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City of Shorewood, MN

# Strawberry Lane Reconstruction and Trail Project Feasibility Report

City Project No. 19-05

April 2021



**Submitted by:**

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# Table of Contents

I.	EXECUTIVE SUMMARY .....	1
A.	Background and Introduction.....	1
B.	Proposed Improvements .....	1
C.	Permitting Requirements .....	2
D.	Right of Way Acquisition .....	2
E.	Potential Funding Opportunities .....	2
F.	Estimated Costs .....	2
II.	BACKGROUND AND INTRODUCTION .....	2
III.	PROPOSED IMPROVEMENTS .....	3
A.	Street Improvements.....	3
B.	Pedestrian Facility Improvements.....	4
C.	Water System Improvements.....	4
D.	Storm Sewer Improvements.....	5
IV.	PERMITTING REQUIREMENTS.....	6
A.	Minnehaha Creek Watershed District (MCWD) .....	6
B.	Minnesota Pollution Control Agency (MPCA) .....	6
C.	Metropolitan Council Environmental Services (MCES) .....	6
D.	Hennepin County and Three Rivers Park District .....	6
E.	Minnesota Department of Natural Resources (DNR).....	6
F.	Minnesota Department of Health (MDH).....	6
G.	Army Corps of Engineers (ACOE).....	6
V.	RIGHT OF WAY ACQUISITION.....	7
A.	Permanent Right of Way (ROW) and Drainage & Utility Easements (DUE) .....	7
B.	Temporary Construction Easements/Right of Entries.....	7
VI.	POTENTIAL FUNDING OPPORTUNITIES .....	8

## Appendix

Appendix A: Figures

Appendix B: Preliminary Cost Estimates

## I. EXECUTIVE SUMMARY

### A. Background and Introduction.

As requested by the City of Shorewood, Bolton & Menk, Inc. has evaluated the feasibility for the proposed Strawberry Lane Reconstruction and Trail project. The project includes reconstructing Strawberry Lane and Peach Circle. During reconstruction of these streets will have watermain, storm sewer, and pedestrian improvements. The storm water improvements will work in conjunction with the Smithtown Stormwater Management Project to improve or resolve multiple drainage issues in the area. Strawberry Court will be reclaimed and new watermain constructed. The goal of the City is to bring these streets up to City standards for the roadway and utilities, while also improving drainage issues in the area.

### B. Proposed Improvements

All improvements addressed within this report are feasible from a technical standpoint. This study addresses issues with aging, substandard, or non-existent infrastructure including street pavement, pedestrian facilities, watermain, and storm sewer. The improvements recommended in this report are necessary to provide safe and adequate infrastructure and represent cost effective solutions for doing so.

#### 1. Street Improvements

The proposed street improvements on Strawberry Lane and Peach Circle consist of full depth reconstruction. The proposed residential street section will include 4-inches of bituminous pavement, 8-inches of aggregate base, 24-inches of select granular borrow, and geotextile fabric placed on compacted subgrade. The reconstructed street sections will include concrete curb and gutter and draintile. The proposed street improvements on Strawberry Court consist of reclaiming the existing pavement as the aggregate base for new bituminous pavement. The proposed residential street section will include 4-inches of bituminous pavement over the recompacted, reclaimed aggregate base. Curb and gutter will be spot replaced as needed, the majority of existing curb would remain.

#### 2. Pedestrian Facility Improvements

A new 8-foot wide bituminous trail is proposed along the boulevard of Strawberry Lane in order to provide safe walking and biking access for residents. The proposed trail section will include 3-inches of bituminous pavement and 6-inches of aggregate base.

#### 3. Water System Improvements

Proposed water system improvements include the installation of new 12-inch watermain extending north from the existing watermain at the south end of Strawberry Lane, connecting to watermain on Smithtown Road. Strawberry Court and Peach Circle will have new 8-inch watermains installed. New hydrants, valves and water services will also be installed. Watermain improvements will be installed on all project streets.

#### 4. Storm Sewer Improvements

Storm sewer structures and piping within the roadway will need to be installed to support the new street layout. The storm sewer under the roadway will be upgraded to accommodate additional flow from adjacent properties and alleviate existing drainage concerns around Strawberry Lane and its surrounding watersheds. The

storm sewer will outlet into the proposed new stormwater runoff detention and water quality treatment facilities between Smithtown Road and Freeman Park. The proposed improvements include stormwater treatment items required by the Minnehaha Creek Watershed District (MCWD).

C. Permitting Requirements

Permits will be required from Minnehaha Creek Watershed District (MCWD), the Minnesota Pollution Control Agency, Hennepin County, Three Rivers Park District, Metropolitan Council Environmental Services, and the Army Corps of Engineers (ACOE). The project will need to comply with erosion control, stormwater runoff management, waterbody crossings and structures, trail crossings, sanitary system requirements and wetland requirements of the listed agencies.

D. Right of Way Acquisition

Right of Way and easement acquisition will be required for this project in order to provide adequate space for construction and maintenance of the street and utilities in the proposed corridor.

E. Potential Funding Opportunities

Hennepin County, Board of Soil and Water Resources, Metropolitan Council, and Minnehaha Creek Watershed District may offer opportunities for collaboration and cost sharing.

F. Estimated Costs

Cost estimates have been prepared for the proposed improvements. Itemized cost estimates are provided in Appendix B and summarized below in Table 1.

<b>Estimated Project Costs</b>	
<b>Proposed Improvements</b>	<b>Total Estimated Project Cost</b>
Right of Way Acquisition	\$150,000.00
Street Improvements	
Strawberry Lane	\$1,925,893.41
Peach Circle	\$343,363.44
Strawberry Court	\$213,919.55
Total Street Improvements	\$2,483,716.40
Water System Improvements	\$770,901.84
Storm Sewer Improvements	\$1,408,727.01
<b>Total Estimated Project Cost</b>	<b>\$4,812,805.25</b>

## II. BACKGROUND AND INTRODUCTION

The impetus for this report is a request by the City of Shorewood to evaluate the feasibility of improvements to pavement and utilities on Strawberry Lane, Strawberry Court, and Peach Circle. In addition to improve or resolve multiple drainage issues in western Shorewood.

Strawberry Lane is currently a 22-foot wide, rural street section. The street does not have curb and gutter, water drains via small ditches on each side. The road is well traveled by pedestrians navigating through the area with amenities such as the Lake Minnetonka Regional Trail and Minnewashta Elementary within the corridor. There is existing watermain on the south end of Strawberry Lane that terminates between Alexander Circle and the Regional Trail. Strawberry Lane has sanitary sewer that is owned and maintained by the Metropolitan Council.

Peach Circle is currently a 24-foot wide street section that has bituminous curb and gutter. The existing street has enough settlement in the pavement that storm water has difficulty flowing to the intended storm sewer system on the east end of the street and pools in standing water in some locations. There is no existing watermain on Peach Circle. The sanitary sewer is City owned and maintained.

Strawberry Court is currently a 26-foot wide urban street section with surmountable concrete curb and gutter. There is limited storm sewer on the east end that drains into two existing storm water detention ponds. There is no existing watermain on Peach Circle. The sanitary sewer is City owned and maintained.

The *Western Shorewood Stormwater Management Plan* (dated June 22, 2020) identified several historic and ongoing problem drainage issues in this area. Strawberry Lane consists of a rural section with minimal storm sewer and inlets. Due to extremely flat topography or lack of a positive outlet, several low areas adjacent to the road and in rear yards experience prolonged inundation during wet periods. During field evaluation of current drainage conditions, pond outlets for the Strawberry Gardens and Shorewood Suburban Estates (Strawberry Court) were observed to be partially clogged, and due to their age, sediment may be reducing their treatment effectiveness. These ponds are currently being assessed as part of the City's overall stormwater treatment ponds assessment. Strawberry Court floods frequently during larger rainfall events or spring melt, resulting in premature degradation of the street section. Potential tile blockages or breaks northeast of Strawberry Circle may be contributing to prolonged and increased inundation in the rear yards between Strawberry Lane and Cathcart Drive north of the HCRRA Trail. A large portion of the south Strawberry Lane watershed is connected to the Shorewood Oaks storm sewer, contributing to that neighborhood's footing drain collection system issues. The rear yards north of Maple Avenue are extremely flat with no positive outlet.

### III. PROPOSED IMPROVEMENTS

#### A. Street Improvements

Figure 2 in Appendix A indicates the proposed street improvements. Figure 5 in Appendix A indicates the proposed street typical sections.

##### 1. Strawberry Lane and Peach Circle

The proposed project includes reconstruction of the entire street section due to the amount of proposed utility work and the condition of the existing pavement. The overall pavement condition is identified to be below average to poor, with evident signs of wear and distress primarily due to the age of the pavement. The proposed street widths will be modified to match the standard city section of 24-feet face to face. The proposed full reconstruction method consists of complete removal of the existing street structural section. A full new street section of select granular, aggregate base and pavement is then installed with new concrete curb and gutter. Adjacent driveways are also reconstructed as necessary to match the new roadway. The proposed residential street section will include 4-inches of bituminous pavement, 8-inches of aggregate base, 24-inches of select granular borrow,

drain tile, and geotextile fabric placed on compacted subgrade. Additional excavation will occur and be replaced with stabilizing aggregate if poor subgrade soils are encountered. The centerline grade of Strawberry Lane will need to be lowered approximately 6-inches to 2-feet from the existing street grade in order to provide adequate tie ins to existing driveways and drain some adjacent properties. This is due to the added width of the street and trail. Lowering the street grade will require adjustments to the sanitary manholes in the existing roadway. These sanitary facilities are owned by the Metropolitan Council and will need to coordinate with them on manhole adjustment needs. The City owned sanitary sewer on these streets will be improved only in spot repairs and possible lining locations based on evaluations of sewer televising.

## 2. Strawberry Court

The proposed street improvements on Strawberry Court include reclaiming the existing pavement and reusing it as the aggregate base for new bituminous pavement. The street widths will remain the same as the existing 26-foot width since the existing curb and gutter will remain in place. The overall pavement condition is identified to be below average to poor, with evident signs of wear and distress primarily due to the age of the pavement. The proposed residential street section will include 4-inches of bituminous pavement over the recompacted, reclaimed aggregate base. Drain tile is proposed to be added behind the existing curb to provide an access point for residential sump pump connections and to help drain any offsite groundwater before it enters the street section.

The total project cost for the proposed street reconstruction, is estimated to be **\$2,483,716.40**. Itemized cost estimates are included in Appendix B.

## B. Pedestrian Facility Improvements

A new 8-foot-wide bituminous trail is proposed along the east boulevard of Strawberry Lane in order to provide safe walking and biking access for residents along the roadway. The proposed trail section will include 3-inches of bituminous pavement and 6-inches of aggregate base. All intersections will be constructed to meet ADA compliance including truncated domes. This is especially critical on the north end of Strawberry Lane where a pedestrian crosswalk to Minnewashta Elementary is currently in place. The proposed trail grade will match into the existing Lake Minnetonka Regional Trail.

The total project cost for the proposed trail improvements, is included with the Strawberry Lane estimate. Itemized cost estimates are included in Appendix B.

## C. Water System Improvements

Figure 3 in Appendix A indicates the proposed water system improvements.

The proposed water system improvements include the installation of new 12-inch watermain extending north from the existing watermain at the south end of Strawberry Lane, connecting to watermain on Smithtown Road. This proposed watermain connection is intended to provide adequate service, looping, and fire protection to the adjacent properties, and flexibility in service and trunk watermain throughout the system. Strawberry Court and Peach Circle will have new 8-inch watermains installed. The proposed pipe material is polyvinyl chloride (PVC) pipe. Isolation valves and hydrants will be installed to bring the system up to current standards. Service lines will be constructed and curb stops will be installed at the right-of-way line, where residents will then connect on as part of their own improvements. By constructing watermain

in these streets provides residents the opportunity to connect to the city's water system and receive access to a safer, cleaner, and more reliable water source.

To protect the watermain against corrosion, the following items will be included with the design and installed during construction:

1. All hydrants and valves will be manufactured and secured using stainless steel bolts.
2. All fittings will be coated with fusion bonded epoxy.
3. All fittings, valves, valve boxes, and hydrants will be wrapped in polyethylene encasement material.
4. All fittings, hydrants, and service line connections shall be provided with cathodic protection (sacrificial anodes).

The total project cost for the proposed water system improvements, is estimated to be **\$770,901.84**. Itemized cost estimates are included in Appendix B.

#### D. Storm Sewer Improvements

Figure 4 in Appendix A indicates the proposed storm sewer improvements.

The proposed storm sewer improvements include the construction of storm sewer facilities to convey street and trail area runoff to the proposed Smithtown Ponds on the city's property between Smithtown Road and Freeman Park. There are many low points on properties adjacent to Strawberry Lane that will be connected to the trunk storm sewer under the street to help resolve known flooding and prolonged inundation during wet periods. The trunk sewer line is oversized for a typical street project of this size due to collecting drainage from these areas in the watershed. The trunk storm sewer has been designed to bypass the existing routing of the southern watershed of Strawberry Lane and route that flow north of the Regional Trail. This is intended to eliminate drainage issues while not overwhelming the proposed Freeman Basin near Freeman Park. If flows increased from Strawberry Lane and continued draining via the south ditch of the Regional Trail, it would require more excavation and treatment in the Freeman Basin. There is adequate room to treat and store this drainage in the larger Smithtown Ponds.

The two storm ponds for the Strawberry Gardens and Shorewood Suburban Estates (Strawberry Court) are proposed to be cleaned of sediment that has accumulated over the years, reducing their treatment effectiveness. The material from the ponds was analyzed as part of the 2021 Pond Sampling Report. Any material excavated from these ponds will need to be disposed of at an MPCA landfill and not reused on site for any use.

Strawberry Garden Pond (west of Strawberry Lane, east of Cathcart Drive) has existing issues with inundation and flooding concerns in high water events. This area needs to be further examined to determine the most efficient and cost-effective method to resolve those issues with different alternatives. One alternative is to pipe high water events east to the Strawberry court ponds, increasing the rate that water enters the trunk storm sewer, but would eliminate the need to add storage capacity to Strawberry Garden Pond. The trunk storm sewer on Strawberry Lane has been sized to accommodate the extra flow from the piping alternative. This is the conservative approach, keeping all alternatives possible for future construction. The trunk storm pipe could possibly be downsized depending on how upstream capacity is resolved.

The existing street outlet at the north end of Church Street is obstructed with vegetation. This ditch will be cleaned and regraded to provide positive drainage as part of this project.

The total project cost for the proposed storm sewer improvements, is estimated to be **\$1,408,727.01**. Itemized cost estimates are included in Appendix B.

#### **IV. PERMITTING REQUIREMENTS**

**A. Minnehaha Creek Watershed District (MCWD)**

As part of initial review of potential options to improve drainage in the Grant Lorenz Channel watershed, the City requested Minnehaha Creek Watershed District (MCWD) review solutions alternatives developed by WSB & Associates in July 2018. Selected options for this report were then discussed again with MCWD in August 2020. MCWD will require a Water Resource Permit for this project. The MCWD permit will address the districts rules including: Erosion Control, Waterbody Crossings & Structures, Wetland, and Stormwater Management for Strawberry Lane area improvements. All proposed construction meets District requirements so no variances to their rules are necessary.

As part of the permitting process, a public notice will be required for all properties within 600 feet of the project. The timeframe for obtaining a MCWD permit is 21 days from submittal of a complete application.

**B. Minnesota Pollution Control Agency (MPCA)**

A construction stormwater permit will be required for this project prior to initiation of construction activities. The timeframe for obtaining a NPDES Permit is 7 days from submittal of a complete application.

The sanitary sewer adjustments may require a Sanitary Sewer Modification Permit from the MPCA before construction can begin.

**C. Metropolitan Council Environmental Services (MCES)**

In addition to what is required by the MPCA for sanitary sewer, the project must be reviewed by the MCES to ensure that the project is consistent with the MCES-approved comprehensive plan for the respective community or communities.

**D. Hennepin County and Three Rivers Park District**

Any work that will impact the Lake Minnetonka Regional Trail will need to be coordinated and permitted with Hennepin County and Three Rivers. There may be trail detours required during phases of construction when trail users would be unable to safely cross Strawberry Lane due to construction equipment and/or safety hazards.

**E. Minnesota Department of Natural Resources (DNR)**

The trunk storm sewer running east from Strawberry Lane to Smithtown pond will pass under Pebble Creek. If this construction is done with open cut excavation, the DNR will need to review and assess if they have jurisdiction over the creek as a navigable waterway. Depending on their assessment, permitting may be required.

**F. Minnesota Department of Health (MDH)**

With the installation of new watermain, the MDH must review all plans to verify that they are design with appropriate engineering standards to ensure the water system remains safe. This is standard for any watermain installed on any project and this project's watermain will be designed in accordance with 10-State Standards.

**G. Army Corps of Engineers (ACOE)**

The Wetland Delineation application has been submitted to the American Corps of Engineers, and they have acknowledged receipt. A ruling for non-jurisdictional wetlands is expected back soon, so no additional permitting should be required from the ACOE.

## V. RIGHT OF WAY ACQUISITION

### A. Permanent Right of Way (ROW) and Drainage & Utility Easements (DUE)

The existing right of way width along Strawberry Lane ranges from 35' to 60' wide. Due to the narrow corridor, it is anticipated that right of way and/or easement acquisition would be required along the entire corridor to construct and properly maintain the proposed street and utilities. This acquisition will need to be negotiated with property owners and if no resolution is made, then the City may need to move to condemnation of the needed land. This process can take 9 to 12 months for local projects and must be initiated early enough to avoid delays on construction.

There are locations along the proposed corridor where permanent drainage and utility easements will be necessary. These will be needed to construct and maintain utilities, primarily storm sewer in this project, that are outside of the typical street section. These are also critical for drainage below the proposed trail grade and locations where surface water drains before entering the storm sewer system.

During this study, two alternative alignments for Strawberry Lane were analyzed. The differences in road design, safety, and construction costs of each alternative were negligible. The area where differences are notable is with land acquisition:

Alignment Alternative A maintained the existing street centerline alignment from 62<sup>nd</sup> Street to Smithtown Road. This keeps the existing sanitary manholes at the centerline of the road to avoid castings in the wheel path of vehicles. This alignment will require acquisition of permanent ROW and/or DUE from 15 adjacent properties.

Alignment Alternative B maintained the existing street centerline alignment from 62<sup>nd</sup> Street to the Lake Minnetonka Regional Trail. North of the regional trail, the street centerline alignment will be 6-feet further west than existing. The 6-feet was used to make sure that the existing manholes would not be in vehicles' wheel paths as well. The west side of Strawberry Lane currently has more existing right of way than the east side. So, by shifting the alignment street west, the City will be able to avoid more right of way acquisition. This alignment will require acquisition of permanent ROW and/or DUE from 8 adjacent properties. This alignment also lines up better with the Minnewashta Elementary entrance across Smithtown Road.

In comparing these two alternatives, Alternative B has a significantly lower number of properties to engage in right of way acquisitions. This is significant in avoiding possible disputes, lowering the chances of the long and costly condemnation process. Therefore, Alternative Alignment B is the recommend alternative.

### B. Temporary Construction Easements/Right of Entries

Temporary construction easements or Right of Entries will be needed to access and construct the project. These will be minimized to the extent possible, but can significantly aid in the efficiency and constructability of the project such as when used for a construction staging area. Also, as staff meet with residents along the corridor it is likely that minor encroachments into private property will be mutually beneficial to both parties in addressing construction concerns.

## **VI. POTENTIAL FUNDING OPPORTUNITIES**

The proposed method of financing for the majority of the Strawberry Lane Reconstruction and Trail Project is by through Street Reconstruction Bonds. Most of the project costs are eligible since the existing streets will be reconstructed. Street and utility improvements will also be funded through the various Capital Improvements Funds: Street Reconstruction Fund, Water Fund, Sanitary Sewer Fund, and Stormwater Management Fund. There could be opportunities for other funding sources such as grants and agreements with other agencies that have infrastructure located in and near the Strawberry Lane Corridor. These other agencies include Hennepin County Regional Rail Authority and Metropolitan Council.

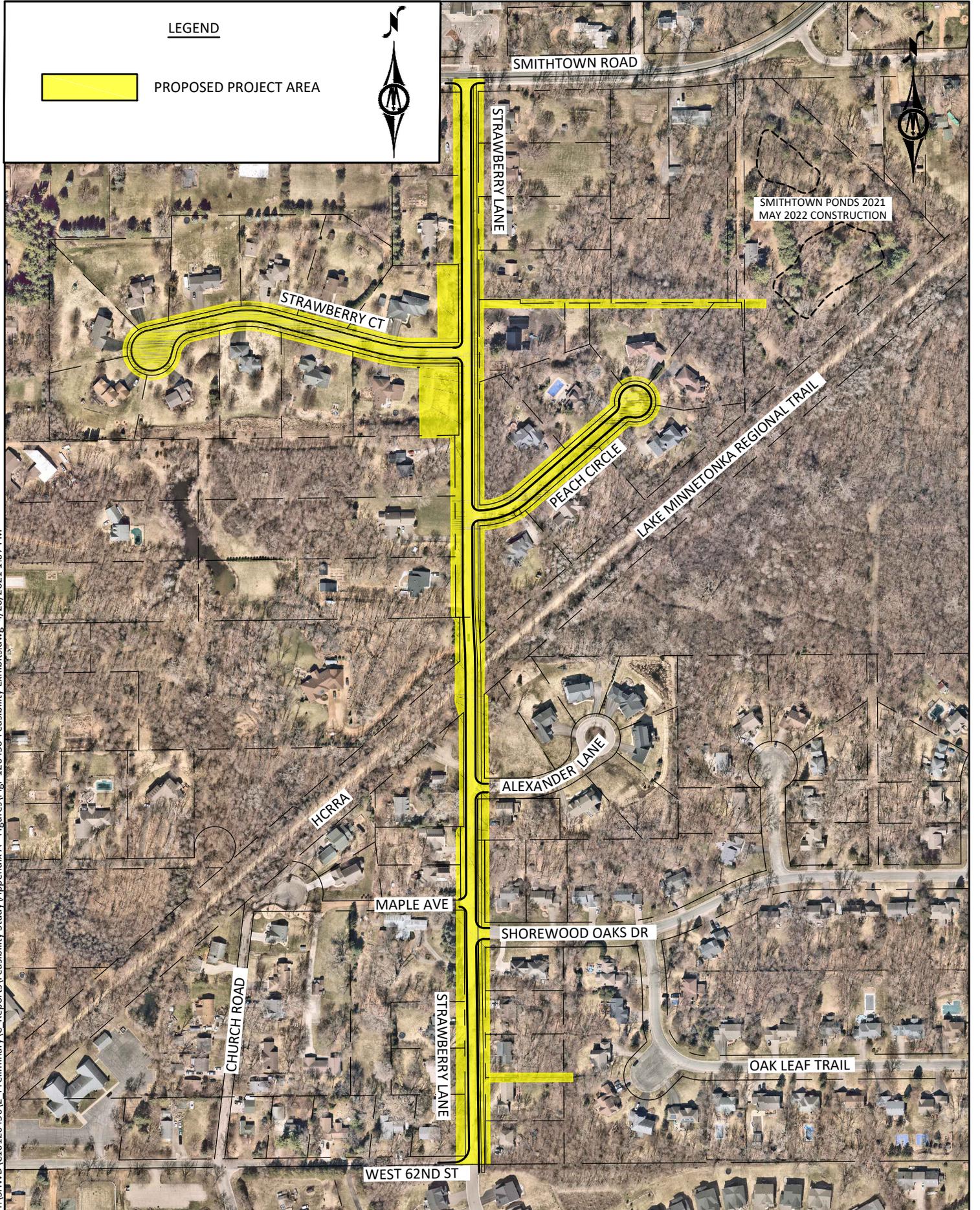
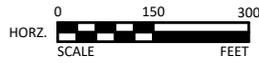
## Appendix A: Figures

# Strawberry Lane Reconstruction & Trail

City of Shorewood

# Figure 1: Project Limits

April 2021



### LEGEND



PROPOSED PROJECT AREA



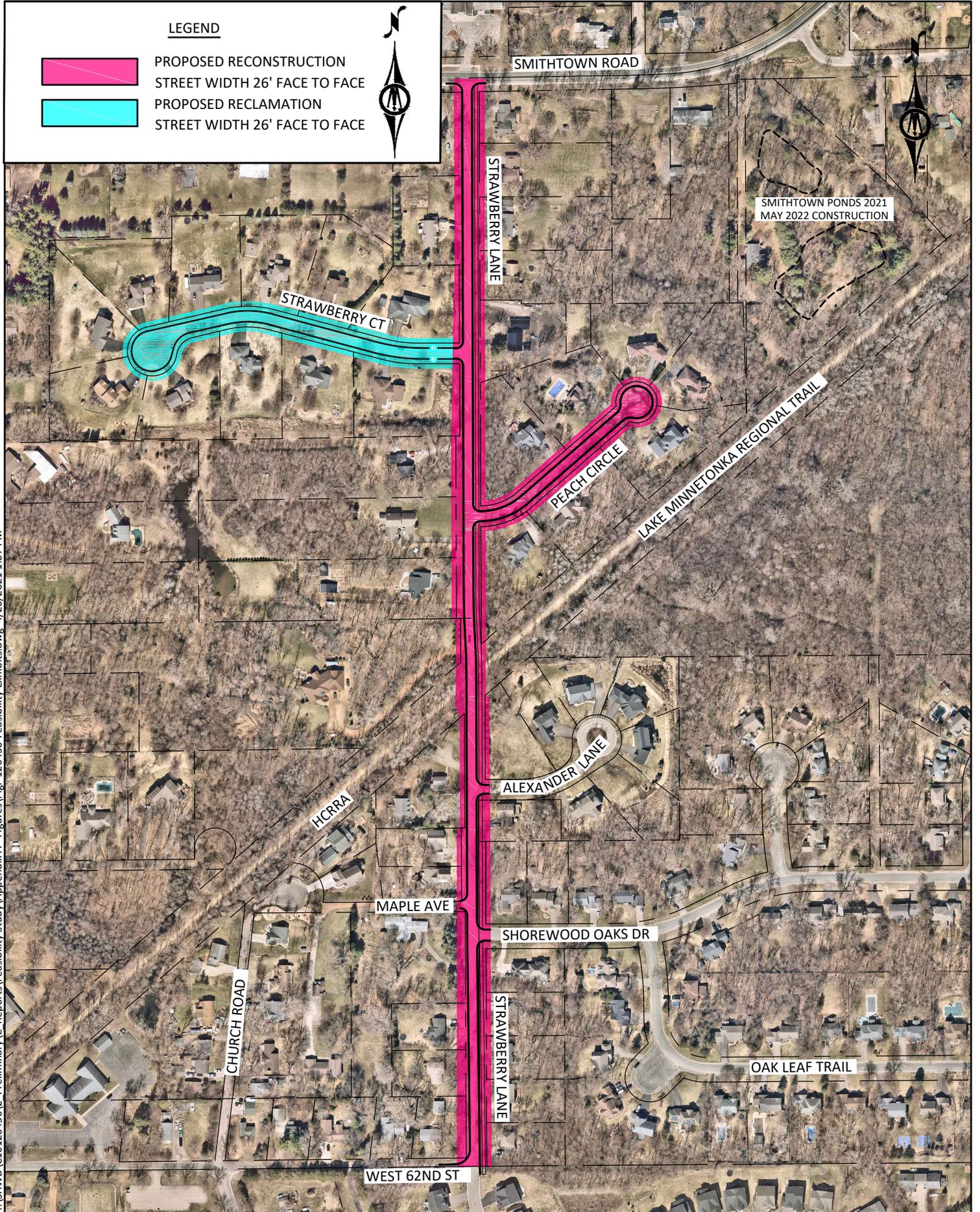
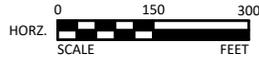
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# Strawberry Lane Reconstruction & Trail

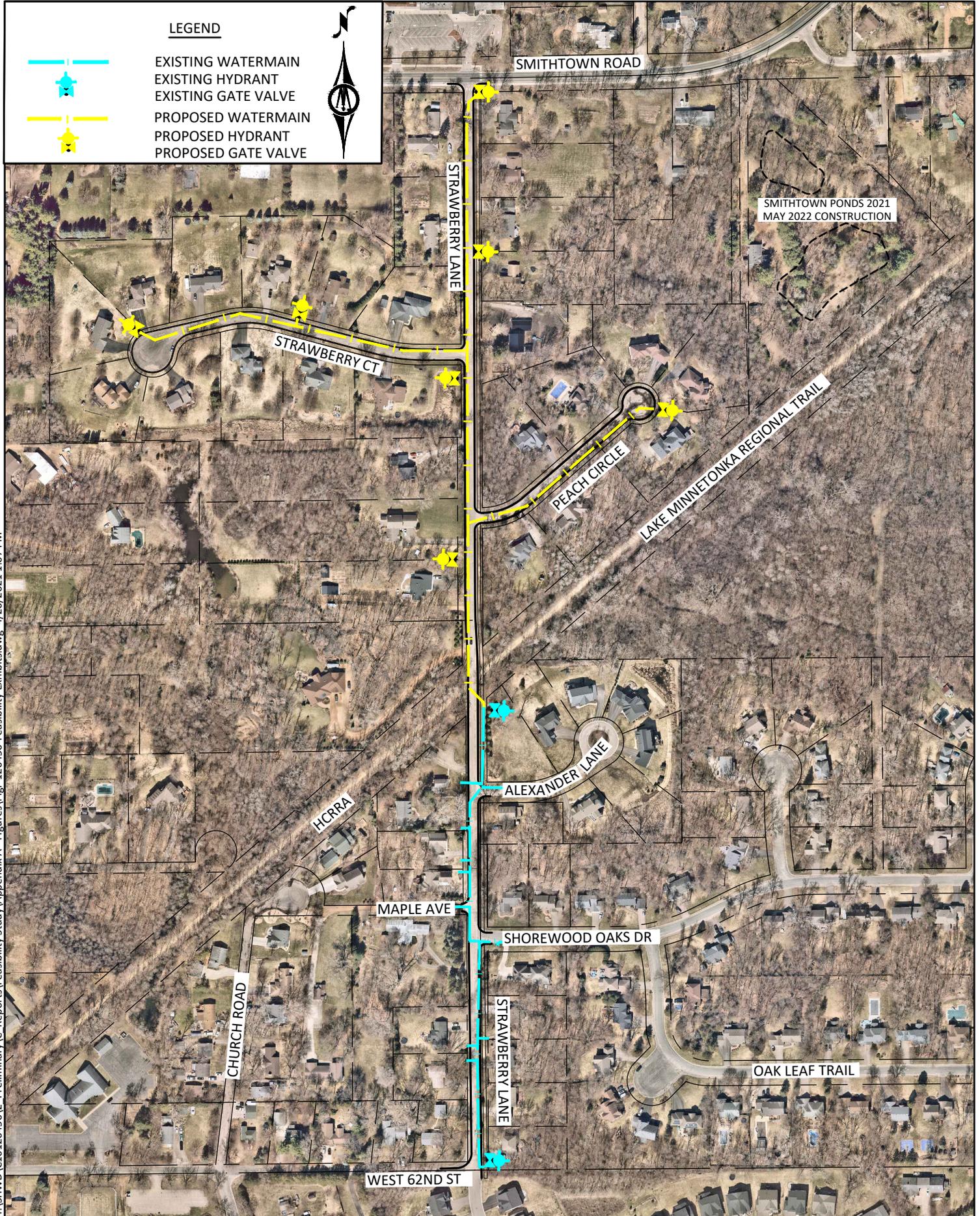
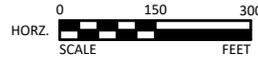
City of Shorewood

# Figure 2: Street Improvements

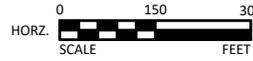
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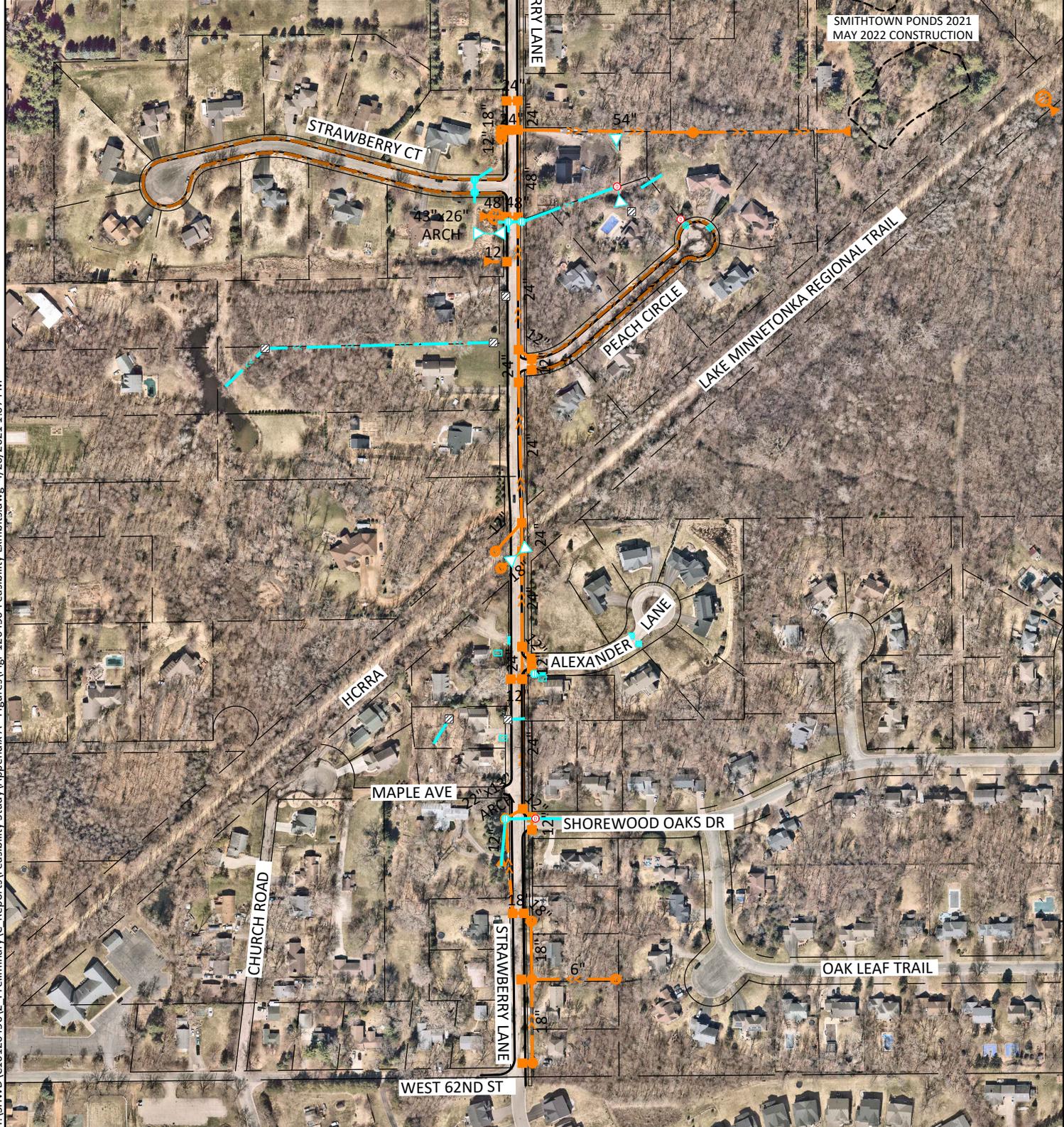


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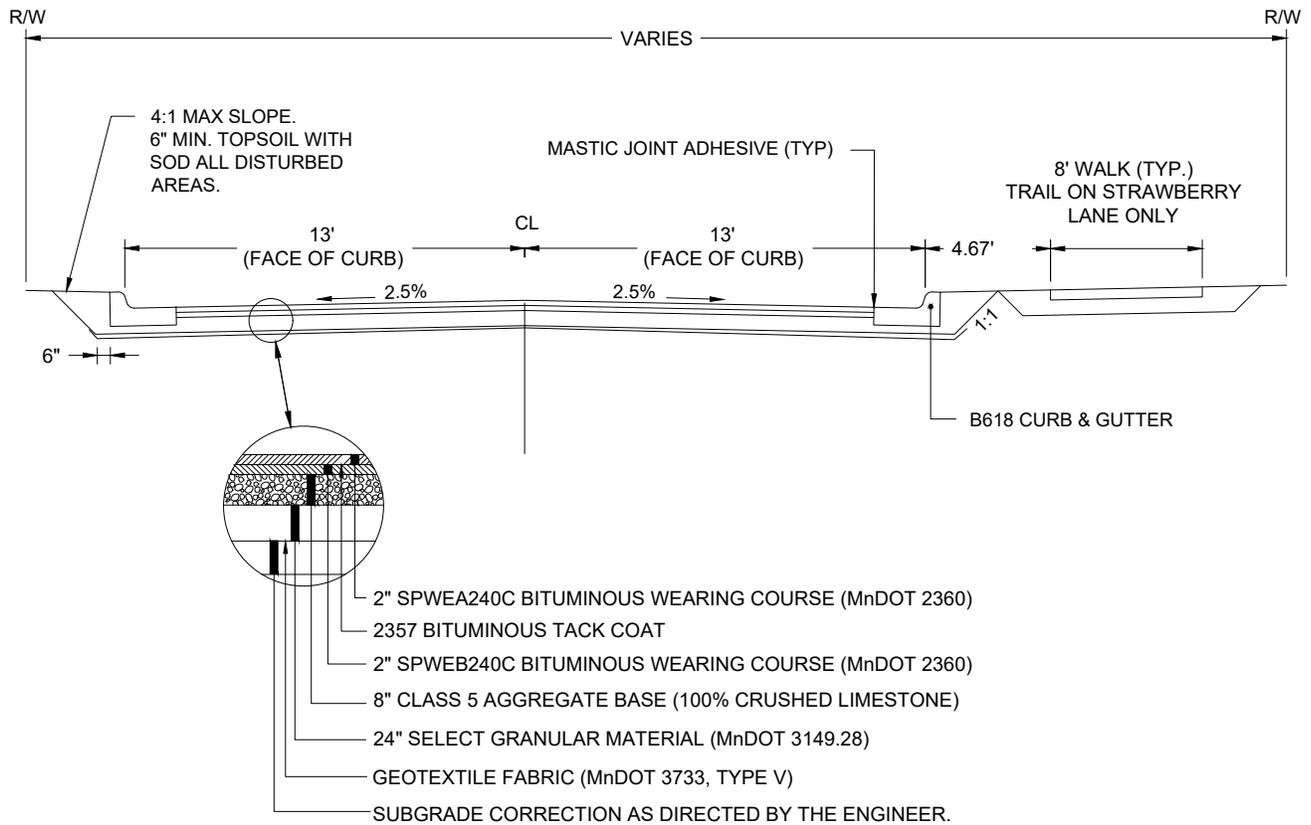


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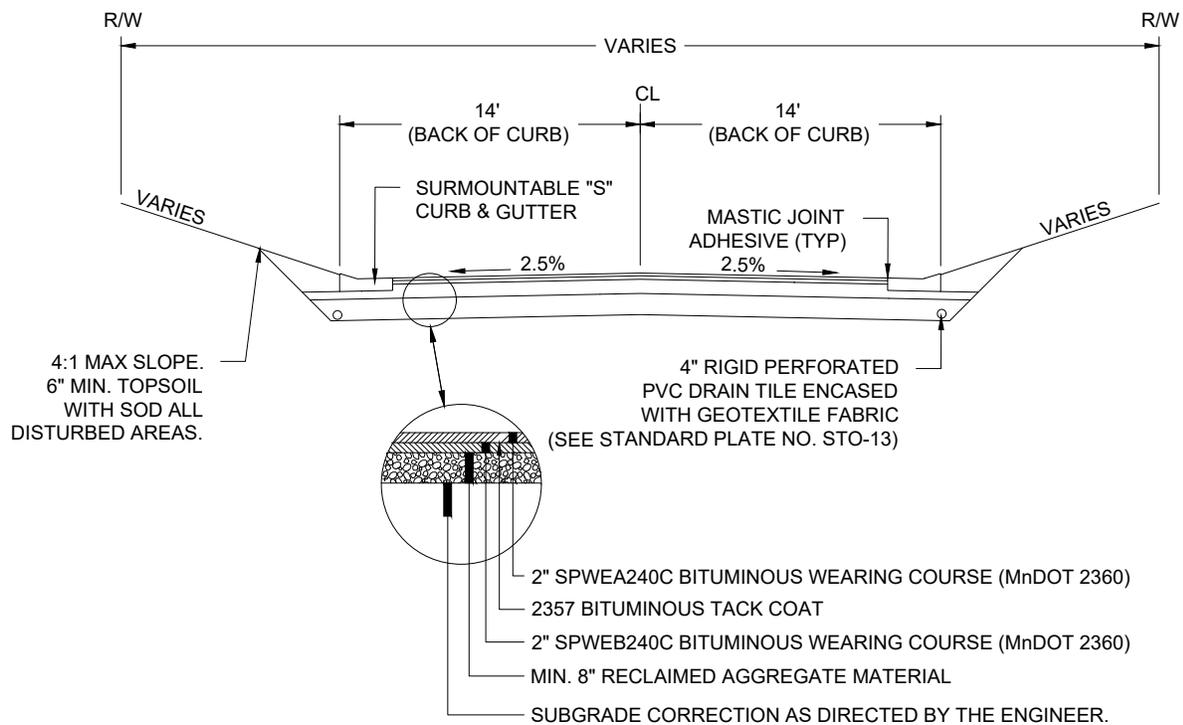
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED DRAIN TILE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- STORM SEWER FLARED END SECTION



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**RECONSTRUCTION TYPICAL SECTION-STRAWBERRY LANE & PEACH CIRCLE**



**RECLAMATION TYPICAL SECTION-STRAWBERRY COURT**

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# Appendix B: Preliminary Cost Estimates

**PRELIMINARY COST ESTIMATE**

STRAWBERRY LANE RECONSTRUCTION  
 CITY OF SHOREWOOD, MN  
 APRIL 21, 2021



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ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST
<b>STREET &amp; UTILITY IMPROVEMENTS</b>											
1	MOBILIZATION	LUMP SUM	1	\$150,000.00	\$150,000.00	0.106	\$15,878.77	0.532	\$79,754.13	0.362	\$54,367.09
2	TRAFFIC CONTROL	LUMP SUM	1	\$20,000.00	\$20,000.00	0.106	\$2,117.17	0.532	\$10,633.88	0.362	\$7,248.95
3	CLEAR AND GRUB TREE (6.0" DIA OR GREATER)	EACH	130	\$550.00	\$71,500.00		\$0.00	130	\$71,500.00		\$0.00
4	REMOVE DRAINAGE STRUCTURE	EACH	4	\$500.00	\$2,000.00		\$0.00		\$0.00	4	\$2,000.00
5	REMOVE PIPE SEWER (STORM)	LIN FT	377	\$18.00	\$6,786.00		\$0.00		\$0.00	377	\$6,786.00
6	REMOVE CASTING (SANITARY)	EACH	14	\$175.00	\$2,450.00		\$0.00	14	\$2,450.00		\$0.00
7	REMOVE BITUMINOUS PAVEMENT	SQ YD	7,800	\$2.50	\$19,500.00		\$0.00	7,800	\$19,500.00		\$0.00
8	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ FT	9,633	\$2.00	\$19,266.00		\$0.00	9,633	\$19,266.00		\$0.00
9	REMOVE AGGREGATE DRIVEWAY SURFACING	SQ FT	1,859	\$1.50	\$2,788.50		\$0.00	1,859	\$2,788.50		\$0.00
10	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ FT	1,489	\$2.00	\$2,978.00		\$0.00	1,489	\$2,978.00		\$0.00
11	REMOVE CONCRETE CURB & GUTTER	LIN FT	474	\$5.00	\$2,370.00		\$0.00	474	\$2,370.00		\$0.00
12	REMOVE SIGN	EACH	16	\$100.00	\$1,600.00		\$0.00	16	\$1,600.00		\$0.00
13	SALVAGE & INSTALL MAILBOX	EACH	10	\$200.00	\$2,000.00		\$0.00	10	\$2,000.00		\$0.00
14	SALVAGE & INSTALL FENCE	LIN FT	110	\$50.00	\$5,500.00		\$0.00		\$0.00	110	\$5,500.00
15	COMMON EXCAVATION (EV)	CU YD	9,304	\$22.00	\$204,688.00		\$0.00	9,304	\$204,688.00		\$0.00
16	SUBGRADE EXCAVATION (EV)	CU YD	465	\$25.00	\$11,625.00		\$0.00	465	\$11,625.00		\$0.00
17	TOPSOIL BORROW (LV)	CU YD	1,568	\$40.00	\$62,720.00		\$0.00	1,568	\$62,720.00		\$0.00
18	STABILIZING AGGREGATE - SELECT GRANULAR BORROW (CV)	TON	930	\$28.00	\$26,040.00		\$0.00	930	\$26,040.00		\$0.00
19	STABILIZING AGGREGATE 3" MINUS CRUSHED	TON	400	\$28.00	\$11,200.00		\$0.00	400	\$11,200.00		\$0.00
20	SUBGRADE PREPARATION	SQ YD	9,304	\$1.50	\$13,956.00		\$0.00	9,304	\$13,956.00		\$0.00
21	SELECT GRANULAR BORROW (CV)	CU YD	6,202	\$28.00	\$173,656.00		\$0.00	6,202	\$173,656.00		\$0.00
22	GEOTEXTILE FABRIC TYPE V	SQ YD	9,490	\$2.00	\$18,980.00		\$0.00	9,490	\$18,980.00		\$0.00
23	AGGREGATE BASE CLASS 5 (CV)	CU YD	2,480	\$32.00	\$79,360.00		\$0.00	2,480	\$79,360.00		\$0.00
24	TYPE SP 12.5 NON WEAR COURSE MIXTURE (2,C)	TON	881	\$90.00	\$79,290.00		\$0.00	881	\$79,290.00		\$0.00
25	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	1,290	\$100.00	\$129,000.00		\$0.00	1,290	\$129,000.00		\$0.00
26	ADJUST FRAME, RING & CASTING	EACH	2	\$1,000.00	\$2,000.00		\$0.00	2	\$2,000.00		\$0.00
27	CASTING ASSEMBLY (SANITARY)	EACH	14	\$1,000.00	\$14,000.00		\$0.00	14	\$14,000.00		\$0.00
28	ADJUST EXISTING SANITARY MANHOLE	EACH	12	\$3,000.00	\$36,000.00		\$0.00	12	\$36,000.00		\$0.00
29	4" PERF PE EDGE DRAIN	LIN FT	5,447	\$10.00	\$54,470.00		\$0.00		\$0.00	5,447	\$54,470.00
30	4" PVC PIPE DRAIN CLEANOUT	EACH	15	\$275.00	\$4,125.00		\$0.00		\$0.00	15	\$4,125.00
31	SUMP PUMP SERVICE CONNECTION	EACH	10	\$400.00	\$4,000.00		\$0.00		\$0.00	10	\$4,000.00
31	CONNECT TO EXISTING DRAINTILE	EACH	10	\$400.00	\$4,000.00		\$0.00		\$0.00	10	\$4,000.00
32	CONNECT TO EXISTING STORM SEWER	EACH	1	\$2,000.00	\$2,000.00		\$0.00		\$0.00	1	\$2,000.00
33	12" RC PIPE APRON W/ TRASHGUARD	EACH	1	\$2,000.00	\$2,000.00		\$0.00		\$0.00	1	\$2,000.00
34	54" RC PIPE APRON W/TRASHGUARD	EACH	1	\$7,500.00	\$7,500.00		\$0.00		\$0.00	1	\$7,500.00
35	43"X26" RC ARCHED PIPE APRON	EACH	1	\$5,000.00	\$5,000.00		\$0.00		\$0.00	1	\$5,000.00
36	CASTING ASSEMBLY (STORM)	EACH	37	\$1,000.00	\$37,000.00		\$0.00		\$0.00	37	\$37,000.00
37	STRUCTURE MARKER POST	EACH	12	\$150.00	\$1,800.00		\$0.00		\$0.00	12	\$1,800.00
38	6" PVC STORM SEWER PIPE	LIN FT	186	\$30.00	\$5,580.00		\$0.00		\$0.00	186	\$5,580.00
39	12" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	394	\$55.00	\$21,670.00		\$0.00		\$0.00	394	\$21,670.00
40	18" RC PIPE SEWER DES 3006 CL V	LIN FT	720	\$65.00	\$46,800.00		\$0.00		\$0.00	720	\$46,800.00

ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST
41	24" RC PIPE SEWER DES 3006 CL V	LIN FT	1,363	\$80.00	\$109,040.00		\$0.00		\$0.00	1,363	\$109,040.00
42	43"X26" RC ARCHED STORM SEWER	LIN FT	20	\$250.00	\$5,000.00		\$0.00		\$0.00	20	\$5,000.00
43	48" RC PIPE SEWER DES 3006 CL III	LIN FT	248	\$275.00	\$68,200.00		\$0.00		\$0.00	248	\$68,200.00
44	54" RC PIPE SEWER DES 3006 CL III	LIN FT	728	\$300.00	\$218,400.00		\$0.00		\$0.00	728	\$218,400.00
45	CONSTRUCT DRAINAGE STRUCTURE DESIGN G	LIN FT	43	\$700.00	\$30,254.00		\$0.00		\$0.00	43.2	\$30,254.00
46	CONSTRUCT DRAINAGE STRUCTURE DES 48-4020	LIN FT	11	\$800.00	\$8,768.00		\$0.00		\$0.00	11.0	\$8,768.00
47	CONSTRUCT DRAINAGE STRUCTURE DES 48-4022	LIN FT	47	\$900.00	\$42,291.00		\$0.00		\$0.00	47.0	\$42,291.00
48	CONSTRUCT DRAINAGE STRUCTURE DES 84-4020	LIN FT	12.4	\$1,500.00	\$18,540.00		\$0.00		\$0.00	12.4	\$18,540.00
49	CONSTRUCT DRAINAGE STRUCTURE DES 60-4022	LIN FT	23.5	\$1,000.00	\$23,480.00		\$0.00		\$0.00	23.5	\$23,480.00
50	CONSTRUCT DRAINAGE STRUCTURE DES 72-4022	LIN FT	32.4	\$1,200.00	\$38,844.00		\$0.00		\$0.00	32.4	\$38,844.00
51	CONSTRUCT DRAINAGE STRUCTURE DES 84-4022	LIN FT	7.4	\$1,500.00	\$11,040.00		\$0.00		\$0.00	7.4	\$11,040.00
52	CONSTRUCT DRAINAGE STRUCTURE DES 108-4020	LIN FT	13.7	\$2,500.00	\$34,175.00		\$0.00		\$0.00	13.7	\$34,175.00
53	CONSTRUCT DRAINAGE STRUCTURE R-1	LIN FT	18.5	\$600.00	\$11,106.00		\$0.00		\$0.00	18.5	\$11,106.00
54	RIPRAP CL III	CU YD	50.0	\$125.00	\$6,250.00		\$0.00		\$0.00	50.0	\$6,250.00
55	POND SEDIMENT EXCAVATION	CU YD	1,000	\$25.00	\$25,000.00		\$0.00		\$0.00	1,000.0	\$25,000.00
56	CONNECT TO EXISTING WATERMAIN	EACH	2	\$2,000.00	\$4,000.00	2	\$4,000.00		\$0.00		\$0.00
57	HYDRANT	EACH	5	\$8,000.00	\$40,000.00	5	\$40,000.00		\$0.00		\$0.00
58	CASTING ASSEMBLY - CURB STOP	EACH	11	\$250.00	\$2,750.00	11	\$2,750.00		\$0.00		\$0.00
59	6" GATE VALVE AND BOX	EACH	5	\$2,250.00	\$11,250.00	5	\$11,250.00		\$0.00		\$0.00
60	12" GATE VALVE AND BOX	EACH	6	\$5,000.00	\$30,000.00	6	\$30,000.00		\$0.00		\$0.00
61	1" CORPORATION STOP	EACH	11	\$450.00	\$4,950.00	11	\$4,950.00		\$0.00		\$0.00
62	1" TYPE K COPPER SERVICE PIPE	LIN FT	351	\$50.00	\$17,550.00	351	\$17,550.00		\$0.00		\$0.00
63	1" CURB STOP & BOX	EACH	11	\$600.00	\$6,600.00	11	\$6,600.00		\$0.00		\$0.00
64	6" WATERMAIN DUCTILE IRON CL 52	LIN FT	50	\$60.00	\$3,000.00	50	\$3,000.00		\$0.00		\$0.00
65	12" PVC WATERMAIN C900 DR18	LIN FT	1,545	\$50.00	\$77,250.00	1,545	\$77,250.00		\$0.00		\$0.00
66	PIPE FITTINGS	POUNDS	1,015	\$15.00	\$15,225.00	1,015	\$15,225.00		\$0.00		\$0.00
67	3 LB ANODE	EACH	4	\$150.00	\$600.00	4	\$600.00		\$0.00		\$0.00
68	9 LB ANODE	EACH	8	\$200.00	\$1,600.00	8	\$1,600.00		\$0.00		\$0.00
69	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	5,447	\$20.00	\$108,940.00		\$0.00	5447	\$108,940.00		\$0.00
70	6" CONCRETE PEDESTRIAN RAMP (W/6" AGG. BASE CL5)	EACH	9	\$1,000.00	\$9,000.00		\$0.00	9	\$9,000.00		\$0.00
71	3" BITUMINOUS DRIVEWAY (W/ 6" AGG. BASE CL. 5)	SQ FT	7,082	\$5.00	\$35,410.00		\$0.00	7082	\$35,410.00		\$0.00
72	6" CONCRETE DRIVEWAY PAVEMENT (W/6" AGG. BASE CL5)	SQ FT	556	\$12.00	\$6,672.00		\$0.00	556	\$6,672.00		\$0.00
73	6" AGGREGATE SURFACING CL 5 (DRIVEWAY)	SQ FT	1,372	\$2.50	\$3,430.00		\$0.00	1372	\$3,430.00		\$0.00
74	4" POLYSTYRENE INSULATION	SQ YD	100	\$80.00	\$8,000.00	100	\$8,000.00		\$0.00		\$0.00
75	T.W. ACCESS BOX	EACH	11	\$150.00	\$1,650.00	11	\$1,650.00		\$0.00		\$0.00
76	CROSSWALK MARKING - EPOXY	EACH	2	\$1,000.00	\$2,000.00		\$0.00	2	\$2,000.00		\$0.00
77	FURNISH AND INSTALL SIGN	EACH	16	\$400.00	\$6,400.00		\$0.00	16	\$6,400.00		\$0.00
78	INLET PROTECTION	EACH	47	\$200.00	\$9,400.00		\$0.00		\$0.00	47	\$9,400.00
79	SILT FENCE - TYPE MS	LIN FT	6,502	\$3.00	\$19,506.00		\$0.00	6502	\$19,506.00		\$0.00
80	SEDIMENT CONTROL LOG - TYPE WOOD FIBER	LIN FT	500	\$6.00	\$3,000.00		\$0.00	500	\$3,000.00		\$0.00
81	EROSION CONTROL BLANKET W/SEED MIX 25-131	SQ YD	1,371	\$5.00	\$6,855.00		\$0.00		\$0.00	1371	\$6,855.00
82	STREET SWEEPER W/PICKUP BROOM	HOOR	50	\$200.00	\$10,000.00		\$0.00	50	\$10,000.00		\$0.00
83	SOD	SQ YD	8,446	\$15.00	\$126,690.00	2112	\$31,680.00	6334	\$95,010.00		\$0.00
84	IRRIGATION SYSTEM AND ELECTRIC FENCE REPAIR	LUMP SUM	1	\$10,000.00	\$10,000.00	0.106	\$1,058.58	0.532	\$5,316.94	0.362	\$3,624.47
85	LANDSCAPE ALLOWANCE	ALLOWANCE	1	\$35,000.00	\$35,000.00	0.106	\$3,705.05	0.532	\$18,609.30	0.362	\$12,685.66

ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST		
					SUBTOTAL		\$2,419,314.50		\$256,105.00		\$1,286,335.50		\$876,874.00
					PRORATA		\$215,000.00		\$22,759.58		\$114,314.25		\$77,926.17
					CONTINGENCIES (10%)		\$263,431.45		\$27,886.46		\$140,064.98		\$95,480.02
					TOTAL CONSTRUCTION COST		\$2,897,745.95		\$306,751.03		\$1,540,714.73		\$1,050,280.19
					SOFT COSTS (25%)		\$724,436.49		\$76,687.76		\$385,178.68		\$262,570.05
					<b>TOTAL DRAINAGE IMPROVEMENT PROJECT COST</b>		<b>\$3,622,182.44</b>		<b>\$383,438.79</b>		<b>\$1,925,893.41</b>		<b>\$1,312,850.23</b>

NOTE: STREET BOND ELIGIBLE = \$3,129,803.64

**PRELIMINARY COST ESTIMATE**

PEACH CIRCLE RECONSTRUCTION  
 CITY OF SHOREWOOD, MN  
 APRIL 21, 2021



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ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST
<b>STREET &amp; UTILITY IMPROVEMENTS</b>											
1	MOBILIZATION	LUMP SUM	1	\$25,000.00	\$24,975.00	0.224	\$5,600.00	0.685	\$17,125.00	0.090	\$2,250.00
2	TRAFFIC CONTROL	LUMP SUM	1	\$2,500.00	\$2,497.50	0.224	\$560.00	0.685	\$1,712.50	0.090	\$225.00
3	CLEAR AND GRUB TREE (6.0" DIA OR GREATER)	EACH	6	\$550.00	\$3,300.00	3	\$1,650.00	3	\$1,650.00		\$0.00
4	REMOVE DRAINAGE STRUCTURE	EACH	2	\$500.00	\$1,000.00		\$0.00		\$0.00	2	\$1,000.00
5	REMOVE PIPE SEWER (STORM)	LIN FT	59	\$20.00	\$1,180.00		\$0.00		\$0.00	59	\$1,180.00
6	REMOVE CASTING (SANITARY)	EACH	2	\$175.00	\$350.00		\$0.00	2	\$350.00		\$0.00
7	REMOVE BITUMINOUS PAVEMENT	SQ YD	1,815	\$3.00	\$5,445.00		\$0.00	1,815	\$5,445.00		\$0.00
8	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ FT	1,500	\$2.00	\$3,000.00		\$0.00	1,500	\$3,000.00		\$0.00
9	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ FT	300	\$1.50	\$450.00		\$0.00	300	\$450.00		\$0.00
10	SALVAGE & INSTALL MAILBOX	EACH	7	\$200.00	\$1,400.00		\$0.00	7	\$1,400.00		\$0.00
11	COMMON EXCAVATION (EV)	CU YD	2,150	\$22.00	\$47,300.00		\$0.00	2,150	\$47,300.00		\$0.00
12	SUBGRADE EXCAVATION (EV)	CU YD	250	\$25.00	\$6,250.00		\$0.00	250	\$6,250.00		\$0.00
13	TOPSOIL BORROW (LV)	CU YD	100	\$40.00	\$4,000.00	25	\$1,000.00	75	\$3,000.00		\$0.00
14	STABILIZING AGGREGATE - SELECT GRANULAR BORROW (CV)	CU YD	250	\$28.00	\$7,000.00		\$0.00	250	\$7,000.00		\$0.00
15	STABILIZING AGGREGATE 3" MINUS CRUSHED	CU YD	250	\$28.00	\$7,000.00		\$0.00	250	\$7,000.00		\$0.00
16	SUBGRADE PREPARATION	SQ YD	2,150	\$1.50	\$3,225.00		\$0.00	2150	\$3,225.00		\$0.00
17	SELECT GRANULAR BORROW (CV)	CU YD	1,575	\$28.00	\$44,100.00		\$0.00	1575	\$44,100.00		\$0.00
18	GEOTEXTILE FABRIC TYPE V	SQ YD	2,150	\$2.00	\$4,300.00		\$0.00	2150	\$4,300.00		\$0.00
19	AGGREGATE BASE CLASS 5 (CV)	CU YD	525	\$32.00	\$16,800.00		\$0.00	525	\$16,800.00		\$0.00
20	TYPE SP 12.5 NON WEAR COURSE MIXTURE (2,C)	TON	200	\$90.00	\$18,000.00		\$0.00	200	\$18,000.00		\$0.00
21	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	200	\$100.00	\$20,000.00		\$0.00	200	\$20,000.00		\$0.00
22	ADJUST FRAME, RING & CASTING	EACH	2	\$1,000.00	\$2,000.00		\$0.00	2	\$2,000.00		\$0.00
23	CASTING ASSEMBLY (SANITARY)	EACH	2	\$1,000.00	\$2,000.00		\$0.00	2	\$2,000.00		\$0.00
24	4" PERF PE EDGE DRAIN	LIN FT	1,100	\$10.00	\$11,000.00		\$0.00		\$0.00	1100	\$11,000.00
25	4" PVC PIPE DRAIN CLEANOUT	EACH	6	\$275.00	\$1,650.00		\$0.00		\$0.00	6	\$1,650.00
26	SUMP PUMP SERVICE CONNECTION	EACH	7	\$400.00	\$2,800.00		\$0.00		\$0.00	7	\$2,800.00
27	CONNECT TO EXISTING DRAIN TILE	EACH	7	\$400.00	\$2,800.00		\$0.00		\$0.00	7	\$2,800.00
28	CONNECT TO EXISTING STORM STRUCTURE	EACH	1	\$2,000.00	\$2,000.00		\$0.00		\$0.00	1	\$2,000.00
29	CASTING ASSEMBLY (STORM)	EACH	2	\$1,000.00	\$2,000.00		\$0.00		\$0.00	2	\$2,000.00
30	12" RC PIPE SEWER DESIGN 3006 CLASS V	LIN FT	59	\$55.00	\$3,245.00		\$0.00		\$0.00	59	\$3,245.00
31	CONSTRUCT DRAINAGE STRUCTURE DESIGN R-1	LIN FT	3	\$700.00	\$2,100.00		\$0.00		\$0.00	3	\$2,100.00
32	CONSTRUCT DRAINAGE STRUCTURE DES 48-4020	LIN FT	3	\$800.00	\$2,400.00		\$0.00		\$0.00	3	\$2,400.00
33	HYDRANT	EACH	1	\$8,000.00	\$8,000.00	1	\$8,000.00		\$0.00		\$0.00
34	6" GATE VALVE AND BOX	EACH	2	\$2,250.00	\$4,500.00	2	\$4,500.00		\$0.00		\$0.00
35	1" CORPORATION STOP	EACH	7	\$450.00	\$3,150.00	7	\$3,150.00		\$0.00		\$0.00
36	1" TYPE K COPPER SERVICE PIPE	LIN FT	280	\$50.00	\$14,000.00	280	\$14,000.00		\$0.00		\$0.00
37	1" CURB STOP & BOX	EACH	7	\$600.00	\$4,200.00	7	\$4,200.00		\$0.00		\$0.00
38	6" WATERMAIN DUCTILE IRON CL 52	LIN FT	42	\$60.00	\$2,520.00	42	\$2,520.00		\$0.00		\$0.00
39	8" PVC WATERMAIN C900 DR18	LIN FT	500	\$45.00	\$22,500.00	500	\$22,500.00		\$0.00		\$0.00
40	PIPE FITTINGS	POUNDS	500	\$15.00	\$7,500.00	500	\$7,500.00		\$0.00		\$0.00
41	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	1,100	\$20.00	\$22,000.00		\$0.00	1100	\$22,000.00		\$0.00

ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST
42	6" CONCRETE DRIVEWAY PAVEMENT (W/ 6" AGG. BASE CL. 5)	SQ FT	300	\$12.00	\$3,600.00		\$0.00	300	\$3,600.00		\$0.00
43	3" BITUMINOUS DRIVEWAY (W/ 6" AGG. BASE CL. 5)	SQ FT	1,500	\$5.00	\$7,500.00		\$0.00	1500	\$7,500.00		\$0.00
44	4" POLYSTYRENE INSULATION	SQ YD	50	\$80.00	\$4,000.00	50	\$4,000.00		\$0.00		\$0.00
45	T.W. ACCESS BOX	EACH	7	\$150.00	\$1,050.00	7	\$1,050.00		\$0.00		\$0.00
46	INLET PROTECTION	EACH	2	\$200.00	\$400.00		\$0.00		\$0.00	2	\$400.00
47	SILT FENCE - TYPE MS	LIN FT	500	\$3.00	\$1,500.00	100	\$300.00	400	\$1,200.00		\$0.00
48	SEDIMENT CONTROL LOG - TYPE WOOD FIBER	LIN FT	100	\$5.00	\$500.00		\$0.00	100	\$500.00		\$0.00
49	EROSION CONTROL BLANKET W/SEED MIX 25-131	SQ YD	250	\$5.00	\$1,250.00		\$0.00	250	\$1,250.00		\$0.00
50	SOD	SQ YD	1,675	\$15.00	\$25,125.00	450	\$6,750.00	1,225	\$18,375.00		\$0.00
51	LANDSCAPE ALLOWANCE	ALLOWANCE	1	\$5,000.00	\$4,995.00	0.224	\$1,120.00	0.685	\$3,425.00	0.090	\$450.00
				SUBTOTAL	\$361,390.00		\$81,120.00		\$247,695.00		\$32,575.00
				PRORATA	\$32,467.50		\$7,280.00		\$22,262.50		\$2,925.00
				CONTINGENCIES (10%)	\$39,385.75		\$8,840.00		\$26,995.75		\$3,550.00
				CONSTRUCTION COST	\$400,775.75		\$89,960.00		\$274,690.75		\$36,125.00
				SOFT COSTS (25%)	\$100,193.94		\$22,490.00		\$68,672.69		\$9,031.25
				<b>TOTAL RECONSTRUCTION PROJECT COST</b>	<b>\$500,969.69</b>		<b>\$112,450.00</b>		<b>\$343,363.44</b>		<b>\$45,156.25</b>

NOTE: STREET BOND ELIGIBLE = \$366,519.69

**PRELIMINARY COST ESTIMATE**

STRAWBERRY COURT RECLAMATION  
 CITY OF SHOREWOOD, MN  
 APRIL 21, 2021



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ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST
<b>STREET &amp; UTILITY IMPROVEMENTS</b>											
1	MOBILIZATION	LUMP SUM	1	\$20,000.00	\$20,000.00	0.510	\$10,192.22	0.396	\$7,928.04	0.094	\$1,879.75
2	TRAFFIC CONTROL	LUMP SUM	1	\$2,000.00	\$2,000.00	0.510	\$1,019.22	0.396	\$792.80	0.094	\$187.97
3	CLEAR AND GRUB TREE (6.0" DIA OR GREATER)	EACH	2	\$550.00	\$1,100.00	2	\$1,100.00		\$0.00		\$0.00
4	REMOVE CASTING (SANITARY)	EACH	3	\$175.00	\$525.00		\$0.00	3	\$525.00		\$0.00
5	FULL DEPTH RECLAMATION	SQ YD	3,000	\$9.00	\$27,000.00		\$0.00	3,000	\$27,000.00		\$0.00
6	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ FT	650	\$2.00	\$1,300.00		\$0.00	650	\$1,300.00		\$0.00
7	REMOVE CONCRETE CURB & GUTTER	LIN FT	400	\$3.00	\$1,200.00	200	\$600.00	200	\$600.00		\$0.00
8	SALVAGE & INSTALL MAILBOX	EACH	11	\$200.00	\$2,200.00		\$0.00	11	\$2,200.00		\$0.00
9	COMMON EXCAVATION (EV)	CU YD	350	\$22.00	\$7,700.00		\$0.00	350	\$7,700.00		\$0.00
10	SUBGRADE EXCAVATION (EV)	CU YD	200	\$22.00	\$4,400.00		\$0.00	200	\$4,400.00		\$0.00
11	TOPSOIL BORROW (LV)	CU YD	75	\$40.00	\$3,000.00	25	\$1,000.00	50	\$2,000.00		\$0.00
12	STABILIZING AGGREGATE - SELECT GRANULAR BORROW (CV)	CU YD	200	\$28.00	\$5,600.00		\$0.00	200	\$5,600.00		\$0.00
13	STABILIZING AGGREGATE 3" MINUS CRUSHED	CU YD	100	\$28.00	\$2,800.00		\$0.00	100	\$2,800.00		\$0.00
14	AGGREGATE BASE CLASS 5 (CV)	CU YD	100	\$32.00	\$3,200.00		\$0.00	100	\$3,200.00		\$0.00
15	TYPE SP 12.5 NON WEAR COURSE MIXTURE (2,C)	TON	350	\$90.00	\$31,500.00		\$0.00	350	\$31,500.00		\$0.00
16	TYPE SP 9.5 WEARING COURSE MIX (2,C)	TON	350	\$100.00	\$35,000.00		\$0.00	350	\$35,000.00		\$0.00
17	ADJUST FRAME, RING & CASTING	EACH	3	\$1,000.00	\$3,000.00		\$0.00	3	\$3,000.00		\$0.00
18	CASTING ASSEMBLY (SANITARY)	EACH	3	\$1,000.00	\$3,000.00		\$0.00	3	\$3,000.00		\$0.00
19	12" RC PIPE APRON W/ TRASHGUARD	EACH	2	\$2,000.00	\$4,000.00		\$0.00		\$0.00	2	\$4,000.00
20	CASTING ASSEMBLY (STORM)	EACH	2	\$1,000.00	\$2,000.00		\$0.00		\$0.00	2	\$2,000.00
21	4" PERF PE EDGE DRAIN	LIN FT	1,750	\$10.00	\$17,500.00		\$0.00		\$0.00	1,750	\$17,500.00
22	4" PVC PIPE DRAIN CLEANOUT	EACH	6	\$275.00	\$1,650.00		\$0.00		\$0.00	6	\$1,650.00
23	SUMP PUMP SERVICE CONNECTION	EACH	11	\$400.00	\$4,400.00		\$0.00		\$0.00	11	\$4,400.00
24	CONNECT TO EXISTING DRAIN TILE	EACH	11	\$400.00	\$4,400.00		\$0.00		\$0.00	11	\$4,400.00
25	HYDRANT	EACH	2	\$8,000.00	\$16,000.00	2	\$16,000.00		\$0.00		\$0.00
26	CASTING ASSEMBLY - CURB STOP	EACH	3	\$250.00	\$750.00	3	\$750.00		\$0.00		\$0.00
27	6" GATE VALVE AND BOX	EACH	3	\$2,250.00	\$6,750.00	3	\$6,750.00		\$0.00		\$0.00
28	1" CORPORATION STOP	EACH	11	\$450.00	\$4,950.00	11	\$4,950.00		\$0.00		\$0.00
29	1" TYPE K COPPER SERVICE PIPE	LIN FT	480	\$50.00	\$24,000.00	480	\$24,000.00		\$0.00		\$0.00
30	1" CURB STOP & BOX	EACH	11	\$600.00	\$6,600.00	11	\$6,600.00		\$0.00		\$0.00
31	6" WATERMAIN DUCTILE IRON CL 52	LIN FT	65	\$50.00	\$3,250.00	65	\$3,250.00		\$0.00		\$0.00
32	8" PVC WATERMAIN C900 DR18 (DIRECTIONALLY DRILLED)	LIN FT	800	\$125.00	\$100,000.00	800	\$100,000.00		\$0.00		\$0.00
33	PIPE FITTINGS	POUNDS	400	\$15.00	\$6,000.00	400	\$6,000.00		\$0.00		\$0.00
34	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	400	\$20.00	\$8,000.00	200	\$4,000.00	200	\$4,000.00		\$0.00
35	3" BITUMINOUS DRIVEWAY (W/ 6" AGG. BASE CL. 5)	SQ FT	600	\$5.00	\$3,000.00	250	\$1,250.00	350	\$1,750.00		\$0.00
36	4" POLYSTYRENE INSULATION	SQ YD	50	\$80.00	\$4,000.00	50	\$4,000.00		\$0.00		\$0.00
37	T.W. ACCESS BOX	EACH	11	\$150.00	\$1,650.00	11	\$1,650.00		\$0.00		\$0.00
38	INLET PROTECTION	EACH	2	\$200.00	\$400.00		\$0.00		\$0.00	2	\$400.00
39	SILT FENCE - TYPE MS	LIN FT	800	\$3.00	\$2,400.00	200	\$600.00	600	\$1,800.00		\$0.00
40	SEDIMENT CONTROL LOG - TYPE WOOD FIBER	LIN FT	250	\$5.00	\$1,250.00		\$0.00	250	\$1,250.00		\$0.00
41	EROSION CONTROL BLANKET W/SEED MIX 25-131	SQ YD	500	\$5.00	\$2,500.00		\$0.00	500	\$2,500.00		\$0.00

ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT COST	AMOUNT	WATERMAIN QUANTITY	WATERMAIN COST	STREET QUANTITY	STREET COST	STORM QUANTITY	STORM COST
42	SOD	SQ YD	500	\$15.00	\$7,500.00	250	\$3,750.00	250	\$3,750.00		\$0.00
43	LANDSCAPE ALLOWANCE	ALLOWANCE	1	\$5,000.00	\$5,000.00	0.510	\$2,548.05	0.396	\$1,982.01	0.094	\$469.94
					SUBTOTAL		\$365,475.00		\$186,250.00		\$144,875.00
					PRORATA		\$27,000.00		\$13,759.49		\$10,702.85
					CONTINGENCIES (10%)		\$39,247.50		\$20,000.95		\$15,557.79
					TOTAL CONSTRUCTION COST		\$431,722.50		\$220,010.44		\$171,135.64
					SOFT COSTS (25%)		\$107,930.63		\$55,002.61		\$42,783.91
					<b>TOTAL DRAINAGE IMPROVEMENT PROJECT COST</b>		<b>\$539,653.13</b>		<b>\$275,013.05</b>		<b>\$213,919.55</b>
											\$34,350.00
											\$2,537.66
											\$3,688.77
											\$40,576.42
											\$10,144.11
											\$50,720.53

NOTE: STREET BOND ELIGIBLE = \$260,640.07