

## ***Lenox Dale Walk Audit***

***Lenox, MA***

June 1, 2017



## Purpose of Walk Audit

The Town of Lenox reached out to WalkBoston to conduct a walk audit in Lenox Dale for two reasons:

1. To assess the safety and quality of the pedestrian environment in the village
2. To identify opportunities to connect the regional open space and historical assets in the Lenox area with walking paths or routes

Lenox is participating in the Massachusetts Department of Transportation (MassDOT) Complete Streets Funding Program to secure funds for bicycle and pedestrian infrastructure projects in town. Lenox has completed the first two steps to receive funding by passing a Complete Streets policy and submitting a Complete Streets Prioritization Plan. WalkBoston completed a walk audit in Lenox Center in the summer of 2016. Many of the infrastructure recommendations made in that audit were included in the Prioritization Plan. The Town of Lenox staff wanted to give Lenox Dale residents the same opportunity to participate in a walk audit to identify needed infrastructure improvements in the Dale.

Lenox has incredible historic and open space assets that could be connected with walking and biking routes. The improvements planned for Walker Street will support walkers and cyclists desire to connect to Lenox Center. A proposed multi-use trail concept is currently being considered to connect neighboring communities to open space areas and historic assets such as Woods Pond, the Housatonic River, Hallowell Meadows, Berkshire Scenic Railway Museum, and October Mountain State Forest (Highlands Footpath). Crystal Street runs along the Housatonic River corridor and may be a key connection (temporary or permanent) along this proposed route.

## Neighborhood Context

Lenox Dale, a village of approximately 900 residents affectionately known as the Dale, has its own post office, businesses, firehouse, church, and park – Tilloston Park. The village is primarily residential with a mix of single-family homes and some multi-family housing. Traffic volumes are relatively low except during rush hour along Crystal Street, Walker Street and Mill Street. Waze – the travel app – has had some impact on traffic patterns, directing drivers along Crystal Street and Mill Streets to get to the neighboring communities of Lee and Stockbridge. The other streets in the Dale are relatively narrow, residential streets without sidewalks or pavement markings, in most cases.

Although the Dale is less than 3 miles from Lenox Center, Route 7/20 – a two-lane median divided highway with 45 mph speed limit - splits the two communities. The Walker Street/Route 7/20 intersection currently has no pedestrian infrastructure – no sidewalks, crosswalks or pedestrian signals. Walker Street will be reconstructed to include protected crossings across Route 7/20, sidewalks on one side of the street and bike lanes on both sides from Route 7/20 to the Crystal/Mill Street intersection in Spring 2018.



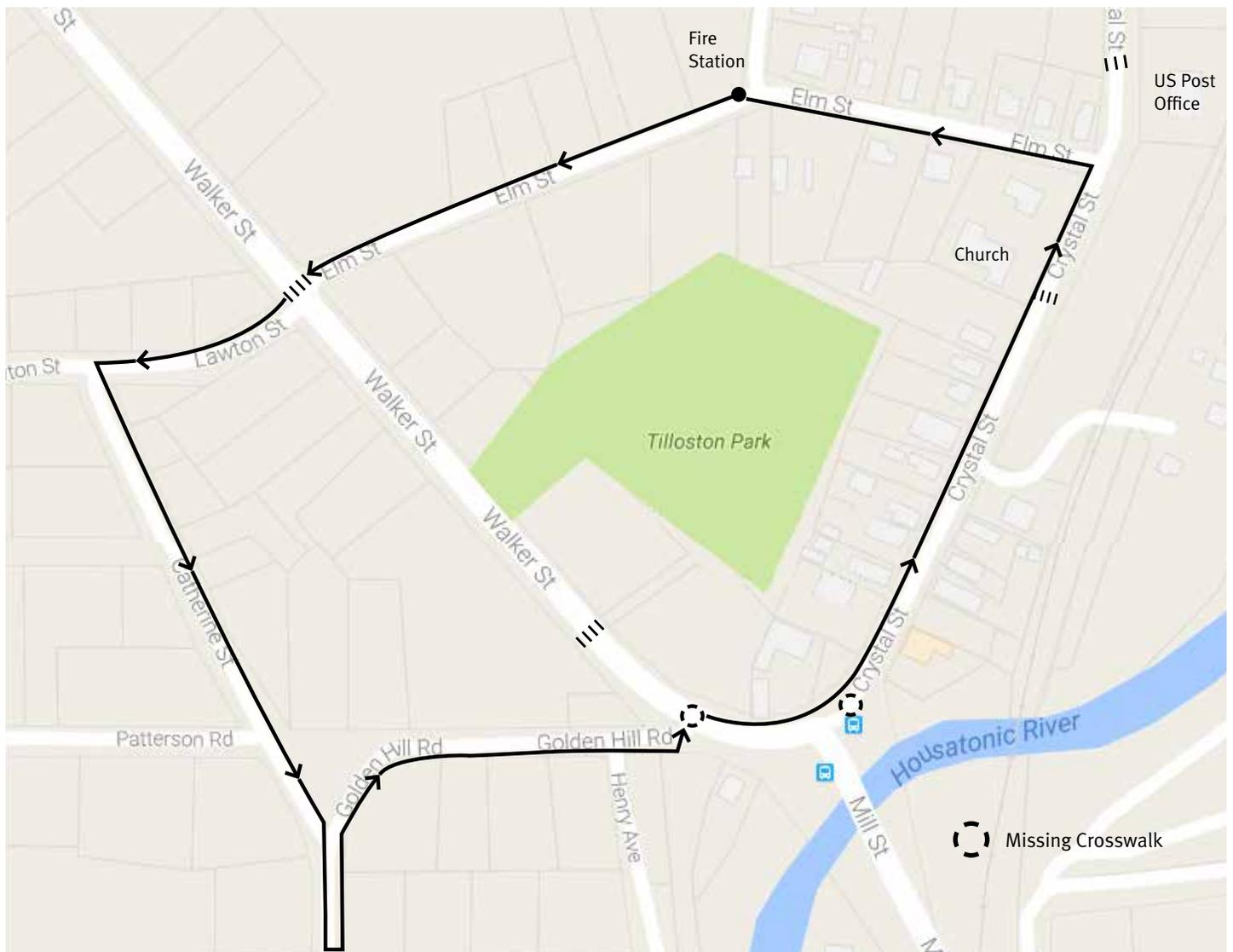
*Relationship between Lenox and Lenox Dale*

## Walk Audit

The walking route was a loop beginning and ending at the historic firehouse. The group exited the firehouse and walked southwest down Elm Street; cautiously crossed Walker St and continued west onto Lawton St. We then turned left and headed south down Catherine St, proceeding south on Golden Hill Rd. After walking almost up to the summit on Golden Hill Road, we turned around and headed back down Golden Hill Road and crossed Walker Street again near Moonshines Package & Variety. We discussed the current resurfacing project on Crystal Street and the proposed changes to Walker Street at this intersection. Finally, we walked northeast up Crystal Street, past the church, and back to the firehouse.



Participants observing Crystal Street/Mill Street intersection



Walk audit route

## Participants

The walk audit participants included Lenox municipal staff, regional planners, elected officials and Lenox Dale residents. Each brought their perspective and stories about their experiences walking in and around the Dale.

Stacey Beuttell	WalkBoston
Joel Catalano	Resident
Eammon Coughlin	Berkshire Regional Planning Commission
Jan Durfee	Resident
Lauren Gaherty	Berkshire Regional Planning Commission
Bill Gop	Superintendent of Public Works
Sandra Hull	Resident
Tom Joyner	Resident
Lillian Joyner	Resident
Ed Lane	Town Selectman
Mary Jane Mattina	Resident
Mary McDarby	Resident
Gwen Miller	Lenox Town Planner
Mike Oft	Resident
Kay Oft	Resident
Morgan Ovitsky	Mass in Motion Coordinator, Be Well Berkshires
Larry Strauss	Resident
Fran Weinberg	Resident
Julia Wu	WalkBoston

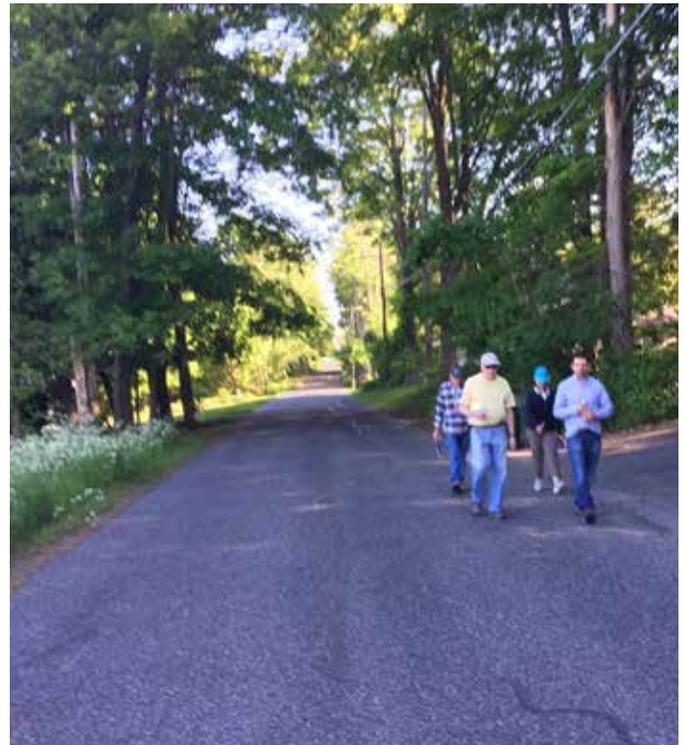
## Key Recommendations

Overall, the walking conditions of Lenox Dale are safe and enjoyable. The majority of roads are small, winding residential streets lined with well-maintained yards and hidden gardens, such as the Golden Hill Memorial Garden. Walk audit participants noted that Mill Street, Walker Street and East Street carry higher traffic volumes with higher speed traffic leading to Route 7, Lenox Center and other neighboring communities. They also expressed concern about the increasing traffic and speeds of vehicles on Crystal Street. The following sections detail specific recommendations for improvement of issues that affect walkability and pedestrian safety in Lenox Dale.

Consider traffic calming strategies to preserve “shared street” culture on residential streets and to slow traffic down on the major collector streets.

The residential streets in Lenox Dale, such as Catherine Street and Golden Hill Road, are generally narrow, with no sidewalks or pavement markings. They are wide enough for cars to pass by; however, when there are cars parked on the side of the road, moving vehicles are limited to one travel lane and must take turns. Aside from rush hour, the traffic is generally slow moving. Drivers traveling down these roads tend to be aware of and leave space for pedestrians who walk on the roadway.

Adding pavement markings on residential streets would help to define the areas where each road user should be. However, as noted by one walk audit participant, this could actually create territoriality and less cautious driving—exacerbating or even creating a problem that does not currently exist. A study completed by Transport for London eliminated center lines on three streets and found that it slowed the average driving speeds between 5 and 9 miles per hour (<http://content.tfl.gov.uk/centre-line-removal-trial.pdf>).



*Golden Hill Road is a residential road in the Dale with no pavement markings that works as a shared use street.*



*The curve at the Catherine/Golden Hill intersection can feel dangerous to walk along given limited sight distances for drivers and walkers.*

The curve at the Catherine Street and Golden Hill Road intersection feels dangerous to walk along given the blind curve, significant grade change, and lack of sidewalks. Drivers struggle with the compromised sight lines and often accelerate around the curve to move up the hill when turning onto Catherine Street from Golden Hill Road. Catherine Street is controlled with a stop sign, so drivers do not pick up exceptional speeds before approaching Golden Hill Road. Residents who walk this route often have had experience with fast-moving traffic and walk cautiously in this area.

Walk audit participants stated that cars frequently speed down the main collector roads that run through Lenox Dale, including Crystal Street and Walker Street. These speeds create an environment that can feel unsafe or uncomfortable to walk in, and one that also deviates from the overall rural village atmosphere of the Dale. The town is in the process of making improvements to slow traffic on Walker Street with the addition of a sidewalk and bicycle lanes.

Crystal Street is essentially a long straightaway with little development along it between Brown Street and Housatonic Street. The road has well-maintained pavement markings including a centerline and fog lines, but there is little “friction” along the roadway, that is few intersections, driveways, vertical elements, or crossings. As a result, drivers have a tendency to drive faster. As the town considers Crystal Street as a potential multi-use trail link, strategies to reduce traffic speeds, such as narrowing travel lanes, should be considered.

#### ***Short-term recommendations:***

- Consider adding sidewalks or pedestrian lane pavement markings on residential streets with high volumes of pedestrians and relatively high volumes of vehicles driving quickly. Potential roads: Patterson Road to the Montessori School entrance drive, Catherine Street, or Golden Hill Road north of Lasher Lane.
- Be deliberate about designating roadways that will remain shared with no pavement markings delineating space for user groups. Potential roads: Lawton Street, Henry Avenue, School Street, and Old Town Way.
- Consider narrowing travel lanes (no wider than 11’) by repainting fog lines on Crystal Street
- Work with Lenox police department to evaluate reported speeding issues on Crystal Street. Initiate speed enforcement patrols periodically if driver behavior warrants them.

#### ***Long-term recommendations:***

- Prioritize residential roadways in the Dale in need of additional pedestrian infrastructure – sidewalks or pavement markings.



*Utility poles partially obstruct the sidewalk on Elm Street*

Prioritize sidewalk construction along roads where either dangerous pedestrian conditions exist, or where pedestrian volumes justify the need. Build sidewalks that are accessible, unobstructed and smooth.

Most roads in the Dale do not have sidewalks. Along the walk route, Elm Street and Crystal Street do have sidewalks. Unfortunately, the narrow sidewalk on Elm Street is partially obstructed with utility poles. Many people find it easier to walk on the road, which is not as safe as on the sidewalk. The Crystal Street sidewalk is continuous, smooth and meets the typical 5 foot-width standard.

Walker Street currently does not have sidewalks, but one will be added when it is reconstructed in Spring 2018. Town staff members discussed the possibility of extending the sidewalk up Golden Hill Road to Henry Avenue as part of the Walker Street reconstruction project.

Accessibility is challenging along the walking route both due to the topographical changes in the Dale as well as missing or non-compliant curb ramps on existing sidewalks. As new sidewalks are added, accessibility must be addressed in construction.

#### *Short-term recommendations*

- Include sidewalk extension along Golden Hill Road to Henry Avenue as part of the Walker Street reconstruction project



*Location of proposed sidewalk extension to Henry Avenue*

- Evaluate whether sidewalks are needed or feasible along or at the Catherine Street/ Golden Hill Road intersection
- Evaluate whether any of the residential streets need sidewalks based on dangerous walking conditions or high pedestrian and vehicular traffic volumes

#### *Long-term recommendations:*

- Replace Elm Street sidewalk to meet accessibility standards – width, curb ramps and detectable warning panels
- Add accessible curb ramps along Crystal Street at all intersections and marked crosswalks

#### **Increase the number and the safety of marked crosswalks in the Dale.**

The section of Walker Street included in the walk audit currently has two crosswalks: one at the intersection of Walker Street, Elm Street and Lawton Street, and one further south at the access road leading into Tilloston Park. The Walker, Elm and Lawton crosswalk will be replaced during the Walker Street reconstruction; it currently has no curb ramps for accessibility and lacks any advance pedestrian crossing signage.

The second crosswalk on Walker Street at the access road to Tilloston Park will be relocated north of its existing location. Curb ramps and signage will be included as part of the reconstruction.

There are two crosswalks on Crystal Street in the Dale: one at St. Vincent Catholic Church, and one by the Lenox Dale Post Office. Neither of them is accessible. The St. Vincent Catholic Church crosswalk currently leads into a parking lot, and does not have curb ramps. The post office crosswalk leads into a driveway.

After the crosswalk at the Post Office, there are no other marked crosswalks until the entrance drive to the water/sewer treatment plant just south of the Housatonic Street intersection. The crosswalk allows people walking to access the sidewalk on the west side of the street, since the sidewalk on the east side of Crystal Street ends. There are no crosswalks at the Housatonic Street intersection near the Berkshire Scenic Railroad Museum.

There are currently no marked crosswalks at the Walker Street/Mill Street/Crystal Street intersection, including at the bus stop located on the east side of Crystal Street. Vehicular traffic traveling northbound on Mill Street has a stop sign, but no other approaches are required to stop. Walk audit participants describe this intersection as very busy during rush hour.

#### ***Short-term recommendations:***

- Include construction of accessible curb ramps and a crosswalk on Crystal Street at the bus stop in the current Crystal Street resurfacing project.
- Install advance crosswalk signs and pedestrian crossing signs at existing crosswalks
- Consider additional crosswalks on Crystal Street north of the Post Office, if needed near other entrance roads along the east side of Crystal Street.



*Town staff are evaluating the possibility of installing a curb ramp and crosswalk at the bus stop on Crystal Street as part of this summer's resurfacing project.*

- Study need for additional crosswalks at the Walker Street/Mill Street/Crystal Street intersection. One may be needed if a walking route is established along Crystal Street reaching into town-owned land along an easement on the west side of the Housatonic River beyond the intersection with Walker Street.

#### ***Long-term recommendations:***

- Upgrade existing crosswalks to meet current accessibility standards – curb ramps and detectable warning strips.

**Consider Crystal Street as potential link in walking route/multi-use trail planning efforts to connect open space and historic resources.**

A proposed multi-use trail concept is currently being considered to connect neighboring communities to open space areas and historic assets. Crystal Street runs along the Housatonic River corridor and may be a key connection (temporary or permanent) along this proposed route. Crystal Street is a two-lane road with a continuous sidewalk on the west side of the street. There is also a sidewalk on the east side of the street from the Walker Street intersection to the Post Office. Both sidewalks are approximately 5 feet wide.



*The Crystal Street sidewalk could be widened to accommodate a multi-use trail connection.*

Given the low number of pedestrians walking on the sidewalk along Crystal Street between the Post Office and the Housatonic Street intersection, it may be a good candidate for a shared path with cyclists. Shared use paths that are two-directional must be 10 feet wide according to most shared use path guidance. The current sidewalk is only 5 feet wide. Therefore, the shared use path could be considered one way, or the sidewalk could be expanded to accommodate bi-directional traffic. If the sidewalk cannot be expanded, a bike lane on the northbound side of Crystal Street should be considered.

**Short-term recommendations:**

- Study the feasibility of expanding the sidewalk on the west side of Crystal Street
- Study the feasibility of bike lanes or one bike lane on the northbound side of Crystal Street

**Long-term recommendations:**

- Initiate formal feasibility study of a walking route/multi-use path to connect open space and historic assets along the Housatonic River with other neighboring communities



*Potential multi-use trail corridor connecting open space assets along the Housatonic River*

## 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](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

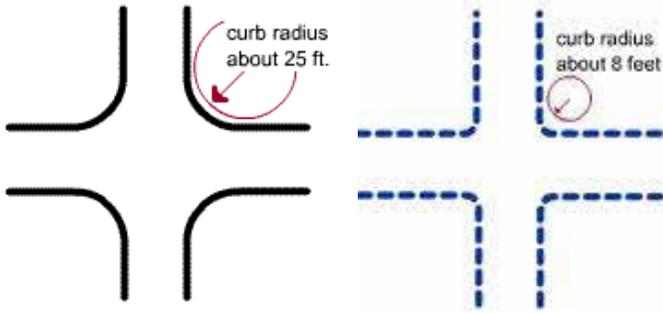
A sidewalk extension into the street (into the parking lane) shortens crossing distance, increases visibility for walkers and encourages eye contact between drivers and walkers.



*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.

