



MEMORANDUM

DATE: January 17, 2023

TO: Honorable Mayor and City Councilmembers
Dave Perrault, City Administrator

FROM: David Swearingen, P.E. Public Works Director / City Engineer

SUBJECT: Pavement Condition Update & Street and Trail Maintenance Plan

Budgeted Amount:
\$220,000

Actual Amount:
TBD

Funding Source:
General Fund

Council Should Consider

- Annual presentation from the Public Works Director / City Engineer regarding the current pavement conditions, an overview of the proposed 20-year PMP project cycle, and the proposed 2023 street and trail maintenance plan.
- Agreement with the proposed 2023 street and trail maintenance plan.

Background/Discussion

In 2021, Arden Hills implemented a program that every 3-years Public Works conducts a citywide pavement condition automated survey of all City owned and operated streets. Through this process, each street is surveyed by a consistent method using laser road surface sensors which detect every crack, defect/distress and roughness in the pavement which then a condition rating is calculated ranging from 100 (excellent) to 0 (Poor). Attachment A is the full report from the survey completed in 2021, this information is used to assist in planning pavement rehabilitation and maintenance projects. The City’s overall network PCI in May of 2021 was calculated at 63, the typical PCI that indicates a healthy street network is 70. The next automated survey will be scheduled in 2024.

Attachment B shows the PCI of the City streets at the beginning of 2022. Attachment C shows the PCI after the 2022 pavement construction and activities which included the Old Snelling and Arden Oaks pavement rehabilitation projects, the PW In-House Paving and the 2022 Sealcoat Project. After the 2022 construction season, the overall network PCI raised to 71.97.

Utilizing the information gathered from the automated survey, field investigations and reviewing historical data, staff is proposing the Citywide PMP Plan (Attachment D) for projects over the next 20-years. The rationale is that each street segment should have some type of pavement rehabilitation project on a 20-year cycle, with routine maintenance activities, that aligns with the typical life cycle of asphalt pavement. Of course, the proposed PMP plan is subject to change during review of the annual CIP/budget process.

Below is a list of the next 5 PMP projects along with “desktop” cost estimates. The estimates are based off of past projects with similar elements for both pavement rehab and utility improvements. They are typically funded by the Permanent Improvement Revolving (PIR) fund, Municipal State Aid (MSA) if applicable, Special Assessments and related utility funds.

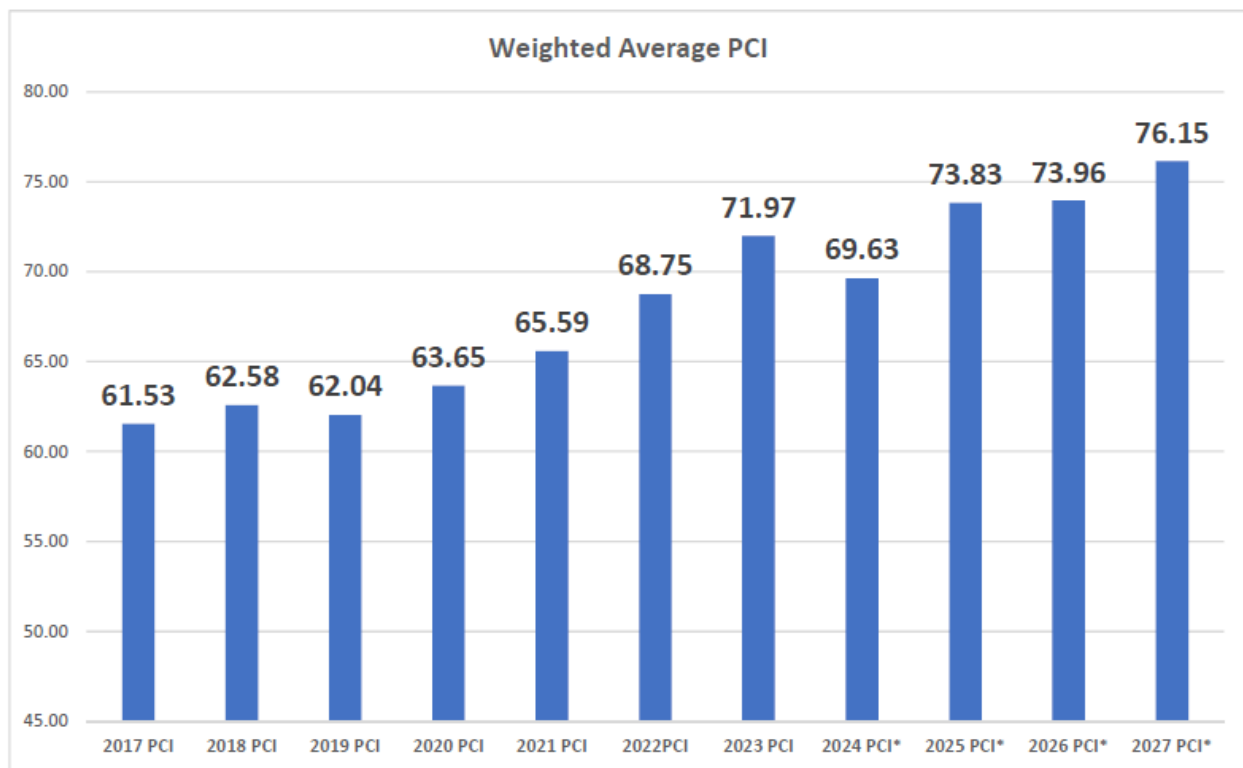
- 2024 Pavement Management Project – \$2,250,000
 - Colleen Ave, Collen Cir, James Ave, Norma Ave, Briarknoll Cir, Briarknoll Dr, McClung Dr, Royal Hills Dr, Arden Vista Ct, Keithson Dr.
- 2026 Pavement Management Project – \$1,700,000
 - Karth Lake Neighborhood streets, Cummings Park Dr, Glenhill Rd.
- 2028 Pavement Management Project – \$1,800,000
 - Tiller Ln, Dunlap St N., Cannon Ave, Fernwood St, Benton Way, Walden Pl, Hunters Ct, Pine Tree Dr, Harriet Ave, Carlton Dr, Benton Way, Bussard Ct, Lametti Ln, Lametti Cir.
- 2030 Pavement Management Project – \$1,600,000
 - Red Fox Rd, Grey Fox Rd, Dunlop St. N, Northwoods Dr, Stowe Ave, Hamline Ave N., Connelly Ave
- 2032 PMP - \$2,800,000
 - Chatham Neighborhood, Lake Valentine Rd, Colleen Ct, Snelling Ave N., Keithson Dr, Royal Hills Dr, Arden View Neighborhood, Nursey Hill Neighborhood, Wyncrest Neighborhood

In 2005, a Joint Powers Agreement (JPA) for Traffic Markings, Crack Sealing, Fog Sealing and Seal Coating was executed by the cities of Coon Rapids, Andover, Brooklyn Center, Columbia Heights, and Fridley. Since 2005, six additional cities have joined the joint powers agreement (Ham Lake, East Bethel, Anoka, Mahtomedi, Circle Pines and Mounds View). On December 11, 2017, the City Council authorized an amendment to the JPA to include the City of Arden Hills.

Attachment E shows the proposed 2023 Street Maintenance Plan which includes preservation activities such as seal coat, fog seal, crack seal. Attachment F shows the Public Works In-House paving and large area patching that is scheduled for 2023. Most of this work is covered through the JPA with Coon Rapids but the large area patching is done by our Public Works Maintenance

Workers. The benefit to large area patching is it localizes the repair where it is needed and extends the useful life of the existing road that does not require rehabilitation.

Attachment G is a map which shows the JPA Coon Rapids street maintenance activities consisting of seal coat, crack seal, and fog sealing scheduled on a 6-year cycle for every street in the City. The streets that are not highlighted are segments that will be included in an upcoming PMP. After this year, our Public Works In-House street maintenance will be scheduled 1 year in advance of the plan shown on Attachment G. This allows for easier scheduling to get the work done throughout the summer months, whereas before, the Public Works In-House work would have to be completed before the end of June which is a strain on our resources.



**Years 2024-2027 are projections and may change*

Through this plan, Arden Hills has reached an overall network PCI of over 70 which indicates the City’s street system is at a healthy state. It is projected the streets could reach an overall network PCI of 76.15 at the end of the 2026 construction season by following the current plan.

Budget Impact

The proposed PMP projects will be programmed into the City’s Capital Improvement Plan (CIP), the Public Works Director / City Engineer will work closely with the Finance Director.

Staff will be submitting estimated quantities to the Coon Rapids JPA by early February. Once the bids are received, this item will come back to Council for approval which is done typically in March. All elements of the proposed 2023 Street Maintenance plan (Coon Rapids JPA and in-

house large area patching) will be covered by the street maintenance operating budget of \$220,000.

Attachments

Attachment A – Automated Pavement Condition Survey Report (2021)

Attachment B – 2022 PCI map (January)

Attachment C – 2023 PCI map (January)

Attachment D – Proposed 20-year PMP projects map

Attachment E – Proposed 2023 Street Maintenance map

Attachment F – Proposed 2023 PW In-House Paving map

Attachment G – Proposed 6-year Street Maintenance cycle

Attachment H – PowerPoint presentation