



MEMORANDUM

Madison Corridor BRT Study – Existing Conditions Memo #2: Multimodal Conditions

Prepared For: City of Seattle

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Date: December 12, 2014

This memo provides a brief overview of pedestrian and bicycle conditions in the Madison BRT corridor, starting with the planning and policy context and proceeding to a description of existing and planned physical conditions and facilities, then a review of available user counts.

1 POLICY BACKGROUND

Seattle Complete Streets Policy

The City of Seattle passed Ordinance 122386 in 2007, which directs SDOT to “design streets for pedestrians, bicyclists, transit riders, and persons of all abilities, while promoting safe operation for all users, including freight.” As part of the implementation of this measure, SDOT developed a complete streets checklist which asks project managers to evaluate existing conditions as well as relevant plans or recommendations for all modes within the project study area, increasing opportunities to integrate recommended actions from other modal plans when nearby projects take place. A Complete Streets checklist will be prepared as part of the Madison Corridor BRT Study.

Bicycle Master Plan and Pedestrian Master Plan

The primary planning documents for bicycle and pedestrian infrastructure in Seattle are the Bicycle Master Plan (BMP) and Pedestrian Master Plan (PMP). The BMP, adopted in April 2014, articulates a vision and goals for bicycling in the city and maps out a citywide network of routes with accompanying local connectors. It also identifies facility types ranging from off-street trails to cycle tracks (protected bicycle lanes) and neighborhood greenways. The Seattle Pedestrian Master Plan, adopted in 2008, includes policies, programs, design criteria, and projects to further pedestrian safety, comfort, and access. Based on data assessment, the plan identifies “High Priority along the Roadway” and “High Priority Crossing the Roadway” locations for improvement.

2 PEDESTRIAN AND BICYCLE INFRASTRUCTURE

Pedestrian Conditions

Especially in its western segments, steep grades (Figure 2-1) are a defining characteristic of the corridor and a major challenge for both bicyclists and pedestrians, particularly those with limited mobility. The elevation at Madison Street and Western Avenue is 16 feet above sea level; this climbs to around 350 feet on the summit of First Hill just west of Madison and Broadway, then dips briefly before reaching 423 feet around 17th Avenue and East Madison Street. Relatively steep grades are also present in the eastern end of the corridor, including beyond 23rd Avenue to Martin Luther King Jr. Way. Between Western and Boylston Avenue, one block west of Broadway, the average grade including

intersections is approximately 7.4 percent, and grades on several blocks exceed this figure.

Figure 2-1 Madison Grades



Sidewalk conditions within the corridor are variable, with widths ranging from 6 to 12 feet and overall quality ranging from relatively high to very poor.

Intersection conditions are similarly variable, with irregularly configured, potentially confusing and time-consuming intersections to the east of Broadway. A number of intersections throughout the corridor are identified as high priorities for improvement in the PMP, including Madison at Post Street, Second Avenue, Fourth Avenue, Seventh Avenue, Eighth Avenue, Ninth Avenue, Boren Avenue, Broadway Court, 10th Avenue, 11th Avenue, 12th Avenue, 19th Avenue, and 23rd Avenue. These locations were identified on the basis of pedestrian demand and opportunities to improve pedestrian conditions through the addition and improvement of sidewalks, curb ramps and crosswalks.

Existing and Planned Bicycle Facilities

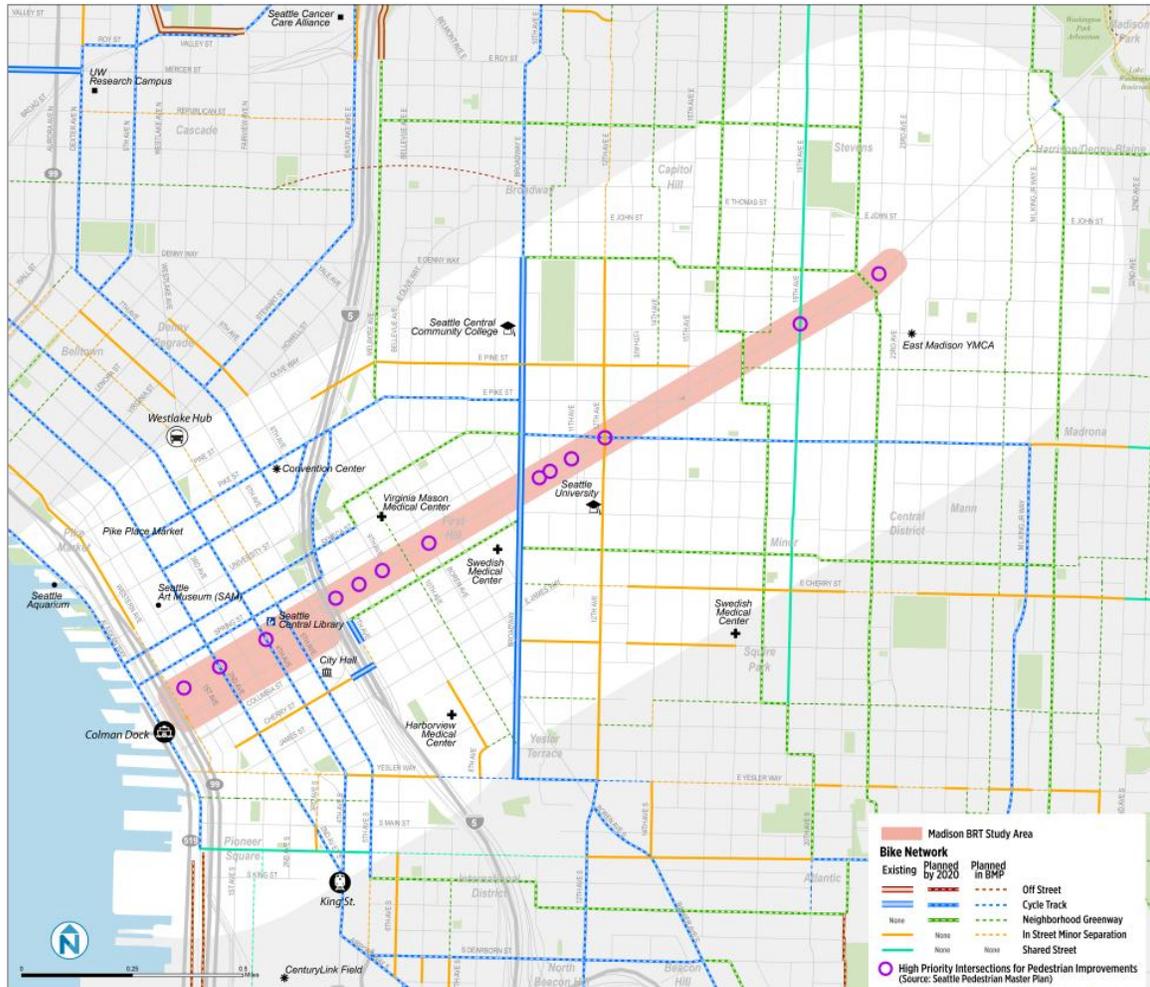
There is currently no direct bicycle route serving the Madison corridor. Figure 2-2 shows existing facilities as well as those planned for the future. The only route with continuous bike lanes between Downtown and Capitol Hill is on Pine Street from Eighth to 15th Avenues. Seneca has sharrows from First Avenue to Summit, at which point a bicycle lane begins and continues east on Union to 18th Avenue. East of 18th, the route includes portions with sharrows and portions with bike lanes. Spring Street alternates between sharrows and bike lanes between Alaskan Way and Boylston. To the south of Madison Street, there is a bicycle lane on Cherry Street passing under I-5 in a cycle track, where the route continues north with a block of sharrows and a block of cycle track on Seventh Avenue; from there, a sharrow continues to Broadway. East-west, there are sharrows on Western Avenue, Ninth Avenue east of Seneca, Boylston from Seneca to Marion, 14th Avenue between Pine and Union, and on 19th Avenue. East-west bicycle lanes

are located on Fourth Avenue south of Spring, and on 12th Avenue, with cycle tracks on Second Avenue Downtown and on Broadway.

The City of Seattle Bicycle Master Plan (BMP), adopted in 2014, identifies a 20-year vision for investment in new bicycle facilities in Seattle. The BMP does not include a bicycle facility on Madison Street. Instead, the plan recommends cycle tracks on Spring and Seneca in Downtown Seattle, with cycle tracks continuing on Seneca east of I-5 until Ninth Avenue. At Ninth Avenue, the cycle tracks would end and a neighborhood greenway on University would connect east-west to Broadway, at which point a cycle track would continue on Union to MLK Jr. Way. An additional route to the south of Madison is planned for a lower level of investment, but including existing sharrows on Cherry from 1st to I-5, with a block of cycle track crossing over I-5, a planned block of sharrows or minor separation on Seventh from Cherry to Columbia, and a block of cycle track from Columbia to Marion. From Marion, a planned greenway would utilize Marion to Broadway and would then shift to Columbia east of Broadway.

Several existing and planned major bicycle facilities cross or would cross Madison, including existing cycle tracks on Second Avenue and Broadway and planned cycle tracks on Fourth and Fifth avenues. Neighborhood greenways that are part of the “citywide network” are planned to cross Madison Street at 17th Avenue and at 22nd Avenue. There is an existing “local connector” neighborhood greenway on 19th Avenue. Additionally, there is an existing local connector facility with minor separation (a standard bike lane) on 12th Avenue, which crosses through the intersection of East Madison Street, East Union Street, and 12th. All of the planned projects mentioned in this section are included in the City’s 2015-2019 Implementation Plan.

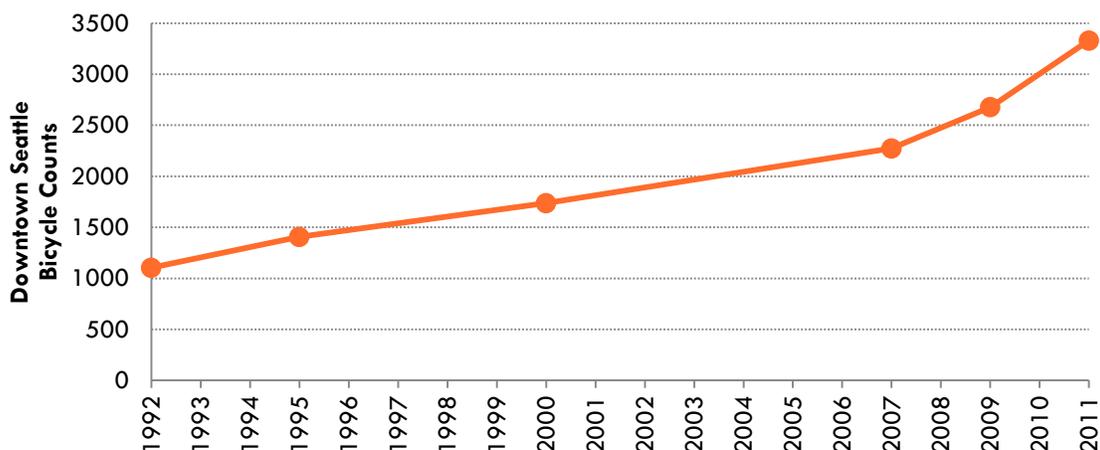
Figure 2-2 Planned and Existing Bicycle Network



3 BICYCLE AND PEDESTRIAN VOLUMES

As Figure 3-1 based on SDOT data shows, rates of bicycling in Downtown Seattle have been steadily increasing since 1992. While the area in which these counts were taken is limited, evidence suggests it may be indicative of a larger trend toward increased rates of cycling throughout the city.

Figure 3-1 Downtown Seattle Historic Bicycle Counts



SDOT also collects quarterly bicycle and pedestrian counts at three locations on or very near the Madison corridor:

- Alaskan Way and Colman Dock
- Sixth Avenue and Madison Street
- 12th Avenue and Madison Street

Figure 3-2 on the following page shows bicycle counts at these locations for the most recent six quarters for which data were available. The count data shown represent bicycles counted at the intersection on a weekday between 5 and 6 p.m. Of the three count locations, bicycle volumes are generally highest at 12th and Madison with peak-hour counts of up to 300 cyclists. Volumes at 12th and at Colman Dock fluctuate significantly by season, with lows of 75-125 cyclists per hour in the fall and winter, and volumes over 200 in most summer counts. Volumes at Sixth and Madison are lower — around 50 cyclists per hour, with little fluctuation by season.

Figure 3-3 shows pedestrian counts for the same time frame in the afternoon peak hour. Pedestrian volumes are much higher than bicycle volumes and appear to be less influenced by seasonal fluctuations. At 12th and Madison, pedestrian volumes generally range from 1,500 to 2,000. As with bicycle volumes, pedestrian volumes are both lowest and most consistent at Sixth and Madison Street, with peak-hour volumes ranging from 500 to 1,000. Volumes at Colman

Dock range from a high of nearly 1,500 in summer 2013 to a low of around 100 in May 2014, a decline that can largely be attributed to construction in the area.

Figure 3-2 Bicycle Counts, Jan 2013-May 2014

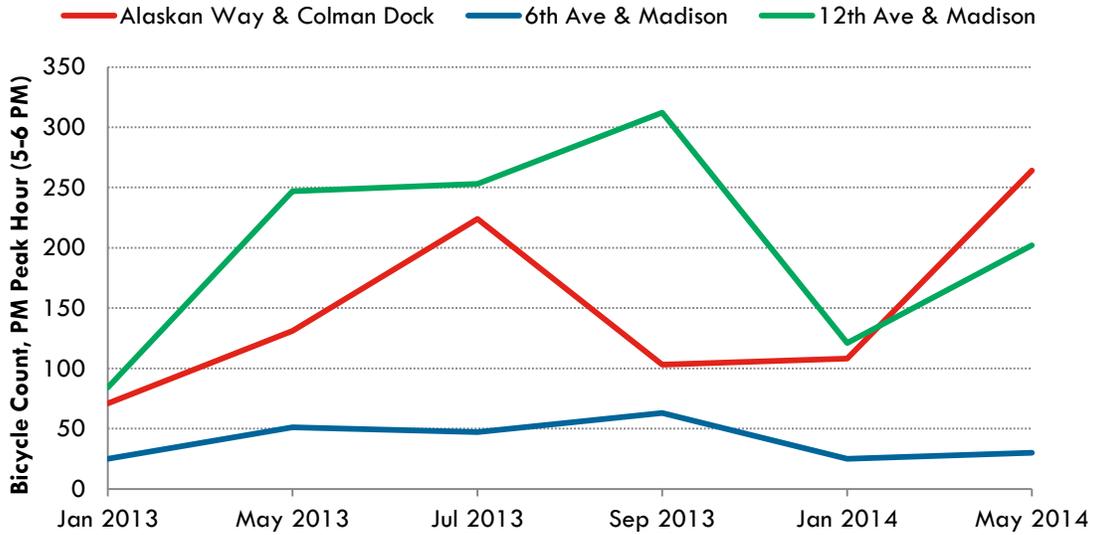


Figure 3-3 Pedestrian Counts, Jan 2013-May 2014

