

# **Squibnocket Beach & Parking Area – December 3, 2013**

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# Why are we here?

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- In recent years, Squibnocket Beach and the roadway to the security gate have experienced significant damage and erosion caused by rising mean high tide levels and severe coastal storms.
- Last February, the Squibnocket parking area sustained nearly \$20,000 in damage from a winter storm.

# Why are we here?



# Purpose

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- Review a plan that replaces the Town's existing Squibnocket Beach and parking area lease with,
- A new lease that expands the Squibnocket Town Beach and relocates the Beach Parking Area—for the next 99 years.



# Purpose

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- **Review the Squibnocket Farm Association's plan to construct an elevated roadway that provides long-term access to and from:**
  - **Squibnocket Road.**
  - **The new Town Beach and Parking Area.**
  - **The Squibnocket Farm residences.**

# Background

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- The Town's current 100-year lease for the Squibnocket Beach and Parking Area expires in 37 years – year 2050.
- Since 1950 a significant portion of the leased land has eroded as the mean high tide level has risen -  
- causing the shoreline to migrate north.

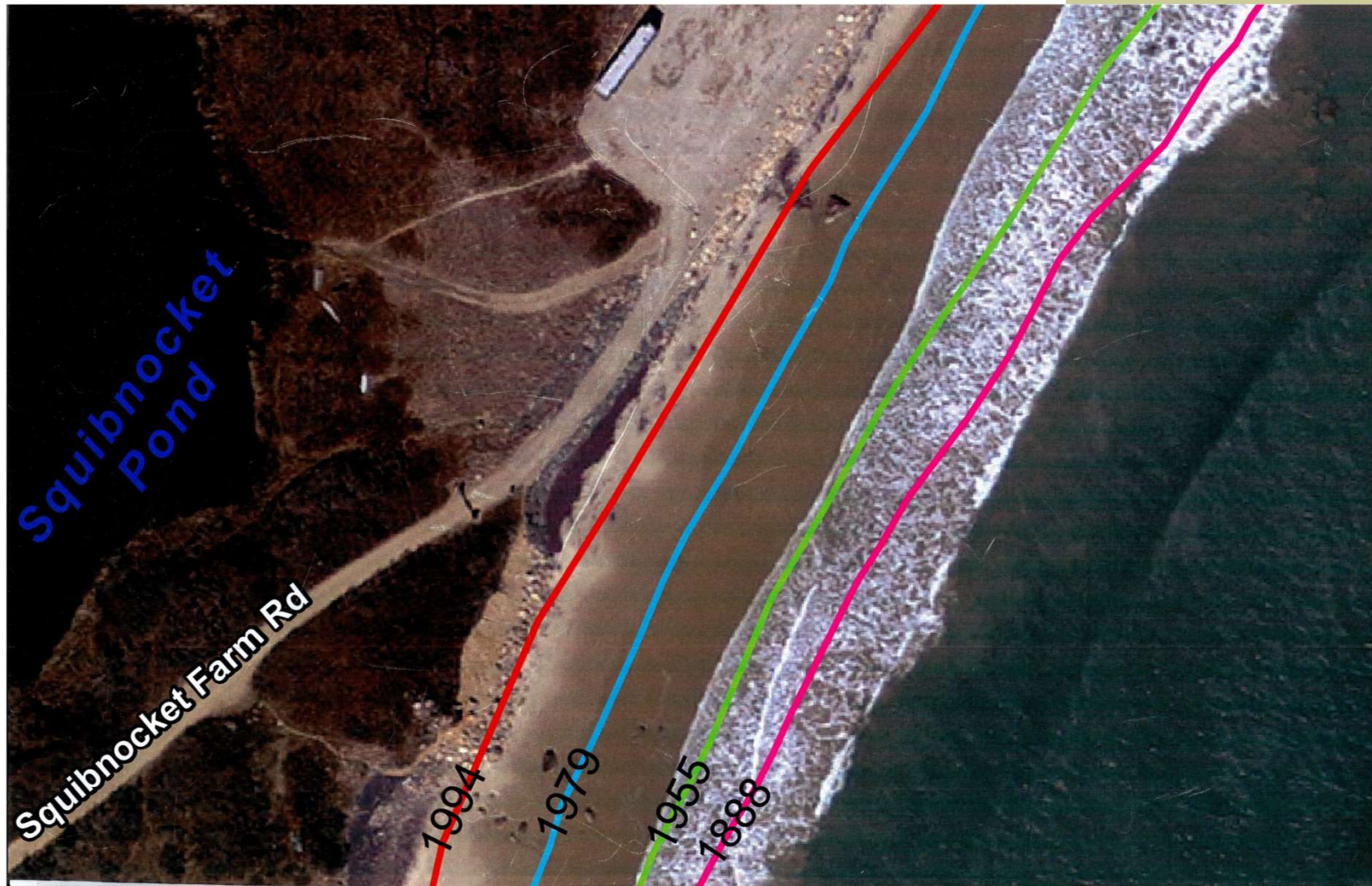


- Squibnocket Beach is now much smaller and mostly used at low tide.

# Background

- **In April 2013 the Selectmen formed a Committee comprised of key stakeholders to find a long-term solution:**
  - **Two Selectmen,**
  - **Conservation Commission member,**
  - **Two residents from the Squibnocket Farm Association,**
  - **The Coastal Planner from the Martha's Vineyard Commission staff,**
  - **Director of the Vineyard Open Land Foundation,**
  - **Beach Committee member,**
  - **Chair of the Squibnocket Pond District Advisory Committee.**

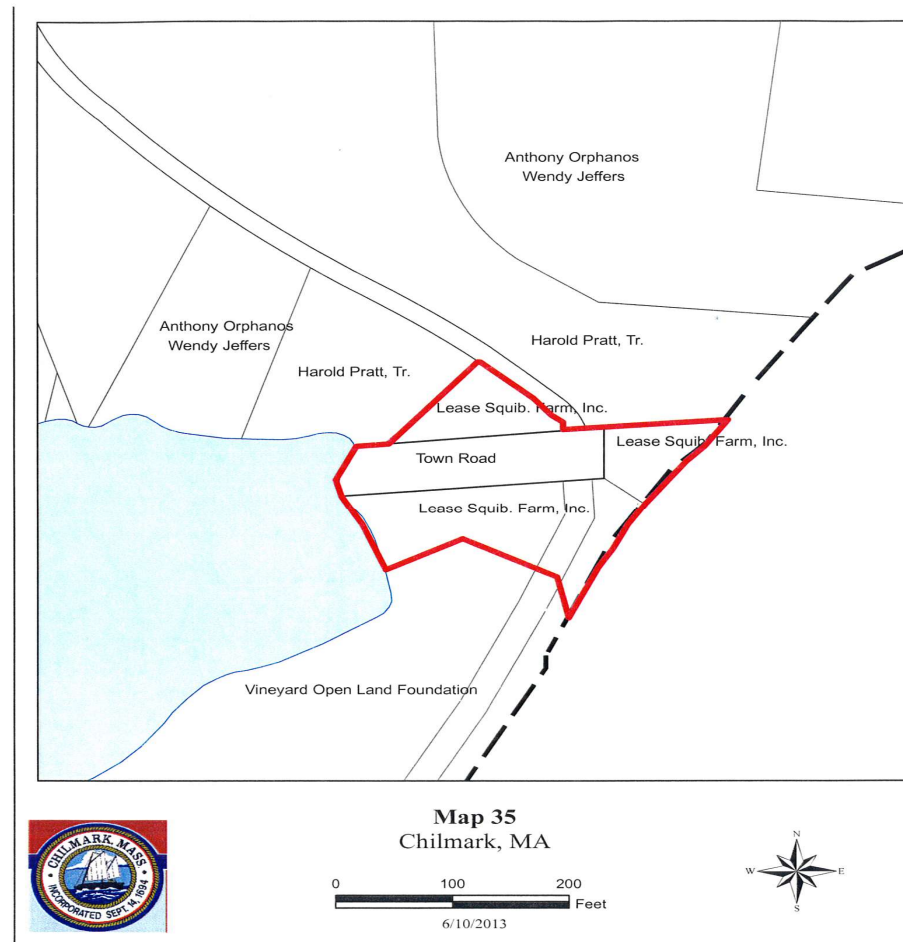
# Beach Shoreline Migration 1888 - Today





# Current Lease 1950 - 2050

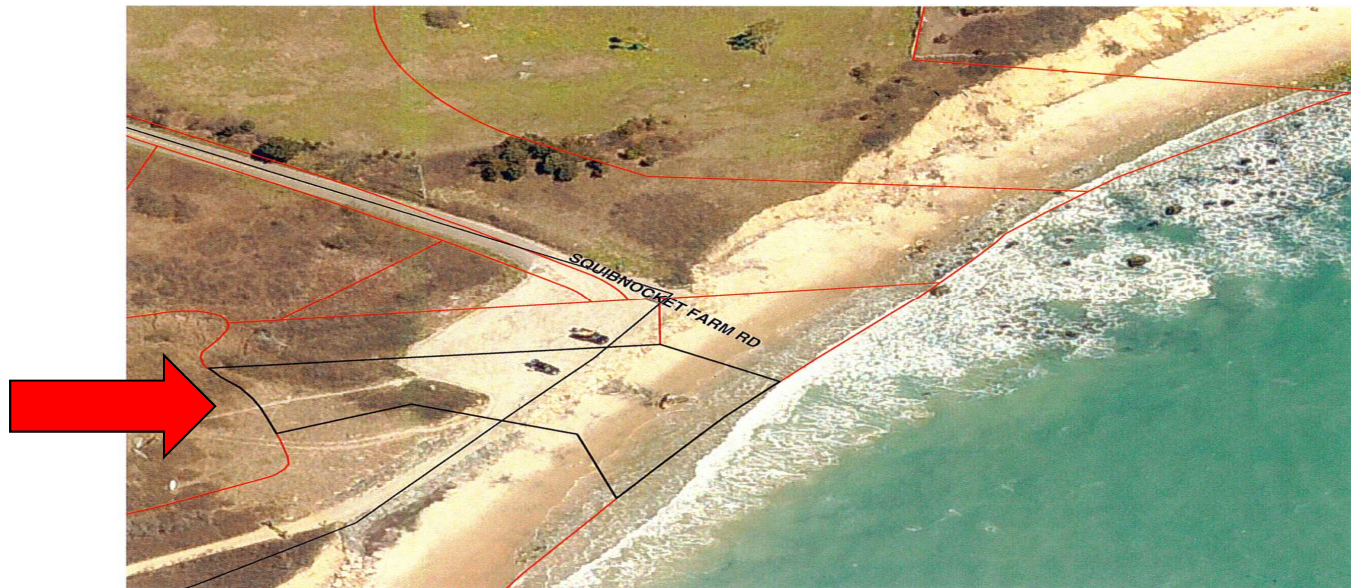
## Assessors Map



[illegible]

# Leased Land - Today

(Notice No Pond Shoreline)



Copyright ©2007 Pictometry International Corp.



# 1950 Survey of Land – Today (Notice Leased Land in Ocean)





# **New Lease Recommendations**

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- **Replace the existing lease with a new 99-year lease that contains the current beach and parking area land, plus land to expand the beach and relocate the parking area.**
- **New Expiration date = year 2113.**

# **New Beach & Parking Area Lease 2014 - 2113**

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- We propose leasing all of the existing beach and parking area, plus significant, additional land abutting the currently leased land in order to:
  - Expand the Town Beach shoreline (5 X larger).
    - Current Squibnocket Beach = Approx. 280 feet
    - + Additional Beach = + Approx. 1,125 feet
    - New Total Squib. Beach = Approx. 1,405 feet

**Source: Assessor's Map**

# **New Beach & Parking Area Lease 2014 - 2113**

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- Relocate the beach parking area. It will be the same area (square footage) as the current parking area but, designed to accommodate more cars.
- The additional beach and new parking area locations have existing natural protection from excessive erosion.

# **New Beach & Parking Area Lease 2014 - 2113**

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- **The Squibnocket Farm Association has proposed a new, 99-year lease for a cost of \$400,000 in rental payments.**
- **The Selectmen propose using existing CPA Open Space and CPA Undesignated Reserve Funds to pay for the lease.**



# New Beach & Parking Area Lease 2014 - 2113



Map 35 Lot 1.30  
Chilmark, MA

0 200 400  
Feet  
7/12/2013



# **New Beach & Parking Area Lease 2014 - 2113**

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- **Dramatically increase Squibnocket Town Beach.**
- **Relocate the Parking Area – the roadway will not pass through the parking area. The new parking area will be more efficiently designed and will accommodate more than the 40-car maximum for the current lot. The new area is also on naturally protected ground.**

# **New Beach & Parking Area Lease 2014 - 2113**

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- **There will be native vegetation screening between the new parking area and Squibnocket Farm Rd. to the north.**
- **Relocate security gate past the parking area.**
- **Relocate the commercial skiff (10 HP Max.) and recreational boat launch path across from new parking area for Squibnocket Pond access.**

# **New Beach & Parking Area Lease 2014 - 2113**

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- **Add a walking path from the parking area to the shore.**
- **Stable and porous (pea stone gravel) parking area surface.**



# New Beach & Parking Area Lease 2014 - 2113



# **New Beach & Parking Area View from Current Parking Area**

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# **New Beach & Parking Area Skiff Launch Path to be Relocated**

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# **New Beach & Parking Area**

## **Est. New Parking Area Location**

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## **New Beach & Parking Area View from the Mussel Bed**



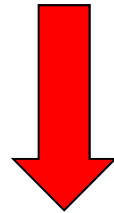
## View of Total Town Beach to the Mussel Bed





# How Long Will the New Parking Area Last?

- The rate of erosion of Squibnocket Beach has varied over time by the specific section of beach.
- Between 1994-2009, the rate of erosion for the section of beach shoreline east of the Mussel Bed and in front of the new parking area has averaged only 0.75 feet or 9 inches per year.



**The Mussel Bed is providing natural protection against beach erosion for this section of beach.**

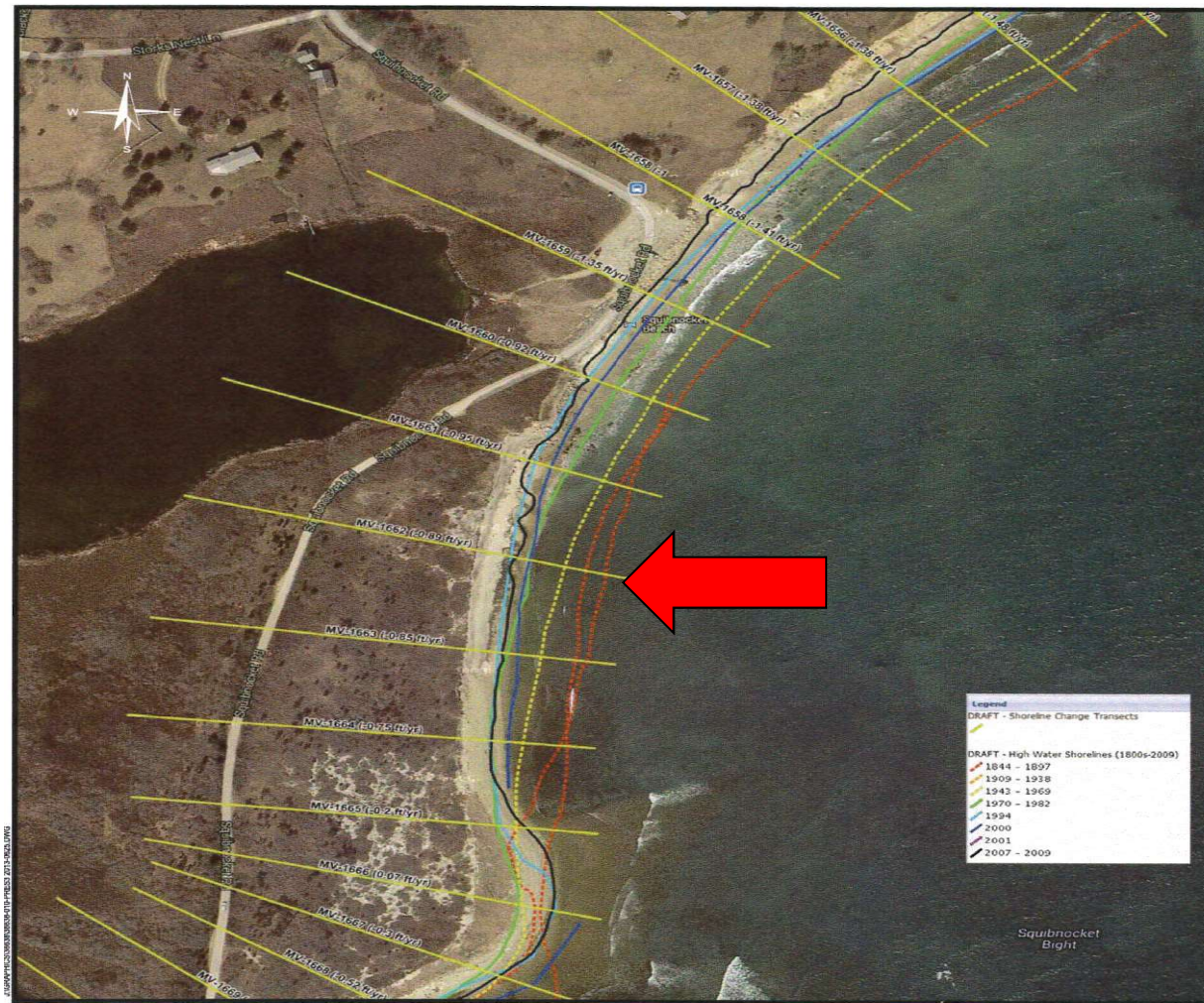
# How Long Will the New Parking Area Last?

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- The south (ocean side) edge of the new parking area will be approximately 120 feet north of the current shoreline.
- Based upon the historical rate of erosion, this section of the shoreline will not reach the new parking area for 120 – 150 years.

Source: [http://maps.massgis.state.ma.us/map\\_ol/czm\\_shorelines.php](http://maps.massgis.state.ma.us/map_ol/czm_shorelines.php)

# High Tide Shoreline Erosion by Beach Section 1844 - 2009



Transects and data from this image taken from: [http://maps.massgis.state.ma.us/map\\_ol/czm\\_shorelines.php](http://maps.massgis.state.ma.us/map_ol/czm_shorelines.php)

# **Town Beach & Parking Area**

## **Next Steps for Town Meeting Approval**

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- **Combine the current leased area with a new, expanded beach and parking area in a lease that expires in year 2113,**
- **for a proposed rental payment of \$400,000 to the Squibnocket Farm Association.**

# **Town Beach & Parking Area Next Steps for Town Meeting Approval**

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- **Obtain cost estimates for:**
  - **Required permitting.**
  - **New beach parking area archaeological survey; clearing; install porous, pea stone gravel surface; and the screening installation.**
  - **New skiff launch path clearing.**
  - **New path clearing to beach shoreline.**



# **Town Beach & Parking Area**

## **Next Steps for Town Meeting Approval**

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- **Recommend source(s) of funds** – possibly use existing Community Preservation Act (CPA) Open Space Preservation and CPA Undesignated Reserve Funds.

# Squibnocket Farm Elevated Roadway

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- **Erosion, rising mean high tide and increased storm frequency and severity are threatening the long-term viability of the current roadway that runs:**
  - **from Squibnocket Road,**
  - **through the parking area,**
  - **to the security gate,**
  - **to Squibnocket Farm Road,**
  - **to the Squibnocket Farm residences.**

# Squibnocket Farm Elevated Roadway

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- **The Squibnocket Farm Association hired the engineering firm of Haley & Aldrich to identify and conceptually design a long-term, structurally and environmentally sound alternative solution for the new roadway.**
- **Site visits were made and several concepts were reviewed with the Committee.**

# Squibnocket Farm Elevated Roadway

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- The Squibnocket Farm Association will cover all costs of designing, permitting and constructing the elevated roadway.
- The roadway design must withstand storm surge, support seasonal traffic volume to beach parking and residences, plus heavy delivery truck weights.

# Squibnocket Farm Elevated Roadway

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- **After the elevated roadway is built and the beach parking area is relocated, the rock revetment at the ocean side of the current parking area will be removed and beach nourishment (sand) will be added to restore the beach to its original state.**
- **The Town will help maintain the roadway section running from Squibnocket Road to the new Town beach parking area.**



# Squibnocket Farm Elevated Roadway

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- **The Town's new Menemsha drive-on dock design was used to create this concept.**
- **The elevated roadway will also have a concrete deck with wooden side rails.**
- **The average height of the elevated roadway deck will be approximately 3 - 4 feet above the top of the ocean-side rock revetment of the current parking area.**

# Squibnocket Farm Elevated Roadway

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- The power and utility lines for Squibnocket Farm will pass through conduit underneath the elevated roadway deck.
- The current parking area and beach will eventually return to their original barrier beach state. The ocean will most likely have a natural water exchange with the wetlands and pond during significant storm events – without disrupting the elevated roadway.

# **Squibnocket Farm Elevated Roadway Located Behind Current Parking Area**

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# **Squibnocket Farm Elevated Roadway Menemsha Drive-on Dock**





# Squibnocket Farm Elevated Roadway Schematic Illustration





# **Squibnocket Farm Elevated Roadway Current View - Facing Ocean**

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# **Squibnocket Farm Elevated Roadway Proposed View - Facing Ocean**

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# Squibnocket Farm Elevated Roadway Support Heavy Vehicle Weights

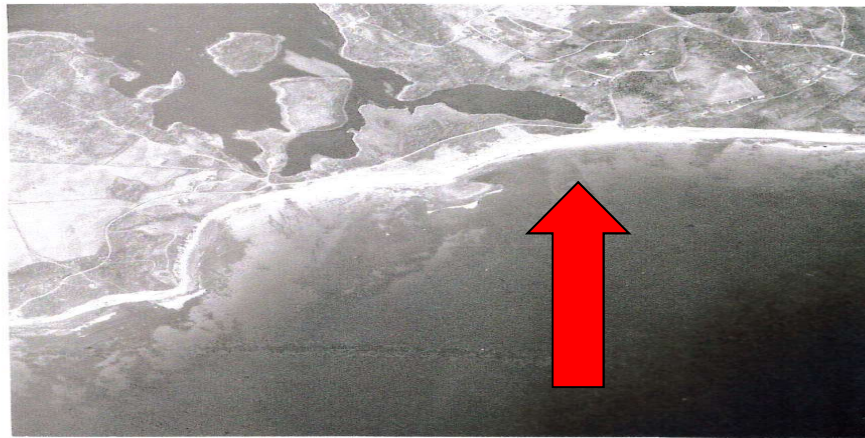


# Squibnocket Beach - Remove Rock Revetment, Restore Beach



# Squibnocket Beach - Early 1900's

## No Revetment





# Squibnocket Town Beach 2014 - 2113





# Squibnocket Town Beach 2014 – 2013

## Parking Traffic Flow



# **Elevated Roadway and Beach Construction Sequence**

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- 1. Town voters authorize the Selectmen to execute a new Squibnocket Beach and Parking Area lease -- to be negotiated and presented prior to the April 2014 Annual Town Meeting.**
- 2. The entire project will need to be referred to the Martha's Vineyard Commission (MVC) and permitted by the Chilmark Conservation Commission and possibly other municipal and state agencies.**

# **Elevated Roadway and Beach Construction Sequence**

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- 3. After permitting, the elevated roadway will be built and the utility lines and security gate relocated.**
- 4. Then the Town will install the new beach parking area and the skiff launch and beach access paths and screening.**

# **Elevated Roadway and Beach Construction Sequence**

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- 5. Lastly, the Town will return the current beach to its natural state by removing the rock revetment and re-nourishing the beach with sand.**

# **Elevated Roadway and Beach Sources of Funds**

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- **Elevated roadway permitting, construction and utilities and gate relocation: Squibnocket Farm Association.**
- **New beach lease, new parking area with screening, beach access and skiff launch paths: Consider existing CPA Open Space and CPA Undesignated Reserve Funds.**

# Elevated Roadway and Beach Sources of Funds

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- **Remove revetment and re-nourish current beach area:** Possibly Commonwealth Grant for Seawall Removal plus, CPA Open Space and CPA Undesignated Reserve Funds.



# Squibnocket Town Beach 2014 – 2113

## Illustration Current Lot, Revetment





# Squibnocket Town Beach 2014 – 2113

## Illustration No Current Lot, Revetment



# Thank you!

