



HULL CONSERVATION COMMISSION

253 Atlantic Avenue, 2nd floor
Hull, MA 02045

Phone: 781-925-8102

Fax: 781-925-8509

APPROVED – January 10, 2017

MEETING HELD AT HULL HIGH SCHOOL (180 MAIN ST) IN THE 2ND FOOR EXHIBITION ROOM

Members Present: Sheila Connor, Chair, Sean Bannen, Paul Epstein, Elizabeth Fish, Paul Paquin, Lou Sorgi

Staff Present: Chris Krahforst, Conservation Administrator, Sarah Clarren, Conservation Assistant

Minutes: Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;
It was **voted** to: Approve the Minutes of December 27, 2016 as amended

7:30 Call to order

7:35 12 Sunset Ave., Map 16/Lot 011 (SE35-1347) Continuation of a Public Hearing on the **Notice of Intent** filed by **Scott Prouty** for work described as **construct 16' x 16' deck**.

Representatives: Scott Prouty (owner)

Abutters/Others: none present

Documents: "Proposed Conditions Plan" – David G. Ray – 1/6/2016, rev. 12/29/2016

S. Prouty introduced the proposed project. He stated that he would like to construct a deck off of the seawall in front of his home, similar to what his neighbors have. He stated that he would like the project to be completed in May and is currently in the process of obtaining a Ch. 91 License to construct the deck. The Commission stated that work should be done when the tide is out and no material should be left on the beach, to which S. Prouty agreed.

Two Special Conditions were added as follows:

S12. No work may commence until a valid Chapter 91 license is presented to the Commission.

S13. No material may be left on the beach.

- Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;

It was **voted** to:

Close the Public Hearing and **approve** the Order of Conditions. The Order of Conditions was **signed**.

7:41 Burr Rd., Map 51/Lot 113 (SE35-1245) Continuation of a Public Hearing on the Notice of Intent filed by Jeffrey Pinkus for work described as construct single family home. **Continued to January 24 at a time TBD**

- Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;

It was **voted** to:

Continue the Public Hearing to 01/24/2017 at a time to be determined.

7:41 180 Main St., Map 01/Lot 001 Opening of a Public Hearing on the Notice of Intent filed by the Hull Department of Public Works for work described as connect blind stormwater basin to existing drainage system near the end of Channel St. **Continued to January 24 at a time TBD.**

- Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;

It was **voted** to:

Continue the Public Hearing to 01/24/2017 at a time to be determined.

7:42 147 Manomet Ave., Map 19/Lot 069 (SE35-1349) Opening of a Public Hearing on the **Notice of Intent** filed by **Tom Johnson** for work described as **31' x 28' addition and 14' x 18' deck**.

Representatives: Tom Johnson, Joyce Sullivan (owners); David Ray (representative)

Abutters/Others: none present

Documents: "Existing and Proposed Conditions Plan" – David G. Ray – 2/27/2016, rev. 12/29/2016

S. Connor, Chair stated that although she is a friend of the applicant, it will not impact her decision on the project.

D. Ray presented the proposed project. He stated that the proposed addition will be on a FEMA compliant foundation and will have flood vents. He then stated that there would be no change to the existing grade.

One Special Condition was added as follows:

S12. The Conservation Commission finds that the coastal dune in this location is not significant to the interests of flood control and storm damage protection.

- Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;
It was **voted** to:

Close the Public Hearing and **approve** the Order of Conditions. The Order of Conditions was **signed**.

7:55 Nantasket Ave./Hull Shore Dr., Map 37/Lot 010 Opening of a Public Hearing on the **Notice of Intent** filed by **Mass. DCR** for work described as **toe protection and improved stability to a 2,200' section of seawall along the middle reach of Nantasket Beach. Improvements include cut stone steps within the revetment slope at existing access points and 3 ADA accessible ramps.**

Representatives: Bernward Hay (Representative); Michael Riccio (Army Corps. Of Engineers (ACOE))

Abutters/Others: Kevin Richardson (Selectman); John Reilly (Selectman); Jennifer Constable (Selectman); Phil Lemnios (Town Manager); Kevin Mooney, Rebecca Quan, David MacDougall (interested parties); Rhoda Kanet (Beach Management Committee)

Documents: "Nantasket Seawall Stabilization Project [PowerPoint] – DCR/ACOE – 12/15/16

S. Connor asked if anyone from the DCR was present for the hearing, to which B. Hay stated that Mike Galvin was unable to attend, but he would be able to present the project on his behalf.

C. Krahforst stated the current NOI includes the December 2014 Nantasket Beach DCR Feasibility Report and Environmental Assessment. S. Connor, Chair stated that the Town had provided two letters with comments on the Report in June 2014 and August 2014. She asked if the presentation would address any concerns raised by the Town in 2014. M. Riccio stated that the ACOE did respond to the Town's comments in writing and can provide them. M. Riccio said that although the presentation won't refer to the specific question/comment raised by the Town in 2014, the presentation will answer many of the questions that were raised in the Town's 2014 letters.

M. Riccio then began a prepared PowerPoint presentation, which is included as part of the record. M. Riccio stated that the project purpose is to protect the citizens, infrastructure, and business. The DCR Reservation has seen the failure of the northern and southern sections of seawall in past years. These sections have since been re-stabilized with emergency orders, but no work has occurred on the middle section of revetment. The proposed project will prevent future undermining of the middle section. M. Riccio stated that when the ACOE gets involved with a feasibility study, they begin by identifying the problem and then identify opportunities to fix the problem. In this case, the ACOE looked at the risk of the wall failing in regards to three items; conceptual instability (coastal processes), calculated instability (which involves simulating the conditions and evaluating the risk of seawall failure), and demonstrated instability (footings are currently exposed and other sections of the wall have failed). The Commission asked if because the wall has been worked on and 'stabilized' in a piecemeal matter, if it has increase erosion in the middle section of the seawall. M. Riccio stated that it is possible, but the degree of which is unknown. The Commission then asked what will happen when the proposed revetment is tied into the disparate sections of seawall, as there are many places that are currently failing where two types of construction has occurred. B. Hay said that at the connecting point of two sections of seawall, there may be some localized erosion. B. Hay said that the rocks that are pushed up the existing ADA ramps is just a function of the energy that is in the ocean. B. Hay then said that two issues need to be focused on for the project; is the wall stable and if so, how can it be mitigated. M. Riccio said that erosion will occur if there is a revetment or not. M. Riccio then stated that typically, when there is a natural beach, the wave energy will dissipate up the gradual slope, but a seawall does not allow the energy to dissipate and instead, the wave energy is reflected both upward and downward causing erosion. Eventually, the scour will undermine the toe of the seawall and it will collapse. He stated that the original seawall would not have been permitted, but because it was constructed before the Wetlands Protection Act was enacted, it can be shored up.

M. Riccio then discussed the risk that the middle section of seawall would fail. He stated that it is difficult to determine when the wall will fail, the seawall will become vulnerable when the sand elevation is at or below the footing of the seawall. ACOE ran calculations for 84 different storm events and identified that even a 2 year storm event could expose the footing of the seawall. The Lewis Berger Group conducted beach profile surveys quarterly from 2006-2016 and the data shows that the elevation at the seawall is decreasing over time. C. Krahforst stated that in the Town's 2014 comments, the Town stated that not all of the data seemed to indicate that; surveys were conducted after larger storms and therefore indicate a worse-case scenario and overall

there is a much higher elevation at the wall than what is being presented. M. Riccio stated that the ACOE's coastal engineers stand by the data that was included in the 2014 report. B. Hay stated that in front of the seawall, data shows that the elevation is going down and that is a trend. C. Krahforst stated that averages of data can be misleading and asked if it has been proven statistically. B. Hay stated that a high frequency of points that are below the elevation of needed sand in front of the seawall. M. Riccio stated that the beach profile survey done after Storm Sandy showed that the wall was very vulnerable; if another severe storm had hit the wall, the seawall would likely have failed. He stated that there is seasonal variability, but regardless, it is clear that there is a mode for failure.

Each ACOE feasibility study must be authorized (in this case by Section 103-Continuing Authorities Program), the project must demonstrate a public benefit and positive cost-benefit ratio, the project cannot be used for recreational value, projects require a 65/35% cost share with non-federal sponsor for implementation, and the Federal cost for planning, design, and construction of any one project cannot exceed \$5,000,000. M. Riccio stated that the economic analysis focused on the impact of overtopping and flooding if the wall fails and the impacts that will have on the public (homes, businesses, and infrastructure). M. Riccio stated that construction of the revetment will not stop over wash. The Commission expressed concern about the impact the project will have on the coastal beach, as the proposed project involves reducing the beach 38' in length. M. Riccio stated that the ACOE recommended the proposed project as opposed to the alternatives stated in their analysis because it provides the most value in terms of damages reduced. P. Epstein stated that the chart located on p. 123 of the Woods Hole Group and Louis Berger Group Report, which is found in the NOI, states that the annual damage cost of the proposed project is \$395,000 while every other alternative is less than \$50,000 annually. M. Riccio said that the ACOE did not look at eight alternatives, as shown in the 2010 WHG/LBG Report, but looked at the two different beach profiles and two different revetment profiles. M. Riccio then stated that although the ACOE sees the benefit of doing a beach stabilization project, doing a beach stabilization project far exceeds their funding authority and furthermore, the amount of sand that is needed to do a beach stabilization project is not available. Initial cost of such a project would be \$15,000,000, with re-nourishment costs of \$36,000,000. He stated that the revetment project would be much more stable, is much more affordable, and would not run as much risk of long-term failure. B. Hay stated that in 2006, the preferred alternative was a combination of a revetment and beach nourishment; given the climate conditions today, beach nourishment alone will not provide the protection. S. Connor stated that a problem that the Commission is facing is that the NOI contains so much information and multiple studies that do not specifically respond to the Town's previous comments. The NOI appears to be a series of contradictions about the way the DCR wants to take on protecting, not section by section, but the entire environment and ecology of Nantasket Beach. She stated that it is disconcerting to have this kind of interaction with the DCR, as what happens on this reservation affects all of the Town.

M. Riccio stated that the ACOE cannot focus on recreational needs. By constructing a revetment, the seawall will no longer remain vulnerable. B. Hay stated that the proposed project is part of a phased approach; the first phase being the revetment and the second phase being nourishment. That being said, he mentioned that nourishment will need to occur annually and a large source of sediment is needed initially. C. Krahforst stated that there will be 720,000 cubic yards of low-cost material available from the Piscataqua River in Portsmouth, NH relatively soon. He stated that Coastal Zone Management (CZM) is very interested in joining in talks that should occur between the Town, DCR, and ACOE. C. Krahforst stated that the economic analysis provided in the NOI does not consider low cost beach nourishment materials. M. Riccio responded by stating that an analysis must first be done in order to determine if it is compatible with the material on the beach. He then said that what is proposed is the best thing that the ACOE can do at this time, as it is unknown how much of that sediment source can come to Nantasket. He stated that if the proposed project is constructed, less sand will be needed initially and beach nourishment costs will be more reasonable. B. Hay said the proposed revetment is more similar in design to the southern section than the northern section. The proposed revetment would involve excavating a section of the beach, placing the rock, then covering a portion of that with sand. The Commission asked who would be responsible for maintaining the revetment and replacing any revetment stones that become displaced, to which B. Hay said the DCR is responsible, but there is no guarantee that the DCR will be able to afford/be able to do maintenance.

The Commission then opened the floor to questions. P. Lemnios, Town Manager asked both representatives to describe the relationship between DCR and ACOE. M. Riccio responded by stating that they both shared in the study and cost, so they are partners in that extent. He stated that the DCR initiated the project. P. Lemnios then asked why no one from the DCR was present, to which B. Hay stated that Mike Galvin, Project Manager had a prior conflict. P. Lemnios then cited a 2014 Bourne study, commissioned by the DCR which stated that the

seawall along Nantasket Beach Reservation is not in dire need of repair. M. Riccio said that the wall is currently stable, but due to the trend of erosion, it is at a risk of failure. P. Lemnios then asked if the design of the revetment at a 100 year storm +1', to which M. Riccio said that the revetment was built to withstand a 10 year storm based on wave energy, not flood elevation. P. Lemnios stated that the Guidelines for Design Consultants (2011) by the DCR states that all coastal protection structures must be designed to withstand a 100 year storm + 1'. P. Lemnios then asked if the state agreed to exceed their 35% required cost to cover, if the project could exceed Section 103 limits, to which M. Riccio stated that there is a lot of grey area, but hypothetically, yes, but it may be unlikely that the ACOE would approve such a project. J. Constable, Selectmen then asked if various federal sources could participate in funding the project under Section 103 limits, to which M. Riccio stated that ACOE would be the sole federal funding source of the project; if HUD monies are available, they could be used as a non-federal fund source. P. Lemnios then asked if either representative was aware of any funding or approach to receive funding for beach nourishment, to which B. Hay said that he is not. P. Lemnios said that if no such funding nor plan is in place, then no one should discuss the proposed project as being part of a phased approach that will eventually involve beach nourishment. S. Connor, Chair asked M. Riccio if he would be willing to actively engage with the ACOE regarding using sand from the Piscataqua River, to which M. Riccio said that he cannot personally, but that there are vehicles for which the DCR can work with the ACOE to be in the running for the sand. M. Riccio then stated that the potential of receiving sand from the Piscataqua River would be separate from the proposed project, to which S. Connor acknowledged. P. Lemnios then urged the Commission to request a robust peer review of the project and a MEPA Review. He stated that if the wall is in as critical condition as materials in the NOI suggest, then the DCR should be prohibiting people from going on the beach. P. Lemnios then stated that the Town has already reviewed this proposal and submitted questions/comments that have still not been addressed; a peer review of the project could help answer such questions and concerns. R. Kanet asked about the project and what would happen to the project if a storm greater than a 10 year storm event occurred, to which M. Riccio said anything greater would leave the revetment vulnerable to damage that would need to be repaired. He then stated that if the revetment is not there and a large storm hits, the seawall could fail. R. Kanet then stated that the NOI says that the seawall is too far seaward and expressed concern about having a hard structure 38' further seaward and the potential for future scouring. She then supported P. Lemnios' suggestion for requesting a peer review. R. Kanet then asked that instead of having a revetment, it would be possible to install jersey barriers to stabilize the seawall. B. Hay stated that installing jersey barriers would only exacerbate erosion.

The Commission asked to conduct a second on-site visit and walk the length of the revetment, to which B. Hay and M. Riccio agreed.

- Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;

It was **voted** to:

Continue the Public Hearing to 02/14/2016 at a time to be determined.

10:34 723 Nantasket Ave., Map 17/Lot 169 Opening of a Public Hearing on the **Request for Determination of Applicability** filed by **Cositca Serban** for work described as **construct 10' x 7' deck and replace footings on existing landing and back porch.**

Representatives: none present

Abutters/Others: none present

Documents: "Building Location Plan" – Robert C. Crawford – 12/15/2016

"Proposed Deck Addition and Porch Rebuild" – n.d.

S. Clarren described the project on C. Serban's behalf. The proposed project involves constructing a 70 sq. ft. deck and would replace existing footings on the existing landing and back porch.

- Upon a **motion** by P. Epstein **2nd** by S. Bannen and a **vote** of 6-0;

It was **voted** to:

Close the Public Hearing and **issue** a Negative Determination of Applicability. The Determination of Applicability was **signed**.

Certificate of Compliance Requests

None

New Business

Letter to Governor Baker: the Commission asked to postpone discussion to the next meeting.

10:37 Upon a **motion** by P. Epstein and **2nd** by S. Bannen and a **vote** of 6-0;

It was **voted** to: Adjourn