

Figure 4-19 Planned Improvements Near the MBTA Station's Southeast Entrance and in the Area East of the Station

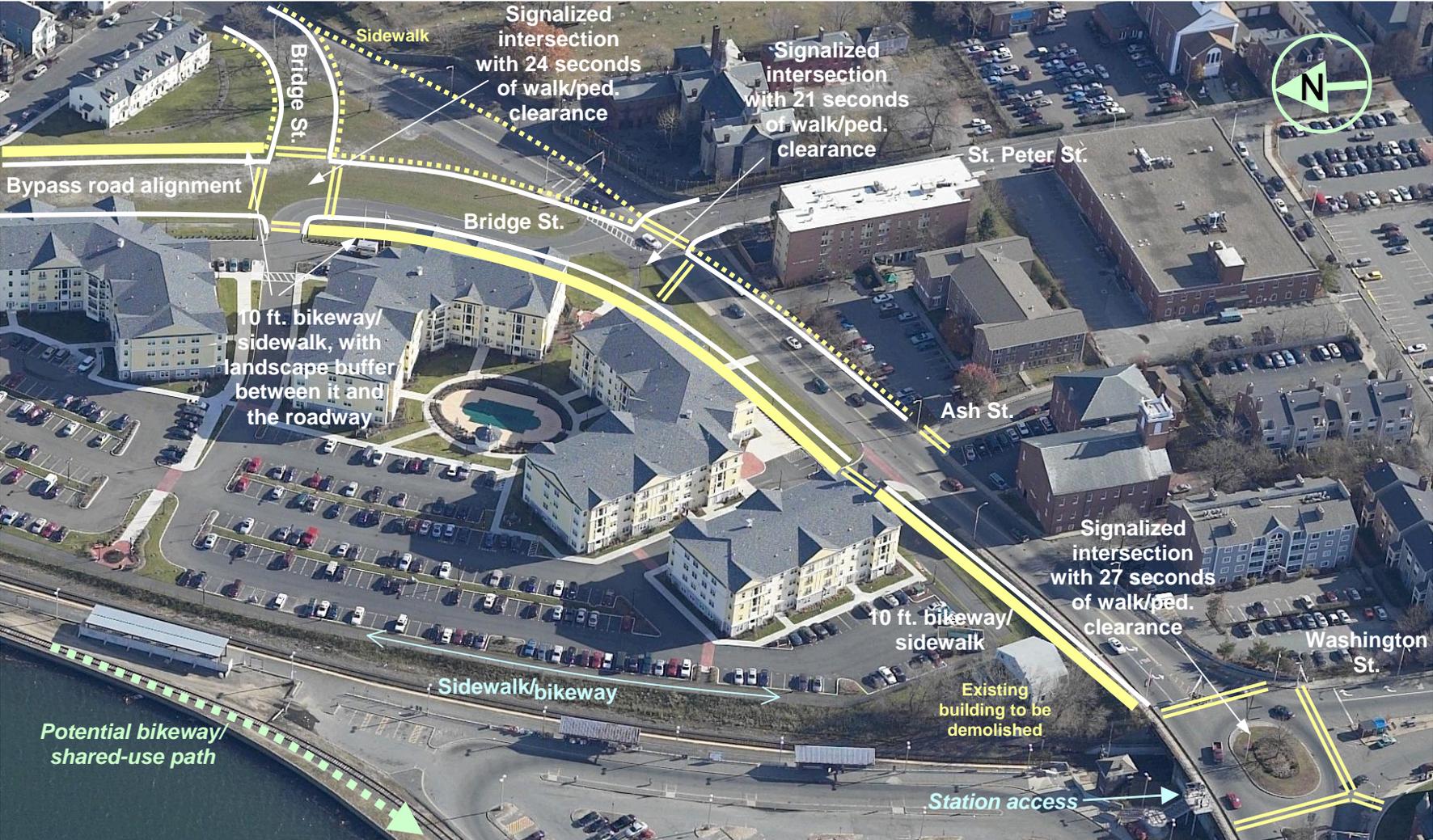


Photo: Bridge Street and area east of the MBTA station, view facing south.

plan will include an actuated pedestrian-only phase with 24 seconds of walk and pedestrian clearance time.

- The intersection with St. Peter Street will be signalized, with crosswalks across two of the three approaches. The signal timing plan will include an actuated, pedestrian-only phase with 21 seconds of walk and pedestrian clearance time.
- The intersection of Ash Street at Bridge Street will remain unsignalized. No crosswalks are planned across Bridge Street here.
- East of Ash Street, a new, 10-foot-wide sidewalk (to also be used as a bikeway) with an 8-foot planted buffer will be built on the north side; an 8-foot-wide sidewalk with no buffer will be built on the south side. Between Washington Street and Ash Street, the north-side sidewalk will also be 10 feet wide but have no buffer.
- North of the new Bridge Street intersection at the bypass road, a new, 10-foot-wide sidewalk/bikeway will be constructed on the east side and will include a landscaped buffer between it and the roadway.
- Washington Street at Bridge Street will be redesigned, becoming a signalized T-intersection with traffic signal control.
- Ten-foot-wide crosswalks will be provided at the redesigned Washington/Bridge intersection in all directions. The southwest crosswalk will have a traffic island, providing pedestrians with a refuge from right-turning vehicles. The signal timing plan will include an actuated pedestrian-only phase with 27 seconds of walk and clearance time.
- Both crosswalks west of Washington Street will be eliminated.

Proposed Improvements

Due to the pending construction of the Bridge Street bypass road, no short-term improvements are recommended. As described above, this project will enhance pedestrian and bicyclist access to the station from the north and east. The new roadway will improve the safety of crossing Bridge Street, with adequate pedestrian crossing phases, marked crosswalks, and wheelchair-ramp curb cuts. Also, the project appears to create a more pleasant walking environment along Bridge Street.

In addition to the improvements from the Bridge Street reconstruction, pedestrian and bicyclist access to the station can be bettered by improving the access from the residential property located across the railroad tracks from the station. This can be accomplished in two ways. One is to connect the existing sidewalk/bikeway, which runs along the property's border on the east side of the railroad tracks, to the sidewalk on the north side of Bridge Street, once the existing abandoned building is removed due to the bypass road project. The connection could be a sloping sidewalk or a staircase leading up to the higher grade on Bridge Street.

The other idea is to build a pedestrian/bicyclist bridge over the railroad tracks, at the property's central sidewalk terminus, connecting the development's pathway to the station. The bridge would also connect bicyclists and pedestrians to the planned intersection of Bridge Street with the bypass road, where a new 10-foot bikeway will connect to points north of the area. Further development of this idea will require working closely and cooperatively with the property owner and the MBTA.

4.4.2 Access to the Southwest Station Entrance, Approaching from Points along North Street (South) and Bridge Street (West)

It is assumed that pedestrians using this entrance are mainly from the areas west and south of the station. The locations under review include the interchange of North Street (Route 114) at Bridge Street (Route 107), the intersection of North Street at Federal Street and Lynde Street, and Bridge Street west of North Street. The existing conditions, planned construction activities, and proposed improvements for each of the locations are discussed separately in the following sections.

Location 1: North Street at Bridge Street Interchange

Existing Conditions

- This is a grade-separated interchange. North Street crosses over Bridge Street and the North River. Sidewalks are provided on both sides of the road. However, the sidewalks are not buffered from the road, which has fast-moving traffic.
- A sidewalk cuts through the southwest quadrant inside the loop ramp from North Street southbound to Bridge Street eastbound. A crosswalk is provided at Bridge Street, connecting the sidewalk to an unpaved path on the north side of the street and to a path under the overpass. A small sign is posted at this crosswalk for the eastbound Bridge Street traffic indicating that vehicles must stop for pedestrians at the crosswalk.
- At the other end of the sidewalk that cuts through the southwest quadrant is an unpaved pathway that leads across the two loop ramps to and from Bridge Street. This is an unsafe location to cross, as it is at the middle of the ramps, where vehicles are in the process of speeding up after entering the ramps. Slightly east of the unpaved pathway, along North Street, is a marked crosswalk that goes across the two ramps. The pedestrian counts indicate that nearly 60 pedestrians crossed the two ramps to reach Bridge Street during the peak morning period (see Figure 4-18). Most of them did not use the crosswalk along North Street, but crossed the two ramps via the unpaved path.
- The southwest entrance to the station is located under the interchange's overpass bridges. Sidewalks are provided on both sides of Bridge Street to the southwest station entrance. However, there is no crosswalk to cross Bridge Street near the entrance. In addition, a heavily used but unpaved pathway exists along the railroad line under the overpass. Over 130 pedestrians passed through this area during the peak morning period. The vast majority of them used the unpaved pathway.

Planned Construction Activities

- According to the second phase of the Bridge Street improvement design plans,⁵ the North Street ramps at Bridge Street will be signalized and Bridge Street between the MBTA station driveway and Flint Street will be widened from two to four lanes. The signalization of the intersection of Bridge Street at the North Street northbound on- and off-ramps will provide a new crosswalk for pedestrians to cross Bridge Street. The Bridge Street

⁵ *Bridge Street (Route 107) 25% Design Plans (draft)*, prepared by Rizzo Associates for the Massachusetts Highway Department, September 2003.

widening will relocate the existing north-side sidewalk further north to where the unpaved pathway is.

- The expansion of the state court facilities on Federal Street may involve reconfiguration of the North Street northbound on- and off-ramps area. Currently, the consultant (Edwards and Kelcey, Inc.) is working with the Massachusetts Division of Capital Asset Management and the MBTA to develop alternatives for the reconfiguration.

Proposed Improvements (most are shown in Figure 4-20)

- Extend the curbs of the sidewalk on both sides of North Street in the vicinity of the on- and off-ramps to Bridge Street. Landscape the extended curb to create a buffer between the sidewalk and the road.
- Consolidate the two desired pathways across the North Street southbound ramps: (1) traveling along North Street and (2) traveling across the interchange quadrant to Bridge Street. Improvements should include the following:
 - Realign the existing crosswalk slightly west.
 - Realign the existing sidewalk across the interchange quadrant further east, leading pedestrians toward the relocated crosswalk.
 - Create a landscape barrier in the ramp median and along the ramp loop to prevent pedestrians from crossing the ramps via the unpaved pathway.
 - Add a pedestrian crossing sign for the southbound North Street traffic turning right onto the Bridge Street ramp.
- Install pedestrian crossing signs on both directions approaching the existing Bridge Street crosswalk.

Location 2: North Street at Federal Street and Lynde Street

Existing Conditions

- Federal Street is one-way (westbound) on both sides of North Street. It is not continuous across North Street, as the traffic flow is broken by a median.
- Lynde Street is one-way (westbound) to North Street.
- A pedestrian-activated traffic signal is installed on North Street between Federal Street and Lynde Street. The signal lacks a pedestrian crossing signal head on both sides of North Street.
- The sidewalks along North Street are not buffer-separated from the busy North Street traffic.
- About 50 pedestrians crossed North Street in this vicinity during the morning peak period. Over half of them used the signalized crosswalk, activating the pedestrian crossing signal 12 times during the morning peak period.

Figure 4-20 Proposed Improvements for the Area Near the MBTA Station's Southwest Entrance

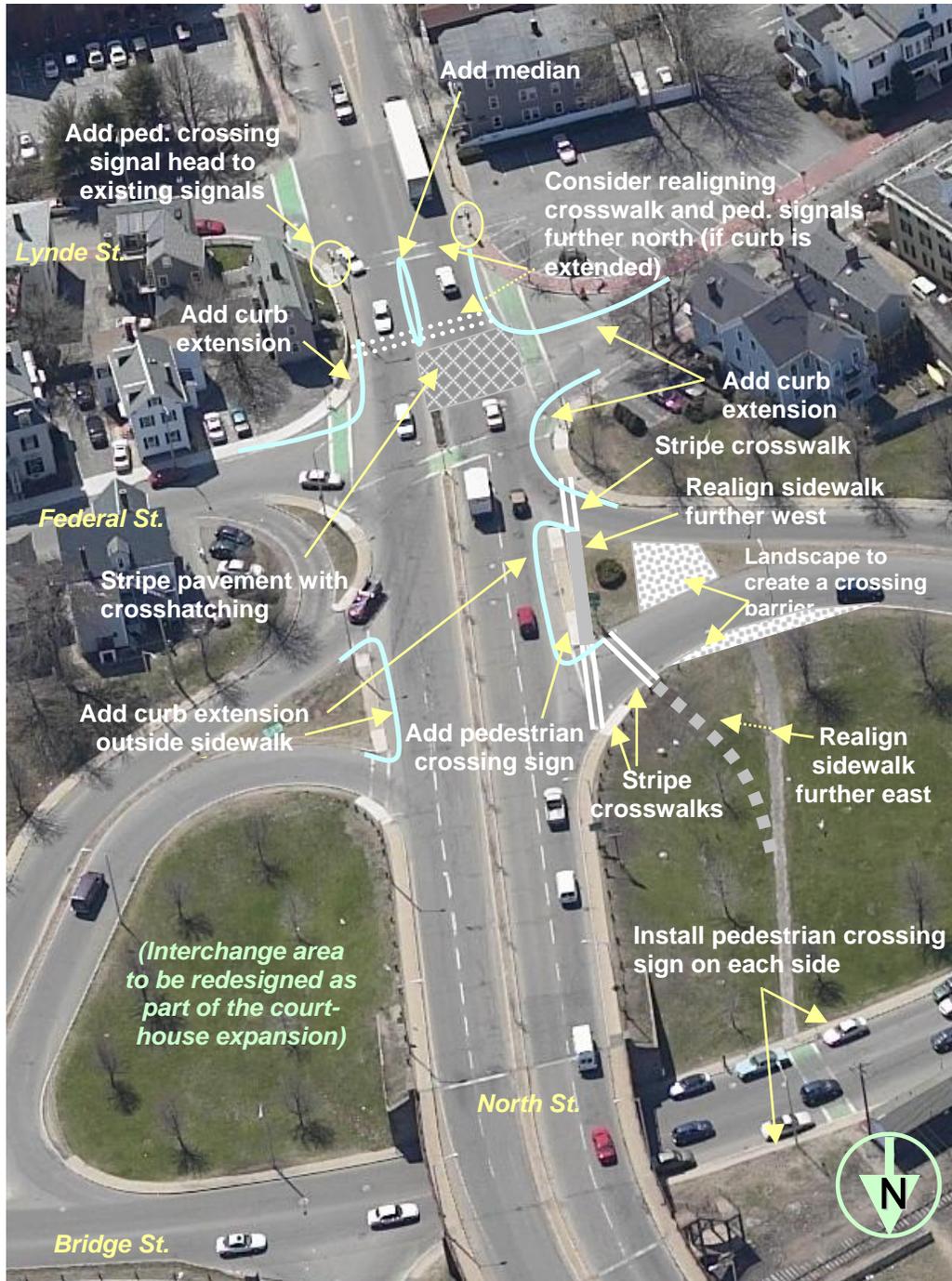


Photo: North Street at Bridge Street and Federal Street, view facing south

Planned Construction Activities

- According to the consultant for the North Street (Route 114) reconstruction project,⁶ the traffic signal for pedestrian crossings at Federal Street will be updated with pedestrian crossing signal heads as an additional improvement in the project.

Proposed Improvements (most are shown in Figure 4-20)

- Add curb extensions to both corners of Federal Street west of North Street. The narrowed street entrance will slow down turning vehicles and reduce the exposure of pedestrians to turning vehicles.
- Add a curb extension to the south corner of Federal Street east of North Street.
- If the curb extensions on Federal Street are added, consider relocating the pedestrian crossing signal and crosswalk across North Street further north, closer to Federal Street.
- Install traffic signs for the one-way streets: (1) add a “one-way” sign to the entrance of Federal Street; (2) add “no right turn” signs on the northbound side of North Street at Lynde Street and Federal Street.
- Add a raised median on North Street between Federal Street and Lynde Street. This feature would slow down vehicles at this point, provide a midcrossing pedestrian refuge, and control turning movements from/to the side streets. The median should be made clearly visible using signs, curb paint, and landscaping. The median should still allow for northbound North Street traffic to make left turns onto Federal Street; this might require shortening the existing median located between the Federal Street approaches.
- Stripe the pavement at the Federal Street intersection with crosshatching to discourage the North Street southbound traffic from blocking the intersection.

Location 3: Bridge Street West of North Street

Existing Conditions

Bridge Street in this section is a two-lane road with a sidewalk on the south side. On the north side, a narrow area between the street and the tracks of a seldom-used freight railroad (Guilford spur line) is usually occupied by parked vehicles during daytime. Presumably, most of the parked vehicles belong to users of MBTA commuter rail. North of the railroad is a strip of open space (Leslie’s Retreat Park) along the North River Canal.

Planned Construction Activities

- According to the second phase of the Bridge Street improvement project, the roadway between North Street and Flint Street is to be reconstructed to have two lanes in each direction. Under the plans, the current perpendicular parking along the north side will be eliminated.

⁶ *Functional Design Report for North Street (Route 114), Traffic and Roadway Improvements*, prepared by Earth Tech and Stokes & Associates for the City of Salem, December 2003.

- The railroad will be realigned farther toward the North River Canal, and some of the tracks will be eliminated. The railroad will continue to have an alignment under the North Street overpass.
- The North Street ramps at Bridge Street will be signalized, with pedestrian crosswalks in all three directions.

Proposed Improvements

Additional pedestrian facilities should be considered in the design plan of the Bridge Street improvement project:

- Create a buffer (landscaped, brick, or decorative bollards) between the road and the existing south-side sidewalk.
- Construct a sidewalk on the north side of Bridge Street.

4.4.3 Access to the Station from Points Northwest

The area northwest of the station includes two major locations: (1) North Street across the North River and Bridge Street, and (2) North Street at Franklin Street. Figure 4-21 is an aerial view of the area with proposed improvements to access to the station.

Location 1: North River Crossing along North Street

Existing Conditions

An informal path, frequently used by pedestrians to access the station, exists on the property along the east side of North Street. The pedestrian counts indicate that nearly 90 pedestrians approached the station via this path during the morning peak period (see Figure 4-18). Sidewalks are provided on both sides of North Street and its bridge. The west-side sidewalk provides access to a staircase from the top of the bridge to an open area at street level near the unpaved pathway that reaches the southwest station entrance. Only three pedestrians used the staircase to reach the station during the morning peak period.

Planned Construction Activities

The North Street (Route 114) reconstruction project will resurface the North Street section in the area, with no major roadway changes.

Proposed Improvements

- Create a well-lit, paved sidewalk between Franklin Street and the station, using the existing desire lines.
- Create a well-lit, paved sidewalk under the North Street overpass bridge. This passageway will provide a connection for pedestrians traveling between the station and Bridge Street west. In the future, this passageway could also serve bicyclists riding along the south side of North River.

Figure 4-21 Proposed Improvements to Station Access from the Northwest

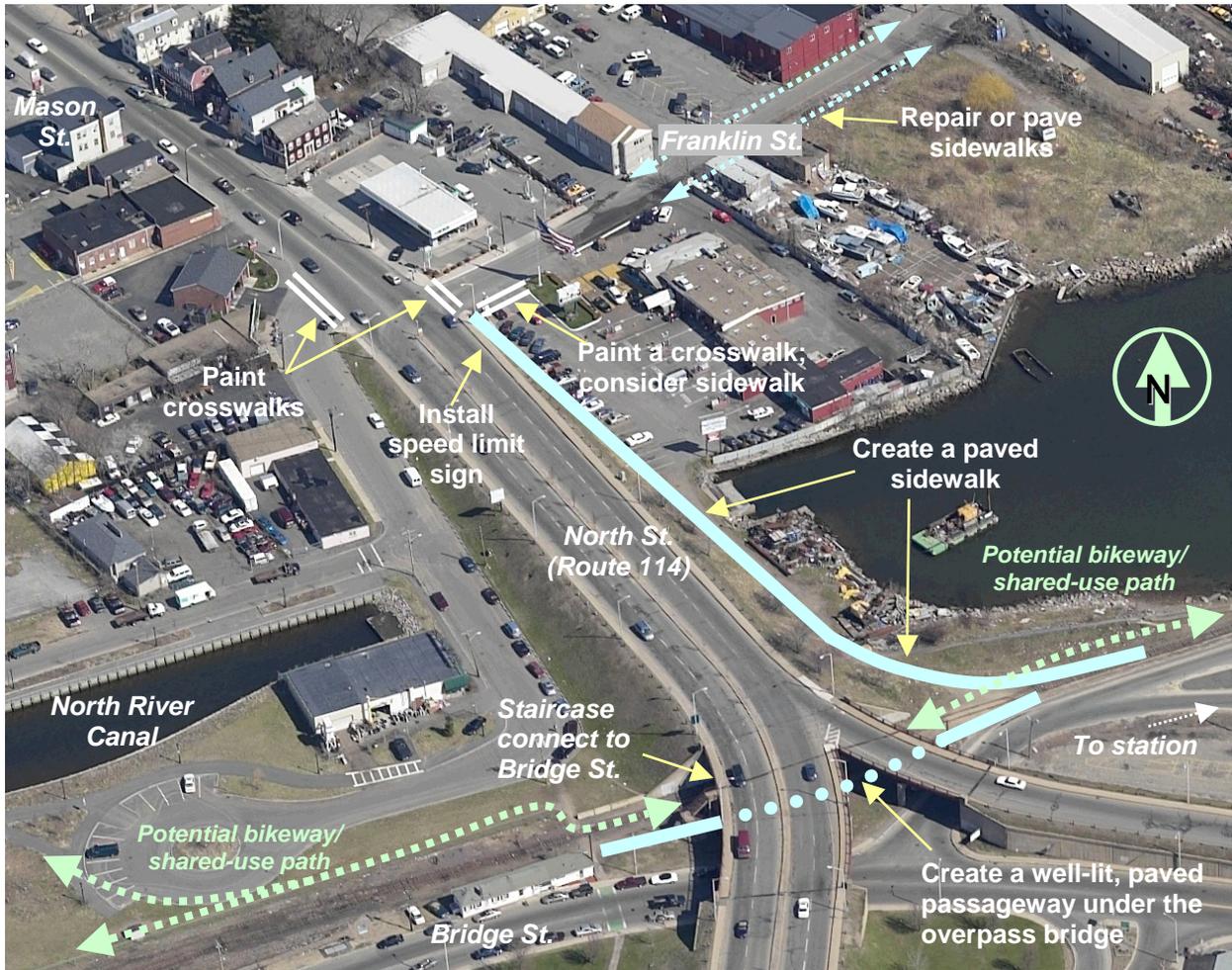


Photo: North Street (Route 114) between Mason Street and main station entrance off Bridge Street, view facing north

Location 2: North Street at Franklin Street

Existing Conditions

- The intersection of North Street at Franklin Street is currently unsignalized. Crosswalks are not provided. Several driveways to local businesses (such as a gas station and a car wash) are located near this intersection.
- At this location, North Street abruptly transitions from a four-lane, divided road with no on-street parking as it crosses the North River to a two-lane road with on-street parking and closely spaced driveways. Sidewalks are provided on both sides of the roadway.

Planned Construction Activities

At the nearby intersection of North Street at Mason Street, the North Street (Route 114) reconstruction project will convert the existing pedestrian-actuated signal to a full-function traffic signal with pedestrian signal heads and push buttons.

Proposed Improvements

- Install a speed limit sign on North Street northbound just before Franklin Street. Drivers should be made aware that the roadway transitions to a lower speed zone.
- Stripe pedestrian crosswalks on both sides of North Street, particularly on the east side along the North Street northbound lanes across Franklin Street.
- Stripe a pedestrian crosswalk across the business driveway on the south side of Franklin Street just off of North Street. Consider extending the sidewalk from North Street along Franklin Street, shifting the business driveway further back from North Street.
- Repair or construct sidewalks on both sides of Franklin Street.