

PRIOR AVENUE BIKEWAY PROJECT SUMMARY OF ENGINEERING RECOMMENDATIONS

Prior Avenue Bikeway

Report prepared: 8/21/2018

Public Hearing: 9/5/2018

PROJECT

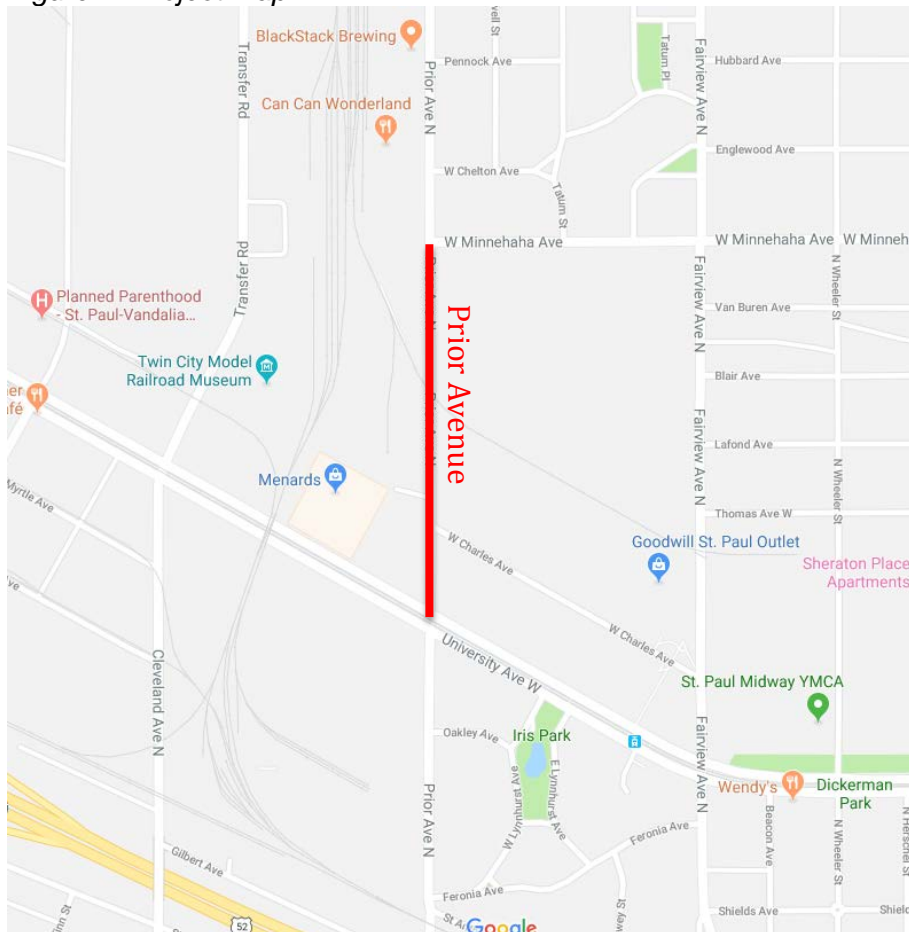
Implementation of buffered bicycle lanes on Prior Avenue from University Avenue to Minnehaha Avenue.

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

PURPOSE

The purpose of this project is to provide an improved north-south bicycle facility on Prior Avenue from University Avenue to Minnehaha Avenue, improving the bicycling environment as it relates to safety, comfort, and connectivity.

Figure 1: Project Map



I. INITIATING ACTION

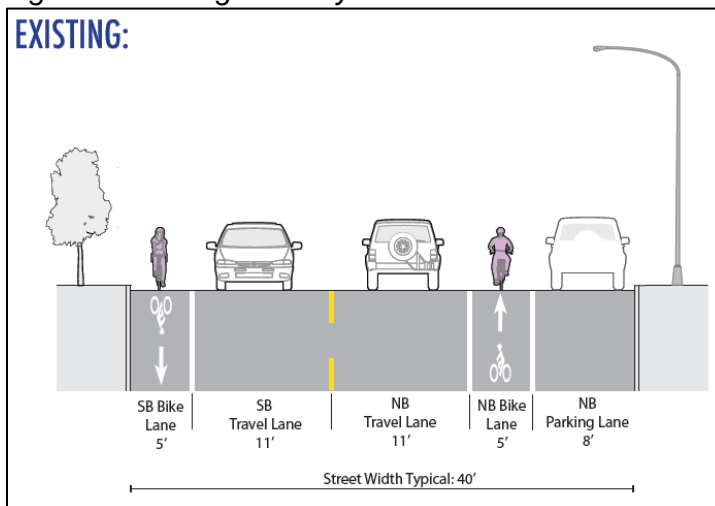
The City of Saint Paul Department of Public Works is planning a mill and overlay of Prior Avenue between University Avenue and Minnehaha Avenue in 2018. To take advantage of the efficiencies associated with implementing and improving bicycle facilities with existing maintenance projects, Public Works is proposing to revise the striping to improve the existing bicycle lanes on Prior Avenue within the mill and overlay project limits. The facilities proposed are consistent with the recommendations of the Saint Paul Bicycle Plan.

II. EXISTING CONDITIONS

Prior Avenue between University Avenue and Minnehaha Avenue is classified as a Collector roadway and a Municipal State Aid (MSA) Route. AADT within the project limits was measured at approximately 4,800 vehicles per day in October 2016. There were no speed studies performed within project limits. The posted speed limit is 30 mph. There is no transit service provided on Prior Avenue, though connections to Routes 16, 67, 87, and the Green Line are available at the southern terminus of the project at University Avenue. There are existing bike lanes on Prior Avenue within the project limits from University Avenue to Minnehaha Avenue. The existing bike lanes extend beyond the mill and overlay project limits from Marshall Avenue to Pierce Butler Route. The Saint Paul Bicycle Plan identifies “in-street separated (bicycle) lanes between within project limits as the recommended facility type.

The roadway is generally 40' wide between Charles Avenue and Minnehaha Avenue, consisting of two 11' travel lanes, two 5' bike lanes, and an 8' parking lane. While this configuration meets current minimum design standards, the mill and overlay is an opportunity to reexamine the cross section to ensure that space is used most efficiently. Staff has received feedback that the existing bicycle lanes are narrow, and that the parking lane has low utilization, prompting Staff to examine alternatives to the current configuration.

Figure 2: Existing roadway cross section

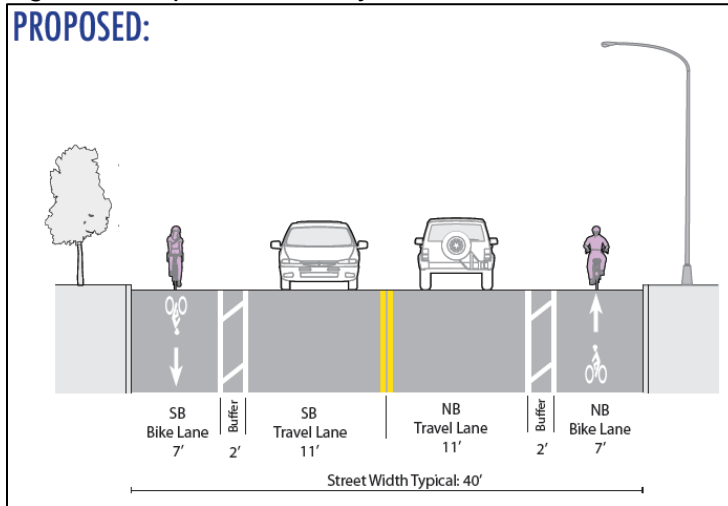


III. PROPOSED IMPROVEMENTS

Within the mill and overlay project limits, the following improvements are recommended:

- Restriping the roadway to add 7' (NB and SB) bicycle lanes
- Installation of 2' buffer zones between the bike lanes and the travel lanes
- Removal of on-street parking on the east side of Prior Avenue between University Avenue and Minnehaha Avenue

Figure 3: Proposed roadway cross section



Changes to On-street Parking

To accommodate the improvement of bicycle facilities, on-street parking removal is proposed for the following locations:

- The east side of Prior Avenue between University Avenue and Minnehaha Avenue

To assess current parking demand, Public works conducted 13 parking occupancy counts at representative time periods along Prior Avenue. Based on the data collected by Public Works, it is determined that on street parking within the project area has a low level of utilization and it is anticipated that parking demand can be accommodated in adjacent off-street parking lots. The parking occupancy data is attached in the **Appendix** of this document.

IV. ALTERNATIVES

The primary alternative considered is replacing the existing striping in the current configuration, which meets current minimum design standards. However, this alternative would not improve safety or comfort for people bicycling on Prior Avenue.

V. POSITIVE BENEFITS

This project will improve the safety and comfort of all users of the roadway. Providing buffered bike lanes will provide additional space for people using bicycles and will enhance Prior Avenue as an important north/south bicycle route. The striped buffers will also allow people driving additional separation from people bicycling, making passing maneuvers easier and safer. Improving the bike lanes on Prior Avenue will improve the safety and comfort for people bicycling on the street, encourage predictable riding behavior. ADA-compliant pedestrian ramps will improve safety for pedestrians at intersections, and all users will benefit from improved pavement quality following the street resurfacing.

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 on-street parking will reduce overall parking capacity and make parking less convenient for stakeholders who regularly park on the east side of Prior Avenue within the project limits.

VII. TIME SCHEDULE

It is anticipated that the bicycle improvements as proposed will be installed concurrent with the planned mill and overlay on Prior Avenue, scheduled for Fall 2018.

VIII. COST ESTIMATE

Construction: \$15,000-20,000*

* This is an estimate developed in advance of a final signing and striping plan.

I. ESTIMATED FINANCING

Signing and striping for bike lanes on Prior Avenue will be funded through the Street Maintenance Service Program.

II. SOURCE OF ADDITIONAL INFORMATION

For additional information, please contact:

Reuben Collins, Transportation Planning and Safety Division
Email: Reuben.Collins@ci.stpaul.mn.us
Phone: 651-266-6059

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

Attached:

1. Prior Avenue Parking Occupancy Study

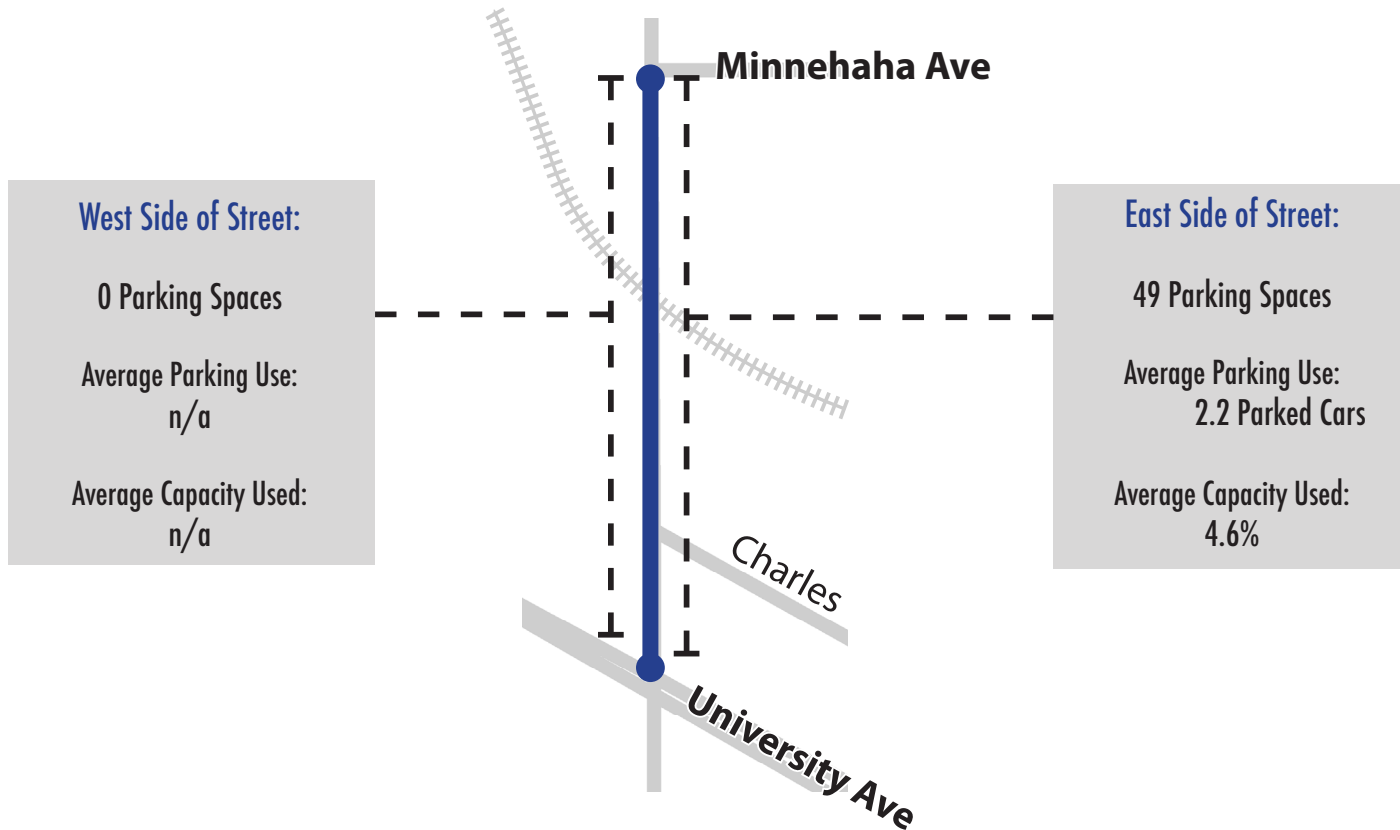
PRIOR AVENUE PARKING SUMMARY

Prior Avenue Parking Count Summary

Boundaries: Minnehaha (north) to University (south)

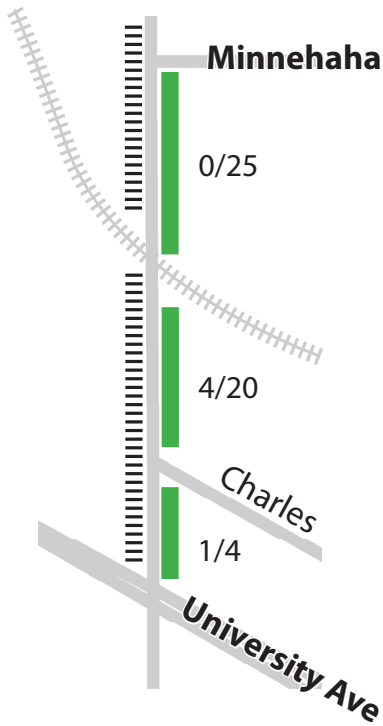
Legal Parking Capacity: 49

Average Parking Utilization (13 Counts): 2.2 Parked Cars (4.6% of total parking capacity used)

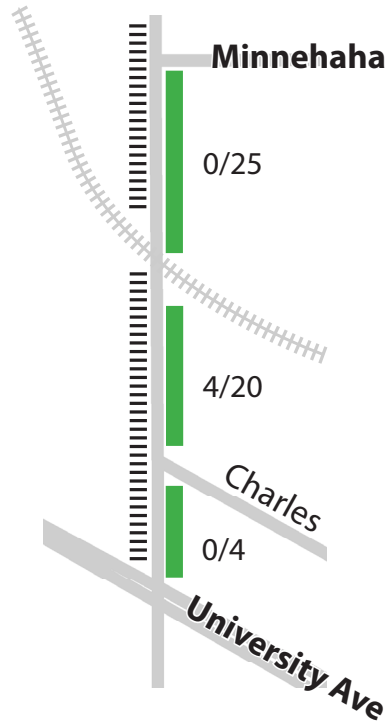


Prior Avenue Parking Counts Weekday Midday (11 AM - 1 PM)

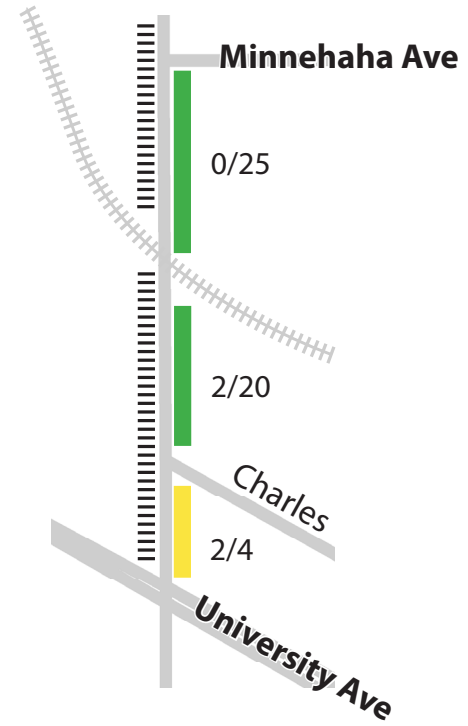
Date: Wednesday, January 10th
Time Period: 11 AM - 1 PM



Date: Friday, February 2nd
Time Period: 11 AM - 1 PM



Date: Tuesday, February 6th
Time Period: 11 AM - 1 PM



Legend

Observed Parking Utilization

Signed "No Parking"

0 - 49%

50 - 74%

75 - 100+%

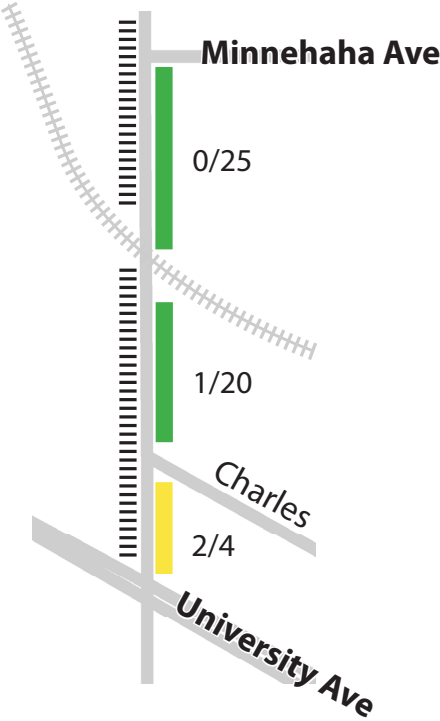
Example: 8/11 =

Observed Parked Cars /
Estimated Legal Parking Capacity

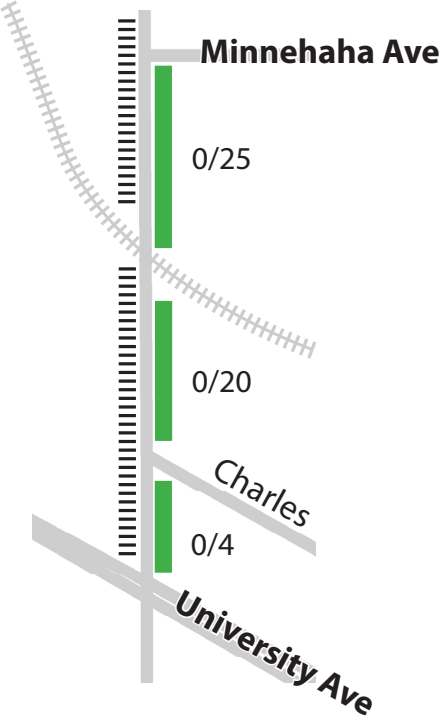
(Observed parking utilization may
exceed estimated legal capacity)

Prior Avenue Parking Counts Weekday Evening (6 PM - 8 PM)

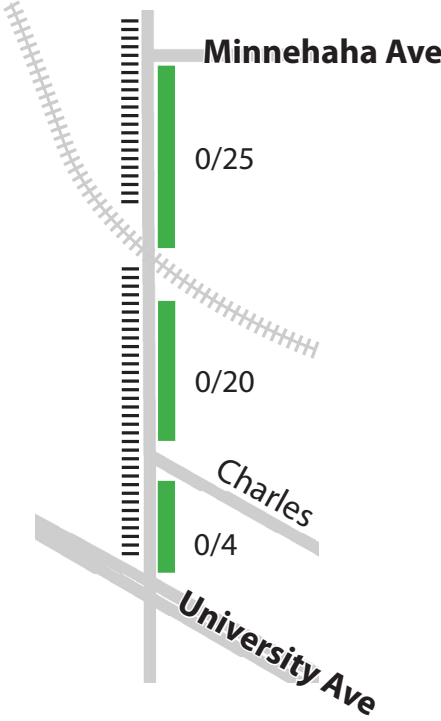
Date: Wednesday, January 3rd
Time Period: 6 PM - 8 PM



Date: Thursday, February 1st
Time Period: 6 PM - 8 PM



Date: Friday, July 13th
Time Period: 6 PM - 8 PM



Legend

Observed Parking Utilization

- Signed "No Parking"
- █ 0 - 49%
- █ 50 - 74%
- █ 75 - 100+%

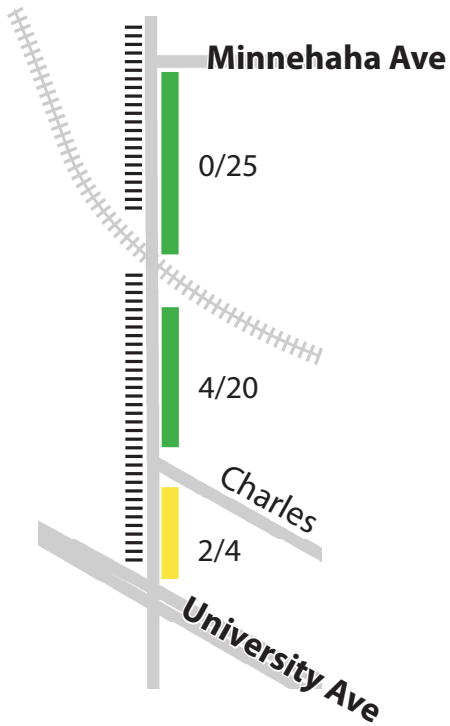
Example: 8/11 =

Observed Parked Cars /
Estimated Legal Parking Capacity

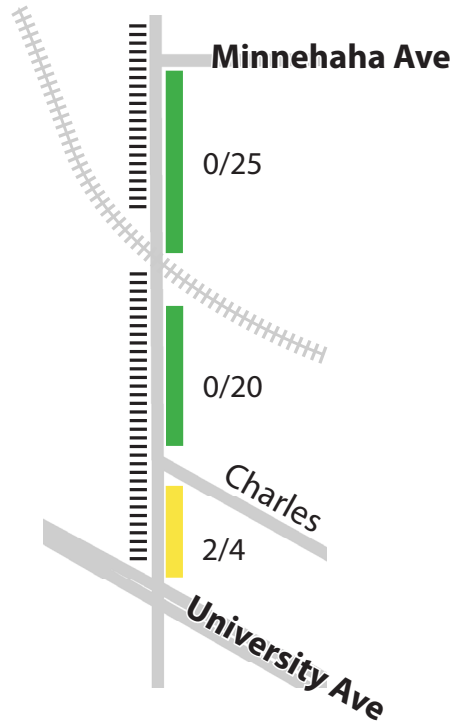
(Observed parking utilization may
exceed estimated legal capacity)

Prior Avenue Parking Counts Saturday Midday (11 AM - 1 PM)

Date: Saturday, March 17th
Time Period: 11 AM - 1 PM



Date: Saturday, June 23rd
Time Period: 11 AM - 1 PM



Legend

Observed Parking Utilization

Signed "No Parking"

0 - 49%

50 - 74%

75 - 100+%

Example: 8/11 =

Observed Parked Cars /
Estimated Legal Parking Capacity

(Observed parking utilization may
exceed estimated legal capacity)

