



Walk Assessment Haverhill, MA

October 8, 2014

Massachusetts Department of Transportation
Bicycle and Pedestrian Safety Program

in partnership with Massachusetts Department of Public Health

MAKING MASSACHUSETTS MORE WALKABLE

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Report Scope and Purpose

WalkBoston conducted this walk assessment as part of the Massachusetts Department of Transportation Bicycle and Pedestrian Safety Program, in association with the Massachusetts Department of Public Health. WalkBoston is a pedestrian advocacy organization whose mission is to make walking safer and easier in Massachusetts to encourage better health, a cleaner environment and vibrant communities. The purpose of the walk assessment is to develop knowledge and awareness of the pedestrian environment at the state and municipal level.

This walk assessment report summarizes the observations made along the walk route and makes recommendations for improvements to the built environment. The observations vary from specific infrastructure deficits (e.g., faded crosswalk, uneven sidewalk) to general comments on traffic speeds or land use patterns (e.g., vacant storefronts). Likewise, the recommendations range from individual fixes (e.g., paint the crosswalk) to suggestions for further study (e.g., evaluate the feasibility of installing raised crosswalks). The assessment is not meant to be a complete inventory of infrastructure deficiencies, nor is it meant to provide specific designs for improvement.

WalkBoston leads these assessments as a means to build local capacity for improving the built environment for walking and not as a complete inventory of walking conditions. WalkBoston staff members are not licensed design or engineering professionals. This report may be used as a resource for municipal staff and for design professionals who may be engaged by municipalities to program and design infrastructure improvements.

Haverhill Walk Assessment

The City of Haverhill is one of twelve communities participating in the Massachusetts Department of Transportation's (MassDOT's) multi-disciplined program to improve bicycle and pedestrian safety in Massachusetts. One component of the MassDOT program is to conduct walk assessments. The assessments have three goals:

1. Foster an awareness of the infrastructure elements which contribute to the walking environment
2. Evaluate the safety and quality of the walking environment along the route
3. Recommend infrastructure improvements

The City of Haverhill identified several high-priority intersections that are particularly dangerous for pedestrians and cyclists. With input from the Merrimack Valley Planning Commission, City officials and the Haverhill Police Department, WalkBoston established a walking route that incorporated several of these key intersections in the Downtown and Acre neighborhoods.

The walk assessment was conducted on October 8, 2014, from 2:30 PM- 4:30 PM. The weather was clear with temperatures in the 70s.



Enhanced streetscape and painted mural along Essex Street near Washington Square



Walk audit participants discuss traffic patterns on Winter Street

Study Area

The walk assessment focused on the Winter Street (Route 97) corridor in the Acre neighborhood and Washington Square (Route 110) in the Downtown neighborhood. Winter Street is a major east-west connector with high traffic volumes. There are several social service organizations on and around Winter Street, which generate a steady stream of pedestrian activity. The YMCA runs an after-school program and several women's shelters provide much-needed services and temporary housing.

Washington Square is home to the main branch of the Post Office, the Merrimack Valley Regional Transit Authority bus station, and a growing retail district. The Post Office generates a significant number of vehicle trips with many motorists parking in the busy crosswalk and making unpredictable turning movements. Pedestrians crossing in the Square do not use the crosswalk consistently, which further complicates the chaotic travel patterns in this area of Haverhill.

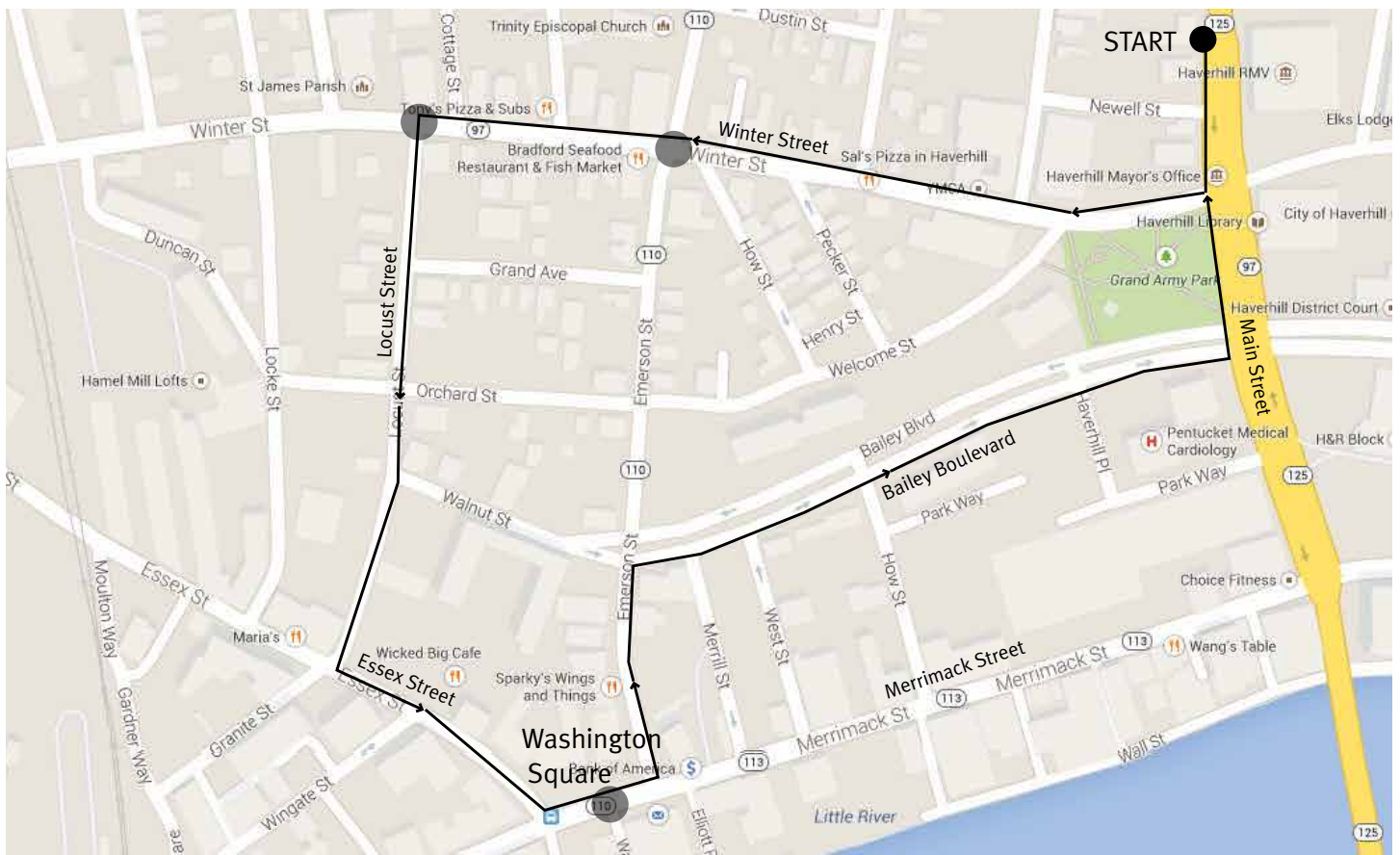
As part of the safety awareness activities, the Haverhill Police Department is collecting data on the reasons that road users behave dangerously to determine

if there is an infrastructure deficiency contributing to the behavior. This walk assessment report will supplement the police reports, documenting infrastructure deficits and recommending short- and long-term solutions to improve pedestrian safety.

General Observations

Participants made some general observations about the walking conditions that apply to much of the walking route. The issues included:

- Damaged sidewalks and tripping hazards, including old sign posts, metal sticking up from sidewalks, and misaligned grates in the sidewalk
- Wide and frequent curb cuts, particularly on Winter Street (for example at Tony's Pizza @ Franklin/Winter intersection)
- Faded and inconsistently placed crosswalks
- Missing or non- ADA compliant curb ramps and missing detectable warning strips
- Lack of street signs and limited wayfinding assistance for pedestrians or other road users
- Missing stop signs approaching Winter Street from the north (for example, posts sheared off at Franklin Street; possibly plow damage)



Map of the walk assessment route

● Enforcement Location

The walking route would benefit from a detailed inventory of these conditions with an emphasis on targeting the low-cost, quick infrastructure fixes that can improve the safety and quality of the walking environment.

Intersections of Concern

The route included three intersections where the Haverhill Police Department has conducted enforcement/awareness activities:

- Winter Street/White Street/Emerson Street
- Winter Street/Locust Street
- Washington Square: Merrimack Street, Washington Street, Essex Street and Emerson Street

Winter Street and White Street/Emerson Street

Winter Street is a two-lane arterial with parking lanes on both sides of the street. At the White Street/Emerson Street intersection, there is a modest retail district with restaurants and shops. The intersection is signalized with pedestrian signal heads timed with an exclusive phase (i.e., traffic is stopped in all directions for the duration of the crossing time when the pedestrian button is pushed).

Current infrastructure deficiencies

- “No Right Turn On Red (RTOR)” signs are outside of drivers’ visibility and therefore most drivers do not see the sign until they have proceeded into the crosswalk
- Missing curb ramps and non-ADA compliant curb ramps on southeast corner of the intersection
- Missing stop line on the southbound side of White Street
- Trucks turning onto Winter Street from White Street are cutting the corner and damaging the sidewalk panels on the northwest side of the intersection
- Traffic signal is too close to travel lane in the northwest corner of the intersection; both the pedestrian signal and traffic signal appear to have been struck by oncoming traffic; few options for locating a signal pole and accommodating pedestrians on this corner



At the Winter/White intersection, the traffic signal obstructs the curb ramp; the sidewalk concrete has been damaged by turning trucks; and signal phasing does not prioritize the pedestrians

- Signal timing does not prioritize pedestrians: takes a long time for the phase to change to WALK, and the WALK phase itself seems too short. No RTOR should allow concurrent phasing with a leading pedestrian indicator (LPI)
- Pedestrian signal equipment is antiquated and in poor condition – appears to have been struck

Recommendations

- Relocate the No RTOR signs so that they are adjacent to the traffic signal heads
- Install ADA-compliant curb ramps where they are missing and upgrade those curb ramps that do not meet requirements
- Repaint stop line on southbound side of White Street
- Evaluate the turning radii on the northwest corner of the intersection; needs to accommodate truck traffic and should discourage (or prevent through design) the practice of driving on the sidewalks
- Evaluate possibility of moving/upgrading the traffic signal on the northwest corner of the intersection to provide additional gathering space

- Consider changing the signal timing so that pedestrians wait less time for WALK phase; evaluate the vehicle volumes to see if concurrent phasing with a leading pedestrian indicator (LPI) is possible
- Upgrade the pedestrian signal heads to a countdown signal



Aerial view of the Cottage/Winter and Winter/Locust intersections

Winter Street and Locust Street

The staggered alignment of Cottage Street and Locust Street contributes to the inconsistent location of crosswalks near the Winter/Locust Street intersection. On-street parking near this intersection varies from parallel parking to angled parking. In some cases, parking contributes to the limited visibility issues at this intersection. The sidewalks on Locust Street between Winter Street and Walnut Street are in poor condition.

Current infrastructure deficiencies

- Crosswalks are not uniform in their location at the intersection or in their direction – one is on a diagonal and another runs perpendicular to the roadway; crosswalks are close together at unsignalized intersection
- Cars are parked within 20' of the crosswalk and the intersection



Street view of multiple crosswalks



Parked cars on Winter Street contribute to limited visibility issues



Sidewalks on Locust Street are in poor condition

- Site visibility constraints: signs and buildings close to the road's edge block motorist views of crosswalk; parked cars also limit sightlines
- No "yield to pedestrian" or advance crosswalk signs to alert drivers to the possibility of pedestrians crossing
- Travel lanes seem wide; no edge lines or painted parking stalls
- Sidewalks on Locust Street between Winter and Walnut Streets are in bad condition – missing curb ramps and detectable warning strips, narrow and crumbling asphalt and concrete

Recommendations

- Review need for both crosswalks on Winter Street near Locust Street intersection; consider installing curb extensions or raising the intersection to increase visibility of pedestrians and reduce crossing distances, if pedestrian volumes warrant it
- Remove pavement markings that allow parking within 20' of crosswalk and install markings that prohibit parking; consider prohibiting on-street parking along Winter Street near the intersection to increase pedestrian visibility; relocate signs that obstruct sight lines
- Add signage to alert drivers to the presence of pedestrians – advance crosswalk signs, "yield to pedestrian" signs, and in-street pedestrian sign
- Paint edge lines and or parking stalls where appropriate to better define lanes and encourage slower speeds

- Repair and replace sidewalks on Locust Street between Winter and Walnut Streets

Washington Square

Washington Square is home to a hub of retail activity and consequently experiences a lot of pedestrian and vehicle traffic. There are two major intersections in this area - Essex Street and Washington Street, and Emerson Street and Merrimack Street. In addition to the intersections, there is a marked crosswalk leading from the public space on the north side of the Square to the Post Office on the south side of Washington Street. All of these street crossings are wide and present some safety issues for pedestrians attempting to cross.



Essex/Washington Street intersection is unsignalized; drivers must inch into crosswalk to see oncoming traffic beyond building edges

Essex/Washington Street

Current infrastructure deficiencies:

- Site visibility constraints: buildings close to the road's edge block motorist views of crosswalk when turning onto Essex from Washington traveling in both eastbound and westbound directions
- Crosswalk is set back from the pedestrian desire line; crossing distance is long due to wide travel lanes on Essex Street
- Stop line, located behind the crosswalk, is far from intersection and motorists must advance to see oncoming traffic
- Curb ramp on the northwest corner does not meet ADA requirements

Recommendations

- Consider installing curb extensions (bump-outs) to address site visibility constraints and shorten the pedestrian crossing distance



Aerial view of Washington Square

- Evaluate impact of shortening curb radii on the northeast side of the intersection
- Study possibility of moving crosswalk closer to pedestrian desire lines to increase compliance with pedestrians using the marked crossing; new location may also reduce motorists' need to inch into crosswalk to see oncoming traffic
- Install ADA-compliant curb ramps where they are missing and upgrade those curb ramps that do not meet ADA requirements



Median helps to define lanes, but does not provide adequate protection for pedestrians waiting to cross

Emerson/Merrimack Street

Current infrastructure deficiencies:

- Intersection is very wide with long pedestrian crossing distance
- Site visibility constraints: buildings close to the road's edge block motorist views of crosswalk when turning onto Emerson from Washington
- Stop line, located behind the crosswalk, is far from intersection and motorists must advance to see oncoming traffic
- Median helps to narrow and define travel lanes on Emerson Street; however, the median is ineffective as a pedestrian refuge island – it does not reach across the crosswalk and is relatively narrow
- Curb ramps do not meet ADA requirements; missing detectable warning strips

Recommendations

- Consider installing curb extensions (bump-outs) to address site visibility constraints and shorten the crossing distance
- Consider adjusting location of crosswalk and stop line to improve visibility
- Explore possibility of redesigning median as a pedestrian refuge island with protection on both sides of the crosswalk of sufficient width
- Install ADA-compliant curb ramps and detectable warning strips



Mid-block crossing leading to the Post Office

Washington Street and Mid-block Crossing to the Post Office

The Post Office and the MVRTA bus depot generate a lot of foot traffic across Washington Street. On a busy Saturday morning, it is difficult to find a parking space and motorists park on the crosswalk, as well as within the 20-foot buffer zone required adjacent to crosswalks. According to the municipal representatives and Haverhill residents, drivers behave unpredictably in this area while searching for parking, and pedestrians do not use the marked crosswalk. The marked crossing is long and pedestrians often cross the street in other places in order to shorten their trip. The Washington Street right-of-way is extremely wide between the Post Office and the public open space at Washington Square.

Current infrastructure deficiencies:

- Washington Square right-of-way is extremely wide; currently accommodates one lane of traffic in both directions and parking on both sides of the street
- Parking stalls may be painted too close to the crosswalk (should be 20' from crosswalk)

- Crossing distance is long; crosswalk is on a diagonal and is inconsistent with, and not as visible as the newer, continental pavement marking designs in the Washington Square area

Recommendations:

- Consider installing a median on Washington Street between Essex and Elliot Streets to minimize illegal U-turns, narrow travel lanes, and provide a pedestrian refuge island
- Evaluate the possibility of using curb extensions (bump-outs) to shorten crossing distance, define parking stalls, and increase visibility of pedestrians

Appendix A. Summary of Issues and Recommendations

Winter Street and White Street/Emerson Street

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
“No Right Turn On Red (RTOR)” signs are outside of drivers’ visibility and therefore most drivers do not see the sign until they have proceeded into the crosswalk	Relocate the No RTOR signs so that they are adjacent to the traffic signal heads	Short-term	City of Haverhill
Missing curb ramps and non-ADA compliant curb ramps on southeast corner of the intersection	Install ADA-compliant curb ramps where they are missing and upgrade those curb ramps that do not meet requirements	Long-term	City of Haverhill
Missing stop line on the southbound side of White Street	Repaint stop line on southbound side of White Street	Short-term	City of Haverhill
Trucks turning onto Winter Street from White Street are cutting the corner and damaging the sidewalk panels on the northwest side of the intersection	Evaluate the turning radii on the northwest corner of the intersection; needs to accommodate truck traffic and should discourage (or prevent through design) the practice of driving on the sidewalks	Long-term	City of Haverhill
Traffic signal is too close to travel lane in the northwest corner of the intersection; both the pedestrian signal and traffic signal appear to have been struck by oncoming traffic; few options for locating a signal pole and accommodating pedestrians on this corner	Evaluate possibility of moving/upgrading the traffic signal on the northwest corner of the intersection to provide additional gathering space	Long-term	City of Haverhill
Signal timing does not prioritize pedestrians: takes a long time for the phase to change to WALK, and the WALK phase itself seems too short. No RTOR should allow concurrent phasing with a leading pedestrian indicator (LPI)	Consider changing the signal timing so that pedestrians wait less time for WALK phase; evaluate the vehicle volumes to see if concurrent phasing with a leading pedestrian indicator (LPI) is possible	Mid-term	City of Haverhill
Pedestrian signal equipment is antiquated and in poor condition – appears to have been struck	Upgrade the pedestrian signal heads to a countdown signal	Long-term	City of Haverhill

Winter Street and Locust Street

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
Crosswalks are not uniform in their location at the intersection or in their direction – one is on a diagonal and another runs perpendicular to the roadway; crosswalks are close together at unsignalized intersection	Review need for both crosswalks on Winter Street near Locust Street intersection; consider installing curb extensions or raising the intersection to increase visibility of pedestrians and reduce crossing distances, if pedestrian volumes warrant it	Long-term	City of Haverhill
Cars are parked within 20’ of the crosswalk and the intersection	Remove pavement markings that allow parking within 20’ of crosswalk and install markings that prohibit parking	Short-term	City of Haverhill

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
Site visibility constraints: signs and buildings close to the road's edge block motorist views of crosswalk; parked cars also limit sightlines	Consider prohibiting on-street parking along Winter Street near the intersection to increase pedestrian visibility; relocate signs that obstruct sight lines	Mid-term	City of Haverhill
No "yield to pedestrian" or advance crosswalk signs to alert drivers to the possibility of pedestrians crossing	Add signage to alert drivers to the presence of pedestrians – advance crosswalk signs, "yield to pedestrian" signs, and in-street pedestrian sign	Short-term	City of Haverhill
Travel lanes seem wide; no edge lines or painted parking stalls	Paint edge lines and or parking stalls where appropriate to better define lanes and encourage slower speeds	Short-term	City of Haverhill
Sidewalks on Locust Street between Winter and Walnut Streets are in bad condition – missing curb ramps and detectable warning strips, narrow and crumbling	Repair and replace sidewalks on Locust Street between Winter and Walnut Streets	Long-term	City of Haverhill

Washington Square

Essex/Washington Street

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
Site visibility constraints: buildings close to the road's edge block motorist views of crosswalk when turning onto Essex from Washington traveling in both eastbound and westbound directions	Consider installing curb extensions (bump-outs) to address site visibility constraints and shorten the crossing distance	Long-term	City of Haverhill
Crosswalk is set back from the pedestrian desire line; crossing distance is long due to wide travel lanes on Essex Street	Evaluate impact of shortening curb radii on the north east side of the intersection	Long-term	City of Haverhill
Stop line, located behind the crosswalk, is far from intersection and motorists must advance to see oncoming traffic	Study possibility of moving crosswalk closer to pedestrian desire lines to increase compliance with pedestrians using the marked crossing; new location may also reduce motorists' need to inch into crosswalk to see oncoming traffic	Short-term	City of Haverhill
Curb ramp on the northwest corner does not meet ADA requirements	Install ADA-compliant curb ramps where they are missing and upgrade those curb ramps which are out of compliance	Long-term	City of Haverhill

Emerson/Merrimack Street

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
Intersection is very wide with long pedestrian crossing distance	Consider installing curb extensions (bump-outs) to address site visibility constraints and shorten the pedestrian crossing distance	Long-term	City of Haverhill

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
Stop line, located behind the crosswalk, is far from intersection and motorists must advance to see oncoming traffic	Consider adjusting location of crosswalk and stop line to improve visibility	Short-term	City of Haverhill
Median helps to narrow and define travel lanes on Emerson Street; however, the median is ineffective as a pedestrian refuge island – it does not reach across the crosswalk and is relatively narrow	Explore possibility of redesigning median as a pedestrian refuge island with protection on both sides of the crosswalk of sufficient width	Long-term	City of Haverhill
Curb ramps do not meet ADA requirements; missing detectable warning strips	Install ADA-compliant curb ramps and detectable warning strips	Long-term	City of Haverhill

Washington Street and Mid-block Crossing to the Post Office

ISSUE	RECOMMENDATION	TIMEFRAME	RESPONSIBLE PARTY
Washington Square right-of-way is extremely wide; currently accommodates one lane of traffic in both directions and parking on both sides of the street.	Consider installing a median on Washington Street between Essex and Elliot Streets to minimize illegal U-turns, narrow travel lanes, and provide a pedestrian refuge island	Long-term	City of Haverhill
Parking stalls may be painted too close to the crosswalk (should be 20' from crosswalk)	Determine if parking is adequate distance from crosswalk; remove or relocate to increase visibility of pedestrians	Short-term	City of Haverhill
Crossing distance is long; crosswalk is on a diagonal and is inconsistent with, and not as visible as the newer, continental pavement marking designs in the Washington Square area	Evaluate the possibility of using curb extensions (bump-outs) to shorten crossing distance, define parking stalls, and increase visibility of pedestrians	Long-term	City of Haverhill

Appendix B. Participant List

NAME	ORGANIZATION
Stacey Beuttell	WalkBoston
Betsy Goodrich	Merrimac Valley Planning Commission
John Gregg	MassDOT, District 4
Kasia Hart	WalkBoston
Brendan Kearney	WalkBoston
Karen Kennedy	Holy Family Hospital
Tony Komornick	Merrimac Valley Planning Commission
Christopher J. Madden	US Post Office
Lance Powell	Haverhill Police Department
Lisa Schletzbaum	MassDOT
Misrak Sultan	MassDOT, District 4

Appendix C. 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 in Woburn, MA

Curb extension/curb bulb-out

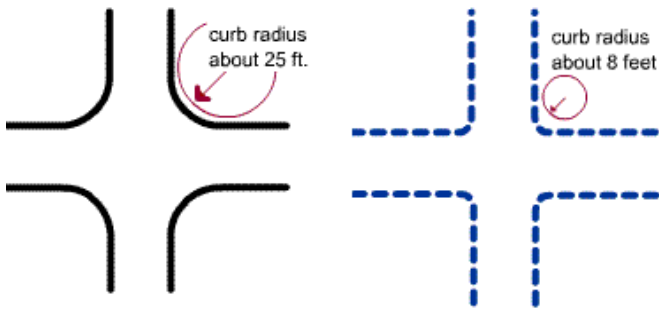
A sidewalk extension into the street (into the parking lane) shortens crossing distance, increases visibility for walkers and encourages eye contact between drivers and walkers.



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.

Edge line

An edge line is a solid white line painted along the roadside curb that defines the driving lane and narrows the driver's perspective. Edge lines are most often used in suburban and rural locations, but may be appropriate in some urban conditions.



Edge 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 Indicator (LPI)

A leading pedestrian indicator 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.



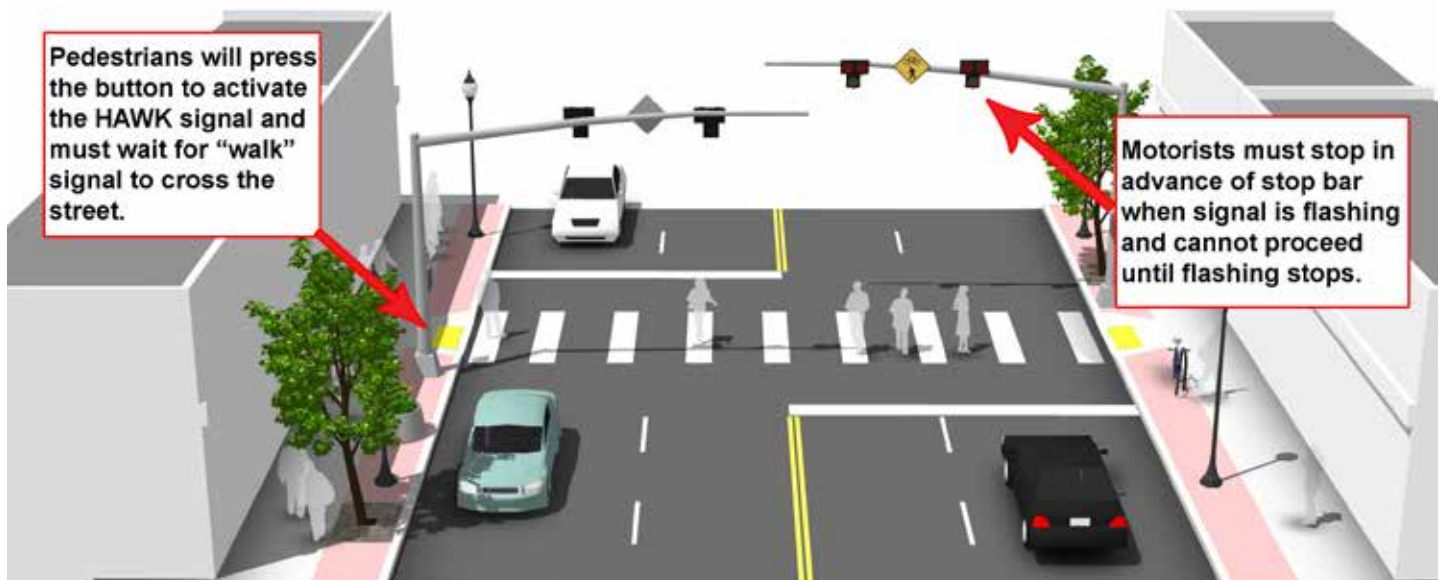
Source: http://safety.fhwa.dot.gov/ped_bike/tools_solve/ped_scdproj/sys_impact_rpt/images/fig34.jpg

High-Intensity Activated crossWalk (HAWK)

A HAWK beacon (High-Intensity Activated crossWalk beacon) is a traffic signal used to stop road traffic and allow pedestrians to cross safely. It is officially known as a Pedestrian Hybrid Beacon (PHB). The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. Where standard traffic signal 'warrants' prevent the installation of standard three-color traffic signals, the HAWK beacon provides an alternative.



Source: <http://www.achdidaho.org/Projects/Images/NewHawkSignal092209%20014.jpg>



Source: <http://bloomington.in.gov/media/media/image/jpeg/13144.jpg>

Pedestrian Refuge Island

Pedestrian refuge islands are protected areas where people may safely pause or wait while crossing a street. Pedestrian refuge islands are particularly helpful as resting areas for seniors, persons with disabilities, children, and others who may be less able to cross the street in one stage. At signalized intersections, they allow slow-moving pedestrians to cross in two phases. At unsignalized locations, they simplify the act of finding a gap in traffic by allowing people to cross traffic moving in one direction at a time.

<http://www.sfbetterstreets.org/find-project-types/pedestrian-safety-and-traffic-calming/traffic-calming-overview/medians-and-islands/>



Pedestrian refuge island at a signalized crossing

Source: <http://safety.fhwa.dot.gov/intersection/resources/fhwasao6o16/images/fig95.jpg>

Appendix D. Walk Assessment Tool

Transit/Walk Audit Assessment Tool



Street Name/Intersection	
Date/Time	
Weather Conditions	
Neighborhood Character	
<input type="radio"/> Land use: residential, commercial, industrial or mixed use?	
<input type="radio"/> Community facilities: schools, parks, libraries?	
<input type="radio"/> Surface parking lots?	
<input type="radio"/> Buildings occupied?	
<input type="radio"/> Building facades – blank walls, engaging storefronts, sidewalk cafes?	
<input type="radio"/> Is there street activity?	
Street Description	
<input type="radio"/> Arterial or local	
<input type="radio"/> Number and estimated width of travel lanes – narrow, adequate, wide?	
<input type="radio"/> Parking – none, one or both sides?	
<input type="radio"/> Sidewalks – none, one or both sides?	
Vehicular Traffic	
<input type="radio"/> Posted speed limit signs	
<input type="radio"/> Estimated vehicle speeds	
<input type="radio"/> Volume	
Sidewalks	
<input type="radio"/> On both sides of the street?	
<input type="radio"/> Wide? Continuous? Smooth surface?	
<input type="radio"/> Curb ramps/detectable warning strips?	
<input type="radio"/> Buffered from traffic with landscape strips (verge)?	
<input type="radio"/> Minimal number of interrupting driveways? Narrow or wide driveways?	
<input type="radio"/> Are newspaper racks, outdoor seating organized?	

Street furnishings	
<input type="radio"/> Trees?	
<input type="radio"/> Benches?	
<input type="radio"/> Trash receptacles?	
<input type="radio"/> Bicycle accommodations?	
<input type="radio"/> Lighting?	
Crosswalks	
<input type="radio"/> Condition?	
<input type="radio"/> Design: 2 lines, zebra/ladder, stamped, pavers? Raised?	
<input type="radio"/> Marked and signed?	
Traffic signals	
<input type="radio"/> Pedestrian-activated? Countdown signals?	
<input type="radio"/> Timing – enough time to cross? Traffic stops in all directions? Traffic stops only in lanes pedestrian is crossing?	
<input type="radio"/> Right turn on red prohibited?	
Sight lines/Visibility	
<input type="radio"/> Obstacles – vegetation, light poles, parked cars?	
<input type="radio"/> Road design – curves, elevation change?	
Pedestrian Safety Countermeasures	
<input type="radio"/> Curb extensions?	
<input type="radio"/> Pedestrian refuge islands or medians?	
<input type="radio"/> In-street pedestrian signs?	
<input type="radio"/> Speed tables?	
Accessibility	
<input type="radio"/> Curb ramps?	
<input type="radio"/> Detectable warning strips?	
<input type="radio"/> Slopes/cross-slopes?	