

Abutters to Squibnocket Project  
Chilmark, MA. 02535

February 3, 2016

Mr. Paul Foley  
Land Use Planning Committee (LUPC)  
Martha's Vineyard Commission  
P.O. Box 1447  
Oak Bluffs, Massachusetts. 02557

Dear Paul,

The abutters to the proposed Squibnocket Beach project have been working together for several years and have made progress on several fronts:

- Relocating the proposed parking lot from an environmentally sensitive coastal dune to a more convenient location on Squibnocket Road.
- Relocating the causeway away from the beach to a more protected area next to the pond.
- Reducing the causeway width to a single lane.

While the project design has been improved, as with any complex project, additional optimizations are certainly possible and should receive scrutiny given the magnitude and importance of this project to the overall environment.

This input to the Martha's Vineyard Commission has been written on behalf of all the abutters listed in the NOI, with the exception of Peter Weldon and the Flanders. Peter lives in Singapore and has not been directly involved. We have not been in contact with the Flanders. Additionally, this is being written with the full support of the Goldmuntz family and Zach Lee, both of whom live in close proximity to the project but who are not technically abutters.

The following four issues concern the abutters:

- The height and scale of the causeway
- Future conditions under which the causeway should be removed
- Protection of the coastal dune in the vicinity of the new boat launch
- Maintenance of the new dune after the revetment is removed

### **Height and Scale of the Causeway**

Most important from the abutters perspective is the mass and overall scale of the causeway. The current proposal calls for a 13' structure (elevation to the top of the road deck). The effect across grade is an average height at the top of the deck of 11.5' above the terrain for 240' across the wetland. And, as currently planned, the railing adds another 4' of dense wooden fencing along the entire bridge from end-to-end. This has the practical effect of creating a 15.5' high causeway structure with an elevation of 17'.

While Squibnocket Farm needs improved access, the scale and environmental footprint for the proposed causeway appears excessive and unnecessary. A lower structure with a smaller footprint will be more in keeping with the rural nature of the area.

The original objection to the proposal as presented to the Town two years ago was that the causeway was too high and too wide. Additionally, the causeway ran parallel to the shore and blocked access to the Town's beach. In response to these concerns, the Squibnocket Beach Committee was formed and the Town approved a plan for a single-lane, low causeway that was characterized by the Selectmen as the 'height of Everett Poole' or 'the height of Everett Poole with his hands in the air'. The notion that a low causeway that was no higher than the six-foot Everett Poole had significant resonance with the voters.

The specific language in the recommendation that was approved was as follows: “*Access: Build an at-grade road with low causeway*”. And, more specifically the “*Height of the causeway to be at a level that limits projected wash-overs to several/year, based on engineering considerations*”. The height of the causeway was linked to the notion that wash overs were to be limited to ‘several/year’. It is difficult to read this any other way than as a prescription for a structure that is low enough to experience wash overs in storms. As currently proposed, it is unlikely that a 13’ elevation causeway, constructed behind a substantial, 15’-19’ coastal bank, will experience more than one or two over washes in its entire 50-year life-time, much less than several/year.

It is our opinion that the proposed causeway is not ‘low’ and is objectionable for that reason. It is likely that scale of the causeway can be modified without harm to the objective for safe and secure access to Squibnocket Point. Possible modifications include:

- Reducing the elevation by as much as 2’. This is technically possible and would reduce the *height over grade* from 11.5’ to 9.5’ (‘elevation’ would be reduced from 13’ to 11’). This is a reduction in height over grade of 17%. (See pages 5-10 for the technical details).
- Changing the guardrail from the heavy rustic design to a lighter, lower guardrail system. It would be preferable to have steel posts with wires. A second possibility is a standard guardrail. In both cases, it does not need to be any higher than 2’ including the curb. It should also be noted that the model for this causeway as proposed by the Selectmen was the Menemsha causeway, which has a very light railing. (See page 11).

Lowering the guardrail by two feet and the causeway itself by the same amount reduces the overall height by more than a third and would have the following benefits:

- Significantly improved aesthetics for anyone looking at the causeway. As it is currently proposed, the causeway will block the view to the west for anyone standing on the beach. This will include the setting sun. The causeway is also problematic for the abutting properties.
- Simpler integration of the road deck with the lower grade of the roadway to the west, should that become necessary.
- Reduced shading effects on the beach, which will get much worse as the shoreline migrates toward the causeway.

### **End of Life (EOL) for Causeway**

The EOL plan for the causeway needs to deal with the eventuality that the causeway will be below normal high water. This should be measured from the perspective of ‘observed high water’. Once any of the bridge’s pilings are in the water, it should be removed. While it may be 50 years before high water reaches the bottom of the pilings, the notion that this structure is approved for an ‘over water’ application has not been discussed and has never been a part of the plan.

### **Boat Launch and Mitigation Measures for Coastal Dune**

The proposed boat launch is to the west of Money Hill and combines both kayak and skiff launching in the same location. The rationale for this new launch is that shell fisherman cannot launch a skiff at the east end of the pond because there is no easy access. While the need for the launching of skiffs is infrequent, the Town considers direct and convenient access for trucks with boats on trailers to be a critical requirement.

While a new launch area for skiffs may be needed, the proposed location will be problematic for more frequent users with kayaks. A kayaker will need to drive across the causeway, drop off his/her kayak, drive back to the parking lot, park, and return on foot to the kayak launch area. This process will need to be repeated upon return. This is inconvenient for any kayaker and the preferable solution would be to retain and maintain the old kayak launch area. An extension from the turnaround at the parking area would be straightforward. (See pages 12-13).

Perhaps a more significant issue is the unwanted access to the barrier beach by sightseers and others who are simply curious. A vehicle that is not transporting a kayak is making an unnecessary trip across a single lane bridge to a fragile barrier beach with no justifiable purpose. The problem is exacerbated by the Squibnocket Farm gate, which will not allow access up Squibnocket Farm Road. These sightseeing vehicles will need to turn around either in the by-pass areas on the road or in the boat launch area. In both cases, this is unnecessary traffic on the causeway and on the coastal dune, as the road is not a 'through-road'. Signage to restrict the use of the road to Squibnocket Farm and to trucks launching skiffs should be installed.

Last, the law of unintended consequences should be considered. The boat ramp and public access across the causeway could result in the following:

- Inadvertent damage to the wetland and coastal bank from legitimate users who are launching skiffs. Over time, trucks backing into the boat ramp with trailers could widen the opening and the adjacent areas next to the road. Fencing and low-lying barriers could protect against this eventuality. (See page 14).
- Damage to the wetland and coastal bank from sightseers and other curious people using the launch area as a turnaround. Fencing will help but other actions to mitigate this are also possible. For example, Aquinnah installed a gate at their access point. (See page 14).
- Use of the causeway and the skiff launch as a convenient way to drop off beach goers and surfers. The possibility of people cutting across the dune as a quick way to get to the beach should not be overlooked. This could be mitigated by some signage and fencing on the opposite side of the road from the launch area. (See page 14).

These suggestions should be welcome to Squibnocket Farm, as this will minimize congestion and traffic on the one-way causeway and Squibnocket Farm Road. Additionally, this protects the coastal bank and the coastal dune. Last, for the abutters, this reduces the volume of vehicles across the barrier beach and that has obvious benefits from an aesthetic perspective.

### **Revetment Removal and Dune Maintenance**

The Town's plan includes the removal of the parking lot and causeway revetments, the re-grading of the existing parking lot and an increase in its elevation to 11', as well as the extension of a new dune form across the causeway area to Money Hill. Our understanding is that is a onetime effort. Following its initial construction and planting, it will be allowed to naturalize and to overwash during storms. If there is a breach to the pond or if inlets are created, these will be left alone, either to fill in naturally as the dune moves toward the pond or to continue to exchange water with the ocean if the breach becomes permanent.

While it makes sense to remove some or all of the revetments in order to allow for the natural retreat of the coastline, the MVC should consider assessing the impact of revetment removal on the coastal banks and on the shorelines inside Squibnocket Pond. Understanding this impact is necessary in order to determine whether maintenance of the dune is advisable (i.e. repairs after storms to fill inlets or breaches). Greg Berman from the WHOI provided insight on this question in his report to the Town of Chilmark (February 26, 2014 - response to Question 12, source: Squibnocket Committee website, Town of Chilmark).

Thank you for your consideration,

#### Direct Abutters:

Wendy and Tony Orphanos  
Sue and Rich Regen  
Molly and John Callagy  
Elizabeth and Charles Parker  
Jack Taylor

Leanne Cowley and Steven Gallante  
Nancy and David Stork  
Doug Liman  
Virginia and David Dawson

#### Other Interested Parties:

Zach Lee

Ellen, Betsy, and Jane Goldmuntz

## Detailed Back-Up

### Causeway



First, a summary of the benefits:

- A lower causeway with less mass is less obtrusive and is more consistent with the rural character of the area.
- A guard railing that is simpler, lower, and more streamlined have less of a negative impact on line of sight from the beach to the west and will reduce the dominance of the structure in this area.
- A lower causeway and a slimmer guardrail will reduce the shading of the causeway on the beach area, which will become more pronounced as the area erodes toward the causeway.

The discussion will focus on three impacts of a 2' lower causeway;

- Impact on shading and shading mitigation
- Impact on storm water flow through under the causeway



## Overview of Height of Causeway – Current Proposal



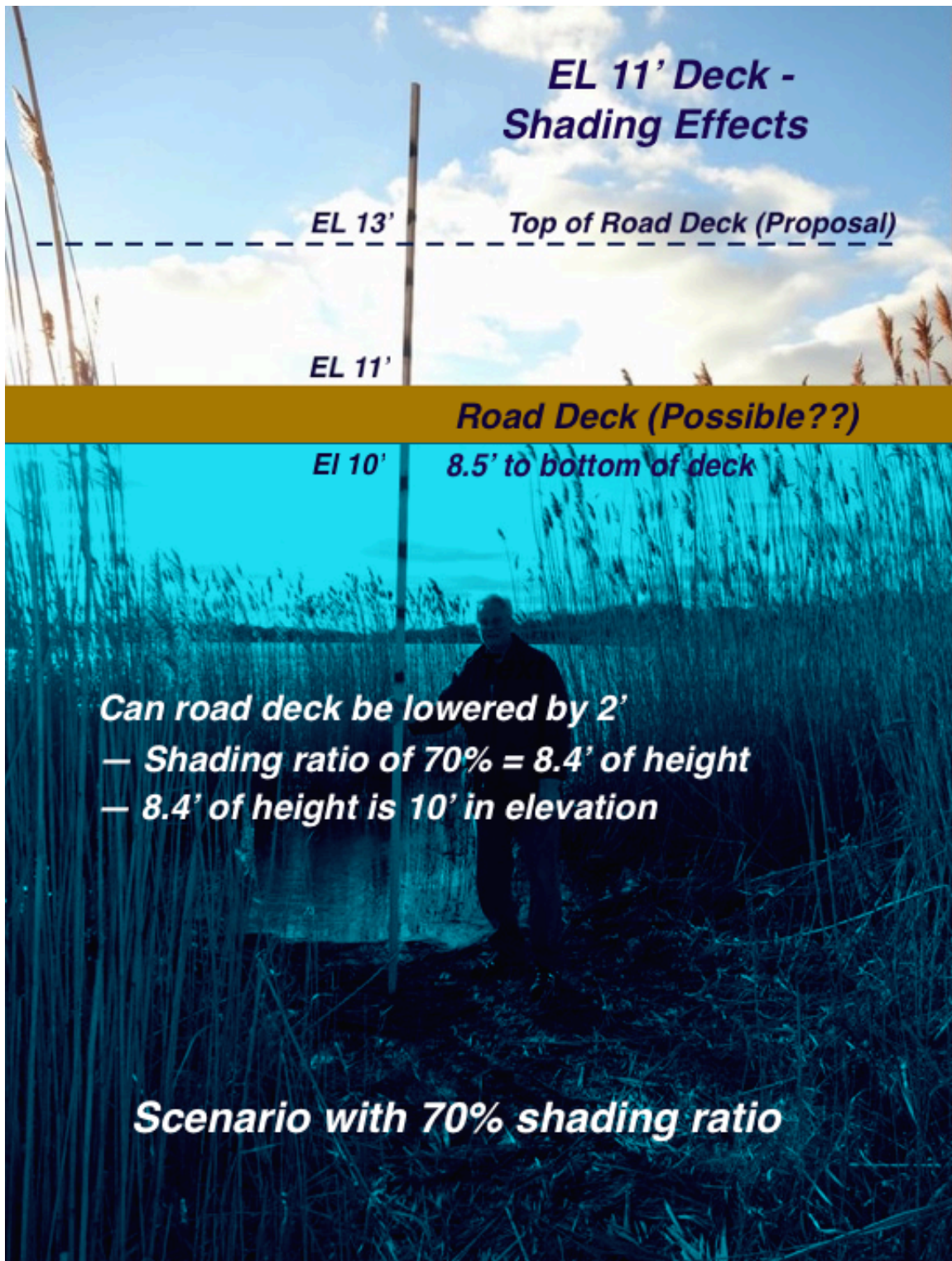
### Notes:

- Batter board is marked in 1' increments
- Batter board is on grade at an elevation of 1.5' NAVD88 (Lidar topo – 2010)
- Dotted line shows the top of the road deck in the current SFHA proposal



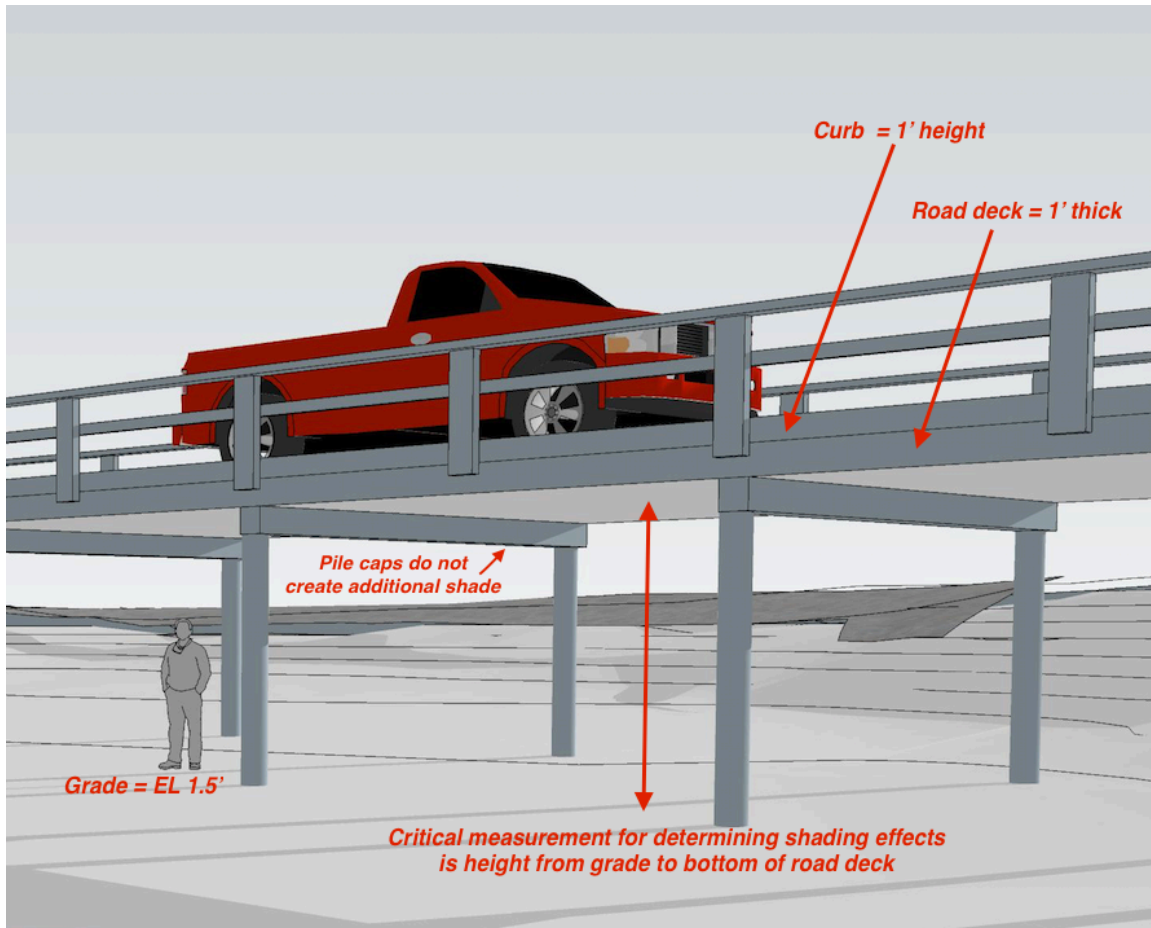


## Shading



- 70% shading guideline requires 8.4' of clearance to bottom of deck
- 70% is minimum allowable in North Carolina DOT study
- Additional mitigation is possible by reducing the width of causeway to 11'; only 7.7' would be required (10" additional clearance beyond requirement)

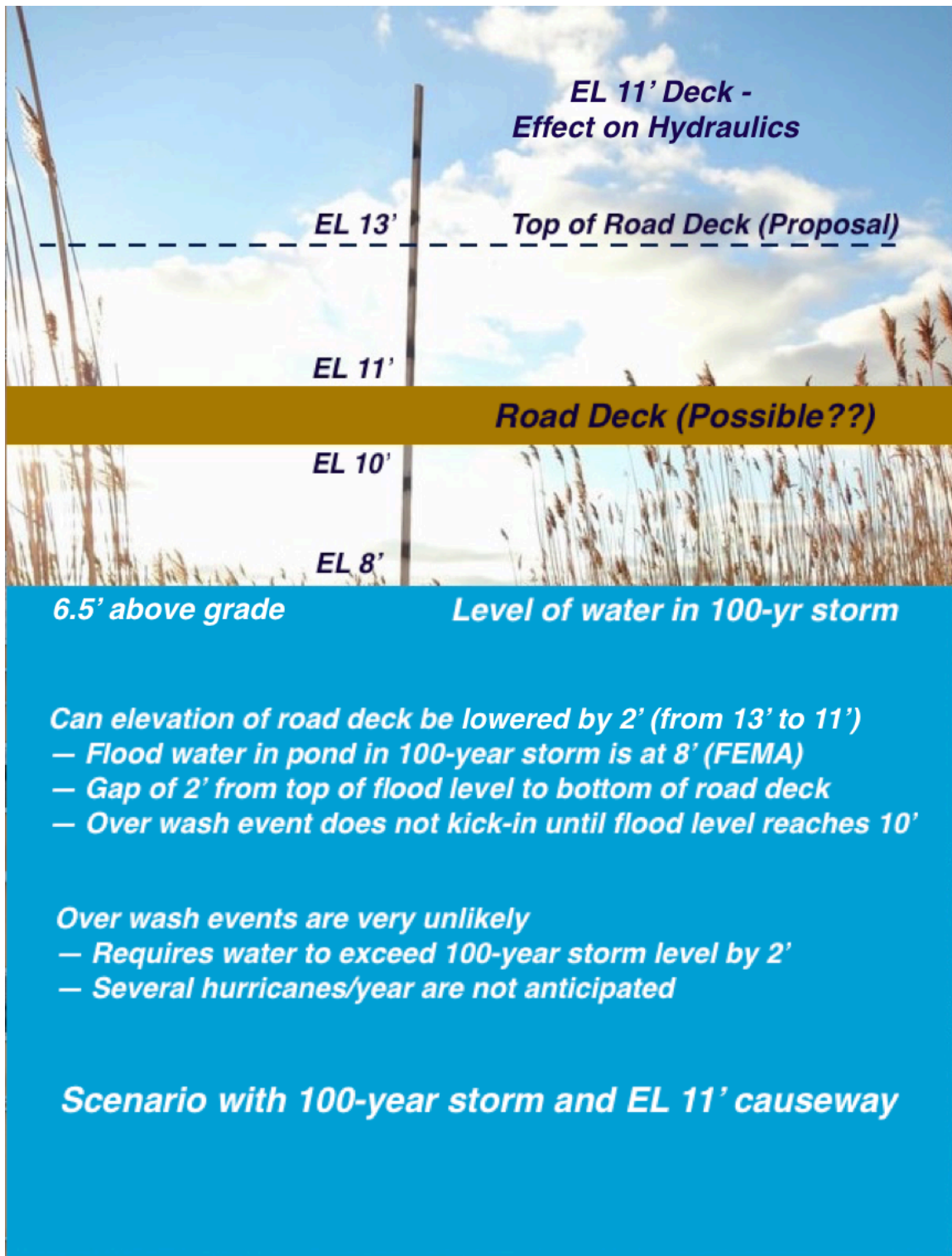
## Height Measurement for Shading Analysis



- The critical measurement for determining shading effects is the height from grade to the bottom of the road deck. It is the road deck that causes the shading.
- Based on the NC DOT guideline to determine height above grade for shading mitigation, 70% of the width of the proposed causeway is necessary from grade to bottom of road deck to mitigate shading effects ( $12' \text{ width} \times 0.7 = 8.4'$ ). If 8.4' is used as necessary 'height from grade', the bridge can be lowered by 2' without having a negative effect on the underlying vegetation.
- Alternatively, if the width of the causeway were reduced by 1' to 11', we would gain additional flexibility. ( $11' \text{ width} \times 0.7 = 7.7'$ .) While we would not recommend reducing the elevation by more than two feet, reducing the width of the causeway would provide additional shading mitigation.



## Flooding/Hydraulics



- Water level can be at EL 10' before it touches the bottom of the deck
- This 2' above the level for the 100-yr storm in the H & A documentation

**Causeway Railing:** Existing railing adds significant mass to structure.



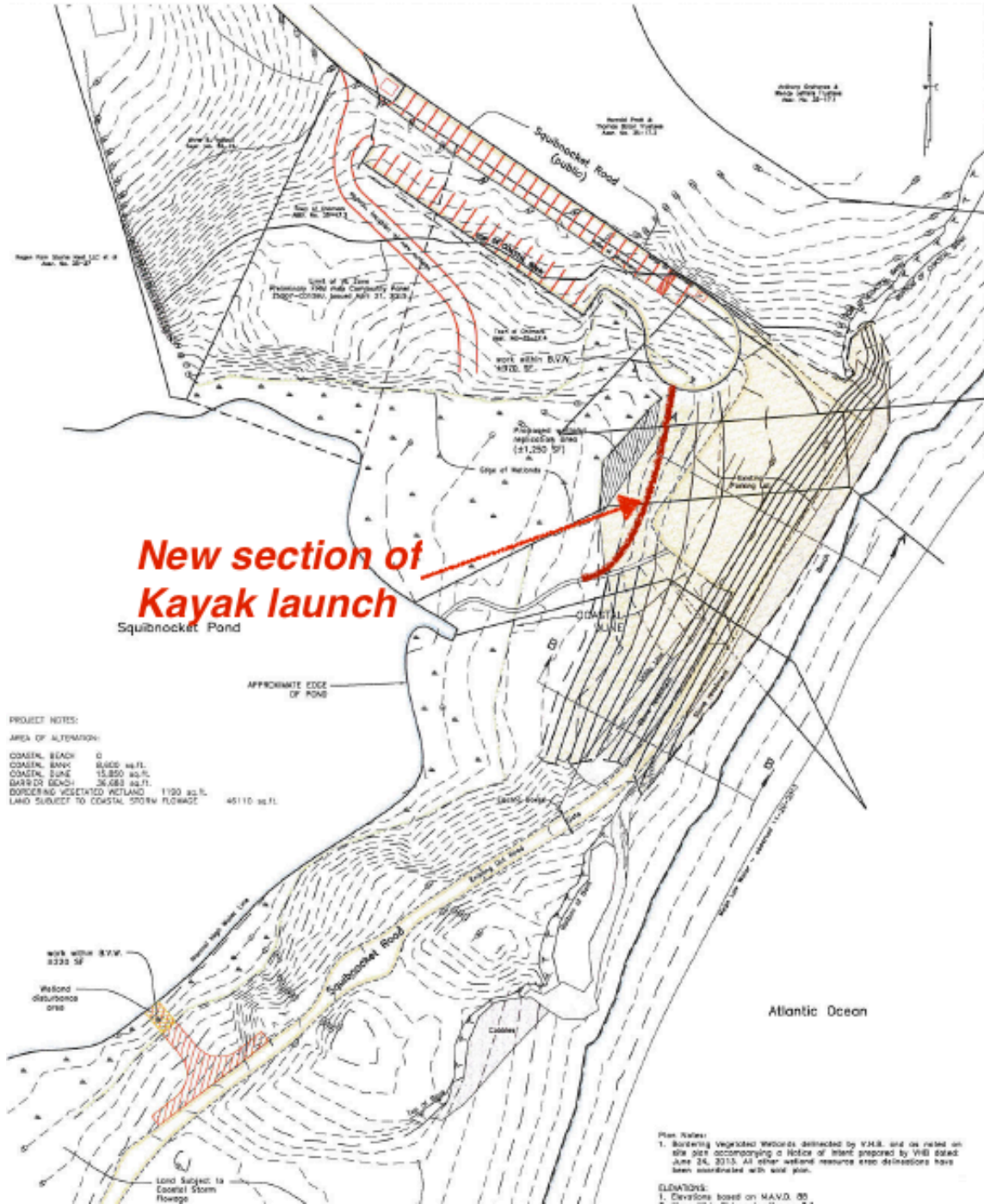
Menemsha railing on new causeway is lighter, more 'see through, and less obtrusive.





**Boat Access -- Kayak launch:** existing launch could be extended and connected to the turnaround

- New path to existing access would provide a convenient launch point



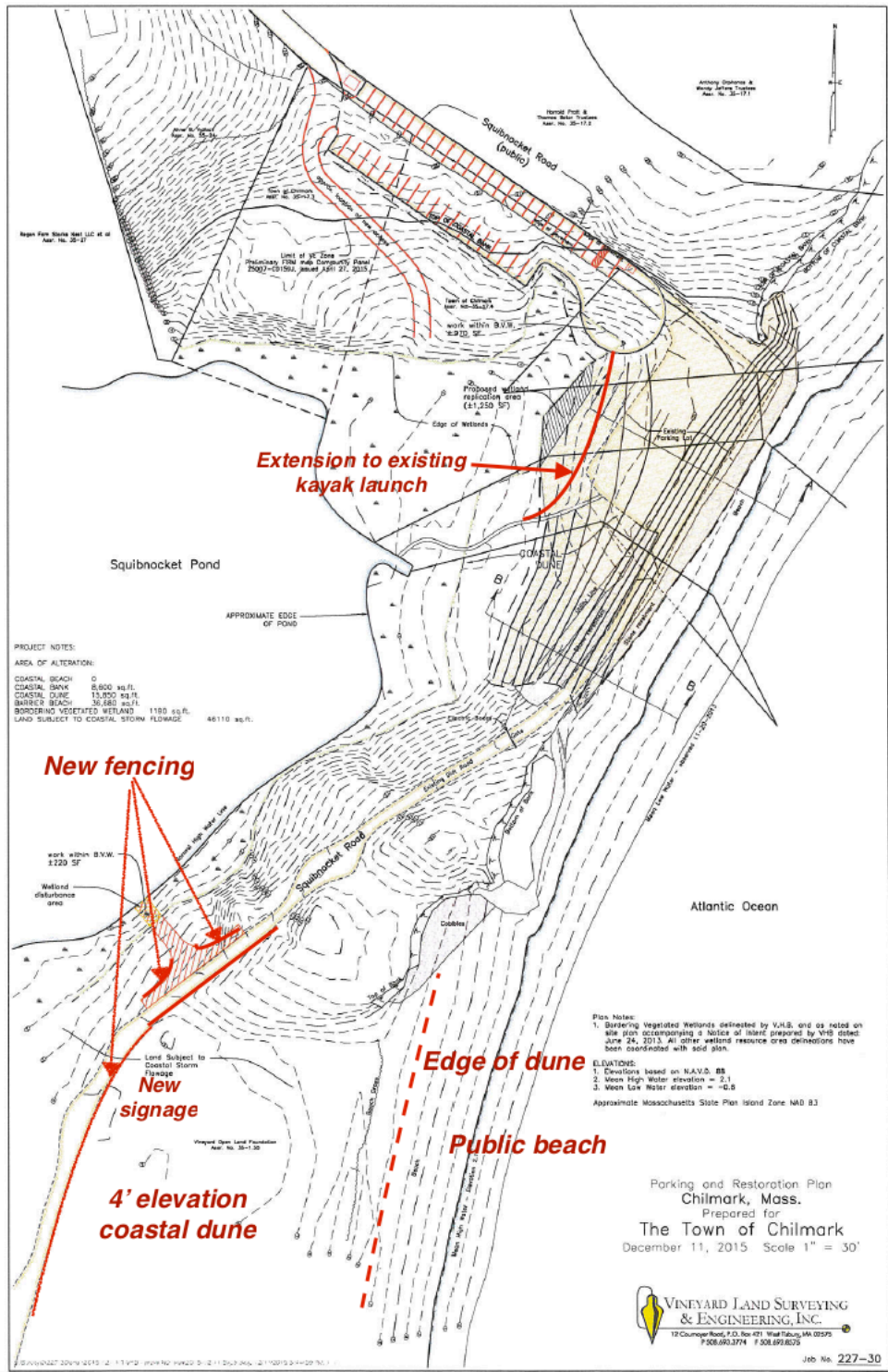
## Existing Boat Launch Access (Extension Connects To It)



- Existing access is an improved road that was built after Hurricane Bob



# Protection of Coastal Dune and Barrier Beach



- New fencing to protect coastal bank next to skiff launch (both sides of road)
- Gate for skiff launch (similar to Aquinnah)
- Signage to prohibit people from crossing coastal dune