

Scope of Work

Baxter Road Engineering Feasibility Assessment, Town of Nantucket, MA

January 29, 2021

The scope of work for the Baxter Road Engineering Feasibility Assessment covers Baxter Road and related public infrastructure from the Sankaty Lighthouse to Butterfly Lane in Siasconset, including the adjacent private parcels.

A summary of work for each project task included in the scope of work is provided below.

Task 1 – Review of existing information

Task 1 involves a review of existing conditions and information to inform analysis and community engagement steps. This includes the following:

- Previous planning studies
- Prior bluff coastal analysis and monitoring reports
- Prior Conservation Commission submittals and findings

Task 1 will also include an assessment of the impacts to the tax base for one selected alternative, as listed under Task 3.

Assumptions: Nantucket staff will provide the relevant previous reports and documentation. For the tax base impacts analysis, Nantucket will provide assessors data by parcel in GIS and spreadsheet format for use in analysis.

Task 2 – Stakeholder engagement

The goal of Task 2 is to reach consensus on:

- acceptable risk
- consequences of alternatives and consequences of inaction
- the path forward based on technically feasible alternatives
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Stakeholders we will work with include the following:

- Sconset Beach Preservation Fund
- Nantucket Coastal Conservancy
- Nantucket Land Council
- Sconset Trust
- Select Board
- Conservation Commission
- Sankaty Golf Club
- Sconset Residence Association

- Town Staff
- Quidnet Squam Association
- Coastal Resilience Advisory Committee

Arcadis will lead and facilitate all stakeholder engagement meetings. The meetings include in the scope are as follows:

- Up to three 1:1 or Group Interviews
- Three Focus Group meetings x 2 for a total of six meetings. Currently it is envisioned that we will split the above list of stakeholders into three groups. We will hold two meetings with each group to reach goals of consensus building.
- Two Community or at large Meetings
- Attendance at up to three Board or Committee meetings to provide updates on materials presented/findings from the other meetings.
- An additional item included in the public engagement is an overview of information on assessments/betterments as a funding alternative. This will show cases throughout the country and specific to Mass General Law. It does not include actual calculations of betterment fees for the work of this project.

Assumptions: Town will provide staffing support and attend all meetings. Nantucket will coordinate, select attendees, provide announcements/advertisements/postings of materials for all Task 2 meetings, including any requirements under Massachusetts Open Meeting Law. All meetings are assumed to be virtual.

Task 3 – Alternatives / Engineering Feasibility Analysis

This high-level alternatives / feasibility assessment will focus on the following considerations for up to five alternatives:

Definition of purpose – what is the alternative intended to do?

Service life – for what period of time would the alternative be effective in preventing significant bluff erosion.

Initial construction cost – order of magnitude estimates for comparison between alternatives.

Operations and Maintenance – costs and other considerations; order of magnitude to compare between alternatives.

Constructability – identify likely issues which could impact the ability to implement the alternative.

Other feasibility issues – will vary with alternative but items may include supply (for sand); need for land acquisition; access; emergency services; adjacent impacts; etc.

The team will consider up to five alternatives within the framework outlined above. These alternatives include:

- Bluff stabilization
- Nourishment – sand replacement, plantings
- Retreat /Relocate road
- No Action
- Homeowner/Community Outreach on SOP (Standards of Practice) & BMP (Best Management Practices)

The alternative analysis will be presented in a narrative format with limited quantitative values as appropriate. A matrix summary will also be provided to support outreach activities. The matrix would be suitable for ranking and scoring, but that work would be completed as part of other tasks.

No additional modeling will be completed at this time. Note we will need to utilize the modeling results being provided from the ongoing Coastal Resilience Plan. Service life and feasibility assessments will be based on previous studies, ongoing work, available published standards, and expert opinion. Engineering analysis will be limited during this phase to only as needed to supplement existing data sources in order to develop construction cost estimates, O&M estimates or make high-level feasibility assessments.

Task 4 – Summary of Findings & Recommendations

Prepare a memorandum summarizing the alternatives and concept plan for moving forward based on analysis and community engagement. Provide a prioritized action plan outline for adaptation over time based on selected alternative. Includes overview of near-term next steps and longer-term critical milestones/decision points the Town can use to focus investment based on changing conditions.

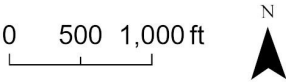


Buildings in Coastal
Erosion Hazard Zone

- Outside
- 2030
- 2050
- 2100

DRAFT

Scale: 1:9,000



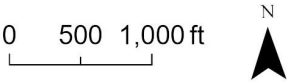


Roads in Coastal
Erosion Hazard Zone

- 2030
- 2050
- 2100

DRAFT

Scale: 1:9,000





Baxter Road Engineering Feasibility Assessment

	2021							
TASKS	February	March	April	May	June	July	August	September
Notice to Proceed / Kickoff	NTP Kickoff							
Task 1 – Review of Existing Information								
Task 2 – Stakeholder Engagement *								
Task 3 – Alternatives and Engineering Feasibility Analysis								
Task 4 – Final Memorandum								

★ Significant Deliverable

● Meetings

* Meetings assumed to be virtual



Person Hour and Fee Schedule
for
Baxter Rd Engineering Feasibility
Town of Nantucket, MA



Task	Task Description	PD / QA/QC/ SE II	PM/SE	E	TS/A	C	Total Hours	Subtotals	Other Direct Costs	Totals
100	Project Kickoff, Initial Information Gathering	38.00	16.00	20.00	0.00	4.00	78.00	\$ 16,971	\$ -	\$ 16,971
200	Community and Stakeholder Engagement	40.00	150.00	60.00	0.00	60.00	310.00	\$ 52,490	\$ 800	\$ 53,290
300	Methodology, Environment, and Identifying Coastal Flood and Erosion Hazards	55.00	116.00	88.00	124.00	0.00	383.00	\$ 64,600	\$ 400	\$ 65,000
400	Summary of Findings & Recommendations	24.00	40.00	30.00	0.00	40.00	134.00	\$ 22,417	\$ 300	\$ 22,717
Total Project Costs		157	322	198	124	104	905	\$ 156,478	\$ 1,500	\$ 157,978

Notes:

1) PD: Project Director / QA/QC: Quality Assurance / Quality Control (Technical Expert) / SE II: Staff Engineer II; PM: Project Manager; SE: Staff Engineer; E: Engineer; TS/A: Technical Support / Admin, Project Assistant; C: Clerical