



Item 7b.

Sunfish Lake Engineer's Report for February 6, 2018

By: Don Sterna, PE, City Engineer

Date: February 2, 2018

1. Engineering Activities Undertaken in the Month of January.

The following Engineer's Report reflects the activities undertaken this past month, along with the anticipated engineering activity for the month of February.

- A. Charlton Road Improvements Update** – The past month, I met with just one resident at 2180 Charlton Road and they are not very supportive of the project. I believe this property will not support any dedicate of easements. This property is one property actually the roadway is moving away from their house. Currently we have 3 signed and returned easements, 6 positive indications of signatures in the works and 2 parcels that have requested revisions before they sign. That brings the potential total to 11 parcels we feel would eventually sign off on the necessary easements for construction out of the 15 parcels we are seeking easements from. Of the remaining 4 parcels, only one parcel we feel we would need to go through the condemnation process to construct the project. The other 3 parcels, the construction limits would fall within the current prescriptive rights area where we feel that a formal signed easement would not be necessary to construct the project and my feeling is we would not need to officially have the easement dedicated in order to construct the project. We would like to discuss options at the February Council meeting to decide how best to approach this issue and how to proceed forward from this point.

Myself and the City Attorney will update the Council on the progress to date and answer any questions at the February Council meeting. From an engineering stand point, we have made every change we could to accommodate the residents' concerns however we are at a point where we have done everything we can to resolve project issues and need to decide where we go from here.

- B. TH 3 / 60th Street Intersection** – As discussed at the January Council meeting, MnDOT currently has identified a project to add a northbound left turn lane on TH 3, however this does not include any improvements for the visibility for drivers on 60th Street looking north. MnDOT sightline analysis showed the visibility looking north does not meet current standards for vehicles waiting on 60th Street trying to access TH 3. MnDOT has been looking at this, however no update was available from MnDOT.
- C. Fire Number Review** – In February, a plan will be prepared showing, which will show the fire numbers that we recommend being replaced, new ones added and suggestions on how best to implement the plan for the City Council to review and discuss. My recommendation is for the City to take the lead on replacing the missing and damaged signs as part of one city-wide contract, which would provide a consistency, efficiency and a cost-effective solution to the fire signs issues. I would recommend that we send this out for quotes and have a private firm supply and install the signs. This could be split up into a 2-year project to better manage the costs of the work.
- D. Comprehensive Stormwater Plan Update** – We plan on presenting a proposal for updating the City's Comprehensive Stormwater Management Plan, which is required as

part of the City Comprehensive Plan Update. Attached to the engineer's report is out proposal for the Council review prior to the meeting.

- E. **Pavement Management Update** – Every 3 years, the City performs a city-wide review pavement evaluation, sign inventory and culvert inspection. We plan on presenting a proposal for FY 2018 plan update, which provides a useful planning tool to actively managing the City's infrastructure. The last evaluation was completed in 2015. Attached to the engineer's report is out proposal for the Council review prior to the meeting.
- 2. **Building and Site Reviews in the Month of January.**
There were no building or site reviews in the month of January.
- 3. **Public Works Activities Undertaken in the Month of January.**
No planned public works activities were undertaken in the month of January.
- 4. **Anticipated Engineering Activities for the Month of February.**
 - A. **Charlton Road Improvements Update** – Updating the Feasibility Report for City Council action is contingent based on decisions reached at the February Council meeting. We will be updating 3 easements and resending them for signatures in February. We plan on continuing to meet with the remaining undecided residents in February to try to reach an agreement on easement dedication.
 - B. **Snow Plow Monitoring** – I will be monitoring the City streets over the next few months through the winter to make sure issues are resolved and the proper snow plow removal is utilized. Please notify me at 612-360-1289 if you see any unsafe conditions.
- 5. **Public Works Activities Planned for in the Month of February.**
At this time, there are no planned public works activities planned for the month of February.

The above constitutes the Engineering Report for the City of Sunfish Lake for February 6, 2018.

Respectfully submitted,

WSB & Associates, Inc.



Donald W. Sterna, PE
City Engineer



January 10, 2018

Re: Pavement Management Work Plan
City of Sunfish Lake, MN

I am pleased to submit this work plan on behalf of WSB & Associates, Inc. to perform City-wide culvert and road inspections. The last pavement and culvert evaluation was completed in 2015. Typically, Cities review one third of their City streets every year to monitor the condition and plan for future improvements to keep their infrastructure investment maintained. These tasks are not significant tasks to complete, but will provide a snapshot of the current condition of the City's entire infrastructure, which will improve how we plan and schedule infrastructure improvements. The CIP process provides a proactive rather than reactive management process for maintaining the City's infrastructure condition and managing the City's infrastructure investments.

Cost Summary

It is proposed that this project be billed hourly on a cost not to exceed basis, with total cost not exceeding **\$7,468**. If you are in agreement with the terms as outlined above, please sign where indicated below and return one copy to our office.

The following tasks will be completed as part of this work plan:

1 Detailed Inspection of City Pavement and Culverts

WSB & Associates will:

- Deployed data to iPads for use in detailed field inspections
- Rate approximately 3 miles of bituminous roadways and 57 culverts in the City of Sunfish Lake
- The pavement inspections will include:
 - o View the segment condition on the ground
 - o Record information on the particular distresses
 - o Input that data into the PAVER database
 - o Determine an Overall Condition Index (OCI) based on Army Corps of Engineers methodology
- The culvert inspections will include:
 - o View the segment condition on the ground
 - o Record information on the particular distresses
- Maintain data during the duration of the project

Cost: \$6,880

2 GIS Maps

WSB & Associates will:

- Create maps showing the condition ratings of the roads and culverts

Cost: \$588

Project Timeline

Detailed inspections of streets

May 2018

GIS Maps

June 2018

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3 **Extra Services**

WSB & Associates can:

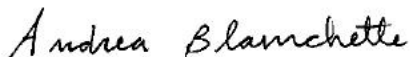
- Provide guidance in developing a network analysis of the City's roadway system
 - Used to determine the needs and/or effectiveness of past and current pavement rehabilitation and preventive maintenance activities
- Develop different budget scenarios that can most accurately represent the City's existing pavement management program
- Make modifications to optimize the existing system
- Develop strategies based on maintenance techniques to optimize a pavement management program
- Draft a memo containing the analysis results, budgeting parameters and maps
- Evaluate historic projects for rehabilitation alternatives, life cycle costing or feasibility
 - May include gathering current information on the pavement condition and/or a historical review of its performance
- Develop pavement performance prediction models to help the city predetermine or predict the future maintenance and rehabilitation needs for the network segments
- Create CIPs which detail future plans for maintenance and rehabilitation projects for the City's roadways
- Create presentations highlighting the findings of the analysis and the pavement management program for the City
- Take pavement cores and soil borings as part of a pavement forensics study
 - Analysis of pavement cores
 - Can be used to find depths of the pavement layers, signs of bonding or unbonding and distresses that might not be visible from the road surface

Pavement coring could be performed based on a 2-man crew taking the cores at a rate of **(\$245/hour)**, an analysis of the cores, travel time and time needed to write up a pavement forensics report performed at a rate of **(\$143/hour)**. The other tasks listed are just a few of the opportunities which exist. If interested, this work could be performed on an hourly basis **(\$109/hr)** with the details to be finalized at a later date. Additional GIS/Cartegraph technical support is available at **(\$143/hr)**.

Thank you for this opportunity to continue to develop the City of Sunfish Lake's Pavement Management System. I am confident that the level of service on this project will meet or exceed your expectations. If you should have any questions regarding this proposal, please contact me at 763-287-8313.

Sincerely,

WSB & Associates, Inc.



Andrea Blanchette, PE
Pavement/Materials Specialist

ACCEPTED BY:

City of Sunfish Lake

By: _____

Title: _____

Date: _____



February 6, 2018

Honorable Mayor and City Council
City of Sunfish Lake
Via Email

RE: A PROPOSAL TO PROVIDE SERVICES TO COMPLETE THE 2018 UPDATE TO THE SUNFISH LAKE COMPREHENSIVE STORMWATER MANAGEMENT PLAN

Honorable Mayor and Members of the City Council:

The following is a proposal to provide services to assist the City with the 2018 update to the Sunfish Lake Comprehensive Stormwater Management Plan. Our planning and water resources team is comprised of experienced professionals that have completed over 25 similar plans to meet Metropolitan Council requirements over the last two years.

The total hourly not to exceed project cost of this proposal is **\$9,975**. An optional service is outlined in Task 2a below for creation of a City-wide hydrologic model. That task is not included in the above-mentioned cost.

Proposed technical components for completing the Local Stormwater Management Plan (LSWMP) update are outlined below. The proposal is based on preparation of a plan that meets the minimum requirements of the Metropolitan Council but also provides sound and long-lasting guidance for the protection of water resources within the city. We are happy to refine this scope if Sunfish Lake has additional needs.

Task 1: Collect Available Background Information

This task consists of gathering relevant water resources-related information for the City. WSB has historical information and studies for the City, which we will utilize. Discussion and coordination with the City Planner and other city representatives as well as communication with agencies will facilitate collection of any outstanding information. We anticipate collecting the following data:

- Floodplain, bluff, shoreland, wetland, erosion control, and other City Ordinances related to surface water management (as available)
- Water resource-related agreements
- Existing SWMP
- Climate and precipitation data
- Soils information
- Groundwater and well information
- List and description of known water resource problem areas
- City parks, trails, and open space plan
- FEMA's floodplain maps and Letters of Map Amendments
- City's Comprehensive Land Use Plan and land use mapping
- National Wetland Inventory mapping
- Previous reports or studies related to storm water management or water quality issues
- Information related to impaired waters within the City
- Monitoring and Modeling data
- TMDL or WRAPS Studies

Information will also be collected from the following agencies: Lower Mississippi River Watershed Management Organization (LMRWMO), Minnesota Department of Natural Resources, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Minnesota Pollution Control Agency (MPCA), and other organizations that may be applicable.

To facilitate the information-gathering efforts and to provide notice that the City will be developing a Plan, a letter will be sent to each of these agencies requesting the desired information. This information collected will be used to develop the City's Plan and to develop a water resource library for the City's future use and reference.

Task 2: Address Surface Water Requirements

The water resource data collected will be analyzed, interpreted, and summarized in the Plan to provide an indication of the present status and possible trends concerning surface water resources within the City, and to assist in the development of surface water management policies.

Minnesota Statute 103B requires a LSWMP to define drainage areas, volumes, and paths of stormwater runoff. Currently, there is no city-wide stormwater model to provide guidance and planning as properties develop or are improved. The city has data from 1991 that is being utilized to meet minimum requirements.

We are including an **optional Task 2a** to create a City-wide hydrologic model. In this task we will review and confirm watershed boundaries, determine times of concentration and sub-watershed curve numbers based on land use, and identify outlets and drainage paths for these areas, including areas that leave or come in to the city. This information will be used to create a city-wide hydrologic model to determine peak runoff rates, runoff volumes, and high-water levels for all of the estimated 114 subwatersheds in the City. The hourly not-to-exceed cost for this effort is \$28,500, which does not include any survey information that may be required. Any survey that is required can be completed at an additional hourly rate.

As discussed above, staff has been utilizing largely outdated data (1991) to evaluate city stormwater issues and to provide guidance for future improvements. A City-wide hydrologic model is an important tool for accurate planning of improvements and protection of existing water resources. The information from the model would provide the city and homeowners more accurate and up-to-date guidance for each subwatershed of the City.

We recommend that the City include this item in the implementation plan as part of the update to the surface water management plan, which will allow the city to budget for this item and potentially request a grant for cost-sharing for this item.

Task 3: Development of Goals and Policies

Based on the results of the previous tasks and associated analysis, goals and policies for the management of water resources in the City will be included. These goals and policies will be in compliance with State and Local requirements, including but not limited to; NPDES, MPCA, and the needs of the City. Input from the Council, Commissions, City Representatives and the public will be used to formulate these policies. The water resource management goals and policies will include cooperation and coordination with other regulatory agencies, internal operation and maintenance practices, and regulation of new development and redevelopment. Policies in the following areas will be included:

- Rate control
- Flood control
- Water quality
- Volume control
- Wetland protection and management
- Wildlife habitat and recreation
- Public education
- Public ditch and creek systems management
- Groundwater protection

- Erosion and sediment control

It is assumed that the majority of the goals and policies included in the previous plan will not change. WSB will generate additional goals and policies to comply with updates in coordination with the City's comprehensive plan.

Task 4: Problem and Correction Actions

Water resource management problems identified within the City during the public input and data collection process will be outlined and corrective actions for each problem will be developed. Problems may be identified in the following areas:

- Lake, stream, and wetland water quality problems
- Flooding or rate control concerns in the City or between adjoining communities
- Impacts of storm water management on recreational opportunities
- Impacts of storm water management on fish and wildlife resources
- Erosion and sediment control problem areas
- Impacts of land use practices on storm water management
- Adequacy of the existing regulations to address storm water management
- Adequacy of capital improvement programs to address storm water management issues
- Adequacy of in place systems to generate revenue to pay for necessary improvements

Identified problems will be included in the Plan. Corrective actions for each item will be developed, if needed, and incorporated into an implementation plan.

Task 5: Develop Implementation Plan

Through the Plan development process, a number of water resource studies, programs, and capital improvements will be identified either through the inclusion of goals and policies or through addressing problems with corrective actions. These programs, studies, and capital improvements will be prioritized with City staff and Council and developed into a clear implementation plan. This implementation plan will provide a road map to help the City implement the Plan for the next ten years.

Task 6: Prepare Draft Report

This task focuses on the direct preparation of the plan document. The Plan will be formatted as one comprehensive set of goals, policies, and implementation priorities. We will combine the results from various programmatic-based inventories and analyses as described in this work plan. The Plan document will contain the following sections:

- 1.6.1 Executive Summary:** Will generally summarize the content, and purpose of the local plan.
- 1.6.2 Land and Water Resource Inventory:** Will contain information that is relevant to the development of this document.
- 1.6.3 Agency Coordination:** Contains information regarding other agencies and organization relevant to the plan.
- 1.6.4 Goals and Policies:** Will state specific goals and corresponding policies related to the purpose of the Plan and are consistent with the policies and goals of the regional, state, and federal goals and programs that are currently in place.
- 1.6.5 Assessment of Problems and Corrective Actions:** Will contain a summary assessment of existing and/or potential water resource-related problems that affect the community along with non-structural, programmatic, and/or structural solutions to the problems.
- 1.6.7 Implementation Priorities:** Will prioritize implementation components so as to make the best use of available local funding and prevent future water management problems from occurring to the maximum practical extent.
- 1.6.8 Financial Considerations:** Will contain an analysis of the financial impact of implementation of the proposed regulatory controls and programs identified in the previous section.
- 1.6.9 Amendment Procedures:** Will contain the year the plan shall extend to and establish the process by which amendments may be made.

A preliminary draft of the Plan will be prepared and reviewed with City representatives prior to submitting to the Watershed District and Met Council for review.

Task 7: Submit to Agencies for Review and Incorporate Comments

This task includes submitting the draft LSWMP to LMRWMO and Met Council for review. The Met Council has a 45-day review period that runs concurrently with the 60-day review period of LMRWMO. Comments provided by the watershed will be discussed with City staff and incorporated into the LSWMP.

Task 8: Prepare Final Report

After their review, the final LSWMP will be prepared and submitted to the City Council for review and approval. Upon final approval of the plan, two (2) printed copies and a PDF document of the Plan will be made and provided to the City.

Total Hourly Not-To-Exceed Project Costs of Tasks 1 through 8 (not including Task 2a): \$9,975.

Total Hourly Not-to-Exceed Project Costs of Task 2a: \$28,500.

We very much appreciate the opportunity to provide this proposal for an update to the Sunfish Lake Comprehensive Stormwater Management Plan. If you have any questions or require additional information, please contact me at 651-286-8474.

Sincerely,

WSB & Associates, Inc.



Jeffery S. Sandberg, PE
Senior Project Manager

ACCEPTED BY:

Sunfish Lake, MN

Name _____

Title _____

Date _____