Town Administrator Report
June 12, 2018
Between percent expended and percent of yea

The following is a summary of the major activities of the Office of the Town Administrator for the previous week.

1. **Financial Update**–Attached please find copies of our summary revenue and expenditure reports for the period through May 30, 2018, along with the report of Local Estimated Receipts (LER) collected by month for both fiscal year 2017 and fiscal year 2018 to date. As we enter the final month of the fiscal year we continue our tight fiscal situation in the appropriation accounts, with 92.2 percent of budgets spent compared to 91.6 percent of the year completed. It's expected that the difference between the percent of budgets expended and the percent of year completed is shrinking the further through the fiscal year we get, and we forecast final expenditure amounts to be just shy of the 100 percent mark with some turnback at the end of the year. Although some individual accounts will require assistance through the year-end transfer process. The revenue side continues to create positive overall performance for the Town, with 105.1 percent of our annual budgeted revenues collected through the end of May. Some of these collections in excess of budget will combine with left-over appropriations to create a positive fund balance for the Town at year's end. Drilling into our local estimated receipts (LER), non-property tax local receipt collections, May collections are showing a slight lag behind May collections from last year, bringing the total collections for the year about even to last year, with fiscal year 2018 trailing 2017 by approximately $31,000. More than likely, and we have seen this before, some May collections are yet to be booked and will show up next month as adjustments to May. Our worst-case scenario is that we are about even with last year's great collections, which is not bad. However, my instinct says that we will wind up just ahead of last year. We will see how that works out, but in any event, we have already collected more than our required budget for the year.

2. **School Roof Project Update** – On Thursday May 31 I attended the design kickoff meeting for the Oak Bluffs School Roof and HVAC design project. The firm of David Sisson Architecture who performed the feasibility study has been tapped by the School Department to complete the design for the construction portion of the improvements. Mr. Sisson is completing his engineering analysis of the building and based on the information developed during the feasibility study he feels that the Town may avoid any structural repairs to the roof area of the building, which will save considerable time and money in the project overall. Given the estimated $5 million construction cost for the roof, I don't want to ask what it would cost if we needed structural repairs. The project is on a time line to complete the design work prior to a projected fall, 2018 special Town Meeting. One item that has not been decided is the absolute best time of the year to put the project out to bid. Some feedback from contractors says that a December/January bid timetable may be when contractors are the most anxious to bid, but more work is needed by the design team to verify this type of information. The project also includes replacing some of the outdated roof-mounted HVAC equipment to avoid a second project that would perforate the new roof. Throughout this project I have greatly enjoyed working

with School officials, especially our Principal, Megan Farrell, for the betterment of the Town, and I will continue to work to help the school while also strengthening school-Town relationships and problem-solving.

3. **Massworks Infrastructure Grant – Application Round 2 Update.** –On Monday, June 4 I participated in a conference call with Alice Boyd of Baily, Boyd and Associates, Craig Miller of the Waterfield Design Group and Chairman of the Streetscape Committee, Selectman Brian Packish to begin working on our second application under DHCD's Massworks Program to make critical repairs and updates to our downtown public infrastructure. Last year we applied for approximately $1 million for sidewalk replacements and other improvements on Circuit Ave and we finished right out of the money. In our post-application interview process, DHCD officials assured us that we had an excellent application that scored high in all categories, except that we were beat by projects that were in emergency conditions with threatened road and bridge closures. We have been encouraged to reapply, and we hope to make the best of our second chance. With our new mixed-use zoning in the downtown we feel that we can score even higher through the creation of more affordable housing opportunities, and we will accentuate this in the new application. In any event we will be as aggressive as we possibly can be by maximizing our use of grant funding to meet major needs of the Town. I'm proud of the planning process the Town used to develop consensus around these improvements, and I remain hopeful that we can implement the plan without going directly to local taxpayers.

4. **Green Communities Status and Grant Funding-**The current administration has placed a premium on providing incentives to local communities who achieve Green Community status according to the State's guidelines. In addition to developing an action plan to limit our use of energy in ways that will save a tremendous amount of money for the Town, grant programs are available that pump hundreds of thousand of dollars into green communities to implement energy saving strategies. In order to become eligible to receive this funding I have recently applied for and been awarded a grant in conjunction with the Cape and Vineyard Electrical Cooperative to receive technical assistance in developing the requirements for becoming a green community. We are working now to put together the data and analysis necessary to support our application. The major piece of lifting to become a green community is to adopt the stretch building code. In recent years the base code and the stretch code have become very close, to the point where 237 of the 351 cities and towns in Mass have adopted it. Here on the island, we would be joining Tisbury and West Tisbury as stretch code communities.

5. **Army Corps. of Engineers Compliance Issues.** – As you know, earlier this year we received correspondence from the ACOE that the Town required additional permits for both the harbor and the North Bluff to be in strict compliance with all their regulations. We have had the engineering firms on each of those projects work out the details of the additional permitting and developed agreements with the Corps. to do an after-the-fact filing to ensure that all our facilities are properly registered. Work has already started to complete the filings which will be completed this summer.

FOR 2018 11

JOURNAL DETAIL 2018 1 TO 2018 11

	ORIGINAL APPROP	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET	% USED
01 GENERAL FUND							
122 BOARD OF SELECTMEN	460,887.07	469,010.81	482,396.09	18,713.04	0.00	-13,385.28	102.9%
131 FINANCE COMMITTEE	6,155.00	6,155.00	4,721.20	0.00	0.00	1,433.80	76.7%
132 FIN COMM RESERVE FD.	56,500.00	35,710.00	0.00	0.00	0.00	35,710.00	.0%
135 TOWN ACCOUNTANT	130,392.00	87,720.00	62,976.88	6,531.92	0.00	24,743.12	71.8%
141 ASSESSORS	122,553.04	156,566.47	140,503.06	10,699.60	0.00	16,063.41	89.7%
144 TREASURER(FIXED P/R COST)	4,014,799.00	4,014,799.00	3,890,498.81	256,081.02	0.00	124,300.19	96.9%
145 TOWN TREASURER	145,516.14	149,144.28	133,833.72	11,248.14	0.00	15,310.56	89.7%
146 TAX COLLECTOR	137,102.00	141,357.60	123,290.54	10,071.01	0.00	18,067.06	87.2%
155 INFORMATION TECHNOLOGY	340,237.00	346,842.78	332,658.36	31,434.90	0.00	14,184.42	95.9%
161 TOWN CLERK	131,744.00	137,442.87	117,669.99	10,539.16	0.00	19,772.88	85.6%
163 BOARD OF REGISTRARS	29,656.00	29,656.00	16,795.50	1,013.72	0.00	12,860.50	56.6%
171 CONSERVATION COMMISSION	102,808.00	106,896.08	88,295.02	8,741.02	0.00	18,601.06	82.6%
175 PLANNING BOARD	43,275.00	43,275.00	24,182.43	3,228.69	0.00	19,092.57	55.9%
199 UNCLASSIFIED (SELECTMEN)	1,279,845.00	1,182,845.00	1,329,505.96	127,679.10	0.00	-146,660.96	112.4%
210 POLICE DEPARTMENT	2,301,161.70	2,453,252.36	2,277,546.26	135,340.23	0.00	175,706.10	92.8%
220 FIRE DEPARTMENT	287,900.00	294,158.87	186,127.54	8,848.30	0.00	108,031.33	63.3%
231 AMBULANCE SERVICE	337,424.75	337,424.75	296,067.39	25,585.46	0.00	41,357.36	87.7%
241 BUILDING INSPECTOR	242,330.00	278,166.72	253,083.53	24,277.01	0.00	25,083.19	91.0%
249 SHELLFISH	193,652.00	195,622.24	172,751.11	21,251.07	0.00	22,871.13	88.3%
291 EMERGENCY MANAGEMENT	21,700.00	21,700.00	17,632.76	0.00	0.00	4,067.24	81.3%

FOR 2018 11

JOURNAL DETAIL 2018 1 TO 2018 11

	ORIGINAL APPROP	REVISED BUDGET	YTD EXPENDED	MTD EXPENDED	ENCUMBRANCES	AVAILABLE BUDGET	% USED
296 MARINA MANAGER	257,048.80	257,048.80	194,425.22	13,818.95	0.00	62,623.58	75.6%
300 OAK BLUFFS SCHOOL	7,772,626.00	7,799,965.92	5,898,559.22	542,056.60	0.00	1,901,406.70	75.6%
301 MARTHA'S VINEYARD REG HS	4,646,813.00	4,646,813.31	4,646,813.31	0.00	0.00	0.00	100.0%
421 HIGHWAY-ADMINISTRATION	1,598,154.00	1,609,992.99	1,393,424.95	103,848.12	0.00	216,568.04	86.5%
519 BOARD OF HEALTH	192,953.24	192,953.24	142,606.05	13,313.81	0.00	50,347.19	73.9%
541 COUNCIL ON AGING	215,456.91	222,711.58	208,118.78	56,875.64	0.00	14,592.80	93.4%
543 VETERANS' SERVICES	61,000.00	68,977.44	62,866.48	4,691.20	0.00	6,110.96	91.1%
610 LIBRARY	501,424.36	512,250.82	443,731.01	34,766.62	0.00	68,519.81	86.6%
612 ARTS COUNCIL	1,500.00	1,500.00	1,500.00	0.00	0.00	0.00	100.0%
630 PARKS AND RECREATION	166,253.40	166,253.40	139,723.73	271.00	0.00	26,529.67	84.0%
710 MATURING DEBT-PRINCIPAL	2,259,719.67	2,259,719.67	1,900,715.62	0.00	0.00	359,004.05	84.1%
720 MATURING BAN-PRINCIPAL	0.00	0.00	120,000.00	120,000.00	0.00	-120,000.00	100.0%
750 MATURING DEBT-INTEREST	537,009.87	545,226.19	493,419.66	15,421.25	0.00	51,806.53	90.5%
760 MATURING BAN-INTEREST	0.00	0.00	1,268.00	1,268.00	0.00	-1,268.00	100.0%
840 STATE/COUNTY ASSESSMENTS	0.00	0.00	922,062.20	0.00	0.00	-922,062.20	100.0%
TOTAL GENERAL FUND	28,595,596.95	28,771,159.19	26,519,770.38	1,617,614.58	0.00	2,251,388.81	92.2%
GRAND TOTAL	28,595,596.95	28,771,159.19	26,519,770.38	1,617,614.58	0.00	2,251,388.81	92.2%

** END OF REPORT - Generated by Deborah Potter **

FOR 2018 11

JOURNAL DETAIL 2018 1 TO 2018 11

	ORIGINAL APPROP	REVISED BUDGET	YTD ACTUAL	MTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	% USED
01 GENERAL FUND							
01 MOTOR VEH EXCISE	-573,000.00	-573,000.00	-854,443.67	-59,270.89	0.00	281,443.67	149.1%
02 OTHER EXCISE	-536,900.00	-536,900.00	-862,880.06	-30.00	0.00	325,980.06	160.7%
03 PENALTIES & INTEREST	-157,000.00	-157,000.00	-295,992.68	-25,153.86	0.00	138,992.68	188.5%
04 PILOT	-10,400.00	-10,400.00	-14,338.99	-14,338.99	0.00	3,938.99	137.9%
08 CHGS TRASH DISP	-160,000.00	-160,000.00	-166,355.38	-19,350.38	0.00	6,355.38	104.0%
10 FEES	-88,000.00	-88,000.00	-100,258.74	-6,601.00	0.00	12,258.74	113.9%
11 RENTALS	-85,000.00	-85,000.00	-54,635.00	-3,500.00	0.00	-30,365.00	64.3%
13 DEPT LIBRARY	-8,000.00	-8,000.00	-8,773.27	-235.99	0.00	773.27	109.7%
16 OTHER DEPTL	-155,000.00	-155,000.00	-178,022.23	-15,507.01	0.00	23,022.23	114.9%
17 LIC & PERMITS	-260,000.00	-260,000.00	-394,152.33	-21,380.25	0.00	134,152.33	151.6%
19 FINES & FORFEIT	-15,000.00	-15,000.00	-20,563.50	-838.50	0.00	5,563.50	137.1%
20 INVMT INCOME	-13,000.00	-13,000.00	-13,437.80	0.00	0.00	437.80	103.4%
21 MISC RECURRING	-720,000.00	-720,000.00	-825,223.76	-2,409.29	0.00	105,223.76	114.6%
30 CHERRY SHEET	-1,242,045.00	-1,242,045.00	-1,078,765.00	0.00	0.00	-163,280.00	86.9%
41 PERSONAL PROPERTY	-515,618.63	-515,618.63	-437,500.93	-13,963.00	0.00	-78,117.70	84.8%
42 REAL ESTATE	-21,152,964.27	-21,152,964.27	-22,674,028.45	-1,249,150.46	0.00	1,521,064.18	107.2%
44 LIENS & OTHER TAXES	0.00	0.00	-232,505.96	-2,021.71	0.00	232,505.96	100.0%
49 TRANSFERS IN/OFS	-1,154,840.48	-1,154,840.48	0.00	0.00	0.00	-1,154,840.48	.0%
TOTAL GENERAL FUND	-26,846,768.38	-26,846,768.38	-28,211,877.75	-1,433,751.33	0.00	1,365,109.37	105.1%
TOTAL REVENUES	-26,846,768.38	-26,846,768.38	-28,211,877.75	-1,433,751.33	0.00	1,365,109.37	
GRAND TOTAL	-26,846,768.38	-26,846,768.38	-28,211,877.75	-1,433,751.33	0.00	1,365,109.37	105.1%

Preliminary Fiscal Year 2018 Local Estimated Receipts By Monthly Collections

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	YTD
MV Excise	$ 22,719	$ 52,243	$ 11,129	$ 28,678	$ 12,623	$ 21,667	$ 10,548	$ 356,077	$ 189,012	$ 90,479	$ 59,271	$ -	854,444
Other Excise	$ 2	$ 145	$ 406,590	$ 3,183	$ 2,797	$ 389,730	$ 496	$ 817	$ 59,090	$ -	$ 30	$ -	862,880
Penalties and Interest	$ 21,673	$ 21,690	$ 41,663	$ 21,575	$ 21,878	$ 18,705	$ 27,666	$ 44,319	$ 38,443	$ 13,220	$ 25,154	$ -	295,985
Payments in Lieu of Taxes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,339	$ -	14,339
Charges for Services-Trash	$ 32,535	$ 28,710	$ 16,905	$ 9,610	$ 14,595	$ 10,170	$ 7,955	$ 9,525	$ 8,315	$ 8,685	$ 19,350	$ -	166,355
Fees	$ 5,058	$ 9,034	$ 7,012	$ 6,365	$ 9,748	$ 9,190	$ 10,642	$ 12,106	$ 5,269	$ 18,585	$ 6,601	$ -	99,609
Rentals	$ 22,500	$ 11,185	$ 5,000	$ 1,250	$ 1,500	$ 250	$ 600	$ 3,850	$ 1,750	$ 3,250	$ 3,500	$ -	54,635
Dept. Revenue-School	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
Dept. Revenue-Library	$ 1,558	$ 1,684	$ 1,131	$ 800	$ 318	$ 1,115	$ 593	$ 228	$ 428	$ 684	$ 236	$ -	8,773
Other Dept. Revenue	$ 12,313	$ 9,382	$ 26,489	$ 50,863	$ 7,211	$ 13,256	$ 14,855	$ 9,725	$ 5,145	$ 13,332	$ 15,507	$ -	178,077
Licenses and Permits	$ 19,138	$ 23,978	$ 17,278	$ 27,228	$ 22,998	$ 23,453	$ 68,055	$ 36,397	$ 24,581	$ 109,016	$ 21,380	$ -	393,502
Fines and Forfeits	$ 640	$ 3,490	$ 4,088	$ 1,713	$ 1,833	$ 945	$ 2,083	$ 2,933	$ 863	$ 1,140	$ 839	$ -	20,564
Investment Income	$ 1,332	$ 1,601	$ 1,184	$ 1,062	$ 1,230	$ 1,121	$ 1,282	$ 1,497	$ 1,563	$ -	$ -	$ -	11,874
Other Miscellaneous-Recurring	$ 332,081	$ 337,252	$ 60,889	$ 10,816	$ 2,552	$ 233	$ -	$ -	$ 11,911	$ 14,192	$ 2,409	$ -	772,336
Miscellaneous-Non Recurring	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
													-
Total	$ 471,548	$ 500,392	$ 599,358	$ 163,144	$ 99,281	$ 489,835	$ 144,774	$ 477,473	$ 346,369	$ 272,582	$ 168,616	$ -	3,733,372
Cummulative Monthly Totals	$ 471,548	$ 971,940	$ 1,571,298	$ 1,734,441	$ 1,833,723	$ 2,323,558	$ 2,468,332	$ 2,945,805	$ 3,292,174	$ 3,564,756	$ 3,733,372	$ 3,733,372	

Preliminary Fiscal Year 2017 Local Estimated Receipts By Monthly Collections

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	YTD
MV Excise	$ 36,487	$ 39,946	$ 20,286	$ 19,848	$ 7,720	$ 17,235	$ 21,684	$ 442,964	$ 101,462	$ 76,803	$ 20,899	$ 84,689	$ 890,023
Other Excise	$ 1,863	$ 387	$ 406,361	$ 496	$ 2,791	$ 352,652	$ 1,479	$ 1,050	$ 48,018	$ 195	$ 644	$ 62,471	$ 878,408
Penalties and Interest	$ 23,594	$ 14,955	$ 22,040	$ 16,004	$ 17,015	$ 14,325	$ 36,799	$ 30,298	$ 25,097	$ 14,434	$ 24,643	$ 33,634	$ 272,838
Payments in Lieu of Taxes	$ 832	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,536	$ 832	$ 16,201
Charges for Services-Trash	$ 32,645	$ 34,550	$ 17,325	$ 12,375	$ 14,495	$ 8,530	$ 8,390	$ 1,810	$ 13,760	$ 9,890	$ 15,365	$ 36,220	$ 205,355
Fees	$ 7,140	$ 9,869	$ 9,692	$ 10,569	$ 8,108	$ 12,701	$ 8,713	$ 10,739	$ 12,290	$ 14,589	$ 12,250	$ 9,776	$ 126,436
Rentals	$ 9,175	$ 12,475	$ 3,500	$ 2,500	$ 256	$ 2,750	$ 1,750	$ 250	$ 5,500	$ 1,500	$ 5,750	$ 9,151	$ 54,557
Dept. Revenue-School	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dept. Revenue-Library	$ 1,467	$ 1,652	$ 1,379	$ 422	$ 1,327	$ 762	$ 449	$ 665	$ 614	$ 778	$ 347	$ 1,362	$ 11,223
Other Dept. Revenue	$ 15,710	$ 10,205	$ 12,601	$ 21,406	$ 19,388	$ 3,922	$ 5,374	$ 3,316	$ 15,038	$ 158,181	$ 9,034	$ (70,797)	$ 203,377
Licenses and Permits	$ 23,215	$ 33,037	$ 26,155	$ 26,270	$ 23,517	$ 30,452	$ 72,039	$ 25,624	$ 94,551	$ 29,420	$ 31,321	$ 51,396	$ 466,996
Fines and Forfeits	$ -		$ 5,258	$ 1,525	$ 1,550	$ 1,310	$ 638	$ 1,015	$ 1,668	$ 1,133	$ 2,190	$ 3,008	$ 19,293
Investment Income	$ 1,525	$ 1,843	$ 1,147	$ 967	$ 1,203	$ 1,079	$ 1,127	$ 1,374	$ 1,555	$ 1,397	$ 1,884	$ 1,629	$ 16,730
Other Miscellaneous-Recurring	$ 307,449	$ 219,668	$ 118,738	$ 5,369	$ (1,348)	$ (7,375)	$ 2,355	$ 51,432	$ 20,510	$ 7,937	$ 101,917	$ 115,453	$ 942,106
Miscellaneous-Non Recurring	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ -
Total	$ 461,102	$ 378,587	$ 644,482	$ 117,751	$ 96,022	$ 438,343	$ 160,796	$ 570,536	$ 340,064	$ 316,256	$ 240,780	$ 338,823	$ 4,103,542
Cummulative Monthly Totals	$ 461,102	$ 839,689	$ 1,484,171	$ 1,601,922	$ 1,697,944	$ 2,136,287	$ 2,297,083	$ 2,867,619	$ 3,207,682	$ 3,523,939	$ 3,764,718	$ 4,103,542	

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DAVID SISSON
ARCHITECTURE

ROOF & HVAC REPLACEMENT/UPGRADES FEASIBILITY STUDY

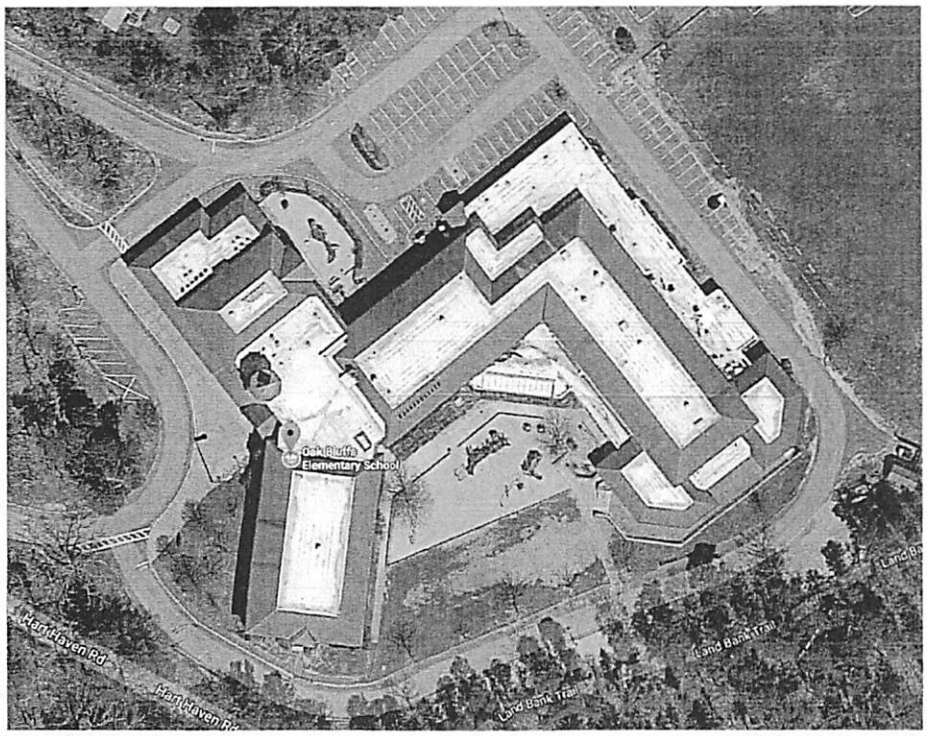
December 22, 2017

OAK BLUFFS ELEMENTARY SCHOOL
50 Tradewinds Road
Oak Bluffs, MA 02557

Roof replacement
David Sisson Architecture PC
238 5th St.
Providence RI 02906

HVAC Replacement & Upgrades
Creative Environment Corp.
195 Frances Ave Bldg #2
Cranston, RI 02910

David Sisson Architecture PC project number: 16111



Roof and HVAC replacement / upgrades feasibility study
OAK BLUFFS ELEMENTARY SCHOOL
50 Tradewinds Road
Oak Bluffs, MA 02557

David Sisson Architecture PC project number: 16111

Executive Summary-roofing

Oak Bluffs Elementary School was designed in 1992 and constructed in 1993. This school is home to grades K through 5, and serves approximately 400 students. It is a two story building, with some portions being "double height" such as the gym and cafeteria. The design of this school is sympathetic to the vernacular design found on Martha's Vineyard, and contains many "post modern" design elements which were popular in the late 1980s and early 1990s.

From the ground level, the school appears to be roofed mostly with sloped residential style asphalt shingles. In fact, the design cleverly hides a large flat roof – which is almost invisible from the ground level. The combination of these two roof systems – sloped asphalt shingle and low slope membrane – form the entire roof of the building.

Completing this roof system is a combination of different waterproofing details, the majority of which are constructed from lead-coated copper.

This roofing system is now approximately 23 years old. The building is experiencing many active leaks throughout the school, including active leaks within the classrooms. These leaks are damaging the interior building materials and will eventually damage the structure of the building.

The low slope roofing membrane was originally designed with a 10 year warranty. This membrane roof has failed. The sloped asphalt shingles were designed for a 30 year warranty, but are clearly approaching the end of their lives.

The lead coated copper does not appear to have failed, but has surface corrosion and pitting typical of aged lead coated copper in a coastal environment. This patina, while not an issue from a performance standpoint, has created an unattractive look to the exterior of the school. Some of these metal details have physical damage, especially the gutters.
There are several areas where the original design seems poorly thought through in terms of roofing and waterproofing details. Some of these locations channel and focus water to a single location, which creates a higher chance of leaks and damage. Other locations were constructed differently or incorrectly from what was shown on the original drawings.

Since the roof was constructed, there have been improvements in the requirements for rooftop insulation. When the roof was constructed, it was designed to an average R-value of 20. Current energy codes require a minimum R-value of 30.

This document will outline improvements – where possible – in the design of the entire roofing and insulation system. It will also offer alternatives – where possible – along with opinions of probable costs.

Executive Summary-HVAC

Executive Summary-HVAC

The HVAC equipment and building controls currently serving the Oak Bluffs Elementary School were installed as part of the original building construction, and experienced minimal replacement and/or upgrade. The level of wear and degradation observed on the equipment is commensurate with the period of time that it has been in service. A minimum though not preferred level of level of scheduled maintenance appears to have been performed on the equipment. Maintenance of the building control system is severely deficient. A comprehensive recommissioning of all HVAC equipment and building controls, with an increase in scheduled maintenance (relative to current levels) should ensure that the majority of the HVAC equipment remains in service for the duration of original expected equipment lifecycle.

The exhaustive nature of the required roof repair and replacement provides justification to replace and/or upgrade all roof-mounted equipment concurrently. The replacement of this equipment does represent a higher immediate cost, as compared to the temporary removal and reinstallation of the same equipment, but the expected replacement of this equipment following individual failure as it comes to the end of expected life will generate a greater overall cost for the operation and maintenance of the school.

In addition, the scheduled phase-out of R-22 refrigerants and the outdated technology of the existing building control system will pose an annually increasing financial burden to the school in order to maintain these systems.

The operating cost of the school could also be reduced by replacing the existing boiler plant. The condition of the existing boilers, and the forecasted costs for heating oil do not provide economic justification for a retrofit with a high performance burner package, as the ROI period for the burner package would be longer than the expected remaining life of the primary boiler components. The replacement of the boiler plant is not required at this time, though the expected requirement to replace the system within 10 years may provide justification for inclusion in near term building renovations.

The replacement of all roof-mounted HVAC equipment is an essential component of the overall roof replacement. The upgrade and recommissioning of the building's mechanical control system is a critical issue in order to maintain building indoor air quality for students, faculty and

staff that should be addressed concurrently with the replacement of the roofing system, but it is functionally independent from the replacement of the roof.

Project Narrative-Roof Replacement

The scope of construction includes removal and replacement of the existing roofing system and associated HVAC rooftop equipment. Options for design of roofing and HVAC equipment will be outlined in this document and in the attached Opinion of Probably Costs for both base and alternate designs.

David Sisson Architecture PC (DS Arch) and Creative Environment Corp (CEC) conducted on-site visits on 6-20-2017 and 8-31-17. These field visits did not include destructive testing of the roofing, but we have also included photographs (see photos LL and MM) from a previous destructive test performed by the Oak Bluffs Elementary School. We additionally reviewed the original 1992 Construction Drawings and Specifications as well as the marked up Construction Drawings that appear to have been used during construction of the building. These drawings and specifications were valuable for understanding the original design of the building and identifying conditions that were not built according to the original design or were problematic from the beginning.

On October 3, 2017 IR Analyzers visited and performed infrared testing on the flat roofed portions of the school. This testing can determine if the layers below the flat membrane roof are wet. This testing revealed that approximately 5% of the insulation is wet and needs to be fully replaced. Full results of this testing can be seen in Appendix D.

There are two distinct roofing systems present on the building: (RS-1) "flat" PVC roofing and (RS-2) sloped asphalt shingles. The flat roof is comprised of 48 mil white PVC membrane (class "A" fire rated), reinforced with prepunched metal bar fasteners which fasten to the roof deck for wind uplift resistance. This membrane is fully adhered to a "nailboard" insulation, which is comprised of a 7/16" layer of OSB (wood) adhered to approximately 3" of polyisocyanurate foam insulation. This nailboard insulation lays over an additional layer of tapered insulation, which provides a 1/8" per 12" slope to the roof. The tapered insulation lays over a vapor barrier. Below the vapor barrier is a layer of of 5/8" thick "Dens-Deck type X" gypsum panel, which provides a fire rating to the roof. This layer of gypsum panel is adhered to a 1-1/2" thick steel roof deck, which forms the structural base to the roofing system. This roof system was originally designed to have a 10 year warranty. The roof is now 23 years old and has begun to fail.

The design for the insulation was for an average R value of 20.

(RS-2) The shingle roofing system is constructed in the same manner as RS-1, except the membrane roofing is replaced with asphalt shingles over a layer of 15 pound felt underlayment. Additionally, the layer of tapered insulation is not present in the RS-2 shingled roofing system,

because the structural deck is sloped at 30 degrees (approximately 7" in 12" of slope) which provides positive drainage to the shingles. This roofing system was designed for a warranty of 30 years. It is now 23 years old and is exhibiting signs of failure.

Failures of both roof systems (both from age and design) will be discussed later in this document.

Completing the design of the roofing system is a series of formed metal waterproofing details. The majority of these details are constructed from lead coated copper. At the transition from RS-1 to RS-2, there is a metal detail that appears to be constructed from coil coated aluminum. Both of these materials are excellent choices for longevity in a coastal environment such as Martha's Vineyard, however, the lead coated copper has an unsightly appearance as it has oxidized significantly. This oxidation is a normal process for this environment and does not indicate a failure of the material, but it does not create an attractive look to the school, particularly where it's easily visible from the ground level.

There is one large skylight – over the library – on this roof. This skylight is also approaching the end of its life.

Over the green house, there is a "Kalwal" roofing system. This roofing system is designed to let light into the greenhouse. Although no leaks were reported from this roof, it is also reaching the end of its life.

On top of the flat roof are many HVAC components. These components will need to be removed in order to facilitate the replacement of the flat roof. Replacement or repair of these components will be discussed in the project narrative for HVAC.

The entire roof drains to an underground (piped) drainage system and these pipes run to approximately 11 leaching basins distributed around the site (see appendix C). These pipes should be inspected (with a camera), cleaned out, and repaired (if necessary). Additionally, the leaching basins should be opened and cleaned out. These leaching basins allow rainwater to percolate into the site.

A rainwater collection system was considered for this project – to allow the rainwater to be reused for site irrigation. Generally, these systems are not cost effective for irrigation water, and removal of the leaching basins means that less groundwater is entering the site, removing water from deep rooted plants. Ultimately, this system was not considered for this project.

A rooftop mounted solar system is being considered for this project. It appears that a system of approximately 150 to 170 KW solar system could be mounted to either the flat or sloped roofs, or both. Design of this system is still in development, and will be attached as an addendum to this report. If this system is installed to the school, its construction would need to occur after the roof is replaced.

Code Analysis & proposed replacements-roofing

Applicable Codes:

780 CMR, Massachusetts State Building Code:

- MA State Building Code 9TH Edition (International Building Code 2015 w/MA Amendments) (Referred to as "IBC 2015")
- Existing Building Code of Massachusetts (2015 International Existing Building Code (IEBC) with MA chapter 34 amendments) (Referred to as "IEBC 2015")
- 2015 International Energy Conservation Code (IECC) w/MA Amendments (780 CMR AA) (Referred to as "IECC 2015")

Use Group: Educational E

Year Built: 1992/93

Building Construction Classification:

1992 Massachusetts State Building Code 5th Edition Type 2C Noncombustible / Unprotected equipped throughout by a fully automatic Fire Suppression System based on 780 CMR Massachusetts State Building Code 5th Edition.

Building Construction Classification: 2015 IBC Equivalent: Type 2B

Fire Rating of Roof Assembly: Non-rated (NOTE: 780 CMR 5th Ed required a thermal barrier below foam insulation in 2002.2, hence the requirement for 5/8" type X densdeck below the insulation)

IEBC 2015: Level 1 and 2 Alterations per Chapters 6, 7, and 8 (removal & replacement of existing materials and reconfiguration)

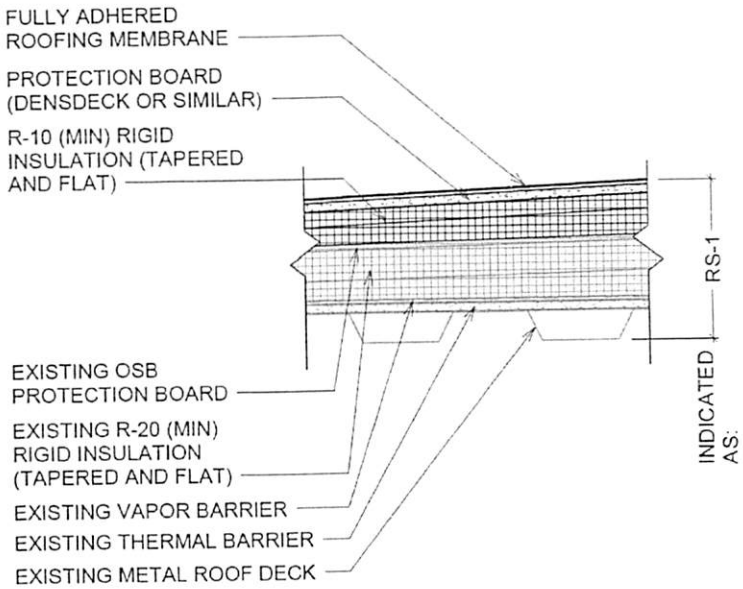
IEBC 2015 section 503: this project qualifies as a "Level 1 Alteration" because the proposed work (roof replacement) which allows replacement with "like or same materials". This work will need to conform with the requirements in IEBC 2015 chapters 6 (repairs) & 7 (Level 1 alterations). Because the project proposes reconfiguring a portion of the roof, the project also qualifies as a "Level 2 Alteration" per section 504. This requires that the project additionally conform with chapter 8 (Level 2 alterations). Additionally, this project will use the "Work Area Compliance Method" as outlined in IEBC 2015 section 301.1.2.

IEBC 2015 Chapter 7 allows the replacement of roof coverings without structural modifications if a structural evaluation determines that the existing structural system is capable of supporting the proposed roof covering system and any other rooftop mounted equipment. We believe the existing system can support the proposed system. (Section 706.2) The existing school building has a similar roof system; therefore the

recommended roof system will not create additional dead loads beyond the allowable limits prescribed by the code. Note that if a solar system is designed for the roof that a structural engineer must evaluate the roof structure and determine if it can support the added load of a solar system.

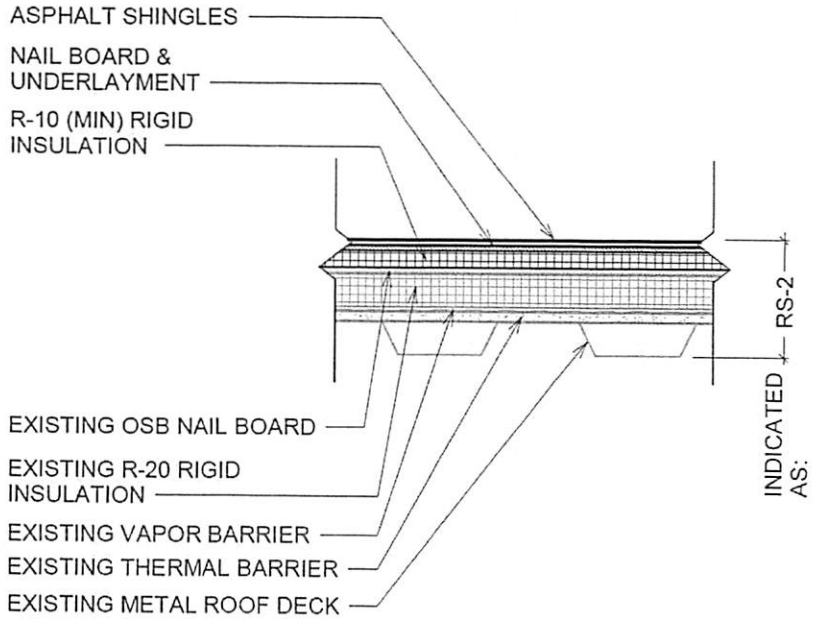
IBC 2015 Section 1504 Performance Requirements:

Roof material performance and installation will be designed and installed in accordance with Chapter 15. For the low slope roofs (Type RS-1) we propose to use a fully adhered single-ply PVC or TPO membrane roof system. Per Section 1504.7 low sloped roofs must resist impact damage based on the results of test conducted in accordance with ASTM D 3746, ASTM D 4272 or the "Resistance to Foot Traffic Test" in Section 5.5 of FM 4470. The roofing manufactures will be required to meet the performance and the wind uplift requirements of the code for winds up to 150 MPH per 1609.3. This means that the system will need to conform to the Factory Mutual (FM) requirement of FM 1-120 or better. This system should use a cover board under the waterproofing membrane.



C1 PROPOSED RS-1 ROOF SYSTEM 1
1 1/2" = 1'-0"

For the sloped roofs (Types RS-2) we propose to use an asphalt shingle roof system. Roof shingles shall also comply with ASTM D 3462 and must be attached to a solidly sheathed deck. As with the single-ply membrane roof system, the asphalt shingle roof system manufacturers will also be required to meet the performance and the wind uplift requirements of the code for winds up to 150 MPH.



C2 PROPOSED RS-2 ROOF SYSTEM 2
1 1/2" = 1'-0"

IBC 2015 Section 1505 Fire Classification

Table 1505.1 requires a minimum fire resistance classification rating of B for Type 2B buildings, as tested in accordance with ASTM E 108 or UL 790. The existing roof has a fire resistance classification of A. Generally, an A rating is easily available in the market and an A rating is recommended for the new roof systems.

For the low slope roofs we propose to use a fully adhered single ply membrane roof system with a class A rating. The following roofing manufacturers offer class A roofing material: Sika Sarnafil, Carlisle, Johns Manville, and Firestone.

For the sloped roofs we propose to use an asphalt shingle roof system with a class A rating. The following roofing manufacturers offer class A roofing material: GAF, CertainTeed, and Owens-Corning,

IBC 2015 Section 1506 Materials

Per Section 1506.2 of the Building Code, roof covering materials must conform with the requirements of chapter 15. 1506.3 requires that the materials be labeled to indicate that they conform with appropriate testing agencies.

Roof drains will be designed and installed in accordance with Massachusetts plumbing code.

IBC 2015 Section 1507 Requirements for Coverings

Section 1507 requires a design roof slope of ¼" per foot, however there is an exception to this requirement. Section 1511.1 allows any design slope providing positive drainage can be achieved when reroofing. However, the existing roof has a slope of 1/8" per 12" and this slope has proven to be inadequate to drain the roof, and has contributed to the current leaks present at the school. We are proposing adding additional tapered insulation to achieve a minimum slope of ¼" per 12" wherever possible. Section 1503.5 requires crickets on the ridge side of roof-top penetrations greater than 30 inches wide.

Section 1507.2 concerns specific requirements to Asphalt Shingles and integral system components. Per 1507.2.3, roofing underlayment shall conform to ASTM D 226, D1970, D4869 AND D6757. Fasteners and methods of attachments shall also comply with Sections 1507.2.5 and 1507.2.6. Shingles must be fastened to a solid deck per 1507.2.1

IBC 2015 Section 1508 Roof Insulation

Flat Roof Type RS-1: We propose to reuse the existing R-20 polyisocyanurate insulation wherever possible. (Where the insulation is soaked with water, it must be completely removed and replaced.) The insulation must be increased to R-30 everywhere, except where we are allowed to reduce the R-value to R-24 (reduce by 1" of thickness) per IECC 2015 C402.2.2 exceptions 1 & 2. Additionally, we will add 1/8"/12" or 1/4"/12" tapered insulation in order to increase overall slope of the roof to a minimum of 1/4" per 12". Likely, the thickness reduction will be taken at the low point roof edges, in order to reduce the requirement for adding wood blocking / roof edge at these locations.

Depending on final selection of roof warranty, durability, and wind uplift requirements, an underlayment of "protection board" of either OSB or a gypsum panel product may be required. The existing roof has a layer of OSB underlayment ("nail board") which was used to provide a substrate to adhere the roofing membrane to. We recommend a layer of protection board for durability and wind uplift resistance.

We propose a polyisocyanurate system of both flat and tapered insulation to a minimum of R-30 as required by code. This insulation should be topped by a protection board. The following roofing manufacturers offer these materials: Sika Sarnafil, Carlisle, Johns Manville. and Firestone.

Sloped Roof Type RS-2: We propose a nailable insulation system with a minimum continuous insulation R-value of 30 to meet IECC 2015 Code requirements of Table C402.1.3. The assumption is that the majority of the existing R-20 insulation is acceptable for re-use, so the intention is to add a layer of 2-1/2" nail board polyisocyanurate (R-12) insulation to achieve the minimum R-30 requirements. In the case that existing insulation is damaged due to water, the insulation will need to be removed to the roof deck and replaced with a minimum R-30 nail base insulation panel. The following roofing manufacturers offer these materials: GAF, CertainTeed and Owens Corning.

IECC 2015 C503.3.1:

Roof replacements shall comply with Table C402.1.3 or C402.1.4

Table C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD

Insulation entirely above deck: R-30

C402.2.2 exceptions 1 & 2 allows variation of 1" or less in insulation thickness, as long as the deficit is made up elsewhere on the roof. In practice, this means that the low point of tapered insulation is allowed to be approximately R-24 (with Polyiso insulation, R-6 per inch) as long as the high point is at least R-36. This exception should be used for this project, especially at roof edges.

IECC 2015 Table C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS

Skylights: maximum U-0.50, SHGC 0.40

Operable fenestration: maximum U-0.45, SHGC varies by orientation

Note: per IBC 2015 chapter 16, the school is a "Risk Category III" building (typical for any school.

Note: per IBC 2015 chapter 2, the school is located in both a "hurricane-prone region" and a "wind-borne debris region" with a basic wind speed (V) of 150 MPH (per 1609.3).

Note: per IBC 2015 chapter 16, (1609.4.2 and 1609.4.3) we are considering the building to have "surface roughness C" and "exposure C" due to the school's proximity to the ocean and it's relative height compared to surrounding buildings and trees.

Design & failures of existing roofing, proposed design changes

RS-1: The existing flat roofed system was designed with a 10 warranty. This system is comprised of the following layers, from top to bottom:

1) 48 mil white PVC membrane (class "A" fire rated), reinforced with prepunched metal bar fasteners which fasten to the roof deck for wind uplift resistance. This membrane is fully adhered to...
2) ..."nailboard" insulation, which is comprised of a 7/16" layer of OSB (wood) adhered to approximately 3" of polyisocyanurate foam insulation (R-20)
3) Tapered polyisocyanurate foam insulation, which provides 1/8" in 12" slope to this roof assembly.
4) A liquid applied vapor barrier on top of...
5) ...A 5/8" thick Dens-Deck type X" gypsum panel, which provides a fire rating to the roof, which is adhered to...
6) ... a 1-1/2" thick steel roof deck, which forms the structural base to the roofing system

This is an excellent design for a code compliant roofing system for its era (1992), and was designed for a coastal environment and high wind zone. However, there are several areas where this design is deficient:

1) The warranty of this system is only 10 years. Ideally, a system for a public school should be 20 plus years. (Note: various warranty lengths are available from different manufacturers. The longest warranties require complete removal of the roofing and insulation. Due to cost, we recommend not removing existing insulation that is acceptable to remain. Many manufacturers will allow you to purchase an extension to a warranty (IE: add 5 years to a 20 year warranty). Because the warranties are pro-rated, and cover roofing material only, it's recommended to purchase a quality membrane and roofing system, rather than focusing on the length of a warranty. Because of this, we recommend a design for at least a 20 year warranty, but focus on the actual longevity of the system rather than the warranty length.)
2) The slope of this roof is only 1/8" per 12". This is too low – both in terms of current code requirements (1/4" per 12" minimum) and practicality – the "bumps" built into this system from the adhered reinforcing bars (see photos EE and HH) and also from sealant of laps of roofing membrane – can be higher than 1/8" and create pockets of ponding – where water sits on the roof rather than sheeting off. The new roof will be designed with a minimum of 1/4" per 12" of slope.
3) The flat roof membrane is heavily worn. See photos EE and HH.
4) The R-value of the original insulation is R-20. Today's requirement is R-30. Insulation will need to be added to achieve this requirement. In some locations on the existing roof, conditions make it challenging to add insulation. These locations – both challenges and solutions – are discussed later in this document.

The flat roofs RS-1 have failed and allowed water to enter the building's structure. Oak Bluffs Elementary took a core sample of this roof, which verified the layers of the roof & also showed significant soaking of the roof layers. See photos LL and MM. During re-

roofing, any wet or damp materials below the roofing membrane must be removed and replaced. The water intrusions into the building have damaged interior building elements and have even intruded as liquid water into classrooms, the library, and service spaces throughout the school, including spaces on levels 2 and 1. See photos NN, OO, PP and QQ. The school moderates these intrusions by replacing damaged materials (generally acoustical ceiling tile) and by capturing liquid water in buckets. Continued water intrusion will result in damage to the building's structure.

The results of the infrared testing revealed that 4.6 percent of the insulation has been soaked by water intrusion. This testing method will not reveal water that is deep in the system, and also cannot analyze insulation that is beneath the sloped asphalt shingle system, so we are estimating the removal and replacement of an additional 10.4 percent of the insulation, for a total of 15 percent replacement.

RS-2: The existing sloped roofed system was designed with a 30 warranty. This system is comprised of the following layers, from top to bottom:

1) Asphalt shingles over...
2) ...a layer of 15 pound felt underlayment. The shingles and underlayment are nailed to...
3) ..."nailboard" insulation, which is comprised of a 7/16" layer of OSB (wood) adhered to approximately 3" of polyisocyanurate foam insulation (R-20)
4) A liquid applied vapor barrier on top of...
5) ...A 5/8" thick Dens-Deck type X" gypsum panel, which provides a fire rating to the roof, which is adhered to...
6) ... a 1-1/2" thick steel roof deck, which forms the structural base to the roofing system. This deck has a 30 degree pitch (approximately 7" in 12") as it is on top of sloped structure.

This is an excellent design for a code compliant roofing system for its era (1992), and was designed for a coastal environment and high wind zone. However, there are several areas where this design is deficient:

1) This roof is warrantied for 30 years. It is not yet 30 years old, but is showing signs of failure such as:
    a. Missing shingles (see photo EE)
    b. Shingles showing signs of damage (cuts) (see photo E)
    c. Significant asphalt granule degradation, as is seen with granule debris in gutters and on top of flat roofs. (see photo X and Y)
2) The R-value of the original insulation is R-20. Today's requirement is R-30. Insulation will need to be added to achieve this requirement. In some locations on the existing roof, conditions make it challenging to add insulation. These locations – both challenges and solutions – are discussed later in this document.

3) Possible water intrusion through wind driven rain, snow, or overloading of water channeled from higher roof surfaces. These locations – both challenges and solutions – are discussed later in this document.
4) It is recommended that this roof be replaced at the same time as the flat roof, in order to insure compatibility between the two roofing systems and eliminate leaks.
5) We recommend installing a heavyweight architectural style shingles of at least 240 pounds per square. Ideally this roofing system should have a minimum 30 year warranty.

Metal roof flashing, soffits, gutters, rain leaders, etc: The existing metal components are largely constructed of lead coated copper, except for edge transition flashing between the flat roofs and sloped roofs, which appears to be constructed from coil coated aluminum. Both of these are excellent choices for longevity in a coastal environment and both have performed well, although the lead coated copper has typical corrosion and patina and does not look good. (See photos FF & GG) Lead coated copper is considered a premium choice, especially for a harsh environment. Coated aluminum is often chosen for a mixture of performance and affordability. The coated aluminum is in good physical condition.

In terms of the aluminum, there are several areas where it is deficient. The aluminum flashing was designed and installed to provide a transition from the flat roofing membrane to the sloped asphalt shingles:

1) There seems to be a discrepancy in the height of the flat membrane to the metal flashing. This appears to be a result in a differing height of the roof edge blocking (solid wood – (2) 2x_ members) and the height of the insulation. The height of the flashing exacerbates this. The result is as small bump that prevents all water from flowing off this edge. Increasing the slope of the flat roof will help with this, as will better detailing of this area. See photo HH
2) The aluminum transition flashing should cover at least 1 shingle, to prevent wind-driven rain from entering the roofing system from under the flashing. This means that this flashing should be at least 12" wide. The existing flashing is only approximately 4" wide. This is a likely location for wind driven rain to enter the building, and possibly has caused leaks. See photo HH.

In terms of the lead coated copper (LCC) (which is much more prevalent on the building), there are also several areas where it is deficient:

1) Lead coated copper is chosen for its longevity and ease of installation. It is chosen over uncoated copper, because uncoated copper can stain surrounding masonry and other building materials green. The LCC has less staining, and tends to stain materials gray, which does not appear as unsightly.
2) The most obvious deficiency is in terms of the look of the LCC. This material has weathered to a gray finish, with streaking of dark gray, light gray, and dull red (that appears slightly rusty). (See photos FF & GG.) All of these are typical

weathering for a LCC in this environment. The dull red is due to red oxide staining, which is a result of reduced sulfur in our atmosphere – due to stricter environmental regulations. The most visible LCC – at the gutters and fascia – is quite visibly patinaed, and is not attractive.

3) The LCC gutters have received much physical damage over the years, likely as a result of maintenance (ladders being leaned against the gutters) (see photo II for one example) or from snow build up on the gutters. Gutters and rain leaders also have become clogged, and some gutters are overflowing and forcing water into the roofing system.
4) Lead is an environmental concern, especially with young children. Given the user group of this building (elementary age school children) we would recommend removing lead coated copper from this building – wherever possible.
5) Ideally, all lead coated copper should be removed from the building and replaced with aluminum, however, the through wall flashing (where metal flashing enters the masonry wall system) is also lead coated copper, and cannot be replaced without significant expense.

Our recommendation is to remove all lead coated copper – wherever possible – and replace with coil coated aluminum. This aluminum should be coated with a 70% PVDF (Kynar) finish and all cut edges should be touched up with automotive paint to match the coil coated finish. This should include all roof transitions, fascias, gravel stop type edges, gutters, rain leaders, and other metal details. At locations where removal of the lead coated copper is not feasible, it should be cleaned with a TSP solution and painted with a "direct to metal" paint. This would improve the look of the lead coated copper (for the 10-15 year lifespan of the paint) and also limit the lead run off from the lead coated copper.

At locations where through wall flashing must be replaced, we recommend using asphaltic coated copper sheets. Copper is an excellent choice for metal flashing in contact with masonry, and can also be in contact with lead coated copper (if required). The asphaltic coating offers additional protection.

Additional challenges: there are several areas on the building that were built incorrectly (not according to the original construction drawings), were altered during construction, or are challenging based on the required changes for re-roofing (mostly due to the required addition of insulation). Some of these conditions are problematic for all three reasons. These include:

1) At locations 1 and 2 (see Appendix A – key plans and key elevations) flat roofs transition to vertical masonry (concrete block) walls. At these locations, the roofing membrane turns vertically where it intersects the vertical wall. This membrane runs up the wall and terminates under through-wall lead coated copper flashing. It is recommended that the minimum height of vertical membrane, from the surface of the roof to the metal flashing, be 8". At locations 1 and 2, this height is as little as 2" or 3", which means it was incorrectly installed originally (original drawings show a minimum of 8"). Once we add additional

insulation thickness, this will be reduced to zero or less. The only "fix" to this situation is to remove masonry wall, redo the through wall flashing at a higher level, rebuild the wall, and install the new roof. At other locations, the existing flashing is 8" to 12" above the existing roof, which will be acceptable for reroofing without alteration of the masonry wall. See photos A and B (appendix B).

2) During construction, a firewall was designed and installed at locations 3 & 4 (see Appendix A). This was very likely done as a code requirement, in order to split the building into two fire areas. However, this created a penetration though the roof, at the low point of a sloped roof. The original architect designed a fix for this location, essentially a large gutter channeling water both north and south on the building. While this appears to be a good solution, this created several problems that have caused leaks and damage to the building:
    a. These large gutters create excellent places for snow to drift and accumulate. This can lead to water intrusion from ice damming under the shingles.
    b. These large gutters collect large amounts of water running off adjacent roof areas. This water is focused and collected into single locations on the roof, and have overloaded these portions of the roof, causing physical damage and leaks. See photos C through L and KK.
    c. We recommend overbuilding this location, so the water runs out on the lower roof and spreads to multiple drain locations, rather than concentrating in the gutter. This would include repair of the damaged areas.
3) At the base of the tower, the flat roofing membrane transitions vertically as it connects to the vertical tower walls. This membrane is only 4" tall – existing, and should be at least 8" tall. This is one of the locations that is experiencing significant leaks. Once insulation is added, to achieve code required insulation levels as well as increase the slope of the roof, this transition will reduce to less than zero. The only fix for this location is to remove the existing windows and install windows with a shorter height, allowing the membrane to have 8" of vertical transition minimum. See photos CC and DD.
4) Skylight – the existing skylight is showing signs of wear, especially at the seals, which are failing. The skylight should be replaced. See photo M.
5) Walkable deck – there is a walkable roof deck at the 2nd floor level, outside the library. This deck is a wood-look product (Trex or similar) over a membrane roof system – the same system as the flat roofs. Although we could not investigate this roof (because the walkable roof deck is atop it), it should also be replaced as part of this project. It is very likely that it is also leaking. The replacement of this surface is challenging, because insulation cannot be added to this location – adding thickness here would result in the surface being higher than the interior floor surface. This would not be allowed by various applicable accessibility codes. A variance from the insulation requirements should be sought in for this location. See photo N.

6) Transition sloped roof to vertical (2 locations, see photos G and O. Through wall flashing exists at locations where vertical walls transition to sloped roofing. This through wall flashing is approximately 3" above the height of the asphalt shingles. See photo O. Although the roof surface will be raised, this area can be detailed to not require removal and replacement of the through wall flashing. This flashing is visible, and could be painted to freshen its look. At another location, (see photo G), above the kindergarten classroom the through wall flashing has been "repaired" with roofing cement. This roofing cement has probably not fixed anything, but has probably clogged the weep holes at the bottom of this wall. If this roofing cement cannot be cleaned off this area, the masonry should be removed and the through wall flashing and weep holes replaced.
7) Through-wall step flashing. See photo P for an example. Through-wall step flashing occurs in 10 locations around the building. When insulation is added and the roof system is thicker, some of this step flashing will not be high enough to prevent water intrusion. The masonry walls will need to be modified at these locations and new step flashing installed.
8) Greenhouse roof. The greenhouse roof is constructed from "Kalwall" material – which is an insulated fiberglass panel. Leaks are not reported from this material, however, it's reported lifespan is 25 years and this material is approximately 23 years old. We recommend replacing this material in-kind as part of this project. Additionally, there are wires entering through the roof surface at this location and appear to be unsealed. This is a location where water will enter the structure. See photo Q
9) Rain leaders. Existing rain leaders (constructed from lead-coated copper) discharge onto lower roofs in some locations. At some of these locations, the rain leaders discharge very high above the roof surface, which causes soaking of the wall, and possibly leaks. See photo P. At other locations, these discharge directly onto the roof surface. Ideally, all rain leaders discharge onto the roof surface, with concrete splash blocks beneath them, to protect the surrounding roof surface and help slow and focus water towards drains. This will be designed into the re-roofing project.
10) Area adjacent to main entry. This area forms a valley, which has been roofed with what appears to be an EPDM roof and asphalt shingle. See photo R. This area likely collects significant snow during the winter. The design of this area appears to be acceptable, but should be investigated closely during the design and construction processes. New EPDM should be as thick as possible and should extend as far below the asphalt shingles as possible. Water appears to collect in a small gutter at the low side of this roof. A new gutter, as large as possible, should be installed. Additionally, at this location through wall step flashing is not installed at the low end. This flashing should be installed during the re-roofing process, which will require removal & replacement of masonry.
11) Chimney – the base of the chimney is flashed with lead coated copper step flashing, which is counterflashed with a reglet. The design of this flashing is

acceptable, but should be replaced in-kind as part of this project. The top of the chimney is comprised of a masonry chimney cap. These blocks have lost their mortar. See photo S. These blocks should be removed and reinstalled with new mortar.

12) Gutters. As was previously mentioned, lead coated copper was originally utilized to construct the gutters. These gutters were divided at multiple locations with expansion joints. See photo T. The expansion joints are required to resist thermal buckling of the material, but the effect is to send water towards the rain leaders that serve only a portion of the gutters. Some of these rain leaders are clogged and the gutters are overflowing, pushing water back into the roof and into the building. See photos U and V. In the short term, rain leaders and gutters should be cleaned to allow free flow of water.
13) Roof drains. There are existing roof drains at multiple locations on the flat roof. Many of these drains are missing their protective domes. See photo W. Because the domes are missing, debris can enter and possibly clog the drainage system. We noted multiple tennis balls on the roof, (see photos X, Z) it's possible that tennis balls have entered and clogged the drainage system. We also noted significant quantities of asphalt granules from the sloped roofing system. See photos X, Y. It's possible that quantities of these granules have entered the drainage system and clogged it. These roof drains should be replaced as part of the re-roofing project and high quality baskets installed. Additionally, the drain lines should be inspected (by camera) and snaked if necessary. These roof drains flow to leaching basins that are located in approximately 11 locations around the property. These leaching basins should be opened and cleaned if necessary. Please see appendix C, which shows locations of the leaching basins and the design for the leaching basins.
14) Pitch pockets. Lines for existing rooftop HVAC units enter the roofing system through existing pitch pockets. See photos Z and AA. A pitch pocket is a round penetration of the roof (a pipe) that allows another pipe, or groups of lines, to enter the roof. The annular space of this is filled with a flowable mastic material (traditionally pitch) that seals the pitch pocket. While not the best way of accomplishing this task, pitch pockets can work well. In the case of the school, pitch pockets should be removed wherever possible, and rebuilt if they must remain.
15) Roof curbs. Existing rooftop mounted HVAC equipment (mostly fans) are mounted on approximately 12" high curbs. These curbs should be acceptable, even when insulation thickness is added to the roof. In some cases, the curbs may need to be replaced or raised in order to provide a minimum of 8" clearance from the roof surface to the top of the curb. See photo BB.
16) Valley flashing. Valley flashing was constructed of plain copper. In some locations, this copper flashing has visibly split (see photo X) and was repaired with roofing cement. Roofing cement is not an effective repair method, and water is entering the building beneath the roofing cement. This valley material should be replaced as part of the re-roofing project.

17) At location 15 (see photo JJ) aluminum flashing and membrane roofing is incorrectly installed. This is a leak location that will be rectified in the re-roofing project.

Project Narrative-HVAC

Building Cooling Equipment

Existing Conditions: Cooling is provided to the administrative offices of the school, and the library/media areas only. A total of 18 rooftop mounted condensing units provide a total capacity of 55 tons of cooling to these areas. Individual units range in size from 1-1/2 tons to 5 tons, and all are equipped with the refrigerant R-22. All of the units were observed to be operating, though unit housings exhibited a fair degree of corrosion. The internal components of the units were not inspected. The refrigerant lines for all units were uninsulated.

Discussion & Recommended Action: There is not an effective way to recondition these units and significantly increase their expected remaining operating life, and all of the existing systems are beyond their expected lifecycle. The units cannot be replaced one for one, as new units with R-22 are no longer available for purchase and installation. Since a different refrigerant must be used with new equipment, the failure of an indoor or outdoor component of each split system will require the replacement of both components, and it is likely that the refrigerant piping will also require replacement.

The scope of work for the replacement of the roof should include the demolition of these existing units, and the installation of Variable Refrigerant Flow systems to replace the majority of the split systems, though practical installation considerations may still require several traditional heat pump systems. With the installation of new equipment, the indoor units, and the associated refrigerant piping would be also be replaced.

The administrative offices of the building do not have mechanically provided ventilation. Replacement of the cooling systems and revision of building codes will require continuous ventilation to these spaces during occupied hours. We recommend the installation of an energy recovery ventilator to meet this requirement.

In addition, the cooling load for the building will be slightly increased, as a dedicated split system should be installed to maintain the IT room and department offices.

The existing electrical distribution within the building will require modification at applicable distribution panels, but ample power is available for the new units.

Kitchen Refrigeration Equipment

Existing Conditions: The walk-in cooler and freezer for the kitchen are equipped with two Trenton refrigeration units that were operating, but in poor condition. The condition of the evaporator coils within the walk-in units was not assessed. The units use R404A for their refrigerant cycle.

Proposed Conditions: We recommend the replacement of these units given their age, condition, and critical nature of their use. The existing evaporators within the kitchen walk-in units might be reusable, though their replacement and upgrade may also be required.

Rooftop Intake and Exhaust Devices

Existing Conditions: In general, the sheet metal housings of the exhaust fans and ventilation hoods are intact. The mechanical components of these devices, and accessories to prevent entry into the building by vermin are worn/degraded and will require increasing levels of maintenance and repair to remain in service. The condition of equipment curbs was not observable. The sheet metal goosenecks providing relief from the locker rooms have maintained their physical integrity, but show obvious deterioration due to the composition of air being exhausted. The condition of the existing equipment curbs cannot be determined until they are exposed during the roofing replacement. It should be planned that all roof curbs will be replaced.

Discussion and Recommended Action: The existing exhaust fans, goosenecks, and roof curbs should be planned to be replaced in full. Equipment selection to maximize energy efficiency, and with the anticipation of future building control upgrades should be prioritized.

Boiler Burner & Heating Distribution Upgrades

Existing Conditions: The building is equipped with Cleaver Brooks Oil-Fired CB Series boilers. The burner control offers a modulating fire rate with fixed equipment linkages. The boilers are still within their expected life span, but are starting to require significant repair and renovation in order to maintain operation. Replacement parts for these boilers are still readily available, but it should be expected that annual maintenance costs will continue to increase. It is expected that the replacement of the boiler plant will be required within the next 10 years.

Hot water is circulated throughout the building using base mounted close-coupled pumps. The pumps are equipped with standard efficiency motors, and were operational.

Discussion and Recommended Action: The unavailability of natural gas limits the options that are available for the upgrade or replacement of the boiler plant. If a change in fuel source were considered, the only alternative would be the installation of a geothermal system, which is beyond the scope of this assessment. In recent years, the economics of commercial heating have transitioned rapidly with the expanded availability of low-cost natural gas throughout New England. Though natural gas is not available on Martha's Vineyard, market forces have decreased volatility in heating oil prices, and also lowered that commodity price significantly. Executing an upgrade to the burner boilers would require 10-12 years of operation in order to recover costs, and it would be likely that the boilers themselves would require replacement within that period. At the time the boilers would be replaced, the upgraded burners could be potentially mated to the new boilers, but this cannot be guaranteed possible, or cost effective. Though possible, we cannot recommend that the boiler burners be upgraded due to the low potential of recovering the costs of the upgrades.

The entire replacement of the boilers is an option that can be considered in light of the desired scope and outcome for the overall improvement project being considered. Unlike other areas evaluated in this report, the replacement of the roof does not generate any requirements for inclusion of a boiler project. A modest reduction in the total heating demand for the building will coincide with the addition of insulation to the roof assembly, but the existing plant has the ability to modulate to match the reduced load. Given the criticality of providing heat to the building during the school year, forecasting the requirement to replace the boilers within the next 5 years.

If the boiler replacement is not forecasted in the immediate future, the school should proceed with executing the upgrade of the hot water pumps with new motors and variable frequency drives as previously proposed by RISE Engineering.

Building Mechanical Controls

Existing Conditions: The building is equipped with an original Barber Coleman pneumatic control system, other than for the direct operation of the split cooling systems, and the boiler firing controls. Control prints for the building were not able to be located, though an investigation of the existing main controls, and subsidiary devices was made.

The maintenance on the system appears to have been minimal to non-existent in recent years. The primary compressor for the system ran almost continually, indicative of a large volume of air loss through leaks in pneumatic components, tubing, etc... In addition, numerous areas of the building were identified as not being able to maintain temperatures consistent with room temperature set point (for both heating & cooling) indicating that field devices are out of calibration or non-operational.

The ability of the system to schedule areas of the building is limited, and inconsistent operation of building air handlers, exhaust fans, and other components was observed (systems running/not running as expected). Mechanical time clocks were observed without the proper time setting, and controls were operating in "winter" mode rather than "summer." Equipment observed had typical arrangements of pneumatic actuators for valves and dampers, as well as thermostatic controls. All of this equipment is obsolete.

Review of the building's electrical usage for the preceding 12 months shows a pattern of usage that is not consistent with the actual usage of the building. During the summer months when school usage is minimal, the electrical usage of the building maintains a very similar pattern to that of wintertime usage, even when the operation of cooling equipment is factored into the analysis.

Discussion and Recommended Action: By design, building controls are very tolerant of poor maintenance and individual component failures – in most cases the equipment will continue to operate, satisfying the casual observer. In addition, problematic pneumatic devices are typically overridden, rather than corrected, in order to "keep things running." Over time, the ability of a pneumatic system will drift considerably from being able to operate efficiently due to a lack of proper maintenance. The degradation of the system can be slow, and a system will have been operating poorly for some time before conditions demand that it be rectified.

Directly affected are the students and staff in the building. Indoor air quality is reduced, as proper ventilation rates are not maintained, and actual temperatures deviate wildly from desired set points throughout the building. With the challenges facing education professionals today, it is highly desirable to maintain a consistent, comfortable, and healthy environment for students to occupy. A secondary consideration is that the cost of operation for a poorly maintained system increases as energy is wasted by systems that are not operating efficiently, or at the proper times.

The existing system could be recommissioned and repaired, but there are limited professional resources available to provide the annual maintenance that is required to keep the system operating correctly. Therefore, we recommend that the school pursue the full replacement of the pneumatic control system in order to ensure better control of temperature and ventilation within classrooms, and reduce building operational cost.

The installation of a new building control system would include the provision of a new DDC front end to schedule operation of building equipment to match occupied periods, the installation of a new communication network to allow communication with all other digital control equipment, the replacement of individual unit controllers, thermostats, and sensors and actuators. In the event that budget constraints do not allow full replacement of the pneumatic controls, the devices that remain pneumatic would require a thorough service, repair, and recalibration as part of an overall building recommissioning.

Cost Estimates

Final cost estimates can be developed once design for replaced and upgraded components is completed. Order of magnitude costs are provided for discussion and budgeting, and are based on current construction costs.

Item	Low	High
Replacement of Roof Mounted Ventilation Equipment	$175,000	$250,000
Replacement of HVAC Cooling	$550,000	$650,000
Replacement of Walk-in Refrigeration Equipment	$30,000	$50,000
Installation of ERV for Administration	$125,000	$160,000
Phased Replacement and Recommissioning of Building Controls	$420,000	$490,000
Replacement of Boiler Plant	$500,000	$600,000
Totals	**$1,800,000**	**$2,200,000**

10/27/17

Schematic Design

Opinion of Probable Construction Cost

Oaks Bluff Roof Replacement

Town of Oak Bluffs

Martha's Vineyard

	HISTORICAL DATA
	2017 RS Means
Prepared by:	MCS
Reviewed by:	DS

This Opinion of Probable Cost assumes a single prime general contractor with competitive bidding. Neither the Architect nor the Owner has control over construction costs and accordingly, the Architect cannot and does not warrant or represent that costs will not vary from the Owner's budget or any opinions of probable costs made by the Architect or its Consultants.

TOTAL GROSS SQUARE FOOTAGE THIS PHASE	**97,229**	
COST/GSF	**$35**	
TOTAL ESTIMATED CONSTRUCTION COST INCLUDING ESCALATION		**$3,366,000**

Assumptions

General Conditions	25.0%
Complexity Factor	10.0%
General Contractor's Overhead and Profit	10.0%
General Contractor's Overhead and Profit for Subcontractors (not applicable to this project)	0.0%
Estimating Design Contingency	15.0%
Escalation - through mid-point of construction	5.0%

1. **Line Items** are organized in accordance with the Construction Specifications Institute (CSI) 50-Division MasterFormat 2004 system. Unit prices are based upon the most current *R.S. Means Construction Costs Estimating Guide* , and adjusted if appropriate to reflect recent experience with the selected items.

2. **General Conditions** are calculated as a percentage of each Line Item. General Conditions may reflect unusual job conditions, historic preservation issues, and/or considerations for overtime, temporary facilities, bonds and equipment rental. General Conditions can range from as low as 5% for large scale new construction to 15% for small renovation projects.

3. **Complexity Factor** allows for a percentage between 0% and 10% of the construction cost for the potential impact of unknown conditions as well as complexity of design. Such conditions could include the removal of ACM, structural defects, or building conditions that can not be verified or determined until construction is underway.

4. **General Contractor's Overhead & Profit** is calculated as a percentage of the subtotal of each Line Item plus General Conditions which will have a variable range per Project Total Costs .

5. **GC Markup of Mechanical / Electrical / Plumbing Overhead & Profit** is calculated as a percentage of the sub-contract totals and is reflected in the appropriate divisional bolded subtotals only.

6. **Estimating Design Contingency** is calculated as a percentage of the subtotal of the previous items and is intended to reflect a buffer for aspects of the design which have not yet been clarified or identified. Typically, 15% is used at the Schematic Design Phase, 10% at the Design Development Phase and 5% at the end of the Construction Documents Phase.

7. **Escalation** is based upon the latest *Building Cost Index History* published monthly by Engineering News Record (ENR). It is used to index our estimate for the period from the beginning of the year through the month posted by ENR closest to the date of this estimate. The percentage escalation is further adjusted to the mid-point of the anticipated construction period pro-rating ENR's Year to Date *Fourth Quarterly Cost Report* year end forecast with the first quarter Cost Report Index if available. Unit price fluctuation from estimate to estimate will be accounted for by the ENR indexing and will **not** be reflected in individual line item adjustments. Escalation is shown as a single line item at the end of the estimate.

8. **Bolded** subtotals shown at each Division heading include General Conditions, Complexity Factor, General Contractors' Overhead and Profit or GC Markup of M/E/P and David Sisson Architecture's Estimating Contingency.

9. ***Italicized*** items indicate estimates provided by Consultants.

10. **Consultants** retained for this project are as follows:

Division 3	
Division 5	
Division 21-23	
Division 26-28	

DESCRIPTION	QTY	UNIT	MATERIAL COSTS	LABOR COSTS	BLDG SUBTOTAL	BLDG TOTAL	DIVISION SUBTOTAL
Division 31							
Division 32							
Division 33							
Roof Replacement Work							2,760,2
Flat roof removal, including walking deck	500.32	SQ		40.50	20263	35245	
Flat roof replacement, including walking deck, 80 mil TPO Membrane only, Fully Adhered	50032	SF		14.00	700448	1218342	
Skylight, 10' x 22'							
Demo Skylight	220	SF		15.00	3300	5740	
Replace Skylight	220	SF	35	30.00	14300	24873	
Sloped roof removal	471.97	SQ		80.50	37994	66085	
Sloped roof replacement, Asphalt	47197	SF		7.60	358697	623909	
Remove wet insulation down to deck	7504.8	SF		0.30	2251	3916	
Replace dens deck, vapor barrier, insulation, coverboard where it's been removed to deck	7504.8	SF		8.00	60038	104429	
Add flat, tapered insulation, cover board to the balance of the flat roofs	42527	SF		5.00	212636	369854	
Add flat insulation, nailboard (OSB cover board) to all sloped roofs	47197	SF		3.75	176989	307850	
Type 1, Transition from flat to slopped							71,7
Remove flashing	3166.5	SF		0.45	1425	2478	
Blocking	3166.5	LF	1	1.00	6333	11015	
Aluminum flashing .05" thick	4749.8	SF	3.85	3.20	33486	58244	
Type 2, roof edge with Fascia							154,4
Fascia Removal	2901	LF		1.65	4787	8326	
Aluminum Fascia, .05" thick	7252.5	SF	4.35	3.75	58745	102180	
Gutter	2300	LF	2.86	3.72	15134	26324	
Rain Leaders	1200	LF	3.59	3.20	8148	14172	
Touch up painting of all exposed edges	1	LS		2,000.00	2000	3479	
Type 3, Replacement of Through wall and Step Flashing							77,7
Removal of Through wall flashing	275	LF		2.08	572	995	
Masonry Removal	1308	SF		3.50	4578	7963	
Removal of step flashing	52	LF		2.08	108	188	
Through wall flashing	275	LF	3.6	3.75	2021	3516	
T.W. Masonry	1100	SF	8	13.50	23650	41136	
Step Flashing	52	LF	3.6	3.75	382	665	
S.F Masonry	208	SF	8	13.50	4472	7778	
insulation, waterproofing	1308	SF	3	2.30	6932	12058	
Touch up painting of all exposed edges	1	LS		2,000.00	2000	3479	
Misc items							76,1
Valley Flashing	120	LF	15	7.00	2640	4592	
Cap	1	EA	1500	350.00	1850	3218	
Drip Edge	279	LF	2.25	2.99	1462	2543	
Chimney and masonry repair	1	LS	500	1,200.00	1700	2957	
Roof Overbuild	800	SF	14	15.00	23200	40354	
wall support for roof overbuild	237.5	SF	5	6.00	2613	4544	
Remove windows	16	EA		35.00	560	974	
Replace windows	16	EA	350	195.00	8720	15167	
Re-build wall at smaller windows	32	SF	15	12.00	864	1503	
Interior repair at window replacement	32	SF	7	8.00	480	835	
							64,
Painting of any existing lead coated copper through wall flashing that remains.	225	LF	0.85	2.50	754	1311	

Replacement of roof drains including metal basket with anti-tamper	11	ea	250	150.00	4400	7653	
Clean out of the roof drain system	1	LS		2,860.00	2860	4975	
Remove and re-install drain pipe as needed, allowance	1	LS	1500	3,000.00	4500	7827	
Camera Inspection	1	LS		2,930.00	2930	5096	
Clean out of the leaching basins on the site	1	LS	300	1,500.00	1800	3131	
Interior Repair Allowance	1	LS		20,000	20000	34788	
Cost per Gross Square Foot							**$32.97**
TOTAL CONSTRUCTION COST							**$3,205,707**
TOTAL ESCALATION COST							**$160,285**
TOTAL CONSTRUCTION COST WITH ESCALATION							**$3,365,992**
Cost per Gross Square Foot including Escalation							**$35**
Alternate for PVC in place of TPO							
80 mil TPO Membrane only, Fully Adhered	-50032	SF		14.00	-700448	-1218342	
60 mil PVC, Fully Adhered	50032	SF	15.7	6.70	1120717	1949347	
TOTAL CONSTRUCTION COST							**$731,005**
TOTAL ESCALATION COST							**$36,550**
TOTAL CONSTRUCTION COST WITH ESCALATION							**$767,555**

Project Schedule - tentative

October 27, 2017 – Draft report is presented to the Town of Oak Bluffs

** 1 week **

November 2, 2017 – On site meeting with Town of Oak Bluffs to review draft report

** 7 weeks **

December 22, 2017 – Final report is presented to the Town of Oak Bluffs

** 16 weeks **

April 12, 2018 – town meeting. Request funding for architectural and engineering design of project.

** 1 week **

April 13, 2018 – Begin design of roof and HVAC replacement project

** 5 weeks **

May 17, 2018 – approximate 25% design check in

** 6 weeks **

June 28, 2018 – approximate 50% check in. Hold meeting with Town

** 6 weeks **

August 9, 2018 – approximate 75% design check in

** 6 weeks **

September 20, 2018 – Approximate 100% design check in. Drawings and specifications ready for bidding

** 1 week **

September 27, 2018 – Project released for bidding

** 2 weeks **

October 11, 2018 – Walkthrough with interested contractors

** 2 weeks **

October 25, 2018 – Bids due

October 29, 2018 – Review bids, hold contractor interviews

** 2 weeks **

November 13, 2018 – Town meeting. Present bids to town. Request funds to fund construction.

** 2 weeks **

November 15, 2018 – Sign contract with contractor

** 28 weeks **

May 28, 2019 – Contractor begins mobilizing, moving equipment and supplies to the job site

** 3 weeks **

June 18, 2019 – Last day of school

June 19, 2019 – Contractor begins

** 10 weeks ** (Note: complete construction schedule to be issued later)

August 30, 2019 – Contractor is complete / final completion

September 2, 2019 – Labor Day

September 3, 2019 – School begins

NOTE: if the project includes solar, the installation will need to happen after the roof is complete, which would be fall 2019, or summer 2020.

Mass.gov

MassWorks 2018 Round Opens

The MassWorks Infrastructure Program provides funds for municipalities and other eligible public entities to support and accelerate housing and job growth in the Commonwealth.

The MassWorks Infrastructure Program is a competitive grant program that provides a robust and flexible source of capital funds for municipalities and other eligible public entities to complete public infrastructure projects that support and accelerate housing and job growth throughout the Commonwealth.

In 2018, MassWorks will continue its commitment to preparing communities for success and contributing to the long term strength and sustainability of our Commonwealth with a particular emphasis on projects that support the production of multi-family housing in appropriately located walkable mixed-use districts, result in direct and immediate job creation, and/or that support economic development in weak or distressed areas.

Now Accepting 2018 MassWorks Applications

The Baker-Polito Administration is pleased to announce the opening of the 2018 round of the MassWorks Infrastructure Program. Capital grants are available to all Massachusetts municipalities and public entities seeking support for public infrastructure improvement projects.

The online portal to prepare and submit your proposal is now available at the link below. Also available are the updated MassWorks Program Guidelines, and a template of the 2018 application for reference.

Deadline: Completed applications will be accepted between July 30 and Aug. 10, 2018. **The online portal will close at 11:59 p.m. on Aug. 10, 2018.**

2018 MassWorks Program Guidelines

2018 MassWorks Application Template

Click here for the 2018 MassWorks online application

RELATED

MassWorks 2017 Award Recipients →

MassWorks 2016 Award Recipients →

MassWorks Out of Round Awards →

Commonwealth of Massachusetts
EXECUTIVE OFFICE OF HOUSING & ECONOMIC DEVELOPMENT
ONE ASHBURTON PLACE, ROOM 2101
BOSTON, MA 02108

2018 MassWorks Infrastructure Program (MWIP)

Grant Guidelines and Application Information

Open Date: **May 1, 2018**

Application Submission Period: **July 30, 2018 – August 10, 2018**

Deadline: **August 10, 2018 @ 11:59 PM**

Questions: **massworks@mass.gov**

Version: 20180525

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WHAT'S NEW IN 2018

In 2018, EOHED is introducing a more streamlined application form to assist all applicants in preparing the strongest possible proposal. While there are some new sections and inquiries, the majority of the questions are the same from previous years, just reorganized into more topical sections. Key changes do include:

1. Expanded section on the public infrastructure project, by grouping together related questions and providing opportunity for applicants to more effectively demonstrate shovel-readiness.
2. Expanded Preparing for Success section where applicants can demonstrate strategies and planning tools that they have employed to attract private investment and development.
3. A new series of questions related to the applicability of MEPA review.

A. INTRODUCTION

The MassWorks Infrastructure Program is a competitive grant program that provides a robust and flexible source of capital funds for municipalities and other eligible public entities to support and accelerate housing and job growth throughout the Commonwealth. MassWorks is authorized by Mass. General Laws, Chapter 23A, Section 63 and is administered by the Executive Office of Housing and Economic Development (EOHED).

Since 2015, the Baker-Polito Administration has awarded over $274M to 134 projects in 106 communities throughout the state, spurring the development of over 2M sf of commercial and retail space, over 7,000 housing units, 1,200 new hotel rooms, at least 7K sf of new public space, and leveraging over $4B in private investments.

In 2018, MassWorks will continue its commitment to preparing communities for success and contributing to the long term strength and sustainability of our Commonwealth, with a particular emphasis on projects that support the production of multi-family housing in appropriately located walkable mixed-use districts, result in direct and immediate job creation, and/or that support economic development in weak or distressed areas.

All complete proposals submitted by the deadline, are carefully and thoroughly reviewed by EOHED staff in consultation with the Department of Transportation, the Executive Office for Administration and Finance, the Executive Office of Energy and Environmental Affairs, and other key partners. Generally, the most competitive applications are those that; a) propose to support development that directly aligns with the sustainable development goals of the Commonwealth, b) are advanced in their planning and permitting, c) meet most if not all of the program's required spending targets, and d) are ready to begin in the upcoming construction season.

B. PROGRAM PURPOSE & GOALS

Per M.G.L.ch.23A§63, the primary purpose of the MassWorks Program is: *to issue grants to municipalities and other public instrumentalities for design, construction, building, land acquisition, rehabilitation, repair and other improvements to publicly-owned infrastructure including, but not limited to, sewers, utility extensions, streets, roads, curb-cuts, parking, water treatment systems, telecommunications systems, transit improvements, public parks and spaces within urban renewal districts, and pedestrian and bicycle ways.*

The state's Economic Development Plan *Opportunities for All*, outlines how essential it is for the state to work with its communities to advance economic development. When we focus on supporting strong community leadership and development preparedness, we find time and again that cities and towns, as well as regions, can be better positioned to attract human and investment capital in an intensely competitive environment. The Massworks program is designed to assist municipalities in advancing projects that support job creation and expansion, housing development and rehabilitation, community development, and transportation safety. To carry out this mission, Massachusetts has adopted a set of principles to guide its investment decisions:

Commonwealth's Sustainable Development Principles

The Commonwealth shall care for the built and natural environment by promoting sustainable development through integrated energy and environment, housing and economic development, transportation and other policies, programs, investments, and regulations. The Commonwealth will encourage the coordination and cooperation of all agencies, invest public funds wisely in smart growth and equitable development, give priority to investments that will deliver good jobs and good wages, transit access, housing, and open space, in accordance with its sustainable development principles. Furthermore, the Commonwealth shall seek to advance these principles in partnership with regional and municipal governments, non-profit organizations, business, and other stakeholders. (*See Appendix 1 for full description of the principles.*)

In addition to a commitment to the principles described above, the MassWorks statute indicates that preference shall be given to public infrastructure projects that are directly aligned and/or reflect the following:

- Growth Districts Initiative: Commercial and residential transportation and infrastructure development, improvements and various capital investment projects located in a district designated under the Executive Office of Housing and Economic Development's Growth District Initiative.

- Transit-Oriented Housing Development: MassWorks funding may be used to match other public and private sources to build or rehabilitate transit-oriented housing located within .5 miles of a commuter rail station, subway station, ferry terminal, or bus station, at least 25 per cent of which shall be affordable.

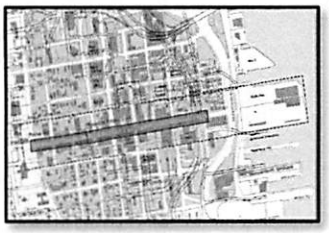
- Roadway Safety in Small, Rural Communities: Each year, at least ten percent of funds are dedicated to supporting transportation safety projects in small, rural communities with a population of 7,000 or less. Such towns can apply for a Small Town Road Assistance Program (STRAP) grant, requesting up to $1,000.000, but may receive only one grant every three years. Two or more eligible towns may file a joint application for a single project serving those towns provided that the total amount awarded to one town shall not exceed the maximum amount allowed under the program.

Supporting our Blue Economy: Beginning in FY2018, the Baker-Polito Administration has committed to setting aside five percent of MassWorks funding to support saltwater dredging of public waterways. Projects will be evaluated based on readiness, direct economic impact, and local match. Program information and guidelines will be available on EOHED's website later this summer. This program will be coordinated with the Executive Office of Energy and Environmental Affairs and EEA's Office of Coastal Zone Management.

C. ELIGIBILITY OF APPLICANTS AND PROJECTS

Any Massachusetts city or town, acting by and through its municipal officers or by and through any agency designated by such municipal officers to act on their behalf, or a public entity, may apply to the program for a grant in a specific amount to fund a specified public infrastructure improvement project. Two or more municipalities may apply jointly, with one municipality or another public entity acting as fiscal agent. MassWorks grants can be in addition to other forms of local, state, and federal assistance that the applicant might receive.

Eligible public infrastructure projects shall be located on public land or on public leasehold, right-of-way or easement. Projects that use grants to municipalities, for public infrastructure provided by this section, shall be procured by municipality in accordance with chapter 7, section 39M of chapter 30, chapter 30B and chapter 149. Program investments will be targeted to projects that require the infrastructure improvements or expansion to support new growth or address safety issues. Examples of proposals that succeeded in getting funded, include:

Framingham, Marble Street Improvement Project $1.1M grant to support the city's first TOD project under its new Central Business District zoning: a 270-unit development on former MBTA land.	**North Reading, MWRA Water Project** $3M grant to support the redevelopment of the former JT Berry DCAMM site. Pulte Homes will develop 450 age-restricted units on the site. Town designated the site under 40R and 43D.
New Bedford, Union Street Improvement Project  $2.5M grant to upgrade infrastructure along Union Street. Supports economic activity in TDI District, including $10M investment in 68-room hotel.	**Charlemont, Town Bridge Repair Project** $949K grant to repair three Town bridges. One at-risk and two already weight-restricted, affecting an evacuation route and commercially accessible roads. Regionally significant to Towns of Heath and Rowe.

D. INVESTMENT GOALS

In alignment with the Commonwealth's Sustainable Development Principles as outlined above, and ensuring that program funds are invested in projects that meet the state priorities, EOHED has developed a set of spending targets to guide its grant making decisions. The 2018 portfolio of grants will seek to achieve the following:

- 50% or more of the total funding be in support of projects that are consistent with regional land use and development plans;
- 50% or more of the total funding be in support of developments that contain a mix of residential and commercial uses, with a residential unit density of at least four units to the acre;
- 50% or more of the total funding be in support of development in Gateway Cities;
- 67% or more of the total funding be in support of transit-oriented developments (that is, developments located within one-half mile of a transit station; further, transit station is defined as a subway or rail station, or a bus stop serving as the convergence of two or more bus fixed routes that serve commuters);
- 80% or more of the total funding be in support of developments that are re-using previously developed sites;
- 100% of the funding that is committed in support of housing (or mixed use including housing) be in support of developments with a residential unit density of at least four units to the acre.

E. APPLICATION COMPONENTS

The MassWorks Infrastructure Program holds one competitive round each year. Generally, the round opens in the spring with applications due in late summer. Evaluation of applications takes place over six to eight weeks, and awards are announced in the fall for projects to begin construction the following spring.

Given the level of competitiveness in recent rounds, applicants should consider applying only for projects that are shovel ready, meaning prepared to begin construction in the next construction season.

The 2018 MassWorks application has been updated with some new questions. The application is organized into seven sections as listed below. A complete proposal package includes answering the questions in all sections and attaching supporting documents, as requested.

I. Project Summary: This page includes all of the identifying information of the applicant as well as highlights of the application, including project name, amount request, and brief description.

II. Infrastructure Project Description: Now has all of the questions related to the public infrastructure project. Includes detailed project description, project schedule and timeline, status of permitting, and alignment with DOT guidelines, regional planning, and zoning regulations.

III. Budget & Source: This part is a worksheet requesting specific information about the project's total budget, portion requested from MassWorks, and sources of other funding, if any.

IV. Preparing for Success: In this section, EOHED is looking to evaluate the extent to which the community has been actively preparing itself to attract investment and development. The section seeks information about the community's engagement in state initiative and includes a checklist with various economic development tools. Applicant is asked to indicate if they are employing the tool in general and whether it is being applied in the proposed project site. For assistance, applicants may use the EOHED Preparing for Success online mapping tool found at: http://maps.massgis.state.ma.us/map_ol/eohed_mapping.php

V. Benefitted Private Development Projects: This section brings together the questions related to the private development that might be supported by the public infrastructure project. May require communication with the developer to answer specific questions related to the private project, such as total investment, # of new units, affordability, # of jobs created, etc.

VI. Applicability of MEPA Review: This is a new section that seeks to outline the expectations and guidelines related to MEPA. The awarding of MassWorks funding is a form of state action as cited in the MEPA regulations. This section requests that the applicant indicate if any of the MEPA thresholds are met or exceeded by the public and/or private project. The intent is to identify, earlier in the process, if any review is needed and how it might affect the project's timeline. (*See Appendix 2 for details.*)

VII. Certification of Public Entity Authorization: This is the signature page certifying that the application is authorized to be submitted and is true and accurate. This page should be completed by the authorized signatory for the applicant entity.

Although not required, other attachments may be submitted to support the application, such as support letters from community leaders, legislators, etc. These can be submitted separately by email to massworks@mass.gov or delivered in person or via US Mail to EOHED, MassWorks Program, 1 Ashburton Place, Boston, MA 02108. Please note that while additional attachments may be reviewed and will be filed as part of the proposal packet, they will not be evaluated as part of the formal assessment of the application.

F. PROGRAM HIGHLIGHTS AND EVALUATION INFORMATION

- There is no set minimum or maximum amount that can requested for a MassWorks grant, except in the case of STRAP or as otherwise indicated by the program. Each application should request funding to support only one complete project (or project phase) and must provide clear justification for the amount requested.

- Eligible applicants may submit funding requests for more than one project in the same round. However, a separate application is required for each project. Each proposal will be evaluated independently against the criteria and will be competing directly with all other proposals.

- While match funds are not required, applications that include funding support from other government or private sources (particularly local funds), will be more competitive.

- The 2018 round opened on May 1st, 2018. The application form template is available on the EOHED webpage. Communities have at least 12 weeks to review the application questions and prepare their project proposal, which must be for implementation of a public infrastructure improvement and/or construction project.

- All applications must be submitted electronically. Access to the online portal, *Intelligrants*, is available at https://www.mass.gov/service-details/massworks. (*See Appendix 3 for additional guidance on accessing the online application.*)

- Applications can be officially submitted during the two-week period: July 30th – August 10th. **Access to the online portal will close at 11:59 PM on August 10, 2018.**

- It is the responsibility of the applicant to ensure that their application is received on time by EOHED. All applications will be logged as to date and time received and kept on file as public record. Late submissions will not be considered. EOHED reserves the right to request additional information from the applicant or external sources as may be necessary in order to complete the application review.

- Additional information for Small Town Road Assistance Program (STRAP) Grants:

  - The STRAP grant is open only to small towns, defined as having a population of 7,000 or less that are seeking funds for road or bridge construction/repair to address roadway safety concerns. (*Qualification will be based on the most recent decennial US Census or similar data from the US Census Bureau.)*

  - The maximum amount a single town may request for a STRAP project is $1 million.

  - Two or more qualified communities may submit a joint STRAP application requesting over $1m for a single project serving multiple towns, however, if awarded, each town cannot receive more than $1m.

  - Entities submitting a STRAP request are reminded that qualified communities are only eligible to receive one STRAP grant every three years. However, all small towns are eligible to submit proposals to any regular round of MassWorks round for projects that qualify under the economic development and/or housing criteria, in addition to STRAP.

As outlined throughout these guidelines, the MassWorks Infrastructure Program seeks to provide capital funding to eligible communities for the improvements to and/or construction of public infrastructure that helps spur economic and housing development and/or address roadway safety concerns. The program is highly competitive with a large number of applicants with viable projects but a limited pool of funding available each round.

Each application will be carefully reviewed and assessed on its own merits. As needed, EOHED will consult a team of reviewers representing housing, economic development, transportation, community development, regional planning and other applicable interests to review applications and help to identify the strongest proposals that will be recommended for funding.

Generally, the criteria used by EOHED to assess proposals, includes: a) ensuring completeness of the application, b) confirming alignment with the Sustainable Development Principles, c) verifying rationality and feasibility of the proposed infrastructure work and the funding amount requested, d) confirming the extent to which the project unlocks major development and the amount of private investment leveraged, and, most significantly, e) determining whether or not the project is "shovel-ready" meaning prepared to begin in the upcoming construction season. In measuring the shovel-readiness criteria, EOHED assesses the extent to which the applicant meets most if not all of the following conditions:

- The project has been vetted locally and has the support of key stakeholders in the community;
- The timeline and funding source for completing designs allows for work to commence in the upcoming construction season;
- Project design is or will be consistent with MassDOT's Complete Streets guidelines, which calls for accommodation of all roadway users in a manner appropriate to the type of roadway and location;
- All rights of way have been secured or there is evidence that the rights of way can be secured within 120 days of receipt of an award notice;
- All required permits have been obtained or there is evidence that all required permits can be reasonably obtained within 120 days of receipt of award notice;
- Demonstration that all other sources necessary to fully fund the project have been committed or evidence that they will be committed in time for project to commence in the upcoming construction season.

Once all applications have been fully vetted and assessed, the MassWorks Team prepares a list of the strongest project proposals for the EOHED Secretary's further review, adjustment, and/or approval. The Secretary presents a final list of funding recommendations to the Governor and Lieutenant Governor for ratification.

Applicants that are approved for funding will receive a commitment letter from EOHED outlining the grant amount and any conditions of the award. Grantees will be need to verify the project's readiness and address any related conditions. Grantees will also be expected to demonstrate that they possess the administrative management capacity to oversee the proposed infrastructure construction project and to comply with applicable regulations and reporting requirements. All awards are contingent upon full execution of a contract between the Commonwealth and the sponsoring entity.

Occasionally, there are strong applications that do not receive an award because the program does not have sufficient funds available at the time. In those cases, the applicant may receive a letter informing them that the proposal may be reconsidered later in the fiscal year if/when funds become available, before the next round.

Applicants that are not selected to receive funding during this round will also be notified in writing. Those wishing to get feedback on their proposal are invited to request a debriefing call with MassWorks staff. These will be scheduled in the order they are received once the round is closed.

The MassWorks Team wishes all communities the best in preparing their applications and we look forward to reading about all of the exciting projects/intiatives that are taking place throughout the Commonwealth.

➢ Questions can be emailed to massworks@mass.gov.

APPENDIX 1: MASSACHUSETTS SUSTAINABLE DEVELOPMENT PRINCIPLES

Concentrate Development and Mix Uses – Support the revitalization of city and town centers and neighborhoods by promoting development that is compact, conserves land, protects historic resources, and integrates uses. Encourage remediation and reuse of existing sites, structures, and infrastructure rather than new construction in undeveloped areas. Create pedestrian friendly districts and neighborhoods that mix commercial, civic, cultural, educational, and recreational activities with open spaces and homes.

Advance Equity – Promote equitable sharing of the benefits and burdens of development. Provide technical and strategic support for inclusive community planning and decision making to ensure social, economic, and environmental justice. Ensure that the interests of future generations are not compromised by today's decisions.

Make Efficient Decisions – Make regulatory and permitting processes for development clear, predictable, coordinated, and timely in accordance with smart growth and environmental stewardship.

Protect Land and Ecosystems – Protect and restore environmentally sensitive lands, natural resources, agricultural lands, critical habitats, wetlands and water resources, and cultural and historic landscapes. Increase the quantity, quality and accessibility of open spaces and recreational opportunities.

Use Natural Resources Wisely – Construct and promote developments, buildings, and infrastructure that conserve natural resources by reducing waste and pollution through efficient use of land, energy, water, and materials.

Expand Housing Opportunities – Support the construction and rehabilitation of homes to meet the needs of people of all abilities, income levels, and household types. Build homes near jobs, transit, and where services are available. Foster the development of housing, particularly multifamily and smaller single-family homes, in a way that is compatible with a community's character and vision and with providing new housing choices for people of all means.

Provide Transportation Choice – Maintain and expand transportation options that maximize mobility, reduce congestion, conserve fuel and improve air quality. Prioritize rail, bus, boat, rapid and surface transit, shared-vehicle and shared-ride services, bicycling, and walking. Invest strategically in existing and new passenger and freight transportation infrastructure that supports sound economic development consistent with smart growth objectives.

Increase Job and Business Opportunities – Attract businesses and jobs to locations near housing, infrastructure, and transportation options. Promote economic development in industry clusters. Expand access to education, training, and entrepreneurial opportunities. Support the growth of local businesses, including sustainable natural resource-based businesses, such as agriculture, forestry, clean energy technology, and fisheries.

Promote Clean Energy – Maximize energy efficiency and renewable energy opportunities. Support energy conservation strategies, local clean power generation, distributed generation technologies, and innovative industries. Reduce greenhouse gas emissions and consumption of fossil fuels.

Plan Regionally – Support the development and implementation of local, regional, and statewide plans that have broad public support and are consistent with these principles. Foster development projects, land and water conservation, transportation and housing that have a regional or multi-community benefit. Consider the long-term costs and benefits to the Commonwealth.

APPENDIX 2: APPLICABILITY OF MEPA REGULATIONS

These guidelines are intended to ensure that the Executive Office of Housing and Economic Development (EOHED) administers the Massworks Infrastructure Program in compliance with the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62I (MEPA), and its implementing regulations at 301 CMR 11.00 (the MEPA regulations).

Overview of Agency Obligations Under MEPA

The purpose of MEPA is to provide for review of the potential environmental impacts of projects for which state agency action is required. MEPA review is potentially required for any project directly undertaken by a state agency; those aspects of a project within the subject matter of any required state permit; a project involving financial assistance; and those aspects of a project within the area of any land transferred by a state agency. For purposes of MEPA, financial assistance means "[a]ny direct or indirect financial aid to any person provided by any agency including, but not limited to, mortgage assistance, special taxing arrangements, grants, issuance of bonds, loans, loan guarantees, debt or equity assistance, and the allocation of Commonwealth or federal funds." 301 CMR 11.02. A Massworks grant is financial assistance that confers MEPA jurisdiction over any project funded by Massworks.

The MEPA regulations set out review thresholds intended to identify categories of projects that are likely to cause damage to the environment. MEPA review is required when one or more review thresholds are met or exceeded *and* the subject matter of at least one review threshold is within MEPA jurisdiction. The provision of financial assistance confers full scope jurisdiction such that MEPA review is required if any threshold is met or exceeded.[1] The MEPA regulations state that "[i]n determining whether a project is subject to MEPA jurisdiction or meets or exceeds any review thresholds ... the proponent, any participating agency, and the secretary shall consider the entirety of the project, including any likely future expansion, and not separate phases or segments thereof. The proponent may not phase or segment a project to evade, defer or curtail MEPA review." 301 CMR 11.01(2)(c).

State agencies, including EOHED, are required to periodically review and evaluate its own programs, regulations, and policies and determine the potential environmental impacts of implementation of its programs, regulations, and policies, and ensure that it and each applicant for a permit, financial assistance, or a land transfer complies with MEPA.

MEPA Compliance in the Massworks Program

The typical Massworks grant is from EOHED to a municipality or other public entity for purposes of constructing infrastructure or other public improvements. To comply with MEPA, EOHED may require the project proponent to demonstrate that a project does not meet or exceed any review thresholds or that there has been due compliance with MEPA prior to awarding a Massworks grant. Accordingly, EOHED will require every applicant for Massworks funding to represent whether the public infrastructure project meets or exceeds any review threshold set forth at 301 CMR 11.03. Where a review threshold is exceeded, the grant recipient will be required to demonstrate that MEPA review has been completed prior to the disbursement of Massworks funds. Such a condition may be stated in a grant award letter and shall be a material term of the grant agreement between EOHED and the grant recipient.

In many cases, the public infrastructure or improvement will benefit or be located in close proximity to a private development proposed by a separate, private entity. In these cases, EOHED is required to consider whether the public infrastructure and the private development should be reviewed as a single "project" consistent with the segmentation provisions set forth at 301 CMR 11.01(2)(c). In making this determination, the MEPA regulations require EOHED to "consider all circumstances as to whether various work or activities constitute one Project".

[1] Full scope jurisdiction extends MEPA review to all aspects of a project that are likely to cause damage to the environment. In contrast, "limited" or "subject matter" MEPA jurisdiction means that review is limited to those aspects of the project within the subject matter of a required permit or within the area of a land transfer.

According to the MEPA regulations, relevant factors include:

- Whether the work or activities, taken together, comprise a common plan or independent undertakings, regardless of whether there is more than one proponent;
- Any time interval between the work or activities; and
- Whether the environmental impacts caused by the work or activities are separable or cumulative.

In addition to these factors, EOHED will consider:

- Whether the public improvements directly serve or physically connect to a private project.
- Whether the public improvements will be located on parcels of land that are part of or immediately adjacent to a private project site.
- The distance separating the public improvements and the private project.
- Whether the public improvements are required to be constructed as a condition in a permit or approval for a private project.
- Whether the public improvements will be constructed by, or in coordination with, the developer of the private project.
- Whether the public improvements are critical to the feasibility or viability of the private project.
- The timing of the private project in relation to the public improvements.

If EOHED determines, based on these factors, that a public infrastructure project and private development are separate projects, EOHED will require MEPA compliance for the public infrastructure project that is receiving financial assistance, if applicable.

However, if EOHED determines that a public infrastructure project is so integral to a private project such that the two projects must be considered a "common plan or undertaking" under 301 CMR 11.01(2)(c), then EOHED will require compliance with MEPA for the public infrastructure and private project. Such a requirement may be stated in a grant award letter and shall be a material term of the grant agreement between EOHED and the grant recipient. If applicable, the contract awarding the Massworks grant also will incorporate the required section 61 findings under 301 CMR 11.12(5).

In any case where EOHED is uncertain of its MEPA obligations, it may consult with the MEPA Office and/or may recommend that the project proponent seek a formal Advisory Opinion under 301 CMR 11.01(6). The MEPA Office is available to offer assistance regarding the applicability of MEPA review and questions about the content, form and/or timing of MEPA review documents.

Applicants for Massworks funding may consult with the MEPA Office early in the process to ensure any filing requirements and associated timing are understood. In some cases, timing of MEPA review may be an important consideration in whether a project is "shovel ready." MEPA staff are available to address questions and provide information over the phone, via email and through pre-filing meetings.

Basic questions regarding jurisdiction and whether a project would exceed an environmental review threshold are typically addressed through email or phone calls. Discussions regarding the substance and timing of MEPA review or specific and unique aspects of a project may be more effectively addressed through pre-filing meetings with the Director or Assistant Director.

The MEPA Office encourages applicants to participate in pre-filing meetings and schedules these meetings regularly. Additional information regarding MEPA review is provided on the MEPA website.

APPENDIX 3: ACCESING THE ONLINE APPLICATION

All applications to the MassWorks Program must be submitted electronically. A link to the online portal, *Intelligrants*, is available at https://www.mass.gov/service-details/massworks. If your community has submitted a MassWorks application in the past, that information is available in portal for viewing, copying and/or editing.

Below are the steps for accessing the online portal to prepare and submit your application. Applications can be submitted only during the two-week period: July 30th – August 10th. **Access to the portal will close at 11:59 PM on August 10, 2018.**

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1. **Username & Password** – Applicants need to set up an account in order to use the online application. Municipalities and eligible public entities are encouraged to establish a primary account, as "Grant Administrator" in the system, through which all applications are initiated and submitted. **NOTE**: *If you have used the system in the past, that username and password is saved and should be used for the 2018 application round.* The municipality may add other individuals as Grant Administrators if they are authorized to edit and submit the application on their behalf. For the Organization Name please enter City of ___ or Town of ____, as applicable; this will be the name of the actual entity that is applying.

2. **Other Users** – A Grant Administrator may also grant access to their application to other users, such as consultants or grant writers, who can enter/edit information but are not authorized to submit the application. In these cases, the individuals must first establish their own unique user account and then request access to the community's application. The Grant Administrator would then assign "Consultant" as the security role. For more information on user accounts and access to applications, please refer to the Intelligrants Application Manual available on the website.

> ***TIP***: It is strongly recommended that municipal officials monitor the granting of access and permissions for the creation and submission of their MassWorks application(s). It is not the responsibility of EOHED to monitor or verify if the person(s) submitting an application(s) have been authorized to do so.

3. **Account approval** – All new accounts must be approved by EOHED staff. We will review and approve log in requests as they are received. Applicants will receive an email notification from the system confirming the approval. If not received after 48 hours, please contact massworks@mass.gov to request assistance. ***Note***: *Requests for resetting username and/or passwords will be addressed as they are received. However, it is the responsibility of the applicant to keep track of this information and to meet the application deadline.*

4. **Starting the Application** – Once the accounts are approved, the applicant can commence the application(s). Following the prompts on the portal, the Administrator can open a new MassWorks application and begin to answer questions in each section as described in the guidelines. Users can enter/edit information, and should save their work often, particularly after completing each section. User can close and reopen the application for editing at any time before the deadline. Applicants are reminded that each separate infrastructure project funding request must be submitted as a separate application.

5. **Submitting an application** –Applications may be completed and saved in the online grant application system at any time, but official submissions will only be accepted between **Monday, July 30th and Friday, August 10th 2018**. During that timeframe, a submission button will become available in the Change of Status page. **Applicant must click the "Submit" button to officially submit their application for consideration in the 2018 MassWorks round.** Applicants will receive an email confirming receipt by the MassWorks program within 4 hours of submission. If an email is not received after 4 hours, please contact massworks@mass.gov for assistance.

> ***TIP:*** If an application is erroneously submitted prior to being completed, the applicant may contact EOHED to reopen the application for further editing and completion, as long as it is before the deadline. Please note that EOHED staff will try to accommodate these requests as they are received, but may not be able to respond immediately. EOHED is not responsible for any delays or missed deadlines due to applicant errors.

Commonwealth of Massachusetts
Executive Office of Housing and Economic Development
One Ashburton Place, Room 2101
Boston, MA 02108

www.mass.gov/hed
617-788-3610

Mass.gov

GUIDE

Becoming a Designated Green Community

The Green Community Designation and Grant Program provides a road map along with financial and technical support to municipalities that 1) pledge to cut municipal energy use by an ambitious and achievable goal of 20 percent over 5 years and 2) meet four other criteria established in the Green Communities Act. Participation in the Program has grown steadily since the first group of 35 municipalities achieved designation status in July of 2010 to include more than half of the diverse cities and towns of the Commonwealth and nearly two-thirds of the population. The benefits of designation extend beyond the program itself, inspiring cities and towns to undertake additional energy-related initiatives, improve coordination between municipal staff and departments, and increase messaging with the public at large about energy-related issues and actions.

Green Communities Division Overview

The GC Division provides:

- **Local support** from **Regional Coordinators**
- **Education** on benefits of energy efficiency and renewable energy
- **Guidance and technical assistance** for local energy questions and projects
- **Funding opportunities** for clean energy projects

The **Green Community Designation and Grant Program** has designated two hundred ten cities and towns as Green Communities. These energy leaders have accessed grants of over$39 million for energy projects.

The latest group of 25 cities and towns designated in December 2017 have pledged energy reductions amounting to 296,968 MMBTUs over five years.

Benefits of Being a Green Community

- Cut municipal energy costs and strengthen the local economies
- Access grants for clean affordable and resilient energy projects; economic development benefits for the city or town and the Commonwealth
- Reduce greenhouse gas emissions
- Promote energy-efficient building construction that drives the market for better built and lower cost homes
- Foster renewable energy and clean energy technologies
- Become a clean energy leader and a better place to live, work, and play

Division Established by Legislation

Section 10 of Chapter 25A, which establishes the Green Community Division and Designation and Grant Program requires a specific path forward for municipalities served by municipal light plants that adopt the renewable energy charge to participate in the Program. Municipalities served by BOTH a municipal light plant and an investor-owned electric utility ARE eligible to apply for and become a designated Green Community. DOER is considering ways to maximize participation by all cities and towns in the Program that yields a mix of reduced energy costs and the environmental and economic development benefits.

Key Actions

Green Communities Division (MassDOER) →

Additional Resources

Green Communities Program Guidance Fall 2016 (PDF 331.86 KB)

Map of 210 GCs and Grant Summaries (PDF 1.01 MB)

Green Communities Brochure (PDF 607.36 KB)

Green Communities Division Brochure (PDF 607.36 KB)

Criterion 1

One of two criteria related to renewable energy development, Criterion 1 is met by a municipality passing zoning in designated locations for the as-of-right siting of renewable or alternative energy generating facilities, research and development facilities, or manufacturing facilities.

Solar generation sited

19 municipalities report issuing 41 permits; 90% for solar generation

Key Actions

Solar Information & Programs →

Additional Resources

Criterion 1 Guidance for All 3 methods.pdf (PDF 190.16 KB)

R&D or Manufacturing AOR Guidance 2013 (PDF 243.19 KB)

Solar Model Bylaw (PDF 35.48 KB)

Wind Model Bylaw Mar 2012.pdf (PDF 120.18 KB)

Adopted As of Right Siting through RE Generation (PDF 369.49 KB)

Criterion 2

One of two criteria related to renewable energy development, Criterion 2 is met by a municipality adopting an expedited application and permitting of one year at most, under which facilities interested in locating their facility in a designated renewable zone may be sited within the municipality.

New jobs and vital municipalities

Clean energy is helping to revitalize municipal centers and create jobs

Additional Resources

Guidance for Expedited Permitting Options (PDF 545.7 KB)

Criterion 3

To demonstrate compliance with Criterion 3, municipalities must:

1. Establish an energy use baseline inventory for municipal buildings and facilities (which can include schools, water, wastewater treatment plants and pumping stations, and open space), street and traffic lighting, and vehicles; and
2. Adopt an Energy Reduction Plan (ERP) demonstrating a reduction of 20 percent of energy use after five years of implementation.

Reaching 20% Reduction

To date, 25 communities have reduced their energy use by 20 percent or more

Additional Resources

Samples of Energy Reduction Plans

Guidance for Criterion Three (PDF 647.85 KB)

Guidance Tables for Criterion Three.xlsx (XLSX 53.83 KB)

Guidance for Building Stock Change (PDF 242.72 KB)

Steps to writing an Energy Reduction Plan

- Read the **Criterion 3 Guidance** document carefully
- Contact your **Regional Coordinator** for helpful tips
- Start your energy audit process by contacting your electric utility for a no-cost energy assessment
- Set up **MassEnergyInsight** to establish your energy use baseline

- Review **sample energy reduction plans** by other municipalities
- Identify 15-20% of your energy baseline in documented energy efficiency measures
- Adopt your energy reduction plan (town and/or school and/or regional school as applicable)

Additional Resources

See Sample Energy Reduction Plans

Audit Recommendations for Municipalities (PDF 368.45 KB)

Criterion 4

Criterion 4 requires all departments within a Green Community to purchase fuel-efficient vehicles for municipal use, whenever such vehicles are commercially available and practicable.

To meet this requirement municipal governments and school districts must:

- Adopt a Fuel-Efficient Vehicle Policy requiring all municipal departments and divisions to purchase fuel-efficient vehicles,
- Develop and maintain a vehicle inventory for all four-wheeled vehicles, and
- Provide a plan for replacing non-exempt vehicles with vehicles that meet specified fuel efficiency ratings.

Hybrids and Electric Vehicles

Purchases have increased noticeably in the past 2 years; along with installtion of EV charging stations.

Key Actions

Alternative Fuel and Advanced Vehicle Technology Resource →

Additional Resources

Smart Growth / Smart Energy Toolkit Modules

Criterion 4 Guidance (PDF 185.4 KB)

Green Communities Program Guidance Fall 2016 (PDF 331.86 KB)

Criterion 5

Criterion 5 requires that municipalities minimize the life-cycle cost of all newly constructed homes and buildings. DOER recommends communities do this by adopting Massachusetts' Board of Building Regulations and Standards (BBRS) Stretch Code (780 CMR 115.AA). Buildings constructed to the Stretch Code use significantly less energy than buildings built to other current and previous building codes.

Stretch Code adoption

Nearly 72% of the population live in a city or town that has adopted the stretch code

Additional Resources

Stretch code "Residential Cash Flow Analysis

Stretch Code Adoption Map & List - Building Energy Codes

MA State Building Code - 780 CMR

Updated Building Code (780 CMR) August 2016

Northeast HERS Alliance

Zero Net Energy Buildings

Criteria 5 Guidance - Stretch Code Adoption process (PDF 437.86 KB)

Image credits: George Headley

CLE Engineering, INC.

U.S. ARMY CORPS OF ENGINEERS PERMIT APPLICATION

BEACH NOURISHMENT AND GROIN & JETTY REHABILITATION
JETTY BEACH, NORTH BLUFF BEACH, PAY BEACH & INKWELL BEACH
AND
NORTH BLUFF SEAWALL (AFTER THE FACT FILING)

Prepared For:
Town of Oak Bluffs
56 School Street
Oak Bluffs, MA 02557

Prepared By:

cleengineering

15 Creek Road | Marion, MA 02738
800.668.3220 | www.cleengineering

Supplemental Information

Exhibit A	Vicinity Map: NOAA Chart, Oak Bluffs MA
Exhibit B	Project Narrative
Exhibit C	Photographs
Exhibit D	DPW License under Contract #343, dated November, 1932
Exhibit E	DPW License under Contract #374, dated August, 1933
Exhibit F	DPW License under Contract #646, dated March, 1940
Exhibit G	DPW License under Contract #870, dated March, 1945
Exhibit H	Site Plan entitled "North Bluff Seawall Repair and Harbor Access As-built Plan Exhibit"

Exhibit A

NOAA Locus Map

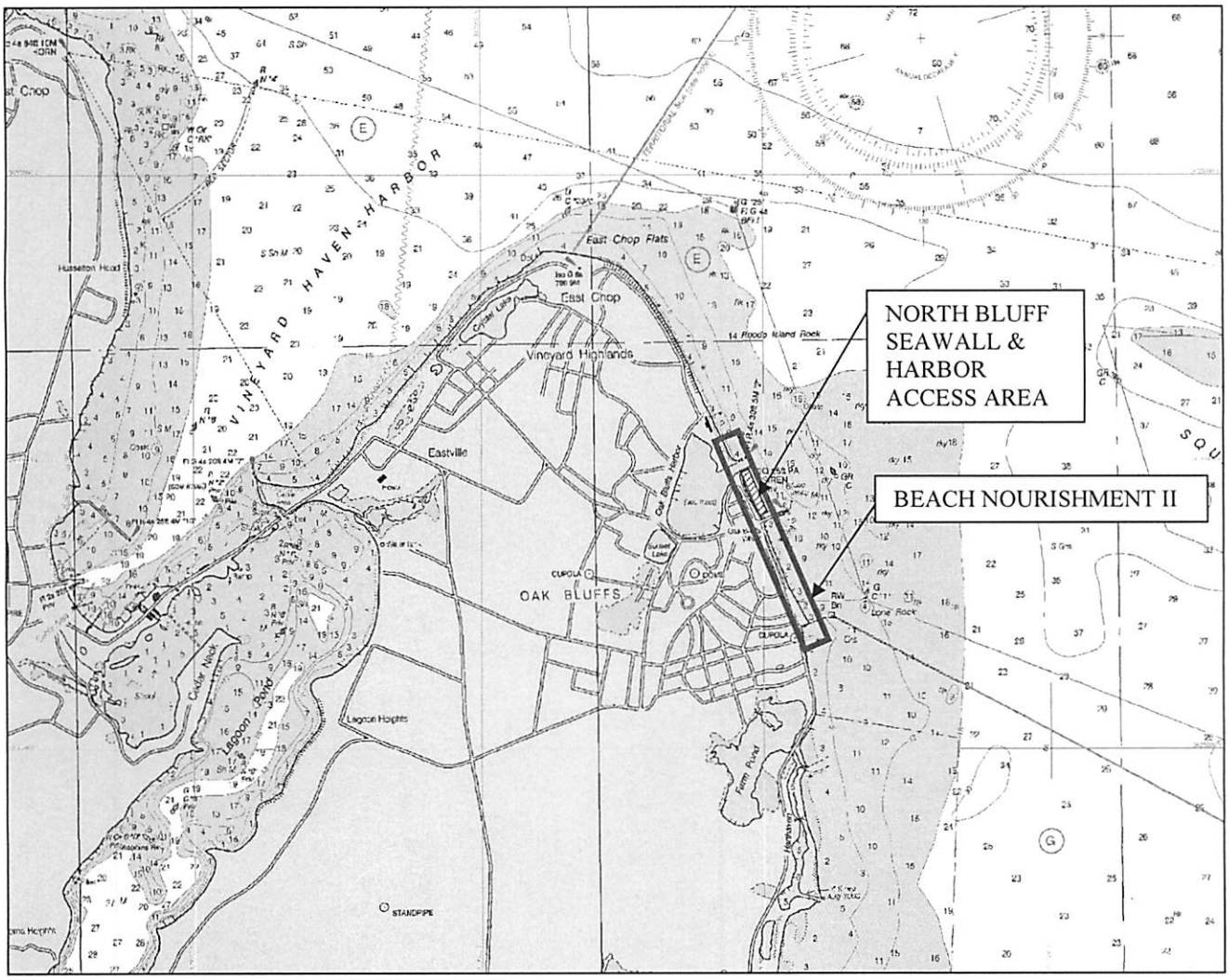


Exhibit B

Supplemental Project Narrative

After the Fact Authorization of North Bluff Seawall and Harbor Access & Beach Nourishment II

Introduction & Background

As requested at an on-site project meeting held on March 20, 2018 with the USACE, this Supplemental Project Narrative includes information pertaining to the After the Fact review/approval of the North Bluff seawall and harbor access completed in July of 2016 (**Section 1**). In addition, supplemental information for the proposed beach nourishment effort that is currently under agency review is noted below in **Section 2**.

Section 1: After the Fact Filing: North Bluff Seawall and Harbor Access

Purpose

The purpose of the project was to rehabilitate the existing historic licensed seawall, repair the existing licensed rip-rap and provide improved accessibility as per the Americans with Disabilities Act (ADA) requirements between the boardwalk, the historic comfort station and the ferry dock. The old concrete seawall was failing in numerous locations and was in danger of collapse prior to the work completed in 2016. The new seawall provides protection to crucial public infrastructure and adjacent private properties.

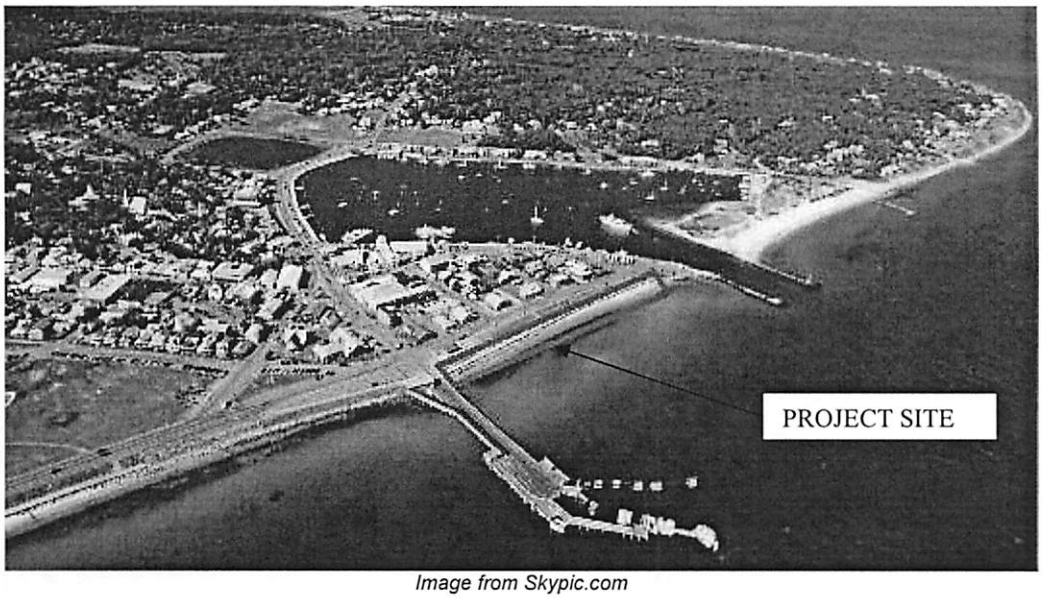


Image from Skypic.com

Site Description

The site is located on the eastern shore of Oak Bluffs adjacent to Nantucket Sound between the Oak Bluffs Ferry Terminal and the entrance to Lake Anthony a.k.a. Oak Bluffs Harbor in the Town of Oak Bluffs, MA. The proposed project is located at 21 Sea View Avenue Extension and is

defined by the Oak Bluffs Assessors office as Map 9, Lot 58. The project site is located within Zone VE El.15, shown on FEMA map 25007C0108J, revised date 07/20/16.

The new North Bluff Seawall extends approximately 670' at elevation 12.5' NGVD29, raised from the original failing wall at 8.5' NGVD29 along Sea View Avenue Extension. The structure is authorized under the following licenses: Oak Bluffs Order of Conditions #SE53-0582, DPW License under Contracts #343, November, Contract #374, dated August, 1933, Contract #646, dated March, 1940, Contract #870, dated March, 1945.

The new wall structure and seaward revetment provide protection from coastal storms and wave over-wash for public infrastructure and private properties. The coastal bank is also protected by the seawall and revetment. A beach of varying width supported by existing timber groins extends from the Ferry Pier north to the Oak Bluffs Harbor Entrance Jetties. This beach area was engineered and established by the installation of the timber groins, designed to accumulate sands as shown on the enclosed as-built plans. The project area is a major tourist destination in the summer and the local economy depends on the attraction of the historic beach areas near town, cultural events, restaurants, shops and other amenities.

Project Description

The rehabilitation project consisted of several components: 1) the reconstruction of 670' of old previously licensed seawall; 2) the repair of approximately 730' of existing previously licensed rip-rap; and 3) the construction of a 12'± wide boardwalk with benches, lighting, ramps and other amenities. All components accommodate ADA guidelines for access between the ferry dock and the harbor. These components are shown on the enclosed As-built Exhibit Plan, as surveyed on September 15, 2016 (See **Exhibit H**).

Regarding the first component, the elevation of the seawall was increased from 8.5' to an elevation of 12.5' NGVD29 to withstand major storm events. The concrete seawall was replaced with a sheet pile wall. Provisions for dissipation of wave over-wash provide protection of coastal bank resource areas during storm events.

As for the second component, rehabilitation included repair of the stone rip-rap revetment to protect the seawall toe during storm events. The historic timber groins located along North Bluff beach were also preserved during construction, which once restored, will help to maintain the beach profile seaward. Additionally, installation of new railings, curbing, lighting, and other public amenities were done to address safety concerns. Stormwater is treated to the maximum extent practicable. Treatment Best Management Practices included a grass lined swale with sediment forebay, and TSS polishing within the revetment.

With regard to the third component, the maximum slope on all boardwalk sections, ramps and landings is 1 in 20 to meet ADA guidelines. The seawall boardwalk is constructed at elevation of 12.0' NGVD29 with a 10' wide minimum clear width which permits bicycle use along with pedestrian access.

Mitigation

The following measures were taken to avoid impacts to resources areas:

1. Existing stone wall from approximately station 6+50 to 9+00 was removed and reused to repair the rip-rap revetment.
2. Planting of beach grass along coastal bank.
3. Siltation barrier at northern extent was installed to prevent siltation to offsite resource areas.

Alternatives Analysis

The proponent considered three alternatives to meet the project goals, as listed below:

1. No-Build
2. Rebuild Concrete Seawall to Current Elevation
3. Rebuild Concrete Seawall to New Elevation
4. Re-build Sheet pile wall to New Elevation

1. No-Build: This alternative would neglect the failing seawall and coastal bank. The no-build alternative placed public health and safety at risk and threatens adjacent public infrastructure and private properties during storm events. This alternative did not serve nor protect the public and private interests and therefore was not considered further.

2. Rebuild Concrete Seawall to Current Elevation: This alternative would not withstand a major storm event and it placed public health and safety at risk, threatened adjacent public infrastructure and private properties during storm events. The overall permanent impacts would be similar to the old seawall, as the new vertical wall would be located within the same footprint, and have an equivalent wall height of +8.5' NGVD29. Temporary impacts would however be increased to accommodate a larger footing than the existing compromised wall, due to the soft bearing soils present 9-10 feet below existing grade, found during soil boring investigations performed prior to preliminary design work. Construction would require temporary cofferdams and project duration would be approximately 12 months. Preliminary cost estimates totaled 6.9 million dollars for this alternative. This alternative did not provide long term protection to resist wave action and rising sea levels, therefore it was not considered further.

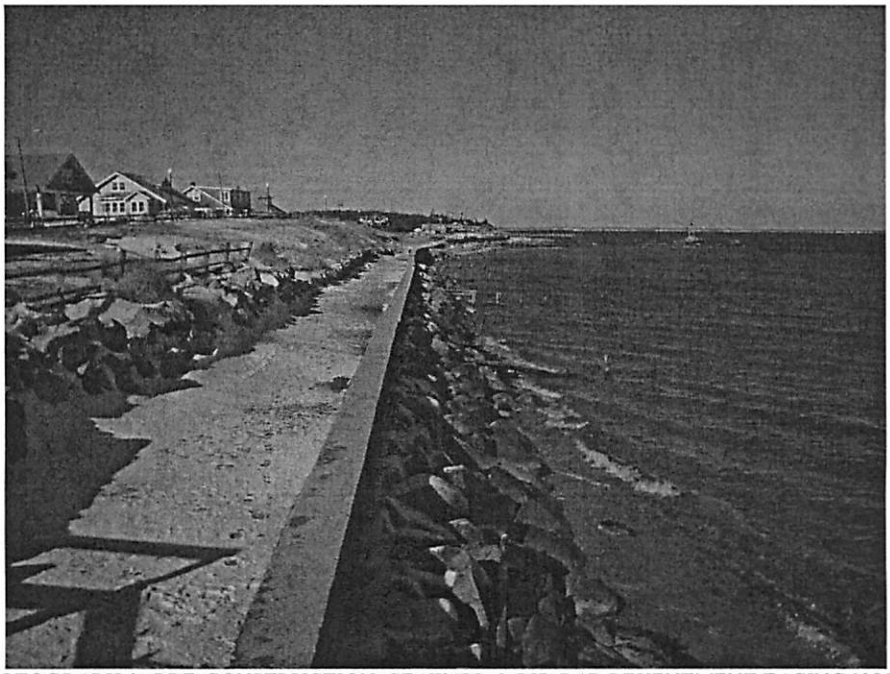
3. Rebuild Concrete Seawall to New Elevation: The objective of this alternative was to perform the seawall rehabilitation designed to withstand a major storm event with the provision for dissipation of wave over-wash and protection of coastal bank resource areas during storm events. The temporary impacts and constructability of this alternative were considered more disturbing to the existing resource areas, as the increased height of the seawall to +12.5' NGVD29 would require an even more extensive footing than alternative #2 due to the soft bearing soils present 9-10 feet below existing grade. Construction would require a substantial cofferdam impacting coastal resources to accommodate extensive foundation work for the increased height to +12.5' NGVD29. This alternative would also require an extended project duration lasting over 12 months. In addition, this alternative was not economical when compared to Alternative #4, having increased estimated costs in the 12 million dollar range. This alternative would provide a longer term solution to coastal protection relative to alternative #2, however, did not serve nor protect the public and private interests considering the impacts to coastal resource areas, extended project duration, and forecasted costs, and therefore was not considered further.

4. Rebuild Sheet Pile Wall to New Elevation: The objective of this alternative is to perform the seawall rehabilitation with it designed to withstand a major storm event with the provision for dissipation of wave over-wash and protection of coastal bank resource areas during storm events. This alternative requires minimal excavation as no footing is required, and sheet piles are driven straight through the soft layers of underlying soils. This alternative is far less disturbing to the coastal resource areas when compared to the reconstruction of a concrete seawall to the same height of +12.5 NGVD29 (alternative #3). Construction duration is also substantially less than alternative #2 and #3, taking approximately 6 months to complete. Lastly, this alternative was the most economical when compared to Alternative #3, with final awarded bid price of approximately 5 million dollars. This alternative serves to minimize impacts to coastal resource areas, project duration, project costs, and protects the public and private interests and therefore was the preferred alternative.

Section 2: Beach Nourishment II

The proposed beach nourishment project is located within existing engineered beach areas that were originally authorized between 1925 and 1948 (copies of authorizations previously provided, as summarized in the 2011 permit application). The structures including timber groins, stone groins, and stone jetties, have historically trapped sediments and served to maintain the town beach areas adjacent to Nantucket Sound affecting topography extending into Land Under Ocean. The proposed nourishment efforts have been designed in coordination with the restoration and maintenance of these structures based on updated on the ground surveys and modeled coastal processes. The design as proposed yields the most stable beach configuration modeled by John Ramsey at Applied Coastal Research and Engineering, Inc. The proposed work also maintains proper offsets to existing eel grass beds, having a minimum distance of 152' to the closest eel grass bed (this information was previously provided in the 2017 supplemental information submittal). The proposed beach nourishment will restore and maintain coastal resiliency along the shoreline of Oak Bluffs, which will continue to provide public access to the town beach areas.

Exhibit C
Site Photographs



PHOTOGRAPH 1: PRE-CONSTRUCTION: SEAWALL & RIP-RAP REVENTMENT FACING NORTH

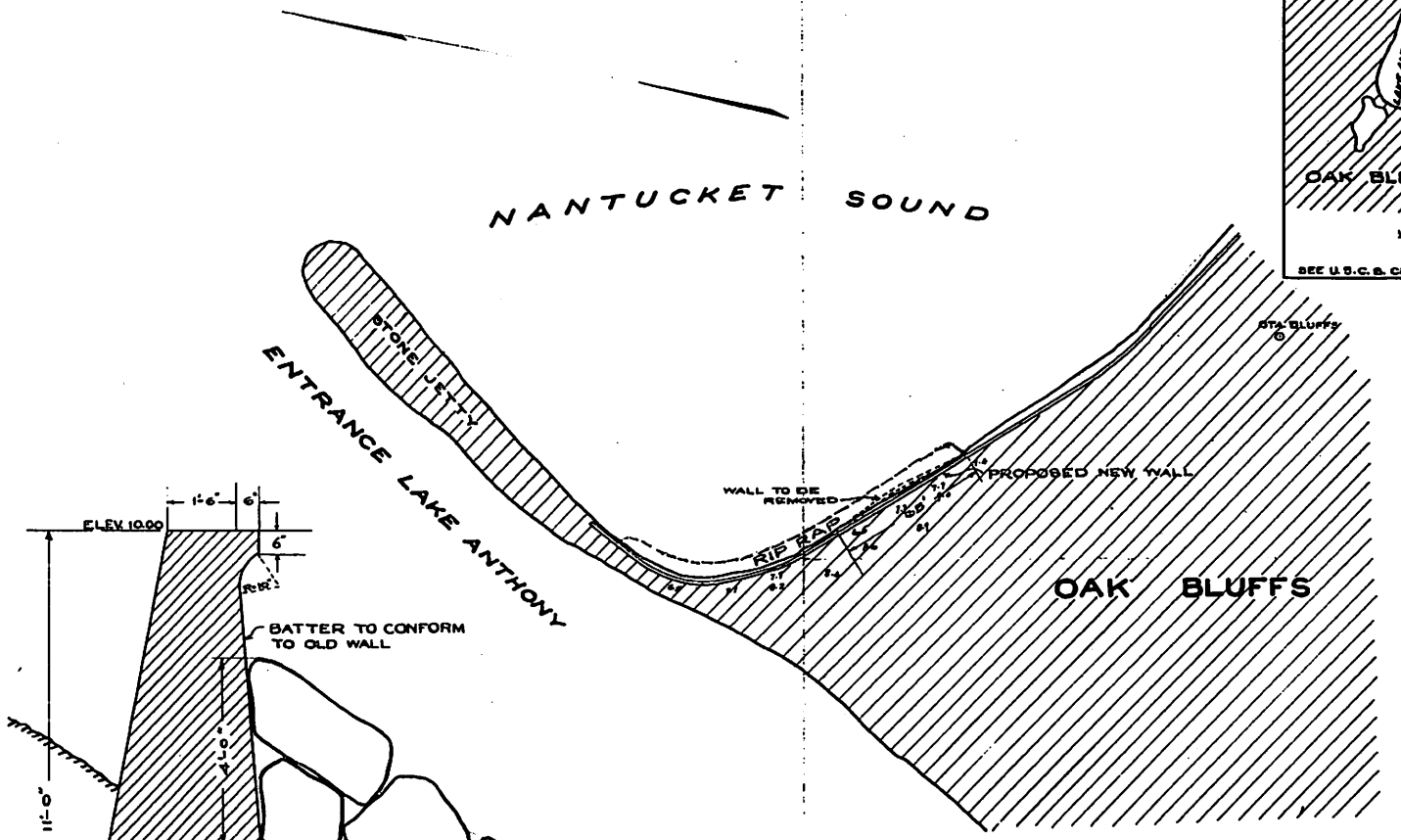
PHOTOGRAPH 2: PRE-CONSTRUCTION: SEAWALL & RIP-RAP REVENTMENT FACING SOUTH

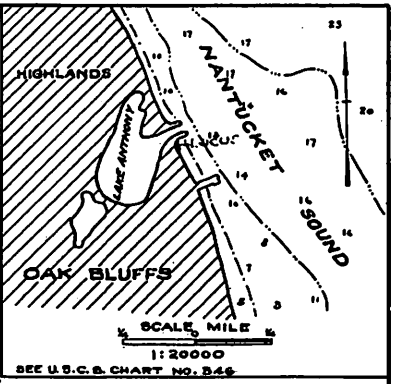
PHOTOGRAPH 3: POST-CONSTRUCTION: SHEET PILE SEAWALL, RIP-RAP REVENTMENT, AND HARBOR ACCESS FACING NORTH

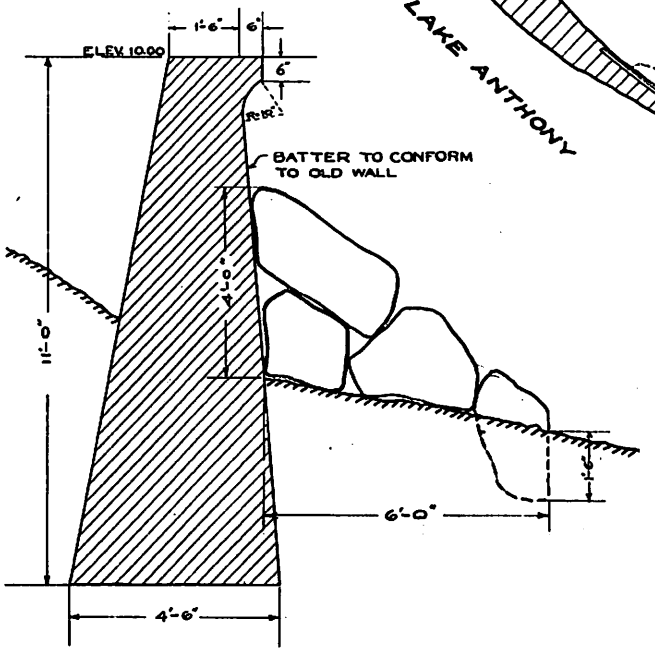
PHOTOGRAPH 4: POST-CONSTRUCTION: SHEET PILE SEAWALL, RIP-RAP REVENTMENT, AND HARBOR ACCESS FACING SOUTH AT ADA BEACH ACCESS RAMP

Exhibit D

DPW License under Contract #343, dated November, 1932







TYPICAL SECTION
THROUGH PROPOSED NEW WALL & RIP-RAP
SCALE ½ IN. = 1 FT.

PROPOSED REPAIRS TO CONCRETE SEA WALL

OAK BLUFFS

MARTHAS VINEYARD ISLAND

DEPARTMENT OF PUBLIC WORKS
OF MASSACHUSETTS

SCALE 1" = 40 FT.

NOVEMBER 1932

Francis A. Gelber
DISTRICT WATERWAYS ENGINEER.

PROPOSED WORK SHOWN IN RED

DATUM – MEAN LOW WATER
MEAN RANGE OF TIDE = 2 FT.

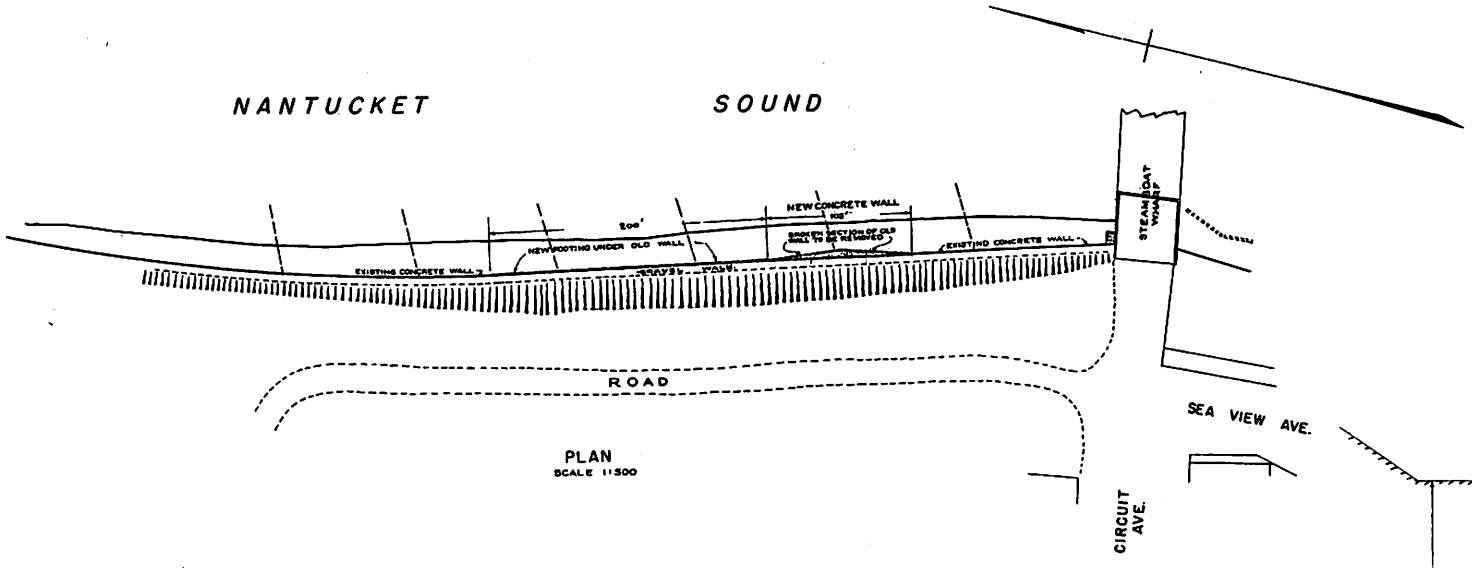
CONTRACT No. 343
ACC. 01224

Exhibit E

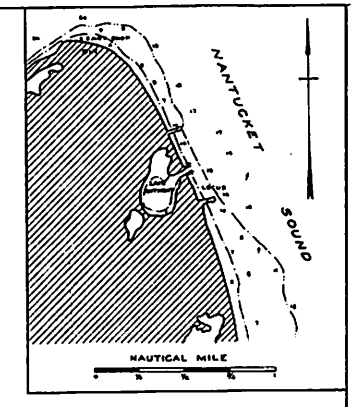
DPW License under Contract #374, dated August, 1933

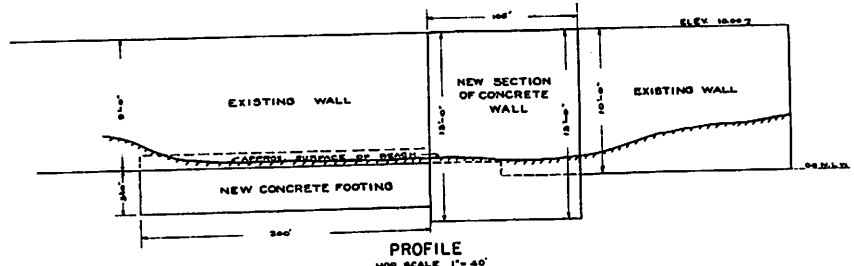
Exhibit F

DPW License under Contract #646, dated March, 1940

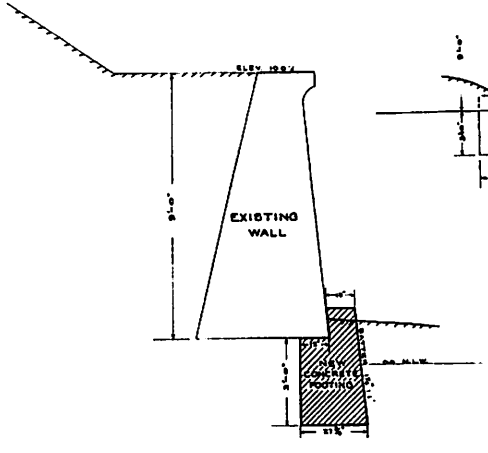


PLAN
SCALE 1:500

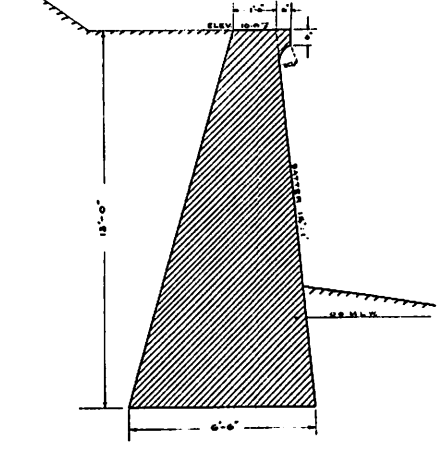




PROFILE
HOR. SCALE 1" = 40'
VER. SCALE 1" = 4'



NEW FOOTING SECTION
SCALE ½" = 1'



NEW WALL SECTION
SCALE ½" = 1'

PROPOSED WORK SHOWN IN RED

PROPOSED REPAIRS TO CONCRETE SEA WALL AT

OAK BLUFFS

NORTH OF STEAMBOAT WHARF

DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

MARCH 1940

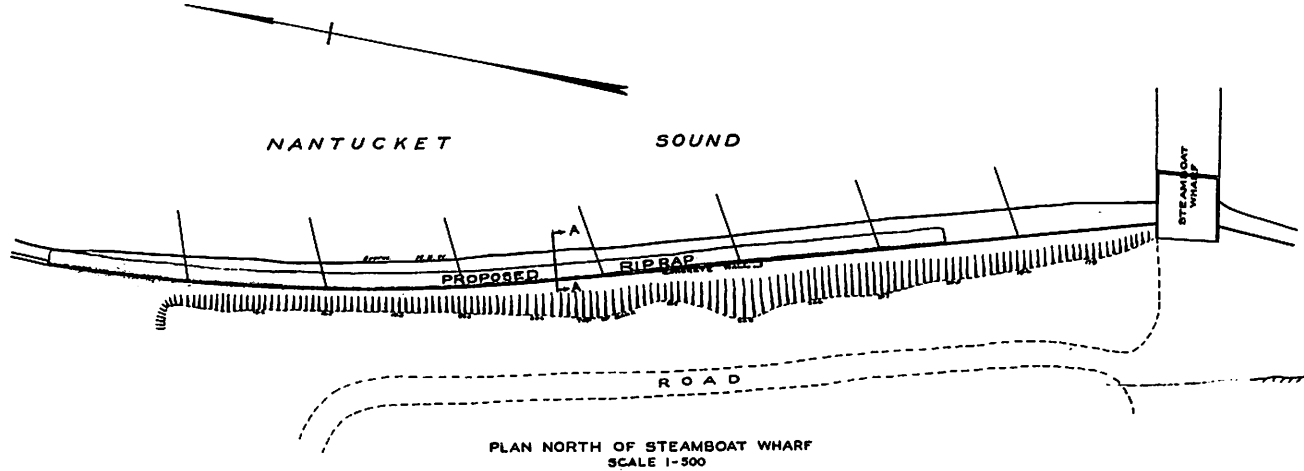
SCALE 1:500

Thomas E. Stelloh
DISTRICT WATERWAYS ENGINEER

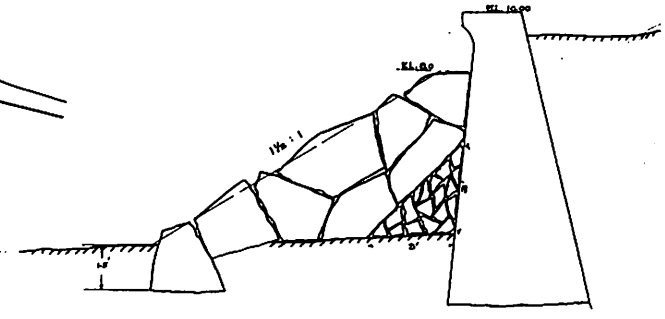
CONTRACT NO. 646

Exhibit G

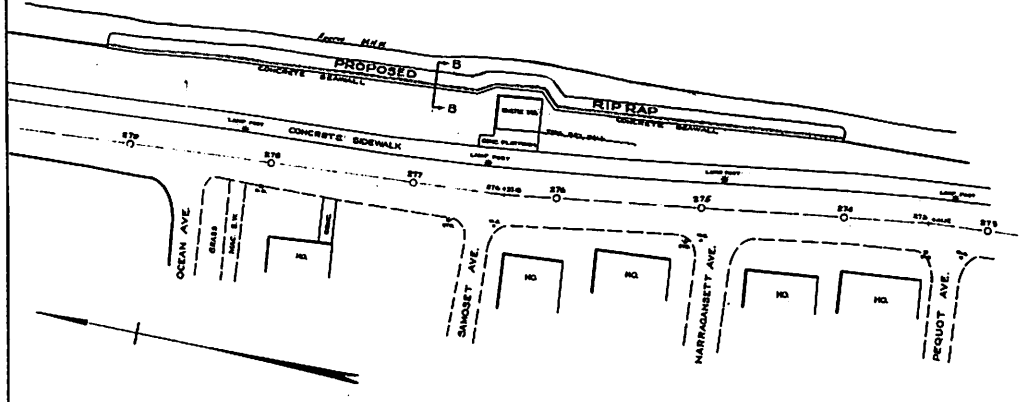
DPW License under Contract #870, dated March, 1945



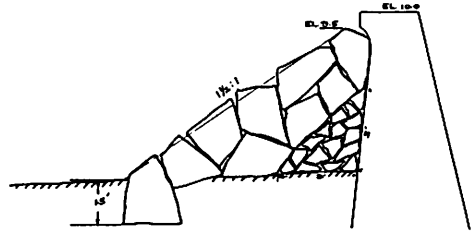
PLAN NORTH OF STEAMBOAT WHARF
SCALE 1-500



SECTION A-A
TYPICAL
SCALE ½"=1'



PLAN SOUTH OF STEAMBOAT WHARF
SCALE 1"=40'



SECTION B-B
TYPICAL
SCALE ½"=1'

PROPOSED WORK SHOWN IN RED

PROPOSED RIPRAP PROTECTION FOR SEAWALLS

OAK BLUFFS

DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS

DECEMBER 1945

SCALES AS NOTED

DISTRICT WATERWAYS ENGINEER

CONTRACT NO. 870

ACC. 02491

Exhibit H

Plans entitled, "North Bluff Seawall Repair and Harbor Access As-Built Plan Exhibit" dated June 4, 2018 prepared by FOTH-CLE Engineering Group.

LEGEND

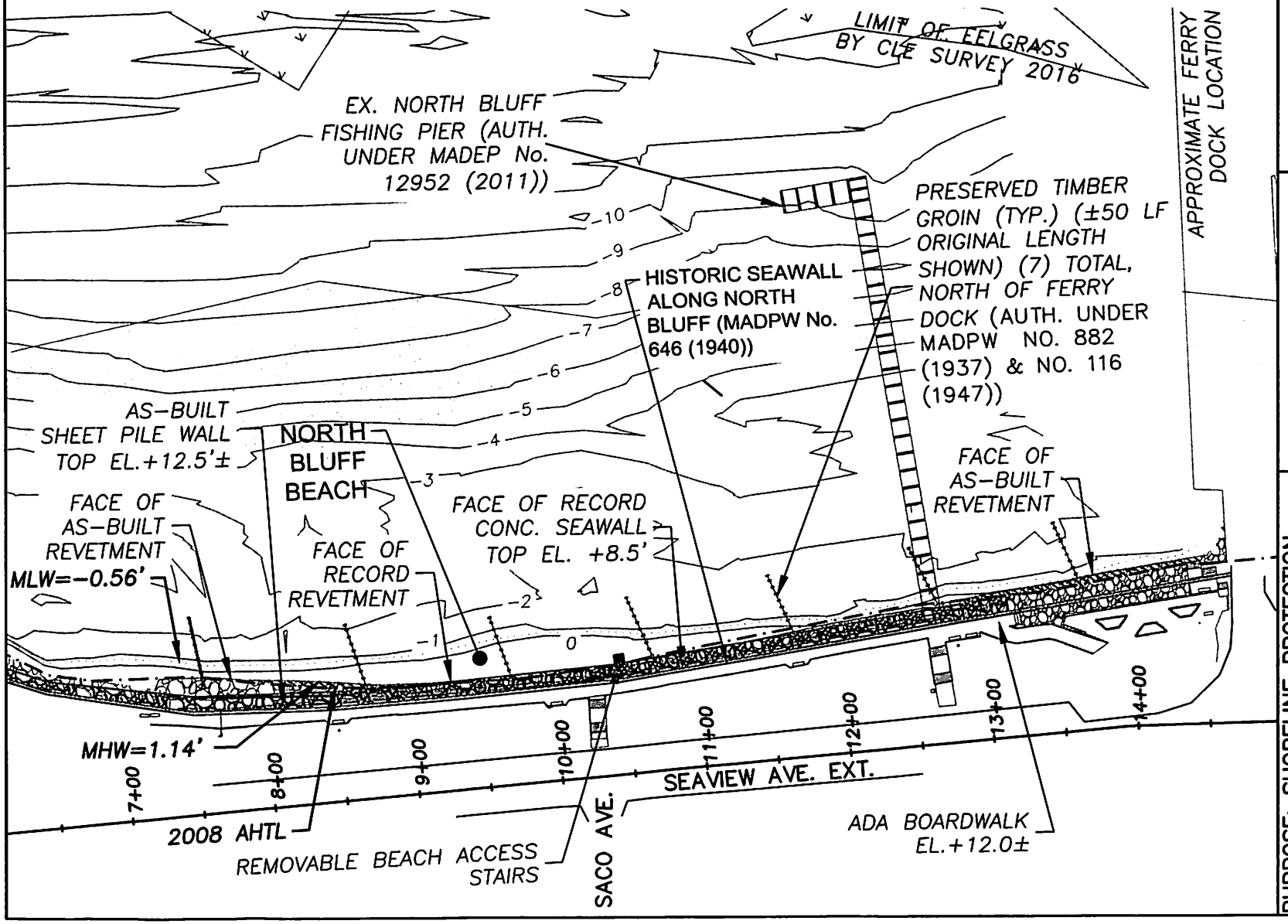
—·— =AHTL 8/20/2008 (PRE-CONSTRUCTION)

=AS-BUILT AREA SEAWARD OF 2008 AHTL (.02 AC)

=RECORD SEAWALL/REVETMENT FOOTPRINT

NOTES

1) AS-BUILT SURVEY PERFORMED ON 9/15/16
2) CONTOURS NOT SHOWN LANDWARD OF SHORELINE PROTECTION STRUCTURES FOR CLARITY PURPOSES,



AFTER THE FACT FILING FOR NORTH BLUFF SEAWALL
AT: OAK BLUFFS
COUNTY OF: DUKES
APPLICATION BY: TOWN OF OAK BLUFFS
DATE: 6/4/18 SHEET 1 OF 1

NORTH BLUFF SEAWALL
AS-BUILT EXHIBIT

GRAPHIC SCALE
0 50 100

PURPOSE: SHORELINE PROTECTION
DATUM: MLW = -0.56
NGVD29 = 0.0
MHW = 1.14
AHTL = 2008 SHOWN
FOTH-CLE ENGINEERING GROUP
15 CREEK RD. MARION, MA 02738

U.S. Army Corps of Engineers (USACE)

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 01-08-2018

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: http://dpcld.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Middle - Last -	First - Middle - Last -
Company - Town of Oak Bluffs	Company - Foth-CLE Engineering Group
E-mail Address - edurkee@oakbluffsma.gov	E-mail Address - Michael.Count@Foth.com
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address- 56 School Street	Address- 15 Creek Road
City - Oak Bluffs State - MA Zip - 02557 Country - USA	City - Marion State - MA Zip - 02738 Country - USA
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax
(508)693-3554 x204 (508) 696-7736	(508) 748-0937 (508) 748-1363

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Foth- CLE Engineering Group to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Beach Nourishment & Groin & Jetty Rehab. at Jetty Beach, N. Bluff, Pay, and Inkwell Beaches & ATF Auth. of N. Bluff Seawall/Access

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Atlantic Ocean/Nantucket Sound	Address Sea View Ave. Ext./Sea View Ave.
15. LOCATION OF PROJECT	City - Oak Bluffs State- MA Zip- 02557
Latitude: •N 41 deg 27' 42.12" to 41 d Longitude: •W 70 deg 33' 30.82" to 70	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID Municipality

Section - Township - Range -

17. DIRECTIONS TO THE SITE

Site is located immediately adjacent to the Steamship Authority/Oak Bluffs ferry terminal.

18. Nature of Activity (Description of project, include all features)

Implementation of a comprehensive beach nourishment program and rehabilitation of existing jetties/groins along 4 public beaches. Approximately +/-53,564 CY of compatible material will be placed within a total footprint area of +/-10.2 acres. Existing/previously authorized coastal structures will be rehabilitated to contain and ensure stability of the beach nourishment effort. Details pertaining to the proposed nourishment and rehabilitation of structures have been previously submitted on February 8, 2018.

After-the-Fact (ATF) authorization of the North Bluff Seawall and Harbor Access Project. This project includes the rehabilitation/repairs of damaged/failed authorized shoreline protection structures including a seawall and stone rip rap along with improvements to public access along the shoreline which includes a harborwalk which is compliant with the American Disabilities Act (ADA).

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The Beach Nourishment and Groin and Jetty Rehabilitation Project will provide protection of the existing coastal banks, public/private infrastructure located along Sea View Ave. Ext./Sea View Ave. and restore/enhance public beaches. Pending the availability of funds, construction is anticipated to start in the Fall 2018 and completed by Spring 2019. Construction may need to be phased into subsequent calendar years due to limitation of funds.

The North Bluff Seawall and Harbor Access Project restores damaged/failed shoreline protection structures to ensure adequate stability/ protection to existing public infrastructure (including Seaview Ave./Extension and utilities) and adjacent private properties and improves public access along the Oak Bluffs coastline.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Beach Nourishment and Rehabilitation of Coastal Structures to provide shoreline protection of coastal bank and public/private infrastructure and to enhance/restore public beach areas.

After the Fact: Structures outside of historic seawall/revetment footprint = .09 acres, Structures seaward of 2008 AHTL= .02 acres

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
SAND +/- 46,871 CY below HTL	Stone +/- 500 tons below HTL (net increase)	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres Total Area= 7.6 acres below HTL [Beach Nourishment=7.6 acres; Coastal Structure = -.06 ac. (net decrease)

or

Linear Feet After the Fact Structures outside of historic footprint = .09 acres

23. Description of Avoidance, Minimization, and Compensation (see instructions)

24. Is Any Portion of the Work Already Complete? ☒ Yes ☐ No IF YES, DESCRIBE THE COMPLETED WORK

Permit application includes the After-the-Fact (ATF) authorization of the North Bluff shoreline protection and public access structures along Seaview Ave./Extension which was completed by the Town in July 2016.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- East Chop Beach Club, P.O. Box 333

City - Oak Bluffs State - MA Zip - 02557

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
MEPA	ENF	EEA#14809	10/17/11	11/23/2011	
Oak Bluffs Con Com	Order of Conditions	SE 053-0643	2011-10-07	2017-09-12	
DEP	Ch 91 License	#X236364	11/4/11	pending	
DEP	WQC	#X236365	11/4/11	pending	

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Board of Selectmen Meeting
Town Hall Meeting Room
May 17, 2017
Present: Chairman Kathleen Burton, Selectmen Brian Packish, Gregory Coogan, Michael Santoro. Also present: Town Administrator Robert Whritenour, Administrator Alice Ryan Butler. Absent: Selectman Gail Barmakian.

Meeting called to order at 4:01 p.m.

Discussion and possible vote on the decision of the MADAC moped complaint.
This is the same decision presented by Attorney Rappaport. No questions were asked of the Attorney.
Selectman Santoro motioned to approve the MADAC decision as presented by Town Counsel, seconded by Selectman Coogan. Vote was three in favor, Selectman Packish abstained.

Discussion and possible vote on the decision regarding requests for waiver of the moped test track by-law requirement.
Attorney Rappaport drafted a decision based on the decision of the Board of Selectmen so as to have a written record.
Chairman Burton read the Decision Re: Petitions for waiver of On-Site Training Track.
Selectman Packish motioned to approve the decision as read by the Chairman (attached), seconded by Selectman Santoro. Vote was unanimous.

Executive Session
Chairman Burton motioned to enter into Executive session to discuss strategy with respect to litigation if an open meeting may have a detrimental effect on litigating position of the public body and the chair so declares, not to reconvene in public session, seconded by Selectman Coogan.

Chairman Burton Aye
Selectman Coogan Aye
Selectman Packish Aye
Selectman Santoro Aye

Selectman Coogan motioned to adjourn at 4:46 p.m., seconded by Selectman Packish

Chairman Burton Aye
Selectman Coogan Aye
Selectman Packish Aye
Selectman Santoro Aye

Respectfully submitted,

Alice Ryan Butler
Administrator