

# Impact Fee Schedules – Town of Boscawen

2017 Update to Basis of Assessment For:

- *Public Schools*
- *Municipal Office*
- *Police Department*
- *Roads*

November 16, 2017

Prepared for:

Town of Boscawen  
116 North Main Street  
Boscawen, NH 03303

Prepared by:



P. O. Box 723  
Yarmouth, ME 04096  
bmayber1@maine.rr.com

## **2017 Impact Fee Update: Executive Summary**

The Town's original Impact Fee Schedules were supported by documentation in a report entitled, *Basis of Assessment Impact Fees for Public Capital Facilities-Town of Boscowen, New Hampshire, 2007*. That study provided a series of methods for the calculation of proportionate impact fees for selected public capital facilities, and was updated in 2012. The Town subsequently discontinued the assessment of recreation impact fees.

This 2017 update has been prepared to provide new fee schedules for public schools, the municipal office, Police Department facilities, and major local (Class V) roads. While the prior computations of impact fees included only per dwelling unit fees for residential uses, the 2017 update provides a second option which would enable impact fee assessments per square foot of living area.

The periodic updating of impact fees is necessary to ensure that the charges remain proportionate to the average demands that new development places on public facilities, and that cost assumptions are reasonably related to the public investment in related capital improvements. The revised fee schedules contained in this report are based on the original models, which have been modified and updated to 2017 conditions.

It is important to note that impact fees, as provided for in New Hampshire RSA 674:21, V can include charges for *future* capital facility needs in proportion to the demands of new development, or the fees may represent the recoupment of *past* capital facility development costs in proportion to the demand on those facilities from new development.

The tables below summarize the supportable impact fee updates for 2017 resulting from this update. Residential impact fees have been calculated per housing unit for three structural categories (the current method). A second option is shown with all fees (residential and commercial) computed per square foot of living area or finished floor area.

The assessment of impact fees to accessory dwelling units (ADUs) may require some administrative flexibility. Accessory dwelling units differ in some respects from the assessment category for two or more family structures. Boscowen zoning standards enable ADUs only in association with single family detached dwelling units. The ADU may be as small as 350 square feet but not more than 750 square feet. While a 750-square foot unit is consistent with the typical size of a two bedroom apartment, a 350 square foot unit is smaller than most one bedroom apartments and could have a much smaller impact particularly with respect to schools.

The ADU may be created by modifying the existing floor area of a single family home, by adding new living space to the parcel, or a combination of both. Therefore ADU assessment could vary depending on how the accessory dwelling unit is created (through the subdivision of existing floor area vs. entirely newly constructed space).

<b>BOSCAWEN IMPACT FEE SCHEDULE 2017</b>					
<b>Option A: Residential Per Unit; Commercial Per Square Foot</b>					
<b>Residential Fees Per Dwelling Unit</b>	Schools	Municipal Office	Police Dept	Roads	Total Impact Fees
Single Family Detached	\$4,093	\$394	\$247	\$637	\$5,371
Attached and 2+ Family	\$1,624	\$390	\$240	\$347	\$2,601
Manufactured Housing	\$2,383	\$404	\$249	\$505	\$3,541
Accessory Dwelling Unit	\$1,228	\$390	\$240	\$347	\$2,205
<b>Commercial Fees Per Square Foot</b>	Schools	Municipal Office	Police Dept	Roads	Total Impact Fees
Retail, Office, Lodging	-----	\$0.38	\$0.24	No fee though exactions may apply	\$0.62
Warehouse, Industrial	-----	\$0.20	\$0.12		\$0.32
All Other	-----	\$0.26	\$0.16		\$0.42

<b>BOSCAWEN IMPACT FEE SCHEDULE 2017</b>					
<b>Option B: All Fees Assessed Per Square Foot</b>					
<b>Residential Fees Per Dwelling Unit</b>	Schools	Municipal Office	Police Dept.	Roads	Total Impact Fees
Single Family Detached	\$2.01	\$0.19	\$0.12	\$0.31	\$2.63
Attached and 2+ Family	\$1.63	\$0.41	\$0.25	\$0.37	\$2.66
Manufactured Housing	\$2.63	\$0.41	\$0.25	\$0.51	\$3.80
Accessory Dwelling Unit	\$2.01	\$0.41	\$0.25	\$0.37	\$3.04
<b>Commercial Fees Per Square Foot</b>	Schools	Municipal Office	Police Dept.	Roads	Total Impact Fees
Retail, Office, Lodging	-----	\$0.38	\$0.24	No fee though exactions may apply	\$0.62
Warehouse, Industrial	-----	\$0.20	\$0.12		\$0.32
All Other	-----	\$0.26	\$0.16		\$0.42

Options for Accessory Dwelling Units:

In the case where an accessory dwelling unit (ADU) is created in whole or in part from existing living space within a single family unit, an appropriate assessment method may be to apply indicated square foot assessment for an ADU as shown above times the *net new living area* created.

If the accessory unit is entirely new living area that is added to the single family parcel, then either the fee per unit or fee per square foot assessment would be appropriate.

Consideration should be given to exempting small ADUs or other apartments from the school impact fee (for example, one bedroom or studio apartments of less than 500 square feet.)

## A. Impact Fee for Public Schools

### 1. Summary of Updated Fee and Alternatives

The 2017 update of the Boscawen school impact fee supports the following alternatives as impact fee assessment schedules. The current fee schedule is assessed per unit based on the type of structure. An alternative has been developed for assessments to be made per square foot of living area should the Town prefer that method of assessment. If the square foot method is used, it is recommended that the Town adopt a ceiling on the amount of the fee, or a maximum amount of living area subject to assessment. Otherwise a disproportionate assessment may occur when fees per square foot are applied to large dwelling units.

**Table 1**

2017 School Impact Fee Update: Options for Assessment		
Type of Housing Unit	Fee Per Unit	Alternative Fee Per Sq. Ft.
Single Family Detached	\$4,093	\$2.01
Attached and 2+ Family	\$1,624	\$1.63
Manufactured Housing	\$2,383	\$2.64
Accessory Dwelling Unit*	\$1,228	\$2.01

*\* Fee per unit computed @ 30% of fee for SF detached home. If fee per square foot is used, apply the fee per square foot to the net increase in total living area on the parcel after completion of the accessory unit.*

### 2. Components of Fee Update

All school facilities serving the Town of Boscawen are owned and operated by the Merrimack Valley School District. Boscawen resident pupils attend the Boscawen Elementary School, the Merrimack Valley Middle School and the Merrimack Valley High School. Impact fees assessed to new development in Boscawen may be used to recoup a portion of the District's cost to provide adequate facility space for enrollment generated in Boscawen.

The primary components of Boscawen's school impact fee assessment include:

- Average enrollment per occupied unit by structure type.
- Facility floor area requirements per pupil capacity.
- Cost to develop schools per square foot of facility space.
- Credit allowances for rectifying base year space deficiencies

### 3. Revised Estimates of Public School Enrollment Per Housing Unit

#### a. General Demographics

Table 2 provides a long term demographic history of Boscawen, with estimates for 2015 based on the American Community Survey (2011-2015 sample) and estimates using the NH Office of Energy and Planning data for 2015 population and housing stock.

**Table 2 – Town Demographics**

POPULATION AND ENROLLMENT CHANGE IN BOSCAWEN					
BOSCAWEN, New Hampshire	1990	2000	2010	2015 ACS Sample (2011-2015)	2015 Estimate Using NHOEP Pop. & Housing Estimates*
Population	3,586	3,672	3,965	3,954	3,950
Less Group Quarters	491	433	536	542	548
Population in Households	3,095	3,239	3,429	3,412	3,402
Housing Units including Vac/Seasonal	1,221	1,295	1,453	1,406	1,463
Units Vacant or Seasonal	68	35	84	59	61
Percent of Units Vacant or Seasonal	5.6%	2.7%	5.8%	4.2%	4.2%
Households (All Occupied Units)	1,153	1,260	1,369	1,262	1,402
Average Household Size	2.68	2.57	2.50	2.70	2.43
Population Under Age 5	238	207	192	249	n.a.
Population Age 5-17 (School Age)	565	633	582	554	n.a.
School Age Per Household	0.490	0.502	0.425	0.439	n.a.
Resident Public School Enrollment*	515	550	520	503	503
ADM Data Academic Year Beginning:	1990	2000	2010	2015	2015
Public School Enrolment Per Household	0.447	0.437	0.380	0.399	0.359
Sources: U. S. Census 100% count for 1990, 2000, 2010. American Community Survey 5-Yr sample estimates for 2011-2015. Boscawen resident enrollment based on ADM in residence data from NH Department of Education.					
* This column contains estimates using 2015 population and total housing units data from NH OEP as baseline.					

Based on this analysis, we would expect that the average public school enrollment in Boscawen to about 0.36 per household (average for all structure types). The average as of the 2010 Census was 0.38 per household, and the total school age population per occupied unit was 0.425 per household.

#### b. Detailed 2017 Enrollment Ratios for Boscawen

In the 2012 update, statistical adjustment was used to adjust the 2007 the original enrollment ratios based on the overall change in estimated occupied units and resident enrollment in Boscawen. In this 2017 update, enrollment counts by grade level and address was paired with

Town property assessment data to replicate the original method of computing proportionate enrollment ratios for Boscawen.

Average enrollment was computed per total housing unit and per square foot of living area. Since average enrollment is divided by total housing units to derive an enrollment ratio, the result will be somewhat lower than estimates based on *occupied* units only (households).

In the assessment system, living area is overestimated for single family homes because the data for floor area represents “effective area”, which is an adjusted figure for assessment purposes. In general, effective area of single family homes is larger than actual living area.

Consequently, both ratios will tend to generate an enrollment ratio that is somewhat lower than would result if the computation were adjusted to occupied units, and actual living area.

Tables 3 and 4 summarize the data base and the resulting enrollment ratios and average housing characteristics by type of dwelling unit. The estimated overall average enrollment per housing unit is about 0.34 for all housing units, and 0.39 for single family dwellings.

**Table 3**

Tabulation of Resident Enrollment by Structure Type - 2017										
Type of Structure	Public School Pupils				Housing Stock Totals			Housing Unit Averages		
	Elementary	Middle School	High School	Total	Housing Units	Sq. Ft. Effective Area	Assessed Valuation	Effective Area (Sq. Ft.)	Average Valuation	Valuation Per Sq. Ft.
Single Family Detached	179	83	125	387	992	2,033,000	\$196,265,047	2,049	\$197,848	\$97
Attached and 2+ Family	18	6	4	28	154	151,557	\$27,606,500	984	\$179,263	\$182
Manufactured Housing	24	15	12	51	227	205,952	\$9,826,487	907	\$43,288	\$48
<i>MH Units on Own Land</i>	4	1	2	7	38	37,624	\$4,431,017	990	\$116,606	\$118
All Housing Units	221	104	141	466	1,373	2,390,509	233,698,034	1,741	\$170,210	\$98

**Table 4**

School Enrollment Ratios By Type of Structure								
Type of Structure	Average Pupils Per Housing Unit				Enrollment Per 1000 Sq.Ft. Effective Area			
	Elementary	Middle School	High School	Total	Elementary	Middle School	High School	Total
Single Family Detached	0.1804	0.0837	0.1260	0.3901	0.0880	0.0408	0.0615	0.1904
Attached and 2+ Family	0.1169	0.0390	0.0260	0.1818	0.1188	0.0396	0.0264	0.1847
Manufactured Housing	0.1057	0.0661	0.0529	0.2247	0.1165	0.0728	0.0583	0.2476
<i>MH Units on Own Land</i>	0.1053	0.0263	0.0526	0.1842	0.1063	0.0266	0.0532	0.1861
All Housing Units	0.1610	0.0757	0.1027	0.3394	0.0924	0.0435	0.0590	0.1949

Tables 5 and 6 compare the enrollment ratios for single family detached homes by year built. Data for housing units built 1990 or later and for 2000 or later show significantly higher enrollment ratios for the newest units compared with the entire single family housing stock. New development has continued to be associated with enrollment generation that is above the overall average for all existing units in the Town.

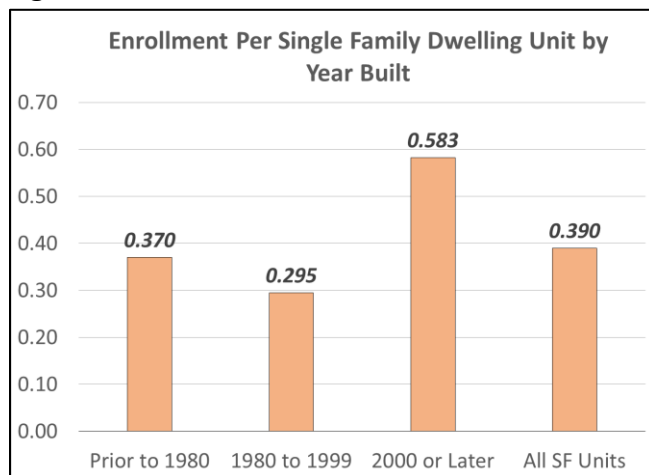
**Table 5**

Tabulation of Resident Enrollment in Single Family Units by Year Built - 2017										
Single Family Detached Homes by Year Built	Public School Pupils				Housing Stock Totals			Housing Unit Averages		
	Elementary	Middle School	High School	Total	Housing Units	Sq. Ft. Effective Area	Assessed Valuation	Effective Area (Sq. Ft.)	Average Valuation	Valuation Per Sq. Ft.
Prior to 1980	116	56	78	250	675	1,360,357	\$125,294,938	2,015	\$185,622	\$92
1980 to 1999	20	12	17	49	166	338,428	\$34,341,201	2,039	\$206,875	\$101
2000 or Later	43	15	30	88	151	334,215	\$36,628,908	2,213	\$242,576	\$110
All Single Family Units	179	83	125	387	992	2,033,000	\$196,265,047	2,049	\$197,848	\$97
1990 or Later	49	18	36	103	199	427,671	\$46,688,766	2,149	\$234,617	\$109

**Table 6**

School Enrollment Ratios for Single Family Homes by Year Built								
Single Family Detached Homes by Year Built	Average Pupils Per Housing Unit				Enrollment Per 1000 Sq.Ft. Effective Area			
	Elementary	Middle School	High School	Total	Elementary	Middle School	High School	Total
Prior to 1980	0.1719	0.0830	0.1156	0.3704	0.0853	0.0412	0.0573	0.1838
1980 to 1999	0.1205	0.0723	0.1024	0.2952	0.0591	0.0355	0.0502	0.1448
2000 or Later	0.2848	0.0993	0.1987	0.5828	0.1287	0.0449	0.0898	0.2633
All Single Family Units	0.1804	0.0837	0.1260	0.3901	0.0880	0.0408	0.0615	0.1904
1990 or Later	0.2462	0.0905	0.1809	0.5176	0.1146	0.0421	0.0842	0.2408

**Figure 1**



Tables 7 and 8 compute enrollment averages for single family homes based on the number of bedrooms. This is provided for comparative and informational purposes only. A bedroom basis has not been used to compute impact fee assessments in Boscawen.

The average enrollment per single family home is about the same as that of the average three bedroom unit (about 0.39 to 0.40 per home), while a four bedroom single family unit can be expected to have an average enrollment ratio of about 0.54 per unit, or about 35% higher than the average single family unit. Should the Town wish to assess fees that would capture more revenue from larger units, it is recommended that this be accomplished using an assessment per square foot of living area, rather than a fee based on bedrooms, which is more difficult to define in the assessment process.

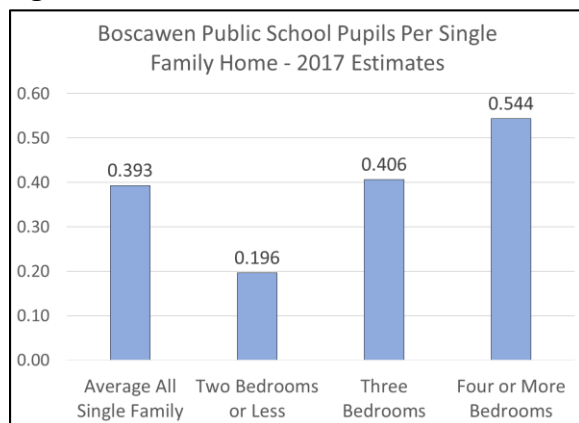
**Table 7**

<b>Tabulation of Resident Enrollment In Single Family Units by Number of Bedrooms -2017</b>										
Single Family Detached Homes by Number of Bedrooms	Public School Pupils				Housing Stock Totals			Housing Unit Averages		
	Elementary	Middle School	High School	Total	Housing Units	Sq. Ft. Effective Area	Assessed Valuation	Effective Area (Sq. Ft.)	Average Valuation	Valuation Per Sq. Ft.
One Bedroom	0	1	0	1	25	30,400	\$4,316,075	1,216	\$172,643	\$142
Two Bedrooms	25	7	10	42	194	295,614	\$33,392,605	1,524	\$172,127	\$113
Three Bedrooms	92	43	78	213	524	998,308	\$99,576,545	1,905	\$190,032	\$100
Four or More Bedrooms	62	32	37	131	241	677,545	\$56,048,022	2,811	\$232,564	\$83
Total/Average	179	83	125	387	984	2,001,867	\$193,333,247	2,034	\$196,477	\$97

**Table 8**

<b>School Enrollment Ratios for Single Family Homes by Number of Bedrooms</b>								
Single Family Detached Homes by Number of Bedrooms	Average Pupils Per Housing Unit				Enrollment Per 1000 Sq.Ft. Effective Area			
	Elementary	Middle School	High School	Total	Elementary	Middle School	High School	Total
One Bedroom	0.0000	0.0400	0.0000	0.0400	0.0000	0.0329	0.0000	0.0329
Two Bedrooms	0.1289	0.0361	0.0515	0.2165	0.0846	0.0237	0.0338	0.1421
Three Bedrooms	0.1756	0.0821	0.1489	0.4065	0.0922	0.0431	0.0781	0.2134
Four or More Bedrooms	0.2573	0.1328	0.1535	0.5436	0.0915	0.0472	0.0546	0.1933
Total/Average	0.1819	0.0843	0.1270	0.3933	0.0894	0.0415	0.0624	0.1933

**Figure 2**





#### 4. Facility Space Per Pupil

Table 9 illustrates the capacity and enrollment in the public schools serving the Town of Boscawen. At the time of the original impact fee study, the Merrimack Valley School District was anticipating the passage of a bond issue that would allow for its long-term facility plans to be implemented at the middle school and high school level and at several elementary schools in the district. A combination of renovations and additions to the Merrimack Valley Middle School and high school complex in 2007 enabled the upgrading and expansion of capacity of both classroom and core facilities.

As of the e October 2016 enrollment counts, the Boscawen Elementary School operates at 60% of maximum capacity, the Middle School at 82%, and the High School at 84% (overall facilities serving Boscawen at 79% of capacity). Therefore, reserve capacity is available to serve additional needs if enrollment should increase, and there is available capacity to absorb enrollment generated by new development.

The spatial standards used to assign estimated floor area per pupil capacity **134** square feet per pupil capacity for elementary and middle school space and **141** square feet per pupil capacity for the high school. These remain the same as in the 2007 study, reflecting the capacity assumptions provided by the Merrimack Valley School District at that time.

#### 5. Capital Cost of School Development

In the original 2007 impact fee study, the average capital cost for school construction was estimated at \$155 per square foot for K-8 schools, and \$172 per square foot for the high school. These values reflected Merrimack County cost allowances issued by the New Hampshire Department of Education. The cost allowances were used as part of the process of determining maximum eligible state building aid for the public schools, using reasonable assignments for the expected costs for quality school construction, exclusive of land, site work and furnishings.

The most recent cost standards issued by the New Hampshire Department of Education (for use in association with State Building Aid) reflect construction cost estimates for 2015. The maximum allowable costs in Merrimack County for 2015 were \$200 per square foot for elementary schools, \$203 per square foot for middle schools, and \$221 per square foot for high school facilities.

In this update, the adjustment of construction costs has been based on the time adjustment factors in the 2017 edition of RS Means Square Foot Costs applied to the original model estimates. The adjusted cost as of January 2017 based on the RS Means index is assigned at **\$196** per square foot for elementary and middle school space and **\$217** per square foot for high school facility space.

**Table 9**

MERRIMACK VALLEY PUBLIC SCHOOL FACILITIES SERVING BOSCAWEN PUPILS								
School Facilities	Original Yr. Built & Expansion Dates	Grades Served	Buidling Area Gross Sq. Ft.	Maximum Capacity Estimate	Square Feet Per Pupil Classroom Capacity	October 2016 Enrollment in Schools	2016 Enrollment as % of Classroom Capacity	Notes
<b>ELEMENTARY SCHOOL</b>								
Boscawen Elementary	Built 1996	Pre-K to 5	55,000	400	138	238	60%	Original design concept included four more classrooms; further expansion possible at the site. Enrollment includes 23 in Pre-K program.
<b>MIDDLE SCHOOL</b>								
Merrimack Valley Middle School	1987, 1990 addition, 2007 expansion	Grades 6-8	92,500	700	132	573	82%	Long term facility plan indicated need for 13,500 s.f. to achieve capacity of 700. Net floor added as part of 2007 expansion: 17,500 s.f. Added 8 permanent classrooms, renovated and expanded core.
Total K-8 Facilities available to Boscawen		Pre-K to 8	147,500	1,100	134	811	74%	
<b>HIGH SCHOOL</b>								
Merrimack Valley High School	1964, 2007 expansion	Grades 9-12	141,000	1,000	141	840	84%	A 28,000 square foot expansion in 2007 added 8 permanent classrooms; work inlcuded expanded core facilities and renovation. Long term Facility Needs Study (2004) indicated net additional space of 27,500 s.f. needed to achieve capacity for up to 1000 students.
Total For Schools Serving Boscawen		Pre-K to 12	288,500	2,100	137	1,651	79%	
Sources: Merrimack Valley School District staff interviews; <i>Educational Program and Analysis of Facility Needs for Grades 6-12</i> , NHSAA, January 2004; <i>Educational Specifications for Additions and Renovations</i> (2004, MV School Board Facilities Committee); 2012 Annual Report, Merrimack Valley School District								

## 6. Credit Allowances

### a. Credits Per Dwelling Unit.

Tables 10 and 11 computes credit allowances for past tax payments on the original debt service for the construction of the Boscawen Elementary School from calendar year 1995 through 2004. The present worth of past payments has been updated to 2017 values and expressed as a credit per thousand dollars of assessed valuation based on the Town's net local assessed valuation as of 2016. This credit allowance is applied to estimated raw land value (pre-development) for past taxes paid by vacant land toward school capacity.

A second credit involving both past and future payments is computed in Tables 12 and 13. These allowances reflect credits for a portion of the District bonds for middle school and high school improvements and expansion. At the time of the original study, it was estimated that about 19% of the total cost of this project was attributable to rectifying base year space deficiencies that existed prior to the improvement and expansion of the schools of the two schools. Therefore, a credit allowance is provided for the portion of Boscawen's cost for rectifying those pre-existing needs.

The present value and present worth of past payments and anticipated future payments have been computed using a discount rate of 5%. Table 14 summarizes the total credit allowances per housing unit for the 2017 fee update.

**Table 10 – Credit Allowance 1**

**SCHOOL IMPACT FEE CREDIT ALLOWANCES  
PAST PAYMENTS ON DEBT SERVICE FOR EXISTING CAPACITY**

**Boscawen Elementary School Construction (1996)**

Original Debt: \$5,400,000 (Included Other Projects)  
Interest Rate(s) 5.3% (estimated)

**ASSUMPTIONS**

State Building Aid To District: 55.0% Of Principal Due on Bonds  
Boscawen Share of Net District Cost 25.37% For capital outlay and debt service (2006 basis)  
Discount Rate: 5.0%

**PAST PAYMENTS**

Calendar Year	Annual Principal Payment	Interest Payment	Total Payment	Less State Building Aid	Net Debt Service Cost To District	Elementary School Construction Portion @ 80% of Bond	Net Debt Service Cost Paid by Boscawen
1995	\$550,000	\$286,200	\$836,200	(\$302,500)	\$533,700	\$426,960	\$135,400
1996	\$550,000	\$257,050	\$807,050	(\$302,500)	\$504,550	\$403,640	\$128,004
1997	\$550,000	\$227,900	\$777,900	(\$302,500)	\$475,400	\$380,320	\$120,609
1998	\$550,000	\$198,750	\$748,750	(\$302,500)	\$446,250	\$357,000	\$113,214
1999	\$550,000	\$168,025	\$718,025	(\$302,500)	\$415,525	\$332,420	\$105,419
2000	\$550,000	\$139,975	\$689,975	(\$302,500)	\$387,475	\$309,980	\$98,302
2001	\$550,000	\$111,924	\$661,924	(\$302,500)	\$359,424	\$287,539	\$91,186
2002	\$550,000	\$83,600	\$633,600	(\$302,500)	\$331,100	\$264,880	\$84,000
2003	\$550,000	\$54,450	\$604,450	(\$302,500)	\$301,950	\$241,560	\$76,605
2004	\$450,000	\$24,750	\$474,750	(\$247,500)	\$227,250	\$181,800	\$57,653

Present Worth of Past Payments @ 5% \$2,242,058  
Boscawen Net Local Assessed Valuation (Fall 2016) \$235,838,863  
Past Payment Credit Per \$1000 Valuation of Raw Land \$9.51

**Table 11**

Housing Type	Average Assessed Value Homes Built 1990 or Later	Raw Land Assessed Value Per Unit Est. @ 13%	Past Payment Credit
Single Family Detached	\$235,000	\$30,550	(\$291)
Attached and 2+ Family Structures	\$179,000	\$23,270	(\$221)
Manufactured Housing	\$117,000	\$15,210	(\$145)

**Table 12 – Credit Allowance 2**

**IMPACT FEE CREDIT ALLOWANCES  
MIDDLE SCHOOL AND HIGH SCHOOL IMPROVEMENTS (PORTION)**  
**Original Bond:** \$19,836,029 2005  
**Interest Rate:** 5% to 3% 10 Years

**ASSUMPTIONS**  
 State Building Aid To District: 55.0% Of Principal Due on Bonds  
 Boscawen Share of District Capital Cost: 25.37% (Original assumption, applied to years through 2006)  
 21.00% (Cost share indicated by Boscawen CIP 2008) - applied to years 2008-2011  
 16.28% (Current ratio, applied to years 2012 or later)  
 Discount Rate: 5.0%

**PAST PAYMENTS**

Calendar Year	Principal Payment	Interest Payment	Total Payment	Less State Aid	Net Debt Service Cost To District	Portion of Cost Related to Meeting Space Deficiency @ 18.7%	Portion of Deficiency Cost Paid by Boscawen
2005	\$1,986,029	\$211,154	\$2,197,183	(\$1,092,316)	\$1,104,867	\$206,610	\$52,417
2006	\$1,985,000	\$617,825	\$2,602,825	(\$1,091,750)	\$1,511,075	\$282,571	\$71,688
2007	\$1,985,000	\$533,462	\$2,518,462	(\$1,091,750)	\$1,426,712	\$266,795	\$43,434
2008	\$1,985,000	\$554,062	\$2,539,062	(\$1,091,750)	\$1,447,312	\$270,647	\$56,836
2009	\$1,985,000	\$389,510	\$2,374,510	(\$1,091,750)	\$1,282,760	\$239,876	\$50,374
2010	\$1,985,000	\$325,038	\$2,310,038	(\$1,091,750)	\$1,218,288	\$227,820	\$47,842
2011	\$1,985,000	\$260,525	\$2,245,525	(\$1,091,750)	\$1,153,775	\$215,756	\$45,309
2012	\$1,980,000	\$198,990	\$2,178,990	(\$1,089,000)	\$1,089,990	\$203,828	\$33,183
2013	\$1,980,000	\$134,640	\$2,114,640	(\$1,089,000)	\$1,025,640	\$191,795	\$31,224
2014	\$1,980,000	\$69,300	\$2,049,300	(\$1,089,000)	\$960,300	\$179,576	\$29,235

Present Worth of Past Payments @ 5% \$692,275  
 Boscawen Net Local Assessed Valuation (Fall 2016) \$235,838,863  
 Past Payment Credit Per \$1000 Valuation of Raw Land \$2.94

**Table 13**

Housing Type	Average Assessed Value Per Unit	Raw Land Assessed Value Per Unit Est. @ 13%	Past Payment Credit Per Unit
Single Family Detached	\$235,000	\$30,550	(\$90)
Attached and 2+ Family Structures	\$179,000	\$23,270	(\$68)
Manufactured Housing	\$117,000	\$15,210	(\$45)

**Table 14**

<b>Total Credit Allowances</b>	
Single Family Detached	(\$381)
Attached and 2+ Family Structures	(\$289)
Manufactured Housing	(\$190)

*b. Credit Allowances Per Square Foot*

The same series of credit calculations was also computed based on assessed valuation per square foot in order to support an alternative assessment option. The results of the credit calculations are shown in Tables 15 to 17.

**Table 15 – Credit Allowance 1 Per Square Foot**

Housing Type	Assessed Value Per Sq. Ft.	Raw Land Assessed Value Per Sq. Ft. Est. @ 13%	Past Payment Credit Per Sq. Ft.
Single Family Detached	\$110	\$14.30	(\$0.14)
Attached and 2+ Family Structures	\$182	\$23.66	(\$0.23)
Manufactured Housing	\$118	\$15.34	(\$0.15)

**Table 16 – Credit Allowance 2 Per Square Foot**

Housing Type	Assessed Value Per Sq. Ft.	Raw Land Assessed Value Per Sq. Ft. Est. @ 13%	Past Payment Credit Per Sq. Ft.
Single Family Detached	\$110	\$14.30	(\$0.04)
Attached and 2+ Family Structures	\$182	\$23.66	(\$0.07)
Manufactured Housing	\$118	\$15.34	(\$0.05)

**Table 17**

Total Credit Allowances Per Square Foot	
Single Family Detached	(\$0.18)
Attached and 2+ Family Structures	(\$0.30)
Manufactured Housing	(\$0.20)

**7. Impact Fee Calculations per Unit and Per Square Foot**

Table 18 shows the resulting school impact fee schedules for two assessment options (per housing unit or per square foot). The detailed components of the calculations for these options are set forth in Tables 19 and 20. The impact fee assessment is based on multiplying the enrollment ratio for each type of structure times the facility standard (square feet of school space per pupil), times the cost per square foot of school facility space (adjusted for historic State Building Aid), less deductions for debt service credit allowances.

**Table 18**

<b>2017 School Impact Fee Update: Options for Assessment</b>		
Type of Housing Unit	Fee Per Unit	Alternative Fee Per Sq. Ft.
Single Family Detached	\$4,093	\$2.01
Attached and 2+ Family	\$1,624	\$1.63
Manufactured Housing	\$2,383	\$2.63
Accessory Dwelling Unit*	\$1,228	\$2.01
* Fee per unit computed @ 30% of fee for SF detached home. If fee per square foot is used, apply the fee per square foot to the net increase in total living area on the parcel after completion of the accessory unit.		

A fee for accessory dwelling units has been added to Table 18 in anticipation of the need for a special category of assessment. In several other communities where sufficient data were available, BCM Planning, LLC was able to compute average enrollment for single family housing units with and without accessory apartments.<sup>1</sup>

The results indicated that an accessory unit is likely to add up to 1/3 additional enrollment to a single family parcel when an accessory unit is added. BCM Planning recommends that the accessory unit be assessed at a ratio of 30% of the fee amount applicable to a single family detached dwelling, or if a square foot assessment is applied, assessed at the single family rate per square foot.

In the case where an accessory dwelling unit is being created in whole or in part from the existing living area within a single family dwelling, the most equitable method of assessment will be to apply the single family fee per square foot to the *net new living area* on the site that results from the addition of the accessory unit.

---

<sup>1</sup> Special tabulations developed by BCM Planning, LLC in studies for Salem and Manchester indicated ratios of 0.31 to 0.32 as the added enrollment impact of an accessory unit incorporated into a single family home site. A higher ratio was estimated in Sandown at 0.34, but was based on a much smaller sample.

**Table 19: 2017 Fee Basis Per Dwelling Unit**

<b>SCHOOL IMPACT FEE COMPUTATION BY DWELLING UNIT TYPE                      TOWN OF BOSCAWEN - 2017 UPDATE                      FEE PER DWELLING UNIT</b>									
Type of Housing Unit:	2017 Boscawen Enrollment Per Housing Unit			School Floor Area/Pupil Standard (2007 Study)			Building Construction Costs/Sq. Ft. - Adjusted to 2017 *		Total School Capital Cost Per Dwelling Unit
	Grade K-8 Enrollment	Grade 9-12 Enrollment	Total K-12 Enrollment	Grade K-8 Schools	High School	Average Per Pupil	\$196 K-8 Schools	\$217 Grade 9-12 High School	
Single Family Detached	0.264	0.126	0.390	134	141	136	\$6,934	\$3,855	\$10,789
Attached and 2+ Family	0.156	0.026	0.182	134	141	135	\$4,097	\$796	\$4,893
Manufactured Housing	0.172	0.053	0.225	134	141	136	\$4,517	\$1,622	\$6,139
Type of Housing Unit:	Net District Cost With 55% State Building Aid				Credit Allowances for Property Tax Payments For Pre-Existing Capacity Needs				Impact Fee Per Dwelling Unit (Capital Cost Impact Less Credit Allowance)
	Elementary and Middle Schools	High School	Total Public Schools		Past	Future	Total		<b>Boscawen School Impact Fee Per Unit:</b>
Single Family Detached	\$3,120	\$1,735	\$4,855		(\$381)	\$0	(\$381)		<b>\$4,093</b>
Attached and 2+ Family	\$1,844	\$358	\$2,202		(\$289)	\$0	(\$289)		<b>\$1,624</b>
Manufactured Housing	\$2,033	\$730	\$2,763		(\$190)	\$0	(\$190)		<b>\$2,383</b>

\* Cost per square foot from original model (2007) adjusted using RS Means Square Foot Costs adjustment factors for January 2017 index relative to the 2007 cost basis.

**Table 20: 2017 Fee Basis Per Square Foot of Living Area \***

<b>SCHOOL IMPACT FEE COMPUTATION BY DWELLING UNIT TYPE</b> <b>TOWN OF BOSCAWEN - 2017 UPDATE</b> <b>FEE PER SQUARE FOOT OF LIVING AREA</b>									
Type of Housing Unit:	2017 Boscawen Enrollment Per 1,000 Sq. Ft.			School Floor Area/Pupil Standard (2007 Study)			Building Construction Costs/Sq. Ft. - Adjusted to 2017 *		Total School Capital Cost Per Square Foot of Living Area in Dwelling Unit
	Grade K-8 Enrollment	Grade 9-12 Enrollment	Total K-12 Enrollment	Grade K-8 Schools	High School	Average Per Pupil	\$196	\$217	
							K-8 Schools	Grade 9-12 High School	
Single Family Detached	0.129	0.061	0.190	134	141	136	\$3.38	\$1.88	\$5.26
Attached and 2+ Family	0.158	0.026	0.185	134	141	135	\$4.16	\$0.81	\$4.97
Manufactured Housing	0.189	0.058	0.248	134	141	136	\$4.97	\$1.78	\$6.75
Type of Housing Unit:	Net District Cost With 55% State Building Aid				Credit Allowances for Property Tax Payments For Pre-Existing Capacity Needs				Impact Fee Per Square Foot (Capital Cost Impact Less Credit Allowance)
	Elementary and Middle Schools	High School	Total Public Schools		Past	Future	Total		<b>Boscawen School Impact Fee Per Sq. Ft.</b>
Single Family Detached	\$1.52	\$0.85	\$2.37		(\$0.18)	\$0.00	(\$0.18)		<b>\$2.01</b>
Attached and 2+ Family	\$1.87	\$0.36	\$2.23		(\$0.30)	\$0.00	(\$0.30)		<b>\$1.63</b>
Manufactured Housing	\$2.24	\$0.80	\$3.04		(\$0.20)	\$0.00	(\$0.20)		<b>\$2.64</b>

\* Cost per square foot from original model (2007) adjusted using RS Means Square Foot Costs, adjustment factors for January 2017 index relative to the 2007 cost basis.

*\* If the square foot method of assessment is used, it is recommended that the single family home fees be limited at a level that would approximate that which would be applicable to a typical four-bedroom home (about 2,500 square feet of living area).*



## **B. Municipal Office and Police Department Impact Fees**

The Boscawen Municipal Office and Police Department are housed in a former school building that was renovated and repurposed in 2003. A portion of the building also houses the Boscawen Library, which is not included within the fee basis for municipal office and police department space.

In the original impact fee study, it was estimated that the gross floor area of usable space was about 7,000 square feet allocated to municipal office use and up to 6,000 square feet potentially available to the police department. The floor areas created by the renovation of the building were determined to have capacity to provide for the long-term needs of the Town.

### 1. Adjustments to Model - 2017

Adjustments have been made in the 2017 update to including the following:

- The value of the Town's capital investment in the building in 2003 has been increased from the base year amount using RS Means Square Foot Cost 2017 time adjustment factors.
- The cost allowance per police department cruiser, fully equipped, has been increased to \$36,500 (equipped) based on recent bid costs.
- The base year population in the model has been adjusted to 2015, and future population has been projected to the year 2040. For the purpose of computing residential impact fees, the population basis used in this chart is limited to the Town's *household* population. The household population excludes persons living in group quarters. In Boscawen, these group quarters are predominantly those who are housed in Merrimack County correctional facilities or the County nursing home.
- As of 2015, the estimated Boscawen population was 3,950. With 548 persons living in group quarters, the Town's household population is about 3,402 as of 2015. The long term population projection for the town has been updated using the most recent New Hampshire Office of Energy and Planning projection (September 2016) which projects a total 2040 population of 4,402. From that total BCM Planning has deducted a projected group quarters population (at the same proportion to total population as in the 2015 estimates), resulting in a projection of the 2040 household population of 3,791.
- Employment (jobs within Boscawen) represents one of the proportionate measures of demand from non-residential development. The private sector employment base has been adjusted to a 2015 base year. Future employment is projected to represent the same ratio to population as the 2015 estimates.

- The proportionate allocation of demand from residential vs. commercial sectors has been update from the original model assignment of 90% residential/10% commercial to an allocation of 80% residential/20% commercial. The capital cost allocations have been updated based on the proportionality factors shown in Table 21 below.

**Table 21**

<b>Proportionate Demand Factors for Boscawen Municipal Office and Police Department</b>			
Sector	Household Population and Private Sector Employment 2015	Assessed Valuation 2017 Developed Property Excluding Govt	Effective Area Buildings 2017 Excluding Govt
Residential	3,402	\$240,460,005	2,421,404
Commercial	690	\$52,023,752	800,663
Total	4,092	\$292,483,757	3,222,067
% Residential	83%	82%	75%
% Commercial	17%	18%	25%
<b>Avg Residential</b>		<b>80%</b>	
<b>Avg Commercial</b>		<b>20%</b>	

The proportionately assigned costs attributable to residential demands are then adjusted to reflect the average residential cost per capita. The proportion of cost assigned to commercial sector demand is assigned per projected private sector job. The residential costs per capita have been recomputed using updated estimates of average household size using the 2011-2015 five-year sample from the American Community Survey for Boscawen.

## 2. Credit Allowances Updates

The debt service credit allowances have been recalculated to reflect bond amortization, with “past payments” computed based on debt service through calendar year 2017, and “future payments” for the period 2018 or later.

The purpose of the credit allowance is to account for the cost to rectify original deficiencies that existed prior to the renovation of the school for municipal office space and Police Department use. Part of the cost of facility improvements and renovations (and related debt service) were related to rectifying space deficiencies that already existed prior to construction. Therefore, a portion of the property tax costs for bonded debt on the facility improvements is assigned as a credit allowance within the impact fee computation.

Using the spatial standards applied in the original fee model, adjusted to the current service base and projected population, total space available in the facility for municipal office and police department functions should continue to provide for the Town's needs for many years to come.

**Table 22 – Sheet 1 of 2**

2017 UPDATE TOWN OFFICE AND POLICE DEPARTMENT IMPACT FEES - BOSCAWEN			
Cost Allocation Factor	1866 Building	Annex (part)	Total Improved (Excludes 2nd Floor Annex Used by Library)
	Town Office	Police Dept	
Gross Floor Area Est. Usable Sq. Ft. Improved	7,000	6,000	13,000
Development Costs			
Land Acquisition from School District	\$18,000		\$18,000
Improvement Cost (Allocated)	\$1,050,000	\$500,000	\$1,550,000
Total Capital cost	\$1,068,000	\$500,000	\$1,568,000
Less LCHIP Grant - Preservation	(\$350,000)	\$0	(\$350,000)
Net Cost to Town (2003)	\$718,000	\$500,000	\$1,218,000
Cost Adjustment Factor to Jan 2017 (RS Means)	1.645	1.645	
<b>2017 Adjusted Town Capital Cost for Building</b>	<b>\$1,181,110</b>	<b>\$822,500</b>	<b>\$2,003,610</b>
Police Department Vehicles			
Cruisers Per FT Officer	---	0.50	
Cost Per Cruiser, Equipped	---	\$36,500	
<b>Police Department - Add. Vehicles for Max Svc. Pop.</b>	---	<b>\$149,650</b>	
Base Year Household Population 2015	3,402	3,402	
Projected Household Population 2040	3,791	3,791	
Private Sector Employment 2015	690	690	
Private Sector Employment 2040	769	769	
Average Municipal Employment Per 1000 Persons	2.75	2.00	
Square Feet Needed Per FTE Staff	470	400	
Base Year Demand for Personnel	9.4	6.8	
Base Year Requirement Floor Area (Sq. Ft.)	4,418	2,720	
Year 2040 Demand for Personnel	10.4	7.6	
Year 2040 Floor Area Requirement	4,900	3,033	
Space Available to Accommodate New Development	2,582	3,280	
Additional Staff Supportable by Space	5.50	8.20	
Additional Household Population Supportable	2,000	4,100	
Maximum Service Population for Facility	5,402	7,502	
Projected Private Employment at Max Service Pop.	1,096	1,522	
<b>Total Capital Cost for Max. Service Population</b>	<b>\$1,181,110</b>	<b>\$972,150</b>	
Residential Share @ 80%	\$944,888	\$777,720	
Non-Residential Share @ 20%	\$236,222	\$194,430	
Cost Per Person or Employee @ Max. Service Pop.			
Residential Cost Per Person	\$174.91	\$103.67	\$278.58
Non-Residential Cost Per Private Sector Employee	\$215.60	\$127.78	\$343.38

**Table 22 – Sheet 2 of 2**

<b>2017 UPDATE TOWN OFFICE AND POLICE DEPARTMENT IMPACT FEES - BOSCAWEN</b>			
<b>RESIDENTIAL COST ALLOCATION</b>	Town Office	Police Dept	Total
<b>Cost Per Housing Unit</b>			
Single Family Detached @ 2.77 persons/unit	\$485	\$287	\$772
Attached and 2+ Family @ 2.57 persons/unit	\$450	\$266	\$716
Manufactured Housing @ 2.62 persons/unit	\$458	\$272	\$730
<b>NON-RESIDENTIAL COST ALLOCATION</b>			
<b>Non-Residential Cost Per Employee</b>	\$215.60	\$127.78	\$343.38
<b>Sq. Ft Assumed Per New Job</b>			
Retail, Restaurant, Lodging, Office	500	500	
Warehouse, Distribution, Industrial	1,000	1,000	
All Other	750	750	
<b>Non-Residential Capital Cost Per Sq. Ft.</b>			
Retail, Restaurant, Lodging, Office	\$0.4312	\$0.2556	\$0.6868
Warehouse, Distribution, Industrial	\$0.2156	\$0.1278	\$0.3434
All Other	\$0.2875	\$0.1704	\$0.4579
<b>Per Unit Residential</b>			
Single Family Detached	(\$91)	(\$40)	(\$131)
Apartments and Attached	(\$60)	(\$26)	(\$86)
Manufactured Housing	(\$54)	(\$23)	(\$77)
<b>Per Sq. Ft. Non-Residential</b>			
Retail, Restaurant, Lodging, Office	(\$0.047)	(\$0.020)	(\$0.067)
Warehouse, Distribution, Industrial	(\$0.018)	(\$0.008)	(\$0.025)
All Other	(\$0.025)	(\$0.011)	(\$0.036)
<b>IMPACT FEE PER UNIT OF NEW DEVELOPMENT</b>			
<b>Per Unit Residential</b>			
Single Family Detached	\$394	\$247	\$641
Apartments and Attached	\$390	\$240	\$630
Manufactured Housing	\$404	\$249	\$653
<b>Per Sq. Ft. Non-Residential (rounded to whole cents)</b>			
Retail, Restaurant, Lodging, Office	\$0.38	\$0.24	\$0.62
Warehouse, Distribution, Industrial	\$0.20	\$0.12	\$0.32
All Other	\$0.26	\$0.16	\$0.42

**Table 23 – Credit Allowance Per \$1,000 Valuation**

DETAIL OF CREDIT ALLOWANCE CALCULATION - BASE YEAR DEFICIENCIES IN SPACE FUNDED BY BOND TOWN OFFICE AND POLICE DEPARTMENT (BOSCAWEN MUNICIPAL COMPLEX)								
Year	Balance	Principal	Interest	Total	Town Office Portion @ 58%	Police Dept Portion @ 42%	Deficiency Portion of Town Office @ 34%	Deficiency Portion of Police Station @ 20%
<b>PAST PAYMENTS</b>								
2003	\$1,200,000	\$60,000	\$52,987	\$112,987	\$65,532	\$47,455	\$22,281	\$9,491
2004	\$1,140,000	\$60,000	\$47,490	\$107,490	\$62,344	\$45,146	\$21,197	\$9,029
2005	\$1,080,000	\$60,000	\$45,690	\$105,690	\$61,300	\$44,390	\$20,842	\$8,878
2006	\$1,020,000	\$60,000	\$43,890	\$103,890	\$60,256	\$43,634	\$20,487	\$8,727
2007	\$960,000	\$60,000	\$41,790	\$101,790	\$59,038	\$42,752	\$20,073	\$8,550
2008	\$900,000	\$60,000	\$39,690	\$99,690	\$57,820	\$41,870	\$19,659	\$8,374
2009	\$840,000	\$60,000	\$37,290	\$97,290	\$56,428	\$40,862	\$19,186	\$8,172
2010	\$780,000	\$60,000	\$34,890	\$94,890	\$55,036	\$39,854	\$18,712	\$7,971
2011	\$720,000	\$60,000	\$30,567	\$90,567	\$52,529	\$38,038	\$17,860	\$7,608
2012	\$660,000	\$60,000	\$28,167	\$88,167	\$51,137	\$37,030	\$17,387	\$7,406
2013	\$600,000	\$60,000	\$25,767	\$85,767	\$49,745	\$36,022	\$16,913	\$7,204
2014	\$540,000	\$60,000	\$23,307	\$83,307	\$48,318	\$34,989	\$16,428	\$6,998
2015	\$480,000	\$60,000	\$20,757	\$80,757	\$46,839	\$33,918	\$15,925	\$6,784
2016	\$420,000	\$60,000	\$18,177	\$78,177	\$45,343	\$32,834	\$15,417	\$6,567
2017	\$360,000	\$60,000	\$15,537	\$75,537	\$43,811	\$31,726	\$14,896	\$6,345
* Interest payments after calendar year 2010 reflect bond refinancing								
Present Worth @ 5%:							\$251,157	\$106,985
Boscawen Net Local Assessed Valuation 2016: \$235,838,863								
Credit Allowance Per \$1,000 Valuation - Past Payments							\$1.06	\$0.45
<b>FUTURE PAYMENTS</b>								
2018	\$300,000	\$60,000	\$12,541	\$72,541	\$42,074	\$30,467	\$14,305	\$6,093
2019	\$240,000	\$60,000	\$12,000	\$72,000	\$41,760	\$30,240	\$14,198	\$6,048
2020	\$180,000	\$60,000	\$9,000	\$69,000	\$40,020	\$28,980	\$13,607	\$5,796
2021	\$120,000	\$60,000	\$6,000	\$66,000	\$38,280	\$27,720	\$13,015	\$5,544
2022	\$60,000	\$60,000	\$3,000	\$63,000	\$36,540	\$26,460	\$12,424	\$5,292
Net Present Value Future Pymts @5%							\$58,698	\$25,003
Boscawen Net Local Assessed Valuation 2016: \$235,838,863								
Credit Allowance Per \$1,000 Valuation - Future Payments							\$0.25	\$0.11

**Table 24 – Credit Allowances Assigned by Use**

Type of Structure/Use	Assessed Valuation	Raw Land Valuation	Past Payment Credit		Future Payment Credit	
			Town Office	Police Dept	Town Office	Police Dept
Structure Type	Newer Units Est. Avg. Assessment	Raw Land Value @ 13%				
Single Family Detached	\$235,000	\$30,550	(\$32)	(\$14)	(\$59)	(\$26)
Apartments & Attached	\$156,000	\$20,280	(\$21)	(\$9)	(\$39)	(\$17)
Manufactured Housing	\$138,000	\$17,940	(\$19)	(\$8)	(\$35)	(\$15)
			Past Payment Credit		Future Payment Credit	
Commercial Values/SF	Avg Valuation Per Sq. Ft.	Raw Land Value @ 13%	Town Office	Police Dept	Town Office	Police Dept
Retail, Office, Lodging	\$120	\$16	(\$0.0165)	(\$0.0070)	(\$0.0300)	(\$0.0132)
Warehouse, Industrial, Storage	\$45	\$6	(\$0.0062)	(\$0.0026)	(\$0.0113)	(\$0.0050)
All Other (Avg All Commercial)	\$65	\$8	(\$0.0090)	(\$0.0038)	(\$0.0163)	(\$0.0072)

### 3. Revised Impact Fee Schedules – Municipal Office and Police Department

The updated fee schedules for the municipal office and the police department are summarized in Table 25. An optional fee per square foot for residential uses is also shown. The residential fees per square foot are computed based on the amount of the fee per dwelling unit calculated by the model, divided by the average square footage (effective area) of Boscawen housing units in each structural category.

**Table 25**

<b>2017 Update: Impact Fee Schedule for Municipal Office and Police Department</b>			
<b>Residential Uses - Per Unit</b>	<b>Municipal Office</b>	<b>Police Dept</b>	<b>Total For Municipal Building</b>
Single Family Detached	\$394	\$247	\$641
Attached or 2+ Unit Structure	\$390	\$240	\$630
Manufactured Housing	\$404	\$249	\$653
<b>Commercial Uses - Per Sq. Ft.</b>	<b>Municipal Office</b>	<b>Police Dept</b>	<b>Total For Municipal Building</b>
Retail, Office, Lodging	\$0.38	\$0.24	\$0.62
Warehouse, Industrial	\$0.20	\$0.12	\$0.32
All Other	\$0.26	\$0.16	\$0.42

Fees per square foot of living area for residential uses were also computed based on average living area (measured as “effective area” in the assessment data, resulting in the option of fees per square foot by housing unit type:

*Option: Residential Fees Per Square Foot:*

<b>Residential Uses - Per Sq. Ft.</b>	<b>Municipal Office</b>	<b>Police Dept</b>	<b>Total For Municipal Building</b>
Single Family Detached	\$0.19	\$0.12	\$0.31
Attached or 2+ Unit Structure	\$0.40	\$0.24	\$0.64
Manufactured Housing	\$0.41	\$0.25	\$0.66

### 4. Accessory Dwelling Units

Unlike the school impact fee, we have no specific data to assign accessory dwelling units an impact based on household size that differs from an average apartment. For these municipal fees, an accessory dwelling unit may be assessed at the same per unit fee or per square foot assessment as would apply to other attached housing units or within a 2+ unit structure.

## 5. Use of Funds

The most practical and direct use of impact fees derived for the municipal office and the Police Department would be their application to offset a portion of annual debt service on the facility improvement bond, which has an amortization schedule for payments through the year 2022.

This impact fee is essentially a recoupment of a prior capital investment. Allocation of impact fee income to offset a portion of bonded debt allows the fee to be applied directly to the facility improvements on which it is based. Once the debt is fully amortized, and presuming that reserve capacity in the municipal building remains to accommodate demand from new development, the fees could be applied to other related improvements to capital facilities that enhance their capacity.

### C. Road Impact Fee

The Boscawen road impact fee was originally developed in 2007 and last updated in 2012. The fee is based on the periodic need for the improvement and reconstruction of the primary Class V streets and roads in Boscawen. For the purpose of impact fee assessment, certain Town roads were informally classified as local “collectors”. These are viewed as roads in common usage which are central to the overall traffic circulation within the community.

They roads that are part of the fee basis do not include minor subdivision streets or roads that provide primarily access to an individual neighborhood, but include highways that provide through-traffic access from one part of town to another or provide important links to the state highway system. The designated collectors comprise approximately 13.2 miles of Class V paved roads.

In Boscawen, the rebuilding of roads is partly undertaken by the Town highway crew, and is partly contracted out. The work done under contract includes full-depth reclamation including grinding the road pavement 6 to 8 inches deep, adding gravel, compaction, and restoration with new pavement. The Town highway crew performs all ditch, culvert, and drainage work and completes finishing work after the reclamation process such as restoring driveway aprons, graveling the road shoulders, and restoring and loaming lawns as required.

Therefore, only a portion of the total cost of road reconstruction is reflected in contract costs. The impact fee is based solely on the recoupment of the contracted portion of these capital costs.

**Table 26**

CLASS V ROADS FUNCTIONING AS LOCAL COLLECTORS AND HISTORICAL IMPROVEMENT COSTS		
Local Class V Collector Streets	Length (Ft)	Condition in Base Year (2007)
Commercial St	600	Poor
Corn Hill Rd	18,500	Good
Goodhue Rd	3,700	Fair
Jackson St	1,945	Excellent
Knowlton Rd	2,000	Good
North Water St	10,560	Excellent
Queen St	20,592	Good
Raymond Rd	1,600	Good
River Rd	10,000	Excellent
Total Linear Feet - Collectors	69,497	
Total Miles-Collectors	13.16	
Average Linear Feet Per Year Rebuilt 2003-2017 (15 calendar years)	1,911	See project history
Average Collector Rebuild Cost Per Linear Foot (2017 Dollars)	\$39	Original cost indexed to 2017 using ENR data
Rebuild Expenditure Per Year	\$74,529	Contracted portion only

Table 26 shows the total roadway lengths of the selected Class V roads and their most recent condition rating at the time the original impact fee was established.

About 5.4 miles of road within this group (about 41% of the total listed) were fully rebuilt from 2003 through 2017. This represents an average pace of about .362 miles per year (1,911 linear feet annually).

Contracted rebuild costs have averaged about \$75,000 per year in 2017 adjusted dollars.



**Table 27**

HISTORY OF IMPROVEMENTS TO SELECTED BOSCAWEN CLASS V ROADS USED IN IMPACT FEE COMPUTATIONS						
Collectors improved	Improvement	Year Improved	Road Improvement Cost	Segment Length Improved	2017 Adjusted Cost to September 2017 ENR	Adjusted cost per foot 2017
North Water St	Rebuilt	2003	\$250,000	10,560	\$398,958	\$38
River Rd	Rebuilt	2006	\$320,000	10,000	\$439,064	\$44
Knowlton Rd	Shim & seal	2010	\$20,000	2,000	\$24,212	\$12
Raymond Rd	Shim & seal	2010	\$20,000	1,600	\$24,212	\$15
North Water St	Chip Seal	2011	\$80,000	10,560	\$94,400	\$9
Queen St	Rebuilt	2012	\$140,000	4,400	\$160,987	\$37
Queen St	Overlay	2013	\$50,000	4,400	\$55,973	\$13
Queen St	Shim & seal	2016	\$157,794	11,100	\$162,168	\$15
Goodhue Rd	Rebuilt	2017	\$116,405	3700	\$116,405	\$31
	Total Improvements for Period		\$1,154,199	58,320	\$1,476,379	\$25
	Rebuild Projects Subtotal		\$826,405	28,660	\$1,115,414	\$39

The rebuilding costs shown above for North Water Street, River Road, Queen Street and Goodhue Road, adjusted to 2017 values using the Engineering News Record (ENR) construction cost index, averaged \$39 per foot for contracted rebuilding costs. Over the 15 calendar years inclusive of 2003 through 2017, an average of 0.362 miles of collector roads per year were improved.

The impact fee basis allocates a portion of projected rebuilding costs over a given period to the new development anticipated during that time. At an average of 0.362 miles per year and a 2017 adjusted cost of \$39 per foot, average annual reconstruction costs that are contracted out would average \$74,529 per year, or about \$1.79 million over a 24-year period (from a base year of 2016 through 2040).

A portion of this cost may be recovered in the form of an impact fee based on the estimated increment in vehicle trips generated by new development in Boscawen. Table 28 contains a revised trip model using the original methodology, updating the base year to 2016, and the horizon year to 2040. The basis for the allocation factors and projections are described in the right hand column of the chart.

The purpose of the projection is to make a reasonable estimate of the potential change in total PM peak trip-ends over a specified period of time. The model indicates that about 23% of total trips are reasonably attributable to new development occurring between the base year 2016 and the projection year 2040.

The total investment projected for the contracted rebuilding costs of collector roads is estimated at about \$1.79 million. Twenty-one percent (21%) of year 2030 trip volume is assumed as new development's proportionate share of road reconstruction costs. The estimated average cost per new PM peak trip for collector reconstruction is \$631 per trip.

**Table 28**

Estimated Town-Wide Trips Generated in Boscawen with Periodic Rebuild Cost of Class V Collectors Apportioned Per PM Peak Trip					
Line No.	Trip Generation Factor	2016 Base	Future Year 2040	Change	Source Notes
<b>A</b>	TOTAL POPULATION	3,952	4,407	455	Base year: 2016 NHOEP. Projection year: NH Office of Energy & Planning projections issued Sept 2016
	POPULATION IN HOUSEHOLDS	3,390	3,722	332	2016 NHOEP Estimate; 2040 households x projected household size (NHHFA Model)
<b>B</b>	HOUSEHOLDS	1,413	1,692	280	Based on estimated average household size and non-institutional population estimate
	Average Household Size	2.40	2.20		Proportionate estimate relative to projected Merrimack County averages in NHHFA 2014 housing demand model
<b>C</b>	ESTIMATED PASSENGER VEHICLES	2,811	3,367	556	Based on average vehicles per household (ACS 2015 5-yr sample basis)
	Passenger Vehicles Per Household - Estimated	1.99	1.99		ACS 2011-2015 five-year sample data for Boscawen
<b>D</b>	RETAIL, ACCOMODATION, AND FOOD SERVICE JOBS	139	199	60	Retail, accommodation and food service in 2016 represented 19% of Boscawen private sector employment (NHES data). Assume same percentage for 2040 projection.
	Estimated Retail Gross Floor Area	73,931	105,844	31,913	
	Average Square Feet Per Employee	532	532		Assumes new retail area per employee at 2016 average
<b>E</b>	NON-RETAIL JOBS INCLUDING GOVERNMENT	1,335	1,819	484	Total jobs including government, less retail, accommodation and food service jobs
	Estimated Non-Retail Gross Floor Area	1,360,931	1,854,332	493,401	Includes large government institutional buildings. Project square feet at 2016 average per employee
	Square Feet Per Employee	1,019	1,019		Boscawen floor rea per employee high due to presence of large public institutional uses and manufacturing uses
<b>F</b>	TOTAL EMPLOYMENT	1,474	2,018	544	Linear projection of total and private sector employment based on trend from 2009 to 2016.
	Estimated Gross Floor Area	1,434,862	1,960,176	525,314	
	Gross Floor Area Per Employee	973	971		
<b>G</b>	AVERAGE TRIP RATE PER DWELLING UNIT	8.60	8.60		ITE Manual - average rates by housing type applied to 2012 housing stock to estimate blended trip rate
<b>H</b>	TRIP END ESTIMATES				
1	Residential Line B x H	12,148	14,551	2,404	Result based on SNHPC model
2	Residential Line B x 1.5	2,119	2,538	419	Result based on SNHPC model
3	Retail Line D x 12	1,668	2,388	720	Result based on SNHPC model
4	Non-Retail Line E x 3	4,005	5,457	1,452	Result based on SNHPC model
5	Total Employment Line F x 1.7	2,506	3,431	925	Result based on SNHPC model
6	Total Daily Trip-Ends (Sum of lines 1-1 to 1-5)	22,445	28,365	5,920	Result based on SNHPC model
7	P. M. Peak Hour Trip Ends (Line 1.6 x 0.10)	2,245	2,836	592	Result based on SNHPC model
			Total Cost For Interval Period	Portion Attributed to New Trips	
	Years in Interval		24	21%	
<b>I</b>	LOCAL RESIDENTIAL COLLECTORS - REBUILD COSTS OVER PROJECTION PERIOD		\$1,788,696	\$373,302	Includes only contracted portion of rebuilding work. Town highway crew performs all ditch, drainage and culvert replacement work and restoration of gravel shoulders, driveway aprons and lawns after rebuild.
<b>J</b>	COST PER NEW PM PEAK TRIP FOR NEW DEVELOPMENT - REBUILDING OF SELECTED CLASS V ROADS - CONTRACTED SERVICES ONLY			<b>\$631</b>	

In Table 29, that rate per trip is assigned to the PM peak trip generation rates for single-family homes, to the average trip rate for apartments, attached dwellings and duplexes, and to manufactured housing. Under this set of assumptions, the road impact fee for a single family home is assigned at \$637 per unit. The updated road fee for apartments and attached dwellings is \$347 per unit and the rate for manufactured housing is \$505 per unit.

**Table 29**

RESIDENTIAL ROAD IMPACT FEE SCHEDULE - 2017 UPDATE			
Land Use	P. M. Peak Trip-Ends Per Unit*	Road Fee Per Dwelling Unit	ITE Use Reference Number (2003 Edition)
<b>Residential Uses</b>			
Single Family Detached Home	1.01	\$637	210
Apartments and Attached Dwellings	0.55	\$347	Average of 221 (garden apts) and 230 (townhouse)
Manufactured Housing	0.80	\$505	Average of 210 (SF Units) and 240 (MH in Park)
* Based on trip rate at PM peak hour 4-6 pm of adjacent street traffic			
Source: <i>Trip Generation</i> , 7th Edition, 2003. Institute of Transportation Engineers			

A fee per square foot can be computed as an alternative using assessment data figures on the average “effective area” per living unit. Effective area is generally higher than actual living area and will therefore generate a conservative value in the case of a fee based on floor area. The comparable road fees per square foot would be:

Single family detached	$\$637 / 2,049 \text{ sq. ft.} = \$0.31 \text{ per sq. ft.}$
Attached & 2+ family units	$\$347 / 950 \text{ sq. ft.} = \$0.37 \text{ per sq. ft.}$
Manufactured housing	$\$505 / 990 \text{ sq. ft.} = \$0.51 \text{ per sq. ft.}$

A fee for an accessory dwelling unit may be applied based on the net new floor area added to a single family home site after creation of that unit, multiplied by the rate of \$0.37 per square foot.

Contracted road reclamation costs on the subject roads will sometimes come as a series of improvements required to maintain the integrity and capacity of the town's collector roads and streets. In some cases, a reclamation and rebuild project with a first course of pavement may be done in one year, followed by an additional pavement course applied in a subsequent year. Sequential projects of this type should be considered as eligible improvements for the use of impact fee income even if the entire series of improvements does not occur as a single project or in a single year.