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SUBJECT: Fiscal Impact of Proposed Northeastern Facility
Town of Nahant, MA

Purpose and Understanding

RKG Associates, Inc. (RKG), a real estate planning and economic development consulting firm, was contracted by KP Law on the behalf of the Town of Nahant to provide an independent review of a preliminary financial analysis by the Nahant Board of Selectmen (BOS) with respect to a Northeastern University (NU) proposal to construct a 55,000 SF facility as part of their existing marine research campus on East Point in Nahant. ¹

As RKG understands the issue, the Town is seeking to acquire property on the east end of Nahant, now owned by NU and proposed for additional development and build-out. The Town desires to preserve the property and public access to it in perpetuity, either through a negotiated agreement with NU or through the use of eminent domain, using a combination of private donations and Town bonding supported by the use of Community Preservation Act funds. This approach by the Town is described in a report issued by the BOS in March of this year.² The area sought by the Town includes the existing Murphy Bunker, currently used by NU, and directly abuts the Town-owned Henry Cabot Lodge Park.

According to the documents reviewed and research undertaken by RKG for this analysis, NU is proposing to construct an approximate 55,000 square foot research and teaching facility, on and adjacent to the underground Murphy Bunker, as well as other improvements to the property. According to NU's various regulatory filings under the Massachusetts Environmental Policy Act (MEPA),³ the proposed project will purportedly result in a doubling of the number of personnel now working at the site, from 114 to 228, consisting of faculty, staff and graduate student researchers. As a qualifying not-for-profit educational institution, under state rules, NU is exempt, with limited exceptions, from local property taxes as well as local zoning codes under G.L. Chapter 40A, Section 3 (the "Dover Amendment").

At the outset, RKG's review of the document offered by the BOS (the Report), notes that it is well presented in a summary format, and was supported by worksheets detailing the assumptions used and calculated findings that were provided separately.⁴ The Report

¹ *Preserving East Point as a Wildlife Preserve*, Second Statement of the Nahant Board of Selectman, prepared by the Nahant Board of Selectmen, dated June 23, 2020.

² *Taking the First Step in Saving East Point as a Wildlife Preserve FINAL*, dated March 19, 2020.

³ These documents include the final *Environmental Notification Form*, dated May 31, 2019; the *Supplemental Memorandum to the ENF* dated July 9, 2019 and the *Final Environmental Impact Report*, EEA#16046, March 16, 2020.

⁴ *Northeastern - financial impact to Town5.xlsx*, provided to RKG by Robert Vanderslice, a member of the Advisory and Finance Committee.

concludes that the proposed NU expansion will have a serious detrimental fiscal impact on the Town as a result of increased municipal service costs and capital improvements for infrastructure required to support the additional activity resulting from the construction and operation of the proposed facility.

The Report concludes that the proposed NU facility will result in total additional costs to the Town of between \$16.9 and \$21.7 million over a 40-year period. These costs include additional municipal operating expenses as well as recurring upgrades and improvements to the Town's sewer and road infrastructure. The Report also discusses a potential loss of property values in the vicinity of the NU project, and the impact on the Town's tax base, but does not include these estimates in the final tally of costs. The Report discusses Payments in Lieu of Taxes (PILOTs) as a means of having NU, as a not-for-profit institution not subject to property taxes, pay for its share of the purported costs, as is done in other jurisdictions. It further describes an apparent offer by NU to offset any costs to the Town of \$6 million paid over a 40-year period. The Report states in a footnote that "*There is no proposal pending, and it is not clear that Northeastern would be willing to make such a proposal at this time.*" No documentation memorializing this offer was provided and it is therefore not considered further in this analysis.

As a preliminary review of the materials provided to or obtained by RKG, and conversations with the department heads from fire, police and public works, we offer the following:

Municipal Service Costs

The Report estimated potential operating costs associated with the NU expansion by utilizing a per capita average cost approach. This methodology calculated the average cost of providing services across many of the various Town departments, as laid out in the Town budget statements, and divided by the Town's population, resulting in an average cost of \$2,835 per person, as indicated in Table 1 below. This total excludes education costs which are assumed not to be impacted by the project.

This per capita cost was then multiplied by the reported number of new employees at the new NU facility (114), resulting in an annual cost of \$323,139, which was then added over a 40-year period (without inflation) to total \$13.3 million. This same methodology was also used to calculate the impacts using the higher employment estimate reported in NU's initial ENF/DEIR filing of 147, resulting in a forty-year total cost of \$17.2 million. Applying a 2.5 percent inflation rate to this 40-year total increases the costs to \$22.4 million and \$28.9 million, respectively. The report only looked at the new facility and did not include the existing 114 employees at the NU Marine Research Center, who by extension are costing the Town an equivalent amount to support on an annual operating cost basis.

Table 1		
General Fund Expenditures		per capita
Public safety	\$2,818,800	\$802
DPW	\$565,210	\$161
Debt	\$865,137	\$246
State assessments	\$236,357	\$67
Debt shift and stabilization	\$1,483,384	\$422
Health and retirement	\$2,388,472	\$680
Town Government	\$1,600,413	\$456
Total	\$9,957,773	\$2,835

Source: supporting spreadsheet for 6/23/20 BOS Statement

The methodology utilized in the report by the BOS assumed that employees at the NU are the equivalent of residents – implying that they utilize municipal services in a similar fashion. According to NU’s filings, the research and education activities at the facility take place on a continual daily basis over the course of the year. As such, there is activity at the facilities at all times, requiring the Town to provide services on a 24/7, 365 day basis, similar to residents.

Although NU’s MEPA filing indicated a total of 114 new staff, faculty and student researchers, the size of the proposed facility warrants a discussion of other activities that could take place within it and estimates of its maximum supportable capacity. As a research and teaching facility, it is likely to be utilized in a variety of different ways – for conducting on-going research in its labs, for teaching classes or hosting educational seminars and conferences, or potentially for other uses such as office space. As NU is exempt from strict conformance with Nahant’s Zoning Bylaw, it could conceivably use the facility for virtually any use that supports the University’s educational mission.

An analysis undertaken by two MIT faculty members (and Nahant residents) for the Nahant Preservation Trust (NPT)⁵ concluded that the proposed facility was over-sized for the uses described in NU’s filings, and that the uses proposed could be accommodated in a building of 30,479 to 35,734 gross square feet. Based on the proposed 114 faculty, staff and students that will be at the facility, this amounts to 267 to 313 square feet per person. Applying these factors to the proposed 55,000 square foot facility indicates that it could support 175 to 205 people.

Similarly, if the proposed 55,000 square foot facility is built for use as traditional office space, and applying industry standards of a 75 percent efficiency factor (i.e. 25 percent of the space is for circulation, bathrooms, storage and mechanical systems) and an average occupancy of 250 square feet per employee, the facility could support as many as 165 employees.

⁵ 5 Nahant Preservation Trust Response to Northeastern University’s Coastal Sustainability Institute Draft Environmental Impact Report, Alternative 1 Review, Dec. 31,2019 (Ex.2 Alternatives analysis.pdf)

There are several approaches available for determining fiscal impacts; all based on the same general assumptions:

- First, current local operating costs and revenues are the best basis for determining future costs and revenues.
- Second, the proposed project is at full build-out and occupancy. This allows for a comparison of the financial effect of the entire project on municipal costs and revenues, as if existing today. While many projects are constructed over a multi-year period, municipal costs and revenues generally occur in equal proportions, therefore this steady-state approach does not detract from the appropriateness or accuracy of this method.
- Third, costs should be directly or indirectly related to the proposed project based on relevant metrics such as usage, activity, or size and to other similar types of uses in the community.

It should also be noted that fiscal impact analysis is only concerned with local public costs and expenditures. All state aid, grants, and non-local one-time sources of revenue are removed from the calculations. Further, fiscal impact analysis focuses on the Town's general fund, which directly impacts the community's tax base. Although specialized funds, such as utility enterprise funds, may also be impacted, those impacts are treated separately from the general fund

RKG used the same average per capita approach to estimate the municipal service costs, utilizing data from the Town's Fiscal Year 2019 general fund expenditures as reported in the Town's published financial statements. These costs were then adjusted as follows:

- Education costs were not included since no school-age children are expected to live at the NU facilities.
- Pension and benefit costs were reduced by subtracting the proportional share of education-related costs (33% of general fund expenses).
- Debt service costs were reduced by subtracting school-related debt share of total debt (27%).

The results of RKG's adjustments are shown in Table 2 below and total \$1,931 per capita.

	2019 General Fund	Adjusted	Per Capita
General Government	\$1,354,329	\$1,354,329	\$386
Public Safety	\$2,653,444	\$2,653,444	\$755
Education (1)	\$3,771,071	\$0	\$0
Public Works	\$464,747	\$464,747	\$132
Health & Human Services	\$83,108	\$83,108	\$24
Culture and Recreation	\$287,562	\$287,562	\$82
Pension Benefits (2)	\$834,826	\$556,265	\$158
Employee Benefits (2)	\$934,405	\$622,617	\$177
Insurances	\$214,570	\$214,570	\$61
State and County Charges	\$128,930	\$128,930	\$37
Debt Service (3)	\$574,611	\$419,505	\$119
Total	\$11,301,603	\$6,785,076	\$1,931
(1) - Education costs excluded			
(2) - Adjustment for Education Share of Benefits			
(3) - Adjustment for Education Share of Debt Service			
Source: Nahant FY19 Financial Statements, RKG Associates			

This per capita cost can then be multiplied by the anticipated users of the proposed NU facility to estimate the total annual municipal service costs to the Town of Nahant associated with it use. Based on the discussion above, the population of the facility and the estimated fiscal impacts has been split into three scenarios:

- Low – 114, the number of users reported in NU’s recent documentation
- Medium – 147, the number reported in NU’s earlier EIS/MEPA filings
- High – 205, the maximum occupancy based on the analysis undertaken by NPT.

These totals are shown below in Table 3.

Scenario	Population	Annual Cost	40 Year Total (constant dollars)	40 Year Total (2.5% inflation)
Low	114	\$220,182	\$8,807,272	\$14,840,816
Medium	147	\$283,919	\$11,356,746	\$19,136,842
High	205	\$395,941	\$15,837,639	\$26,687,432
Source: RKG Associates				

Because Northeastern does not pay property taxes or otherwise contribute to the Town’s general fund revenues, the net fiscal impact on the Town is negative. This analysis further implies that the existing NU facility, with 114 employees, is also costing the town over \$220,000 annually to provide municipal services.

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Under the assumptions presented in Table 3, and reflecting the inflation adjusted 40-year term, estimated municipal costs could range from \$14.8 million to \$26.7 million, as contrasted to the range of \$22.4 million to \$28.9 million in the Report.

These results, and the methodology used in the BOS report, assumes that the NU facility and its personnel uses municipal services in a manner equivalent to that of full-time residents. This is likely true for services such as public safety (which protects lives and property around the clock) and public works. It can be argued that other municipal activities, for example general administrative services such as voter registration or public health services, and fixed costs such as debt service or pension benefits, are not utilized. While this may be true in the short term, over the 40 year period used in the BOS report, all of the Town's general fund expenditures would be impacted by the increase in population and the additional structures/facilities located at NU's East End campus.

Capital Costs

The BOS report indicated that the proposed NU project would require the Town to incur capital costs to undertake major infrastructure projects "*that the Town has no plans to make without the Northeastern project*".⁶ These projects include \$12 million for sewer upgrades, \$750,000 for a pump station upgrade, \$500,000 for repaving Nahant Road and \$800,000 for repair work to the 40 Steps revetment wall. Only the latter three projects were considered directly attributable to the NU project in the report and were assumed to be bonded for either 10 or 20 years and the debt service cost over the 40-year period, which totaled \$2.95 million, was applied as a project cost. No engineering studies that directly tie these impacts to the project were referred to in the Report.

The capital improvements described in the BOS Report would benefit the NU facility (existing and as proposed) and would also benefit other residents and visitors to Nahant. There was no indication provided that the additional estimated 175 vehicle trips generated by the proposed project (as reported in the DEIS) or wastewater generated by the 114 additional employees would result in failure of these infrastructure components. However, it was indicated by the current and the former DPW directors that one of the pump stations serving the East End is at capacity and will need to be replaced should additional flow be added to the system.

Analyzing infrastructure needs and costs is outside RKG's scope and expertise. In order to accurately and fairly allocate potential capital costs for infrastructure to the proposed NU project, RKG recommends that detailed traffic (including on-going daily use and use during construction of the project) and water/sewer usage studies be conducted that specifically calculate the impacts to and costs to repair or upgrade the infrastructure components cited in the BOS Report.

⁶ Financial Summary page 13 from BOS Report.

Other Revenues

If the project proceeds, NU will be required to pay certain fees for the required building permit to cover the costs of inspections and reviews over the course of construction. Based on the Town's current fee schedule, the building permit fee of \$12 per \$1,000 of cost will generate significant revenue that can be used to offset any additional costs associated with the review and inspection of the building process.

The BOS Report estimated that the cost of the 55,000 square foot building would be on the order of \$55 million, or \$1,000 per square foot. RKG believes this amount to be overstated. Based on construction costs derived from published sources and comparison to other research and educational facilities, RKG estimates the construction cost to be on the order of \$18 million (approximately \$330 per square foot or one-third of that in the Report), resulting in a one-time building permit fee payment of approximately \$220,000. This revenue would be used by the Town for expenses relating to inspections. Commercial construction projects of this magnitude typically include internal inspections and code review by the architects and engineers responsible for the project, or include independent outside review, thereby reducing the amount of effort required by the Town's building inspections staff.

The BOS Report also discussed the alleged NU incentive payment of \$6 million over 40 years. Without a formal proposal or offer from NU to the Town, RKG has not analyzed this further.

Other Considerations

The BOS Report also refers to other potential costs associated with the proposed NU project that would be incurred by the Town. These included the potential reduction in property values to nearby homes during the period of construction, and the resulting shift of the property taxes lost onto the rest of the Town's tax base. RKG is not aware of any studies, reports or research that can be used to definitively estimate the impact to housing values and to assessed values. While such an impact is possible in theory, in today's economic environment of rapidly rising home values, Nahant's unique market position and the relatively short-lived period of construction (the actual impacts of which have not been determined), any impact on prices is likely to be negligible, with any impact more related to a property's time on market than price. Any linkage of property value to the construction of the proposed NU facility will require significant additional analysis by a highly qualified specialist based on specific parcels and a detailed construction schedule and plan.

Lastly, the BOS Report discussed Payments in Lieu of Taxes (PILOT) as a means of estimating what NU would pay in property taxes but for its tax-exempt status. The analysis applied the Town's tax rate of \$10.97 per thousand of assessed valuation, less that portion of the tax rate that applies to education costs (\$3.52), to the estimated value of the new facility (\$55 million), resulting in a potential revenue stream over 40-years of \$14.2 to \$18.4 million. In RKG's opinion, the assessed value of the facility, based on construction costs and comparable facilities elsewhere, would be \$20 to \$25 million including personal property (FF&E), resulting in a forgone tax revenue of approximately \$220,000 to \$285,000 annually, or \$8 to \$11 million over 40-years.

Discussions with members of the BOS and others referred to the City of Boston's PILOT formula that is applied to exempt organizations with payment requested on a voluntary basis. RKG's research indicates that Boston encourages exempt organizations to pay a minimum of what they would owe if they were taxable on their tax-exempt property value (typically about one-half of full market value but this varies by use), discounted by approximately 50 percent based on the public benefits provided. Some organizations pay their share while others do not. In FY2019, the City of Boston collected 71 percent of the PILOT requests made from educational institutions in the City.⁷

Summary and Conclusions

Based on the information reviewed and RKG's independent research, the proposed NU expansion of its Marine Research Center on East Point in Nahant will result in a negative fiscal impact to the Town's general fund of approximately \$220,000 to \$395,000 per year, depending on the population of faculty, staff and students who utilize the facility on a daily basis (in addition to the current 114 employees). This fiscal impact estimate would increase—the negative impact would be greater—if NU, now or in the future, expanded the uses and activities on the subject locus beyond that evaluated here. Given the broad latitude granted to educational institutions such as NU by G.L. c.40A, s.3 (the "Dover Amendment"), such an increase in the resulting fiscal impact is reasonably likely, although not ascertainable at this point in time.

The construction of the project will generate one-time fee revenue of approximately \$220,000 from building permit fees, which can be used to cover costs associated with inspections and reviews.

NU will also pay increased water and sewer charges based on any additional usage generated by the new facility and its employees, staff and visitors.

Without more detailed information on the Town's infrastructure systems potentially impacted by the proposed project, RKG cannot estimate any future capital costs that will result from construction and operation of the proposed NU facility.

⁷ See <https://www.boston.gov/finance/payment-lieu-tax-pilot-program>