FRONT AVENUE RESURFACING PROJECT SUMMARY OF ENGINEERING RECOMMENDATIONS

Front Avenue Resurfacing Project

Report prepared: 12/05/2022

Public Hearing: 02/08/2023

PROJECT

Mill and Overlay on Front Avenue from Western Avenue to Rice Street with proposed implementation of bicycle facilities from Kent Street to Rice Street.

Improvements include the installation of dedicated bicycle lanes, pavement markings, signage, and other elements as described below.

PURPOSE

The purpose of this project is to provide an east-west bicycle facility on Front Avenue, to continue the existing facility on Front Avenue west of Dale Street and to make purposeful connections to the planned bikeway along Rice Street, improving safety, comfort, and connectivity for people using bicycles for transportation.

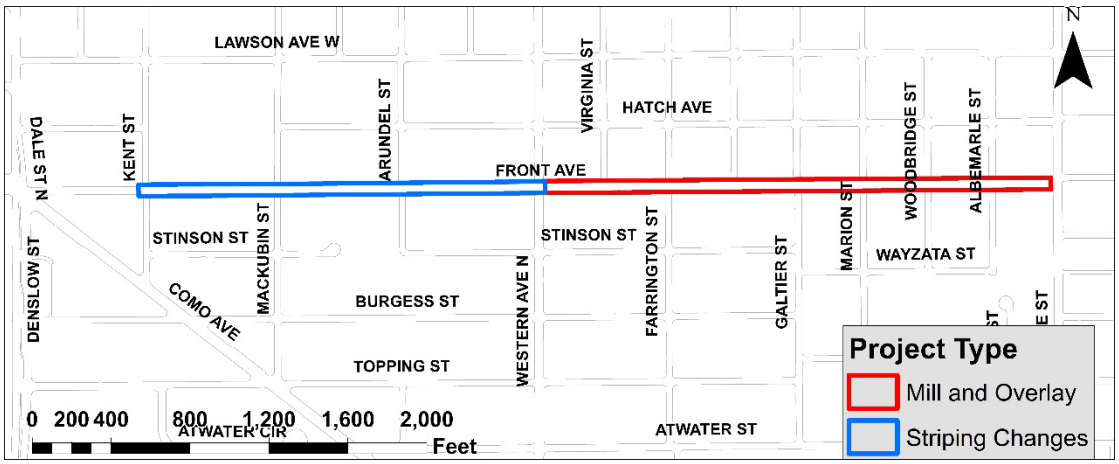

Figure 1: Project Map

I. INITIATING ACTION

The City of Saint Paul Department of Public Works is planning a mill and overlay of Front Avenue from Western Avenue to Rice Street in the Fall of 2023.To take advantage of the efficiencies associated with implementing bicycle facilities with existing maintenance projects, Public Works is proposing to implement bicycle lanes on Front Avenue within the mill and overlay boundaries. Additionally, in order to maximize the use of resources and staff time, striping changes are proposed to continue to Kent St to eliminate a facility gap that would

remain. The bicycle facilities proposed are consistent with guidelines from the Saint Paul Bicycle Plan.

II. EXISTING CONDITIONS

Front Avenue within the project limits is classified as a Major Collector roadway. Average Annual Daily Traffic (AADT) was observed in 2022 to be 2,920 vehicles per day. A speed study conducted in 2016 west of Dale Street identified average speeds of 35 miles per hour with 85th percentile speeds at 40 MPH. The posted speed limit is 25 MPH.

Sidewalks are continuous on the north and south side of Front Avenue within the Mill and Overlay project limits, though pedestrian ramps are not ADA compliant at all intersections except for Western Avenue and Rice Street. Sidewalk gaps exist on the south side of Front Avenue from Dale Street to Mackubin Street, this gap will have sidewalk installed in a separate project in 2025.

There are no existing bike facilities installed within the project limits, there are shared lane markers from Dale Street to Western Avenue. The Saint Paul Bicycle Plan identifies “enhanced shared lanes” on Front Avenue as the recommended bicycle facility type. However, the Plan update identifies “separated bikeway” for this section of Front Avenue. In addition, the prevailing vehicle speeds and volume warrant increased delineation of bicycle and motor vehicle traffic on Front Ave. Due to the scope limit of a mill and overlay, in-street lanes are seen as a sufficient near-term installation. In-street bicycle lanes are installed on Front Avenue west of Dale Street and continue west to Minneapolis. Longer term proposed improvements include upgrading Front Avenue to separated facilities and extension of Western Avenue bike lanes north of Front Avenue.

III. PROPOSED IMPROVEMENTS

Front Avenue: Kent Street to Rice Street

- Restriping the roadway to add 6’ EB and WB bicycle lanes
- Narrowing of existing vehicular travel lanes to 10’
- Installation of bike lane pavement markings and signage
- Removal of on-street parking on the south side of Front Avenue
- Installation of sidewalk extensions (bumpouts) at targeted intersections

Changes to On-street Parking
To accommodate the installation of bicycle facilities, changes to on-street parking is proposed for the following locations:

Parking will be prohibited:

- South side of Front Avenue from Kent Street to Rice Street

Parking will continue to be permitted:

- North side of Front Avenue from Kent Street to Rice Street

There are a total of 315 legal parking spaces on Front Avenue within the project limits of the proposed striping changes. This project will eliminate 142 spaces, or 46% of available parking spaces. To measure existing parking demand, Public Works conducted 12 parking occupancy counts at representative time periods along Front Avenue in September 2022. Parking counts were collected during overnight, afternoon and evening times during both weekdays and weekends.

Across the 12 parking counts, staff observed total parking utilization ranging from 36 to 58 vehicles on Front Avenue, or 11% to 18% utilization of total available parking spaces. Parking data indicated that residential parking demand and overnight parking demand make up a large portion of parked cars along Front Avenue, however utilized parking remained low with an average of 15% to 18% utilization during overnight and evening observations.

Parking East of Western Avenue
The land uses east of Western Avenue are residential, except for corner retail found at Galtier St, Marion St and Rice St. There are a total of 138 parking spaces east of Western Avenue, 78 of which are on the south side of Front Avenue and will be eliminated as part of the proposed project, resulting in 64 spaces remaining on the north side of Front Avenue. Maximum parking occupancy observed east of Western Avenue was 45 vehicles. The remaining 64 parking spaces on the north side of Front Avenue will provide sufficient capacity to accommodate observed parking demand on this segment of Front Avenue.

Parking West of Western Avenue
There are a total of 177 parking spaces on Front Avenue west of Western Avenue – 92 spaces on the north side of the street and 85 spaces on the south side of the street. Parking demand west of Western drops considerably, land use adjacent to Front Avenue between Dale Steet and Western Avenue mainly consists of light industrial, city parkland and Crossroads Montessori School. Maximum occupancy observed west of Western was 16 vehicles. Weekday counts were conducted during school session for the adjacent public school and showed little variance from use during times when school was not in session. School buses load and unload on the northern side of Front Avenue which will remain with proposed striping changes. The remaining 92 spaces on the north side of the street will provide more than sufficient capacity to accommodate observed parking demand on this segment of Front Avenue.

Public Works is recommending removing parking from the south side of Front Avenue because it lines up with the existing lane configuration west of Dale St, accommodates school bus loading at Crossroads Montessori, higher parking utilization was observed on the north side of the street and sufficient capacity to accommodate existing parking needs along Front Avenue with a single parking lane.

Parking restrictions
Crossroads Montessori School utilizes Front Avenue to school bus loading and unloading. Due to this need, parking is restricted on the north side of Front Avenue from Kent Street to Mackubin Street Monday through Friday from 7AM to 6PM. No vehicles were observed parked on Front Avenue between Kent Street and Mackubin Street during any observation.

Saint Paul Fire Department Station 22 is located at the intersection of Front Ave and Marion St. Parking is restricted from Marion St to the alley located at the middle of the block on both sides of the street to accommodate fire truck movement into and out of the station.

Parking Conclusions

Based on the data collected by Public Works, parking utilization was over twice as high on the northern side (23%) of Front Avenue than on the southern side (11%). It is anticipated that remaining parking supply on Front Avenue and, if necessary, on adjacent residential streets following the implementation of bicycle lanes will be sufficient to meet observed demand in most circumstances. The parking occupancy data is attached in the **Appendix** of this document.

Changes to Pedestrian Crossing Accommodations
The project will also include potential bumpouts at certain intersections to improve pedestrian safety when crossing Front Avenue and to implement traffic calming measures to the road. These bumpouts are being proposed to be installed at Western Avenue, Farrington Street, Marion Street and Albemarle Street. These improvements are planned to be spaced in order to get the maximum amount of safety and traffic calming improvements through the project corridor. These improvements will upgrade these intersections to be more ADA accessible with updated curb ramps and other ADA features like truncated domes.

IV. ALTERNATIVES

Not pursuing bicycle facilities with the 2023 mill and overlay would not improve safety or comfort for people bicycling on Front Avenue and would be inconsistent with the Saint Paul Bicycle Plan.

Parking removal is proposed for the south side of Front Avenue between Kent Street and Rice Street. Removing parking from the north side of Front Avenue instead of the south side was examined, but is not recommended due to the existing alignment of Front Avenue west of Dale Street, Crossroads Montessori school bus loading and unloading needs and observed higher parking utilization on the north side of Front Avenue.

V. POSITIVE BENEFITS

This project will improve the safety of all users of the roadway. Providing dedicated bike lanes on Front Avenue will improve the safety and comfort for people bicycling on the street, encourage predictable riding behavior, and will provide connectivity to existing bike facilities on Dale Street and Western Avenue, and to planned facilities on Rice Street. Constructing bumpouts at targeted intersections and narrowing the travel lanes to accommodate bicycle facilities will minimize roadway exposure to motorized traffic for pedestrians and provide visual cues to drivers to moderate excessive speed.

VI. ADVERSE EFFECTS

Normal issues relative to implementing infrastructure improvement projects will be present. Those issues include, but may not be necessarily limited to, noise, dust, and general disruptions to vehicular traffic. Removal of some on-street parking will reduce overall parking capacity.

VII. TIME SCHEDULE

It is anticipated that the bicycle improvements as proposed will be installed concurrent with the planned mill and overlay on Front Avenue, scheduled for Fall of 2023 while pedestrian improvements will be installed in Summer of 2023.

VIII. COST ESTIMATE

Implementation of bicycle lanes and lane reconfiguration within the limits of the mill and overlay will incur little additional cost beyond the amount already budgeted for resurfacing. Implementation of bicycle lanes and lane reconfiguration outside of the mill and overlay extent simultaneously with work done within the mill and overlay extent will utilize existing resources and staff time dedicated to mill and overlay work and will incur negligible costs. Implementation of pedestrian improvements is contingent upon feasibility within final project budget, which has not yet been set.

I. ESTIMATED FINANCING

Signing and striping for bike lanes on Front Avenue will be funded through funds budgeted for the Citywide Mill and Overlay program.

II. SOURCE OF ADDITIONAL INFORMATION

For additional information, please contact:

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III. SUMMARY AND RECOMMENDATIONS

The Department of Public Works believes the project submitted herein to be necessary and feasible. The Department's Engineering Recommendation is for approval of the project as proposed.

Appendix

1. Front Avenue Parking Occupancy Study
2. Front Avenue Proposed Project Layout