



Feasibility Report

2024 Pavement Management Project RV 24-04

Roselawn Avenue, from Hamline Avenue to Snelling Avenue

Prepared by: Stephanie Smith
City Engineer
City of Falcon Heights

I hereby certify that this feasibility 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.

_____, P.E.
Licensed No. 51837

EXECUTIVE SUMMARY

This feasibility report has been prepared for the Roselawn Avenue portion of the 2024 Pavement Management Project, RV 24-04. The project was initiated by the City Council as part of the City's Pavement Management Program. This report examines the proposed project including necessity, funding, estimated cost, cost effectiveness and overall feasibility of the project. A map showing the project location can be found on Page 4.

Scope of Work

The proposed project involves milling the pavement, spot curb replacement, spot utility improvements, select sidewalk panel replacement and asphalt pavement overlay on Roselawn Avenue, from Snelling Avenue to Hamline Avenue. Utility improvements for the project include the repair of selected storm sewer manholes and catch basins. As has been discussed during development of the CIP, the City Council has expressed the desire to complete maintenance on City streets that, if neglected for too long, would need to be reconstructed. The proposed mill and overlay of Roselawn Avenue achieves this, while also reducing costs by combining efforts with the City of Roseville's large-scale, 2024 Pavement Management Program.

Estimated Cost

The total project cost for Falcon Heights is estimated to be \$130,000. The street and utility improvements in the base project amount to \$98,000 and an alternate for sidewalk repairs is estimated at \$32,000. This also includes contingencies and overhead costs. Funding for the project will be provided through assessments from the benefitting properties, utility funds, street infrastructure funds, and Municipal State Aid (MSA) funds. A summary of the estimated project costs and funding sources are as follows, rounded to the nearest thousand:

Estimated Costs:

Street Costs:	\$ 94,000
<u>Storm Sewer Costs:</u>	<u>\$ 4,000</u>
Total Cost Estimate:	\$ 98,000

Estimated Funding:

Assessments:	\$ 30,000
Street Fund:	\$ 32,000
Municipal State Aid:	\$ 32,000
<u>Storm Sewer Fund:</u>	<u>\$ 4,000</u>
Total Funding Estimate:	\$ 98,000

Sidewalk Repair Option: \$ 32,000 funded by Street Fund

Note the amounts listed above include 10% Contingency and \$8,500 in Engineering fees.

Schedule

If this project is approved, the proposed project schedule is shown below and Council Action items are noted with a CC:

CC Receive Feasibility Report and Set Improvement Hearing	December 27, 2023
CC Improvement Hearing, Order Improvement, and Authorize Preparation of Plans & Specifications	January 10, 2024
CC Approve Plans & Specifications, and Order Advertisement for Bid	February 14, 2024
Bid Opening	March 2024
CC Award Contract	March 2024
Construction Start	Spring/Summer 2024
Substantial Completion	Fall 2024
CC Set Assessment Hearing	September 2024
CC Assessment Hearing	October 2024

Recommendation

Based on the data within this report, the proposed Roselawn Avenue portion of the 2024 Pavement Management Project, RV 24-04, is feasible, necessary, cost-effective and will benefit the City of Falcon Heights.

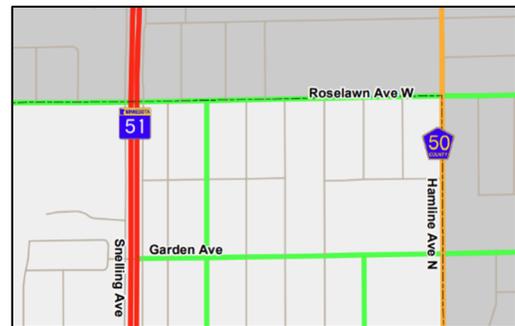
STREET

Existing Conditions

The approximately half mile of Roselawn Avenue in the project area was originally a gravel, county section line road, as evidenced in aerial photos. Between 1940 and 1953, it was paved and had ditch sections for stormwater. In 2004, Ramsey County turned the jurisdiction of Roselawn Avenue to the cities of Falcon Heights (south half) and Roseville (north half). The 2006 Roselawn Reconstruction project included road widening, pathway installation and converting from a rural ditch-section, to urban curb and gutter for stormwater conveyance. This road segment was last seal-coated in 2011.

Roselawn Avenue is a major collector, that provides connections to minor arterials, other collectors and local streets. It is a 34-foot wide road section, with two drive lanes and a parking lane on the north side. The pavement was constructed to a 9-ton design.

The speed limit on Roselawn Avenue is 30 miles per hour. It is a Municipal State Aid Street. The Annual Average Daily Traffic (AADT) is 2,584 vehicles based on traffic volume counts from 2022. Roselawn is forecast in the 2024 Comprehensive Plan to have 2,700 AADT by 2040.



The Roselawn Avenue/Hamline Avenue intersection has been identified as exceeding the state-wide average for the 2011-2015 crash rate. Staff have contacted Ramsey County Public Works to inquire about potential for a traffic operations study of this segment to evaluate strategies to lower the crash rate. It is unlikely such improvements would be within the scope of this mill and overlay project.



Pavement condition scores were considered to determine the streets for the City's Pavement Management and Capital Improvements Plan. Falcon Heights' pavement management

system utilizes a Pavement Condition Index (PCI) rating of 0 to 100. This rating is based on surficial pavement observations. Street condition ratings are divided into three categories: "adequate" (66 to 100), "marginal" (36 to 65) and "problem" (0 to 35). Roselawn Avenue, west of Arona Street, was scored at 80. Roselawn Avenue was 65 between Arona Street and Simpson Street, and 60 east of Simpson Street. This roadway has sealcoat raveling, where the upper layer of the sealcoat peels away from the road surface, creating divots in the road surface that negatively affect drivability. In recent years, more patching has been needed to maintain the condition of Roselawn Avenue, and maintenance costs are expected to continue to increase without a pavement rehabilitation.

Roselawn Avenue has a double-yellow centerline striping and a white parking lane stripe. At the intersection with Simpson Street, Roselawn Avenue has crosswalk markings that lead from a pedestrian

ramp on the south side, to Simpson Street on the north; however, Simpson Street does not have a pathway, street light pole or advanced signage.

Proposed Improvements

Mill and overlay of the asphalt pavement is proposed on Roselawn Avenue to rehabilitate the pavement. The process involves grinding off the top 2 inches of pavement and replacing it with 2 inches of new bituminous. This method is a cost-effective way to get a new pavement surface that is smoother and free of defects. Although cracking is likely to mirror in the year following construction, sealing cracks the following year is anticipated to address that issue and maintain the pavement's longevity. Cost for the street mill and overlay is estimated at \$94,000.

At the intersection with Simpson Street, Roselawn Avenue has crosswalk markings that lead from a pedestrian ramp on the south side, to Simpson Street on the north; however, Simpson Street does not have a pathway. Staff will evaluate the crosswalk markings for elimination.

Pathway

Existing Conditions

A concrete pathway with buffer stormwater plantings is located on the south side of the road. The pathway has a significant number of cracked and heaved panels. The pathway is 8 feet wide, except at the planting locations where it narrows to 6 feet wide. Per the 2006 Feasibility Study, a 5-foot grass buffer was not constructed between the pathway and the curb, based on feedback from the adjacent property owners who were concerned about the proximity of a pathway to their homes.



Pedestrian ramps were updated with recent pavement projects on the side streets in 2015, 2021 and 2023. Additionally, MnDOT upgraded the pedestrian ramps at the intersection with Snelling Avenue (TH 51) in 2021.

This section of Roselawn Avenue is identified in the 2040 Comprehensive Plan for Bicycle/Pedestrian Improvement corridor.

Proposed Improvements

No pathway improvements were originally proposed with this project as it is outside the scope of a mill and overlay. However, cost savings may be realized from including replacements of damaged concrete panels in this larger project. Therefore, sidewalk panel replacement is proposed as a bid alternate. Once bids are received, staff will evaluate and present to Council a recommendation on whether to include sidewalk work in this project.

Sanitary Sewer

Existing Conditions

Falcon Heights has a 160-foot length of sanitary sewer pipe with two manholes between Pascal Street and Holton Street. The pipe was lined in 2019 with Cure-In-Place-Pipe (CIPP) through the City's Sanitary Sewer Rehabilitation Program. This process creates a new pipe within the existing pipe.

Proposed Improvements

No work is proposed on the sanitary sewer pipe or manhole structures.

Stormwater and Drainage

Existing Conditions

Roselawn Avenue has an urban design with concrete curb and gutter to convey drainage. The streets in the project area are served by catch basins which collect water on the street. Storm sewer within the project area was constructed with conventional concrete pipe and structures in 2006.

Stormwater west of Simpson Street is conveyed north at Asbury Street and Arona Street. This stormwater eventually flows to Zimmerman Lake in Roseville.

Stormwater east of Simpson Street is conveyed south at Holton Street and Hamline Avenue. This stormwater eventually flows east across the city line to a known flooding area, Gottfried Pit, located in Roseville at Larpenteur Avenue and Fernwood Avenue. Gottfried Pit is a regional pond that is owned by Ramsey County and maintained by the City of Roseville. In extreme events, the pond has flooded up to approximately the 912 elevations (approximately 16' above the normal water level).

Daylily plantings were installed along the pathway in 2006. The plantings are Best Management Practice (BMP) to reduce the amount of impervious surface and provide water quality enhancement acting as a buffer to slow the rate of runoff entering the curb and gutter. The plantings are maintained monthly to remove debris and weeds, and they are also touched up with mulch.

Infiltration trench BMPs were installed in 2006 to provide water quality treatment. The underground infiltration trench near the Roselawn Avenue/Hamline Avenue intersection is owned and maintained by Falcon Heights. It captures water in a perforated pipe and allows it to infiltrate, helping to reduce the volume of runoff while also capturing and treating stormwater on site. The infiltration trench is scheduled for inspection twice per year and maintained as needed with a vac truck.

Proposed Improvements

The project proposes no additional impervious surface and, therefore, would not trigger watershed quality or quantity requirements. No improvements for stormwater treatment are proposed with this project. Minor work is anticipated to repair damaged or sunken catch basins. The cost estimate for these improvements is \$4,000.

Care will be taken during construction to prevent damage to the existing BMPs. Contractors will be required to meet erosion and sediment control requirements for all operations.

RIGHT-OF-WAY AND EASEMENTS

The majority of the existing right-of-way is 66-feet wide, except two areas which are 76-feet wide:

1. Between Pascal Street and Holton Street
2. Southwest corner of Albert Street to the southwest corner of Hamline Avenue

The proposed improvements are within the existing right-of-way. No right-of-way or easement acquisition is anticipated.

OUTSIDE AGENCY COORDINATION

City of Roseville

This project will be designed and constructed in partnership with the City of Roseville. Falcon Heights entered into a cooperative agreement for street construction dated November 15, 2023, which details the responsibilities of each community. The project will be designed and constructed by Roseville with input and financial contributions from Falcon Heights.

St. Paul Regional Water Services

The watermain system that services the project area is owned and operated by St. Paul Regional Water Services (SPRWS). SPRWS has indicated they intend to replace the hydrant at Roselawn Avenue and Hamline Avenue, and may do other minor work such as gate box repairs or anode bag installation. Any improvements they would like to perform in conjunction with this project would be at the cost of SPRWS.

Watershed Districts

The eastern portion of the project area is within the Capitol Region Watershed District. Proposed improvements are not anticipated to warrant any stormwater requirements from this District.

The western portion of the project area is within the Rice Creek Watershed District. Proposed improvements are not anticipated to warrant any stormwater requirements from this District.

Private Utilities

The City will coordinate with private utilities to finalize any relocations and other coordination items during design. The following private utilities are listed with Gopher State One in the project area as of December 8, 2023: CenturyLink (Lumen), Comcast, MCI, Xcel Energy and Zayo Bandwidth.

ESTIMATED COSTS AND PROPOSED FUNDING

Proposed project costs for the 2024 Pavement Management Project are summarized below. The cost estimate is based on recent construction projects of similar character and assumes that the proposed improvements would begin in 2024. All costs include pro-rated \$8,500 of engineering costs as per the cooperative construction agreement with Roseville and 10% contingency, which includes unforeseen costs including inflation, unforeseen site conditions, etc. Actual costs will be determined through competitive bids following final design for the project. The actual costs will be dependent upon the market conditions that exist at the time of the bidding.

The proposed street improvements are eligible for special benefit assessment according to the City of Falcon Heights Assessment Policy. Per City Policy, a portion of the street improvements will be assessed to the benefitting properties. Along with assessments, street costs will be financed through the Street Infrastructure Fund and Municipal State Aid. Typically, only roads that have been added to the City’s Municipal State Aid system (MSA) are eligible for funding through the City’s portion of state gas tax revenues. However, the City of Falcon Heights has a Certified Municipal State Aid Street system. As a result, the City can use MSA funds to pay for the City’s portion of the costs on Roselawn Avenue.

Storm sewer and sanitary sewer improvements will be funded from the appropriate infrastructure fund, and are not eligible for assessments.

	Estimated Cost*	MSA	Street Infrastructure Funds	Assessments	Storm Sewer Fund
Street Improvements	\$94,000	\$32,000	\$32,000	\$30,000	
Storm Sewer Improvements	\$4,000				\$4,000
Total	\$ 98,000	\$32,000	\$32,000	\$30,000	\$4,000

*Includes 10% Contingency and \$8,500 Engineering

PROPOSED ASSESSMENTS

Assessments will be levied to the benefitting properties as outlined in Minnesota State Statute Chapter 429 and the City’s Assessment Policy, which is summarized below. The assessed amount is levied on a front footage basis. Residential corner lots are assessed 100% of the property footage for the long side, 0% for the short side.

Assuming this project is completed by Fall 2024, the final assessment amount would be determined at an assessment hearing in Fall 2024 with a thorough review of the proposed assessments by the City Council. The City Council would also set the time period of assessments and the interest rate at the hearing. In past projects, the assessments have been amortized over 7 years for mill and overlay projects at an interest rate 2% above the current rate of return on the City’s portfolio.

The following factor regarding the City of Falcon Heights’ Assessment Policy should be considered:

- Residential corner lots are only assessed for the long side; therefore, four properties adjacent to the project are not proposed for assessment. These properties are ineligible for assessment because the short side is adjacent to Roselawn Avenue, not the long side.

The estimated assessment rate is 40% of the improvement cost, which is \$19.94/ft. The project area includes 1,886 feet of frontage, 368 feet of which is not assessable. There are 13 parcels eligible for assessment. The average residential assessment is estimated at \$2,532.38.

PROPOSED SCHEDULE

If this project is approved, the proposed project schedule is shown below and Council Action items are noted with a CC:

CC Receive Feasibility Report and Set Improvement Hearing December 27, 2023

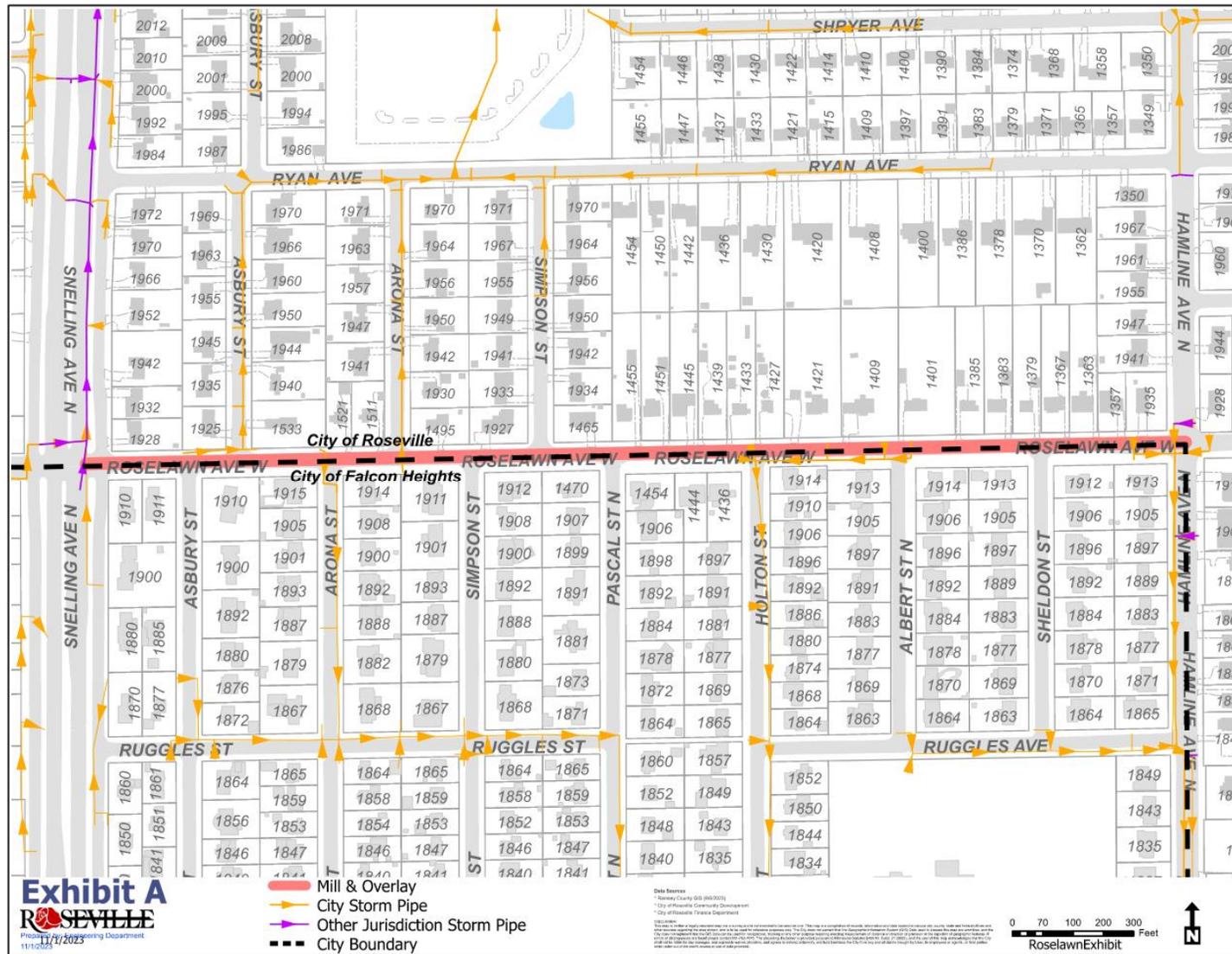
CC Improvement Hearing, Order Improvement, and Authorize Preparation of Plans & Specifications	January 10, 2024
CC Approve Plans & Specifications, and Order Advertisement for Bid	February 14, 2024
Bid Opening	March 2024
CC Award Contract	March 2024
Construction Start	Spring/Summer 2024
Substantial Completion	Fall 2024
CC Set Assessment Hearing	September 2024

SUMMARY & RECOMMENDATIONS

Based on the information and analysis included in this report, the 2024 Pavement Management Project, RV 24-04, is feasible, necessary, and cost effective. The following is recommended:

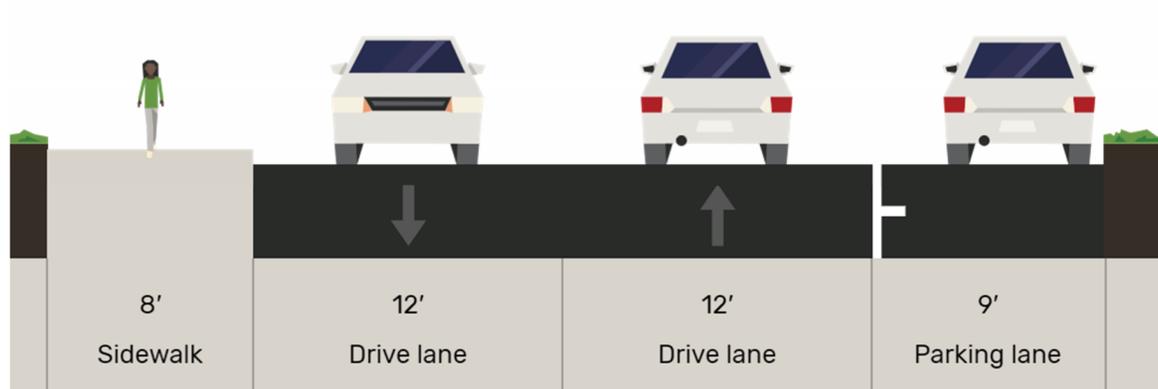
1. The Falcon Heights City Council accept this feasibility study and report and order public hearing for January 10, 2024;
2. After receiving the appropriate staff reports, information and input from the public hearing, the City Council shall determine whether to proceed with or reject the proposed public improvements; and
3. If proceeding with the proposed improvement, the City Council shall order the proposed improvements and authorize the preparation of plans and specifications.

APPENDIX 1: IMPROVEMENT MAPS

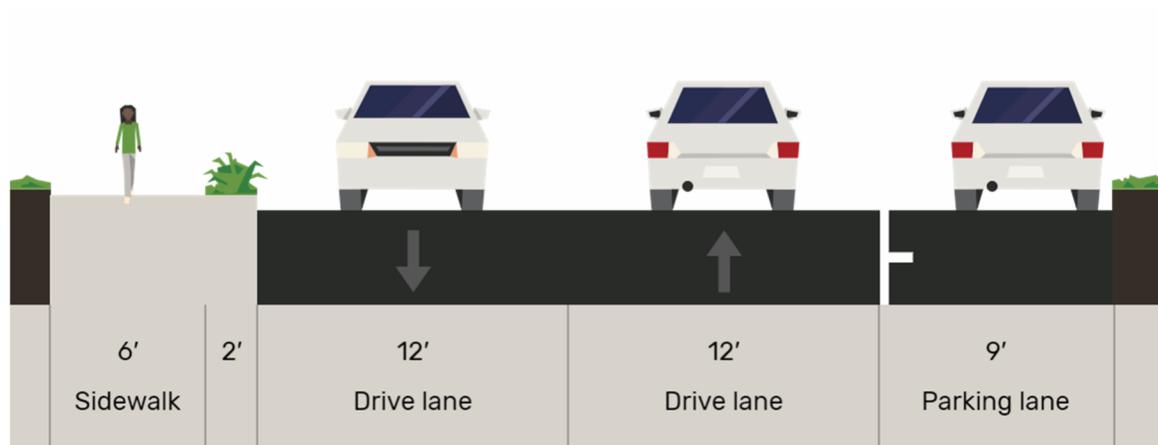


APPENDIX 2: TYPICAL SECTIONS

Roselawn Avenue Typical Section (No Change Proposed):



Roselawn Avenue Section at Stormwater Plantings (No Change Proposed):



Graphics created with Streetmix

APPENDIX 3: OPINION OF PROBABLE COST

Contract RV 24-04 Roselawn - FH Portion - Funding Category Estimate Values by Item by Project/Category												
Report Date: 12/12/2023												
Line	Number	Description	Unit	Contract Quantity	Estimated Price	Total	Street		Local Storm Sewer		Add-Alternate Sidewalk Repairs	
							Quantity	Amount	Quantity	Amount	Quantity	Amount
1	2021.501	MOBILIZATION	L S	1	\$ 5,000.00	\$ 5,000.00	0.95	\$ 4,750.00	0.05	\$ 250.00		\$ -
2	2104.503	REMOVE CONCRETE CURB	L F	100	\$ 7.00	\$ 700.00	100	\$ 700.00		\$ -		\$ -
3	2104.504	REMOVE CONCRETE PAVEMENT	S Y	40	\$ 15.00	\$ 600.00	40	\$ 600.00		\$ -	190	\$ 2,850.00
4	2231.509	BITUMINOUS PATCHING MIXTURE	TON	5	\$ 200.00	\$ 1,000.00	5	\$ 1,000.00		\$ -		\$ -
5	2232.504	EDGE MILL BITUMINOUS SURFACE	S Y	50	\$ 5.00	\$ 250.00	50	\$ 250.00		\$ -		\$ -
6	2232.504	MILL BITUMINOUS SURFACE (2")	S Y	4355	\$ 2.00	\$ 8,710.00	4355	\$ 8,710.00		\$ -		\$ -
7	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	380	\$ 2.00	\$ 760.00	380	\$ 760.00		\$ -		\$ -
8	2360.509	TYPE SP 9.5 WEARING COURSE MIX (3,B)	TON	550	\$ 85.00	\$ 46,750.00	550	\$ 46,750.00		\$ -		\$ -
9	2506.602	ADJUST FRAME AND RING CASTING	EACH	4	\$ 580.00	\$ 2,320.00		\$ -	4	\$ 2,320.00		\$ -
10	2521.518	4" CONCRETE WALK	S F		\$ 12.00	\$ -		\$ -		\$ -	1315	\$ 15,780.00
11	2521.518	6" CONCRETE WALK	S F		\$ 17.00	\$ -		\$ -		\$ -	390	\$ 6,630.00
12	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	L F	100	\$ 35.00	\$ 3,500.00	100	\$ 3,500.00		\$ -		\$ -
13	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	S Y	40	\$ 90.00	\$ 3,600.00	40	\$ 3,600.00		\$ -		\$ -
14	2531.618	TRUNCATED RADIUS DOMES	S F		\$ 60.00	\$ -		\$ -		\$ -	64	\$ 3,840.00
15	2563.601	TRAFFIC CONTROL	L S	1	\$ 3,000.00	\$ 3,000.00	0.95	\$ 2,850.00	0.05	\$ 150.00		\$ -
16	2573.502	INLET PROTECTION TYPE B	EACH	4	\$ 150.00	\$ 600.00		\$ -	4	\$ 600.00		\$ -
17	2574.604	TURF ESTABLISHMENT WITH HYDROSEED	S Y	170	\$ 8.00	\$ 1,360.00	170	\$ 1,360.00		\$ -		\$ -
18	2582.503	4" SOLID LINE MULTI-COMPONENT	L F	80	\$ 1.00	\$ 80.00	80	\$ 80.00		\$ -		\$ -
19	2582.518	CROSSWALK MULTI-COMPONENT	S F	72	\$ 7.00	\$ 504.00	72	\$ 504.00		\$ -		\$ -
20	2582.503	4" DBLE SOLID LINE MULTI COMP	L F	1600	\$ 1.50	\$ 2,400.00	1600	\$ 2,400.00		\$ -		\$ -
21	2582.518	PAVEMENT MESSAGE MULTI-COMPONENT	S F	20	\$ 12.00	\$ 240.00	20	\$ 240.00		\$ -		\$ -
						Subtotals	\$ 81,374.00	\$ 78,054.00	\$ 3,320.00		\$ 29,100.00	
						10% Contingency	\$ 8,137.40	\$ 7,805.40	\$ 332.00		\$ 2,910.00	
						FH Engineering	\$ 8,500.00	\$ 8,075.00	\$ 425.00			
						FH Total	\$ 98,011.40	\$ 93,934.40	\$ 4,077.00		\$ 32,010.00	
						FH Rounded Total	\$ 98,000.00	\$ 94,000.00	\$ 4,000.00		\$ 32,000.00	

APPENDIX 4: DRAFT ASSESSMENT ROLLS

Parcel ID	Building Number	Street Name	Street Suffix	Roselawn Frontage (FT)	Assessment Rate (\$/FT)	Assessment Amount (\$)
152923310026	1913	ALBERT	ST	133	\$ 19.94	\$ 2,652.02
152923310025	1914	ALBERT	ST	133	\$ 19.94	\$ 2,652.02
152923320027	1914	ARONA	ST	133	\$ 19.94	\$ 2,652.02
152923320028	1915	ARONA	ST	133	\$ 19.94	\$ 2,652.02
152923310097	1913	HAMLIN	AVE	123	\$ 19.94	\$ 2,452.62
152923310043	1914	HOLTON	ST	132	\$ 19.94	\$ 2,632.08
152923310045	1444	ROSELAWN	AVE	75	\$ 19.94	\$ 1,495.50
152923310046	1454	ROSELAWN	AVE	114	\$ 19.94	\$ 2,273.16
152923320001	1470	ROSELAWN	AVE	133	\$ 19.94	\$ 2,652.02
152923310002	1912	SHELDON	ST	139	\$ 19.94	\$ 2,771.66
152923310010	1913	SHELDON	ST	137	\$ 19.94	\$ 2,731.78
152923320015	1911	SIMPSON	ST	133	\$ 19.94	\$ 2,652.02
152923320014	1912	SIMPSON	ST	133	\$ 19.94	\$ 2,652.02
NOT ASSESSED (CORNER LOT - SHORT SIDE)						
	1910	SNELLING	AVE	78	\$ -	\$ -
	1911	ASBURY	ST	78	\$ -	\$ -
	1910	ASBURY	ST	133	\$ -	\$ -
	1436	ROSELAWN	AVE	79	\$ -	\$ -

