THE CITY OF EXCELSIOR MINNESOTA

FEASIBILITY REPORT

2021 STREET & UTILITY IMPROVEMENTS PROJECT

CITY OF EXCELSIOR | HENNEPIN COUNTY, MINNESOTA

FEBRUARY 16, 2021

Prepared for:
City of Excelsior
339 Third Street
Excelsior, MN 55331

WSB PROJECT NO. 017293-000

wsb

FEASIBILITY REPORT

2021 STREET & UTILITY IMPROVEMENTS PROJECT

FOR THE
CITY OF EXCELSIOR, MN

February 16, 2021

Prepared By:

February 16, 2021

Honorable Mayor and City Council
City of Excelsior
339 Third Street
Excelsior, MN 55331

Re: Feasibility Report
2021 Street & Utility Improvements Project
City of Excelsior, MN
WSB Project No. 017293-000

Dear Honorable Mayor and City Council Members:

Transmitted herewith for your review is a feasibility report which addresses improvements associated with the 2021 Street & Utility Improvements Project. Roadways investigated in this report include Maple Street, West Lake Street, Smith Street, Courtland Street, Hidden Lane, Grace Street, Third Avenue, Cedar Lane, Unnamed Drive west of Mill Street, Wheeler Drive, and Lyman Place. This feasibility report describes the necessary improvements, project costs, and anticipated funding for the associated street improvements project.

I am available at your convenience to discuss this report. Please do not hesitate to contact me at 763.287.7173 if you have any questions regarding this report.

Sincerely,

WSB

Morgan Dawley, PE
City Engineer

Attachment

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

CERTIFICATION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Minnesota.

Alexandra K.M. Mollenkamp, PE

Date: February 16, 2021 Lic. No. 57240

Quality Control Review Completed By:

Brad R. Reifsteck, PE

Date: February 16, 2021 Lic. No. 47930

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1. EXECUTIVE SUMMARY

The City of Excelsior's 2021 Street & Utility Improvements Project was initiated by the City's ongoing Pavement Management Plan, and the feasibility report was authorized by City Council on December 21, 2020. Roadways to be reconstructed as part of the project include Maple Street, West Lake Street, Smith Street, Courtland Street, Hidden Lane, Grace Street, Third Avenue, Cedar Lane, Unnamed Drive west of Mill Street, Wheeler Drive, and Lyman Place. Improvements proposed with the project include full roadway reconstruction, addition of concrete curb and gutter, sidewalk replacement, complete watermain replacement, sanitary sewer main lining and/or replacement, sanitary sewer service lining and repairs, and storm sewer installation.

The total estimated project cost for the 2021 Street & Utility Improvements Project is **$5,600,000** which includes a 15% contingency and 25% indirect costs for legal, engineering, administrative, and financing costs. The project is proposed to be funded through City street and utility funds and special assessments to benefiting property owners.

The project is feasible, necessary, and cost-effective from an engineering standpoint and should be constructed as proposed herein.

2. INTRODUCTION

2.1 Introduction

2.1.1 Authorization

On December 21, 2020, the Excelsior City Council authorized the preparation of an engineering feasibility report for the 2021 Street & Utility Improvements Project. This project is included in the City's Pavement Management Plan.

2.1.2 Scope

This report includes proposed roadway, utility, and associated curb and gutter and sidewalk improvements on the following roadways:

- Maple Street – from West Lake Street to Courtland Street
- West Lake Street – from Maple Street to Third Street
- Smith Street – from George Street to Third Street
- Courtland Street – from Third Street to Maple Street
- Hidden Lane – from Minnetonka Boulevard to eastern terminus
- Grace Street – from Third Avenue to southern terminus
- Third Avenue – from western terminus to Mill Street
- Wheeler Drive – from Mill Street to Third Avenue
- Lyman Place – from Wheeler Drive to terminus
- Cedar Lane – from Mill Street to western terminus
- Unnamed Drive – from Mill Street to western terminus

The overall ***Project Location Map*** highlighting the individual project areas is included in ***Appendix A***.

2.1.3 Data Available

Information and materials used in the preparation of this report include the following:

- City of Excelsior Pavement Management Plan
- City of Excelsior Utility Plans
- City of Excelsior Record Plans
- Geotechnical Report and Soil Boring Logs
- Hennepin County Land Use Data
- Field Observations of the Project Area
- City of Excelsior Assessment Policy
- Comments Received at the 2/2/2021 Neighborhood Meeting

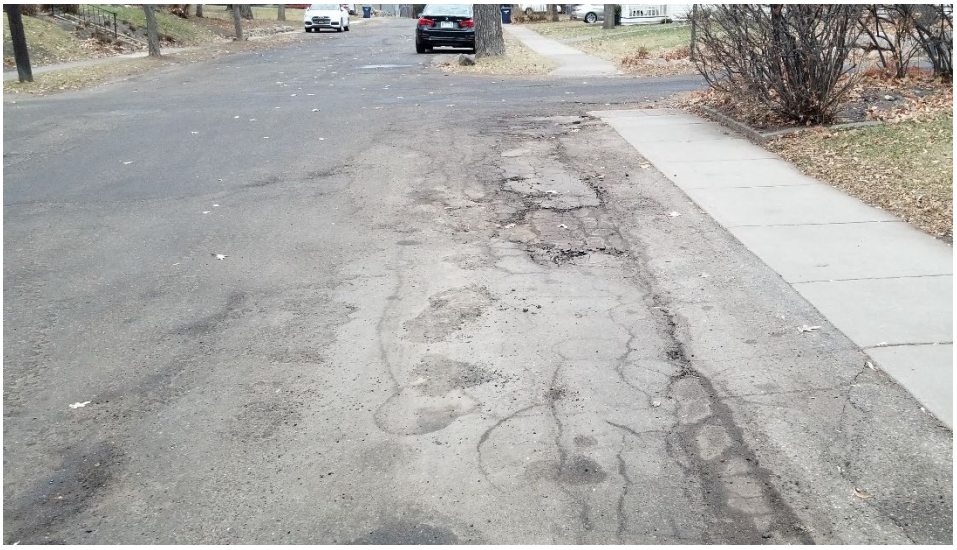
2.2 Existing Conditions

2.2.1 Surface

The streets throughout the project area are showing signs of aging and experiencing various severities of pavement distress.

All roads within the project area currently exist as rural street sections with no curb and gutter except for a few locations where concrete or bituminous curb exist intermittently. Sections of sidewalk exist in the Maple Street area on the north side of West Lake Street extending from Third Street to Maple Street, on the east side of Maple Street from West Lake Street to Courtland Street, on the west side of Maple Street from a point just south of West Lake Street to mid-block, and on the north side of Courtland Street from Maple Street to Third Street.

Roadway widths throughout the project area range between 10 feet and 36 feet. Existing roadway widths per street can be found on the ***Typical Sections figures*** in ***Appendix A***. Roadways include two driving lanes and on-street parking, except where prohibited.



Maple Street; December 2020

The existing pavement and aggregate depths vary throughout the project area. A summary of pavement data is outlined below.

Table 1 – Average Pavement and Aggregate Depths

Street and Location	Bit Depth (inches)	Class 5 Depth (inches)	Existing Street Widths (feet)
Maple Street	7	8	21 – 33
Smith Street	4.5	2.5	12 – 16
West Lake Street	5	12	26 – 29
Courtland Street	5	6	23 – 26
Third Street	5.5	3.5	19 – 21
Grace Street	1.25	2	13 – 20
Wheeler Drive	6.5	6.75	26 – 36
Lyman Place	5	5	26 – 33

Environmental testing was completed at soil boring locations throughout the project area due to the impacted material found on Second Street during the 2017 Street and Utility Improvement Project. Petroleum odors and PID readings indicate that creosote or coal tar impacts may be present within the project area. Further environmental analysis will need to be performed at the time of construction, but it is assumed that the existing pavement and underlying aggregate to a depth of 8 inches may not be re-used throughout the project area. Based on assumptive quantities of removal and disposal arrived at through best-available information and historical pricing for similar work performed in Excelsior, the costs for this level of mitigation have been estimated in the project estimates included in ***Appendix B***, but the full extents will not be known fully until further evaluation is completed at the time of construction.

2.2.2 Sanitary Sewer

Municipal sanitary sewer in the project area consists of 8-inch-diameter gravity sewer pipe. The City has been managing its sanitary sewer main through separate sewer lining projects over recent years and there are numerous sections within the project area which have been lined previously. The sanitary sewer services will be televised after a construction contract letting. The existing services are typically 4 inches to 6 inches in diameter and made of clay, cast iron, or PVC pipe materials.

2.2.3 Watermain

Watermain within the project area consists of 4-inch and 6-inch-diameter pipe constructed of either cast iron or ductile iron pipe in the 1940s through the 1960s except for a stretch on Maple Street that is 10-inch-diameter watermain. Due to the age of the watermain pipe it could be anticipated that it will have a high propensity to break and leak in the future.

2.2.4 Drainage

The existing drainage within the project area consists of mostly rural sections of road that do not contain storm sewer. A few exceptions include intermittent curb in locations along Maple Street and Wheeler Drive and a few catch basin inlets in these areas. Existing stormwater runoff in most of the project area sheet flows into private residential properties, ultimately draining to lakes or wetlands.

2.2.5 Private Utilities

Private utilities that have facilities in or near the project area will be notified during the final design phase of the project and will be requested to coordinate any necessary repairs and replacements as needed at their cost. Private utility companies that have facilities within the project area include the following:

- CenturyLink (Telephone/Internet)
- CenterPoint Energy (Gas)
- Mediacom (Cable TV/Internet)
- Xcel Energy (Electric/Gas)
- Zayo Bandwidth (Fiber Optic)

2.3 Proposed Improvements

2.3.1 Surface

The condition and age of the existing pavements within the project area warrant surface improvements at this time. The proposed improvements for the roadways within the project area are a full reconstruction consisting of a full depth reclamation or pavement removal, installation of barrier curb and gutter, and reconstruction of the aggregate and pavement. A typical section can be seen on the ***Typical Sections figures*** in ***Appendix A***. The design will consist of 2 inches of bituminous wearing course, 2 inches of bituminous base course, 8 inches of class 5 aggregate base, and 18 inches of select granular borrow over an acceptable, compacted subgrade. The sidewalk along George Street and West Lake Street will be replaced, and new sidewalk is proposed to be installed along George Street to improve pedestrian safety and accessibility to downtown and the LRT Minnetonka Trail. Locations of the sidewalk can be seen on the ***Existing and Proposed Sidewalk figure*** in ***Appendix A***.

2.3.2 Sanitary Sewer

Existing sanitary sewer within the project area warrants significant improvements at this time. In general, improvements include lining or full replacement of the main lines throughout the project. Additional improvements include service replacement or lining where impacted. Manholes that are in good condition will be rehabilitated and manholes in poor condition will be replaced as necessary. The status of the sanitary sewer pipes within the project area is shown on the ***Excelsior Sanitary Sewer Status Map*** in ***Appendix A***.

2.3.3 Watermain

All existing watermain within the project area is proposed to be removed and replaced including new valves, fire hydrants, and new private services to the right-of-way to all properties. The proposed improvements are laid out in further detail on the ***Existing and Proposed Sewer and Watermain Utilities figures*** in ***Appendix A***. Trenchless methods, such as horizontal directional drilling (HDD) or pipe bursting, have been identified as a method of watermain installation which may be beneficial to use along certain portions of the project in order to minimize tree and other surface impacts where replacement is not specifically necessary.

The watermain along Hidden Lane is currently a dead-end line and could be improved by extending it to connect to Excelsior Boulevard. Dead-ended lines can become stagnant and the proposed surface improvements provide an ideal time to extend the watermain and provide a looped connection. The cost to complete this work is included with the estimate in ***Appendix B***.

2.3.4 Drainage

The proposed drainage will be designed to improve the existing conditions. Stormwater runoff from the street is proposed to be collected in storm sewer for Smith Street, Maple Street, and West Lake Street. These streets will tie into existing storm sewer that was constructed in 2020.

Storm sewer improvements proposed for Grace Street will include the installation of storm sewer discharging to one of two locations. The northern portion of the roadway will discharge to a reconstructed outlet to Galpin Lake at Third Street. The southern portion of the roadway will be collected and piped to tie into existing storm sewer along Mill Street.

Wheeler Drive will include reconstruction of existing catch basins and extend storm sewer to manage runoff from Lyman Place and reduce the amount of ponding at the low point of Wheeler Drive. The proposed storm sewer will maintain drainage patterns and the pipe discharging to the wetland between Division Street and Wheeler Drive will be reconstructed.

Hidden Lane will include a new rain guardian outlet to Lake Minnetonka, which will help improve the water quality of the lake. See the ***Existing and/or Proposed Storm Sewer Utilities figures*** in ***Appendix A*** for the proposed layout of storm sewer.

2.3.5 Street Sign Replacement

All existing street signs within the project will be replaced with new street signs that meet the Federal Highway Administration's (FHWA) requirements for retro-reflectivity.

2.3.6 Easements

It is anticipated that work will take place within the existing roadway right-of-way or within existing drainage and utility easements with the exception of storm sewer outlet improvements that may require additional drainage and utility easements. Temporary construction access on private property may be required to accommodate driveway repair, water/sewer service replacement, and final boulevard grading. Written permission or waiver of trespass agreements will be secured from private property owners for these encroachments to the greatest extent possible.

2.3.7 Permits/Approvals

Permits will be necessary from the following agencies:

- MPCA National Pollution Discharge Elimination System (NPDES) Permit
- Minnehaha Creek Watershed District (MCWD)
    - The project as proposed is designed to create no more than 10,000 square-feet of new impervious surface thus not triggering the need for stormwater management measures.
- Minnesota Department of Health Extension of Water Main Permit (MDH)

2.3.8 Construction Access/Staging

The contractor will be responsible for providing access to all properties throughout the project. Adequately signed detours will be identified to direct traffic around the construction zones and notify users of the increased truck and construction activity.

2.3.9 Public Involvement

A neighborhood open house for the proposed improvements was held on February 2, 2021, for property owners. Preliminary information was available to property owners regarding the proposed improvements, schedule, and impacts associated with the project. The participants on the virtual meeting call were offered the option to provide feedback and questions in the chat function and anonymously in the Q&A function as well as emailing or calling the project hotline. Questions and comments are summarized in ***Appendix D***.

The following general comments were provided at the neighborhood meeting:

- Positive support for improvements within the project area
- Concerns regarding current water quality
- Questions regarding driveway replacement location and logistics

3. FINANCING

3.1 Opinion of Cost

The total project cost is estimated to be **$5,600,000**. A detailed breakdown of the cost opinion for the proposed project can be found in ***Appendix B*** of this report. The opinion of cost incorporates estimated construction costs and includes a 15% contingency factor. Indirect costs are projected at 25% of the estimated construction cost and include legal, engineering, administrative, and financing costs.

3.2 Funding

Financing for the 2021 Street & Utility Improvements Project is anticipated to come from City street and utility funds and special assessments to benefiting property owners.

Table 2 below provides a summary of the anticipated funding for the proposed project improvements.

Table 2 – Proposed Project Funding

Schedule	City Street & Utility Funds	Special Assessments	Total
A. Surface Improvements	$2,790,000	$330,000	$3,120,000
B. Watermain Improvements	$1,032,000	$0.00	$1,032,000
C. Sanitary Sewer Improvements	$1,028,000	$0.00	$1,028,000
D. Storm Sewer Improvements	$420,000	$0.00	$420,000
GRAND TOTAL PROJECT COST	$5,270,000	$330,000	**$5,600,000**

The City of Excelsior's special assessment policy, which was amended in October 2015, describes in detail the procedures used for levying special assessments. A project map outlining impacted properties, assessment calculations, and a complete assessment roll for each project area can be found in ***Appendix C*** of this report. Three assessment methods are proposed to be implemented for this project: residential, multi-family, and commercial. The total amount to be collected via special assessments is estimated to be **$330,000**.

The residential method will be used for single-family, duplex, and townhouse residential dwelling units. All residential properties with less than three units are proposed to be assessed on a per unit basis, with each dwelling unit being considered as one unit. Corner lots shall be assessed based on the street to which driveway access is available.

Multi-family dwellings and commercial properties will be assessed on a front footage basis. Corner lots shall be assessed for all sides fronting the improvements.

Table 3 below provides a summary of the estimated assessments proposed for the surface and utility improvements associated with the aforementioned project.

Table 3 – Proposed Special Assessments to Benefiting Properties

	Calculated Assessment	Units/FF/Acre	Total Assessment
Residential Assessments – Reconstruction Streets	$3,850	65	$250,250
Commercial/Multi-Family Apartment Assessments – Reconstruction Streets	$89/FF	753.13	$67,030
Residential Assessments – Cedar Lane	$2,480	3	$7,440
Residential Assessments – Unnamed Drive	$3,060	2	$6,120
		PROJECT TOTAL	**$330,840**

4. PROPOSED SCHEDULE

The proposed project schedule for the 2021 Street & Utility Improvements Project is as follows:

Order Feasibility Report ..... December 21, 2020

Neighborhood Open House ..... February 2, 2021

Accept Feasibility Report/Set Public Hearing ..... February 16, 2021

Public Improvement Hearing/Order Project ..... March 1, 2021

Open Bids ..... April/May 2021

Award Contract ..... May 2021

Begin Construction ..... Spring 2021

Substantial Completion ..... November 2021

Final Completion ..... June/July 2022

Assessment Hearing ..... Summer 2022

5. FEASIBILITY AND RECOMMENDATION

The 2021 Street & Utility Improvements Project includes improvements to Maple Street, West Lake Street, Smith Street, Courtland Street, Hidden Lane, Grace Street, Third Avenue, Cedar Lane, Unnamed Drive west of Mill Street, Wheeler Drive, and Lyman Place. The proposed improvements for the 2021 Street & Utility Improvements Project consist of full roadway reconstruction, sidewalk replacement, addition of either barrier or ribbon concrete curb and gutter, complete watermain replacement, sanitary sewer lining or spot repairs, and storm sewer installation.

Project improvement costs are estimated at **$5,600,000** with funding proposed to be through a combination of Municipal funds and special assessments to benefiting property owners.

This project is feasible, necessary, and cost-effective from an engineering standpoint. The project feasibility is subject to financial review by the City. Based on the information contained in this report, it is recommended to proceed with the improvements as outlined in this report.

APPENDIX A

Project Location Map
Typical Sections
Existing and Proposed Sidewalk Map
Existing and Proposed Sewer and Water Utilities Maps
Excelsior Sanitary Sewer Status Map
Existing and/or Proposed Storm Sewer Utilities Maps

APPENDIX B

Opinion of Probable Cost

APPENDIX C

Preliminary Assessment Calculations – Reconstruction Streets
Preliminary Assessment Calculations – Cedar Lane
Preliminary Assessment Calculations – Unnamed Drive
Area 3 Assessment Map
Area 3 Preliminary Assessment Roll
Area 6B Assessment Map
Area 6B Preliminary Assessment Roll
Area 7B Assessment Map
Area 7B Preliminary Assessment Roll
Cedar Lane Assessment Map
Cedar Lane Preliminary Assessment Roll
Unnamed Drive Assessment Map
Unnamed Drive Preliminary Assessment Roll

APPENDIX D

Public Comment Summary from Virtual Open House

Public Response for Project

Virtual Open House Zoom Meeting - Questions & Comments (2/2/21)

Item #	Question	Response
1	Is it possible when the new infrastructure goes in, to place a speed bump or two on Maple St.? Some cars drive way too fast!	Speed bumps could be considered and have been considered in the past but there currently aren't any in Excelsior. Please always let the City know when you have a complaint of motorists speeding on local roadways, we let the police department know so they can make decisions on enforcement.
2	Is there a plan in place to preserve the boulevard trees?	Yes, it is not the intention of the project to clear-cut all trees. Trees are removed when needed to construct the improvements or if they are in poor condition or have a propenisty to carry problems (Ash trees). Because this project proposes to replace watermain, several portions of sanitary sewer, the sidewalk, and concrete curb and gutter, likely several trees will be impacted by construction.
3	We have no curbs now -- will new driveway curb cuts match current driveway locations or survey lot lines? (we have situations that have deviated a bit over 60+ years); 2) will property owners be assessed?	Yes, driveway curb cuts will match the location of existing driveways. Property owners will be assessed, the assessment hearing is tentatively scheduled for the fall of 2022.
4	If we already paid an assessment at another residence and moved to the current do we have to pay again?	Yes, assessments are levied against properties rather than a property owner.
5	Could there be an option to have attached driveways that are a part of the street to be redone at the same time? Could homeowners get a bid for the contractor to do their driveway at the same time? I was told this can be less expensive if done at the same time, by the same contractor that is already doing the road.	This certainly is an option however, the property owners would be responsible for hiring a contractor and coordinate this work. The project team will share the contact information for the contractor working on the project however, they are not obligated to complete work on private property. The city has seen several residents group together and hire a contractor for multiple driveways, that could be a good option.
6	The county installed the median on Mill Street and 3rd Ave. They have not installed a cross walk or pedestrian crossing, which has not only resolved the safety concerns at this crossing, but, now, with a shorter curb area, it is more dangerous to cross at this road. Are there any plans to increase safety for pedestrians at this crossing (3rd ave and Mill street).	Because Mill Street is a County road, the crosswalk is a decision that would need to be made by the County. It would be a great idea to reach out to the County via public comment channels to express this concern / request. If you have questions on how to do that, let the City Engineer or project team know and they can help.
7	During past construction on Hidden lane, some chunks of asphalt were left on the edges of our property. Please can all of these materials be removed?	Yes, please let Public Works know if they are accessible now (not buried in snow) or as soon as they are and we will remove them. Otherwise, the contractor will remove them with the road construction.
8	We have two mature trees on the boulevard. Do you attempt to save such trees during projects such as this?	Yes, the trees will be removed on a case by case basis. We will review each property specifically and only remove trees that would be damaged by construction. Also, see item 2 above.
9	Will this work mean that our water will no longer be brown or finally be clear?	As projects have taken place in Excelsior, City staff has seen improvements in water clarity so it is expected that continues to happen with this and future watermain replacement projects
10	Will sidewalks be installed on Hidden lane?	No, sidewalks are not proposed for Hidden Lane.
11	Which type of curbing are you planning for the Lyman Place culdesac -- ribbon or common step type?	At this stage of preliminary design, the curb type on Lyman Place is proposed to be barrier curb.
12	A big problem on Cedar lane is due to having no curb. There is constant degrading of the edges of the road. Why will there not be a curb on Cedar? How do you plan to keep the road from degrading without a curb?	That is a great comment for the team to note. It's likely this degradation is due to water shedding off the roadway that sits along the edges and causes the pavement to deteriorate. Another option is to have the roadway inverted (or v-shaped) which causes the water to collect in the middle of the roadway and shed off the road that way which keep the edges drier. The project team will also consider adding a concrete edge if that is determined to be necessary.
13	Property owner/resident asked for more information on what the "right of way" means and for clarification about the 50ft average width that was mentioned during the presentation.	The right of way is the area where most roads and utilities reside. It isn't city property but the city has the right and responsibility to maintain the infrastructure within the right of way. The right of way typically extends a few feet beyond the edge of the roadway so the 50ft is measured as 25ft to the left of road centerline and 25ft to the right of road centerline. However, there are several instances in this project where this 50ft isn't the width of the right of way (Smith Street and Cedar Lane for instance) and where the right of way varies along the road length (Hidden Lane).