

DOWNTOWN CIRCULATION AND FERRY ACCESS IMPROVEMENT STUDY

**AN UPDATED DATA COLLECTION AND ANALYSIS EFFORT THAT
PRESENTS RECOMMENDATIONS TO ALLEVIATE DOWNTOWN
TRAFFIC CONGESTION IN AND AROUND THE FERRY TERMINALS**

DOWNTOWN NANTUCKET NANTUCKET, MASSACHUSETTS

MMI #2967-04

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Nantucket Planning & Economic Development Commission
Nantucket, Massachusetts

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INTRODUCTION AND HISTORICAL PERSPECTIVE OF THE PROJECT AREA

Geography and Demographic Trends

The town of Nantucket is located off the coast of Massachusetts approximately 20 miles east of Martha's Vineyard and 25 miles south of Cape Cod. The town of Nantucket is coincident with the county of Nantucket and includes the islands of Nantucket, Tuckernuck, and Muskeget.

Refer to Map 1 for a map of the town on a USGS topographic base.

Nantucket has a land area of 46 square miles and approximately 88 miles of shoreline.

Nantucket Sound is located north of the town, and the open Atlantic Ocean is located to the east and south. Sheltered and semisheltered marine systems include Nantucket Harbor, connected to Nantucket Sound; Polpis Harbor, an embayment of Nantucket Harbor; and Madaket Harbor, at the west end of Nantucket Island toward Tuckernuck. Extensive sandy shoals are located east and west of Nantucket. Key physical features of Nantucket Island include high bluffs at Sankaty Head and the Nantucket Cliffs, long systems of beaches and dunes (Great Point and Coatue) formed by longshore currents, several north-south trending elongated ponds that are typically cut off from the ocean by narrow beaches (such as Hummock Pond and Miacomet Pond), extensive moorlands, and numerous areas of tidal wetlands.

Demographic trends for the town of Nantucket have historically been different from many other communities in Massachusetts and continue to differ. Nantucket was the third largest city in Massachusetts while its whaling economy was booming. At the end of its whaling heyday in the 1840s, Nantucket had a population of 9,700. By the 1870s, the town's population was only 4,000. From the 1930s through the 1970s, the year-round population of Nantucket was only 3,500.

According to the 2000 U.S. Census, 9,520 people were residing in Nantucket. This represented an enormous population increase of 58 percent between 1990 and 2000. This growth was due in

large part to the attractive setting and high quality of life as well as the influence of tourism and the need for workers to support the tourism industry. The estimated population in 2005 was 10,168, a more stable seven percent increase over the preceding five years but still representing substantial growth as compared to trends for the Commonwealth of Massachusetts. Meanwhile, the summer tourist season brings an enormous increase in temporary population, currently reaching approximately 60,000 on a peak day. The island peak summertime population surge of day trip tourists, vacationers, retirees, and second home owners is critical to supporting the island's year-round economy.

The historic downtown core is the primary area of congestion for the island and includes many of the island's shops, restaurants, guest houses, and both ferry terminals. This core area also serves as the gateway for the vast majority of all people coming to and departing from the island.

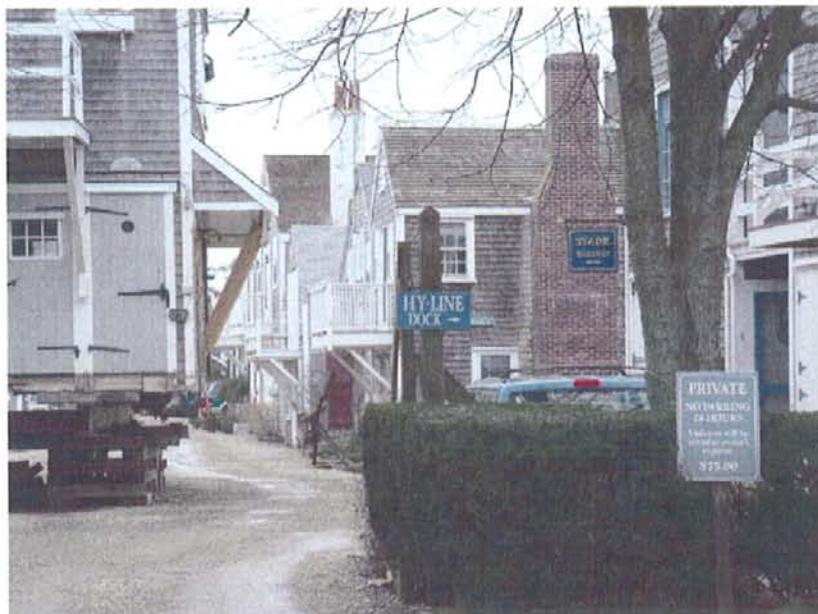
Transportation, Circulation, and Parking Issues

At first glance, there appear to be a number of factors that contribute to the congestion observed and experienced in the downtown area, including many not unique to Nantucket such as the use of modern-day vehicles in an area that was laid out and developed in the 19th century. This kind of problem occurs throughout many historic New England towns. However, several circumstances that contribute to the congestion are unique to Nantucket as compared to other historic community centers, including pressures associated with tourism and the need to deliver almost everything needed in the town via only one dock or wharf, the Steamship Authority dock, in the historic downtown core area.

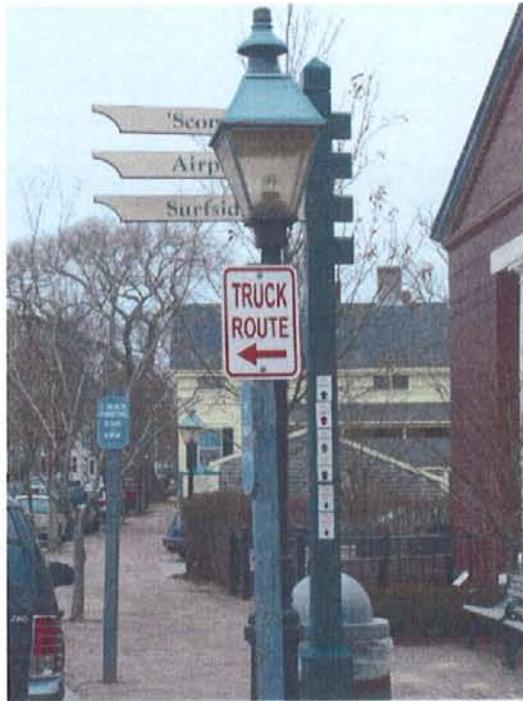
Because of these unique circumstances, Nantucket officials have long understood the causes of the transportation-related issues in the downtown area. This is evident from a review of the following reports:

- ❑ *Nantucket Central Business District Circulation and Parking Study, 1977*
- ❑ *Planning and Implementation for Downtown Parking and Traffic Circulation, 1993*
- ❑ *Downtown Traffic Circulation Analysis, 1996*
- ❑ *A Strategy to Address Parking and Traffic Congestion in Downtown Nantucket, 1998*
- ❑ *Site Analysis Study: Nantucket Island Parking Garage, Spring 2006*

A review of these reports reveals that a number of problems have persisted, including a potential lack of parking and misuse of existing parking; routing of truck and automobile traffic to and from the Steamship Authority dock; unloading of trucks in the downtown area; confusion of pedestrians walking to and from the two ferry terminals; jaywalking and overflow from sidewalks to the streets; the presence of tour buses, vans, and taxis; and the general problem of many people using several modes of transit in a small downtown area (cars, trucks, bicycles, buses, etc.).



During a 10-minute walk of the downtown area, only one sign can easily be found that points pedestrians to the Hy-Line ferry terminal.



Only two small signs designate the preferred truck route as trucks depart from the Steamship Authority ferry terminal.

It is interesting to note that all of these reports focusing on the downtown area predated the permanent and seasonal population increases described above. The population increases have only heightened the need for transportation improvements in and around the downtown area, especially given the fact that many residents employed downtown are using their own vehicles. Indeed, a mid-February visit to Nantucket revealed that on-street parking and truck activity cause navigation in the downtown area to be a challenge even in the off season.

Some of the goals and objectives outlined in the four reports specific to downtown Nantucket were incorporated in the Nantucket Regional Transportation Plan (2007-2030) based on a review of the public participation meeting materials. For example, reducing the number of cars that come to the island and developing parking alternatives in the downtown area are shared goals.

It is clear, as stated in *A Strategy to Address Parking and Traffic Congestion in Downtown Nantucket*, that "there is no one magic bullet to solve the problems in the Downtown." Milone & MacBroom, Inc. concurs fully and understands that only a creative combination of strategies can help to mitigate the existing problems. Mainland solutions such as addition of lanes, extreme roadway widening, and electronic traffic signaling are not consistent with the historic nature of the downtown and have not been considered.

It is the intent of this study to provide up-to-date data on traffic circulation and volume within the project area and provide recommendations for improvements. The recommendations are purposely varied and include both short-term economically feasible improvements and long-range more economically challenging ones. It is the goal of this study not only to refine a strategy for implementing relevant recommendations of previous studies but also to collect and evaluate new alternatives to improve the circulation system as well as to improve the access and flow of all traffic modes between the ferry terminals and both downtown and out-of-town destinations.

SECTION ONE: PROJECT INITIATION, DATA COLLECTION AND BASE MAPPING (JULY 2007 – OCTOBER 2007)

Downtown Study Area

The downtown study area was developed in order to define the project area. This boundary (shown in red on Map 1) is not a zoning boundary or property boundary but rather a subjective immediate downtown business area that reflects a 0.33 mile zone of influence surrounding the two primary ferry docks (the Steamship Authority dock and the Hy-Line dock). The project study area boundary, Map 1, was utilized as the limit for existing conditions analysis, mapping, and data collection.



Engineering,
Landscape Architecture
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**Downtown Circulation and Ferry Access
Improvement Study**

MMI#: 2967-04
MXD: H:study_area.mxd
SOURCE: DEP Bulletin No.40

N
↑

**Study Area
Locations Map**

LOCATION:
Nantucket, MA

DATE:
October 2007

SCALE:
1:6,000

SHEET:
Map 1

The analysis included several project workshop meetings to solicit input from the public, business owners, the Transit Authority, ferry service providers, town staff and municipal organizations. A complete memorandum on the public and private workshops has been included in the Appendix of this report.

The following is a list of general safety, circulation, and aesthetic issues noted as part of the existing conditions analysis.

- Vehicular traffic, to and from the ferry terminal lots, and queuing are the main causes of the periodic congestion in the downtown area.
- The unique and attractive character of the "Historic Downtown Area" is oftentimes overshadowed by the dominance of the vehicle congestion.
- The historic layout of streets and parking does not support current day vehicle sizes (i.e., large SUVs and delivery trucks) and thus leads to insufficient aisle widths, insufficient quantity of parking spaces, and excessive traffic congestion due to the length of vehicles.
- Several side streets that allow on-street parking create extremely narrow and dangerous travel aisles in certain areas.
- Difficult pavement types exist in several sections of the downtown area.
- There is a lack of safe sidewalks, crosswalks, handicap accessible parking spaces, sidewalk ramps, and pedestrian safety features (i.e., crossing signs, crosswalks, etc.).
- There are limited sidewalk widths and pedestrian spaces.

- Existing signposts and poles within sidewalks conflict with pedestrian movements and circulation paths.
- Although the historic areas include an exceptionally decorative theme that is difficult to recreate, there appears to be a lack of a continuation of that streetscape theme and the pedestrian scale amenities (i.e., period style pedestrian level lighting, benches, trash receptacles, street trees, etc.) in the vicinity of the Steamship Authority pier.
- The gateway to Historic Downtown Nantucket is understated.
- There is a lack of defined on-street parking spaces. Insufficient or absent parking space layout causes a disorganized parking scheme.
- There is a lack of additional parking areas other than downtown on-street parking spaces.
- Uneven walking surfaces present a potential tripping hazard and are generally difficult for some abilities to navigate.
- There are limited civic and cultural spaces along the downtown waterfront.
- Poor pedestrian connections (sidewalks, wayfinding signage, etc.) exist to and from the ferry terminals, the downtown shops, and the Nantucket Regional Transit Authority (NRTA).

Existing Conditions Mapping – Inventory Plans

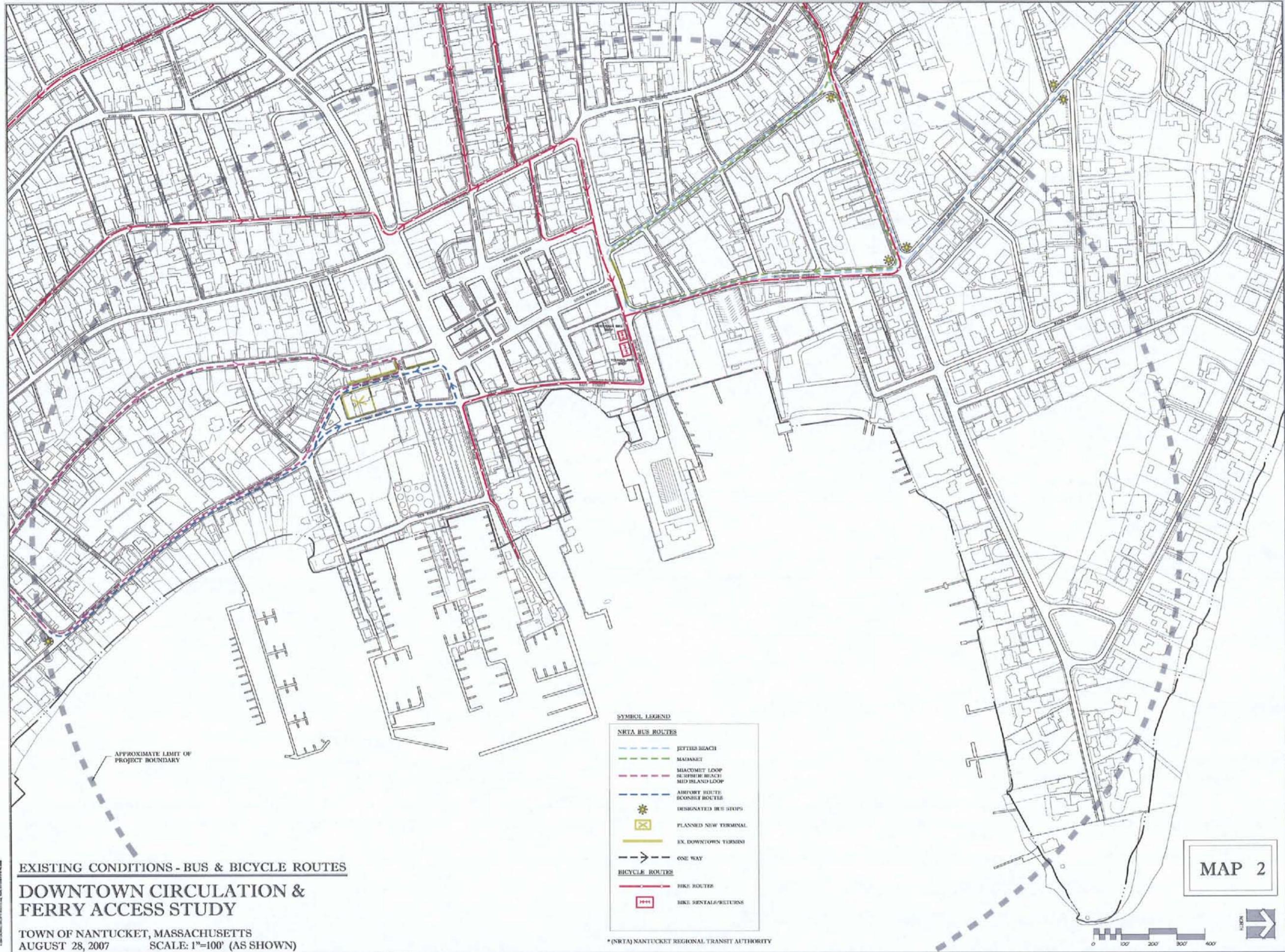
In an attempt to better understand actual field conditions of the unique pavement types, available parking counts, and restrictions, a field inventory was completed for the downtown study area.

Three separate maps were developed in order to better present the data collected:

Map 2 - Bus & Bicycle Routes

Map 3 - Crosswalk & Pavement Inventory

Map 4 – On-Street Parking



EXISTING CONDITIONS - BUS & BICYCLE ROUTES

DOWNTOWN CIRCULATION & FERRY ACCESS STUDY

TOWN OF NANTUCKET, MASSACHUSETTS
 AUGUST 28, 2007 SCALE: 1"=100' (AS SHOWN)

SYMBOL LEGEND

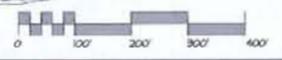
NRTA BUS ROUTES

- JETTES BEACH
- MAHARGET
- MACOMET LOOP
- BURNETT BEACH
- MID ISLAND LOOP
- AIRPORT ROUTE
- ECONSIST ROUTE
- DESIGNATED BUS STOPS
- PLANNED NEW TERMINAL
- EX. DOWNTOWN TERMINI
- ONE WAY

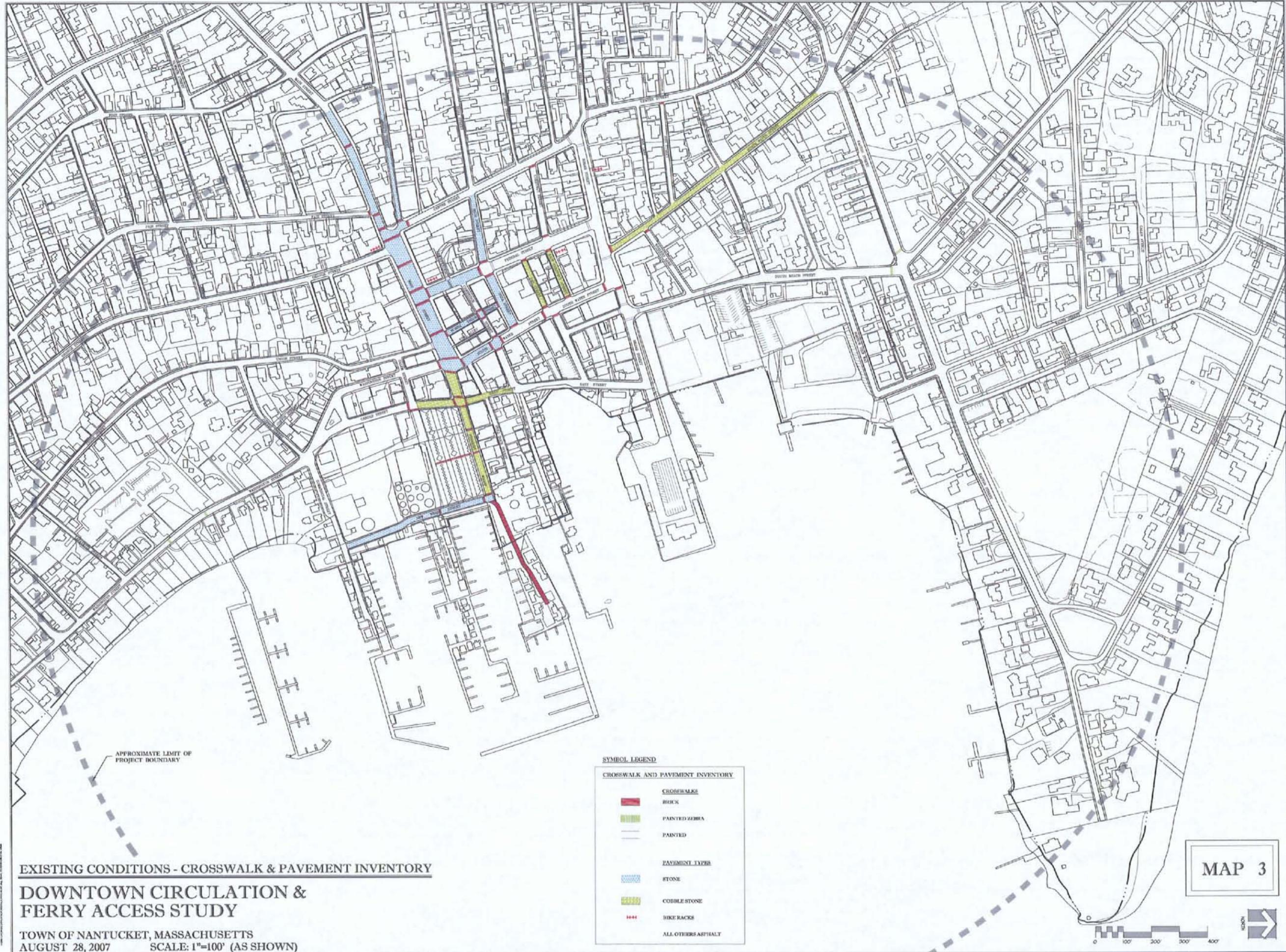
BICYCLE ROUTES

- BIKE ROUTES
- BIKE RENTAL/RETURNS

MAP 2



* (NRTA) NANTUCKET REGIONAL TRANSIT AUTHORITY



APPROXIMATE LIMIT OF PROJECT BOUNDARY

EXISTING CONDITIONS - CROSSWALK & PAVEMENT INVENTORY

DOWNTOWN CIRCULATION & FERRY ACCESS STUDY

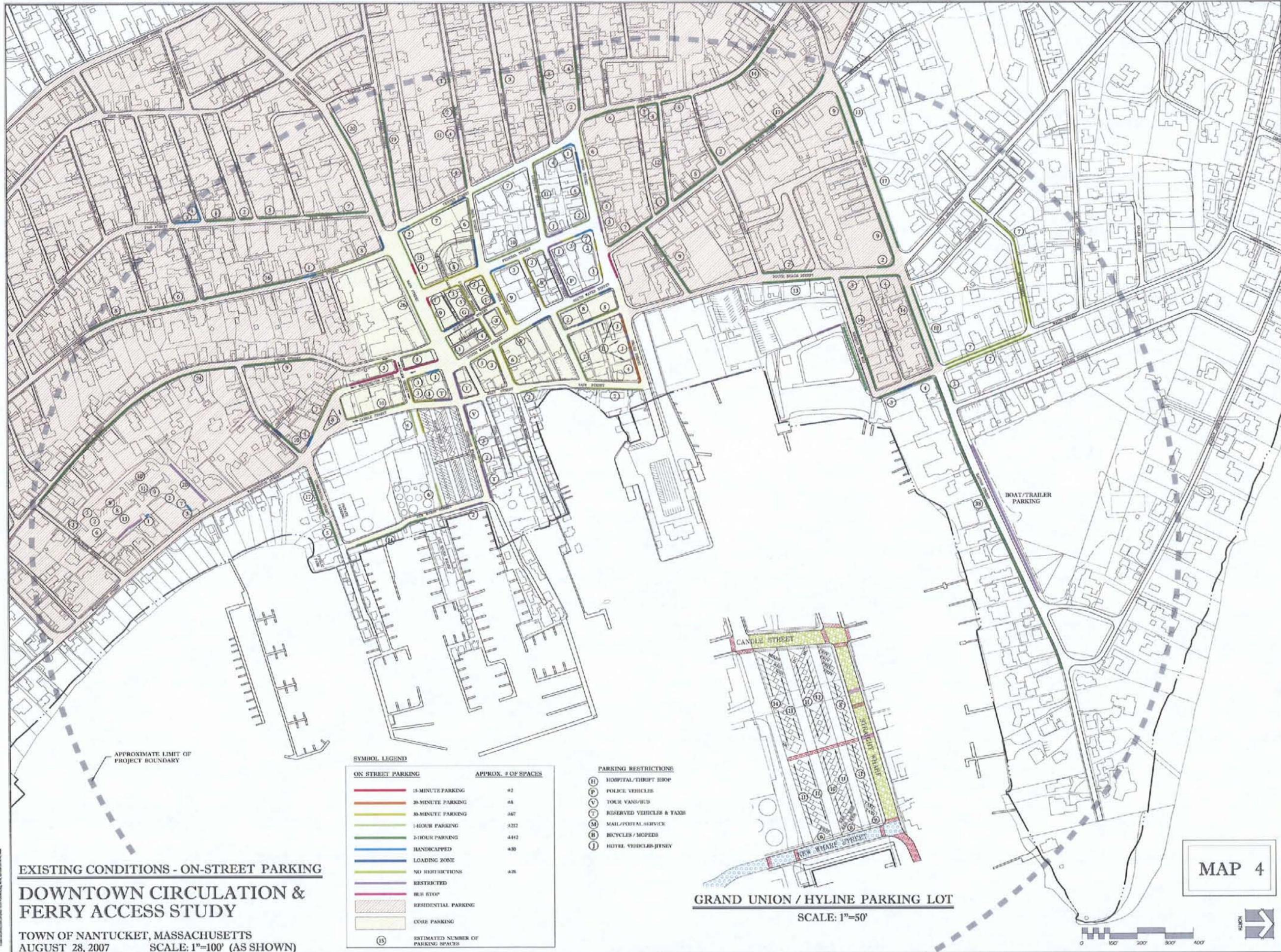
TOWN OF NANTUCKET, MASSACHUSETTS
 AUGUST 28, 2007 SCALE: 1"=100' (AS SHOWN)

SYMBOL LEGEND

CROSSWALK AND PAVEMENT INVENTORY	
	CROSSWALK BRICK
	PAINTED ZEBRA
	PAINTED
PAVEMENT TYPES	
	STONE
	COBBLE STONE
	BIKE RACKS
	ALL OTHERS ASPHALT

MAP 3





EXISTING CONDITIONS - ON-STREET PARKING

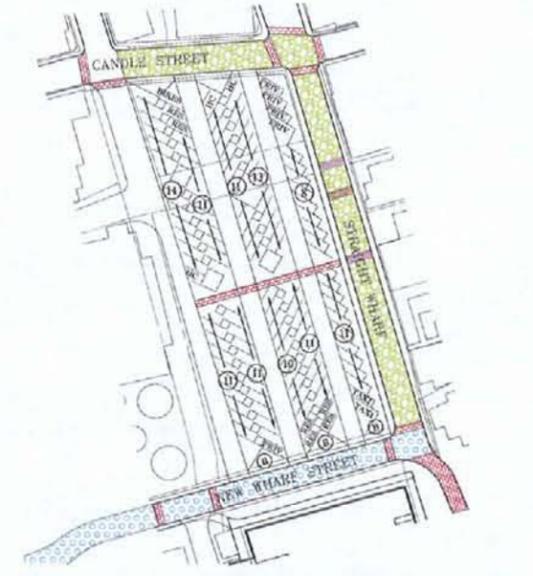
DOWNTOWN CIRCULATION & FERRY ACCESS STUDY

TOWN OF NANTUCKET, MASSACHUSETTS
 AUGUST 28, 2007 SCALE: 1"=100' (AS SHOWN)

SYMBOL LEGEND

ON STREET PARKING	APPROX. # OF SPACES
15-MINUTE PARKING	~2
20-MINUTE PARKING	~8
30-MINUTE PARKING	~67
1-HOUR PARKING	~232
2-HOUR PARKING	~442
HANDICAPPED	~30
LOADING ZONE	
NO RESTRICTIONS	~28
RESTRICTED	
BUS STOP	
RESIDENTIAL PARKING	
COBE PARKING	
(15) ESTIMATED NUMBER OF PARKING SPACES	

- PARKING RESTRICTIONS**
- (H) HOSPITAL/THRIFT SHOP
 - (P) POLICE VEHICLES
 - (V) TOUR VANS/BUS
 - (T) RESERVED VEHICLES & TAXI
 - (M) MAIL/HOSPITAL SERVICE
 - (B) BICYCLES / MOPEDS
 - (J) HOTEL VEHICLES/ITNEY



MAP 4

