

**SECTION TWO: ANALYSIS AND RECOMMENDATIONS (OCTOBER 2007 –  
FEBRUARY 2008)**

**RECOMMENDED SHORT-TERM IMPROVEMENTS**

**Introduction**

Ideas and concepts for improvements to traffic circulation and ferry access have been developed from observations and analysis, surveys of ferry passengers, discussions with service providers, and interaction with numerous stakeholders. A preliminary list was developed and refined in discussions and meetings with stakeholders.

The recommendations below have been developed with several considerations in mind.

1. They can be implemented reasonably quickly at modest cost with little or no undesirable impacts.
2. They provide elements of synergy with benefits for traffic, public transportation, pedestrians, and bicycle facilities.
3. They are robust and compatible with other improvements pending in the downtown area, including the new transportation hub, the proposed development of National Grid's Candle Street property, and redevelopment of the Steamship Authority terminal.
4. They will encourage new patterns of pedestrian, bicycle, and traffic movements, which will not only be helpful but will also provide a new perspective from which to consider additional improvements in the future.

The recommendations are grouped by general type and illustrated in the enclosed figures. It is hoped that these will offer immediate relief to some problems while the dialogue about long-term needs and improvements continues.

### **Traffic and Circulation**

1. Implement two-way traffic flow on Oak Street between South Beach Street Extension and Easy Street. This will remove traffic from the Broad/Easy Street intersection and other key locations. Converting the short section of Oak Street between South Beach Street Extension and Easy Street to two-way operation would permit northbound vehicles on Easy Street to make a left turn onto Oak Street for direct access to South Water Street. These vehicles would thus be removed from three intersections on Broad Street – at Easy Street, South Beach Street, and South Water Street. In conjunction with this change, the nine parking places along the north side of Oak Street should be moved to the south side.

It is estimated that approximately 50 to 70 vehicles (17 percent to 23 percent of traffic turning left from Easy Street onto Broad Street) would make this turn in each of the three peak hours. This estimate was made based on the proportions of vehicles making turns at each of the intersections where vehicles currently travel. For example, vehicles traveling north on Easy Street can turn east toward the ferry terminal or west onto Broad Street; a certain proportion turns west. At South Beach Street, vehicles can turn west or east or continue south; a certain proportion turns west. At Broad and South Water Street, vehicles can turn south or continue west; a certain proportion turns south. These compound proportions were applied to traffic passing Oak Street on Easy Street. Traffic was reassigned for the purposes of analysis, and the resulting traffic conditions are summarized in Tables 2-5a, 2-6a, 2-9a, 2-20a, and 2-21a.

Conditions on the three intersections along Broad Street show improvement with reduced levels of delay and shorter vehicle queues. In particular, delays on South Beach Street are reduced by up to 30 percent and vehicle queues by more than 10 percent. The

intersections of Oak Street with Easy Street and South Water Street have also been analyzed and are expected to operate at good levels of service. The queue of westbound vehicles on Oak Street would be longer than at present but can be accommodated within the length of this section of Oak Street. In summary, this change would be expected to improve conditions overall. In the interim, the town should consider changing Oak Street traffic flow to one way westbound from Easy Street to South Water Street with on-street parking preserved at existing locations.

2. Install a STOP sign at the eastbound approach of Salem Street to Candle Street. This is expected to reduce the queuing along Candle Street. Traffic operations at this intersection are summarized for existing conditions and with the addition of the proposed STOP sign in Tables 2-25 and 2-25a, respectively. The revised control scheme is expected to result in an improvement in the Levels of Service (LOS) on the Candle Street approach from LOS C to LOS B on weekdays and LOS A in the Saturday midday period. The volume/capacity ratios and delays on this approach are also expected to be reduced and would be comparable on each approach.
3. Install a STOP sign at the southbound approach of Washington Street to Francis Street. This is anticipated to improve safety at this location. Traffic operations at this intersection are summarized for existing conditions and with the addition of the proposed STOP sign in Tables 2-18 and 2-18a, respectively. Operation as an all-way stop is expected to result in levels of delay more balanced among approaches. The intersection would operate at LOS B during weekday peak periods and at LOS C during Saturday midday.
4. Install a bulb-out with DO NOT ENTER sign along the north side of Broad Street west of the restricted parking spaces at the intersection of Federal Street. This should be implemented to complement the parallel parking configuration along Broad Street.

5. Undertake a future detailed study of the impacts of closing the section of Main Street between Union Street and Orange Street and along Federal Street from Main Street to Cambridge Street to vehicular traffic.

### **Parking**

1. Designate individual on-street parking spaces within the core parking district.
2. Undertake a future study of downtown parking inventory, regulations, utilization, and future demand. Study of future demand should take into account existing land uses, Master Plan land use designations, population and employment forecasts, planned and anticipated development, economic climate, and walking time between parking areas and destinations.

### **Public Transportation**

1. NRTA – Provide storage area at destination stops for beach carry-on items. Replacement vehicles that provide beach service should consider the provision of additional storage space for carry-on items.
2. NRTA – Work with ferry operators to make bus route and schedule information available on ferries.
3. NRTA – Develop the planned new downtown transportation hub for NRTA.

### **Bicycle Facilities**

1. Add bike route stencil to roadway along inbound and outbound bike routes. While the samples of acceptable roadway signage painted symbols are included in the upcoming text and in Figure 7, the 11 proposed locations are illustrated in Figure 8.

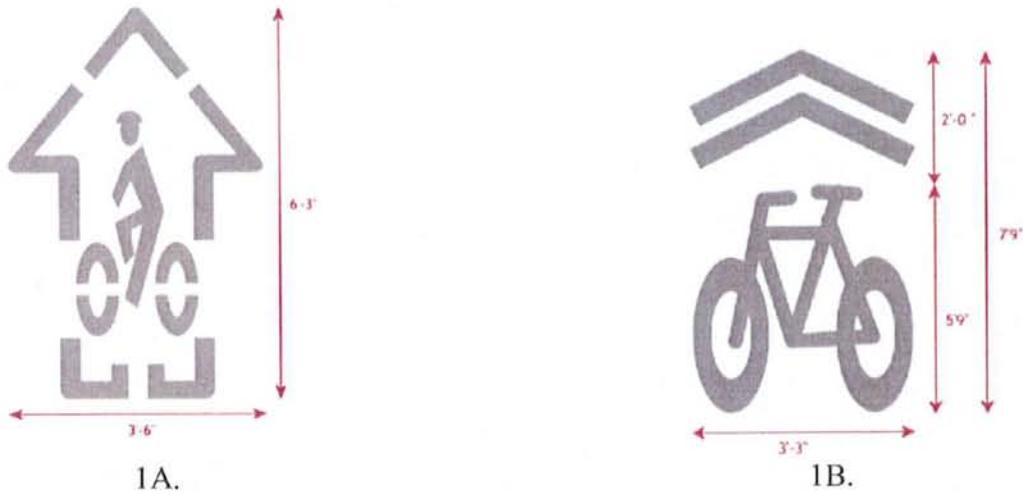


Shown above: Acceptable "Share the Road" signage should be installed where a concentration of bike traffic will be directed to utilize a vehicular roadway.

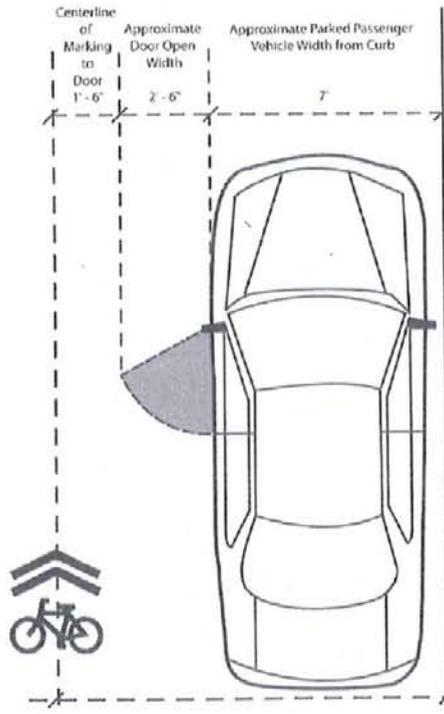


Shown above: Painted bike symbol on the vehicular roadway travel path. It is important to install this symbol so that it is in the travel path and highly visible for both bicycles and vehicles. Do not install the symbol along the side of the road where it is more likely to be covered by a parked car or accumulated road sand.

FIGURE 7



Shown above: General dimensional criteria for typical bike symbol pavement markings.



Shown above: General dimensional criteria for the location of painted bike symbol on roadway with on-street parking.

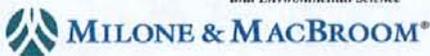
2. Add bike route signage along Center Street at the intersection of Chestnut Street to direct bicycle traffic to Broad Street.
3. Implement the conceptual design for the In-town Bike Route from the new bus terminal to the Milestone Rotary. This is illustrated in Figure 9.
4. Implement the conceptual design for extension of the Cliff Road Bike Path. This is illustrated in Figure 10.
5. Work with ferry operators to provide information on bike rules and safety.



**Bike Route Symbol**



Engineering,  
Landscape Architecture  
and Environmental Science



### Downtown Circulation and Ferry Access Improvement Study

LOCATION:

Nantucket, MA

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www.miloneandmacbroom.com

MMI#: 2967-04  
MXD: H:study\_area.mxd  
SOURCE: DEP Bulletin No.40



**Bike Route Symbol Stencil  
Location Map**

DATE:  
January 2008

SCALE:  
1" = 300'

SHEET:  
**Figure 8**



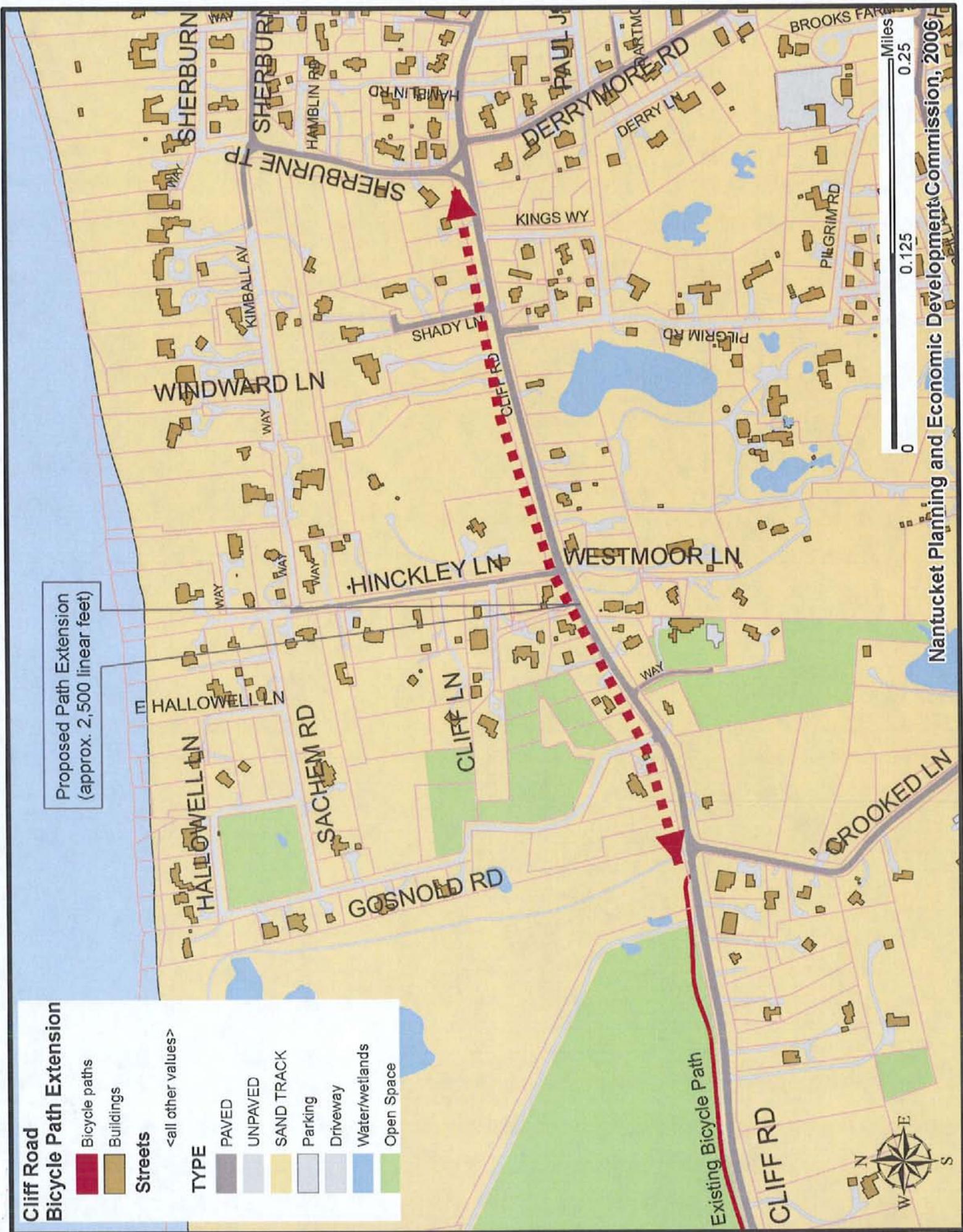


Figure 10

## **Pedestrian Facilities**

A coordinated effort of the town, the Commission on Disability, or local advocates for accessibility could potentially inventory and study the improvements required to provide preferred safe routes of travel for all abilities within the downtown area. This effort should primarily include uniform handicap access ramps at all downtown crossings not already so equipped.

1. Add painted crosswalks along both sides of Salem Street at Washington and Candle Streets.
2. Replace existing brick crosswalks along the truck route with alternative material or installation detail (see Figures 19 and 20) for better structural stability and limited damage from truck operations.
3. Widen sidewalks at the following locations:
  - a. Along the north side of Straight Wharf by three feet;
  - b. Along the south side of Broad Street from South Beach to Easy Streets by three feet; and
  - c. Along Easy Street from Straight Wharf to Broad Street by a variable width to provide a minimum seven-foot wide sidewalk and 15-foot travel lane along the north side of lower Main Street and in front of the Pacific Club; realign crosswalk along South Water Street.
4. Provide pedestrian access/walkway from Broad Street to Easton Street via the waterfront walkway along the Nantucket Yacht Club property, the Children's Beach park, and Harbor View Way.

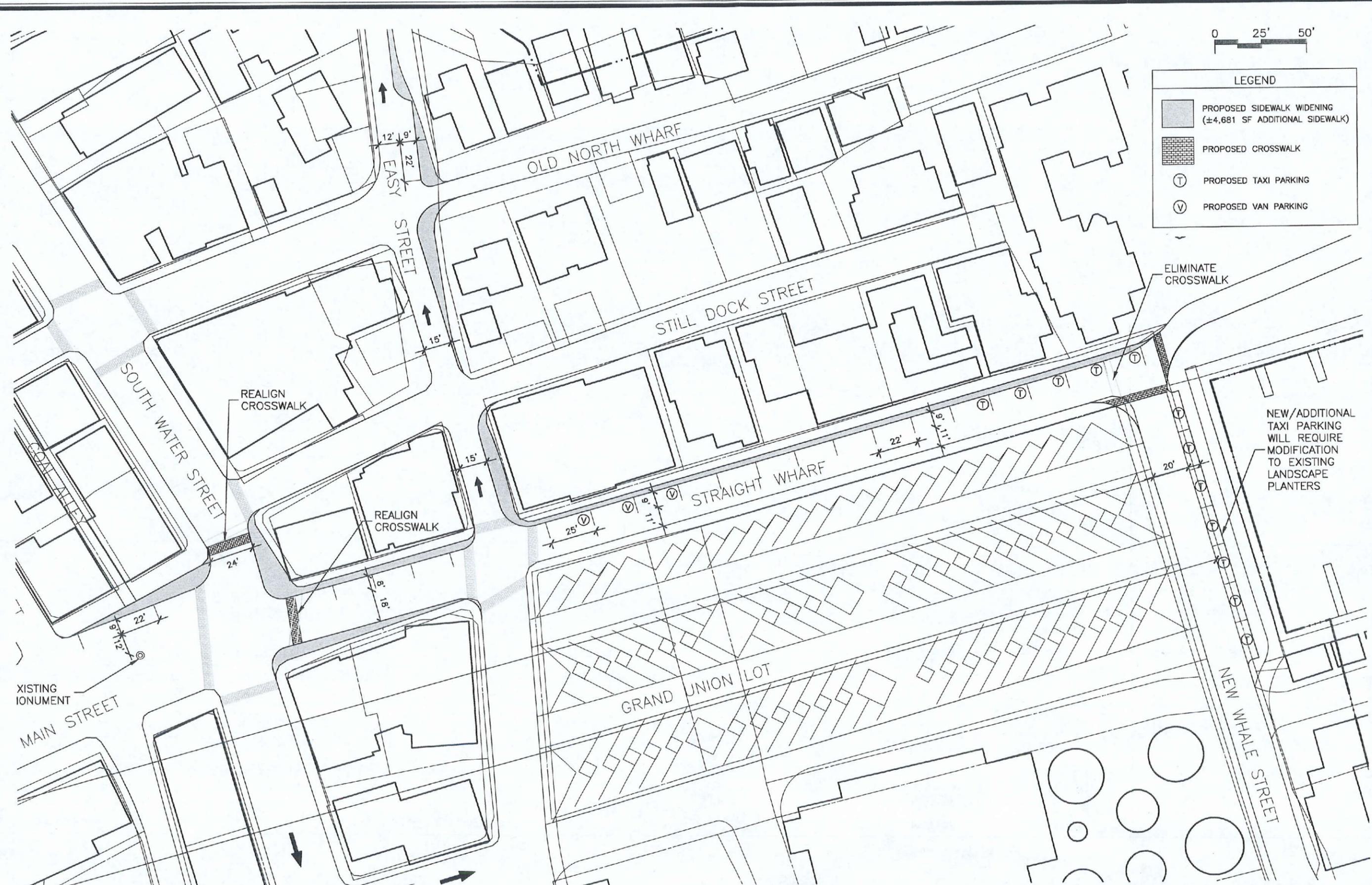
(Refer to Figures 11, 12, 13, and 14.)

## **Ferry Service and Intermodal Connections**

It is noted that restriping improvements were implemented at the Steamship Authority terminal prior to the 2007 summer season to achieve better traffic flow through the property.

1. Provide two additional public parking spaces along Straight Wharf by redelineating and removing unused tour van spaces near the intersection of Easy Street as illustrated in Figure 11.
2. Create five additional pickup and drop-off spaces along New Whale Street by removing the existing landscaped buffer between the roadway and sidewalk and moving the curb by approximately 7.5 feet as illustrated in Figure 11. It will be necessary to evaluate current deed restrictions pertaining to the landscape and memorial elements of the right-of-way, as well as appropriate replacement landscaping, before implementation.
3. Provide multimedia information on ferries concerning:
  - a. Downtown facilities and attractions;
  - b. Directions and downtown navigation;
  - c. Bicycle rentals; and
  - d. Bus routes and schedules.
4. Provide robust pedestrian connection between ferry terminals via sidewalk along Easy Street waterfront as illustrated in Figures 11 and 13.
5. Allow and improve access from the Steamship Authority terminal to Harbor View Way via the Nantucket Yacht Club and Children's Beach (see Figure 14).

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LEGEND	
	PROPOSED SIDEWALK WIDENING (±4,681 SF ADDITIONAL SIDEWALK)
	PROPOSED CROSSWALK
	PROPOSED TAXI PARKING
	PROPOSED VAN PARKING

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REVISIONS
FEB. 18, 2008
MARCH 27, 2008

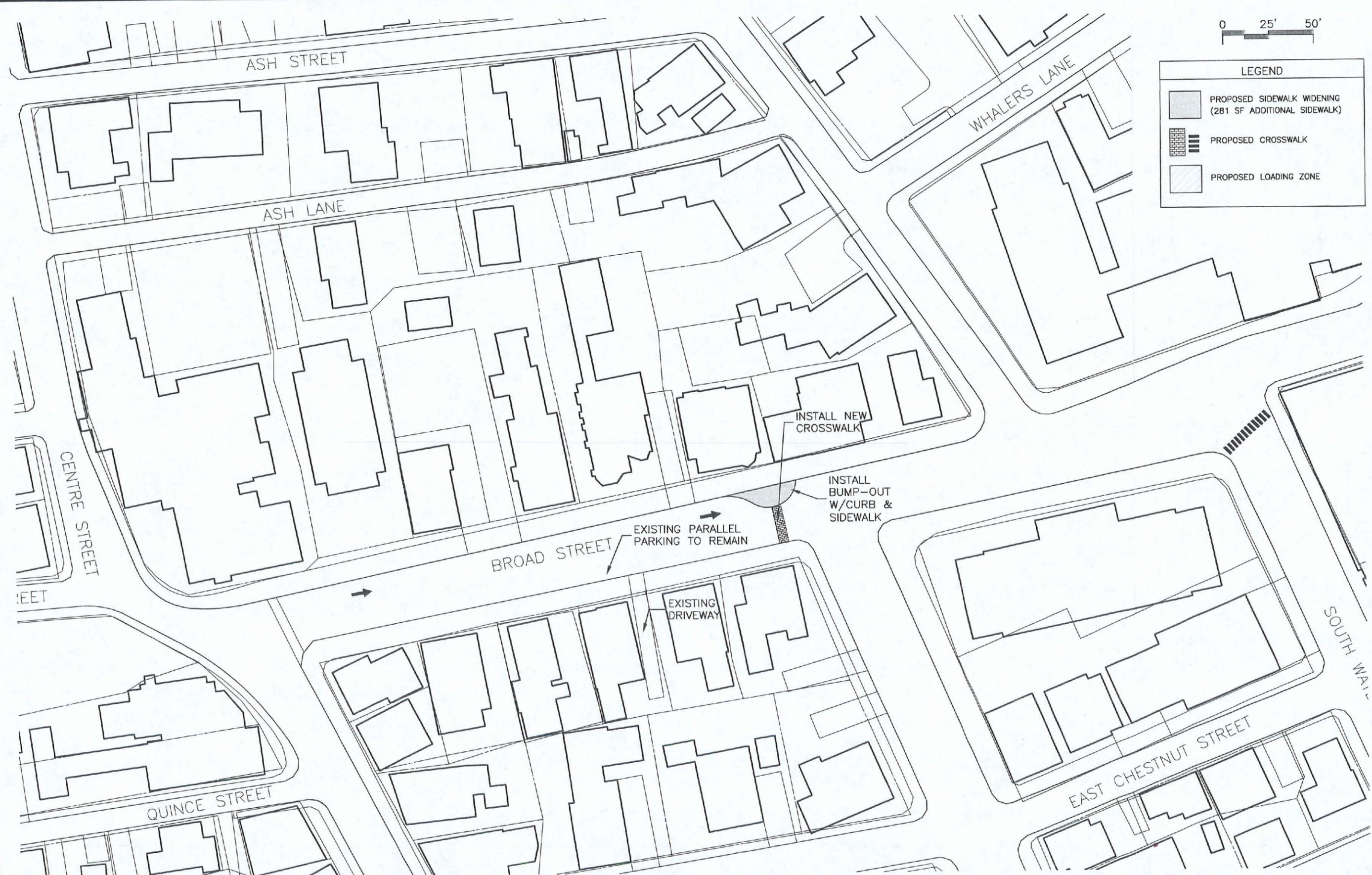
ROADWAY IMPROVEMENTS @ STRAIGHT WHARF & NEW WHALE STREET  
 DOWNTOWN CIRCULATION AND FERRY  
 ACCESS IMPROVEMENT STUDY  
 NANTUCKET, MASSACHUSETTS

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DESIGNED	DRAWN	CHECKED
SCALE 1" = 50'		
DATE JAN. 29, 2008		
PROJECT NO. 2967-04		

**FIG.-11**

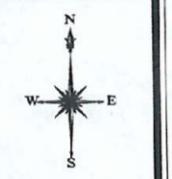
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**LEGEND**

-  PROPOSED SIDEWALK WIDENING (281 SF ADDITIONAL SIDEWALK)
-  PROPOSED CROSSWALK
-  PROPOSED LOADING ZONE



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2	MARCH 27, 2008	

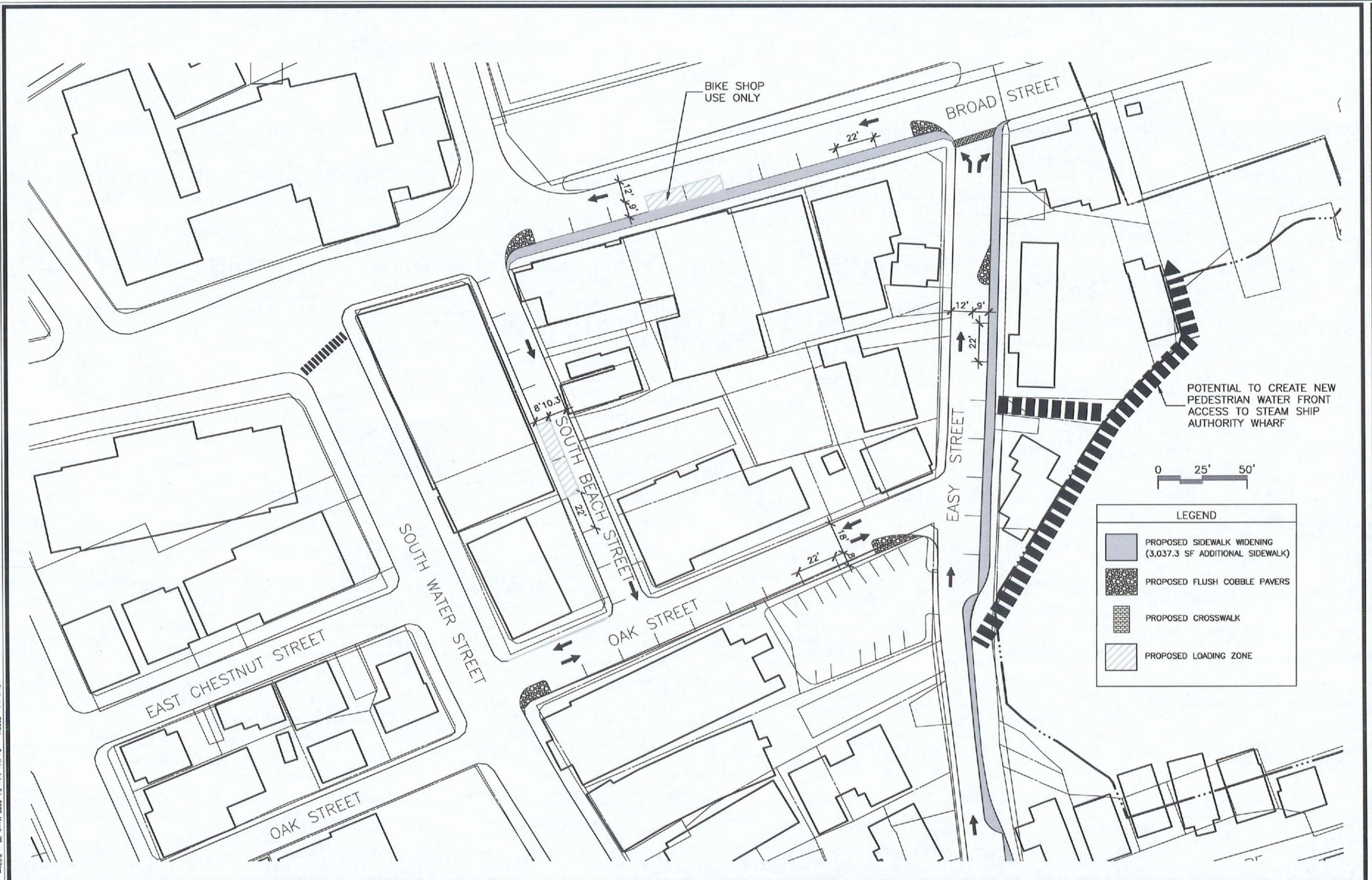
ROADWAY IMPROVEMENTS @ BROAD STREET  
 DOWNTOWN CIRCULATION AND FERRY ACCESS IMPROVEMENT STUDY  
 NANTUCKET, MASSACHUSETTS

MRA	TMM	MRA
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DATE: JAN. 29, 2008		
PROJECT NO. 2967-04		

**FIG.-12**  
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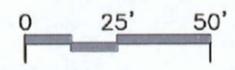
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**LEGEND**

- PROPOSED SIDEWALK WIDENING  
(3,037.3 SF ADDITIONAL SIDEWALK)
- PROPOSED FLUSH COBBLE PAVERS
- PROPOSED CROSSWALK
- PROPOSED LOADING ZONE



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NO.	DATE	DESCRIPTION
1	FEB. 18, 2008	
2	MARCH 27, 2008	

ROADWAY IMPROVEMENTS @ BROAD, EASY AND SOUTH BEACH STREET  
 DOWNTOWN CIRCULATION AND FERRY  
 ACCESS IMPROVEMENT STUDY  
 NANTUCKET, MASSACHUSETTS

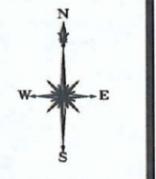
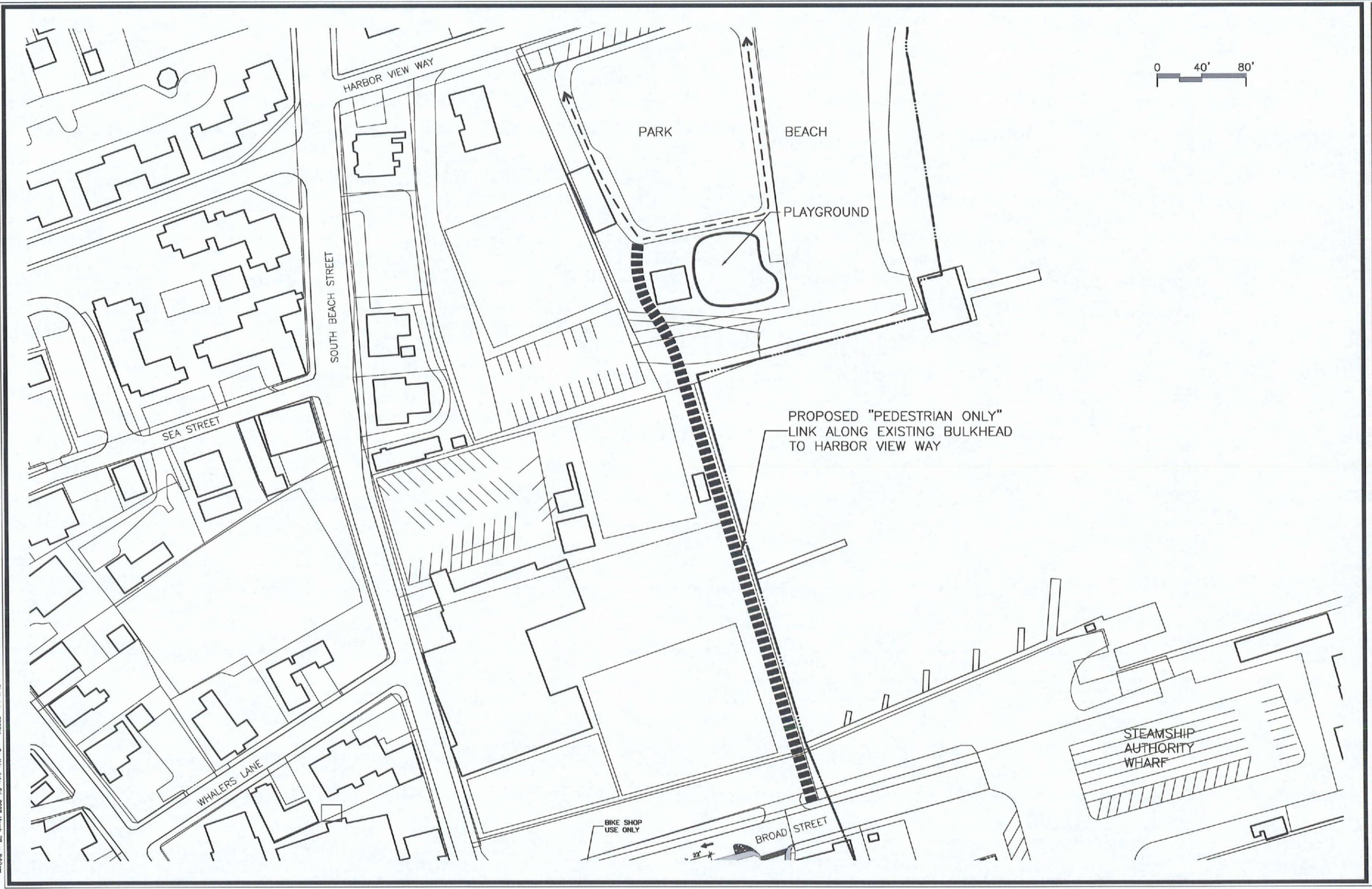
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PROJECT NO: <b>2967-04</b>		

**FIG.-13**

SHEET NO.

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NO.	DESCRIPTION	DATE

PEDESTRIAN ONLY CONNECTION - BROAD STREET TO HARBOR VIEW WAY

**DOWNTOWN CIRCULATION AND FERRY ACCESS IMPROVEMENT STUDY**

NANTUCKET, MASSACHUSETTS

MRA DESIGNED	TMM DRAWN	MRA CHECKED
SCALE 1" = 80'		
DATE FEB. 18, 2008		
PROJECT NO. 2967-04		

**FIG.-14**

SHEET NO.

## **Wayfinding and Gateways**

1. Provide public information for visitors to and from Nantucket on ferries as discussed above.
2. Provide satellite downtown information center/map kiosk at key points of entry and exit to ferry terminals.
3. Provide downtown information/map kiosk at future transportation hub.
4. Consider downtown gateway elements at key road intersections.
5. Formalize in conjunction with the Historic District Commission a unified landscape/streetscape theme throughout the downtown area.
6. Formalize in conjunction with the Historic District Commission a unified signage design, implementation, and installation program.

## **Graphics and Figures**

The following graphic section is intended to provide a series of existing conditions photographs and simulated conceptual illustrations that depict many of the recommendations for improvements that were discussed earlier in this report. It should be understood that these illustrations are conceptual illustrations and have been prepared for informational purposes only. The installation of these design elements would require detailed design documents, regulatory approvals, and may potentially require further studies, analysis, and property access or acquisition agreements.



Figure 15

Shown above Figure 15: Existing conditions leaving steamboat wharf traveling onto Broad Street include abnormally large vehicular travel lanes, a highly visible and unattractive Steamship Authority trailer and equipment loading/storage area (to the right), approximately 10 trash cans, large and highly visible utility transformers, various types of sidewalk paving materials (concrete, bituminous, brick, etc.), and no visible pedestrian crosswalk locations.



Figure 16

Shown in Figure 16: Existing Conditions pulling out of Easy Street at the intersection of Broad Street and the beginning of the steamboat wharf. This is one of the last views that many Nantucket visitors see as they leave the island. Much like the previous photo above, the line of sight is directed into the highly visible and unattractive Steamship Authority trailer and equipment loading/storage area.

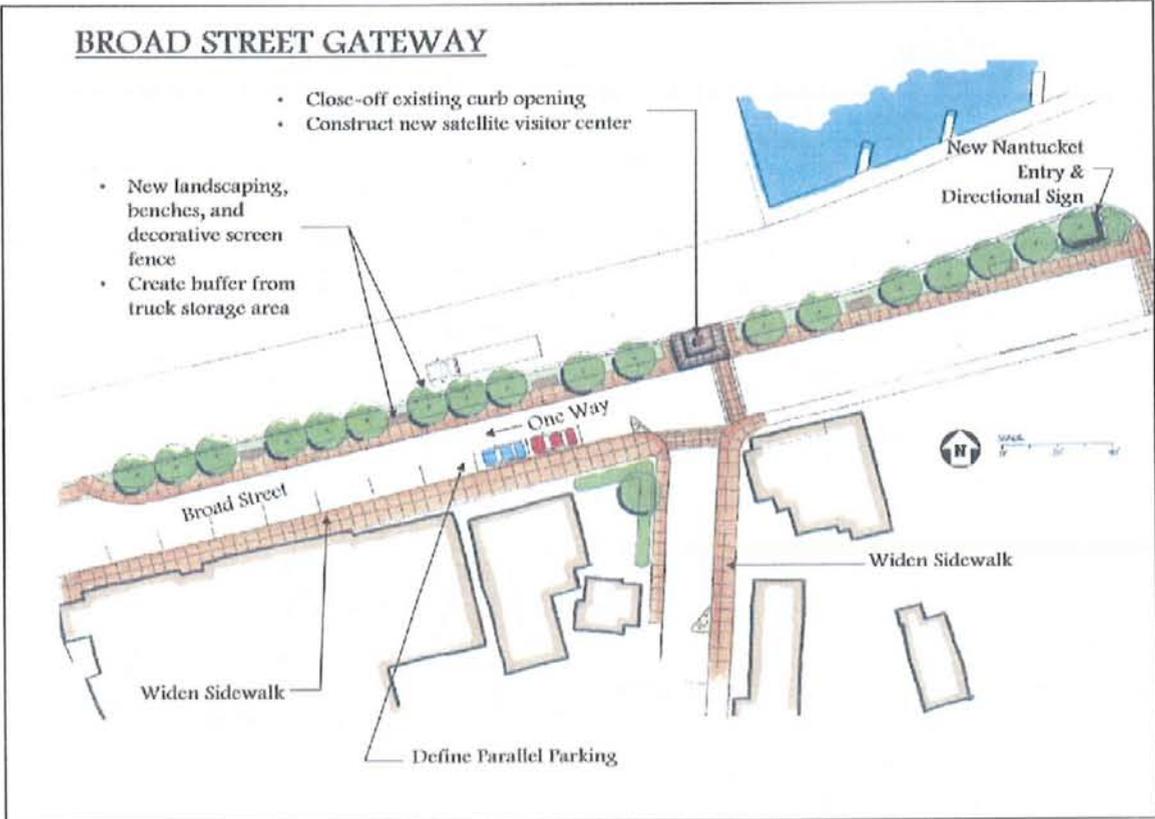


Figure 17 – Conceptual schematic site plan depicting potential lower Broad Street streetscape improvements and gateway.



Figure 18 – Conceptual illustrative sketch depicting potential lower Broad Street streetscape improvements and gateway.

Shown in Figures 17 and 18: Proposed conceptual illustration of a "Gateway to Nantucket" leaving steamboat wharf and traveling onto Broad Street. This is the first impression that many visitors to the island will see and the last image they see as they leave. Note the widened sidewalks, new paver crosswalks, new Nantucket Visitors' Information Building, and general streetscape enhancements including a decorative screen fence, landscape areas, benches, and bike racks to screen the Steamship Authority tractor trailer and equipment storage loading area. Locating a satellite visitors' center in this location will provide an immediate destination for new island visitors to plan for transportation, activities, tours, lodging, etc. and avoid the "wandering pedestrian dilemma" that oftentimes leads to congestion and dangerous situations when considering the extreme interaction of vehicles and pedestrians in this area. A revamped and enhanced streetscape is shown along the southern side of Broad Street that provides a better sense of organization and an important visual screen from the immediately adjacent trailer storage area. New paver crosswalks are also shown at Broad and Easy Streets to provide a sense of arrival to the island. These crosswalks will provide a clear and safe pedestrian crossing route and can be installed to withstand the vehicular and truck traffic that occurs in the downtown area.

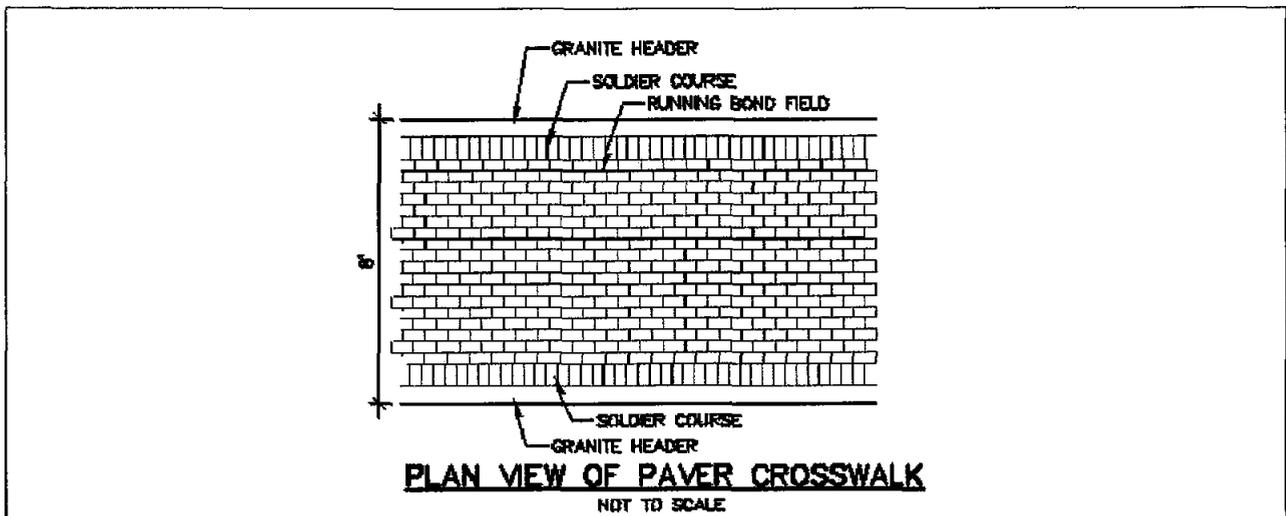


Fig 19

Shown above Figure 19: A design detail that can be installed to match the style of the existing brick crosswalk of the area and function as an accessible crosswalk. This detail can be used in areas where a simple painted crosswalk would not provide the aesthetic streetscape element desired for the downtown village area.

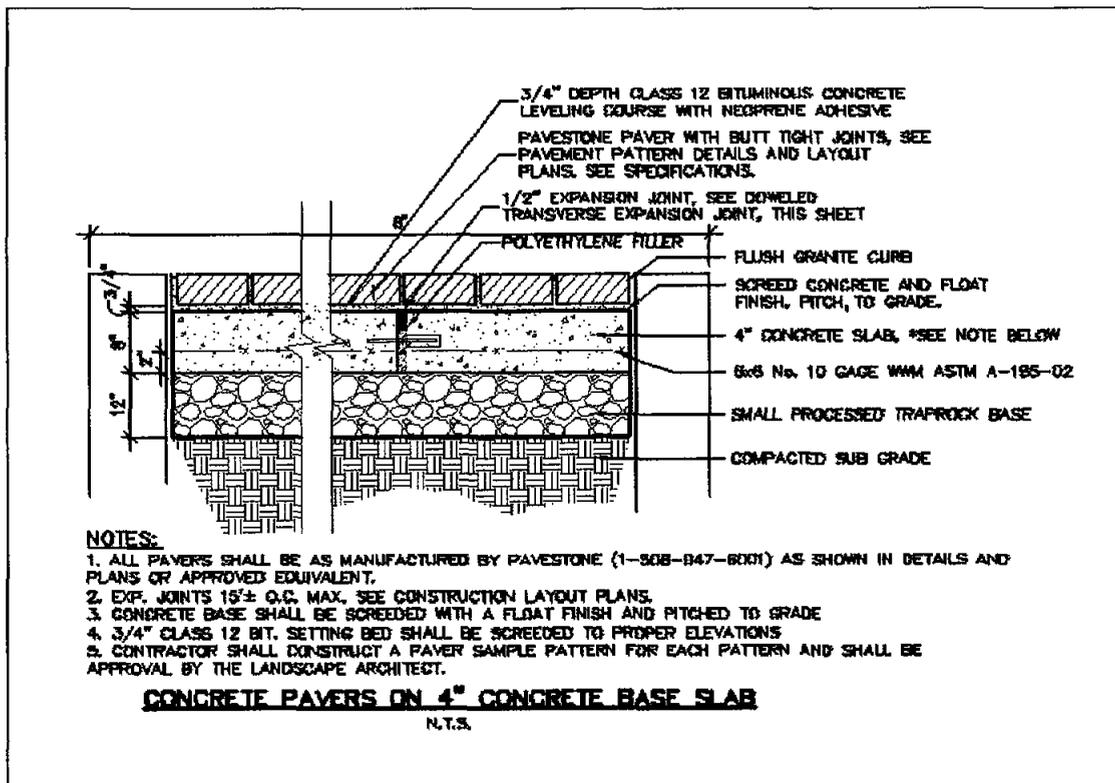


Figure 20

Shown in Figure 20: A design detail cross section that should be utilized in areas of high vehicle and heavy load truck traffic. The paver crosswalk is set on a 12" compacted processed aggregate base and a 4" concrete slab for increased structural stability.



Figure 21

Shown in Figures 21 and 22: Existing conditions on Straight Wharf traveling toward New Whale Street. This area is rich in character and includes large expanses of brick paving, cobble, and wood boardwalk. The large expanses of brick pavers lead to a large variation in the route of travel that each group or cluster of pedestrians chooses to use. Although the character of the area is attractive and unique to Nantucket, the lack of defined pedestrian versus vehicular areas coupled with a visitor's sense of "Where am I?" lead to congestion in and around the ferry arrival area.



Figure 22



Figure 23 – Conceptual schematic site plan depicting potential Straight Wharf visitors' center and improved gateway.