

# PLANNING FOR COMPLETE STREETS IN GLOUCESTER



## A REPORT FOR AND BY THE GET FIT GLOUCESTER! PARTNERSHIP

Get Fit Gloucester!



working for a  
Fit-Friendly Gloucester



**Mass  
in Motion**

Better health. It's your move. ®

APRIL 2012 DRAFT

Gloucester Community Development Department

## ACKNOWLEDGEMENTS

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# PLANNING FOR COMPLETE STREETS IN GLOUCESTER

## **Part 1: Executive Summary / Community Priorities**

To Be Determined After Further Public Input

SPW Observations: Successful implementation of this plan requires a sustained effort from local residents to improve conditions for pedestrians and bicyclists. Local politicians and municipal staff respond when the community expresses its needs. The vast majority of trips within Gloucester are by motor vehicle so the normal mode of operation is to maintain streets to accommodate the daily needs of motorists. Interest exists in improving sidewalks and making streets and trails safer for bicyclists; the current challenge for the Gloucester walking and bicycling community has been the lack of a consistent grassroots group or individuals to become the voices (and faces) for walking and/or bicycling in Gloucester.

As some residents step up to become more involved in efforts to implement these plans, its important for the community to support these individuals and groups working at the grassroots level. Personally, as a City staff member I have made some pro-active effort to identify and support individuals interested in working at the grassroots level. More support and effort is needed.

Interestingly, regional bicycle ride clubs avoid Gloucester in their regular weekly on-road rides as well as their on-road centuries. Ride clubs primarily focus on finding safe, less-traveled routes for organized rides. Ride clubs may support individual members who advocate for on-road safety improvements. Cape Ann's scenic beauty attracts bicycle tourists that enjoy the scenery and bear with the road conditions. Many Gloucester residents walk or bicycle out of economic necessity and do not belong to organized groups so more effort must be made to outreach to this constituency.

## PART 2: INTRODUCTION AND STATEMENT OF PURPOSE

- a. Goal of Get Fit Gloucester!  
Creating a Fit Friendly Gloucester

In 2009 the City of Gloucester received a Mass in Motion grant through a partnership with the Massachusetts Department of Public Health and various foundations including the Harvard Pilgrim Foundation to create the Get Fit Gloucester! Partnership.

Mass in Motion and Get Fit Gloucester! seek to address increasing levels of obesity in our society through changes in our community to support more physically active lifestyles and access to fresh healthy foods. These programs seek to make active transportation choices such as walking and bicycling safer and more convenient and to be the easiest choice for shorter trips within Gloucester.

One way many communities support active lifestyles is by creating “Complete Streets”.

### Vision for a Fit-Friendly Gloucester:

Opportunities for fitness and access to healthy foods will start in our backyards, as we step out of our homes, as we walk down the street, visit a park, tend a community garden plot, go to a local business or hike a local trail.

Our children can safely walk or bike to school...and to the library, the park or local store. At lunchtime, we can take a relaxing walk or go for a bike ride or run, returning to a shower and refreshed for the afternoon. We can combine our errands with easy access to a harbor walk or the neighborhood park on the way home where our children can let off steam and we relax. There are clearly-marked bike trails for family outings as well as safe round the Cape routes for the teenagers and adults.

We find healthy and affordable foods are available from local farmers and fishermen, the farmers’ market, multiple supermarkets and the food pantry. The school lunch program provides healthy foods for our children that keep them fit and alert in class. Our children grow and taste vegetables and visit local farms and fishermen. The restaurants in the City offer us healthy options and fit-friendly portions.

Our medical community engages us in monitoring and improving our health and wellness and helps guide us to appropriate and engaging health and fitness options offered by community organizations and businesses. Insurance carriers and businesses work co-operatively to create work environments that support health and wellness.

- b. What is a Complete Street?

The National Complete Streets Coalition<sup>1</sup> describes “Complete Streets” as follows:

*Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.*

*The intent is to change the everyday practice of transportation agencies so that every mode should be part of every stage of the design process in just about every road project*

- c. Why Complete Streets for Gloucester?

*Complete Streets increase transportation options and equity – streets designed with only cars in mind limit transportation choices by making walking, bicycling, and taking public transportation inconvenient, unattractive, and, too often, dangerous even when people must or want to choose active transportation. Complete Streets recognizes that about 30 percent of Gloucester residents*

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<sup>1</sup> This section uses information provided by the National Complete Streets Coalition.

can not drive for their primary means of transportation. Children and young teens, who make up 16% of Gloucester's population, are not permitted to drive themselves<sup>2</sup>. Teens of driving age, young and low-income adults and seniors do not have convenient access to an automobile. Locally 9% of workers relied on walking, transit and bicycling as their means of transportation<sup>3</sup>. Many adults have disabilities that impair their ability to drive themselves. Nationally, 9% of adults have medical conditions that impair their ability to drive<sup>4</sup>.

Providing streets that allow the full-age spectra of Gloucester residents helps create a more respectful view of pedestrians, transit users and bicyclists and encourages more courteous interactions between various users.

*Complete Streets improve safety.* A Federal Highway Administration safety review found that streets designed with sidewalks, raised medians, better bus stop placement, traffic-calming measures, and treatments for disabled travelers improve pedestrian safety.

Figures 1 and 2 show the location of pedestrian and bicycles crashes in and around Gloucester over the twelve year period from 1995 to 2007. Figure 1 maps crash locations throughout Cape Ann and shows that most crashes occur in the more congested areas of Downtown Gloucester and Rockport. Figure 2 maps the crashes in Downtown Gloucester. The long-term nature of this data allows some patterns to be observed. Most pedestrian crashes in Downtown occur along state numbered roads (Washington Street and Rogers Street), as well as Main Street and Centennial Street. (36 of 51; 71%) Bicycle crashes in the City occur with particular frequency along Route 133, Route 127 and 127A from Stage Fort Park, along Rogers and Main Streets to Bass Avenue (19 of 26; 73%).

Crash data provides some indication of locations of frequency accidents; however, assessment of overall pedestrian and bicycle safety must factor in both crash frequency and the total number of pedestrians and bicyclists using a location.

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<sup>2</sup> 2010 Census Data

<sup>3</sup> 2000 Census Data (2010 Census did not collect this data)

<sup>4</sup> The 2001 National Household Travel Survey, person file, U.S. Department of Transportation.

Figure 1  
Cape Ann Pedestrian and Bicycle Crashes

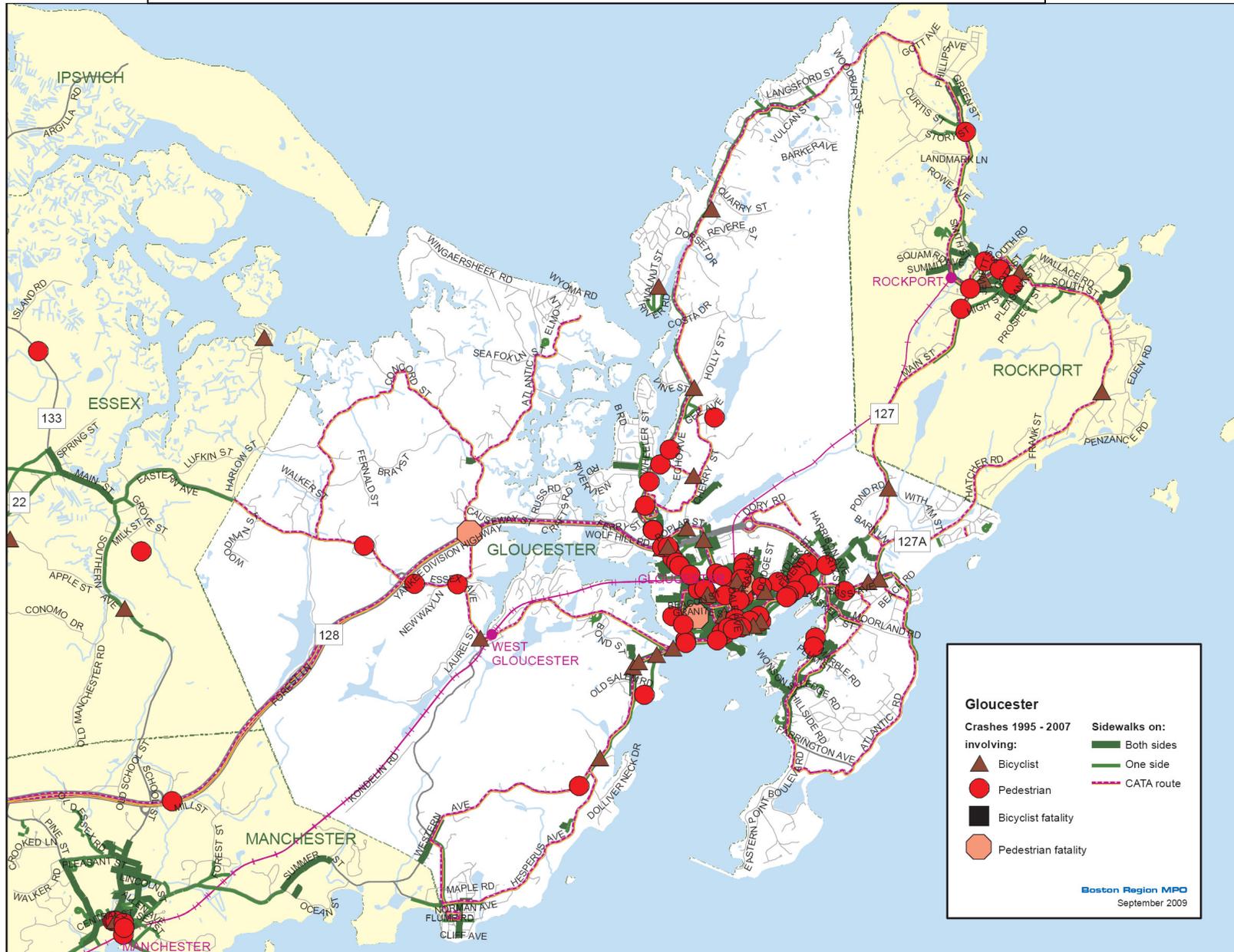
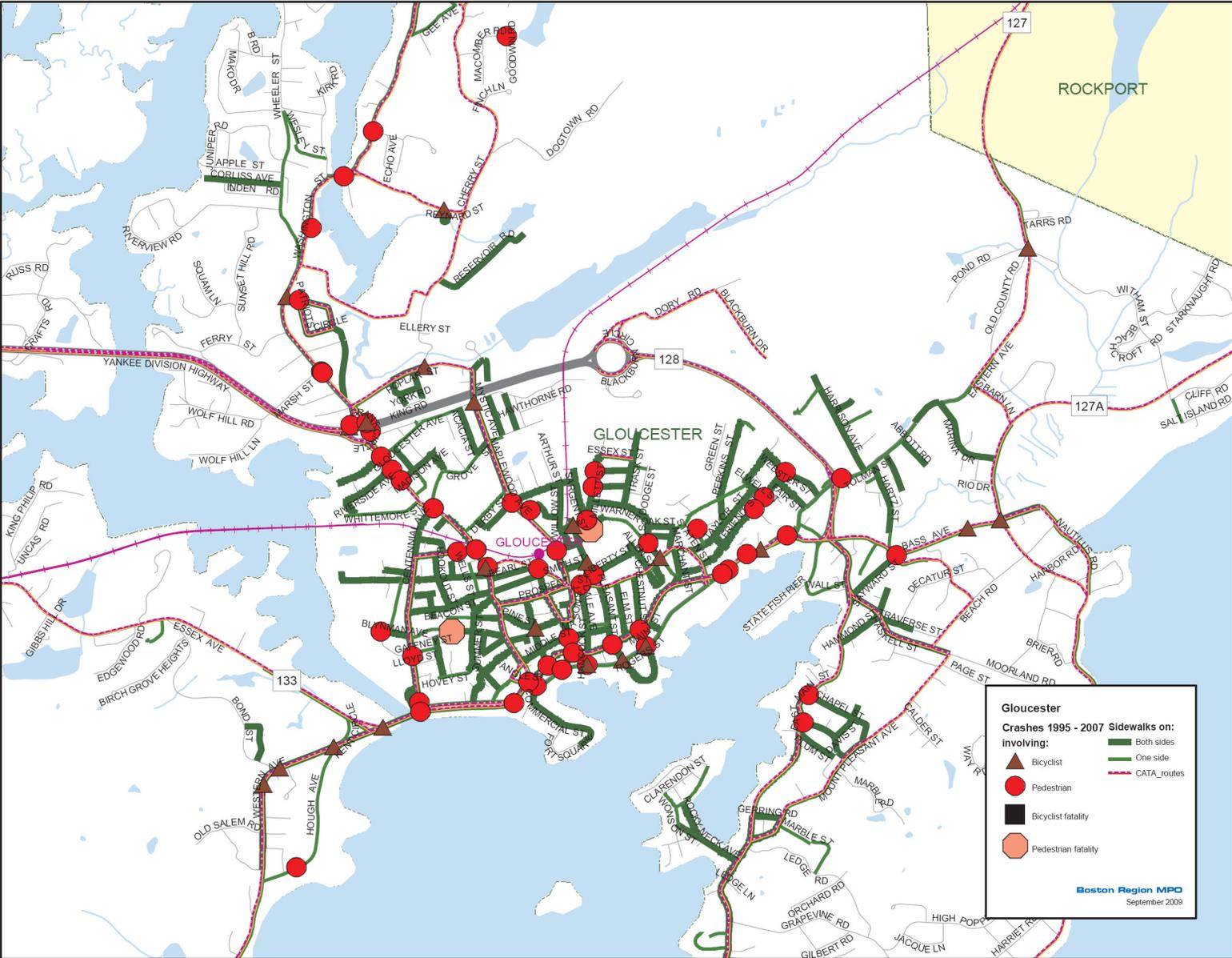


Figure 2  
Downtown Gloucester Pedestrian and Bicycle Crashes



*Complete Streets encourage walking and bicycling for health.* Complete Streets are a necessary element of promoting walking and bicycling for health. Public health officials have found communities with physical environments that support active living result in healthier behaviors. One study found that 43% of people with safe places to walk within 10 minutes of home met recommended activity levels; among individuals without a safe place to walk, just 27% were active enough. Easy access to transit also contributes to healthy physical activity: nearly one third of transit users meet the Surgeon General's recommendations for minimum daily exercise through their daily travels.

*Complete Streets can lower transportation costs for families.* Americans spent an average of 18 percent of their income on transportation, with the poorest fifth of families spending 36 percent. In fact, most families spend far more on transportation than on food. When residents have the opportunity to walk, bike, or take transit, they have more control over their expenses by replacing car trips with these inexpensive options. Taking public transportation, for example, saves individuals \$9,581 each year.

*Complete Streets foster strong communities.* Complete Streets play an important role in livable communities, where all people, regardless of age, ability or mode of transportation, feel safe and welcome on roadways. A safe walking and bicycling environment bolsters public transit use and creates friendlier communities. A recent study found that people who live in walkable communities are more likely to be socially engaged and trusting than residents of less walkable neighborhoods. They also reported being in better health and happier more often.

*Complete Street policies ensure connectivity between important destinations.* Get Fit Gloucester! with the assistance of WalkBoston has developed a GloucesterWalks map. This map show walking routes to key destinations in Downtown Gloucester along with scenic walks in Magnolia Annisquam and Lanesville. Pedestrians and bicyclists can not readily reach their desired destination if the City does not create a network of sidewalks and bicycle accommodations that allow them to.

*Complete Streets Support Tourism.* Tourists whether they arrive by car, train, bus or cruise ship often prefer to walk through areas of Gloucester in order to take in the local sights and smells that make Gloucester an interesting tourist destination. The Chamber of Commerce and Discover Gloucester publish walking maps of Downtown Gloucester, the Gloucester Maritime Heritage Trail and Rocky Neck to encourage tourist to take advantage of Gloucester's pedestrian-scale shopping district, visit local museums and historic sites. Trail maps also exist for Ravenswood Park and Dogtown Common.

*Complete Streets Further Gloucester's Clean Energy and Open Space & Recreation Plans.* Increased active transportation reduces motor vehicle use, cutting air pollution and global warming. Gloucester's Clean Energy Commission recognizes promotion of active transportation as one means achieve the City's goal to cut carbon emissions in the next ten years. The City's 2011-2017 Open Space and Recreation Plan bold proposes the creation of a "Green Path Network" that would connect the City's outlying villages, woodlands and Downtown with a series of off-road paths. When off-road paths prove to be infeasible, the Green Path Network will follow existing streets.

## PART 3: GLOUCESTER’S CURRENT PEDESTRIAN ENVIRONMENT

### 1. Walkability by Ward

#### a. Downtown and Riverdale (Wards 2 and 3)

Figure 4 shows the network of sidewalks that exist in and around downtown Gloucester (primarily Wards 2 and 3). The downtown area has the highest density of residents and sidewalks. Downtown Gloucester’s combination of stores, restaurants and services serves as an ideal location for those wanting a walkable place to live and work, apartments near Main Street can have perfect Walk Scores® of 100!<sup>5</sup>

Downtown Gloucester stretches out from the Harbor, along Rogers Street, East Main Street and Bass Avenue to East Gloucester, connecting up to Riverdale via Washington and Maplewood Streets and stretching out towards Stage Fort Park along Stacy Boulevard and over the Blyman Drawbridge. The quality of sidewalks varies substantially on these major streets.

Main Street serves as the commercial heart of Gloucester with numerous shops, restaurants, banks and other businesses and some residential above. The City hired Gilman and Gander to develop a streetscape plan for Main Street and Rogers Street in 1996 (see Page 40 for more information). The City implemented the Main Street portion of G&G plan in 2005 installing ADA



ramps, creating wide brick sidewalks with street trees and allowing room for some outdoor dining and sidewalk sales. “Block Parties” occur monthly in the summer with businesses pouring on to the street and residents flocking up and down to enjoy the festivities. The Dale Avenue area is the government hub with Gloucester City Hall, the Sawyer Free Library and the Post Office all in close proximity. The City DPW does snow removal on Main Street in the winter.



Rogers Street primarily has asphalt sidewalks (olive-green on Figure 4). The streetscape varies between attractive business fronts to fences and disorganized parking. Several key intersection lack ADA ramps including Harbor Loop near the Building Center. The City has not yet implemented the Rogers Street portion G&G plan. That plan proposed narrowing the curb to curb width of Rogers Street from 48 to 40 feet allowing for wider

<sup>5</sup> <http://www.walkscore.com/apartments/details/School-St-at-Middle-St-Gloucester-MA-US/9679558> 12-28-2011

sidewalks on both sides. The G&G plan needs to be revisited since current MassDOT guidelines probably would not allow such a dramatic narrowing of a state number road. The sections of Rogers and Washington Streets that need updated planning studies are highlighted in the purple box in Figure 5. Some Rogers Street sidewalks from Latitude 43 towards the Harbor Loop will be reconstructed as part of the 2012 Harbor Walk improvements.

The Railroad Avenue area also has many businesses. A wide concrete sidewalk sits immediately in front of the Gloucester MBTA commuter rail station and extends towards Washington Street. No sidewalk exists between the station and Maplewood Street by Shaw's (see red highlighted area on Figure 4). The southern stretch of Railroad Avenue has an asphalt sidewalk that has extensive interruptions by wide driveway aprons or blends into adjoining parking spots.



Railroad Avenue: Sidewalk missing in from of Shaws

Washington Street is lined with a mix of small businesses and homes set close to concrete and asphalt sidewalks. Many intersecting streets have outdated ADA ramps or lack them all together. The City has developed design plans for reconstruction of Washington Street from Grant Circle towards the Joan of Arc Statue (highlighted by orange box). Congressman Tierney has secured \$3 million in Federal Transportation funding for this project.



Washington Street Conceptual Design

Downtown becomes more and more residential further from the harbor. Houses tend to be on small lots on relatively narrow streets and even narrower asphalt sidewalks. Parking on sidewalks frequently occurs. Snow removal can be sporadic.

Maplewood Street has sidewalks on both sides lined with numerous apartments, tightly-packed homes and auto repair businesses. To cope with the narrow road width many vehicles are inappropriately parked partly or entirely on the sidewalk.

Route 128 separates the Riverdale neighborhood from Downtown Gloucester. Riverdale has more low-income residents and many school-age children who rely on walking to access Downtown. The shortest route follows Washington Street and crosses Route 128 at Grant Circle where MassDOT has installed a self-actuating pedestrian crossing signal. High traffic volumes and speeds probably discourage more residents from using this route. The longer route from Riverdale to Downtown follows Poplar Street to Maplewood Street. The sidewalk here varies in width and has missing section or “gap” in the sidewalk network is located on Poplar Street near Cherry.



Sidewalk Gap – Poplar Street at Cherry

Gloucester Crossing along Route 128 is a major new retail center established in the last two years. The Planning Board required that the development be connected to nearby residential areas via a walking path at the end of Perkins Street. Residents also frequently walk along a paved footpath through Green Street Park to the development. The City plans to install lighting along this foot path as requested by residents.

#### b. Centennial Avenue / Emerson Avenue



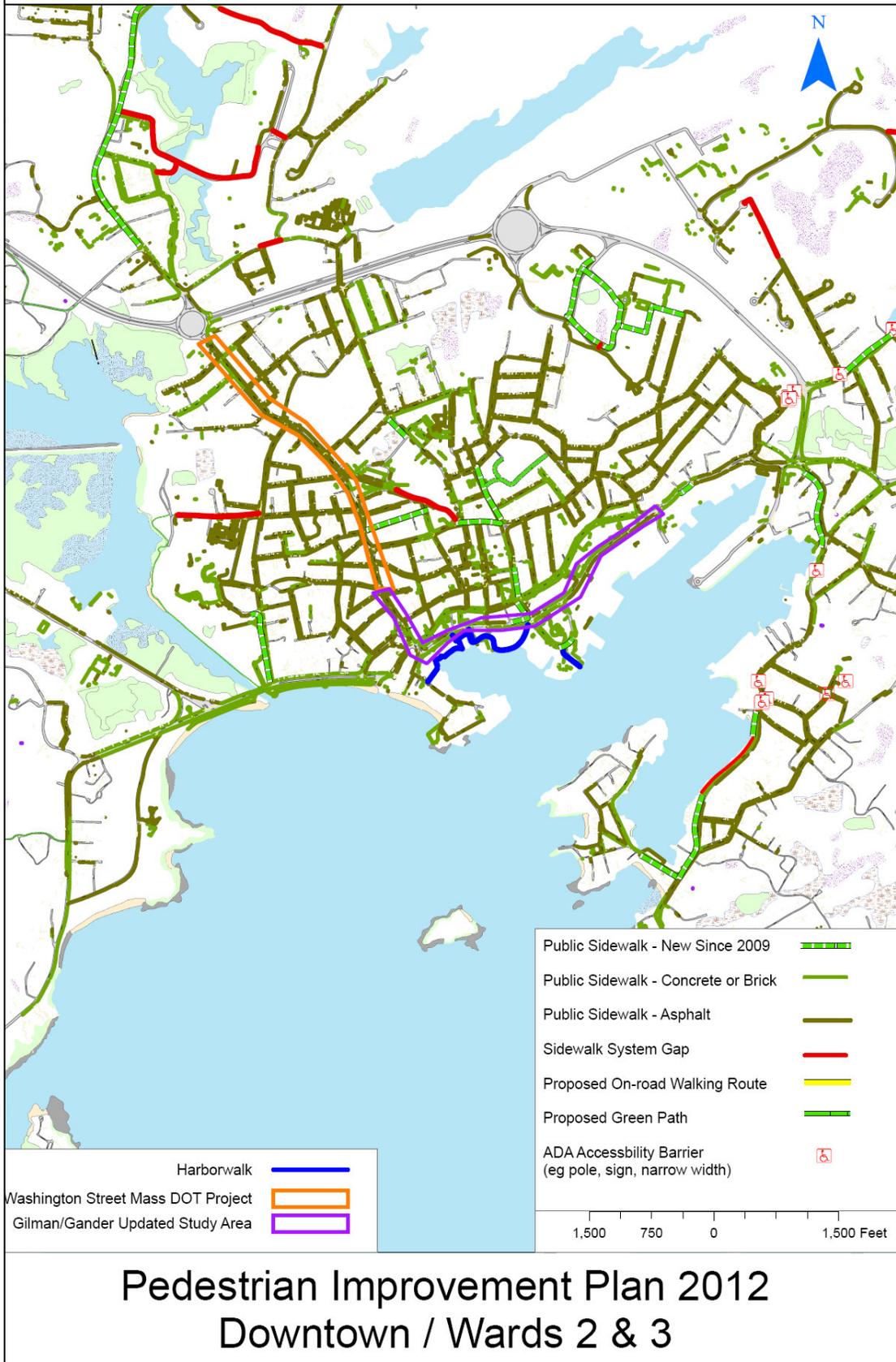
The City in 2010 completed major improvements to the Centennial Avenue sidewalks between Stacy Boulevard and Leslie O’Johnson Drive near Gloucester High School, adding granite curbs and concrete sidewalks (on of the bright green areas on Figure 5). The Gloucester Police stepped up efforts to enforce no parking on sidewalk and shoveling ordinances at this location as well.

Centennial between Leslie O’Johnson Drive and Washington Street has asphalt sidewalks that are currently in fair to poor shape. The intersection at Emerson Avenue has a very long crosswalk. Emerson Avenue lacks currently lacks a continuous, well-defined sidewalk. Emerson Avenue serves both the

Open Door Food Pantry and the Pathways for Children Headstart program low-income orientated service organizations that have many clients that rely on transit and walking. The Lincoln Park Apartment Complex run by the Gloucester Housing Authority also sits off of Emerson. As a result of the likely needs of these users, the City should develop plans to add a sidewalk along Emerson (highlighted in red on Figure 4).



Figure 4



c. Eastern Avenue (Ward 1)

Eastern Avenue starts at Main Street and travels towards the Rockport line. The City in the past 2 years improved sidewalks near the Veterans School and from Route 128 to former Eastern Avenue school. These improvements included installing ADA ramps at street and driveway crossings and installing new concrete sidewalk in some stretches. The southside Eastern Avenue sidewalk ends just prior to Shaw's. The northside sidewalk tends to be overgrown.



Eastern Avenue Before and After Sidewalk Improvements

Between Barn Lane and the cemetery, the sidewalk exists only on the northside. Many residents walk on the dirt shoulder on the southside or in the roadway since this is more convenient than trying to cross back and forth. Residents attending a Ward 1 meeting indicated that they would like a sidewalk added at this location.



d. East Gloucester: East Main and Rocky Neck (Ward 1)

East Main Street heading into East Gloucester has seen numerous sidewalk improvements over the past two years (See Figure 5). Between Bass Avenue and Cripple Cove landing, new, wider sidewalks were installed and a shoulder stripe has been installed, creating more separation between pedestrians, bicyclists and motorists and upgrading the ADA accessibility of the area. Similar improvements were completed near Rocky Neck and concrete sidewalks were extended past the parking lot on Rocky Neck.



The sidewalks near Beacon Marine continue to present a problem. Motor vehicles often straddle the sidewalk at this location. The sidewalk itself is narrow with a significant cross slope. Parents pushing baby strollers can be forced to walk in street at this location. DPW decided not to reconstruct the sidewalk at this location while repaving the street in 2011 due to concerns that this could entail work on a hidden seawall or piers.



the

Farrington Avenue connects Eastern Point Boulevard to Atlantic Avenue. This connection serves as a portion of the loop around East Gloucester that includes East Main Street, Eastern Point Boulevard, Atlantic Street and Bass Avenue. The loop and the scenic views along the way attracts many runners and walkers. Farrington Avenue is the biggest stretch of the loop without sidewalks; on the other hand, Farrington's wide pavement width and moderate speeds and traffic volumes allow runners and walkers space and relative comfort. Bicyclists enjoy the loop as well though the narrow widths of East Main Street and the high volume of traffic on Bass Avenue detract from making this route even more popular. The City repaved Farrington in 2011. The City-owned right-of-way could accommodate a sidewalk or striped shoulders to create more distinct separation between pedestrians and vehicles.

e. Access to Good Harbor Beach: Thatcher Road, Witham Street

Residents in the Nautilus Road neighborhood can access Good Harbor Beach on foot using the footbridge near the end of Beach Street. Residents of Nugent Farm lack sidewalks to provide access to either southwest towards the existing footbridge or east to the main vehicle access off of Thatcher Road. Nugent Farm residents counted several hundred people walking along Thatcher Road towards the main vehicle access over 4<sup>th</sup> of July weekend in 2011. A preliminary idea under consideration would be to create a boardwalk from Old Nugent Farm road towards Witham Street. To advance that idea will require the City to conduct a detailed survey of the road and salt marsh in order to assess whether such a boardwalk can be constructed without adversely impacting the salt marsh. Part of that survey and study should also consider the option of extending a sidewalk from Old Nugent Farm toward Barn Road and Marina Drive where it would connect into sidewalks leading to the existing footbridge.

Witham Street neighbors and employees from Blackburn Industrial Park use Witham Street to access Good Harbor Beach from the end of Witham Street. Witham Street is a relatively narrow road (30 feet and under) that winds its way up and down through a primarily residential neighborhood; few businesses are located on the Eastern Avenue end. Witham Street as a connection between Thatcher Road (Route 127A) and Eastern Avenue (Route 127) receives some cut through traffic. The City completed repaving

Witham Street in 2011 and striped lanes and shoulder lines that provide better delineated separation between vehicles and pedestrians. Residents asked about sidewalk installation prior to construction. The narrow right-of-way, the substantial cost to install sidewalks and the lack of evidence of past pedestrian accidents on the street were all factors that



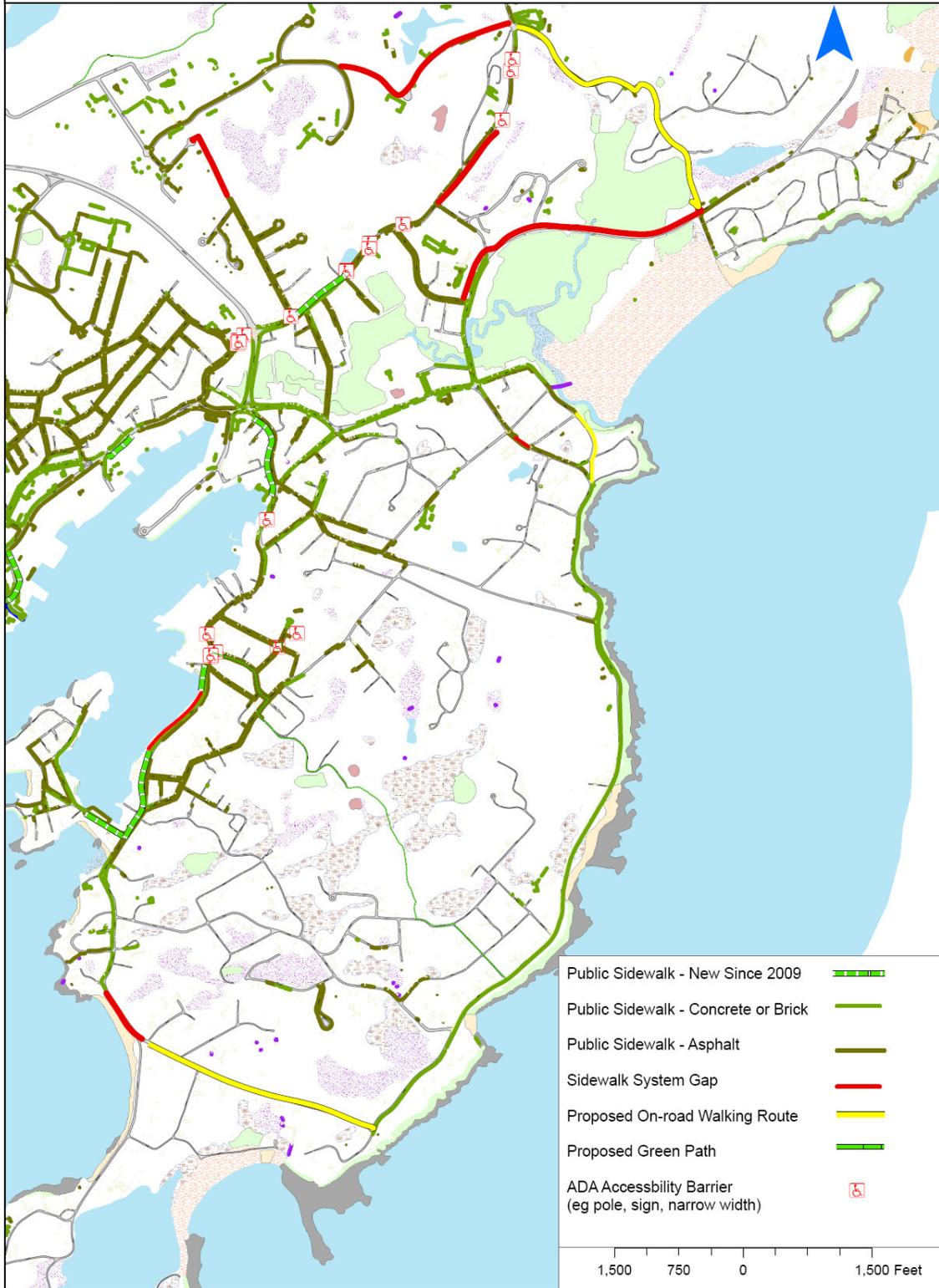
weighed against installing sidewalks. Witham's narrow width does not allow for bicycle lanes. Consideration could be given to installing "Yield to Pedestrians in Road" signs and "sharrow" markings to highlight presence of pedestrians along this road.



f. Access to Blackburn Industrial Park: Harrington Street and Pond Road

Employees have no official and legal pedestrian or bicycle access to Blackburn Industrial Park since legal access is provided from Route 128 to Dory Road at Blackburn Circle; a portion of Route 128 that lacks sidewalks and bans bicycles. Employees who do access Blackburn Circle can do so via the end of Harrington Avenue or by crossing the gravel yard at the end of Pond Road.

Figure 5



## Pedestrian Improvement Plan 2012 East Gloucester / Ward 1

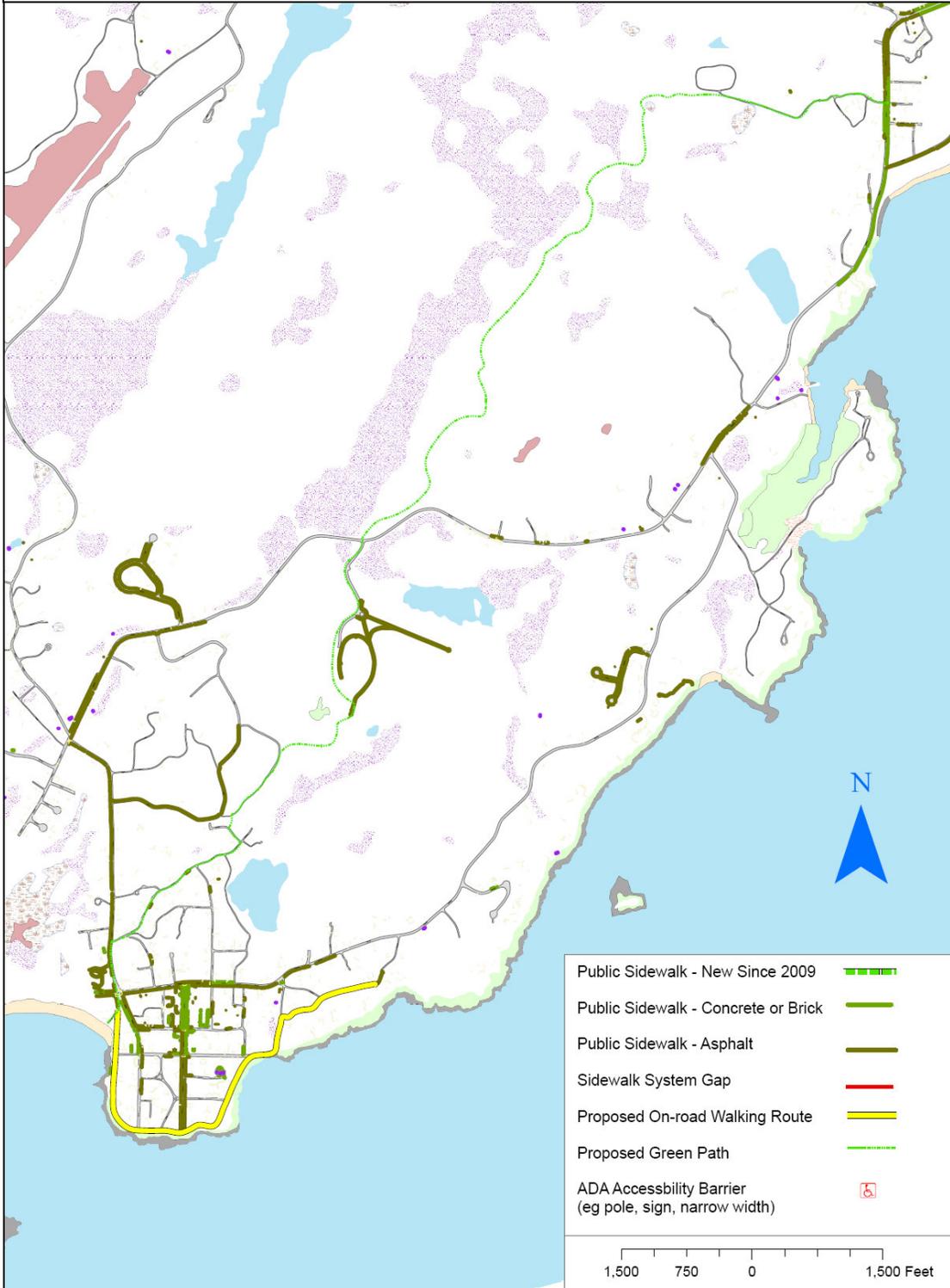
g. Villages: Magnolia, Annisquam and Lanesville

Magnolia (Ward 5): Magnolia once served as a thriving shopping village for the numerous wealthy visitors who came to the high-end resorts once located there. Lexington Avenue has wide, tree-lined sidewalks along attractive business fronts. The Magnolia Library and Post Office serve as community destinations. With the exception of Dunkin' Donuts, other retail businesses and restaurants have struggled there. Magnolia has a convenience store and pizza shop both located at the corner of Magnolia and Norman Avenues. Magnolia's proximity to Manchester-by-the-Sea's larger and more vibrant retail area presents a challenge to sustaining a business along Lexington Avenue.

Many residents enjoy walking along scenic Shore Drive a narrow oceanfront road (sans sidewalks) with views of Magnolia Harbor and across Massachusetts Bay to Boston. Sidewalks stretch out of Magnolia to Kettle Cove Field along Western Avenue. The major roads from Magnolia to Downtown Gloucester, Western Avenue (Route 127) and Hesperus Avenue lack sidewalks; their winding lay-outs and higher traffic speeds make these roads less attractive to pedestrians and bicyclists though only one pedestrian and one bicycle crash occurred on these roads in ten years. Rafe's Chasm can be reached via Shore Road and a remnant of Old Salem Road but are then forced to walk along a edge of a stretch of Hesperus Avenue that lacks sidewalks. Trails from the Lake Street area lead through the woods to the Magnolia Woods recreational fields and could potentially link to Ravenswood. These trails have dirt surfaces, lack trail route markers and can be soggy and muddy in spots.



Figure 6



## Pedestrian Improvement Plan 2012 Magnolia / Ward 5

Magnolia lacks a direct pedestrian connection to the rest of Gloucester. Neither Western Avenue (Route 127) nor Hesperus Avenue have sidewalks or a wide shoulders that could accommodate pedestrians. The shoulder width on Western Avenue varies and often narrows to under two feet. As a result, speeds and traffic volumes make walking along Western Avenue uncomfortable. Hesperus Avenue has lower traffic volumes. Striped shoulders on Hesperus could provide delineation of a walkable area for pedestrians and could encourage slower speeds as well. Another alternative for pedestrian access from Magnolia to downtown Gloucester would be the improvement of trails through the Magnolia Woods that would create a connection to the excellent trails system in Ravenswood that connects to Old Salem Road near Stage Fort Park.

Annisquam (Ward 4): Annisquam has many large private homes along narrow residential ways (without sidewalks) that also serve as the primary walking routes to private beaches, docks and clubs along the waterfront. The Annisquam Village Hall, Library, Historical Society and Art Gallery all sit near the intersection of Leonard Street and Bridgewater Street. A footbridge extends across Lobster Cove connecting towards Washington Street. The Squam Rock Trust maintains a foot path off Walnut Street to Lighthouse Beach.

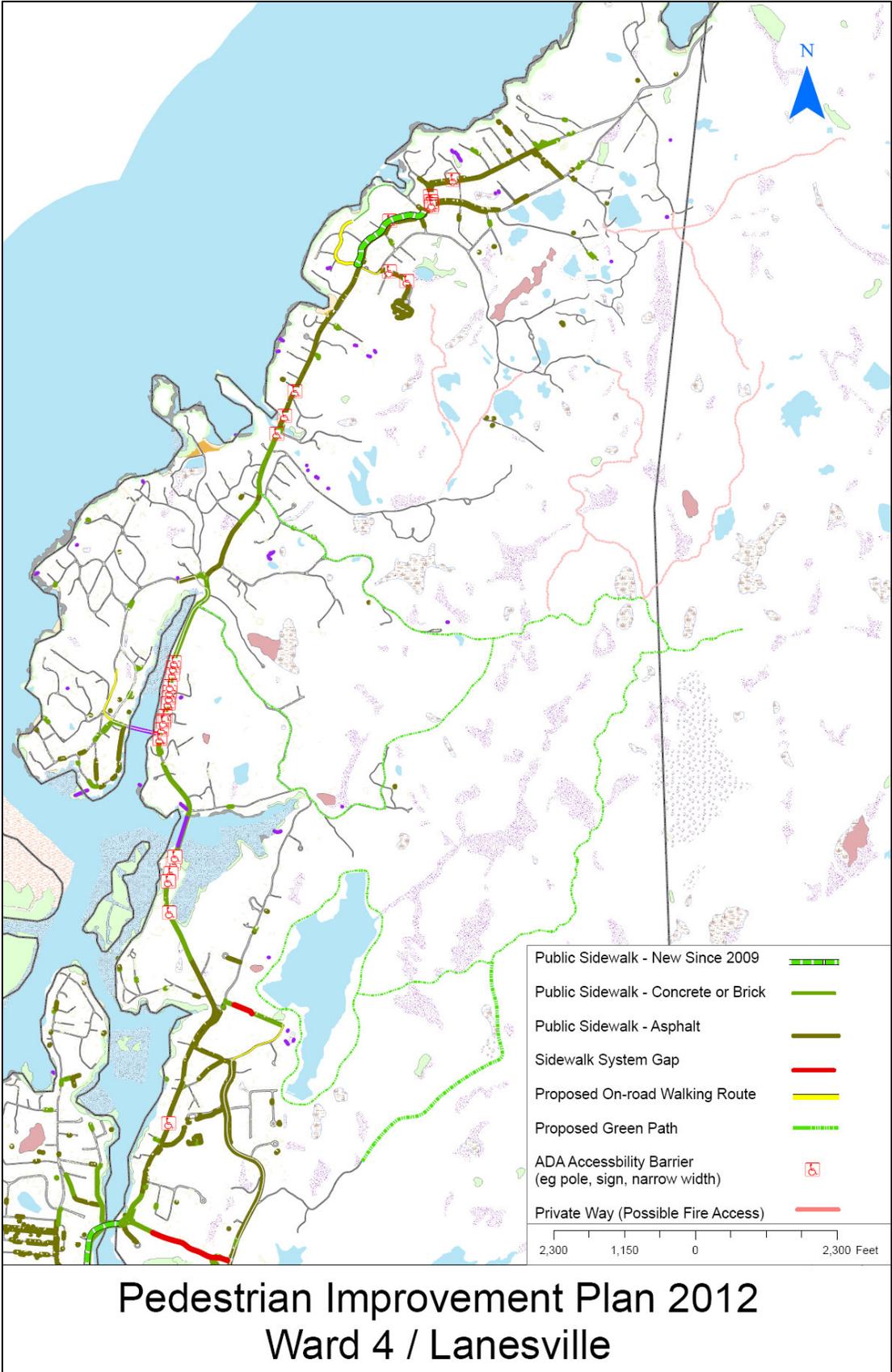


The stretch of Washington Street to the east of Lobster Cove in Annisquam has a very narrow sidewalk widths – down to 32 inches in some locations. The largest problem in this section is the location of utility poles within this narrow stretch of sidewalk that forces even the most agile walkers and runners into the road and makes this stretch impassable for the disabled. Consideration should be given to working with National Grid to relocate these poles outside of the stonewall that runs along this stretch.



Lanesville (Ward 4): The core of the village of Lanesville lies along Washington Street between High and Duley Streets. The Post Office and several businesses are nestled in this bend in the road. The City recently repaved the asphalt sidewalks from the village center towards Young Avenue leading towards the Plum Cove School and Plum Cove Beach. Residents can readily walk along Rowley Shore, cross the Essex County Greenbelt's Reservation into Lanes Cove. Other

desirable walking routes head towards the Lanesville Community Center off Vulcan Street and the cemetery off Langsford Road.



## **2. Safe Routes to School: Education and Infrastructure**

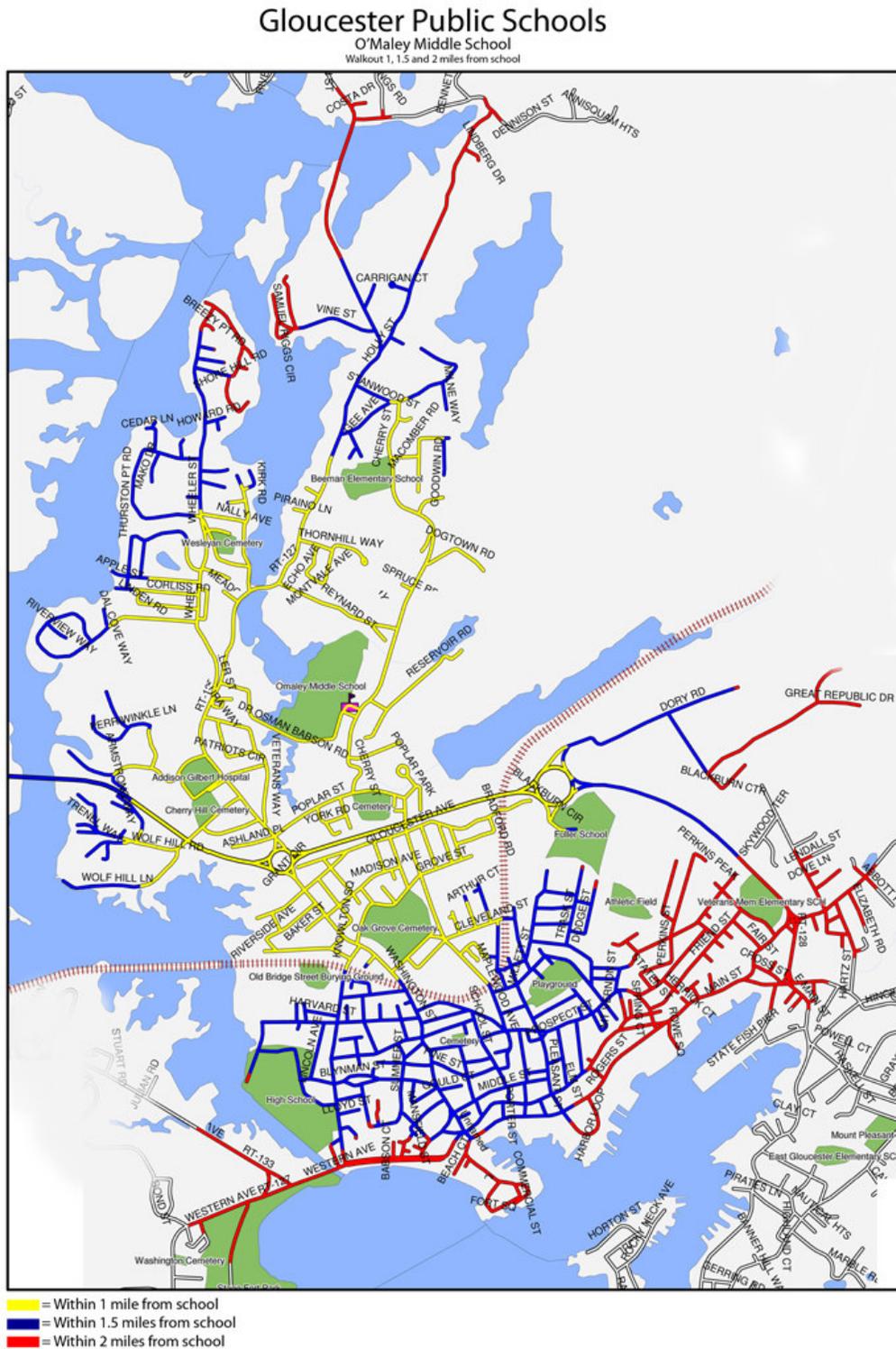
Four of Five Gloucester Elementary Schools, the O'Maley Middle School and Gloucester High School sit in locations close to nearby residential neighborhoods. The degree to which connections exist between neighborhoods and each school varies dramatically between each school.

Gloucester High School, the Veterans School and East Gloucester Elementary are located near downtown Gloucester in walkable locations for many students. Centennial Avenue sidewalks from the high school towards the Boulevard have been rebuilt with concrete in the past few years. O'Maley Middle School and Beeman Elementary School are both located between Cherry and Washington Streets near residential neighborhoods. Plum Cove Elementary sits on High Street not too far from Lanesville Village Center.

West Parish School sits along Concord Street just off of Essex Street in the portion of Gloucester with lower residential density and with few if any sidewalks.

Gloucester Public Schools assigns elementary students based on geographic school assignment zones. Massachusetts state law requires communities to provide transportation for students who live more than a 2-mile walk from school. The Gloucester School Department has prepared maps showing the school assignment zones and the walking distance to the school. The following 7 maps show those walking zones and include some commentary of the actual walkability around each school.

# Walk to School Distances Zones for Gloucester Schools



O'Maley Middle School – Walkability Comments:

The main vehicular access routes into O'Maley from Cherry Street and Osram-Babson Road lack sidewalks. The few students who walk from the nearby Riverdale Housing Complex walk along a unlit dirt path, up an short embankments, hop over a guard rail and then walk along the edge of Osram-Babson road towards the school.



Dr. Osman Babson Road – There are no sidewalks on this road, stretching between Cherry St and Washington St. While it does have a wide shoulder, it seems important to have a sidewalk here as it is the way to the Middle School, as well as to several athletic fields. As the shoulder is wide, there is space for a sidewalk.

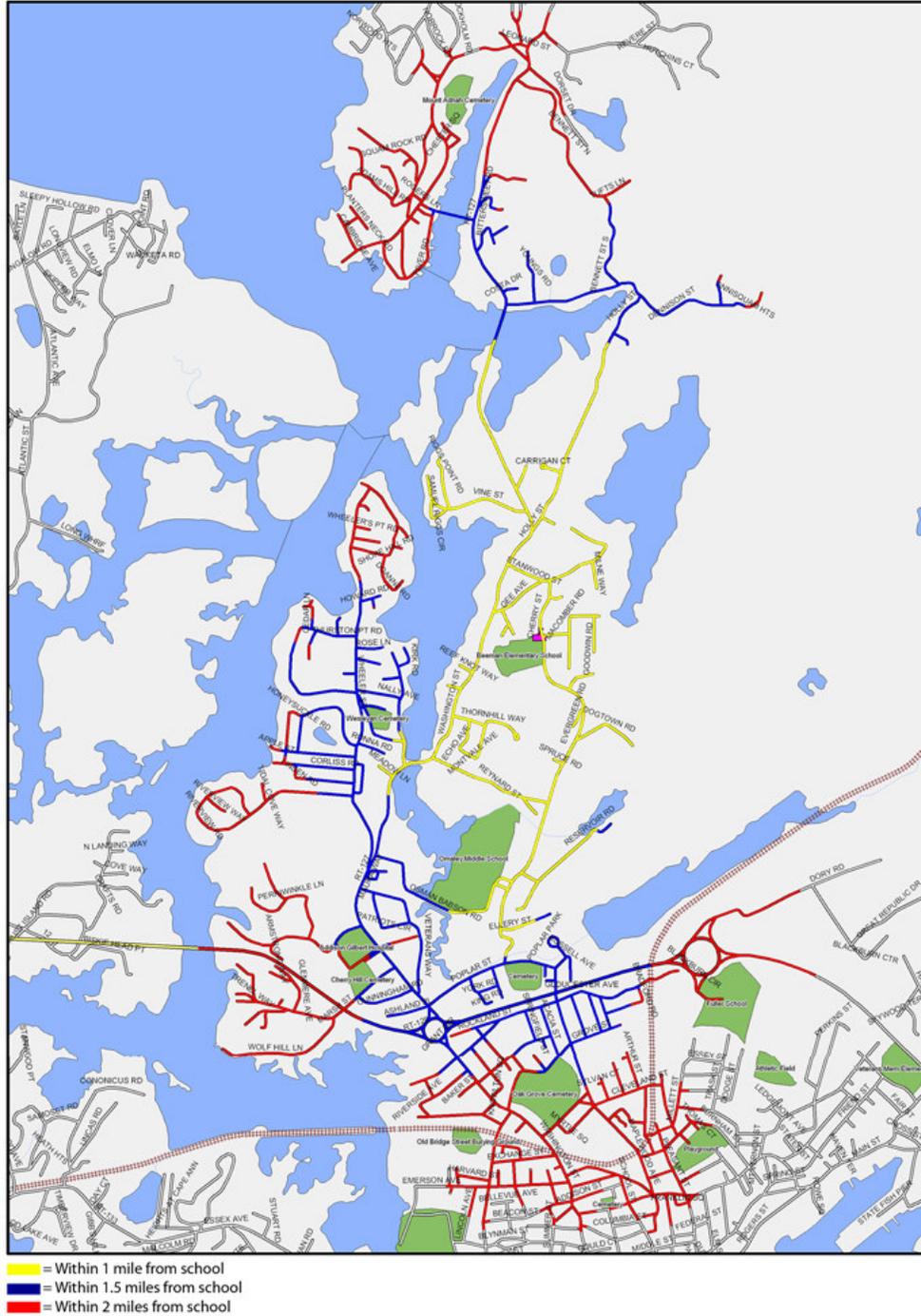
Cherry Street has asphalt sidewalks that have some narrow stretches of broken pavement. The lack of curbing allows vehicles to readily jump onto the sidewalk. The entrance from Cherry Street to the O'Maley School has no sidewalk forcing students through lawns. Many students walk from Maplewood Avenue. One convenient way is through the Oak Grove Cemetery on Poplar Street crossing at the intersection of Cherry and Poplar.



Beaman: Cherry Street, Path from Washington Street

Gloucester Public Schools

Beaman Memorial School  
Walkout 1, 1.5 and 2 miles from school



Beeman School Walkability Comments:

At Beeman, pathways have been constructed from Cherry Street and Washington Street to allow students to walk into the school from the street. The Cherry Street path includes steps. Students can also reach Beeman using a dirt path from Garden Terrace.



Cherry Street Access



Footpath from Washington Street



Garden Terrace Access



## East Gloucester School Walkability Comments

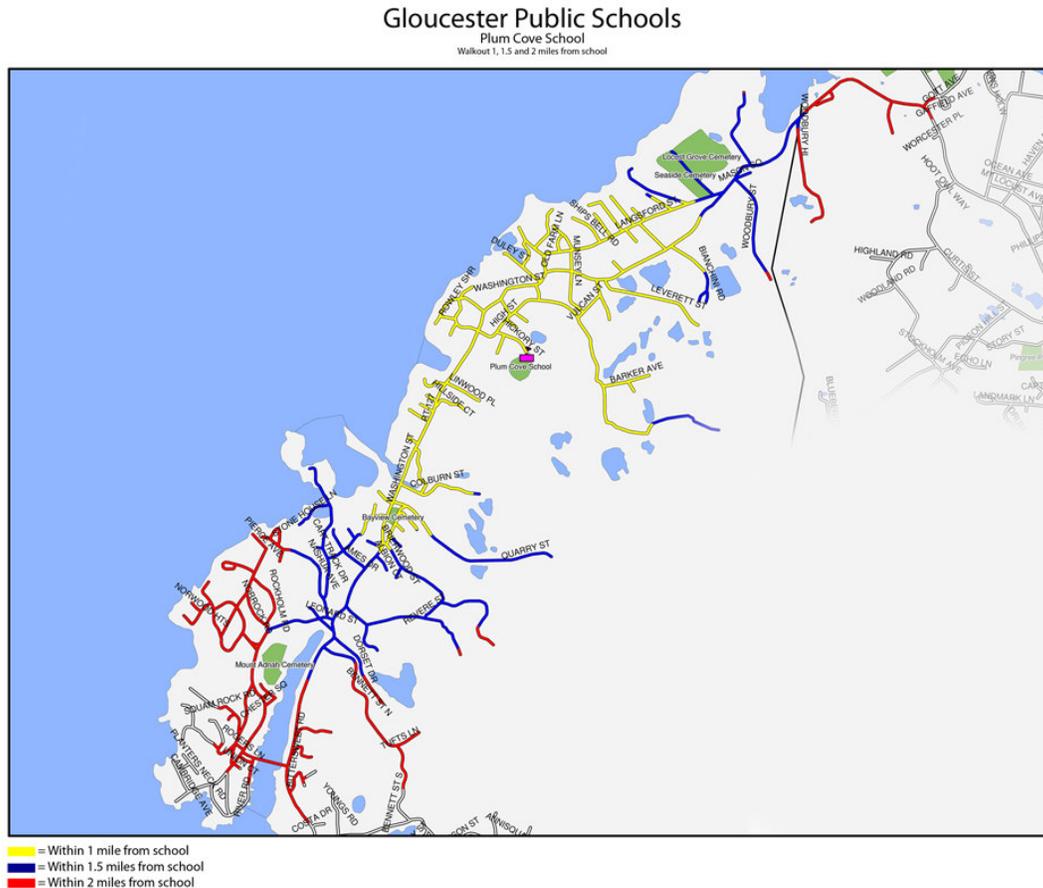
East Gloucester students encounter very narrow sidewalks in East Gloucester, particularly on Davis Street Extension leading up to the School. The sidewalk leads to a set of steps up to the school and does not currently connect to the ADA ramp on the east side of the building. Room appears to exist around the traffic circle that could accommodate a sidewalk extension at this location.

Many students use pathways from Mount Pleasant Street or East Main Street as another means to walk to the school. East Gloucester School will be receiving a Safe Routes to School assessment from MassDOT



Dirt path from Mount Pleasant Street to East Gloucester Elementary

## Plum Cove: Washington Street, Young Avenue, Hickory Street

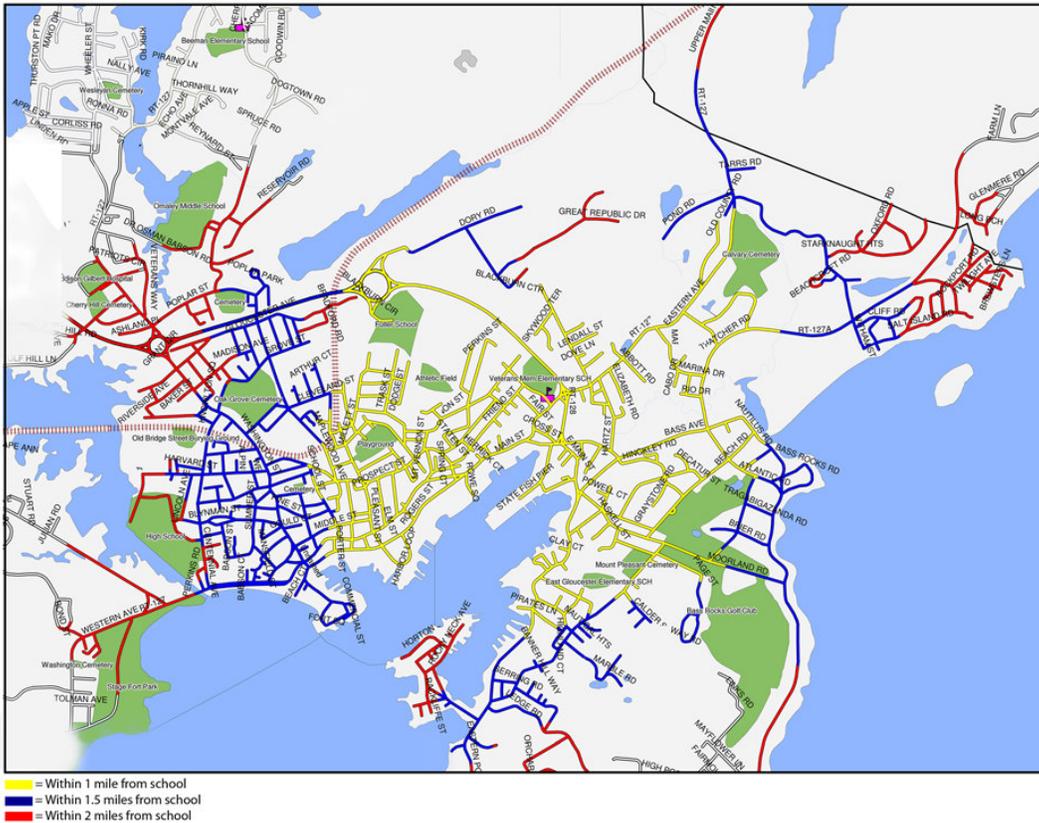


Plum Cove School Walkability Comments: The City repaved sidewalks along Washington Street leading towards the School. The sidewalk on Hickory Street leading towards the School becomes very narrow. At one location a utility pole blocks wheelchair access to the sidewalk. At the other end, near the driveway entrance to the school, there's a break between the sidewalk and the asphalt walkway that has been built leading to the front door of the school.

# Veterans Memorial School

## Gloucester Public Schools

Veterans' School  
Walkout 1, 1.5 and 2 miles from school



### Veterans Memorial School walkability comments:

Veterans School students walk from the neighborhood or from the nearby Elks lodge using newly installed curb ramps built with CDBG funding.



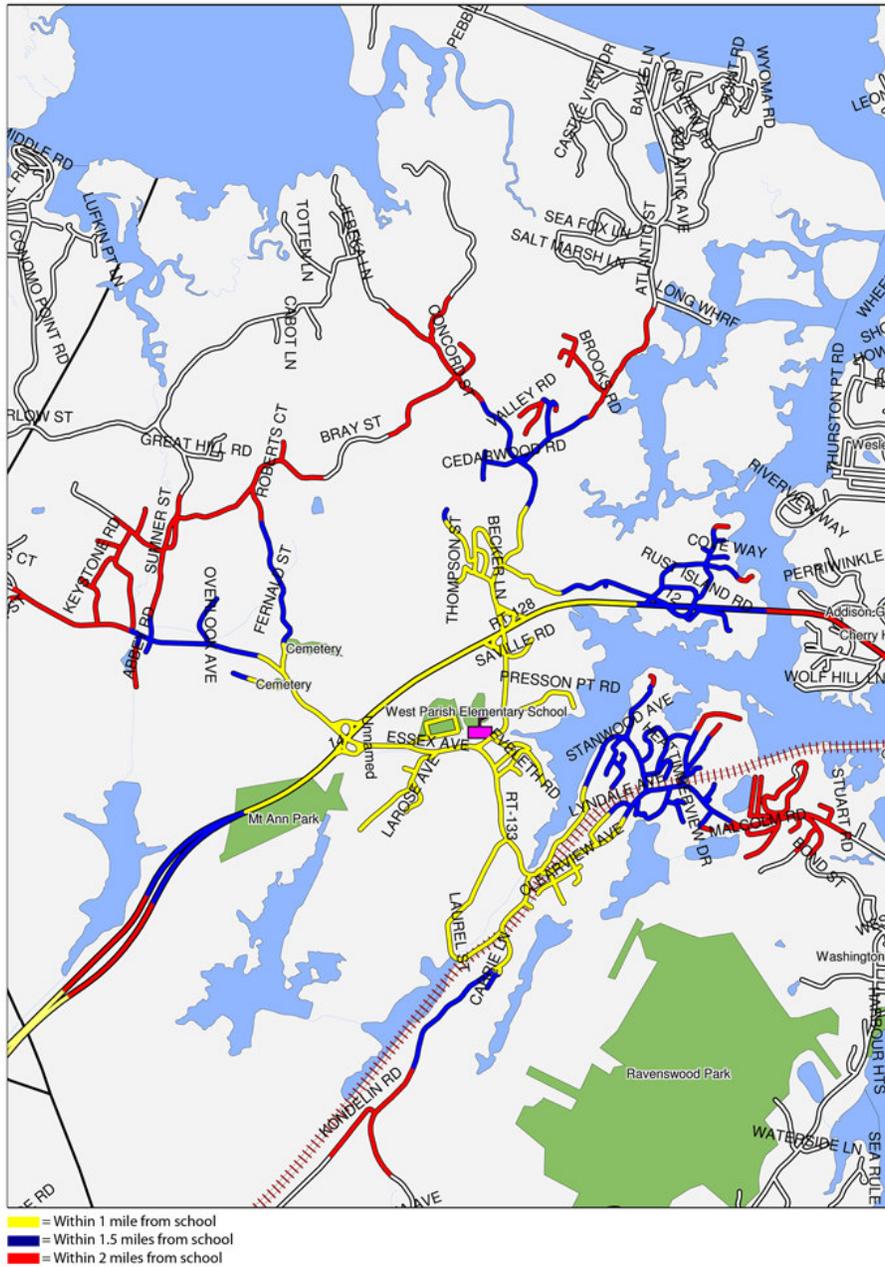
**Webster Street** – Sidewalks are patchy and poor in spots between Sadler St and Eastern Ave. As this is the access to Veteran’s Memorial Elementary, it is an area of special concern for children. On the East side, there is some lack of definition with the road and with a parking lot near Friend St. The sidewalk on the West side is very poor—narrow, uneven, cracked and overgrown.

# West Parish: Concord Street

## Gloucester Public Schools

West Parish School

Walkout 1, 1.5 and 2 miles from school



West Parish School sits off Concord Street not far from Essex Avenue. DPW recently repaved the driveway and sidewalk leading into the school. Essex Avenue has sufficient right-of-way width to accommodate sidewalks and a raised dirt areas exists along side the edge of pavement that could ultimately be used for sidewalks. MassDOT has been contacted to assess the possibility of adding sidewalk in the vicinity of Essex Avenue and Concord Street.

### Gloucester High School: Centennial

Centennial Avenue – Sidewalks are in mostly poor condition between Leslie O. Johnson Road and Commonwealth Ave. The East side is slightly better than the West, but both are steep, narrow and uneven on the hill from Leslie O. Johnson Rd to Blynman St. From Blynman to Commonwealth sidewalks continue to be steep, narrow, cracked and uneven. This is an area of concern as Centennial Ave is highly traveled as the way to the High School.

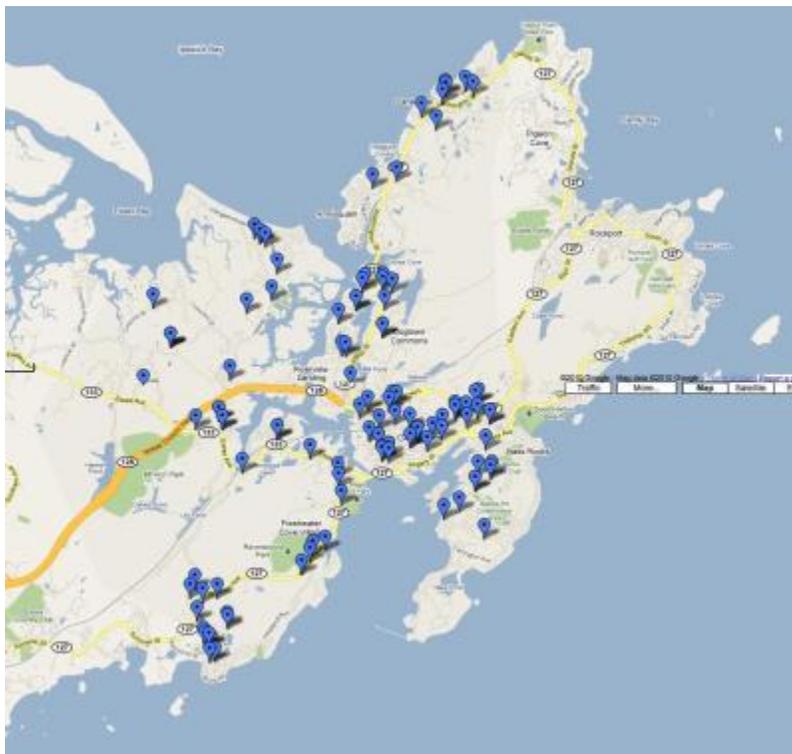
### St. Ann’s Catholic School: Pleasant Street

Sits on Pleasant Street in the heart of Downtown Gloucester near Prospect Street. Pleasant Street has been paved and ADA ramps on Prospect Street have been improved.

### Gloucester Community Art Charter School: Blackburn Industrial Park off of Route 128.

This section of Route 128 does not allow pedestrian or bicyclists. The only option for students on-foot or bicycle would be to take Eastern Avenue to Harrison Avenue A pathway leads from the top of Harrison Avenue into Blackburn Industrial Park. A sidewalk exists within portions of the Industrial Park that connect to the Charter School.

### Enrollment Distribution 2010 Gloucester Community Art Charter School



3. **Missing Links, ADA Barriers and Major Repair Needs:** A systematic assessment of the state of repair of all Gloucester sidewalks has not been conducted. Get Fit Gloucester! intern Natasha Smith did a limited walking survey of some sidewalks and walking audits were conducted as part of the GloucesterWalks events in summer of 2011. That information has been used primarily identify missing links in the sidewalk network as well as a few stretches of sidewalk in need of repair.

High Use Areas:

**g. Washington Street:** Downtown from Grant Circle to Mansfield Street:

This stretch of Washington Street runs from dense residential neighborhoods to the MBTA

Commuter Rail Station, Shaw's on Railroad Avenue and the numerous small businesses located along the way. The City has developed 25% design plans for the full depth reconstruction of this stretch of road including streetscape improvements such as:



- new concrete sidewalks with improved cross slopes and more width when available;
- improved ADA crossing ramps and crosswalk; and
- trees and other landscape design elements to improve the pedestrian experience.

Three million dollars in Federal High-Priority funds has been allocated to this project. The City needs state and federal transportation agencies to review the plans and schedule in order to release the funds. A 25% design public hearing will be held by Mass DOT once the City secures the preliminary okay from Mass DOT and the Boston Metropolitan Planning Organization.



- h. **Railroad Avenue:** As described above, Railroad Avenue lacks a sidewalk in front of Shaw’s that could link directly to the MBTA station. The southern sidewalks are in poor repair and wide entry drives create an unattractive walking environment
- i. **Rogers Street:** Gilman and Gander in 1995 prepared plans for an improved streetscape along Main Street and Rogers Street from Washington Street to Flannagan Square. The Main Street element of the plan has been realized; the Rogers Street proposal has not. Gilman and Gander proposed narrowing the road w



the current ~48 feet to 40 ft to include wider sidewalks, improving ADA ramps and crosswalks, installing brick details and improved lighting and adding street trees where possible. A 40-foot road width would not meet current MassDOT standards for bicycle accommodations.

Consideration should also be given to bicycle accommodations along this stretch of Rogers Street as well. In 2011, Get Fit Gloucester! purchased a bicycle “sharrow” stencil and worked with DPW to have these stencils installed to highlight Rogers Street as a bicycle route. A 46-foot wide curb-to-curbwidth on Rogers Street could accommodate the desire for wider sidewalks on the south side of Rogers Street, an east bound bicycle lane and lane widths of 11-feet for truck traffic. A west bound bicycle lane on Main Street from Flannagan Square to Pleasant Street with sharrows the rest of the way would draw bicyclists into the heart of downtown.

- j. **Thatcher Road:** Marina Drive to Witham Street. Residents of the Old Nugent Farm development have expressed strong interest in seeing a boardwalk or some other type of pedestrian accommodation be made on this stretch. During busy beach day where parking fills up at Good Harbor Beach, hundreds of people have been observed walking this narrow stretch of roadway. A key challenge will be the wetlands permitting associated with the project. A detailed survey and wetland identification need to be done to create a base map that will allow a thoughtful analysis of the project options.
- k. **Eastern Avenue:** Near Shaws towards Witham Street: Residents of the Witham Street neighborhood often walk on the cemetery side of the street to and from the Barn Road area. This saves time and avoid having to cross back and forth this busy stretch of road.



- l. **Emerson Avenue** – The condition of walkways on Emerson Ave are extremely poor. The sidewalks that exist on the North side are heaved, cracked and overgrown such that it is easier to walk in the road. These patches of poor sidewalk are interspersed with stretches of no sidewalk at all. Conditions are worst nearing Centennial Avenue, and the intersection with Centennial is very bad. This area is of particular concern as it is the way to the Open Door and Pathways for Children as well as a regular path for residents of Lincoln Park and students at Gloucester High School.
- m. **Poplar Street** – The section of Poplar Street from near the DPW to Cherry Street has no sidewalks, yet it is so well-traveled that a dirt path is worn on the side of the road, one which would be dangerous or impossible to pass for disabled/elderly persons or those with baby carriages. The corner of Poplar and Cherry Streets has no sidewalk and is not ADA accessible. This area should be targeted due to its poor condition and its proximity to O’Maley Middle School, as well as the fact that it is well-traveled by pedestrians.



- n. **Reynard Street / Osrarn Babson Road:** A walking loop exists around Mill Pond including Reynard, Cherry, Osrarn Babson Road and Washington Street. Both streets have sidewalks that extend a few hundred feet up from Washington Street. The sidewalks on Washington Street are in good shape and the bridge over the inlet was reconstructed in 2011. A railing along Washington Street near the pond needs repair.



- o. **Magnolia to Stage Fort Park (Hesperus and Western Avenues)**  
 The Western Avenue sidewalks end just southwest of Stage Fort creating a 0.6 mile gap between Stage Fort Park and Magnolia. Hesperus Avenue that parallels Western Avenue also lacks sidewalks. Traffic volumes, higher speeds and narrow shoulders make Western Avenue unattractive for walkers. Hesperus has lower traffic volumes; however, varied sight lines and the lack of shoulders also make Hesperus unattractive to walk.  
 An option exists to create an off-road path from Lake Street in Magnolia, through Magnolia Woods and Ravenswood to Old Salem Road and ultimately to Stage Fort Park .
- p. **Industrial Park Connections**  
 Blackburn: Industrial Park: Lacks a strong pedestrian connection to the rest of Gloucester. A pathway leads from Harrison Avenue into this area. A pedestrian bridge over Route 128 near Gloucester Crossing could provide further could

create better pedestrian connectivity (at great expense) . The major streets within this industrial park have sidewalk. + through Pond Road.

Pond Road Industrial Park: This area lacks sidewalks. A connection to Eastern Avenue via a proposed emergency access road is under discussion. Many people run from Blackburn Industrial Park to Good Harbor Beach using the existing dirt road to come down Pond Road then cross Eastern Avenue to jog down Witham Street. Witham has been recently repaved and striped with narrow lanes to allow create a narrow shoulder than provide some pedestrian accommodation where it exists.

- q. Community-wide Issues:** The Community Development Department did an assessment of ADA access of state numbered roads where there are existing plans for reconstruction (e.g. downtown stretch of Washington Street and Rogers Street) Utility Poles in narrow sidewalks limit ADA access in a variety of locations including:

- i.** Washington Street: (a) from Bridgewater Street to Bayview Fire Station;  
(b) 600 feet west of Duley Street in Lanesville
- ii.** Hickory Street: near the entrance to Plum Cove School
- iii.** Eastern Avenue: between Webster Street and Route 128

Other issues include various barriers that bring the effective sidewalk width below the ADA minimum of 36 inches. These barriers include 4 fire hydrant locations, 2 damaged signs, 2 old flashing school sign foundations and one major tree root upwelling. Additionally there are seven locations have no ADA ramps at crosswalk locations, 4 locations with widths below 32 inches and the pedestrian entrances to Plum Cove and East Gloucester School where the sidewalks do not connect to the walkways leading to the school entrance.

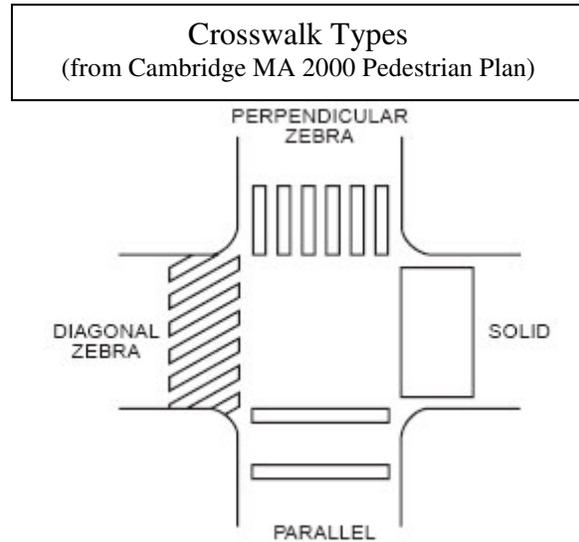
## 5. Cross-walk Maintenance and Signage

Gloucester budgets approximately \$60,000(?) per year to maintain street markings and signs. Street markings are maintained through a combination of DPW crews and contractors. DPW has the capability of painting down high durability striping paint. For heavy use areas or newly paved streets, private contractors with the equipment to laydown thermoplastic paint may be used.

Street markings can only be installed during dry periods with night time pavement temperatures above 50 degrees thus limiting these efforts primarily to the months of June, July and August. Crosswalks around schools receive fresh paint just before the start of school. Other crosswalks are done as needed / time permitting.

Gloucester currently paints most of its crosswalks as two parallel lines from curb-to-curb. Cambridge and many other communities are replacing parallel crosswalks with “zebra” crosswalks when repaving roads. Zebra crosswalks have multiple lines that run parallel to the flow of traffic. Zebra crosswalks present more visible area and contrast to motorists. Many communities now also use pedestrian impact recovery signs in the middle of the road at high use crosswalks to provide an additional level of safety and visibility.

*How do signs get selected and paid for?*



## 6. Ordinances related to Sidewalks: See Appendix X

Gloucester ordinances prohibit various practices such as parking on sidewalks and crosswalks and allow vehicles to be towed in such circumstances. In the absence of towing, the fine for such offenses is only \$10.00.

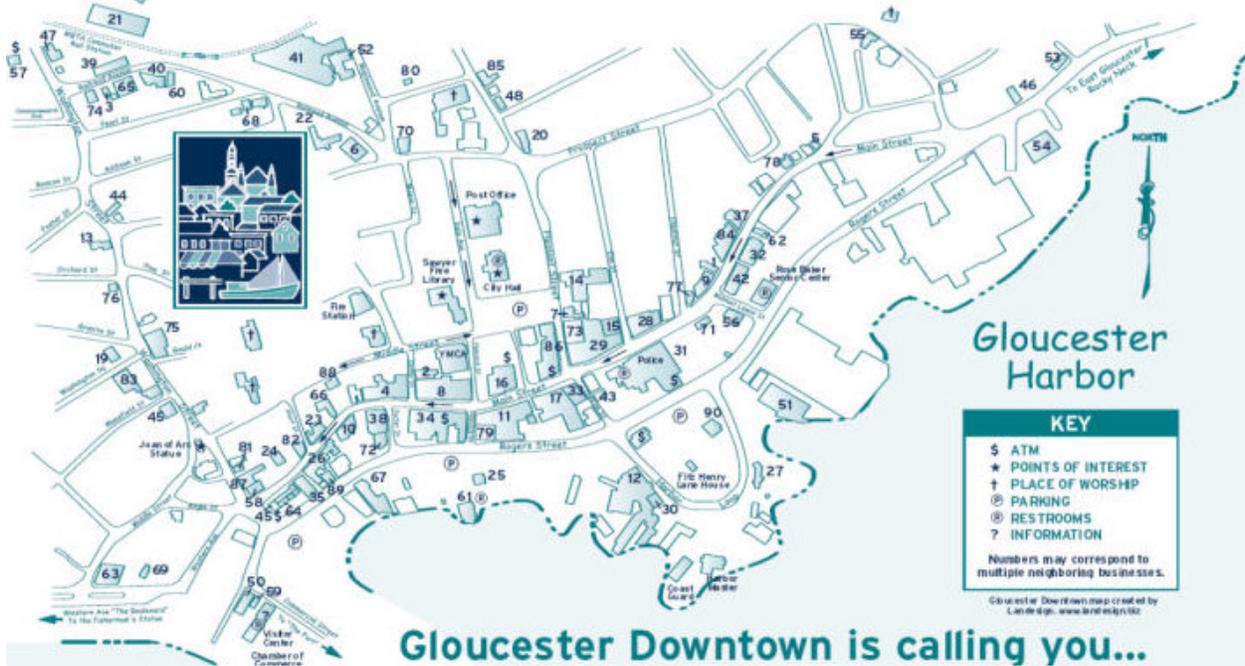
Gloucester ordinances also require the adjoining property owner to a sidewalk to keep them free of ice and require sand to be swept from the sidewalk once the snow clears.

Lack of enforcement of parking on sidewalks has been a frequent complaint from various people in the community involved with Get Fit Gloucester!

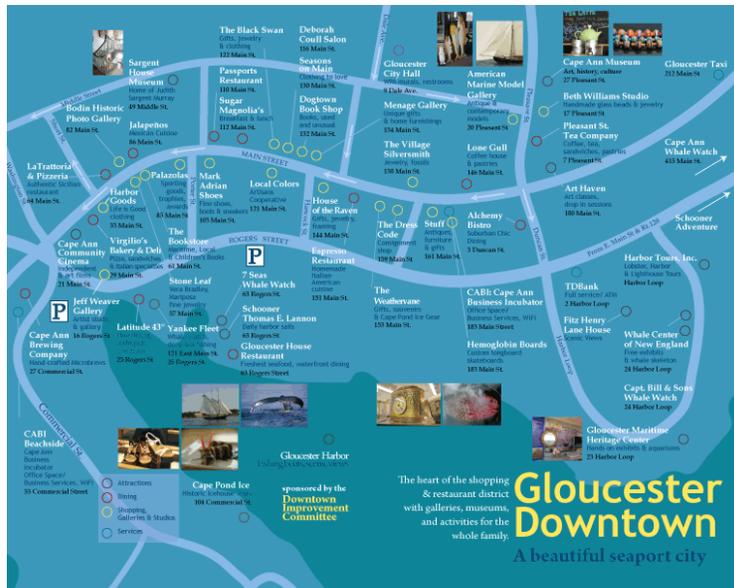
## 7. Tourism and Walking

### a. Tourist Maps

Cape Ann Vacations published a walking map for Downtown Gloucester that features many businesses and points of interest for tourists



Discover Gloucester has also printed its own walking map:



The City of Gloucester developed a Maritime Heritage Trail and has posted the map at <http://www.gloucesterma.com/Guides/MaritimeTrail.pdf>



A Walking Guide to Rocky Neck has also been developed.

In 2012, WalkBoston developed a “GloucesterWalks Map” and the City published a HarborWalk map.

b. Wooded Trails: Public, Non-Profit and Private

Gloucester's interior features numerous stretches of woodlands that provide the City with drinking water or have been protected by land trusts such as the Trustees of Reservation or Essex Country Greenbelt. Well-mapped trail areas readily accessible to the public include Ravenswood Park along Western Avenue owned by the Trustees of Reservations, the Tompson Reservation along Essex Street by ECG and the Dogtown Common Area owned by the City of Gloucester for watershed protection purposes. Numerous other trails exist across stretches of public, non-profit and private land, examples include trails behind the Magnolia Woods Recreational Fields, trails leading towards the Red Rocks land off of Essex Street and a set of trails being studied as part of the North Gloucester Woods Preservation Study currently underway.

c. Scenic Walking Areas

- George O. Stacy Esplande (Western Avenue from the Tavern to Stage Fort)

The Stacy Esplande has wide concrete sidewalks that attract many residents out for day or evening walks as well as tourists viewing the Man at the Wheel and Fishermen's Wives statutes and other sites.

- Harbor Walk

The Harbor Walk currently extends from St. Peter's Park off Rogers Street behind Cape Ann Brew Pub and the Latitude 43 Restaurant. The walk consists of decorative pavers and wide wooden walkways and provide close up views of Gloucester's working waterfront. These areas also serve as winter storage space for lobster traps.

The City has initiated efforts to extend the Harbor Walk past Latitude 43 to Harbor Loop. Ultimately the Harbor Walk could extend as far west as Pavillion Beach near the Birdseye site and as far east as Cruiseport.

- Goose Cove

A wide paved pathway circles the Goose Cove reservoir and also provides access to Common Road leading into Dogtown. The 3-mile loop is one of the most popular destinations for recreational walks and bicycle rides and is popular with dog owners. The reservoir provides drinking water so signs have been posted to encourage dog owners to pick up after their dogs.

- Back Shore

Residents of East Gloucester enjoy the walking and bicycling loop to Rocky Neck and along the Back Shore and its views of Bass Rocks. The route includes East Main Street, Eastern Point Boulevard, Farrington Avenue, Atlantic Road, Nautilus Road by Good Harbor Beach and Bass Avenue. The City has recently improved stretches of sidewalks along East Main Street and into Rocky Neck. Eastern Point Boulevard and Farrington Avenue lack sidewalks. Moderate travel speeds and traffic volumes and the width of Farrington Avenue allow pedestrians and bicyclists to comfortably use this stretch. Bass Avenue has shade trees and good concrete sidewalks that allow residents to access the footbridge to Good Harbor Beach off Nautilus Road. The narrow curb-to-curb road width of this

stretch of Bass provides less than ideal conditions for bicyclists especially on heavily congested summer days.

- Shore Drive

Magnolia residents enjoy walking along scenic shore drive with views into Boston as well as interesting homes.

d. Road Races & Charity Walks

Gloucester offers a wonderful setting for fundraising events including many charity walks and road races. Here's a list of events that occurred in 2011:

Month	Event Name	Sponsoring Organization	Type / Distance	Location
April	Road Race	YuKanRun.com The Open Door	1 mile road race	
May	Gloucester Pride Stride	20+ Cape Ann Charities	5 mile walk	Stage Fort / Downtown Waterfront
May	Twin Lights Half Marathon	Pursuit Racing (Benefits GFAA)	13 mile run	Good Harbor Beach to Rockport
May	Backshore Road Race	Cape Ann YMCA	5 mile run	Back Shore
June	Fiesta Road Race	Cape Ann YMCA	5 km run	Downtown
July	Seacoast Seven Road Race	Seacoast Nursing /Rehab Center	7 mile run	Stage Fort
August	Gloucester Tri-athlon	GFAA	Swim, bike, run	Stage Fort / Magnolia
August	RunGloucester	GFAA	7 mile run	Back Shore
September	Round the Cape Rund	Cape Ann YMCA	25 km race 7 km race	Washington St / Thatcher Road
September	Lone Gull 10K	Lone Gull Charitable Trust	10 km run	Atlantic Road / Eastern Point
October	Father Bullock Race	Father Bullock Trust	5 mile run 2 mile walk	Atlantic Road
October	Ravenswood Trail Run	Team Gloucester	4 mile trail run	Ravenswood
October	Hoof It for Habitat	Habitat for Humanity	5 km run 1 mile walk	Good Harbor Beach

e. Public Stairways

Several public stairways exist in Downtown and Rocky Neck. Stairways provide more direct access from neighborhoods to main streets and also offer interesting scenic vistas for tourists interested in off-beat walking tours. (Photos courtesy of Catherine Ryan)



## 8. Pedestrian Counts / Evaluation

The Community Development office has performed a few pedestrian counts in order to create some baseline information that can be used to assess the impact of recent or future improvements intended to promote walking. The following table lists times and hourly pedestrian counts at various locations.

Location	Purpose of Count	Time of Day	Hourly Rate
Stacy Boulevard at Blynman Bridge	Overall Baseline of Walking and Bicycling Activity.	Thursday 9/3/2009 4 – 5 pm	90 pedestrians
Stacy Boulevard at Blynman Bridge	Overall Baseline of Walking and Bicycling Activity	Saturday 9/10/2010 10-12 noon	165 pedestrians
Harborwalk – at St. Peter’s Park Entrance	Impact of Harborwalk Improvements	Wed. July 14 , 2011 10-12 noon	21 pedestrians
Rogers Street	Baseline Prior to Anticipated Roger Street Improvements	Monday 6/21/2011 4-6 PM	68 pedestrians
Good Harbor Footbridge	Baseline	Saturday 9/5/2009 AM	232 pedestrians
Good Harbor Witham Street Access	Baseline	Saturday 9/5/2009 AM	43 pedestrians
Good Harbor – Thatcher Road	Baseline	Saturday 9/5/2009 AM	5 pedestrians Note: 204 vehicles
O’Maley School Via Osram /Babson	Safe Routes to School Baseline	Wednesday 11/24/2010 AM	7 peds (5 students) 114 cars 21 buses
Washington St near Railroad Avenue	Baseline	Thursday 3/8/2012 ~ 2 PM (GHS dismissal)	40 peds
Maplewood at Grove	Baseline	Tuesday 3/20/2012 1:40 – 2:40 PM (O’Maley out at 2 PM	42 peds (~28 students)

## PART 4: GLOUCESTER'S BICYCLING ENVIRONMENT

### 1. On-road Routes

Cape Ann's varied and historic landscape and oceanfront views make Gloucester attractive to local bicyclists, regional bicycle groups and bicycle tour operators. The routes described below tend to attract more road savvy bicyclists rather than casual recreational riders. Roads in Downtown Gloucester and the Back Shore have narrow stretches where casual riders can feel squeezed and intimidated by passing traffic.



#### Back Shore Loop (7-mile loop)

Local cyclists can enjoy a seven-mile loop around East Gloucester by heading south on East Main Street, connecting to Eastern Point Road, heading east on Farrington Avenue, enjoying the rocky coast along Atlantic Road then looping back along Bass Avenue. Farrington Avenue and Atlantic Road are relatively wide and prohibit summer parking making these enjoyable for recreational bicyclists. East Main has narrow lanes and on-street parking; however, winding curves, lower traffic speeds and volumes help accommodate less road-savvy bicyclists. Bass Avenue's narrow lanes and higher traffic volumes make this return leg of the loop the least enjoyable.

#### Cape Ann Loop (25 + miles)

A regionally popular route enters Gloucester via Ocean Avenue in Manchester (off Rte 127) which becomes Raymond Street in Magnolia. The route heads along scenic Shore Road in Magnolia to Hesperus Avenue passing Hammond Castle on the way back onto Rte 127 / Western Avenue. Bicyclists turn right and roll through Stage Fort Park, visit the Fishermen's Wives and the Fisherman and the Wheel Statue along Stacy Boulevard before turning down towards Rogers and Main Streets. The route heads down East Main Street with views of Rocky Neck and crashing waves of the Atlantic Ocean along the Back Shore of East Gloucester. Bicyclists then head out along Thatcher Road and Good Harbor Beach to loop into Rockport and then back towards Gloucester via Route 127 in Lanesville. Some routes venture down Leonard Street into Annisquam and then back on Washington Street via the Lobster Cove footbridge. As the route reaches Riverdale, bicyclists turn left onto Stanwood Road, head right down Cherry, Poplar and Maplewood Streets back into Downtown Gloucester. Longer routes connect back into Stacy Boulevard and then head out Route 133 and Concord Street towards Ipswich.

## 2. On-road Crash Locations<sup>6</sup>

As shown in Figures 1 and 2 above, bicycle crashes in the City primarily occur along the major Cape Ann bicycles routes that run through Gloucester along Routes 127, 127A and 133 (19 of 26; 73%). Clusters of crashes occur along Route 127 and 127A from Stage Fort Park, Rogers and Main Streets to Bass Avenue. Another cluster occurs near Route 128 and Poplar Street where bicyclists try to navigate through or around Grant Circle. The only crashes along the Back Shore loop have occurred on Bass Avenue.

## 3. Proposal for On-Road Accommodations

The recommend locations for bicycle lanes and sharrow are shown in Table B-1 and the current status of sharrow installation is provided in Table B-2.

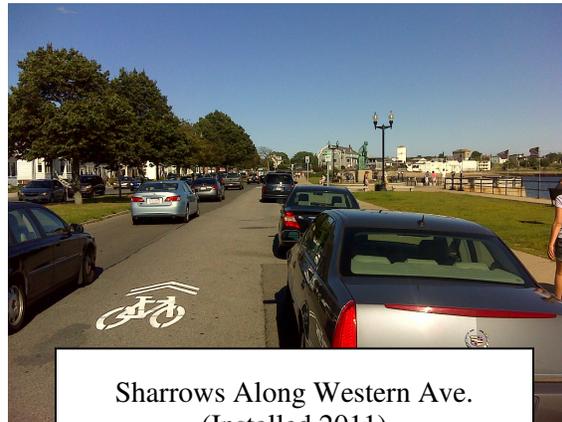
### i. Basic Bicycle Accommodations – Bicycle Lanes

Communities can affordably provide good bicycle accommodations on roads with sufficient curb-to-curb width. Massachusetts DOT standards require bicycle lanes to be at least 5-foot wide next to park vehicles and 4-foot wide next to curbs where parking is not allowed. A road must be 48-feet in width to accommodate the standard 11-foot motor vehicle travel lanes, 8-foot parking lanes and 5-foot bicycles lanes the road width. Some communities such as Chicago, Cambridge and Somerville have incorporated bicycle lanes into roads with 44-foot widths (10-foot travel lanes, 5-foot bicycle lanes and 7-foot parking lanes). Bicycles lanes most frequently consist of a 6-inch stripe along the travel lane, set-off 4 to 6 feet from either the curb, pavement edge or parking lane. Some communities paint the whole lane in green paint. Western Avenue, Rogers and Main Street have sufficient width to accommodate bicycle lanes. Other routes lack consistent widths over 44-feet so would be appropriate for sharrows.



### ii. Sharrows

Where sufficient width does not exist for bicycle lanes, MassDOT standards allow the installation of bicycles “sharrows” that help indicate the presence of bicyclists and help guide bicyclists away from opening car doors.



Sharrows Along Western Ave.  
(Installed 2011)

A survey of Gloucester bicyclists indicates their preference for first providing bicycle accommodations in Downtown. along Rogers

<sup>6</sup> Please note that state law does not require police to file reports related to off-road crashes with the Commonwealth so the Boston Region MPO do not have access to that data.

Street and Stacey Boulevard from Stage Fort Park to Bass Avenue. Their second preference is to mark the Back Shore Loop, the 3<sup>rd</sup> is for the Round the Cape Connector and 4<sup>th</sup> for sharrows from Magnolia to Western Avenue.

1. [Sharrow Locations] Get Fit Gloucester! funded the purchase of a "sharrow" stencil that helps improve bicycle safety by indicating the safe location for bicyclists to ride on streets and highlighting the locations where motorists should anticipate bicyclists. GOT Wheels? a group of local bicyclists promoting safe bicycling in and around Gloucester seeks your suggestions on where to locate these sharrows. Please rank the following four options (#1 is the top priority, #4 the lowest).

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	1	2	3	4
Option 1: Downtown: Rogers Street and Stacey Boulevard from Stage Fort Park to Bass Avenue	7 70%	1 10%	2 20%	0 0%
Option 2: Round the Cape Connector: Cherry Street/Poplar/Maplewood the via Prospect/Burnhams to Rogers	2 22%	2 22%	3 33%	2 22%
Option 3: Backshore Loop: East Main Street / Farrington/ Atlantic Rd. / Bass Avenue	2 20%	5 50%	1 10%	2 20%
Option 4: Magnolia Loop: Magnolia Avenue / Raymond / Shore Road / Hesperus / Western	0 0%	1 12%	3 38%	4 50%

### iii. Wide Shoulders and Signage

On more rural stretches of roadway with lighter vehicle and bicycle volumes, wide shoulder lanes and “share the road” signs are often the preferred bicycle accommodation. Essex Avenue for the most part has wide shoulders that readily accommodate bicycle travel with the exception of the under crossing of the MBTA Commuter Rail line near Little River. Crashes involving bicyclists have occurred at this location.

Washington Street from Riverdale to Lanesville poses a greater challenge. Sufficient pavement width does not allow wide shoulders in most of this stretch. Two crashes have involved bicyclists in this stretch of highway. Consideration should be given to adding share the road signs.

### iv. Going Bold: Separated Bicycle Lanes aka Cycle Tracks

Major communities have found that painted bicycle lanes do not provide a sufficient level of safety and comfort necessary to attract the broadest range of potential bicyclists, especially families with children, active senior citizens and women. Painted bicycle lanes only partially eliminate the hazard of being “doored” when a driver opens their door into a moving bicyclist. Many people express discomfort of traveling in bicycles lanes next to heavy traffic or trucks.



One solution that has been increasingly implemented is the use of separated bicycle lanes or “cycletracks”. Cycletracks may be placed between the curb and park cars to create stronger physical and psychological barrier between bicyclists and moving vehicles. The



Table B-2 Status of Bicycle Sharrow Installation 2/1/2012

Main Street from Bass Avenue to Prospect – West Bound

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Bass Avenue to Prospect	1900 feet	~24 feet 48 feet	Parking allowed	8 sharrows 11 feet from curb	Marked

Main Street: Bass Avenue to Washington – West Bound

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Just Before Prospect	200 feet	22 – 48 feet	Parking Allowed	2 Sharrows; 1. By sewer manhole ~16 feet of curb 2. Near start of median line	Marked
Prospect to Pleasant	1900 feet	16 feet (between parking T's) Min 34 feet	Parking allowed, some diagonal	6 Sharrows 11 feet from right curb	Marked
Pleasant to Sargent House	850 feet	16 feet (between parking T's) 32 feet	Parallel parking	3 Sharrows 11 feet from right curb	Marked
Sargent House to Washington	480 feet	9 feet (between parking T's) 27 feet curb to curb	Parallel parking	3 Sharrows Center in lane (13.5 from curb)	Partially Marked

Western Avenue: Stage Fort to Washington – East Bound

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Stage Fort Park / Hough Avenue to Blynman Canal	1277 feet	19 ft 41.5 ft	Parking allowed	3 sharrows 11 feet from curb up to point where sidewalk extend to curb	Marked
Canal to Centennial	265 feet	16 -> 19.5 ft 36-> 47 ft	No Parking	1 Sharrow, near Centennial, 7 ft from curb	Marked
Centennial to end of Boulevard (just past Middle Street)	1223 feet	~27 feet (Note East Bound of median only)	Parking allowed	4 sharrows 12 feet from curb	Marked
End of Boulevard to 1 <sup>st</sup> Curve	230 feet	17.5 feet 36 feet at narrowest point	No Parking at narrowest point	1 Sharrow – Centered at 4 feet from curb	Marked
Bottom of Curve to Washington Street	420 feet	20 feet 37 feet	Parking allowed East Bound Only	2 Sharrows 11 feet from curb	Marked

Rogers Street/Main Street from Washington to Bass Avenue – East Bound

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Washington Street By Tully's	120 feet	~28 feet (to median)	No Parking	1 sharrow ~ 4 feet from curb	Marked
Tully's Corner to Bass Avenue	5300 feet	24 feet 48 feet	Parking allowed including semi trailers	~18 sharrows After intersections, on climbs, under lights if possible; 11 feet from curb with 12 feet from curb in semi parking areas	Marked

Stanwood / Cherry Street/Poplar to Maplewood – Both Directions

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Stanwood Street	685 Feet	25 feet (curb to curb)	Both Sides	3 sharrows each direction Staggered, 11 feet from pavement edge	Marked Note: Needs turn sign on Washington St. too.
Cherry Street to 10 MPH Curve	5600 feet	23 feet Curb to curb	Limited	~9 in each direction 4 feet from edge of pavement/curb	Marked (Note unmarked at one spot)
Cherry St curve to Poplar	560 feet	27 feet pavement x-section	No	~4 sharrows 4 feet from edge of pavement	Marked
Poplar to Maplewood	750 feet	24 feet pavement x-section	No	3 sharrows each side	Unmarked

Maplewood/Pleasant to Rogers/Main Street - South Bound

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Maplewood: Poplar to Prospect	3700 feet	?? 26 feet	Parking on North bound side only	6 sharrows – 4 feet from curb	Unmarked
Prospect: Maplewood to Pleasant	450 feet	?? 24 feet	None	2 sharrows 4 feet from curb	Unmarked
Pleasant/Duncan to Rogers	1250 feet	16 feet between T's 24-32 feet curb to curb	Allowed on Both sides on some stretches	5 sharrows 11 feet when parking 4 feet when not	Unmarked (was under construction)

Pleasant/Shepherd/Maplewood to Poplar – North Bound

Starting Point & Ending Point	~Length of Stretch	~Lane Width (curb to center line) / ~Curb to Curb width	Parking or other Lane Restriction	# and Proposed Sharrow Location	Status
Pleasant: Main Street to Shepherd	1675 feet	16 feet between T's 24-32 feet curb to curb	Allowed on Both sides on stretch after City Hall	5 sharrows 11 feet when parking 4 feet when not	Unmarked
Shepherd:Pleasant to Maplewood	339 feet	30 feet	TBD	2 sharrows West bound	Unmarked
Maplewood: Shepherd to Poplar	3150 feet	?? 26 feet	Parking on North bound side only	6 sharrows –11 feet from curb	Unmarked

#### 4. Recreational Bicycle Areas

##### The Stacy Esplande (For Beginners)

For the youngest bicyclists and families pushing strollers, the sidewalks along the Stacy Esplande are very popular. Stacy Esplande's flat and wide sidewalks provide nearly a one-mile stretch that's easy to traverse for beginners.

##### Goose Cove Reservoir (For Families and Children)

The maintenance road around Goose Cove Reservoir provides a scenic three-mile loop away from traffic that's great for families with children ages five and up. The trail surface consists mostly of asphalt paving with a few stretches of hard pack. The terrain varies with some grades greater than 5% that may require down-shifting or a short walk uphill.

##### Ravenswood (For Families and Children)

The Trustees of Reservations allows bicyclists to use the wider trails that run through Ravenswood Park in West Gloucester. These trails consist of well-maintained crushed stone surfaces through woodlands with flat to moderate terrain.

##### Dogtown and other mountain bike areas (For Teens and up)

Dogtown and other woodland areas in Gloucester attract many mountain bikers. The main trails on Common and Dogtown road can be 5 – 10 feet wide and the surface varies between hard rocks to loose dirt and gravel. Less well-known trails connect from Magnolia to the Magnolia Recreation Fields and run through West Gloucester, connecting as far as Beverly.

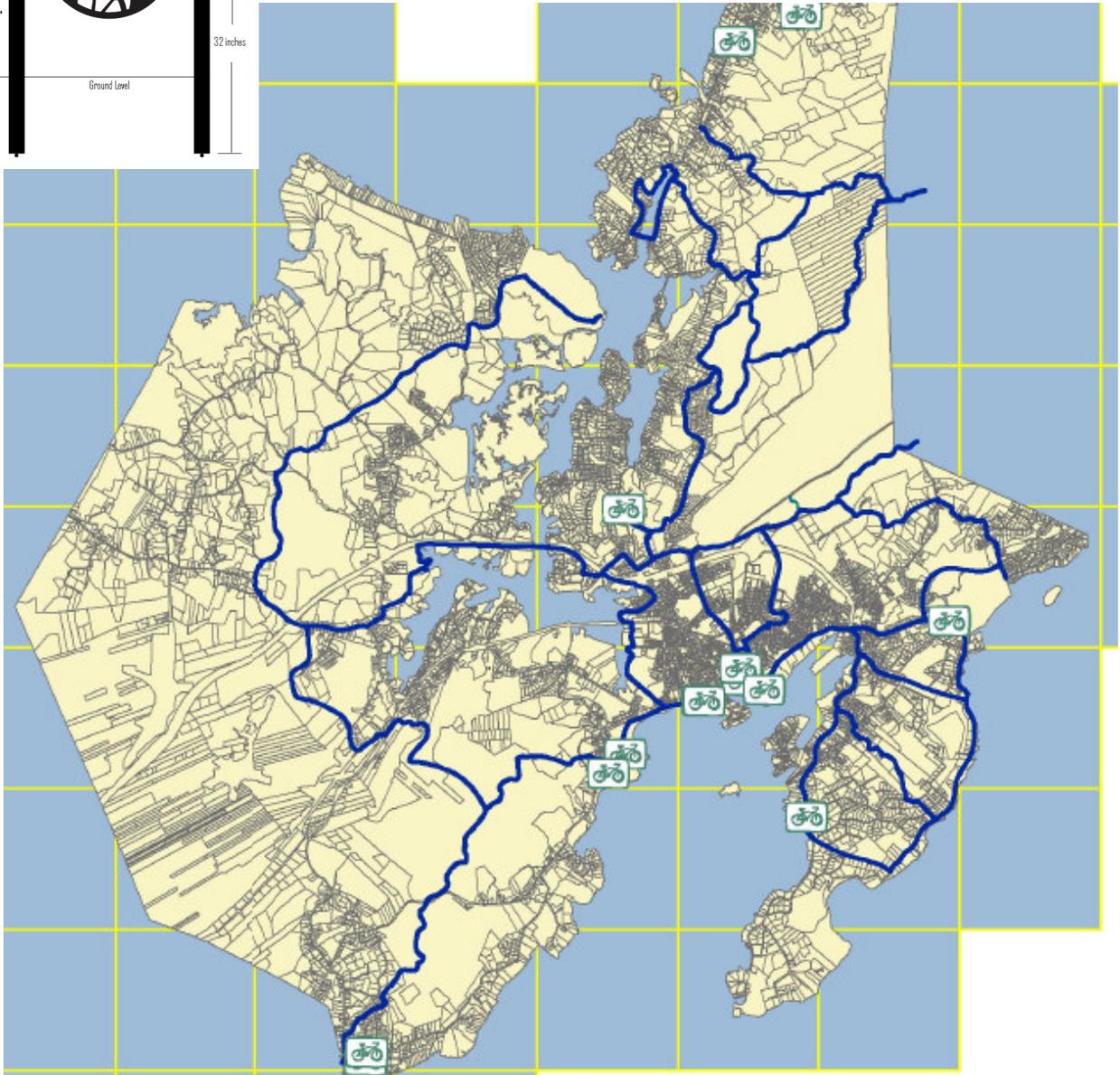
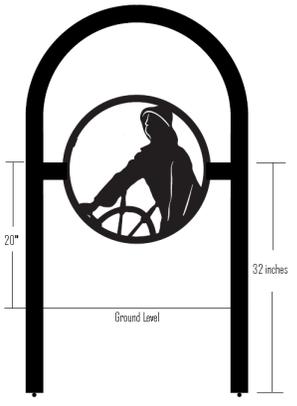
#### 5. Supporting Bicycle Culture

Bicycling best thrives when a community embraces and supports a culture that supports and promote bicycling. Bicyclists need safe places to park their bicycles, mentors to promote safe bicycling skills, bicycles shops where they can conveniently purchase and repair their bikes and links to bicycling groups that provide avenues to recreational, long-distance, mountain and racing opportunities. This culture also helps welcome bicycling tour groups that can help extend tourism season from late spring through the fall.

##### i. Bicycle Rack Locations

In 2010 the City of Gloucester Community Development and Public Works Departments work with the Metropolitan Area Planning Council and the Rotary Club of Gloucester to install twenty "Gloucester Fisherman" bicycle racks created by Dero Manufacturing. Bicycle racks also exist at all Gloucester schools, those are antiquated "comb-racks" that are difficult to safely secure bicycles to.

# Gloucester Fisherman Bicycle Rack Locations - 2010



ii. Bicycle Groups and Organizations: A variety of bicycle groups welcome local residents.

- ❖ Essex County Velo: Essex County Velo is a nonprofit, volunteer organization whose mission is to enhance the opportunities for members to enjoy the numerous benefits derived from the simple, youthful act of riding a bike. ECV hosts a mix of regular on-road and mountain bike rides and rides for cyclists of any age training for competition.

Competitive rides include the Gran Prix of Gloucester each October, road races and time trials, including kids races. The Gran Prix features professional cyclocross racers and locals who compete on a seaside obstacle course set up in Stage Fort Park each October.

Website: [www.ecvcycling.org](http://www.ecvcycling.org)

- ❖ North Shore Cyclists: North Shore Cyclists (NSC) is a recreational bike club that draws its membership primarily from the North Shore area of Massachusetts. Most of our bike rides are routed along the back roads and shorelines north of Boston. In addition to our scheduled recurring (Monday through Saturday) and Sunday rides, the club holds cookouts and weekend excursions and the Blazing Saddles Century in August. A Cape Ann tour route can be found in their website.

Website: <http://www.nscyc.org>

*Note of Interest: – the daily and century rides of both Essex County Velo and the North Shore Cyclists avoid Gloucester and Rockport and indication that ride organizers shy away from riding in Gloucester and see Gloucester’s roads as less desirable to ride.*

- ❖ New England Mountain Bike Association: NEMBA’s North Shore Chapter organizes group rides, holds skills events, offers beginners clinics and holds trail maintenance days that have included Dogtown and the Tompson Street Reservation in West Gloucester.

Website: <http://nsnemba.org>

- ❖ MassBike (the Massachusetts Bicycle Coalition): The state-wide bicycle advocacy for laws and policies that promote bicycling and bicycle safety

Website: [www.massbike.org](http://www.massbike.org)

iii. Local bicycle shops: A local shop provides service and accessories that help riders keep their bicycles in good repair. A full service bicycle shop on Roger’s Street went out of business around 2009 indicating a lack of demand for bicycle related services. The following businesses do provide bicycle- related services:

> Palazola’s Sporting Goods, 85 Main Street Gloucester: Palazola's offers a great selection of road and mountain bikes, helmets, lights, bike bags, bicycle parts, and bike repair services.

> Bike Mike’s Bikes, Gloucester: A husband and wife team offering repairs, tuneups, rehabs and full-on overhauls for your current bicycle – or choose from one of our used and vintage models that are fully tuned up and ready to go!

Website: <http://www.bigmikesbikes.org/>

> Seaside Bicycle, Manchester: A full-service bicycle shop offering new bicycles, accessories and repairs.

Website: <http://seasidecycle.com/>

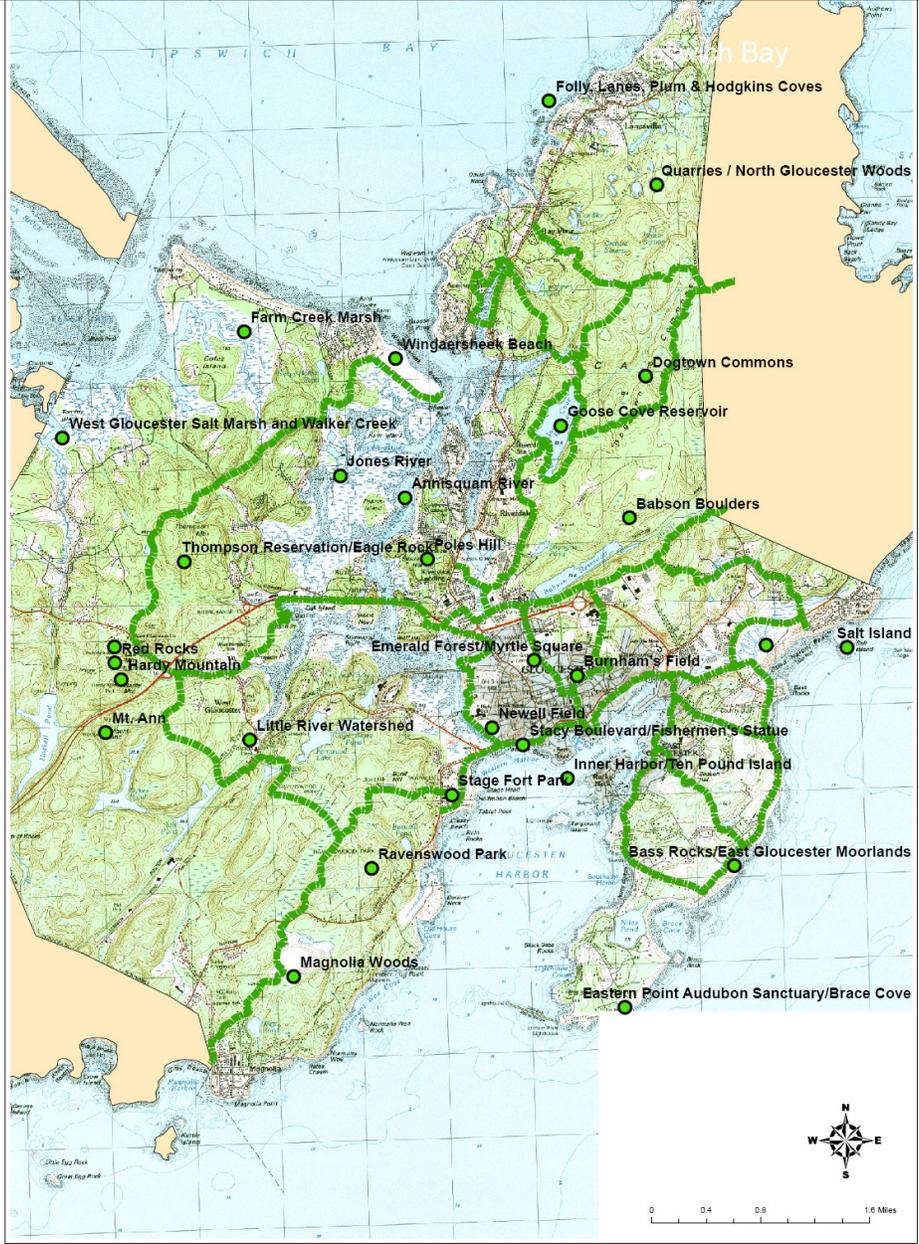
## 6. Bicycle Counts

The Community Development office has performed a few pedestrian counts in order to create some baseline information that can be used to assess the impact of recent or future improvements intended to promote walking. The following table lists times and hourly pedestrian counts at various locations.

Location	Purpose of Count	Time of Day	Hourly Rate
Stacy Boulevard at Blynman Bridge	Overall Baseline of Walking and Bicycling Activity.	Thursday 9/3/2009 4 – 5 pm	25 bicyclists
Stacy Boulevard at Blynman Bridge	Overall Baseline of Walking and Bicycling Activity	Saturday 9/11/2010 10-12 noon	17 bicyclists
Harborwalk – at St. Peter’s Park Entrance	Impact of Harborwalk Improvements	Wed. July 14 , 2011 10-12 noon	2 bicyclists
Rogers Street	Baseline Prior to Anticipated Roger Street Improvements	Monday 6/21/2011 4-6 PM	19 bicyclists
Good Harbor Footbridge	Baseline	Saturday 9/5/2009 AM	19 bicyclists (4 to beach) Note: 204 vehicles
Good Harbor Witham Street Access	Baseline	Saturday 9/5/2009 AM	4 bicyclists
Good Harbor – Thatcher Road	Baseline	Saturday 9/5/2009 AM	2 bicyclists
O’Maley School Via Osram /Babson	Safe Routes to School Baseline	Wednesday 11/24/2010 AM	None
Washington St near Railroad Avenue	Baseline	Thursday 3/8/2012 ~ 2 PM (GHS dismissal)	4 bicyclists
Maplewood at Grove	Baseline	Tuesday 3/20/2012 1:40 PM – 2:40 PM	10 bicyclists

7. **Beyond Streets: The Green Path Network** – Envisioned to be an “Acadia-like” system of groomed carriage paths connecting major villages, open space and recreation area and Downtown. Given the greater level of development on Cape Ann than the Acadia Peninsula, the Green Path Network needs to include many on-road stretches. The development of such a network requires an initial feasibility study to identify potential routes, land ownership, approximate costs and an action plan for implementation.

Conceptual Green Path Network from 2011-2017 Open Space & Recreation Plan



Conceptual Green Path Network

Figure 22

## APPENDIX P-1 – Ordinances that Apply to Sidewalks

### **Sec. 21-13. - Obstructions.**

(b)

No person shall place or cause to be placed, upon any sidewalk, any lumber, iron, coal, trunk, bale, box, crate, cask, package, article or thing whatsoever, whether of the same description or not, so as to obstruct the free passage for travelers for more than 15 minutes.

### **Sec. 21-14. - Duty of property owners or occupants to keep sidewalks free of litter.**

(a)

Persons owning or occupying property shall keep the sidewalk in front of their premises free of litter.

(b)

Prior to April 1 of each spring, persons owning or occupying property shall also be required to sweep the sidewalk in front of their premises free of sand by sweeping sand accumulated over the winter onto the street along the curbside for pickup by city street sweepers. Sand shall not be swept into storm drains or into piles, but swept uniformly along the length of the sidewalk curbside.

### **Sec. 21-15. - Cutting firewood on street or placing same on sidewalk.**

No person shall saw or cut any firewood in any street or place the same upon any sidewalk.

### **Sec. 21-16. - Gates, porches, entrances to cellars or other hazards.**

No person shall make or maintain any gate, doorstep, portico, porch, entrance or passageway to any cellar or basement, or any other structure, intending or swinging into or upon any street or sidewalk in the city. No person shall suffer the platform or gate of the entrance to his cellar or basement, in any street or sidewalk, to rise above the surface thereof, and every such entrance or passageway shall be at all times kept covered by a suitable and substantial platform or gate, unless authorized to be kept open by the mayor and in case it shall be kept open it shall be protected by a sufficient railing on both sides thereof, at least 2½ feet high.

### **Sec. 21-17. - Projections over streets, sidewalks, etc.; permits, bonds required; exceptions.**

(a)

No person shall place or maintain any signs, advertising devices, clocks, marquees, public telephones, telephone booths and other appurtenances thereto, permanent awnings and other like structures projecting into or placed on or over streets, sidewalks or other public ways in the city, without first obtaining a permit therefor from the building inspector. All such structures shall be constructed, and, when attached to a building, shall be connected therewith, in accordance with all applicable state laws, building code regulations, city zoning regulations and applicable ordinance, and approved by the building inspector.

(b)

No permit shall be issued under subsection (a) of this section until the applicant therefor shall file with the city clerk a liability insurance policy, protecting the city, which is approved by the mayor in the amount of \$100,000.00.

(c)

No liability insurance policy shall be required to be filed under subsection (b) of this section for a permit for an awning, canopy, shade or the frame for any of them, or for any other projection which is constructed of lightweight materials which are not a danger to passersby along the street, sidewalk or other public way over which the object shall project.

(d)

The provisions of this section shall not apply to signs or other structures projecting into or over any such street, sidewalk or way a distance of less than 12 inches, nor to poles, wires, conduits, and appurtenances of railroad, railway, telegraph and telephone, water, gas, electric light, heat and power companies.

### **Sec. 21-18. - Throwing ice and snow into street.**

No person shall throw any ice or snow into or place the same in any street outside of the sidewalk.

**Sec. 21-20. - Removal or covering of ice on sidewalks.**

Whenever any footway or sidewalk, or any part thereof, adjoining any building or lot of land on any street, lane, court, square or public place is encumbered with ice, it shall be the duty of the tenant or occupant, and in case there is no tenant or occupant, it shall be the duty of the owner, or any person having the care of the building or lot, to cause the footway or sidewalk to be made safe and convenient, by removing the ice therefrom, or by making the ice even and keeping it covered with sand, ashes or some other suitable material to prevent slipping, within six hours after the ice forms, if in the daytime and before 12:00 noon, if it forms in the nighttime.

**Sec. 21-21. - Barbed wire fences along sidewalks prohibited; penalty.**

No barbed wire fence shall be built or maintained within six feet above the ground along any sidewalk located on or upon any public street or highway. Any person convicted of violating this section shall be punished by a fine of not less than \$20.00 nor more than \$50.00.

**Sec. 21-42. - Minimum street width.**

No new street or way, except a footway, shall be laid out and accepted by the city council of a less width than 40 feet, provided the land through which it runs and the estates adjoining the street or way will admit of the width without material injury to the same. The city council may, however, lay out and accept any old street or way, whenever in its judgment the common convenience and benefit of the inhabitants require it

**Sec. 22-51. - Emerging from alley, driveway or garage.**

The operator of a vehicle emerging from an alley, driveway or garage shall stop such vehicle immediately prior to driving onto a sidewalk or onto the sidewalk area extending across such alleyway or driveway.

**Sec. 22-54. - Driving on sidewalks.**

The driver of a vehicle shall not drive upon any sidewalk, except at a permanent or temporary driveway.

**Sec. 22-145. - General prohibitions.**

(a)

No person shall allow, permit or suffer any vehicle registered in his name to stand or park in any street, way, highway, road or parkway under the control of the city in violation of this chapter or other traffic ordinances or orders adopted by the city council, except when necessary to avoid conflict with other traffic or in compliance with the direction of a police official or traffic sign or signal; and in particular, in any of the following places:

- (1) Within an intersection, except where the installation of parking meters has been specifically approved by the department of public works of the commonwealth;
- (2) Upon any sidewalk;
- (3) Upon any crosswalk;  
Within 25 feet of a crosswalk, where so designated and established, in front of a school building entrance, when signs are in place giving notice of such prohibition;
- \*\*\*
- (12) Within 25 feet of a crosswalk, where so designated and established, in front of a school building entrance, when signs are in place giving notice of such prohibition;
- (13)

Notwithstanding the provisions of subsection (a)(12) of this section, within 50 feet of a crosswalk leading to the main entrance of the following schools: Maplewood Avenue School, Faith Christian School (Calvary Chapel) Baptist Independent Church, 394 Washington Street and Ward 2 Veterans Memorial School. The provisions of this subsection shall be applicable only between the hours of 8:00

a.m. and 4:00 p.m. on days when such schools are in session. This subsection shall not be effective unless signs are in place giving notice of such prohibition;

\*\*\*\*

- (b) Vehicles found in violation of subsection (a) of this section may be moved, by or under the direction of an officer and at the expense of the owner, to a place where parking is allowed.

**Sec. 22-176. - Penalties for parking violations.**

(a)

*Generally.* Pursuant to the authority granted in M.G.L. c. 90, § 20A1/2, any person violating the provisions of this article regulating the parking of motor vehicles, except as provided in subsection (b) of this section shall be punished by a fine as follows:

<b>07</b>	<b>Within 20 feet of an intersection</b>	<b>5.00</b>
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<b>10</b>	<b>Upon a sidewalk or crosswalk</b>	<b>10.00</b>
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**TITLE 4 TOW-AWAY ZONES**

**Sec. 22-240. - Statutory authority.**

In accordance with the provisions of M.G.L. c. 40, § 22D, the city council hereby enacts the regulations imposed by this division authorizing the immobilization or removal to a convenient place of vehicles parked or standing in such manner, or in such areas as are hereinafter described on any way under the control of the city. Vehicles specifically exempt by M.G.L. c. 40, § 22D shall not, however, be subject to such immobilization or removal.

**Sec. 22-241. - Authorization of police.**

The moving, towing or immobilization of any vehicle under the provisions of this division shall be by and at the direction of the chief of police or such other officers of the rank of sergeant or higher as he may designate from time to time and at the request of the director of public works as may be necessary to perform the duties of the public works department.

**Sec. 22-242. - Parking prohibitions; towing; immobilization; signs.**

No person shall stand or park or allow, permit or suffer any vehicle registered in his name to stand or park in any of the following locations:

- (1) Upon any way in such a manner as to impede the removal or plowing of snow or ice, except vehicles parked in accordance with approved regulations governing all-night parking;
- (2) Upon any sidewalk, with or without curbing;
- (3) Upon any crosswalk;
- (4) Upon any way within 20 feet of an intersecting way, except alleys;

Another note on ordinances, skateboarding is currently banned on Main Street, Rogers Street and Stacy Boulevard and many other downtown streets.

## APPENDIX P-2

### ADA ACCESSIBILITY REQUIREMENTS FOR SIDEWALKS

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#### **CHECKLIST FOR ACCESSIBLE SIDEWALKS AND STREET CROSSINGS**

The Americans with Disabilities Act (ADA) requires that new and altered public sidewalks and street crossings be accessible so that people with disabilities can use the pedestrian routes that connect buildings, facilities, and transportation modes. Title II of the ADA covers new sidewalks and streets constructed by or on behalf of a State or local government. The Department of Justice (DOJ) title II regulation specifically requires that curb ramps be provided when sidewalks or streets are newly constructed or altered. Sidewalks and curb ramps covered by title II should comply with the technical standards in ADAAG, UFAS (the 1984 standard for Federal construction), or other accessibility code that meets or exceeds the level of accessibility required under the ADA. Many of the same provisions that govern the accessible route on a building site or within a building, as specified in the ADA Accessibility Guidelines (ADAAG, sections 1-10), can also be applied to public sidewalks. Additional requirements for existing pedestrian networks not otherwise being altered are also included in the DOJ regulation.

#### **CURB RAMPS**

- A curb ramp or other sloped area is required wherever a new or altered pedestrian walkway crosses a curb or other barrier to a street, road, or highway. Similarly, a curb ramp is required wherever a new or altered street intersects a pedestrian walkway. A curb ramp may be perpendicular to the curb it cuts or parallel with the sidewalk. Other designs may also comply, including sidewalks that ramp down to a lesser curb height, combined with a short perpendicular curb ramp at the street.
- The running slope of a new curb ramp should not exceed 1 in 12 (8.33%). Curb ramps in alterations where it is technically infeasible to meet new construction requirements may have a maximum slope of 1 in 10 (10%).
- A level landing should be provided at the top of a perpendicular curb ramp. A curb ramp must connect to a travel route that is at least 36 inches (915 mm) wide and has a cross slope of no more than 1:48 (2%). The side flares of a curb ramp do not meet these criteria (the slope of a side flare is limited so that it will not present a tripping hazard to pedestrians).
- The transition from curb ramp to gutter should be flush. Lips are not permitted. Adjacent counterslopes in the line of travel should not exceed 1 in 20 (5%) and should connect smoothly with other elements of the pedestrian network.
- The foot of a curb ramp should be contained within the crosswalk markings. Pedestrians who use wheelchairs should not be directed outside the crosswalk or into an active travel lane in order to cross stopped traffic. If a diagonal ramp is used, the 48-inch long (1220 mm) bottom landing should be fully contained within the space between the curb radius and curb line extensions.

#### **SIDEWALKS**

- A new sidewalk should be wider than the minimum accessible travel width of 36 inches (915 mm). Maneuvering space is necessary for a pedestrian using a wheelchair to turn, to pass by other pedestrians, to operate and pass through an entrance door, to use a sidewalk telephone

or to activate a pedestrian crossing button. A 60-inch (1525-mm) minimum width can accommodate turns and passing space and is recommended for sidewalks adjacent to curbs in order to provide travel width away from the drop-off at the street edge.

- The cross slope of a sidewalk should not exceed 1:50 (2%). Excessive cross slope tends to direct wheelchair users into the street. At driveways there should be a 36-inch (915-mm) wide passage with a cross slope of no more than 1:50 (2%). Corners at intersections should comply in both directions, since the running slope of one walkway will be the cross slope of another.
- Street furniture, plantings, and other fixed items should not protrude into travel routes. Pedestrians with vision impairments can detect objects mounted on walls or posts if their leading edges are at or below 27 inches (685 mm) above the sidewalk.

## STREET CROSSINGS

- Consider the information needs of blind and low-vision pedestrians at intersections. Street crossing design should ensure that the boundary between the sidewalk and the street is detectable. Pedestrian crossing information should be available to all users.
- Insufficient crossing time may be a barrier for some pedestrians. Every pedestrian cohort should be expected to contain some walkers whose rate of travel is less than 4.0 feet per second.

## TEMPORARY WORK

- Temporary work should be accessible. Where construction blocks a public sidewalk for more than a short time, an alternate route that includes curb ramps and other accessible features should be provided. Temporary events and facilities, such as street fairs, parades, and vending carts should also meet accessibility criteria. Temporary road signage should not encroach on accessible passage or headroom.

## OTHER PEDESTRIAN FEATURES

- Pedestrian facilities on and along sidewalks must be accessible. Signal actuating buttons, drinking fountains, telephones, kiosks, and other pedestrian elements should meet accessibility criteria for approach and maneuvering space, reach range, and controls and operation.

## Reference:

Accessible Sidewalks and Street Crossings: a Design Guide, **November, 1999**

Written by: U.S. Access Board and Federal Highway Administration staff

Edited by: Lois Thibault, U.S. Access Board