

AGENDA

Wednesday

December 7, 2016

**TOWN OF EASTHAM
AGENDA
BOARD OF SELECTMEN WORK SESSION
WEDNESDAY, December 7, 2016
3:00 p.m.**

Location: Timothy Smith Room

DISCUSSION:

- A) Complete Streets Policy/Program – Paul Lagg, Town Planner and Neil Andres, DPW Director
- B) Presentation Asset Management Program and Drainage with Pricing for inclusion in the 5-yr Capital Plan – Neil Andres, DPW Superintendent, James Fitzgerald, Consulting Engineer Environmental Partners.
- C) Nauset Light Beach Road, Alternative Long Term Access to Private and Public Properties – Sheila Vanderhoef, Town Administrator, Neil Andres DPW Superintendent

Minutes:

September 19, 2016	Executive Session
November 7, 2016	Regular Meeting
November 7, 2016	Executive Session
November 9, 2016	Work Meeting
November 9, 2016	Executive Session
November 21, 2016	Regular Meeting

Upcoming Meetings

December 19, 2017	5:00 p.m.	Timothy Smith Room	Regular Session
January 3, 2017	3:00 p.m.	Timothy Smith Room	Regular Session
January 4, 2017	3:00 p.m.	Timothy Smith Room	Work Session

The listing of matters includes those reasonably anticipated by the Chair that may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law.

This meeting will be video recorded and broadcast over Local Access Channel 18 and through the Town website at www.eastham-ma.gov



TOWN OF EASTHAM

2500 State Highway, Eastham, MA 02642
All Departments 508-240-5900
www.eastham-ma.gov

MEMORANDUM

DATE: December 5, 2016

TO: Eastham Board of Selectmen
Sheila Vanderhoef, Town Administrator

CC: Jacqui Beebe, Assistant Town Administrator

FROM: Paul Lagg, Town Planner/ Neil Andres, DPW Superintendant

RE: Complete Street Policy

COMPLETE STREETS DEFINITION (MASSDOT):

A Complete Street is one that provides safe and accessible options for all travel modes and for people of all ages and abilities. Designing streets with these principles contributes toward the safety, health, economic viability and quality of life in a community by improving the pedestrian and vehicular environments. Providing safer, more accessible and comfortable means of travel between home, school, work, recreation and retail destinations helps promote more livable communities.

PROGRAM OVERVIEW:

To help put the complete streets concept into practice, the State has created a Complete Streets funding program. The program provides incentives to cities and towns to adopt policies and practices that provide safe and accessible options for all travel modes. Funding is available to participating communities in the following categories

- up to **\$50,000** in technical assistance
- up to **\$400,000** in construction funding

PROGRAM ELIGIBILITY:

To be eligible, a municipality must meet three primary requirements:

1. Attendance of a municipal employee at a Complete Streets training (*completed Spring 2016*)
2. Passage of a Complete Streets Policy (*see proposed policy, attached*)
3. Development of a Complete Streets Prioritization Plan (*to be completed as part of comprehensive asset management plan*)

COMPLETE STREET POLICY BENEFITS:

- Allows Eastham to access transportation funds appropriated through a state transportation bond bill for planning, engineering and construction.
- Creates a framework for comprehensive evaluation of infrastructure projects that will take into consideration all modes of transportation and full spectrum of users.
- Will create framework to integrate roadway projects into comprehensive planning activities and construction schedules.
- Aligns Eastham's infrastructure improvement plans with State's Best Practices.
- Improves Safety and accessibility
- Improves community amenities for residents and visitors.

PROGRAM NEED:

Eastham's transportation network is not designed to handle the seasonal demands placed upon it. Many of our public roadways function as both transportation and recreational routes with automobiles, cyclists and pedestrians of all ages sharing the roadway. Adopting a complete street policy and incorporating complete street concepts into future roadway planning will allow the Town to manage its roadway infrastructure in a manner that keeps pace with current and future demands. A well planned transportation system that serves the needs of all users in the community will enhance the quality of life and will ensure that Eastham remains a highly desirable location for both residents and visitors.

REQUESTED ACTION BY BOARD OF SELECTMEN:

- Adoption of proposed Completed Street Policy

NEXT STEPS:

- Submit policy to MassDOT for review.
- If policy scores minimum of 80 points, Town may apply for technical assistance grant for engineering and project design *(the proposed policy is based on a Cape Cod Commission template designed to meet MassDOT scoring criteria.)*
- Complete Streets Prioritization Plan will utilize the Town's current asset management plan as a basis for prioritizing roadway improvement projects that will enhance our transportation network and fulfill the goals of the Complete Streets Policy.
- Once plan is completed Town may apply for construction grants.

Town of Eastham
**SELECTMEN POLICY ON
COMPLETE STREETS**

1.0 Authority

The Board of Selectmen hereby adopt a Complete Street Policy.

2.0 Purpose

The fifteen towns of Barnstable County make up a distinctive region known for its coastlines, historic villages, and environmental resources. It can be challenging to accommodate all users on narrow roadways that follow colonial layouts and are constrained by historic buildings and environmental resources, especially when the volume of users swells during the summer tourist season. The goal of Eastham's Complete Streets policy is to make sure that all users and resources are considered when designing roadway improvements, and that accommodations for a full array of users are balanced with the elements that are important to both the character and the economy of the town and the region.

Complete Streets are designed and operated to provide safety, comfort, and accessibility for all the users of our roadways, trails, and transit systems, including pedestrians, bicyclists, transit riders, motorists, commercial vehicles, and emergency vehicles. "All users" includes users of all ages, abilities, and income levels. Furthermore, Complete Streets principles contribute toward the safety, health, economic viability, and quality of life in a community by improving the pedestrian and vehicular environments in order to provide safe, accessible, and comfortable means of travel between home, school, work, recreation and retail destinations. Complete Streets also furthers equity objectives by providing safe forms of travel for residents of all income levels. The purpose of the town of Eastham's Complete Streets policy, therefore, is to accommodate all users by creating a context-sensitive roadway network that meets the needs of individuals utilizing a variety of transportation modes. It is the intent of the town of Eastham to formalize the plan, design, operation and maintenance of roadways so that they are safe for all users of all ages and abilities and all income levels as a matter of routine. This Policy directs decision-makers to consistently plan, design, construct, and maintain roadways to accommodate all anticipated users including but not limited to pedestrians, bicyclists, motorists, transit riders and vehicles, emergency vehicles, and freight and commercial vehicles.

3.0 Core Commitment

The town of Eastham recognizes that users of various modes of transportation, including but not limited to pedestrians, cyclists, transit and school bus riders, motorists, delivery and service personal, freight haulers, and emergency responders, are legitimate users of streets and deserve safe facilities. "All users" includes users of all ages, abilities, and income levels.

The Town of Eastham recognizes that all projects, including new construction, maintenance and reconstruction, are potential opportunities to apply Complete Streets design principles. The town will, to the maximum extent practicable, design, construct, maintain and operate all streets to provide for a comprehensive and integrated street network of facilities for people of all ages and abilities. Complete Streets design recommendations shall be incorporated into all publicly and privately funded projects, as appropriate. All transportation infrastructure and street design projects requiring funding or approval by the Town of Eastham, as well as projects funded by the State and Federal government, including but not limited to Chapter 90 funds, City improvements grants, Transportation Improvement Program (TIP), the MassWorks Infrastructure Program, Community Development Block Grants (CDBG), Capital Funding and other state and federal funds for street and infrastructure design shall adhere to the Town of Eastham Complete Street Policy. Private developments and related roadway design components shall also adhere to the Complete Street principles. In addition, to the extent practical, state-owned roadways will comply with the Complete Streets Policy, including the design, construction and maintenance of such roadways within town boundaries.

Town Departments, will use best judgment regarding the desirability and feasibility of applying Complete Streets principles for routine roadway maintenance and projects such as repaving, restriping and so forth.

4.0 Exemptions

Transportation infrastructure projects, including but not limited to roadway reconstruction, roadway reconfigurations or subdivisions may be excluded upon approval by the Board of Selectmen with consultation from the appropriate town departments and the Eastham Planning Board where documentation and date indicate that any of the following apply:

- Where it is demonstrated that costs or impacts of accommodation are excessively disproportionate to the need or probable future use.
- Other town policies, regulations or requirements contradict or preclude implementation of Complete Streets principles.

5.0 Best Practices

The Town of Eastham Complete Streets policy will focus on developing a connected, integrated network that serves all users. Complete Streets will be integrated into policies, planning and design of all types of public and private projects, including new construction, reconstruction, rehabilitation, repair, and maintenance of transportation facilities on streets and redevelopment projects. As practicable, recommendations from the appropriate town departments, Boards and Committees for incorporating complete streets elements will occur in projects' beginning stages prior to design.

Implementation of the Town of Eastham Complete Streets Policy will be carried out cooperatively within all departments in the Town of Eastham with multi-

jurisdictional cooperation and, to the greatest extent possible, among private developers and state, regional and federal agencies.

The Town of Eastham will work cooperatively with neighboring communities and regional entities in an effort to strengthen regional connectivity options for all users.

Complete Streets principles include the development and implementation of projects in a context-sensitive manner in which project implementation is sensitive to the community's physical, economic, and social setting. The context-sensitive approach to process and design includes a range of goals by giving significant consideration to stakeholder and community values. It includes goals related to livability with greater participation of those affected in order to gain project consensus. The overall goal of this approach is to preserve and enhance scenic, aesthetic, historical and environmental resources while improving or maintaining safety, mobility and infrastructure conditions.

The Town of Eastham recognizes that "Complete Streets" may be achieved through single elements incorporated into a particular project or incrementally through a series of smaller improvements or maintenance activities over time. The latest design guidance, standards and recommendations available will be used in the implementation of Complete Streets, including the most up-to-date versions of:

- The Massachusetts Department of Transportation Project Design and Development Guidebook
- American Association of State Highway Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets
- The United States Department of Transportation Federal Highway Administration's Manual on Uniform Traffic Design Controls
- The Architectural Access Board (AAB) 521 CMR Rules and Regulations
- The Cape Cod Commission's Complete Streets/Living Streets Design Manual
- Cape Cod Metropolitan Planning Organization's Cape Cod Regional Transportation Plan
- Documents and plans created for the Town of Eastham including but not limited to:
 - Local Comprehensive Plan
 - Open Space and Recreation Plan
 - Downtown Improvement or Historic District plans
 - Bicycle and pedestrian network plans.

The Town of Eastham will implement a balanced and flexible approach to Complete Streets implementation that utilizes the latest design guidance, standards and recommendations while providing flexibility to best accommodate all users and modes given the unique characteristics of the surrounding community.

6.0 Evaluation of Effectiveness

The Town will develop performance measures to periodically assess the rate, success, and effectiveness of implementing the Complete Streets Policy. The Town

will determine the frequency of assessment and utilize appropriate metrics for analyzing the success of this policy. These metrics may include:

- Total miles of new on-street bicycle routes defined by lane markings or signage,
- Linear feet of new pedestrian accommodation,
- Number of new curb ramps or other retrofitted pedestrian facilities,
- Increase in the number of users of public transportation,
- Decrease in the number of traffic accidents involving vehicles, bicycles and pedestrians in Complete Streets areas.

These metrics will be compiled into a report by the Town and presented as needed, but no less than annually. Implementation strategies will be adjusted as needed based on the findings in these reports.

7.0 Implementation

The town shall make Complete Streets practices a routine part of everyday operations, shall approach every transportation project and program as an opportunity to improve streets and the transportation network for all users, and shall work in coordination with other Town departments, boards, committees, State and Federal agencies, and jurisdictions to achieve Complete Streets.

[OPTIONAL COMPONENT FOR BOS CONSIDERATION: A Complete Streets Working Group comprised of multi-disciplinary stakeholders, including members of relevant departments and existing committees designated by the Board of Selectmen will be created to implement this initiative. A key component of the Complete Streets Working Group will be to increase communication and forge partnerships among the various stakeholders. The focus of this Group will be ensuring the implementation of the context-sensitive Complete Streets Policy and, where necessary, altering existing practices and overcoming barriers that may act as impediments to implementation. In addition, this Group will regularly update and solicit feedback on potential projects with the general public to ensure that the perspectives of the community are considered and incorporated, as appropriate.]

The Eastham Planning Department shall integrate Complete Streets principles in all new planning documents, as applicable (master plans, open space and recreation plan, etc.), laws, procedures, rules, regulations, guidelines, programs and templates, and make recommendations for zoning and subdivision codes to encourage contextual design of complete streets policies, respecting the presence of important scenic, environmental and historic resources.

The town shall maintain a comprehensive inventory of pedestrian and bicycle facility infrastructure that will highlight projects that eliminate gaps in the sidewalk and bikeway network.

The Town will evaluate projects within the Capital Improvement Plan to encourage implementation of this Policy.

The town will secure training for pertinent town staff and decision-makers on both the technical content of Complete Streets principles and best practices, as well as community engagement methods for implementing the Complete Streets Policy. Training may be accomplished through workshops and other appropriate means.

The town will utilize inter-department coordination to promote the most responsible and efficient use of resources for activities within the public way.

The town will seek out appropriate sources of funding and grants for implementation of Complete Street policies.

8.0 The Board of Selectmen or their designee reserves the right to revise this policy at any time.

9.0 Effective Date

The policy is effective as of _____

This policy was adopted by the Board of Selectmen at a public meeting on _____

Signed,
Eastham Board of Selectmen.

Signature _____ Date _____
John Knight, Chairman

Pavement Management Summary of Methodology and Findings

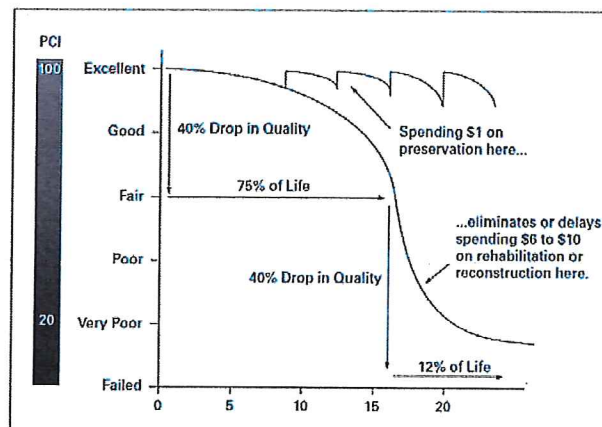
Introduction

Environmental Partners Group was retained by the Town of Eastham to assist in assessing existing roadway pavement conditions and establishing a Capital Improvement Plan (CIP) for improvements. The CIP is a network level prioritization for surface treatments of Town roadways based on collected information and input from the Town that is heavily influenced by the construction schedule of the ongoing water distribution system currently under construction throughout the Town.

The resulting planning tool is used in establishing order-of-magnitude budgets for roadway maintenance and reconstruction. Since each roadway project will differ as to its specific improvement elements (i.e. drainage improvements, improvements required by local ordinance, the construction of new sidewalks, etc.), more precise budgets for these additional components will need to be established during later project-level pavement contract development and cost estimating and are not accounted for in the Pavement Management Program.

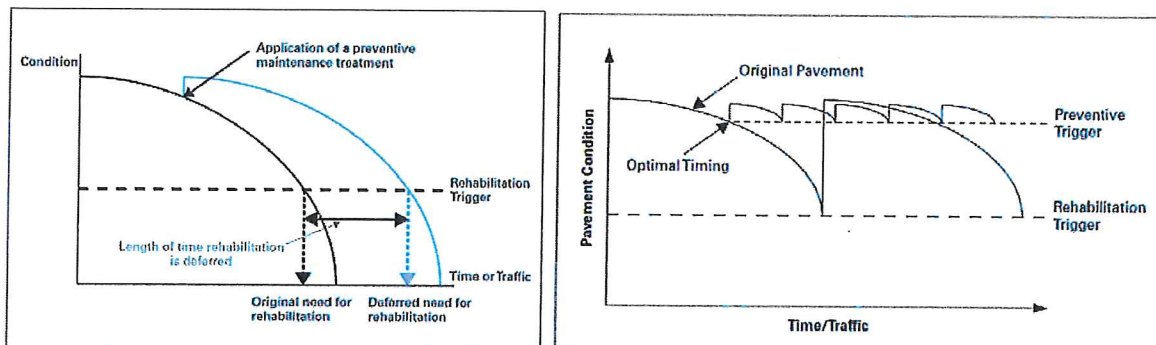
Pavement Management

Pavement Management programs are effective tools to assist towns in maintaining their roadways in an efficient manner while allowing them to budget needed improvements several years in advance. The primary benefit of Pavement Management can best be seen in typical pavement deterioration curves showing the life cycle of pavement and its gradual deterioration over time. As shown in the figure below, pavement deterioration over time is not linear but curved. Pavement degrades at a slow rate initially after it is installed. As time goes on, without pavement maintenance, degradation becomes rapid until reaching complete failure, at which time only costly full depth reclamation or reconstruction would remedy the failed pavement.



Federal Highway Administration, Pavement Preservation Compendium II, September 2006

By implementing pavement preservation treatments such as crack seal and chip seal before the pavement fails, however, the life cycle of pavement can be greatly prolonged with these less expensive treatments compared to full depth reconstruction. The result is a significant reduction in life-cycle costs for the roadway.



Federal Highway Administration, Pavement Preservation Compendium II, September 2006

Database Design & Inventory

Environmental Partners utilized the data compiled from the Town's 2012 Flyover Planimetric database coupled with any additional and relevant GIS data that was available, either from the Town or the design activities associated with the municipal water system. This data included roadway length, roadway width, and street ownership (Town, State, Federal or private). The PeopleGIS Pavement Management tools were used at the Town's request to support the other Town assets in the same software.

Each roadway was broken into road segments of appropriate lengths depending on intercepting streets or variation of pavement conditions.

The inventory consisted of collecting the information described below for all Town-owned roadways (55 centerline miles) and private roadways (59 centerline miles). An inventory of State or DCR owned roadways was not included.

Environmental Partners reviewed road ownership by comparing the list of Town roadways on the Assessor's database with MassDOT's list of Town-maintained roadways (used as a basis for establishing the Town's annual Chapter 90 allotment). A number of discrepancies were identified and reviewed with the town. The refined list of discrepancies is provided in Appendix C, and includes changes that should be made to the Assessor's database and updates to the MassDOT Chapter 90 list. It should be noted that these changes, if filed with MassDOT, will be used by MassDOT to adjust the Town's yearly Chapter 90 allotment.

For each roadway, the inventory recorded the following roadway features and information:

- Ownership (Town, Private, Federal, State or unknown.)
- Acceptance (Paper, Road or Footpath)
- Pavement Type (Bituminous Concrete, Gravel, Chip Seal, Concrete, Surface Treated, Binder, Sand/Dirt)
- Length (as determined from the GIS mapping)
- Width (as determined from the GIS mapping)
- Roadway Functional Classification (Arterial, Collector, Local, etc. as determined from the GIS mapping)
- Date of Inspection

Photographs of each roadway were collected and stored within the People GIS software, together with the above information. In addition, wherever soil boring information is available, collected as part of the municipal water system design effort, the boring locations are shown on the GIS map and the boring log stored within the software.

Paved Roadways

For paved roads, each roadway segment was assessed to identify pavement failure type, extent and severity and input into PeopleGIS's Pavement Management Program. Attributes collected included:

- Failure Type (Block, Joint, Raveling, Potholes, Patching, Rutting, Depressions, Edge, Alligator, Longitudinal or Transverse)
- Severity of each failure type (None, Low, Moderate or High)
- Extent of each failure type (rated on a scale of 0 to 100)
- Curb Type (None, Granite, Concrete, Asphalt, CC Berm or Mix)
- Curb Reveal (0 to 8 inches)
- Curb Condition (Good, Fair or Poor)

The attributes relative to pavement failure were used to calculate each roadway segment's Pavement Condition Index (PCI) as discussed below.

Unpaved Roadways

For unpaved roads, the following attributes were collected:

- Rutting Severity (None, Low, Moderate or High)
- Rutting Extent (rated on a scale of 0 to 100)
- Depressions Severity (None, Low, Moderate or High)
- Depressions Extent (0-100)
- Drainage Severity (None, Low, Moderate or High)
- Drainage Extent (0-100)

Private Roadways

In addition to the above information, the following attributes of private roads were also collected:

- Clearance width
- Number of properties accessed

Pavement Condition Index

The recorded field distresses were used to calculate each segment's PCI in the PeopleGIS software. PCI is measured on a scale of 0 to 100, with 0 representing a roadway in complete disrepair and 100 representing conditions of a new roadway surface in excellent condition. Its calculation is based on deductions off of the perfect PCI score of 100 based on distress type, severity and extent. Some distresses carry a higher deduction weight than others, such as roadway base or foundation-related distresses.

PCI Banding

Environmental Partners, in coordination with representatives of the Eastham Department of Public Works, developed appropriate repair strategies based on past surface treatments that have proven to be successful with the soils in Eastham. The soil conditions in Eastham are unique in that roadways tend to last longer than in other areas of Massachusetts with minimal treatment. In fact, many of the roadways in Eastham have minimal pavement depths but have been successfully maintained by regularly applying chip seal treatments.

The appropriate repair strategy for each roadway segment was initially determined based on the calculated PCI and the results of the visual inspection. A series of PCI "repair bands" were established, designating the appropriate repair strategy for each range or band of PCI values. This banding allows for a streamlined approach for repair assignment, cost estimating and town-wide planning purposes.

The repair strategies identified for Eastham's roadways and respective PCI banding are as follows:

Repair Method Banding Table				
<i>Repair Method</i>	<i>Paved Road</i>		<i>Surface Treated Road</i>	
	<i>PCI (High)</i>	<i>PCI (Low)</i>	<i>PCI (High)</i>	<i>PCI (Low)</i>
Defer Maintenance	100	97	100	95
Crack Seal	96	88		
Chip Seal	87	79	94	84
Tack /Overlay	78	70	83	75
Full Depth Reclamation	69	46	74	57
Full Depth Reconstruction	45	0	56	0

Evaluation Reports

Associated order-of-magnitude construction cost estimates for each roadway were prepared based on prevailing unit costs made available by MassDOT for their 2015 construction projects, as well as recently advertised and awarded projects completed by either Eastham or by Environmental Partners. These estimates are a function of the roadway lengths and widths, as obtained from the available GIS data and recorded in the PeopleGIS database. Computations in establishing unit prices for each repair method are provided in Appendix A. These unit price assumptions have been reviewed by the Department of Public Works to confirm that they are appropriate, based on their local experience. The PeopleGIS software uses these unit prices and approximate roadway widths and lengths to calculate an approximate cost for each roadway segment.

Since each roadway project will differ as to its specific improvement elements, such as drainage improvements, additional roadway features that may be required by local ordinance, or whether the Town chooses to include sidewalks as part of the roadway reconstruction, a detailed budget for any additional components will need to be established during later project-level pavement maintenance contract development and cost estimating.

The PeopleGIS reports for each roadway are included in Appendix B, and provide the data used as a basis of preparing the CIP components discussed below.

Recommendations Reports

In establishing a CIP, the pavement treatments dictated by the PCI banding were reviewed in order to establish a project-level plan for each roadway with realistic lengths of proposed pavement treatments. In instances where PCI values fluctuated along a given roadway resulting in short lengths of varying pavement treatments that are impractical to implement, treatments have been “overridden” to provide a more practical CIP with treatments of reasonable lengths, as shown on the provided supplemental charts in Appendix A. These charts also are used to override treatment types in instances where the DPW recommended such changes, based on the maintenance history of specific roadways.

Associated order-of-magnitude construction cost estimates for each roadway were prepared. Roadways requiring engineering design and/or construction services were identified by DPW and included in the budget. These engineering services were budgeted on the basis of 15% of the construction costs.

Developing the recommended schedule of the roadway treatments is heavily influenced by the construction schedule associated with the municipal water system currently underway. This water system construction will result in trenching on all of the Town’s roadways, both public and private, and is being implemented in two broad phases (Phase 1 and Phase 2). As such, the proposed CIP has been established to accommodate the schedule of the water main installations to, when feasible, address the roadway after the water main installations have been completed and adequate trench settling has taken place. In instances where the DPW has identified roadways requiring immediate attention, they have been identified as such in the CIP. It should be noted that contingency, inflation and police details are

reflected at the bottom of each chart and are not included in the estimated cost for each street segment. Mapping of the CIP has also been included in Appendix A.

These charts as well as the PeopleGIS software are available for the Town electronically to maintain and update regularly as they implement improvements. It is critical that the information be kept up to date electronically if this planning tool is to be used effectively by the Town.

General Findings

Based on the data collected and the most recent version of the CIP, the following is a summary of findings:

Paved/Unpaved Comparison

- Town: 54 miles paved; 1 mile unpaved
- Private: 25 miles paved; 34 miles unpaved

Paved Roads:

- Town average PCI: **88**
- Private average PCI: **79**

CIP for Town-owned Roads:

Phase 1 Roadway CIP:

• FY2018:	\$945,000	(7.5 miles)
• FY2019:	\$1,201,000	(6.8 miles)
• FY2020:	\$2,899,000	(6.9 miles)
TOTAL	\$5,045,000	(21.2 miles)

Phase 2 Roadway CIP:

• FY2020 and Beyond: (Major Repairs)	\$283,000	(0.3 miles)
• FY2020 and Beyond: (Minor Repairs)	\$1,131,000	(17.7 miles)
TOTAL	\$1,414,000	(18.0 miles)

Double Chip Seal Program (2016), Funded through Chapter 90

• Phase 2 Roadways	\$666,000	(4.0 miles)
TOTAL	\$666,000	(4.0 miles)

Double Chip Seal Program (2017 - 2018), Funded through Chapter 90 (pending State approval)

• Phase 1 Roadways	\$104,000	(0.6 miles)
• Phase 2 Roadways	\$671,000	(3.5 miles)
TOTAL	\$775,000	(4.1 miles)

Vicki Reis

From: Neil Andres <nandres@eastham-ma.gov>
Sent: Monday, December 05, 2016 12:14 PM
To: Sheila Vanderhoef; Vicki Reis; Jacqueline Beebe
Subject: Asset Mgt
Attachments: Asset mgt with drainage cont and inf.xls

With contingency and inflation on drainage

Note:

Jim Fitzgerald / EPG will bring maps and updated table of roads w/ pricing to the meeting on Wed. in 11x17 format.

We will have initial discussion + then detail info will be given to board in larger format.

Neil's cost attachment is for drainage upgrades only.

2018 Town Road CIP - Phase 1 water main installation roads

Road	From	To	Asset Mgt	\$ drainage	engineering	Total
Alston Ave	Meetinghouse	School House	\$ 1,741.00	\$ 19,320.00		
Brackett Road	Dory	Nauset	\$ 5,443.00			
Candlewood	School House	end	\$ 2,608.00			
Meetinghouse	Old Orchard	School House	\$ 227,913.00	\$ 115,920.00		
Nauset Road	Route 6 (north)	Doane Rd	\$ 159,187.00	\$ 96,600.00	\$ 25,127.00	
Old Orchard Road	Nauset Road	Route 6	\$ 132,604.00	\$ 57,960.00		
School House Road	Nauset Road	Nauset Road	\$ 135,711.00	\$ 57,960.00		
Seaside	Nauset Road	end	\$ 257.00			
Seaward Road	Nauset Road	end	\$ 32,355.00			
Thorne	Nauset Road	end	\$ 2,450.00			
SubTotal			\$ 700,269.00	\$ 347,760.00	\$ 25,127.00	\$ 1,073,156.00
10% contingency			\$ 70,027.00	\$ 34,776.00		\$ 104,803.00
8% police detail			\$ 61,624.00	\$ 27,820.80		\$ 89,444.80
inflation			\$ 87,847.00	\$ 43,625.62		\$ 131,472.62
Total						\$ 1,398,876.42

2019 Town Road CIP - Phase 1 water main installation roads

Road	From	To	Asset Mgt	\$ drainage	engineering	Total
Aspinet	N. Sunken	Route 6	\$ 1,047.00			
Bracket	Route 6	Dory	\$ 744.00			
Camp Ground	Massasoit	Higgins	\$ 37,927.00	\$ 57,960.00		
Great Pond Rd	Route 6	Kingsbury Beach	\$ 12,482.00			
Herring Brook Rd	Massasoit	Kingsbury Beach	\$ 178,078.00	\$ 77,280.00		
Higgins	Steele	Campground	\$ 15,456.00			
Massasoit	Wellfleet	Route 6	\$ 403,426.00	\$ 96,600.00		
McKoy	Herring brook	Route 6	\$ 2,196.00			
N. Sunken Meadow	Massasoit	Aspinet	\$ 2,468.00	\$ 19,320.00		
Old County Rd	Route 6	Massasoit	\$ 23,315.00			
Old State highway	Gile	end	\$ 1,051.00			
Smith Ln	Orleans	end	\$ 348.00			
S Sunken	Spring Rd	Massasoit	\$ 144,648.00	\$ 38,640.00	\$ 60,173.42	
SubTotal			\$ 822,440.00	\$ 231,840.00	\$ 60,173.42	\$ 1,114,453.42
10% contingency			\$ 82,244.00	\$ 23,184.00		\$ 105,428.00
8% police detail			\$ 72,375.00	\$ 18,547.20		\$ 90,922.20
inflation			\$ 163,494.00	\$ 46,087.80		\$ 209,581.80
Total			\$ 1,140,553.00	\$ 319,659.00	\$ 60,173.42	\$ 1,520,385.42

2020 Town Road CIP - Phase 1 water main installation roads

Road	From	To	Asset Mgt	\$ drainage	engineering	Total
Bridge Road	Samoset	Orleans	\$ 758,054.00	\$ 135,240.00	\$ 189,866.00	
Gov Prence	Bridge	Route 6	\$ 319,160.00	\$ 77,280.00		
Herring Brook Rd	Kingsbury beach	Bridge	\$ 435,612.00	\$ 77,280.00		
Kingsbury beach	Herring brook	Route 6	\$ 74,662.00	\$ 57,960.00		
Samoset	Herring brook	Route 6	\$ 209,420.00		\$ 60,249.00	
SubTotal			\$ 1,796,908.00	\$ 347,760.00	\$ 250,115.00	\$ 2,394,783.00
10% contingency			\$ 179,691.00	\$ 34,776.00		\$ 214,467.00
8% police detail			\$ 159,128.00	\$ 27,820.80		\$ 186,948.80
inflation			\$ 513,948.00	\$ 99,465.61		\$ 613,413.61
Total			\$ 2,649,675.00	\$ 509,822.41	\$ 250,115.00	\$ 3,409,612.41

2018 -2020 Total**\$ 6,328,874.26**

Town of Eastham

Department of Public Works
555 Old Orchard Road
Eastham, MA. 02642



508 240-5973
Fax 508 240-6687

To: Edward Kulhawik, Chief of Police

From: Neil Andres, Superintendent DPW

Date: May 31, 2016

RE: No Parking – Brownell at Atlantic Ocean

Brownell Road previously ended at Nauset Light Beach Road – a roadway recently lost to erosion.

Nauset Light Beach Road had approved “No Parking” signs which were installed so that fire apparatus could have access to a cottage located to the north. The signs have fallen into the ocean along with the road and the small parking lot which was popular with locals.

Currently, Brownell Road is blocked from a 60 foot tall cliff by two jersey barriers. Motorists will park there to enjoy the view. There is no turn around so vehicles must back up and typically turn around in neighbor’s driveways. If more than two cars parks there, neighbor’s driveways are blocked.

Given the spectacular views and seclusion, it can be a popular gathering spot but it can be dangerous as there is a steep cliff and no lighting.

The coastal erosion situation will not get any better. Given we are losing around 10 feet of road per year, it make little sense to attempt improvements to the end of Brownell Road.

Based on the above, I agree with your recommendation to install:

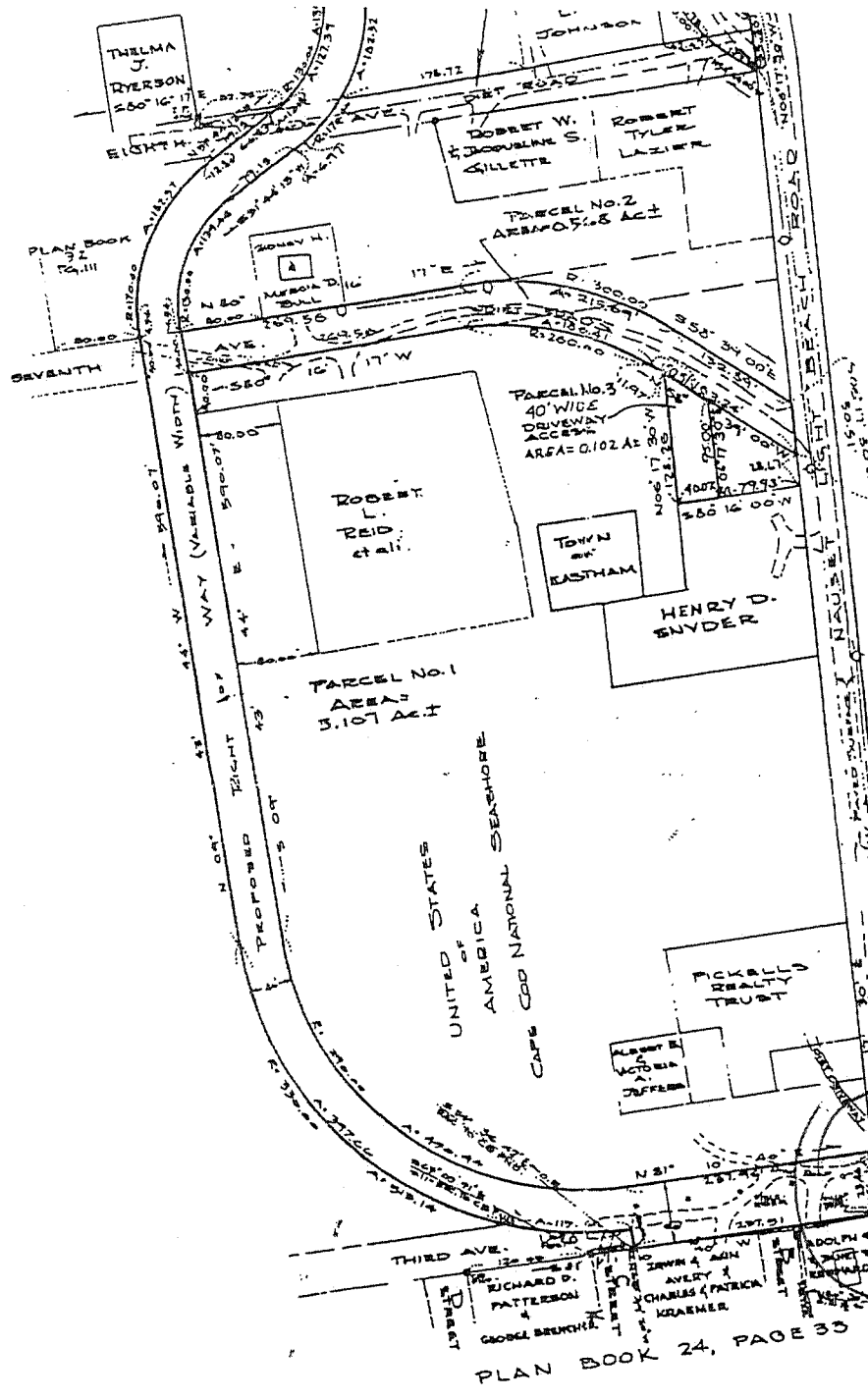
1. “No Parking” R8- 3 sign at the terminal end Brownell Road to prohibit parking at the Jersey barrier.
2. “Dead End” W14-1 and “No Parking” R8- 3 be installed at the west end of Brownell.

The end of Nauset Light beach Road Rear (AKA Cumming Road) should be re-graded within the layout to allow turning around at the end of the road without impacting neighbors driveways.

BARNSTABLE Co., MA.
9.4.5 P.M. 3/11/1976
AND IS RECORDED

UNITED STATES

LEGEND	
18- 05.70	CONCRETE BOUND FOUND
18- 05.70	STONE BOUND FOUND
23	UTILITY POLE
10- 10.70	IRON PIPE FOUND
10- 10.70	POLYVINYL CHLORIDE PIPE
10- 10.70	OVERHEAD UTILITY LINE



NOTES:
1. OWNER OF RECORD
UNITED STATES OF AMERICA
CAPE COD NATIONAL SEASHORE
2. TOWN OF EASTHAM ASSESSOR'S
SHEET 25.
3. TOTAL AREA OF ROADS
AND DRIVEWAYS TO BE
CONVEYED TO THE
TOWN OF EASTHAM: 4.621 AC.

AREA LEGEND		
PARCEL NO.	STREET NAME	AREA (ACRES)
1	THIRD AVE. PROPOSED LAYOUT - 2ND AVE. SPARE LAKE-BROWNELL AVE.	3.107
2	7TH AVENUE	0.568
3	DRIVEWAY ACCESS (HENRY SNYDER)	0.102
4	DRIVEWAY ACCESS (DAVID MARSHALL)	0.170
5	DRIVEWAY ACCESS (ELINE A. CONLIN)	0.423
6	SUNRISE AVE.	0.532
TOTAL AREA =		4.902 AC. ±

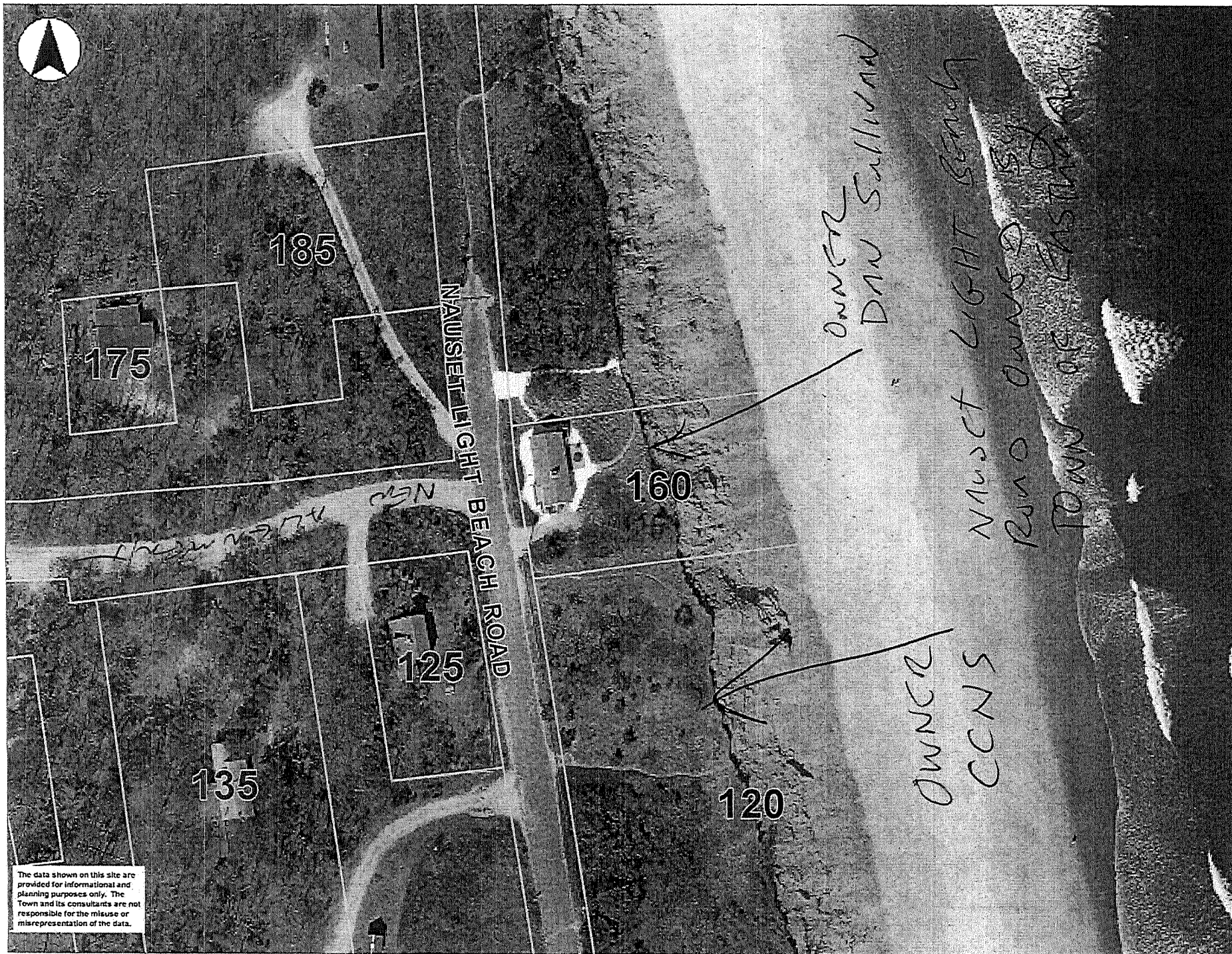
PLAN OF LAND
IN
EASTHAM, MASS.
SHOWING PROPOSED RELOCATION
OF
NAUSET LIGHT BEACH ROAD
-AS PREPARED FOR-
TOWN OF EASTHAM
AND
CAPE COD NATIONAL SEASHORE

SCALE: 1 IN. = 80 FT. MAY 8, 1981
SCHOFIELD BROTHERS, INC.
REGISTERED
PROFESSIONAL ENGINEERS & LAND SURVEYORS
ROUTE 6A - P.O. BOX 101 - ORLEANS, MASS. 02653
(603) 255-2078

RESEARCH BY JTB	DRAFTED BY BSL
FIELD CHIEF JTB	CHECKED BY JTB
COMPUTED BY JTB	APPROVED BY JTB

REVISED: 12/6/91, 7/23/92, 8/14/92, 9/14/92, 3/2/93

0-7964



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



- Police Station
- Fire Station
- Ice Rinks
- Libraries
- Schools
- Town Hall
- Lighthouses
- Three Nautical Mile Line
- Parcels with Aerials
- MA Highways
 - Interstate
 - US Highway
 - State Highway
- Town Boundary
- Abutting Towns
- Ocean

2



- Police Station
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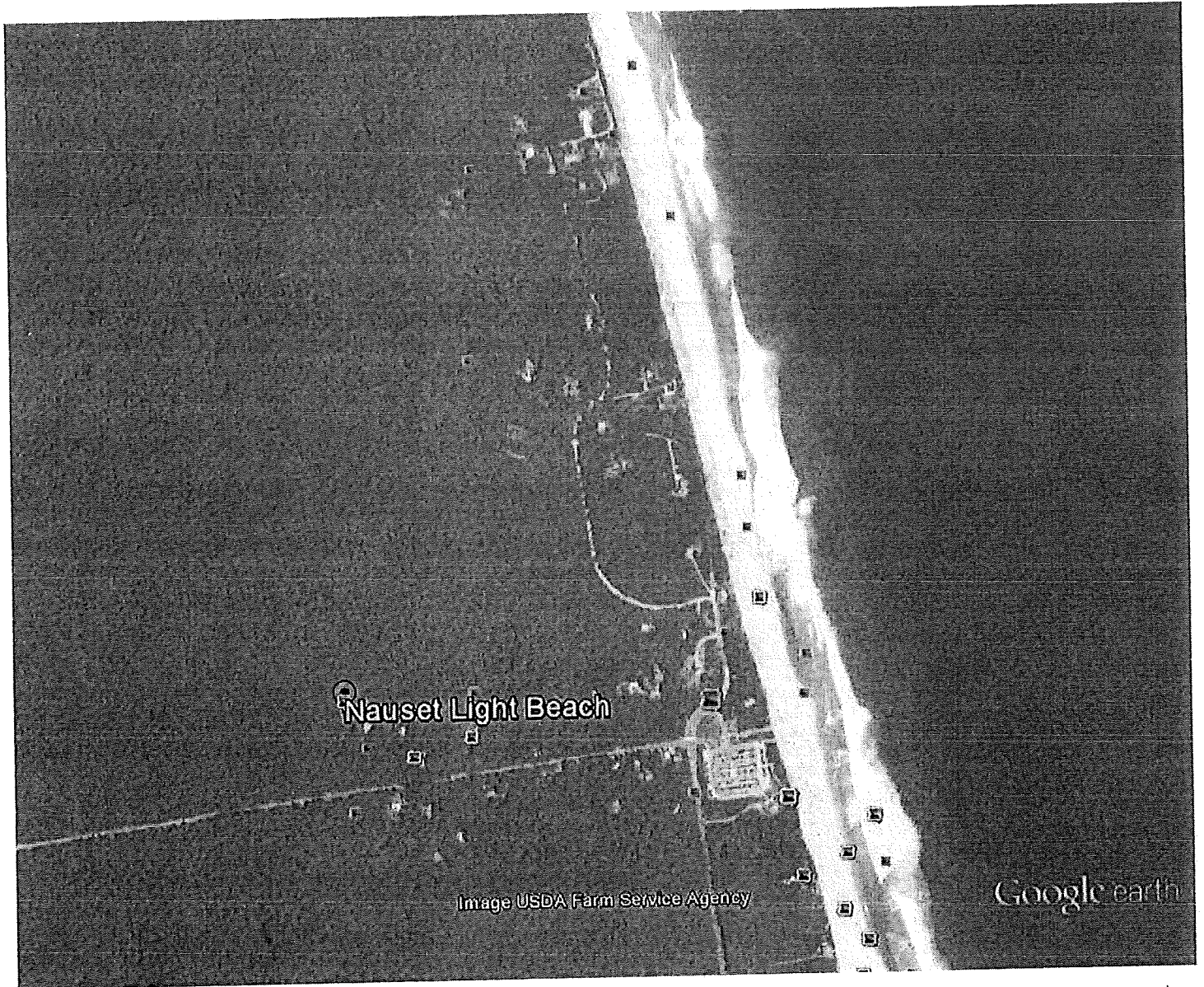
Google earth

feet
meters



2014

7

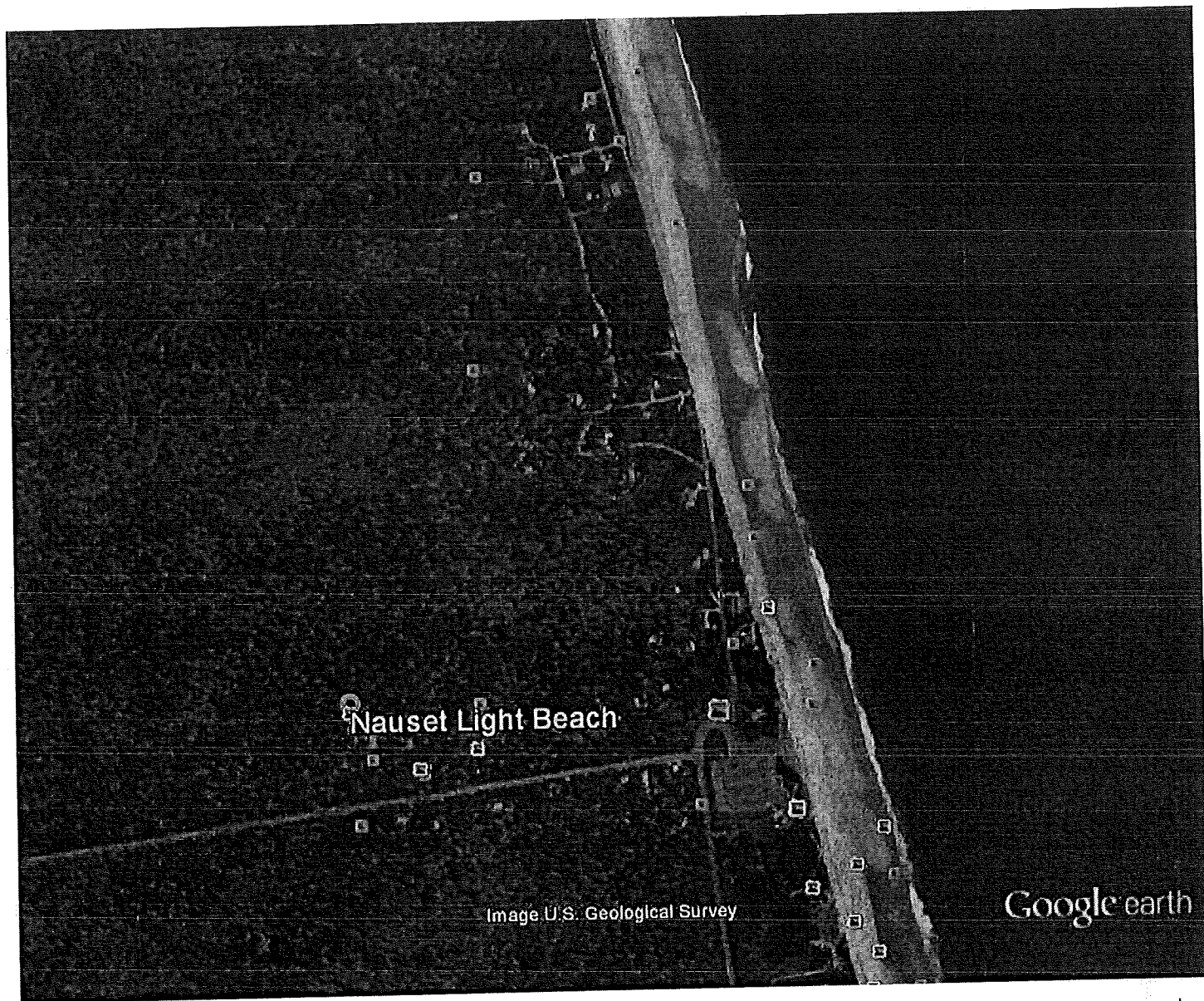


Google earth feet 3000
meters 900



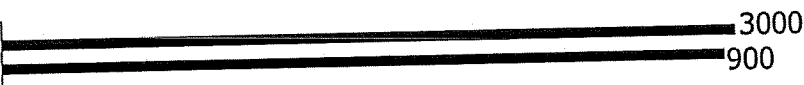
2010

5



Google earth

feet
meters



1994

9

Rhonda M. C. Hodges
2 Summit Avenue
Winchester, MA 01890

RMC.hodges@yahoo.com

Mr. Ronald W. Carbone
15 Birch Mtn. Rd. Ext.
Bolton, CT 06043

March 11, 2013

Ms. Sheila Vanderhoef
Town Administrator
Town of Eastham
2500 State Highway
Eastham, MA 02642-2544

VIA E-MAIL

Neil Andres
Superintendent
Town of Eastham
555 Old Orchard Road
Eastham, MA 02642-2544

Dear Ms. Vanderhoef and Mr. Andres:

In light of recent storm events, we are writing to express our concern regarding the driveway access recently bulldozed to the Carosella house formerly on Nauset Light Beach Road (now listed at 153 Brownell Road), traffic traveling to and from Nauset Light Beach Road and along Brownell Road as well as the condition of the remaining paved Northern portion of Nauset Light Beach Road.

First and foremost on our minds, is the new access to 153 Brownell Road that is across from our house and driveway. There was a 40 foot swath where this entrance road could have been placed but it appears that it was put as far to the western border of this parameter as possible. It is literally right on top of our egress. We understand that trees were of a concern as was encroaching upon the Dibenedetto property but the current placement of this new access has opened up a traffic hazard for us. Every time we pull in or back out we could be surprised by a car exiting 153 Brownell. Likewise, when cars exit 153 Brownell, they could be surprised by us. Frankly, this new access is just plain dangerous. This could be rectified if the new driveway is pushed eastward with the result of the two driveways no longer overlapping. We request that this driveway be moved further to the east as was asked two summers ago by Rhonda Hodges in a face to face conversation she had with Mr. Andres directly in front of this area.

Secondly, now that the "turn around" at the end of the paved northern part of Nauset Light Beach Road has been removed from use, it makes us wonder what will happen to all the cars looking for access to the beach or another access out to Route 6 not to mention the "just plain curious" and "the lost". As you may be aware, some maps continue to show Nauset Light Beach Road intact and traversable as do certain GPS applications. We, therefore, request the Town of Eastham to display signage in order to deter some of this traffic and parking where the Nauset Light Beach Road Rear street sign is located (at turn off from the paved southern portion onto dirt road access). Our hope is that it will eliminate quite a bit aggravation for all concerned. The sign or signs could read Private Homes, No Beach Access and/or No Outlet or any combination thereof. In years past, there was a sign that read similar about 150 feet on the right side of the beginning of Nauset Light Beach Road. By reducing traffic into this neighborhood, road wear and tear would decline as would probably calls to the police, fire and park service for abandoned cars blocking the right of way. Also, several No Parking signs prominently displayed along the length of the dirt road would help the situation as well.

Furthermore, a posted speed limit sign of 15 to 20 miles per hour is appropriate for this neighborhood. Often times, we, our children and neighbors have had to jump into the woods when walking or biking along this road

Rhonda Hodges and Ronald Carbone

March 11, 2013

Page 2

because of cars traveling too fast. It is our understanding that unless posted, 30 miles an hour is allowable which is too fast to travel on any dirt road in our opinion.

Lastly, we are concerned about the asphalt still present on Nauset Light Beach Road now that it is closed. On the south end of Nauset Light Beach Road, the asphalt was taken up when the road was closed and it has allowed the vegetation to return. By bringing the land back to its natural state it has reduced the erosion rate in that area. Since the town has already removed the asphalt on the southern section, we request that it do the same to the recently blocked north section. A small Bobcat should be able to accomplish this without risk to its' driver or the equipment.

In closing, we respectfully ask that the Town of Eastham act upon our requests to move eastward the access to 153 Brownell Road, for signage to deter unnecessary traffic, parking and speeding as well as asphalt removal to help preserve this beautiful area as soon as possible before summer is upon us.

Thank you for reading our letter. We look forward to your response.

Respectfully,

Rhonda M.C. Hodges

Ronald W. Carbone

Owners of 150 Brownell Road, North Eastham, MA 02651

cc: Edward Kulhawik, Chief, Eastham Police

George Price, Superintendent, National Seashore

MICHAEL SCHAFFER

545 Nauset Lt. Beach Road
P.O. Box 1594
North Eastham, MA 02651

12/9 agenda
ADMINISTRATION

NOV 02 2016

RECEIVED _____

November 1, 2016

Board of Selectmen
TOWN OF EASTHAM
2500 State Highway
Eastham, MA 02642

Dear Board of Selectmen,

I am writing on behalf of my neighbors on or adjacent to Nauset Light Beach Road regarding the imminent loss of access to our homes.

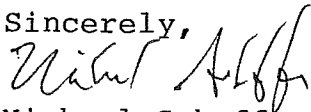
Just northeast of Nauset Light is the last piece of tarmac that serves 20+ properties in the Seashore District. Currently, there is less than fifty feet separating the receding ocean bluff from this road. For emergency vehicles and everyday activities, there is only one way in or out of our neighborhood. Coastal erosion will soon claim this roadway and critical access point.

The Town Administrator, DPW and Supt. Price are familiar with this matter and have very good maps to illustrate the area of concern and potential remedies. Planning ahead is part of the solution, which will involve a number of entities, approvals and the actual work.

The purpose of this letter is to urge the Board of Selectman to understand and appreciate the gravity of the problem and respond well in advance of a sudden or drastic loss. By any measure, this is one of Eastham's most unique and beautiful residential areas. All of the homeowners care deeply about its character and future.

Thank you for your consideration and we look forward to your reply.

Sincerely,


Michael Schaffer

cc. Rhonda Hodges, Elaine Damm, Lynette Tsiang, Joe Everett,
Nat Santoro, Janet Sibley, Roy Kelley

INFORMATION



NAUSET REGIONAL HIGH SCHOOL

P.O. Box 1887, North Eastham, Massachusetts 02651-1887

Tel. (508) 255-1505

Fax (508) 255-9701

Eduardo J. MacDonald, Principal

Keith Kenyon, Asst. Principal

Sean Fleming, Asst. Principal



November 15, 2016

Dear Friends,

On behalf of Nauset Regional High School, we are pleased to invite you to our first annual Community Friends Day.

We are inviting community leaders, elected officials and special guests to see what we do here at Nauset, and observe the high level of instruction. We think you will be impressed! Guests will participate in an 85 minute tour of (7) classrooms for 10 minutes each, including World Language, History, English, Math, Fine & Applied Arts, Business Technology and History classes. At the end of the tour, there will be a reception in our cafeteria with refreshments and snacks. We hope you choose to join us at one of the following days and times:

Tuesday December 6th 8:30-10:30

Tuesday December 6th 9:30-11:30

Thursday December 8th 8:30-10:30

Thursday December 8th 9:30-11:30

We have invited over 100 local people and would like to keep tour groups to 4-7 per group. Therefore, if you, or a designee, would like to attend, please call or email Joanne Cremins at 508-255-5215 or creminsj@nausetschools.org to schedule one of the four tours. We hope that you can take time from your busy schedule to see what amazing things happen everyday in our classrooms at Nauset Regional High School.

Sincerely,

Eduardo MacDonald

Principal

Nauset Regional High School