walkBoston

Acushnet Avenue Walk Assessment

New Bedford, MA

November 17, 2016

Sponsored by the Massachusetts Department of Transportation Bicycle and Pedestrian Safety Awareness and Enforcement Program

MAKING MASSACHUSETTS MORE WALKABLE

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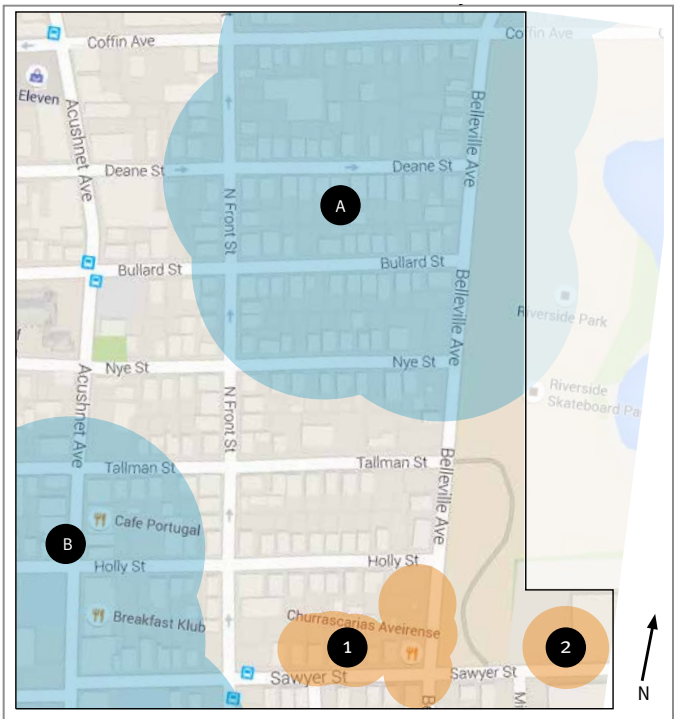
Acushnet Avenue Walk Assessment

The Acushnet Avenue neighborhood walk assessment supplements the great efforts of the Love the Ave initiative, facilitated by the Massachusetts Smart Growth Alliance, and the recent City of New Bedford's road safety improvements in the neighborhood. WalkBoston connected with the Love the Ave initiative after a MassDOT Bicycle and Pedestrian Safety Enforcement and Awareness Program follow-up meeting. The Community Economic Development Center (CEDC), a community stakeholder and member of the Love the Ave initiative, hosted a meeting to discuss the value of a walk assessment to increase pedestrian safety in the neighborhood, particularly along Belleville Avenue, which separates residential districts from Riverside Park.

The City of New Bedford participates in the Massachusetts Department of Transportation (MassDOT) Bicycle and Pedestrian Safety Enforcement and Awareness Program which funds walk assessments to determine if there is a built environment reason for why crashes involving pedestrians occur. Two Highway Safety Improvement Plan (HSIP) pedestrian crash clusters occur along the walk route:

A. Belleville Avenue between Coffin Avenue and Nye Street
B. Acushnet Avenue between Sawyer Street and Tallman Street

These crash clusters indicate that these locations are within the top 5 percent of the intersections in the region with the highest number of crashes involving pedestrians.



Pedestrian Crash Cluster A (2004-2013)	
Crash Count	22
Fatal	0
Injury	16
Property Damage	6

HSIP Crash Cluster 1 (2011-2013)	
Crash Count	28
Fatal	0
Injury	9
Property Damage	19

Pedestrian Crash Cluster B (2004-2013)	
Crash Count	27
Fatal	0
Injury	18
Property Damage	9

HSIP Crash Cluster 2 (2011-2013)	
Crash Count	21
Fatal	0
Injury	6
Property Damage	15

Pedestrian Crash Cluster *- This layer shows the top 5% of pedestrian crash clusters for each Regional Planning Agency between the years of 2004-2013.*

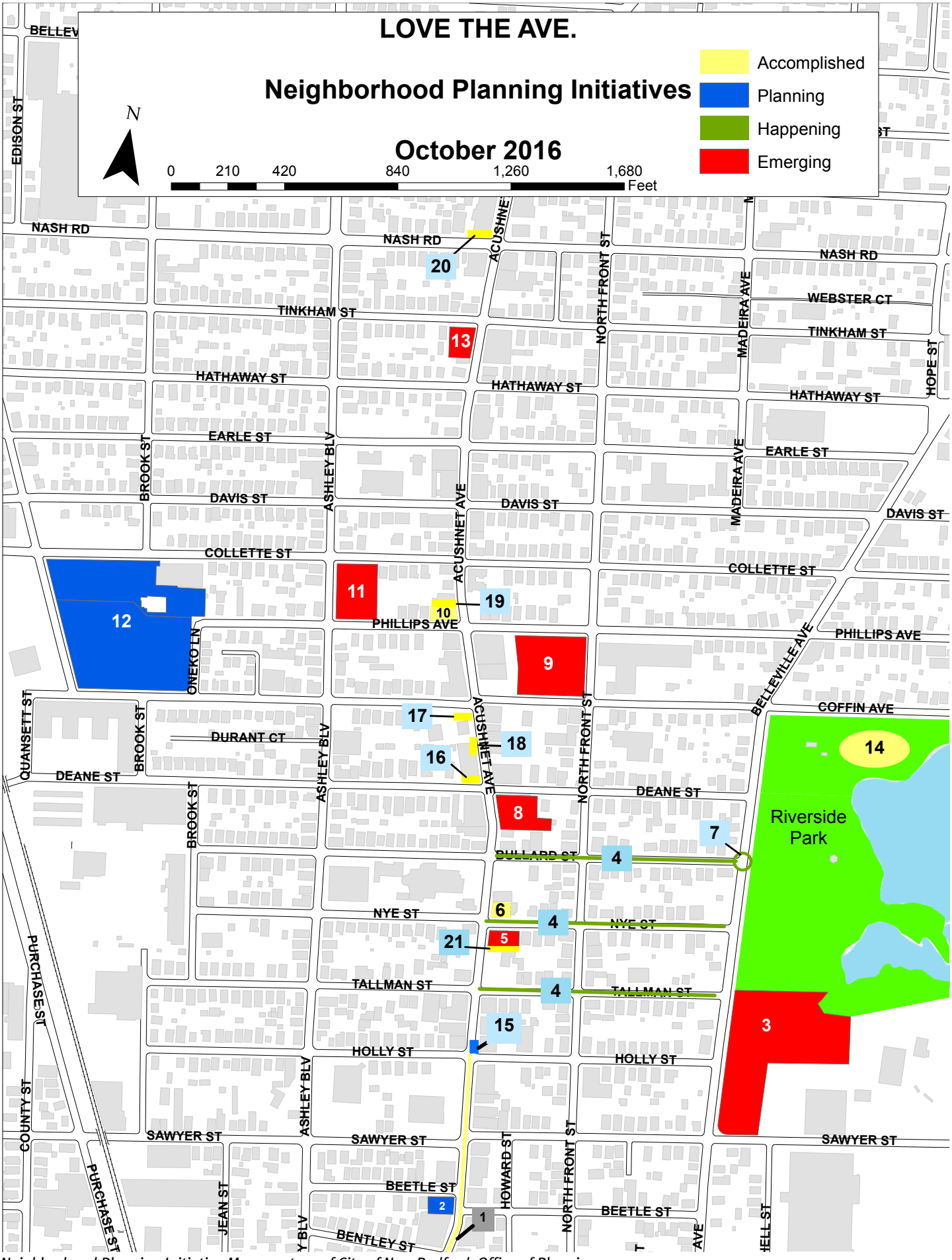
HSIP Crash Cluster *- An HSIP-eligible location is a crash cluster that ranks within the top 5% of each Regioanl Planning Agency based on a combination of factors including crash incidence and severity*

Love the Ave Initiative

Love the Ave (formerly called the Acushnet Avenue Steering Committee) is a collective action network that is implementing cost-effective strategies to achieve the long-term transformation of the Acushnet Avenue Corridor. The initiative brings together businesses, property owners, residents, and community groups to compliment the City's on-going planning and infrastructure improvements. The ultimate goal is to cultivate Acushnet Avenue as a walkable, thriving, and welcoming neighborhood that serves local residents, while also creating a destination—an 'International Marketplace'—that attracts more people and investment to the corridor.

Love the Ave's vision statement

Acushnet Avenue in the City of New Bedford, MA has a beloved past, dynamic present and thrilling future. The commercial corridor is home to the city's International Marketplace -a collection of cultures reflected in its many restaurants, businesses, services and opportunities. Its residential population enjoys the area's most walkable neighborhood. From dawn into the evening, The Avenue, as it is affectionately known, is a hub of activity. Up and down The Avenue you'll find a community of civic and private enterprises of all backgrounds working together to create a destination like none other on the South Coast. Make yourself part of this unique streetscape. Meet, mingle, create and Love the Ave. It's the launching pad for what's next in New Bedford.



Neighborhood Planning Initiative Map courtesy of City of New Bedford, Office of Planning

1. Acushnet Avenue Improvements - In 2015, the city finished street and infrastructure improvements including new sidewalks, lighting, seating, trash receptacles, street improvements, and a new pocket park at Beetle Street.

2.. Cape Verdean Cultural Center - Renovation project to transform a vacant theater into a new cultural and resource center for the Cape Verdean community

3. Underutilized Section of Riverside Park - The need to explore options on how to bring more utilization and people into this section of the park.

4. Bullard Street, Nye Street, Tallman Street Infrastructure improvements. Plan to improve crosswalks, handicapped accessibility, additional trees and lights to these three streets from Acushnet Ave. to Belleville Ave.

5. All City Windows - Exploring options to redevelop this vacant retail site.

6. Nye Street Pocket Park - The transformation of a vacant lot into a pocket park.

7. Love the Ave. Intersection Repair - a project to create a new street mural at the intersection of Belleville Ave. and Bullard Street. To be produced October 2016.

8. Capitol Theatre - Exploring new options to redevelop the historic Capitol Theatre.

9. Sunbeam Bread Building - Former manufacturing site for Sunbeam Bread. Now empty, there's a need to find new options for this building.

10. Phillips Ave. Pocket Park - A former vacant lot transformed into a new and attractive public space.

11.Phillips Avenue School - Former school that is now vacant. There's a need to explore new options for redevelopment of this site.

12. Payne Cutlery Brownfields Site - This vacant lot/brownfields site is the site of the former Payne Cutlery Factory. There is a committee currently exploring new redevelopment options for this site.

13. Former Admirals Bank Building - Former home of Admirals Bank, now vacant, There's a need to explore new options for this building.

14. Riverside Park Community Garden - A new community garden planned for 2016

15. Acushnet Ave. and Holly Street Parklet - Exploring the building of a new parket at Acushnet Ave. and Holly Street.

16. AmeriCorps/ Veteran Transition House Mural - Located at the corner of Deane Street and Acushnet Ave.

17. Love the Ave. Book Mural - Located next to 7-Eleven at the corner of Coffin Ave. and Acushnet Ave.

18. Black and White Cartoon Mural - Located on Acushnet Ave. between Deane Street and Coffin Ave.

19. Flower Mural. - Flower mural located in the Phillips Ave. Pocket Park

20. Mermaid Mural - Mermaid mural located at the corner of Acushnet Ave. and Nash Rd.

21. All City Windows Storefront Photos Gallery - Project to introduce art and pictures in vacant storefronts.

Planning Intiative List courtesy of City of New Bedford, Office of Planning

Nye Street Pocket Park at the corner of Nye Street and Acushnet Avenue (#6 on the Neighborhood Planning Initiatives map)

Art installations along Acushnet Avenue

Assessment Team

WalkBoston led a walk assessment in the Acushnet Avenue neighborhood on November 17, 2016. Participants represented several City of New Bedford Departments, Massachusetts Smart Growth Alliance, CEDC, and others. A complete list of participants is below.

Corinn Williams	CEDC
Ken Rapoza	CEDC
Brian Pastori	CEDC
Ray Holberger	City of New Bedford - Environmental Stewardship
Jen Gonet	City of New Bedford - Planning
Eddie Bates	City of New Bedford - Planning
Gabrielle Montein	City of New Bedford - Planning
Stephanie Dupras	City of New Bedford - Public Infrastructure
Steven Froias	Groundwork
Kim Ferreira	Mass in Motion
Anabelle Rondon	Massachusetts Smart Growth Alliance
Jim McKeag	MassDevelopment - TDI Fellow
Angela Johnston	New Bedford Economic Development Council
Thomas Flood	New Bedford Police Department
Carissa Wills-DeMello	returned Peace Corps volunteer
Stacey Beuttell	WalkBoston
Brendan Kearney	WalkBoston

The walk route included the two HSIP crash cluster locations and several of the Love the Ave initiative project sites. The goal of the walk audit was twofold:

1. Determine if there are built environment reasons that contribute to the high numbers of crashes in the area
2. Highlight and assess the current condition of Love the Ave initiative projects on the route

New curb ramps were being constructed during the walk assessment, which affected normal traffic patterns. Walk audit participants did not experience fast moving traffic along Belleville Avenue and some sidewalk and crossing conditions were compromised. That said, all were excited that positive infrastructure changes were happening in the neighborhood.

Walk audit participants gather for a briefing on walkability

Walk audit participants begin the audit of Acushnet Avenue

Walk audit route map for Acushnet Avenue neighborhood

Key Findings

The walk audit revealed several key issues regarding the pedestrian environment in the Acushnet Avenue neighborhood.

1. Traffic calming strategies along Belleville Avenue would reduce traffic speeds and increase connectivity to Riverside Park for neighborhood residents and visitors.

2. Bus shelters, benches, crosswalks and better lighting would provide needed facilities along Acushnet Avenue to improve safety for transit riders and walkers. Crosswalks should be coordinated with bus stops.

3. While Acushnet Avenue and Belleville Avenue have several marked crossings, none of the intersections on N Front Street have crosswalks. At least one additional crosswalk should be marked on Acushnet Avenue, and existing crosswalks should be enhanced to a ladder design or other high visibility marking.

4. The pedestrian wait time at the Sawyer/ Belleville and Sawyer/Acushnet intersections is relatively long. Switching from exclusive signals to concurrent signal timing would decrease wait times for all users.

Detailed discussions and short- and long-term recommendations for each key issue are provided in the following sections of this report.

Traffic calming strategies along Belleville Avenue would reduce traffic speeds and increase connectivity to Riverside Park for neighborhood residents and visitors.

Belleville Avenue is a relatively wide, two-lane road running north to south along the Acushnet River in New Bedford's North End. Riverside Park, a neighborhood park with a playground, community gardens, soccer fields, passive green space, and a skateboard park, is the biggest open green space in the neighborhood. Parallel parking is permitted on both sides of Belleville Avenue. Crosswalks occur at those intersections with park entrances: Coffin Avenue (entrance just east of the crosswalk), Bullard Street, Tallman Street, and Sawyer Street.

Aerial view of Belleville Avenue courtesy of Google Maps

Wide angle view of the Belleville Avenue/Bullard Street intersection and the future site of a public art mural on the roadway. Curb ramp construction was underway during the walk assessment.

Vehicular traffic on Belleville Avenue is not required to stop between Coffin Avenue and Sawyer Street, which is the length of Riverside Park. All four approaches at the Coffin Avenue/Belleville Avenue are stop controlled with stop signs. The Sawyer/Belleville intersection is controlled with a traffic signal equipped with pedestrian signals.

Participants described fast-moving traffic along this stretch, and many near misses with pedestrians both in crosswalks and crossing between parked cars. Road construction activities slowed traffic during the walk assessment, so participants did not observe fast-moving cars during the assessment.

Short-term recommendations:

- Paint fog lines to delineate the outside edge of travel lanes (travel lanes should be less than 11 feet wide)
- Enhance crossings with high visibility, ladder crosswalks. The Bullard Street/Belleville Avenue crossing will be the site of a public art mural on the roadway.
- Work with the New Bedford Police Department to locate a speed trailer on Belleville Avenue to reduce traffic speeds while capturing speed data.
- Work with the New Bedford Police Department to enforce parking ordinances near crosswalks and intersections (no parking within 20 feet of crosswalk or intersection)
- Paint diagonal lines at intersections and near crosswalks to discourage parking within 20 feet
- Place in-street pedestrian signs in crosswalks to increase awareness of crossing zones
- Consider installing advance crosswalk signs before uncontrolled crossings at Bullard and Tallman Streets

Long-term recommendations:

- Consider curb bump-outs at the intersections with marked crosswalks to shorten crossing distances and improve pedestrian visibility

Wide sidewalks, benches and street trees line the edge of Riverside Park along Belleville Avenue

Bus shelters, benches, crosswalks and better lighting would provide needed facilities along Acushnet Avenue to improve safety for transit riders and walkers. Crosswalks should be also coordinated with bus stops.

Recent renovations to Acushnet Avenue south of Holly Street included benches, trash receptacles and trees that greatly improved the pedestrian experience along Acushnet Avenue. Bike facilities and pavement markings define parking areas and travel lanes and help to slow traffic. Acushnet Avenue within the study area needs similar improvements. Some infrastructure improvements are happening in the study area and others are planned. Curb ramps and new crosswalks were under construction during the assessment. Trees will be added on neighborhood streets including Tallman Street, Nye Street and Bullard Street in Spring 2017. Lighting is also being addressed in the study area with new poles and fixtures planned for some of the streets leading from Acushnet Avenue to Riverside Park.

There is a major bus stop on the corner of Sawyer Street and Acushnet Avenue. Those waiting for the bus have no shelter or bench. Walk audit participants mentioned that Southeast Regional Planning and Economic Development District (SRPEDD) has conducted a survey of bus stops to determine need for shelters. This location should be identified as a location deserving a shelter. Furthermore, it is important that there be a marked crosswalk at or near every bus stop. Currently, there is no crosswalk across Acushnet Avenue at the bus stop near the Tallman Street intersection.

Short-term recommendations

- Install a bus shelter near the intersection of Sawyer St/Acushnet Avenue
- Mark a crosswalk on Acushnet Avenue at the Tallman Street intersection
- Study light levels along Acushnet Avenue to determine if additional light poles or changes in light fixtures or bulbs would improve conditions

Long-term recommendations

- Add benches, trees and trash receptacles of similar quality to those along Acushnet Avenue south of Holly Street.
- Add/Improve lighting along Acushnet Avenue with new light poles or improved fixtures and bulbs, (i.e, adjust the level of LEDs).

Recent streetscape improvements on Acushnet Avenue just south of the study area included new benches, trash receptacles, pavement markings and bike facilities

While Acushnet Avenue and Belleville Avenue have several marked crossings, none of the intersections on N Front Street have crosswalks. At least one additional crosswalk should be marked on Acushnet Avenue, and existing crosswalks should be enhanced to a ladder design or other high visibility marking.

The crosswalks on Acushnet Avenue south of Holly Street were redesigned to include pavers and transverse lines, which makes them easier to see and helps to alert drivers to the possibility of people crossing at un-signalized intersections. The crosswalks on Acushnet Avenue within the study area do not have these enhancements and remain two simple transverse lines. In addition, there is no marked crosswalk for three blocks between Holly Street and Bullard Street. As discussed in the previous section, the Tallman Street intersection should have a crosswalk to provide transit riders with a designated path to cross the street.

There are no marked crosswalks on any of the intersections on N Front Street within the study area, except at Sawyer Street. Even there, only three of the four approaches have crosswalks. N Front Street is primarily residential and the City may not have installed crosswalks due to low traffic volumes and to limit maintenance costs. Given the proposed improvements to Bullard, Nye and Tallman, the City should consider adding crosswalks on N Front Street to provide connections from Acushnet Avenue to Riverside Park.

New crosswalk designs just south of the study area include pavers, transverse lines, and detectable warning panels

Parking near intersections and directly adjacent to crosswalks limits sight lines for both drivers and pedestrians. Walkers cannot see oncoming traffic and drivers cannot see pedestrians trying to cross. Parking is not allowed within 20' of an intersection or crosswalk. Many drivers disregard these rules along Belleville Avenue along Riverside Park.

Short-term recommendations:

- Enhance crossings on Acushnet Avenue with high visibility, ladder crosswalks
- Add a crosswalk across Acushnet Avenue at the Tallman Street intersection
- Enhance crossings on Belleville Avenue with high visibility, ladder crosswalks
- Determine priority locations for crosswalks on N Front Street and install high visibility crosswalks, preferably ladder design at priority locations
- Paint diagonal lines near crosswalks where drivers regularly ignore rules about parking directly adjacent to crosswalks

Long-term recommendations

- Consider installing bump-outs at intersections along Acushnet Avenue and Belleville Avenue. Curb bump-outs improve compliance with parking near crosswalks and intersections
- Upgrade crosswalks across Acushnet Avenue and Belleville Avenue similar to those seen on Acushnet Avenue south of Holly Street

The pedestrian wait time at the Sawyer/ Belleville and Sawyer/Acushnet intersections is relatively long. Switching from exclusive signals to concurrent signal timing would decrease wait times for all users.

Generally, pedestrians have higher WALK signal compliance rates when concurrent signals are in use. Concurrent signals, which give pedestrians a WALK signal when traffic is moving parallel to them, should be combined with a leading pedestrian interval (LPI) and No Turn on Red signs to give pedestrians a head start and limit turning movements.

The signals on Sawyer Street at Belleville and Acushnet Avenues have exclusive signal timing, which means all approaches are stopped when the WALK light is illuminated. To accommodate each signal phase, the wait time becomes longer for all users – all drivers wait for WALK signal, and walkers have to wait for up to two phases of vehicular traffic before getting their turn. Except in special circumstances, such as high crash rates or proximity to a school, park, or senior housing units, WalkBoston recommends concurrent signal phasing.

Short-term recommendations

- Study effects of changing the signal phasing along Sawyer Street at Acushnet and Belleville Avenues from exclusive phasing to concurrent phasing.
- Evaluate the walk time at both intersections to ensure that there is adequate time to walk across the street before the pedestrian signals change to solid red

Long-term recommendations

- Upgrade the pedestrian signals to countdown signals

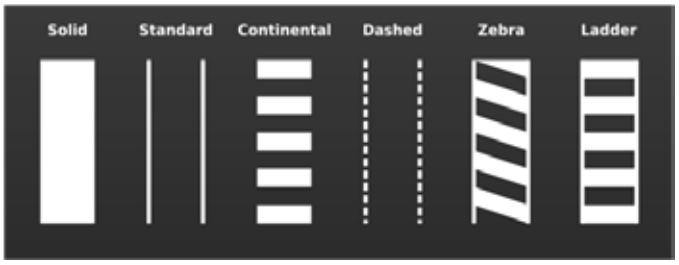
Belleville Avenue/Sawyer Street intersection where walk audit group is crossing against the WALK signal

Appendix A. Terminology

Below are images and definitions of the terms used to describe the walking environment in this report.

Crosswalk and Stop Line

Crosswalks can be painted in a variety of ways, some of which are more effective in warning drivers of pedestrians. Crosswalks are usually accompanied with stop lines. These lines act as the legally mandated stopping point for vehicles, and discourage drivers from stopping in the middle of the crosswalk.



Crosswalk patterns
Source: USFHA

Crosswalk and stop line
Source: http://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/sys_impact_rpt/images/fig16.jpg

Curb Ramp and Detectable Warning Strip

Curb ramps provide access from the sidewalk to the street for people using wheel chairs and strollers. They are most commonly found at intersections. While curb ramps have improved access for wheelchair-bound people, they are problematic for visually impaired people who use the curb as an indication of the side of the street. Detectable warning strips, a distinctive surface pattern of domes detectable by cane or underfoot, are now used to alert people with vision impairments of their approach to streets and hazardous drop-offs.

Curb ramp and detectable warning strip

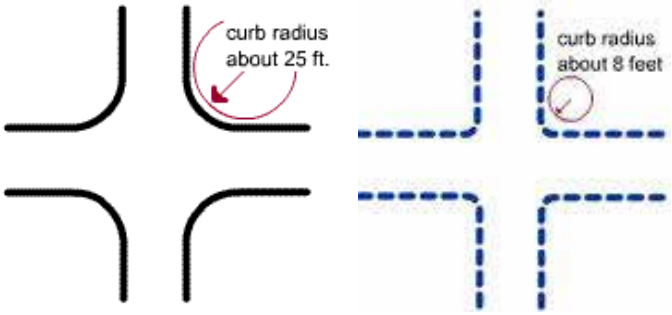
Curb Extension/Curb Bulb-out

A sidewalk extension into the street (into the parking lane) shortens crossing distance, increases visibility for walkers and encourages eye contact between drivers and walkers.

Curb extensions are often associated with mid-block crossings

Curb Radius

A longer curb radius (on the left in figure below) allows vehicles to turn more quickly and creates longer crossing distance for pedestrians. A shorter curb radius (on the right in the figure below) slows turning speeds and provides pedestrians shorter crossing distances.



There are two excellent examples of the shortening of curb radii in Woburn, MA. The first (A) is a low- cost solution using a gravel-filled zone between the original curb line and the newly established road edge. The second is a higher-cost solution using grass and trees and extending the sidewalks to the new curb. Both work to slow traffic.

Fog Line

A fog line is a solid white line painted along the roadside curb that defines the travel lane. It narrows a driver's perspective and helps to slow traffic speeds. Fog lines are used in urban, suburban and rural locations.

Fog lines delineate the vehicular driving zone on wide roadways.

(A) Gravel-filled curb extension

(B) Grass, trees and extended sidewalk in curb extension

In-street Pedestrian Crossing Sign

In-street pedestrian crossing signs are used at the road centerline within crosswalks to increase driver awareness of pedestrians in the area. These signs are a relatively low-cost, highly effective tool in slowing traffic by the narrowing travel lanes. They are popular with road maintenance departments since they can be easily moved for snow removal.

Leading Pedestrian Interval (LPI)

A leading pedestrian interval gives pedestrians an advance walk signal before motorists get a green signal, giving the pedestrian several seconds to start walking in the crosswalk before a concurrent signal is provided to vehicles. This makes pedestrians more visible to motorists and motorists more likely to yield to them. Typical LPI settings provide 3 to 6 seconds of advance walk time.

Source: http://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/sys_impact_rpt/images/fig34.jpg

Rectangular Rapid Flash Beacon (RRFB)

RRFBs are user-actuated flashing lights (amber LEDs) that supplement pedestrian warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system. RRFBs use an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs may be installed on either two-lane or multi-lane roadways.

Source: http://safety.fhwa.dot.gov/intersection/conventional/unsignalized/tech_sum/fhwasa09009/

Rectangular Rapid Flash Beacon (RRFB) in West Springfield

Safety Zone (Slow Zone)

A safety zone is an area in which the posted speed limit is 20 miles per hour. Safety zones can be established anywhere in a Massachusetts city or town with approval from the applicable departments. Safety zones were recently passed as part of the 2016 Muncipal Modernization Bill - Sections 193 and 194.