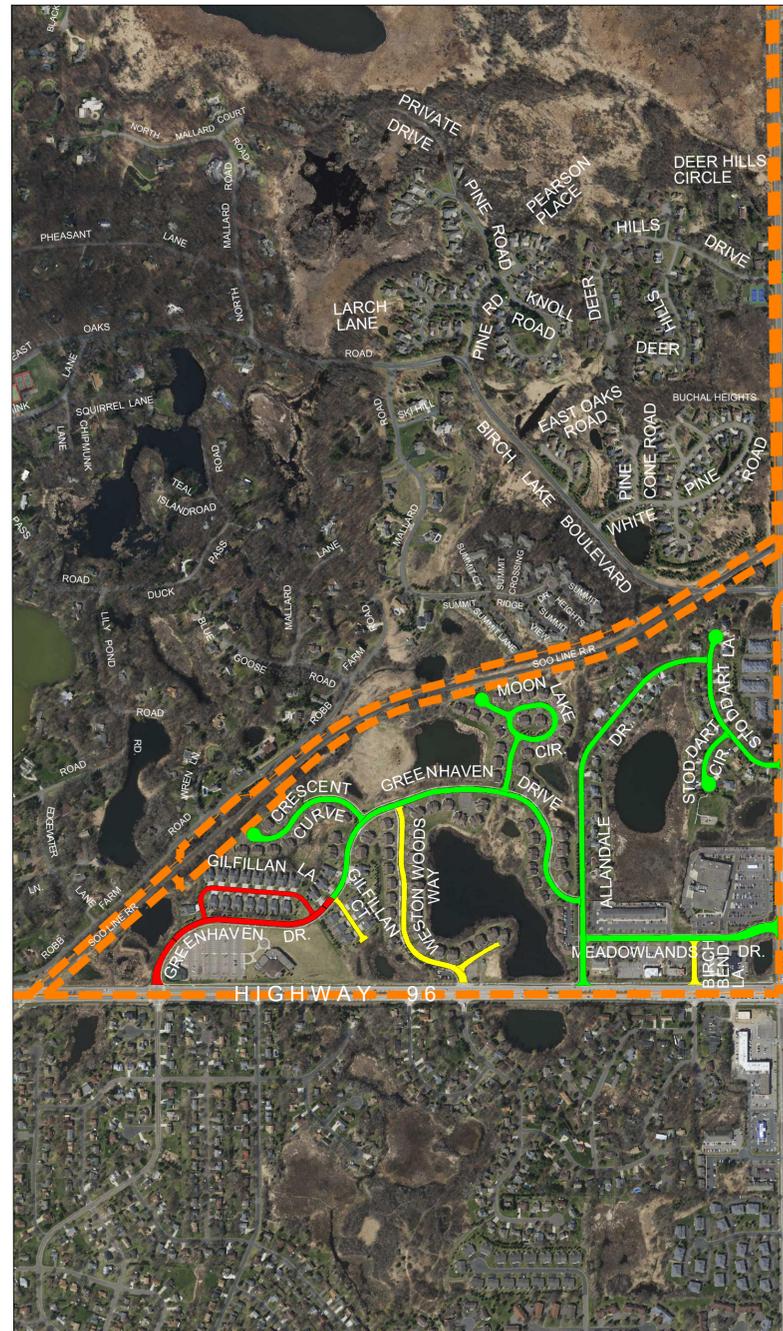
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WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT

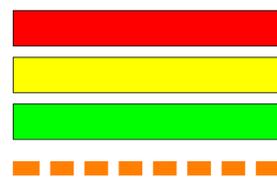
STREET NETWORK RATINGS MAP
 2018

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LEGEND



RATING 0-2.2
 RATING 2.2-3.25
 RATING 3.25 AND UP
 TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 10.8
 TOTAL YELLOW MILEAGE = 6.6
 TOTAL GREEN MILEAGE = 25.5



JAN 2019



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WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT

STREET NETWORK RATINGS MAP
 2018

16627.011

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Appendix C

Street Network Ratings Map at Five Years with No Street Improvement Projects

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LEGEND

-  RATING 0-2.2
-  RATING 2.2-3.25
-  RATING 3.25 AND UP
-  TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 13.6
 TOTAL YELLOW MILEAGE = 7.8
 TOTAL GREEN MILEAGE = 21.5



JAN 2019



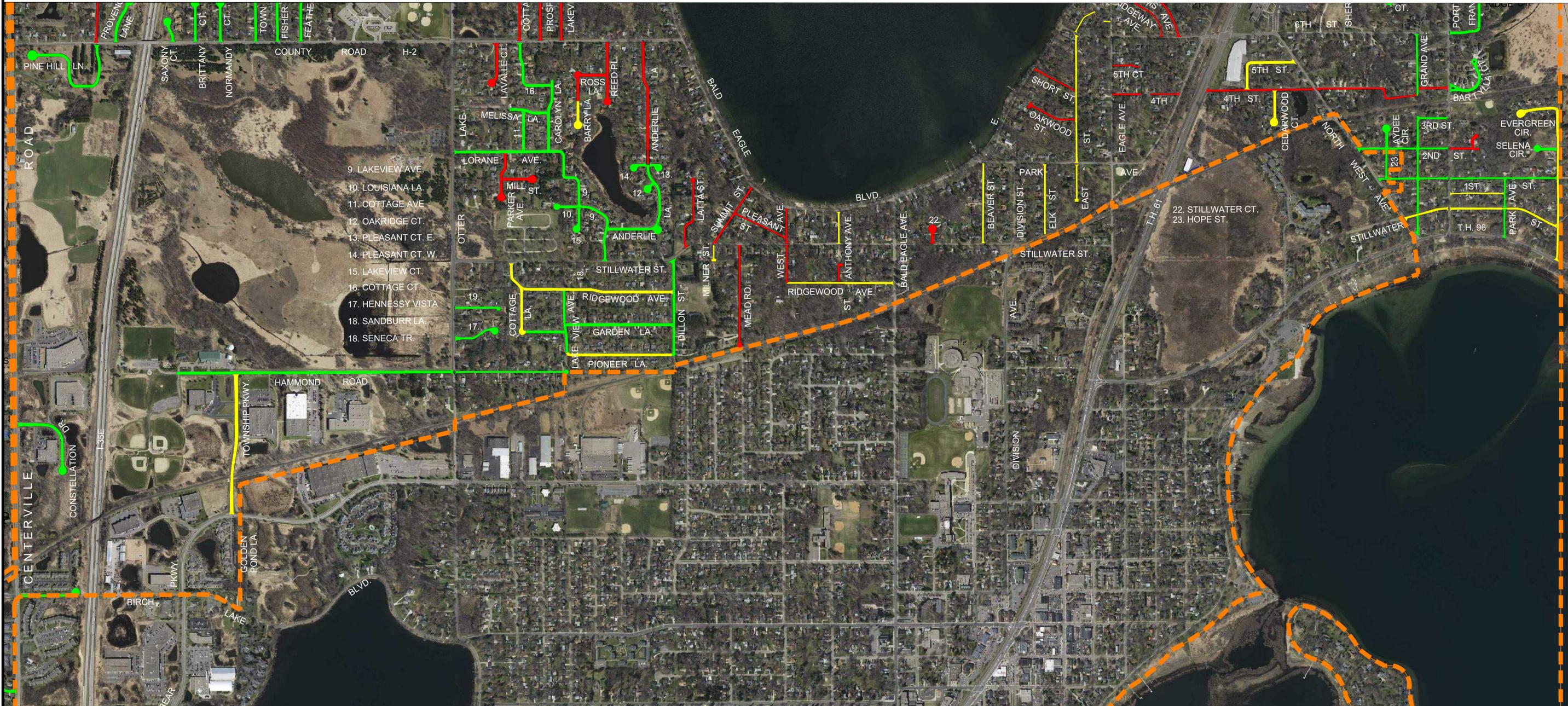
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WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT

5 YEAR OUTLOOK WITH NO
 STREET IMPROVEMENT PROJECTS

16627.011

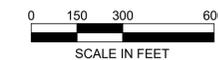
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LEGEND

- RATING 0-2.2
- RATING 2.2-3.25
- RATING 3.25 AND UP
- TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 13.6
 TOTAL YELLOW MILEAGE = 7.8
 TOTAL GREEN MILEAGE = 21.5



JAN 2019



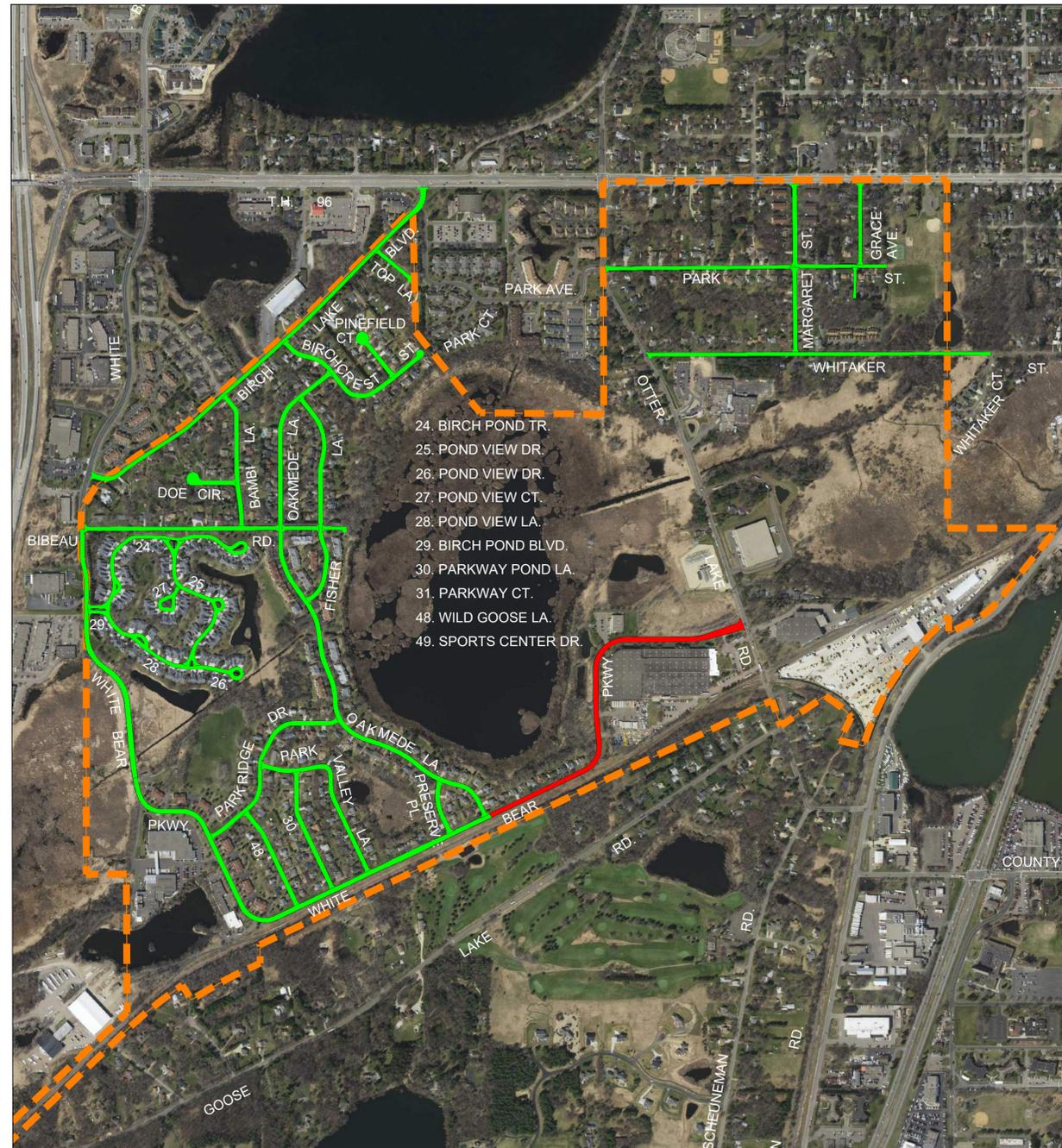
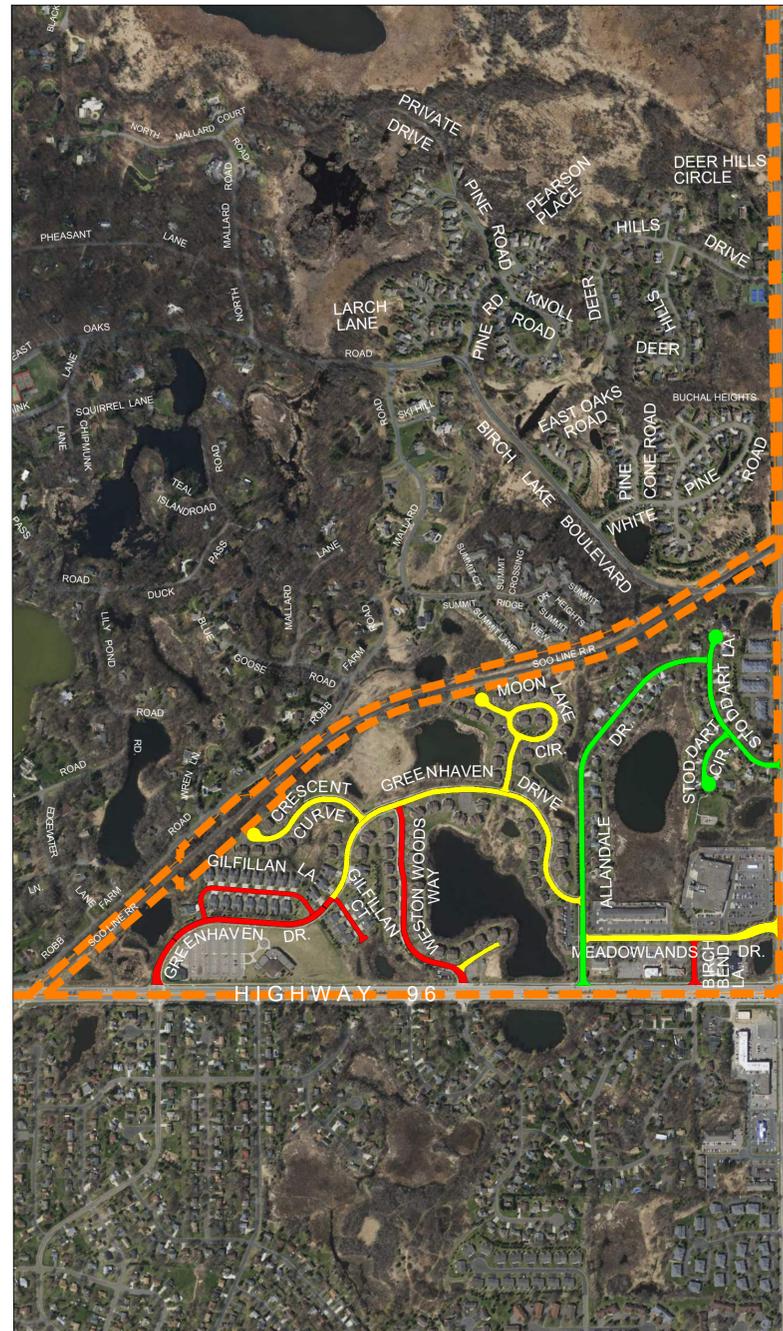
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**WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT**

**5 YEAR OUTLOOK WITH NO
 STREET IMPROVEMENT PROJECTS**

16627.011

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LEGEND



RATING 0-2.2
 RATING 2.2-3.25
 RATING 3.25 AND UP
 TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 13.6
 TOTAL YELLOW MILEAGE = 7.8
 TOTAL GREEN MILEAGE = 21.5



JAN 2019



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WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT

5 YEAR OUTLOOK WITH NO
 STREET IMPROVEMENT PROJECTS

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Appendix D

Improvement Cost Estimates

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GENERAL COST ESTIMATE FOR MILL & OVERLAY OF 100' X 30' ROADWAY BIT CURB

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	MOBILIZATION	LUMP SUM	1	\$ 500.00	\$ 500.00
2	TRAFFIC CONTROL	LUMP SUM	1	\$ 25.00	\$ 25.00
3	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	0	\$ 4.50	\$ -
4	REMOVE BITUMINOUS PAVEMENT (STREET)	SQ YD	0	\$ 4.50	\$ -
5	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	0	\$ 9.00	\$ -
6	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	0	\$ 8.00	\$ -
7	SAWING BITUMINOUS PAVEMENT	LIN FT	0	\$ 6.00	\$ -
8	MILL 2" EXISTING BITUMINOUS	SQ YD	333	\$ 4.00	\$ 1,332.00
9	SALVAGE AND REINSTALL SPRINKLER SYSTEM	LIN FT	0	\$ 20.00	\$ -
10	COMMON EXCAVATION	CU YD	0	\$ 14.00	\$ -
11	AGGREGATE BASE CLASS V	TON	0	\$ 20.00	\$ -
12	BITUMINOUS MIX (2")	TON	37.5	\$ 55.00	\$ 2,062.50
13	6" DRIVEWAY CONCRETE PAVEMENT	SQ YD	0	\$ 50.00	\$ -
14	BITUMINOUS DRIVEWAY	SQ YD	0	\$ 35.00	\$ -
15	BITUMINOUS CURB AND GUTTER	LIN FT	200	\$ 9.00	\$ 1,800.00
16	15" RCP STORM PIPE	LIN FT	0	\$ 40.00	\$ -
17	18" RCP STORM PIPE	LIN FT	0	\$ 45.00	\$ -
18	CATCH BASIN CONSTRUCTION	EACH	0	\$ 2,500.00	\$ -
19	INSTALL CASTING (STORM)	EACH	0	\$ 500.00	\$ -
20	ADJUST FRAME AND RING CASTING	EACH	2	\$ 450.00	\$ 900.00
21	INLET PROTECTION	EACH	1	\$ 180.00	\$ 180.00
22	TOPSOIL BORROW	CU YD	0	\$ 30.00	\$ -
23	SODDING TYPE LAWN	SQ YD	0	\$ 5.00	\$ -
	CONSTRUCTION COSTS				\$ 6,799.50
	PROJECT SUPPORT COSTS (25%)				\$ 1,699.88
	TOTAL				\$ 8,499.38

28' ROAD WIDTH	DEDUCT	\$ 225.50	TOTAL	\$ 8,273.88	\$2.95 /SQ. FT.
24' ROAD WIDTH	DEDUCT	\$ 676.50	TOTAL	\$ 7,822.88	\$3.26 /SQ. FT.

ASSUMPTIONS:
2" MILL AND OVERLAY
NEW BITUMINOUS CURB
DRIVEWAYS NOT IMPACTED

USE \$3.00/SF

GENERAL COST ESTIMATE FOR MILL & OVERLAY OF 100' X 30' ROADWAY WITH CURB

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	MOBILIZATION	LUMP SUM	1	\$ 2,000.00	\$ 500.00
2	TRAFFIC CONTROL	LUMP SUM	1	\$ 100.00	\$ 50.00
3	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	20	\$ 4.50	\$ 90.00
4	REMOVE BITUMINOUS PAVEMENT (STREET)	SQ YD	0	\$ 4.50	\$ -
5	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	20	\$ 9.00	\$ 180.00
6	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	15	\$ 8.00	\$ 120.00
7	SAWING BITUMINOUS PAVEMENT	LIN FT	15	\$ 6.00	\$ 90.00
8	MILL 2" EXISTING BITUMINOUS	SQ YD	333	\$ 4.00	\$ 1,332.00
9	SALVAGE AND REINSTALL SPRINKLER SYSTEM	LIN FT	10	\$ 20.00	\$ 200.00
10	COMMON EXCAVATION	CU YD	0	\$ 14.00	\$ -
11	AGGREGATE BASE CLASS V	TON	0	\$ 20.00	\$ -
12	BITUMINOUS MIX (2")	TON	37.5	\$ 55.00	\$ 2,062.50
13	6" DRIVEWAY CONCRETE PAVEMENT	SQ YD	20	\$ 50.00	\$ 1,000.00
14	BITUMINOUS DRIVEWAY	SQ YD	20	\$ 35.00	\$ 700.00
15	CONCRETE CURB AND GUTTER REPLACEMENT	LIN FT	60	\$ 22.00	\$ 1,320.00
16	15" RCP STORM PIPE	LIN FT	0	\$ 40.00	\$ -
17	18" RCP STORM PIPE	LIN FT	0	\$ 45.00	\$ -
18	CATCH BASIN CONSTRUCTION	EACH	0	\$ 2,500.00	\$ -
19	INSTALL CASTING (STORM)	EACH	0	\$ 500.00	\$ -
20	ADJUST FRAME AND RING CASTING	EACH	2	\$ 450.00	\$ 900.00
21	INLET PROTECTION	EACH	1	\$ 180.00	\$ 180.00
22	TOPSOIL BORROW	CU YD	0	\$ 30.00	\$ -
23	SODDING TYPE LAWN	SQ YD	20	\$ 5.00	\$ 100.00
	CONSTRUCTION COSTS				\$ 8,824.50
	PROJECT SUPPORT COSTS (25%)				\$ 2,206.13
	TOTAL				\$ 11,030.63

28' ROAD WIDTH	DEDUCT	\$ 225.50	TOTAL	\$ 10,805.13	\$3.86 /SQ. FT.
24' ROAD WIDTH	DEDUCT	\$ 676.50	TOTAL	\$ 10,354.13	\$4.31 /SQ. FT.

ASSUMPTIONS:
2" MILL AND OVERLAY
30% CURB REMOVAL AND REPLACEMENT
DRIVEWAYS IMPACTED

USE \$4.00/SF

GENERAL COST ESTIMATE FOR RECLAIM WITH CURB OF 100' X 30' ROADWAY

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE	
1	MOBILIZATION	LUMP SUM	1	\$ 500.00	\$ 500.00	
2	TRAFFIC CONTROL	LUMP SUM	1	\$ 25.00	\$ 25.00	
3	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	20	\$ 4.50	\$ 90.00	
4	REMOVE BITUMINOUS PAVEMENT (STREET)	SQ YD	0	\$ 4.50	\$ -	
5	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	20	\$ 9.00	\$ 180.00	
6	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	15	\$ 8.00	\$ 120.00	
7	SAWING BITUMINOUS PAVEMENT	LIN FT	15	\$ 6.00	\$ 90.00	
8	RECLAIM EXISTING BIT. AND BASE (6")	SQ YD	333	\$ 1.50	\$ 499.50	
9	SUBGRADE PREPARATION OF RECLAIMED SURFACE	SQ YD	333	\$ 1.50	\$ 499.50	
10	SALVAGE AND REINSTALL MAILBOXES	EACH	0	\$ 100.00	\$ -	
11	SALVAGE AND REINSTALL SPRINKLER SYSTEM	LIN FT	10	\$ 20.00	\$ 200.00	
12	COMMON EXCAVATION	CU YD	20	\$ 14.00	\$ 280.00	
13	AGGREGATE BASE CLASS V	TON	20	\$ 20.00	\$ 400.00	
14	BITUMINOUS MIX (3.5")	TON	65	\$ 55.00	\$ 3,575.00	
15	6" DRIVEWAY CONCRETE PAVEMENT	SQ YD	20	\$ 50.00	\$ 1,000.00	
16	BITUMINOUS DRIVEWAY	SQ YD	20	\$ 35.00	\$ 700.00	
17	CONCRETE CURB AND GUTTER REPLACEMENT	LIN FT	60	\$ 22.00	\$ 1,320.00	
18	15" RCP STORM PIPE	LIN FT	0	\$ 40.00	\$ -	
19	18" RCP STORM PIPE	LIN FT	0	\$ 45.00	\$ -	
20	CATCH BASIN CONSTRUCTION	EACH	0	\$ 2,500.00	\$ -	
21	INSTALL CASTING (STORM)	EACH	0	\$ 500.00	\$ -	
22	ADJUST FRAME AND RING CASTING	EACH	2	\$ 450.00	\$ 900.00	
23	INLET PROTECTION	EACH	1	\$ 180.00	\$ 180.00	
24	TOPSOIL BORROW	CU YD	0	\$ 30.00	\$ -	
25	SODDING TYPE LAWN	SQ YD	20	\$ 5.00	\$ 100.00	
	CONSTRUCTION COSTS				\$ 10,659.00	
	PROJECT SUPPORT COSTS (25%)				\$ 2,664.75	
	TOTAL				\$ 13,323.75	\$4.44 /SQ. FT.
	28' ROAD WIDTH	DEDUCT	\$ 341.00	TOTAL	\$ 12,982.75	\$4.64 /SQ. FT.
	24' ROAD WIDTH	DEDUCT	\$ 1,023.00	TOTAL	\$ 12,300.75	\$5.13 /SQ. FT.

ASSUMPTIONS:
RECLAMATION OF EXISTING BITUMINOUS
REPLACE 30% OF CONCRETE CURB
NO STORM SEWER REPLACEMENT

USE \$5.00/SF

GENERAL COST ESTIMATE FOR RECLAIM & ADDING CURB OF 100' X 30' ROADWAY

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE	
1	MOBILIZATION	LUMP SUM	1	\$ 1,000.00	\$ 1,000.00	
2	TRAFFIC CONTROL	LUMP SUM	1	\$ 50.00	\$ 50.00	
3	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	20	\$ 4.50	\$ 90.00	
4	REMOVE BITUMINOUS PAVEMENT (STREET)	SQ YD	0	\$ 4.50	\$ -	
5	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	20	\$ 9.00	\$ 180.00	
6	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	15	\$ 8.00	\$ 120.00	
7	SAWING BITUMINOUS PAVEMENT	LIN FT	15	\$ 6.00	\$ 90.00	
8	RECLAIM EXISTING BIT. AND BASE (6")	SQ YD	333	\$ 2.00	\$ 666.00	
9	SUBGRADE PREPARATION OF RECLAIMED SURFACE	SQ YD	333	\$ 2.00	\$ 666.00	
10	SALVAGE AND REINSTALL MAILBOXES	EACH	2	\$ 100.00	\$ 200.00	
11	SALVAGE AND REINSTALL SPRINKLER SYSTEM	LIN FT	10	\$ 20.00	\$ 200.00	
12	COMMON EXCAVATION	CU YD	20	\$ 14.00	\$ 280.00	
13	AGGREGATE BASE CLASS V	TON	20	\$ 20.00	\$ 400.00	
14	BITUMINOUS MIX (3.5")	TON	65	\$ 55.00	\$ 3,575.00	
15	6" DRIVEWAY CONCRETE PAVEMENT	SQ YD	20	\$ 50.00	\$ 1,000.00	
16	BITUMINOUS DRIVEWAY	SQ YD	20	\$ 35.00	\$ 700.00	
17	CONCRETE CURB AND GUTTER	LIN FT	200	\$ 18.00	\$ 3,600.00	
18	15" RCP STORM PIPE	LIN FT	15	\$ 40.00	\$ 600.00	
19	18" RCP STORM PIPE	LIN FT	50	\$ 45.00	\$ 2,250.00	
20	CATCH BASIN CONSTRUCTION	EACH	1	\$ 2,500.00	\$ 2,500.00	
21	INSTALL CASTING (STORM)	EACH	2	\$ 500.00	\$ 1,000.00	
22	ADJUST FRAME AND RING CASTING	EACH	1	\$ 450.00	\$ 450.00	
23	INLET PROTECTION	EACH	2	\$ 180.00	\$ 360.00	
24	TOPSOIL BORROW	CU YD	10	\$ 30.00	\$ 300.00	
25	SODDING TYPE LAWN	SQ YD	100	\$ 5.00	\$ 500.00	
	CONSTRUCTION COSTS				\$ 20,777.00	
	PROJECT SUPPORT COSTS (25%)				\$ 5,194.25	
	TOTAL				\$ 25,971.25	\$8.66 /SQ. FT.
	28' ROAD WIDTH	DEDUCT	\$ 363.00	TOTAL	\$ 25,608.25	\$9.15 /SQ. FT.
	24' ROAD WIDTH	DEDUCT	\$ 1,089.00	TOTAL	\$ 24,882.25	\$10.37 /SQ. FT.

ASSUMPTIONS:
RECLAMATION OF EXISTING BITUMINOUS
ADD CONCRETE CURB
ADD STORM SEWER

USE \$9.00/SF

GENERAL COST ESTIMATE FOR RECONSTRUCTION OF 100' X 30' ROADWAY

ITEM #	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	MOBILIZATION	LUMP SUM	1	\$ 2,000.00	\$ 2,000.00
2	TRAFFIC CONTROL	LUMP SUM	1	\$ 100.00	\$ 100.00
3	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	20	\$ 4.50	\$ 90.00
4	REMOVE BITUMINOUS PAVEMENT (STREET)	SQ YD	333	\$ 4.50	\$ 1,498.50
5	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	20	\$ 9.00	\$ 180.00
6	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	15	\$ 8.00	\$ 120.00
7	SAWING BITUMINOUS PAVEMENT	LIN FT	15	\$ 6.00	\$ 90.00
8	SALVAGE AND REINSTALL MAILBOXES	EACH	2	\$ 100.00	\$ 200.00
9	SALVAGE AND REINSTALL SPRINKLER SYSTEM	LIN FT	10	\$ 20.00	\$ 200.00
10	COMMON EXCAVATION	CU YD	230	\$ 14.00	\$ 3,220.00
11	AGGREGATE BASE CLASS V (8")	TON	150	\$ 20.00	\$ 3,000.00
12	BITUMINOUS MIX (3.5")	TON	65	\$ 55.00	\$ 3,575.00
13	6" DRIVEWAY CONCRETE PAVEMENT	SQ YD	20	\$ 50.00	\$ 1,000.00
14	BITUMINOUS DRIVEWAY	SQ YD	20	\$ 35.00	\$ 700.00
15	CONCRETE CURB AND GUTTER	LIN FT	200	\$ 18.00	\$ 3,600.00
16	15" RCP STORM PIPE	LIN FT	15	\$ 40.00	\$ 600.00
17	18" RCP STORM PIPE	LIN FT	50	\$ 45.00	\$ 2,250.00
18	CATCH BASIN CONSTRUCTION	EACH	1	\$ 2,500.00	\$ 2,500.00
19	INSTALL CASTING (STORM)	EACH	1	\$ 500.00	\$ 500.00
20	ADJUST FRAME AND RING CASTING	EACH	2	\$ 450.00	\$ 900.00
21	INLET PROTECTION	EACH	1	\$ 180.00	\$ 180.00
22	TOPSOIL BORROW	CU YD	10	\$ 30.00	\$ 300.00
23	SODDING TYPE LAWN	SQ YD	100	\$ 5.00	\$ 500.00
	CONSTRUCTION COSTS				\$ 27,303.50
	PROJECT SUPPORT COSTS (25%)				\$ 6,825.88
	TOTAL				\$ 34,129.38

\$11.38 /SQ. FT.

18" GRANULAR BORROW	TON	350	\$ 12.00	\$ 4,200.00
COMMON EXCAVATION	CU YD	190	\$ 14.00	\$ 2,660.00
				\$ 40,989.38

\$13.66 /SQ. FT.

28' ROAD WIDTH	DEDUCT	\$ 784.00	TOTAL	\$ 33,345.38	\$11.91 /SQ. FT.
24' ROAD WIDTH	DEDUCT	\$ 2,352.00	TOTAL	\$ 31,777.38	\$13.24 /SQ. FT.

ASSUMPTIONS:
FULL RECONSTRUCTION
15' WIDE DRIVEWAYS
SOD 4' BEHIND CURB
PAVE DRIVEWAY 10' BEHIND CURB
ADD STORM SEWER
NO STORMWATER TREATMENT

USE \$12.00/SF

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Appendix E

Network Ratings Map at Five Years with Project Grouping Recommendations

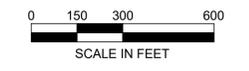
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LEGEND

- RATING 0-2.2
- RATING 2.2-3.25
- RATING 3.25 AND UP
- TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 6.6
 TOTAL YELLOW MILEAGE = 5.5
 TOTAL GREEN MILEAGE = 30.8



JAN 2019

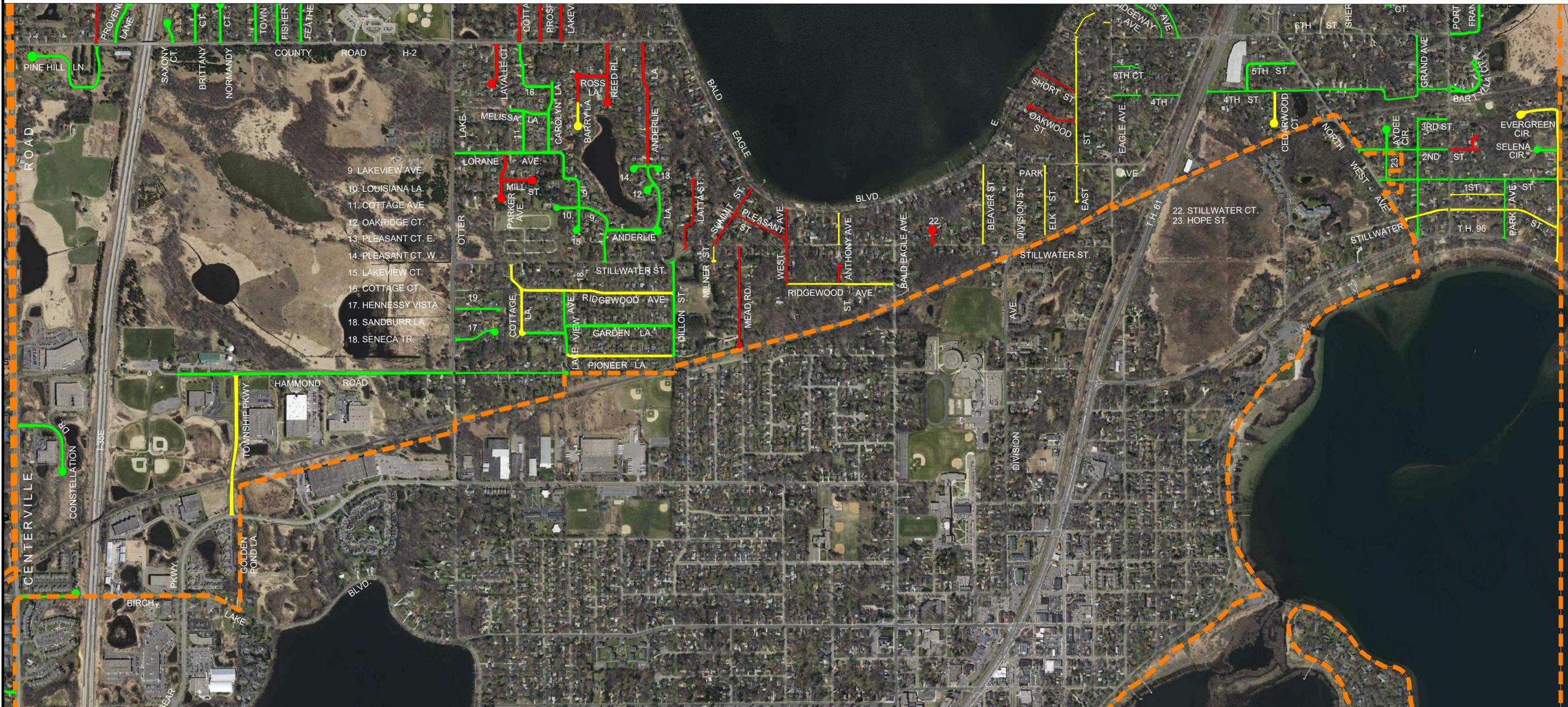
TKDA
 444 Cedar Street, Suite 1500
 Saint Paul, MN 55101
 651.292.4400
 tkda.com

**WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT**

**5 YEAR OUTLOOK WITH SUGGESTED
 STREET IMPROVEMENT PROJECTS**

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LEGEND

- RATING 0-2.2
- RATING 2.2-3.25
- RATING 3.25 AND UP
- TOWNSHIP BOUNDARY

TOTAL RED MILEAGE = 6.6
 TOTAL YELLOW MILEAGE = 5.5
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JAN 2019



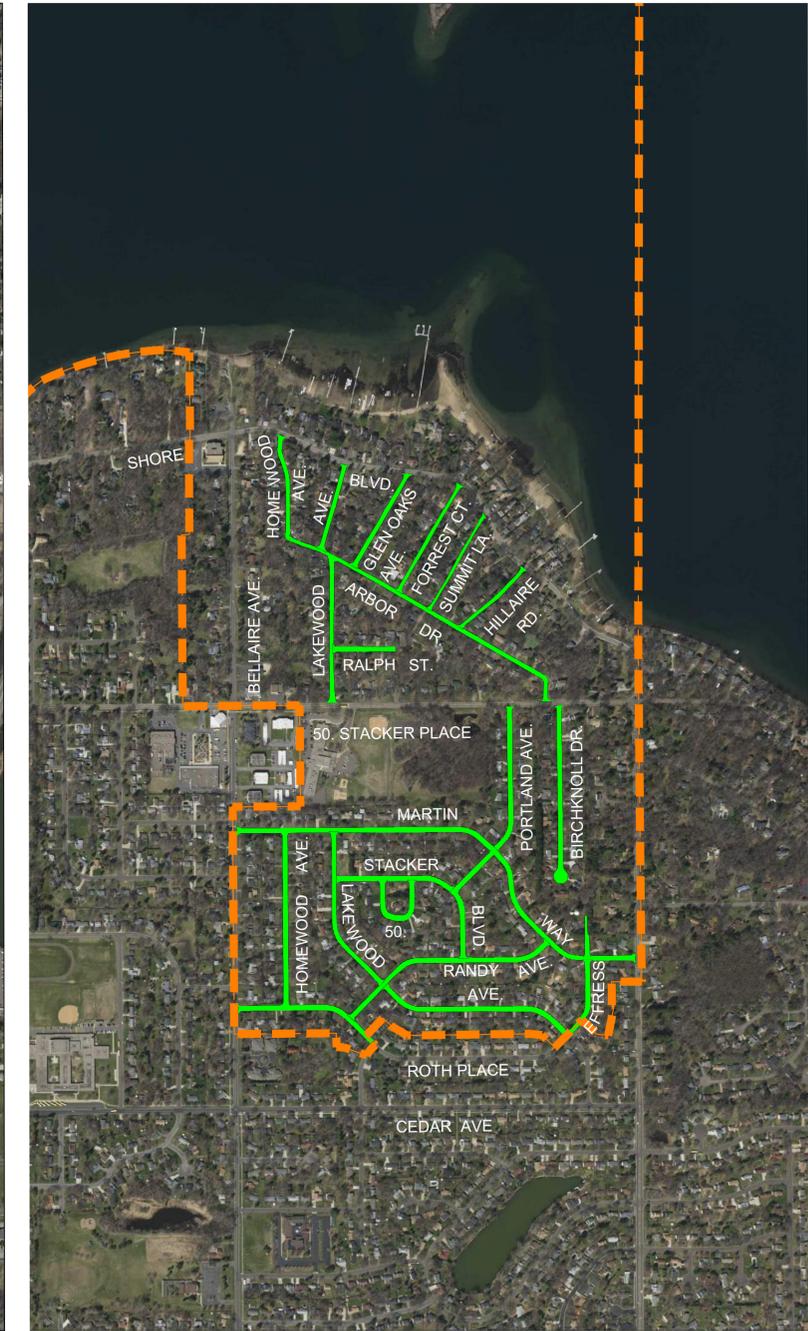
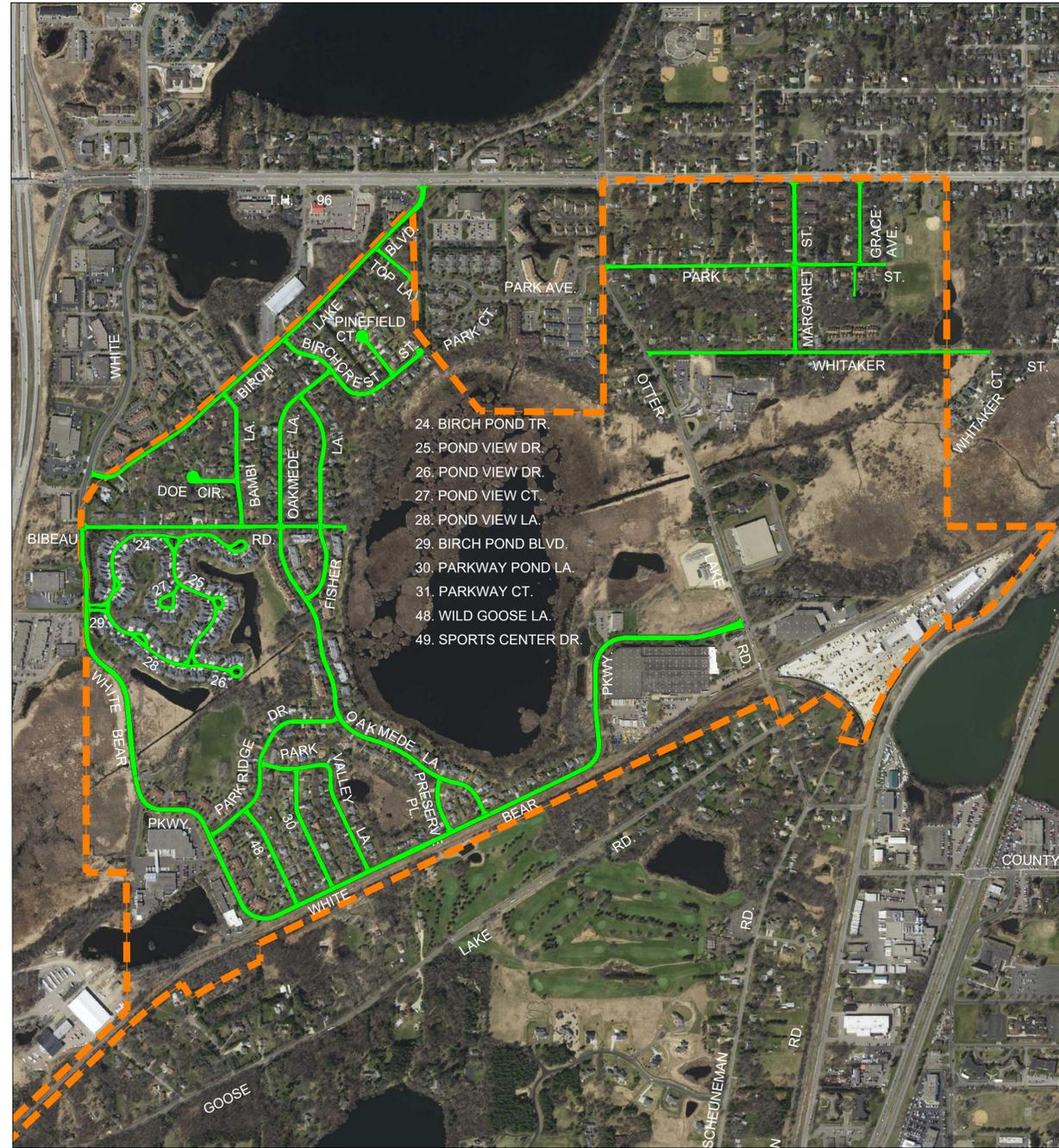
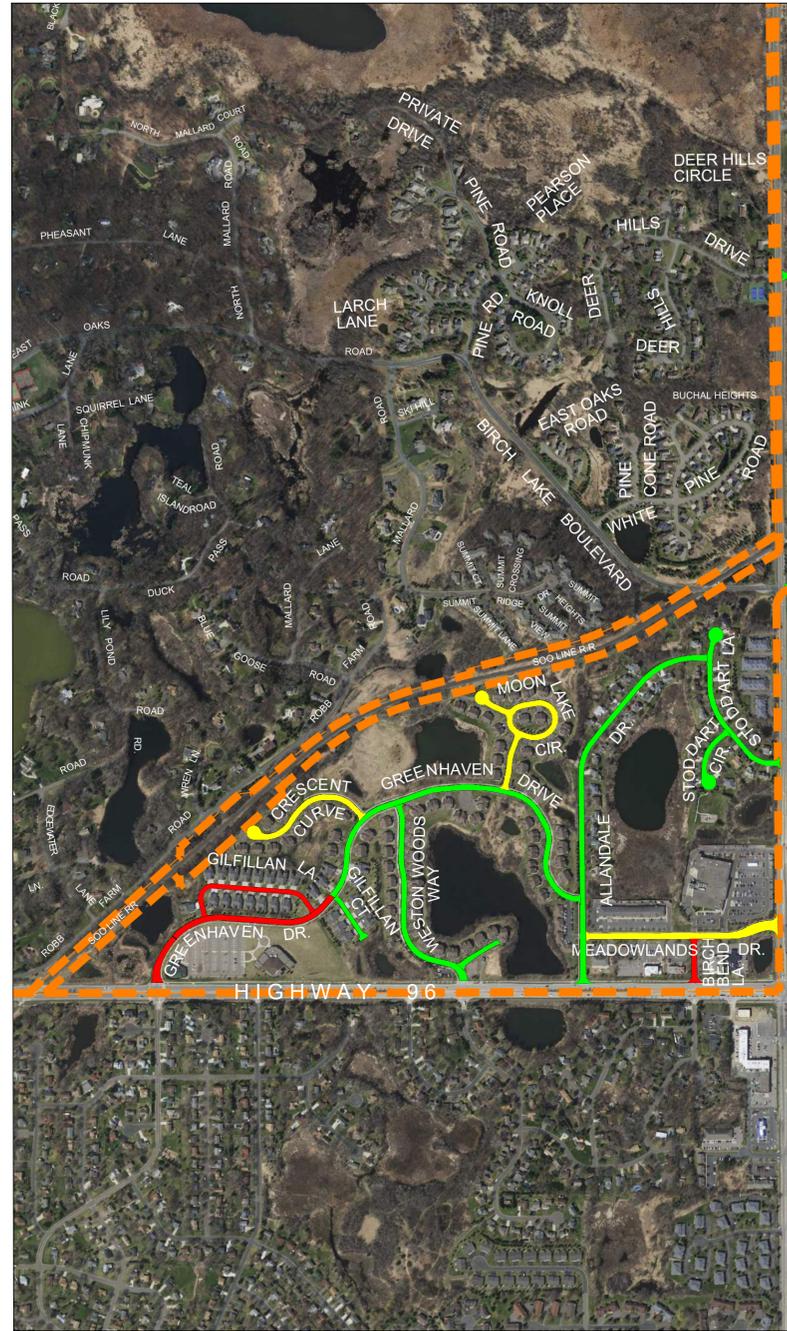
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**WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT**

**5 YEAR OUTLOOK WITH SUGGESTED
 STREET IMPROVEMENT PROJECTS**

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LEGEND

	RATING 0-2.2	TOTAL RED MILEAGE = 6.6
	RATING 2.2-3.25	TOTAL YELLOW MILEAGE = 5.5
	RATING 3.25 AND UP	TOTAL GREEN MILEAGE = 30.8
	TOWNSHIP BOUNDARY	



JAN 2019

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**WHITE BEAR TOWNSHIP
 PAVEMENT MANAGEMENT**

**5 YEAR OUTLOOK WITH SUGGESTED
 STREET IMPROVEMENT PROJECTS**

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Appendix F

Funding Plan

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WHITE BEAR TOWNSHIP
2019-2028 STREET IMPROVEMENT FUNDING PLAN

1/2/2019

40% ASSESSMENT RATE

Year	Improvement	Project Type	Length Miles	Pavement CR	Constructed/Reconstructed	Tax Levy	Bond Type	Assessments	Water Utility Fund	Sewer Utility Fund	Stormwater/Water Quality	Grant or Other	TOTAL COST	Estimated Unit Assessment
2019	Parkview Dr/Parkview Ct/Fenway Ct	M&O Exist. Curb	0.65	2.42	1996	\$ 216,000	429	\$ 144,000	\$ 20,961	\$ 20,961	\$ 8,384		\$ 411,000	\$ 2,400
2019	Weston Woods Way/Moon Lake Ct/Gilfillan Ct	M&O Exist. Curb	0.37	2.66	2001	\$ 129,000	429	\$ 86,000	\$ 12,495	\$ 12,495	\$ 4,998		\$ 245,000	\$ 1,500
2019	White Bear Pkway (Oakmede to Otter Lake Rd)	Reclaim Exist. Curb	0.54	2.2	1998	\$ 249,000	429	\$ 166,000	\$ 24,072	\$ 24,072	\$ 9,629		\$ 472,000	
2019	4th St (TH61 to Portland)/5th St	M&O Place Bit. Curb	0.72	2.63	1980	\$ 123,000	429	\$ 82,000	\$ 16,104	\$ 16,104	\$ 6,344		\$ 244,000	\$ 2,100
2019	Hobe Ln/W Hobe Ct/N Hobe Ct	M&O Place Bit. Curb	0.81	2.98	1963	\$ 175,000	429	\$ 117,000	\$ 22,836	\$ 22,836	\$ 8,996		\$ 346,000	\$ 2,100
2019	Project Totals		3.09			\$ 892,000		\$ 595,000	\$ 96,468	\$ 96,468	\$ 38,351	\$ -	\$ 1,718,000	
2020	Homewood/Lakewood/Ralph/Arbor/Hillaire/Summit/Forrest/Glen Oaks	Reclaim Adding Curb	1.43	1.71	1962	\$ 635,000	429	\$ 424,000	\$ 35,002	\$ 35,002	\$ 483,900		\$ 1,613,000	\$ 3,600
2020	Project Totals		1.43			\$ 635,000		\$ 424,000	\$ 35,002	\$ 35,002	\$ 483,900	\$ -	\$ 1,613,000	
2021	Birch Knoll/Portland/Martin/Effress	Reclaim Adding Curb	1.11	1.93	1963	\$ 622,000	429	\$ 415,000	\$ 34,264	\$ 34,264	\$ 473,700		\$ 1,579,000	\$ 4,200
2021	Project Totals		1.11			\$ 622,000		\$ 415,000	\$ 34,264	\$ 34,264	\$ 473,700	\$ -	\$ 1,579,000	
2022	Lakewood/Stacker/Portland/Randy/Roth/Homewood	Reclaim Adding Curb	1.33	1.84	1963	\$ 758,000	429	\$ 506,000	\$ 41,773	\$ 41,773	\$ 577,500		\$ 1,925,000	\$ 4,300
2022	Project Totals		1.33			\$ 758,000		\$ 506,000	\$ 41,773	\$ 41,773	\$ 577,500	\$ -	\$ 1,925,000	
2023	Williams/Ridgeway/Hoxie/Shadyside/Gaston/O'Connors/Gilbert/5th Ct/4th St/Hugo Ct	Reclaim Adding Curb	1.04	1.85	1971	\$ 331,000	429	\$ 220,000	\$ 18,206	\$ 18,206	\$ 251,700		\$ 839,000	\$ 2,400
2023	Silver Fox/Jenni/Christine/Katie/Suzanne/Richard/Paul/Buffalo/Westergren/Ridge/Franklin	M&O Curb Varies	1.67	3.29	1988	\$ 470,000	429	\$ 314,000	\$ 61,446	\$ 61,446	\$ 24,206		\$ 931,000	\$ 2,400
2023	Project Totals		2.71			\$ 801,000		\$ 534,000	\$ 79,652	\$ 79,652	\$ 275,906	\$ -	\$ 1,770,000	
2024	Street Non-Specific	Recon	0.7			\$ 596,000	429	\$ 397,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2024	Mill & Overlay	M&O	1.4			\$ 382,000	429	\$ 255,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2024	Project Totals		2.1			\$ 978,000		\$ 652,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2025	Street Non-Specific	Recon	0.7			\$ 596,000	429	\$ 397,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2025	Mill & Overlay	M&O	1.4			\$ 382,000	429	\$ 255,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2025	Project Totals		2.1			\$ 978,000		\$ 652,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2026	Street Non-Specific	Recon	0.7			\$ 596,000	429	\$ 397,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2026	Mill & Overlay	M&O	1.4			\$ 382,000	429	\$ 255,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2026	Project Totals		2.1			\$ 978,000		\$ 652,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2027	Street Non-Specific	Recon	0.7			\$ 596,000	429	\$ 397,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2027	Mill & Overlay	M&O	1.4			\$ 382,000	429	\$ 255,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2027	Project Totals		2.1			\$ 978,000		\$ 652,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2028	Street Non-Specific	Recon	0.7			\$ 596,000	429	\$ 397,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2028	Mill & Overlay	M&O	1.4			\$ 382,000	429	\$ 255,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2028	Project Totals		2.1			\$ 978,000.00		\$ 652,000.00	\$ 58,920.00	\$ 58,920.00	\$ 307,390.00	\$ -	\$ 2,055,000	
	PROGRAM TOTALS		20.17			\$ 8,598,000		\$ 5,734,000	\$ 581,759	\$ 581,759	\$ 3,386,307	\$ -	\$ 18,880,000	

*NOTE: COSTS ARE IN 2019 DOLLARS AND DOES NOT INCLUDE INFLATION OR INTEREST



WHITE BEAR TOWNSHIP
2019-2028 STREET IMPROVEMENT FUNDING PLAN

1/2/2019

50% ASSESSMENT RATE

Year	Improvement	Project Type	Length Miles	Pavement CR	Constructed/Reconstructed	Tax Levy	Bond Type	Assessments	Water Utility Fund	Sewer Utility Fund	Stormwater/Water Quality	Grant or Other Contribution	TOTAL COST	Estimated Unit Assessment
2019	Parkview Dr/Parkview Ct/Fenway Ct	M&O Exist. Curb	0.65	2.32	1996	\$ 180,000	429	\$ 180,000	\$ 20,961	\$ 20,961	\$ 8,384		\$ 411,000	\$ 3,000
2019	Weston Woods Way/Moon Lake Ct/Gilfillan Ct	M&O Exist. Curb	0.37	2.66	2001	\$ 108,000	429	\$ 108,000	\$ 12,495	\$ 12,495	\$ 4,998		\$ 245,000	\$ 1,800
2019	White Bear Pkway (Oakmede to Otter Lake Rd)	Reclaim Exist. Curb	0.54	2.2	1998	\$ 207,000	429	\$ 207,000	\$ 24,072	\$ 24,072	\$ 9,629		\$ 472,000	
2019	4th St (TH61 to Portland)/5th St	M&O Place Bit. Curb	0.72	2.63	1980	\$ 103,000	429	\$ 103,000	\$ 16,104	\$ 16,104	\$ 6,344		\$ 244,000	\$ 3,000
2019	Hobe Ln/W Hobe Ct/N Hobe Ct	M&O Place Bit. Curb	0.81	2.89	1963	\$ 146,000	429	\$ 146,000	\$ 22,836	\$ 22,836	\$ 8,996		\$ 346,000	\$ 3,000
2019	Project Totals		3.09			\$ 744,000		\$ 744,000	\$ 96,468	\$ 96,468	\$ 38,351	\$ -	\$ 1,718,000	
2020	Homewood/Lakewood/Ralph/Arbor/Hillaire/Summit/Forrest/Glen Oaks	Reclaim Adding Curb	1.43	1.71	1962	\$ 530,000	429	\$ 530,000	\$ 35,002	\$ 35,002	\$ 483,900		\$ 1,613,000	\$ 4,500
2020	Project Totals		1.43			\$ 530,000		\$ 530,000	\$ 35,002	\$ 35,002	\$ 483,900	\$ -	\$ 1,613,000	
2021	Birch Knoll/Portland/Martin/Effress	Reclaim Adding Curb	1.11	1.93	1963	\$ 518,000	429	\$ 518,000	\$ 34,264	\$ 34,264	\$ 473,700		\$ 1,579,000	\$ 5,200
2021	Project Totals		1.11			\$ 518,000		\$ 518,000	\$ 34,264	\$ 34,264	\$ 473,700	\$ -	\$ 1,579,000	
2022	Lakewood/Stacker/Portland/Randy/Roth/ Homewood	Reclaim Adding Curb	1.33	1.85	1963	\$ 632,000	429	\$ 632,000	\$ 41,773	\$ 41,773	\$ 577,500		\$ 1,925,000	\$ 5,400
2022	Project Totals		1.33			\$ 632,000		\$ 632,000	\$ 41,773	\$ 41,773	\$ 577,500	\$ -	\$ 1,925,000	
2023	Williams/Ridgeway/Hoxie/Shadyside/Gaston/O'Connors/Gilbert/5th Ct/4th St/Hugo Ct	Reclaim Adding Curb	1.04	1.85	1971	\$ 275,000	429	\$ 275,000	\$ 18,206	\$ 18,206	\$ 251,700		\$ 839,000	\$ 2,800
2023	Silver Fox/Jenni/Christine/Katie/Suzanne/Richard/Paul/Buffalo/Westergren/Ridge/Franklin	M&O Curb Varies	1.67	3.29	1988	\$ 392,000	429	\$ 392,000	\$ 61,446	\$ 61,446	\$ 24,206		\$ 931,000	\$ 3,000
2023	Project Totals		2.71			\$ 667,000		\$ 667,000	\$ 79,652	\$ 79,652	\$ 275,906	\$ -	\$ 1,770,000	
2024	Street Non-Specific	Recon	0.7			\$ 497,000	429	\$ 497,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2024	Mill & Overlay	M&O	1.4			\$ 318,000	429	\$ 318,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2024	Project Totals		2.1			\$ 815,000		\$ 815,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2025	Street Non-Specific	Recon	0.7			\$ 497,000	429	\$ 497,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2025	Mill & Overlay	M&O	1.4			\$ 318,000	429	\$ 318,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2025	Project Totals		2.1			\$ 815,000		\$ 815,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2026	Street Non-Specific	Recon	0.7			\$ 497,000	429	\$ 497,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2026	Mill & Overlay	M&O	1.4			\$ 318,000	429	\$ 318,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2026	Project Totals		2.1			\$ 815,000		\$ 815,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2027	Street Non-Specific	Recon	0.7			\$ 497,000	429	\$ 497,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2027	Mill & Overlay	M&O	1.4			\$ 318,000	429	\$ 318,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2027	Project Totals		2.1			\$ 815,000		\$ 815,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2028	Street Non-Specific	Recon	0.7			\$ 497,000	429	\$ 497,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2028	Mill & Overlay	M&O	1.4			\$ 318,000	429	\$ 318,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2028	Project Totals		2.1			\$ 815,000		\$ 815,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
	PROGRAM TOTALS		20.17			\$ 7,166,000		\$ 7,166,000	\$ 581,759	\$ 581,759	\$ 3,386,307	\$ -	\$ 18,880,000	

*NOTE: COSTS ARE IN 2019 DOLLARS AND DOES NOT INCLUDE INFLATION OR INTEREST



Year	Improvement	Project Type	Length Miles	2018 Pavement Rating	Constructed/Reconstructed	Tax Levy	Bond Type	Assessments	Water Utility Fund	Sewer Utility Fund	Stormwater/Water Quality	Grant or Other Contribution	TOTAL COST	Estimated Unit Assessment
2019	Parkview Dr/Parkview Ct/Fenway Ct	M&O Exist. Curb	0.65	2.42	1996		429	\$ 361,000	\$ 20,961	\$ 20,961	\$ 8,384		\$ 411,000	\$ 6,000
2019	Weston Woods Way/Moon Lake Ct/Gilfillan Ct	M&O Exist. Curb	0.37	2.66	2001		429	\$ 215,000	\$ 12,495	\$ 12,495	\$ 4,998		\$ 245,000	\$ 3,600
2019	White Bear Pkway (Oakmede to Otter Lake Rd)	Reclaim Exist. Curb	0.54	2.2	1998		429	\$ 416,000	\$ 19,824	\$ 19,824	\$ 16,048		\$ 472,000	
2019	4th St (TH61 to Portland)/5th St	M&O Place Bit. Curb	0.72	2.63	1980		429	\$ 205,000	\$ 16,104	\$ 16,104	\$ 6,344		\$ 244,000	\$ 5,100
2019	Hobe Ln/W Hobe Ct/N Hobe Ct	M&O Place Bit. Curb	0.81	2.98	1963		429	\$ 291,000	\$ 22,836	\$ 22,836	\$ 8,996		\$ 346,000	\$ 5,300
2019	Project Totals		3.09			\$ -		\$ 1,488,000	\$ 92,220	\$ 92,220	\$ 44,770	\$ -	\$ 1,718,000	
2020	Homewood/Lakewood/Ralph/Arbor/Hillaire/Summit/Forrest/Glen Oaks	Reclaim Adding Curb	1.43	1.71	1962		429	\$ 1,059,000	\$ 35,002	\$ 35,002	\$ 483,900		\$ 1,613,000	\$ 9,000
2020	Project Totals		1.43			\$ -		\$ 1,059,000	\$ 35,002	\$ 35,002	\$ 483,900	\$ -	\$ 1,613,000	
2021	Birch Knoll/Portland/Martin/Effress	Reclaim Adding Curb	1.11	1.93	1963		429	\$ 1,037,000	\$ 34,264	\$ 34,264	\$ 473,700		\$ 1,579,000	\$ 10,500
2021	Project Totals		1.11			\$ -		\$ 1,037,000	\$ 34,264	\$ 34,264	\$ 473,700	\$ -	\$ 1,579,000	
2022	Lakewood/Stacker/Portland/Randy/Roth/ Homewood	Reclaim Adding Curb	1.33	1.85	1963		429	\$ 1,264,000	\$ 41,773	\$ 41,773	\$ 577,500		\$ 1,925,000	\$ 10,700
2022	Project Totals		1.33			\$ -		\$ 1,264,000	\$ 41,773	\$ 41,773	\$ 577,500	\$ -	\$ 1,925,000	
2023	Williams/Ridgeway/Hoxie/Shadyside/Gaston/O'Connors/Gilbert/5th Ct/4th St/Hugo Ct	Reclaim Adding Curb	1.04	1.85	1971		429	\$ 551,000	\$ 18,206	\$ 18,206	\$ 251,700		\$ 839,000	\$ 5,900
2023	Silver Fox/Jenni/Christine/Katie/Suzanne/Richard/Paul/Buffalo/Westergren/Ridge/Franklin	M&O Curb Varies	1.67	3.29	1988		429	\$ 784,000	\$ 61,446	\$ 61,446	\$ 24,206		\$ 931,000	\$ 6,000
2023	Project Totals		2.71			\$ -		\$ 1,335,000	\$ 18,206	\$ 18,206	\$ 251,700	\$ -	\$ 1,770,000	
2024	Street Non-Specific	Recon	0.7				429	\$ 994,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2024	Mill & Overlay	M&O	1.4				429	\$ 636,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2024	Project Totals		2.1			\$ -		\$ 1,630,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2025	Street Non-Specific	Recon	0.7				429	\$ 994,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2025	Mill & Overlay	M&O	1.4				429	\$ 636,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2025	Project Totals		2.1			\$ -		\$ 1,630,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2026	Street Non-Specific	Recon	0.7				429	\$ 994,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2026	Mill & Overlay	M&O	1.4				429	\$ 636,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2026	Project Totals		2.1			\$ -		\$ 1,630,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2027	Street Non-Specific	Recon	0.7				429	\$ 994,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2027	Mill & Overlay	M&O	1.4				429	\$ 636,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2027	Project Totals		2.1			\$ -		\$ 1,630,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
2028	Street Non-Specific	Recon	0.7				429	\$ 994,000	\$ 21,945	\$ 21,945	\$ 292,600		\$ 1,330,000	
2028	Mill & Overlay	M&O	1.4				429	\$ 636,000	\$ 36,975	\$ 36,975	\$ 14,790		\$ 725,000	
2028	Project Totals		2.1			\$ -		\$ 1,630,000	\$ 58,920	\$ 58,920	\$ 307,390	\$ -	\$ 2,055,000	
	PROGRAM TOTALS		20.17			\$ -		\$ 14,333,000	\$ 516,065	\$ 516,065	\$ 3,368,520	\$ -	\$ 18,880,000	

*NOTE: COSTS ARE IN 2019 DOLLARS AND DOES NOT INCLUDE INFLATION OR INTEREST

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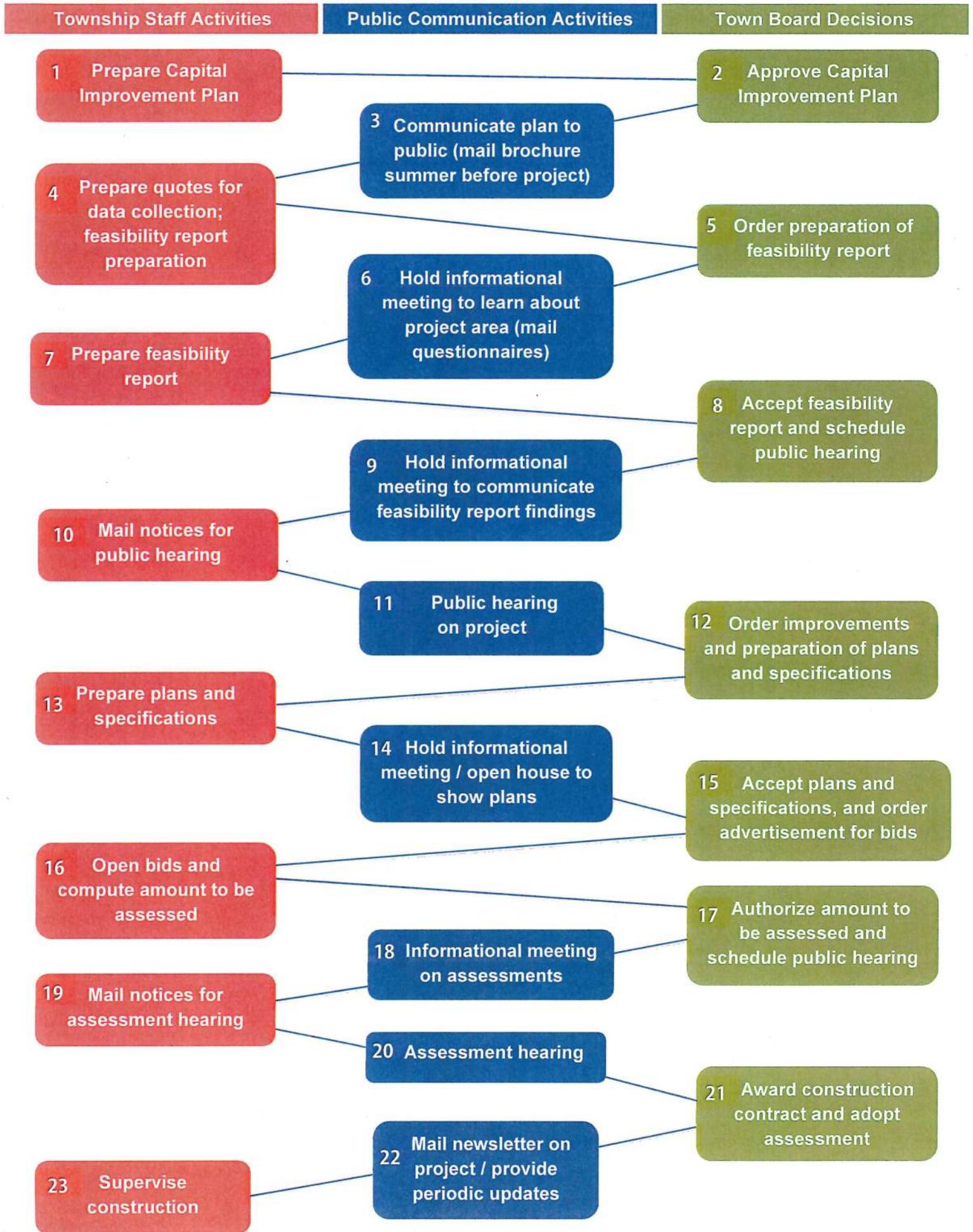


Appendix G

Communication Templates

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Public Improvement Process and Communication Outline



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OTHER QUESTIONS

Will construction affect my landscaping, sprinklers, or trees? If landscaping, sprinklers, or trees are within the right-of-way or near the street it is likely they will have to be removed. We recommend you remove landscape sprinkler heads and pipes in the right-of-way. In cases where these items remain within the right-of-way or easement and are damaged, they will not be replaced. These areas will be restored with sod.

I am planning to replace my entire driveway this summer. Should I hold off until next year? Yes, construction will likely affect your driveway, so waiting until next year will prevent you from having a seam in your new driveway. There are instances when entire driveways are removed and replaced as part of reconstruction due to utilities and grade changes. However, driveways are generally sawcut at the construction limits and removed and replaced in kind, leaving a match-line seam.

Why are concrete curb and gutter important? A primary source of street degradation is caused by poor drainage. Concrete curb and gutter direct drainage away from the street to protect the street investment. This also improves water quality by reducing pavement edge failure and erosion. Curb and gutter define the street edges, improving safety, snow plowing, street sweeping, and mowing.

For information regarding White Bear Township's street improvements, please visit our website at www.ci.white-bear-township.mn.us.

White Bear Township
1281 Hammond Road
White Bear Township, MN 55110

RESIDENT
ADDRESS
(area no more than 4" x 2.75"
per postal standard)



White Bear Township
1281 Hammond Road
White Bear Township, MN 55110

YEAR

AREA

PROJECT TYPE

(Place image here)

COMMUNICATION BROCHURE TEMPLATE

CONTACTS:

Jim Studenski, Town Engineer
(651) 292-4503

Township Hall
(651) 747-2750

Your neighborhood is planned for street improvements next summer. This newsletter provides information on the project, including the process and timelines for the project.

WHY IS MY STREET BEING IMPROVED?

The Township has a Pavement Management Program which allows the Township to rate the condition of streets within the Township. In your cases, the streets have been rated low in comparison to other streets in the Township and designated for replacement. While the Township has other low-rated streets, the Public Works Department reviews the lowest rated streets and prioritizes them into improvement projects. While not all streets within an improvement area are rated the same, they may be included in the project to complete a neighborhood. This provides an economy of scale and reduces the need for construction to disrupt the neighborhood in the future. The low pavement management rating also indicates that it is no longer economical to repair the street.

WHAT OTHER IMPROVEMENTS WILL BE MADE?

White Bear Township reviews and updates the sanitary sewer and watermain as needed. Storm sewer is added to improve drainage, protect the street improvements, and improve water quality for Township wetlands and lakes.

TIMELINE FOR IMPROVEMENTS

Usually, construction begins in May and continues into October. Not all streets will be under construction at the same time. Typically, a

contractor begins in the most remote part of the project and works toward the main access to the neighborhood. Construction begins with utility work and progresses to street improvements and finally restoration. Multiple phases of construction may be undergoing within the project as work progresses.

The following is a general schedule for the project:

Mail Questionnaire	September
Informational Meeting #1	November
Informational Meeting #2	February
Approve Plans & Specifications / Order Ad for Bids	March
Open Bids	April
Accept Bids / Award Contract	May
Project Substantially Completed	October

THE PROCESS

Do I have a say in what is being done? Yes, the Township holds a number of different meetings throughout the project to gather information and input. Notices for those meetings will be mailed to you. Questionnaires will also be sent to gather information.

ASSESSMENT INFORMATION

Will I be assessed for the project? Yes.

What is the amount of the assessment? While we do not know the amount of the assessment until bids are received for the work, the assessment can range from \$2,000 to \$10,000 per property.

When will I be assessed? The Assessment Hearing will likely take place next October. Property owners have a one-month opportunity to pay off the assessment without interest. After November, the assessment is certified and will appear on your tax statement.

How is the assessment calculated?

The Township assesses benefited properties xx% of the street and storm sewer costs for the project. The remainder of the cost is funded by other funds.

How can the assessment cost be spread out?

The assessment, if it is not paid up front, will be added to your taxes and spread out over ten years.

EXAMPLE OF COMPLETED

(Place image here)