



21597/2018/Expanded Project/NOI/Public Hearing Comments

PRINCIPALS

March 8, 2019

Theodore A Barten, PE
Margaret B Briggs
Dale T Raczynski, PE
Cindy Schlessinger
Lester B Smith, Jr
Robert D O'Neal, CCM, INCE
Andrew D Magee
Michael D Howard, PWS
Douglas J Kelleher
AJ Jablonowski, PE
Stephen H Slocomb, PE
David E Hewett, LEED AP
Dwight R Dunk, LPD
David C Klinch, PWS, PMP
Maria B Hartnett

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Via Electronic Mail and U.S. Mail

Subject: Response to Comments from the Nantucket Coastal Conservancy dated March 6, 2019 on the Expanded Baxter Road and Sconset Bluff Storm Damage Prevention Project (DEP File No. SE 48-3115)

Dear Commission Members:

On behalf of the Siasconset Beach Preservation Fund ("SBPF"), Epsilon Associates, Inc. ("Epsilon") submits this response to the correspondence submitted by the Nantucket Coastal Conservancy ("Coastal Conservancy") dated 06 March 2019 which provides their opinion on the project assessment prepared by Mr. Greg Berman regarding the Expanded Baxter Road and Sconset Bluff Storm Damage Prevention Project ("Expanded Project"). For the record, we note the Coastal Conservancy correspondence was submitted after the 01 March 2019 deadline established by the Nantucket Conservation Commission ("Commission") for receipt of matters discussed during the 11 February 2019 Public Hearing.

The Coastal Conservancy correspondence dated 06 March 2019 presents no new information and of their correspondence is their interpretation of the Mr. Greg Berman's report, to which SBPF provided a response dated 07 February 2019. Whereas we have provided a thorough response to Mr. Berman's report, we will respond to the threshold issues identify by the Coastal Conservancy on pages 1 and 5. Those are presented in italics typeface and our response is in normal typeface.

The SBPF projects will never be in stasis; the environment is too dynamic.

We agree that coastal environments, including the Siasconset Beach shoreline, is a dynamic shoreline. The project purpose is to stabilize the Coastal Bank to protect existing homes and public infrastructure from erosion in compliance with the state Wetlands Protection Act and local Bylaw Wetlands regulations. The nature of the

978 897 7100

FAX 978 897 0099

3 Mill & Main Place, Suite 250
Maynard, MA 01754
www.epsilonassociates.com

proposed geotube system will require ongoing management to deliver and place sand on the template and extend returns periodically as the adjacent unprotected Coastal Bank continues to retreat.

Extension of the returns will be required repeatedly in a losing battle to prevent end scour.

It is expected that the returns for the geotube system will need to be lengthened periodically as the adjacent unprotected Coastal Bank adjacent to the system naturally erodes over time. The Conservation Commission recently permitted SBPF to do exactly this type of return extension to protect the existing pilot project system, and something similar will be needed going forward for the extension Project as well.

Therefore, the adjacent beaches are suffering and will continue to suffer.

The quarterly shoreline monitoring has demonstrated there is no evidence of accelerated erosion post-geotube construction that exceed historic observations. As for adjacent beaches, see Table 2 in our 04 January 2019 correspondence. That shows that 3 of the 4 Profiles adjacent to the existing geotube system (2 north and 2 south) document accretion from October 2014 to September 2018. At Profile 92 there was about a 10-foot retreat documented from October 2014 to October 2015. Since October 2015 the shoreline has been relatively stable at Profile 92, with 4.4 feet of accretion observed from October 2105 to October 2018, and that correlates to an annualized accretion rate of 1.47 feet per year.

It is not feasible to artificially provide the amount of beach nourishment that will be necessary to prevent the need for such extensions.

The sand mitigation program is provided to supply sediment to the littoral system to compensate for placing the geotube system in front to the Coastal Bank. The purpose of the sand mitigation is not to prevent the need to extend returns.

Extending the project fourfold would accelerate the destruction of the returns and the scouring process because of the greater reduction of natural sand replenishment caused by the longer project.

The extended length of the system is not correlated to increased end scour or damage. As described above returns will need to be managed and extended periodically as the adjacent unprotected Coastal Bank retreats. The proposed sand

mitigation protocol is described in our correspondence dated 02 November 2019 and the volumes associated with the relative to the unprotected Coastal Bank contribution is described in response to item 7 in our 08 March 2019 submitted in response the Applied Coastal Research and Engineering comments.

Whether this project is/will be destructive of the environment in a way that violates legal protections, and ...

Throughout this review process the applicant presented a consistent description of the design and mitigation program, and how the Expanded Project meets the regulations and performance standards for Coastal Bank and Coastal Beach. Compliance with the regulations and performance standards has been presented in Public Hearing presentations and documented in written submittals, e.g. see our response to comments document dated 02 November 2018.

... whether feasible alternatives exist.

Alternatives have been evaluated in theory and practice and those were presented to the Conservation Commission during the 01 October 2018 Public Hearing and in our written response document dated 02 November 2018.

Sincerely,
EPSILON ASSOCIATES, INC.



Dwight R. Dunk, LPD, PWS, BCES
Principal

cc: MassDEP-SERO
J. Posner, SBPF
A. Gasbarro, Nantucket Eng. & Survey
S. Cohen, Cohen & Cohen Law, PC
G. Wood, Ruben and Rudman, LLP
G. Thomson, W.F. Baird & Assoc.
L. Smith, Epsilon
R. Hamilton, Woods Hole Group