

Impact Fee Update 2018 Dover, New Hampshire

Basis of Assessment For:

Public Schools
Public Safety (Police and Fire)
Recreation Facilities

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Prepared for:

City of Dover Planning Department
288 Central Avenue
Dover, New Hampshire 03820

Prepared by:



Bruce C. Mayberry, Principal
P. O. Box 723
Yarmouth, ME 04096
bmayber1@maine.rr.com

Executive Summary

This report updates the basis of assessment for impact fees assessed to new development in Dover for public schools, public safety, and public recreation facilities. The first supporting documentation for Dover school impact fees was developed in 2002. An analysis completed in 2008 updated the school impact fee, and introduced new impact fees for public safety and recreation facilities. The City's code provisions governing impact fee assessment are authorized under New Hampshire RSA 674:21, V. Under this statute, impact fees may be assessed to new development for its proportionate share of anticipated capital projects, or to recoup past capital investments made in anticipation of the needs to be generated by new development. This update of Dover impact fees has been based on the structure of the 2008 methods, but with some updates and adjustments to the capital basis of the fees and how they are allocated by land use. The revisions included:

- An update socio-economic data, demographics, and new growth projections of population, employment and non-residential floor area in Dover.
- A full recalculation of public school enrollment ratios per housing unit was conducted. This process involved matching resident enrollment counts by grade level by street address to the characteristics of the property indicated by property tax assessment data for the location. This is the first full update of address-matched enrollment ratios since the original school impact fee was developed in 2002.
- New and revised indicators of proportionate demand on public safety facilities were prepared based on several sources. This analysis included matching of public safety calls by address (where available) to property tax assessment data for that parcel. This data enabled new calculations of average Police and Fire Department call rates per housing unit and per 1000 square feet of building area.
- The replacement cost of Dover capital facilities that comprise the basis of the impact fee assessments have been updated to 2017 values; and credit allowances for certain debt service costs have been updated and revised.
- In the case of the public school impact fee, a significant increase in the fee resulted from applying a new facility floor area standard (square feet of building area per pupil capacity) for the new high school, and from the absence of traditional State Building Aid to offset a portion of its construction cost (historically 30% of principal costs had been reimbursed by the State).

Since 10 years have elapsed since the last impact fee update, the capital values assigned may have increased significantly as a result of time adjustments; the changes in the fees should be considered in that context.

The purpose of this report is to provide a rational, proportionate basis for impact fee calculations. The process of adopting revised fee schedules, and other administrative provisions relating to the assessment and collection of fees is governed by the impact fee provisions of the Dover Code.

DOVER IMPACT FEE SCHEDULE 2018 UPDATE

DOVER NEW HAMPSHIRE IMPACT FEES - 2018 FEE SCHEDULE						
Use Category	Police	Fire	Total Public Safety	Recreation	Public Schools	Total City and School
Residential Uses - Fee Per Dwelling Unit by Structure Type						
Single Detached	\$325	\$615	\$940	\$1,326	\$6,629	\$8,895
Townhouse	\$309	\$548	\$857	\$1,138	\$2,125	\$4,120
Two to Three Family	\$357	\$583	\$940	\$1,154	\$4,346	\$6,440
Apartments 4+ Units	\$279	\$447	\$726	\$872	\$3,003	\$4,601
Manufactured Housing	\$402	\$635	\$1,037	\$1,227	\$4,338	\$6,602
Accessory Dwelling Unit	\$179	\$286	\$465	\$558	\$1,989	\$3,012
Apartment over 1st Floor Non-Residential (1)	\$279	\$447	\$726	\$872	\$649	\$2,247
Age Restricted Unit 55+	\$152	\$1,163	\$1,315	\$349	see note (2)	\$1,664
Age Restricted Unit 62+ or Congregate	\$181	\$1,609	\$1,790	\$183	see note (3)	\$1,973
Commercial, Industrial & Institutional Uses Per Square Foot Finished Area						
Retail, Including Restaurants, Clubs	\$0.71	\$0.87	\$1.58	--	--	\$1.58
Offices and Commercial Services	\$0.33	\$0.59	\$0.92	--	--	\$0.92
Industrial, Transp, Whse, Communications	\$0.04	\$0.04	\$0.08	--	--	\$0.08
Nursing Homes & Assisted Living	\$0.13	\$2.37	\$2.50	--	--	\$2.50
Other Institutional Uses	\$0.23	\$0.25	\$0.48	--	--	\$0.48
Average Fee (All Other)	\$0.24	\$0.39	\$0.63	--	--	\$0.63
<i>(1) This provides for reduced school impact fees in apartments located on the upper floors of buildings with non-residential uses on the first floor. The basis for a reduced school impact fee reflects the data on enrollment per unit in older downtown buildings of this type.</i>						
<i>(2) In the case of an age-restricted development for age 55 or older, where the age restriction pertains to less than 100% of the units, the school fee shall be assessed at the standard rate for the portion of units that are not subject to an age restriction.</i>						
<i>(3) Housing units in age-restricted developments for age 62 or older governed by deed restrictions that limit occupancy to seniors, and congregate housing units, are found to have negligible enrollment impacts and are not subject to the school impact fee.</i>						

A. Socioeconomic Characteristics, History and Projections

1. Population, Households and Housing

Full counts of the City's population, households and housing units are available only from the decennial Census (data shown below for 1990, 2000 and 2010). All other data on these characteristics are based on sample survey data (American Community Survey or ACS) or estimates (NH Office of Strategic Initiatives – formerly NH Office of Energy and Planning).

DEMOGRAPHIC HISTORY AND ESTIMATES FOR DOVER, NH					
Demographic Element	1990	2000	2010	2015 ACS Five Year Sample	NHOEP 2016 Data & BCM Estimates
Population					
Total	25,042	26,884	29,987	30,524	30,683
In Group Quarters	609	757	896	892	959
In Households	24,433	26,127	29,091	29,632	29,724
Population Age < 5	1,581	1,527	1,805	1,770	
Population Age 5-17 (School Age)	3,474	4,075	4,271	4,212	
Population Under 18	5,055	5,602	6,076	5,983	
% of Total Population	20.2%	20.8%	20.3%	19.6%	
Age < 5 Per Household	0.15	0.13	0.14	0.14	
School Age (5-17) Per Household	0.34	0.35	0.33	0.33	
School Age (5-17) Per Household < Age 55	0.49	0.50	0.51	0.53	
Total Housing Units	11,307	11,924	13,685	13,589	14,176
Households (Occupied Units)	10,345	11,573	12,827	12,668	13,255 estimated
Owner Occupied	5,190	5,920	6,970	6,521	
Renter Occupied	5,155	5,653	6,037	6,147	
Homeownership Rate	50.2%	51.2%	54.3%	51.5%	
Occupied Housing Units by Age of Head of Household					
Under 25	1,199	1,032	1,046	974	
25 to 34	2,747	2,467	2,484	2,595	
35 to 44	1,886	2,616	2,344	2,052	
45 to 54	1,317	2,014	2,576	2,286	
55 to 64	1,221	1,247	1,934	2,120	
65 to 74	1,130	1,090	1,133	1,257	
75 or Older	845	1,107	1,310	1,384	
Total Households	10,345	11,573	12,827	12,668	
<i>Percent of Heads of Households Age 55+</i>	<i>30.9%</i>	<i>29.8%</i>	<i>34.1%</i>	<i>37.6%</i>	Estimated
Average Household Size	2.36	2.26	2.27	2.34	2.24
Total Housing Units	11,307	11,924	13,685	13,589	14,176
Vacant Units Total	962	351	858	921	Assume:
Percent Vacant	8.5%	2.9%	6.3%	6.8%	6.5%

Since 1990 the City's total population has grown from about 25,000 to nearly 31,000.

During the same period the number of housing units has increased from 11,300 units to about 14,200 units.

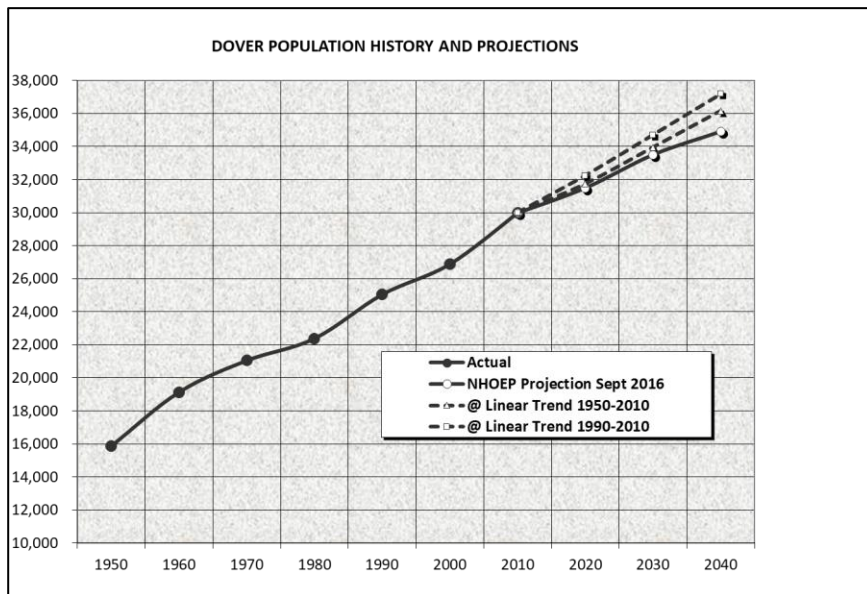
In 1990 about 31% of the households in Dover were headed by a person age 55 or older. As of 2015, the proportion is estimated at nearly 38%, a consequence of the aging of the baby boom population.

The ratio of the school age population (age 5-17) to households has remained fairly constant. In 1990 the ratio was 0.34 school age children per household; the ratio for 2015 is estimated at 0.33 per household.

Estimated Average Household Size 2016	
Structure Type	Persons Per Occupied Unit
Single Family Detached	2.54
Attached or Townhouse	2.18
Two to Three Family	2.21
Four or More Family	1.67
Manufactured Housing	2.35
Average Household Size	2.24

Source: BCM Planning, LLC proportionate estimates by housing type based on historical data, applied to an estimated average household size of 2.24.

BCM Planning estimates that the average household size in Dover as of 2016 is 2.24 persons. Average household size per unit by type of structure is estimated here for various residential structural categories. These estimates were prepared using historical Census data by type of structure in Dover, and the American Community Survey. These ratios are used to allocate proportionate demand on residential service costs to each structure type based on its expected generation of population.



The most recent state population projections for Dover (2016) point to a potential 2040 population of 34,915. This is the approximate buildout population (35,000) estimated by the City at the time of the 2008 impact fee update. Buildout populations are difficult to predict due to future changes in average household size, changes in zoning, and housing infill

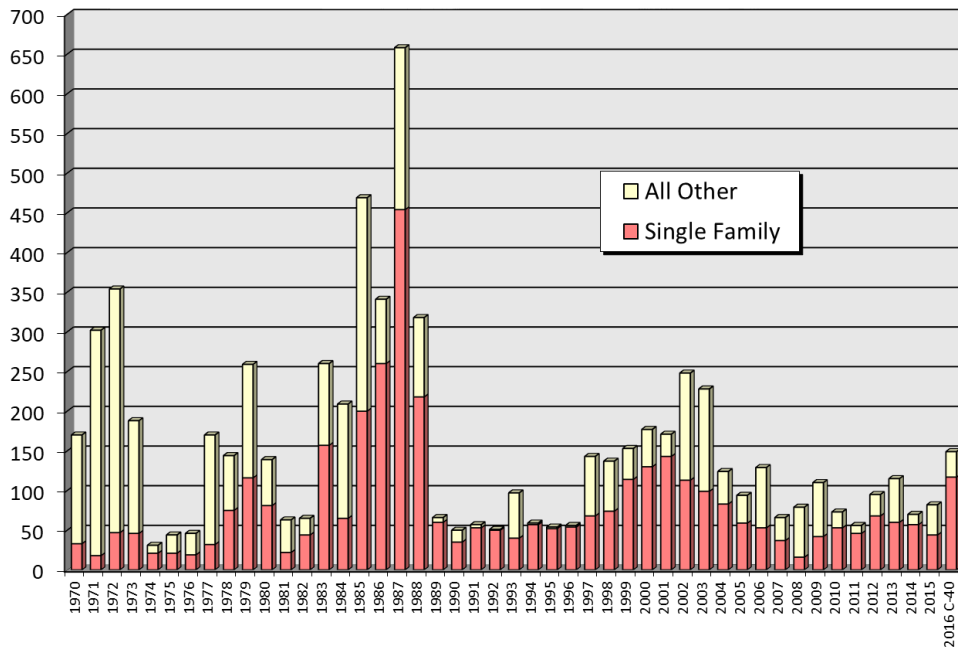
potential. Linear projections based on long term trends suggest the potential for 2040 population to reach 36,000 to 37,000 if not constrained by other factors.

From 2000 to 2016, about 2,066 housing units were authorized by building permits issued in Dover (an average of 122 units per year). Of the total, about 39% of the units authorized were in two or more family structures.

By comparison, housing units authorized by permit averaged 171 during the 1970s, 259 per year in the 1980s, and only 86 per year in the 1990s.

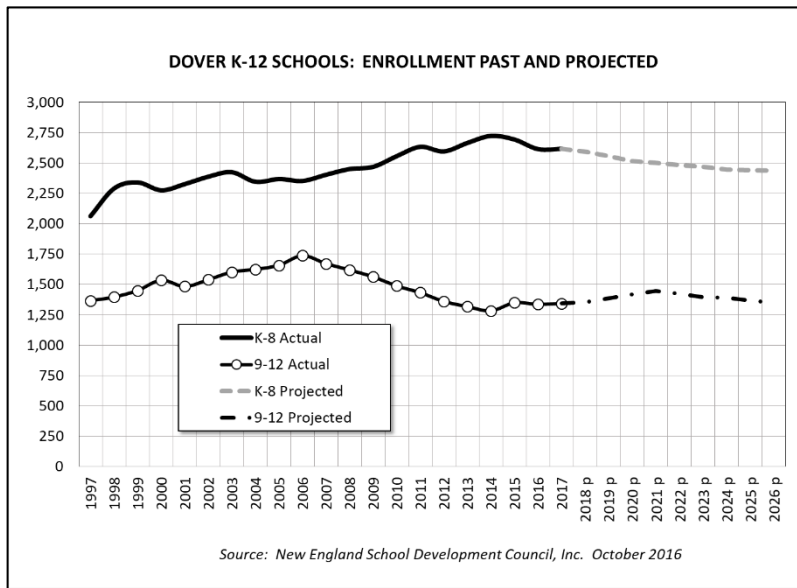
The number of units authorized by permit average 143 per year from 2000-2009, and 91 per year from 2010 to 2016.

Housing Units Authorized by Building Permit - Dover



New Housing Units Authorized by Building Permits				
Total Housing Units Authorized				
Period	Single Family	2+ Family	Manuf. Housing	All Types
1970-79	428	1,191	89	1,708
1980-89	1,561	941	86	2,588
1990-99	597	212	48	857
2000-09	775	617	34	1,426
2010-16	445	189	6	640
Average Annual Units Authorized				
Period	Single Family	2+ Family	Manuf. Housing	All Types
1970-79	43	119	9	171
1980-89	156	94	9	259
1990-99	60	21	5	86
2000-09	78	62	3	143
2010-16	64	27	1	91

The history and projection of public school enrollment in the Dover school system indicates that



high school enrollment peaked in the 2006-07 academic year, and K-8 public enrollment peaked in 2014-15.

The most recent school enrollment projections for the Dover schools forecast a decline in K-8 enrollment and a fairly level number of students in the high school grades. Since the number of housing units will continue to grow, enrollment per housing unit should decline during the projection period.

K-12 Enrollment in Dover Public Schools - Past and Projected					
Actual October Enrollment Excluding Pre-School					
Year	K-4	5-8	9-12	Total	
1997	1,044	1,018	1,367	3,429	
1998	1,274	1,016	1,396	3,686	
1999	1,308	1,032	1,450	3,790	
2000	1,241	1,034	1,535	3,810	
2001	1,240	1,086	1,483	3,809	
2002	1,250	1,137	1,539	3,926	
2003	1,282	1,142	1,602	4,026	
2004	1,233	1,112	1,624	3,969	
2005	1,271	1,097	1,658	4,026	
2006	1,270	1,082	1,737	4,089	
2007	1,294	1,109	1,671	4,074	
2008	1,356	1,094	1,619	4,069	
2009	1,391	1,077	1,562	4,030	
2010	1,472	1,084	1,488	4,044	
2011	1,502	1,131	1,432	4,065	
2012	1,506	1,089	1,360	3,955	
2013	1,550	1,115	1,318	3,983	
2014	1,554	1,169	1,283	4,006	
2015	1,537	1,156	1,349	4,042	
2016	1,436	1,178	1,336	3,950	
2017	1,408	1,209	1,344	3,961	
2016 Enrollment Projection					
2017	1,425	1,203	1,330	3,958	
2018	1,410	1,181	1,354	3,945	
2019	1,399	1,156	1,386	3,941	
2020	1,364	1,153	1,419	3,936	
2021	1,365	1,137	1,447	3,949	
2022	1,360	1,124	1,422	3,906	
2023	1,356	1,111	1,393	3,860	
2024	1,350	1,094	1,390	3,834	
2025	1,363	1,078	1,368	3,809	
2026	1,360	1,076	1,350	3,786	

Source: New England School Development Council, Inc.; October 2016 projections provided by Dover School District

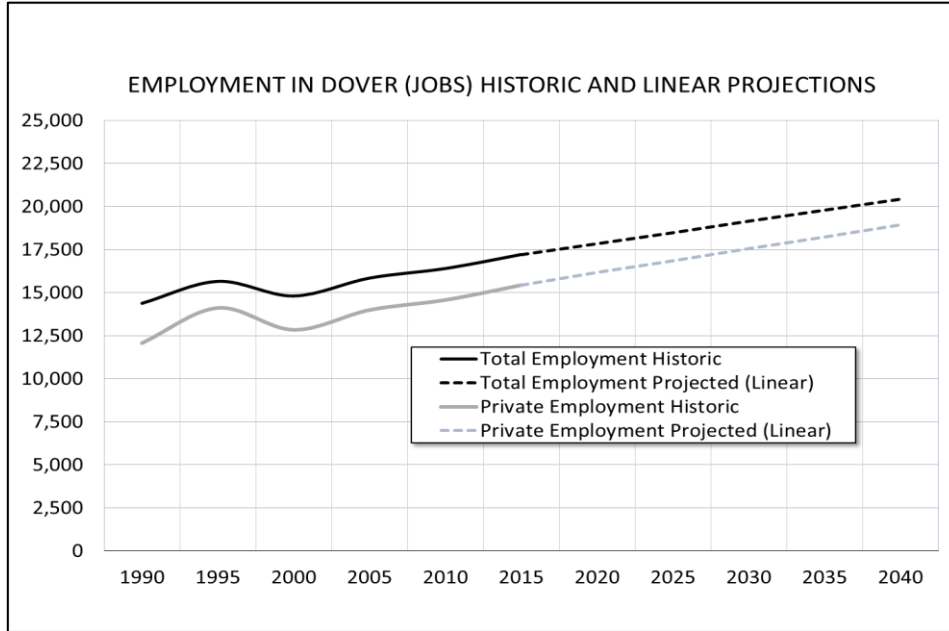
Enrollment projections are based on the historical shift in student counts based on a progression ratio from one grade to the next grade, and the number of births projected for the period.

The projections indirectly reflect the influence of the pace of new housing development during the historical period used to make the projections.

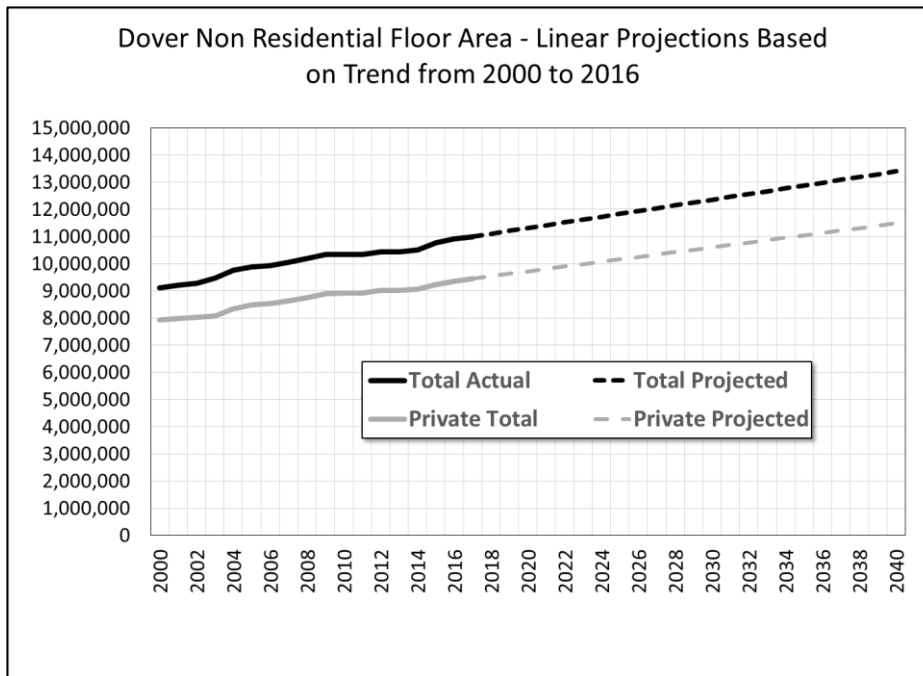
If the actual pace of housing development were to be significantly higher than that of the historical period used to measure the grade progressions, the forecast enrollment could be too low.

However, due to the aging of the population, the volume of housing growth would need to be quite high in order to offset that demographic trend and generate net growth in enrollment.

2. Employment and Non-Residential Development



Using five-year interval data for the period 1990-2015 as a basis for projections, a linear trend model suggests that total employment (jobs) in Dover could increase from about 17,500 in 2015 to just over 20,400 by 2040.



A separate linear projection of the floor area of non-residential buildings in Dover indicates potential growth from a 2016 base estimate of 10.9 million square feet to 13.4 million square feet by 2040.

The historic relationship between employment, population, housing units and commercial floor area in Dover is summarized here based on data for 1990, 2000, 2010 and 2016. The purpose of this comparison was to develop a basis for projections of non-residential development as a function of the historical relationship between population, employment, and non-residential floor area in the City.

EMPLOYMENT, POPULATION AND NON-RESIDENTIAL FLOOR AREA RELATIONSHIPS - DOVER 1990 TO 2016											
Year	Square Feet Non-Residential (BCM Planning Tabulation)	Housing Units		Population (Census 1990 to 2010 and NHOEP 2016)		Employment (Jobs in City) - NH Employment Security	Employment Ratios		Non-Residential Floor Area Ratios (Square Feet)		
		Assessment Data Tabulations BCM Planning	Census 1990-2010 and NHOEP 2016	Total	In Group Quarters		Square Feet Non-Residential Per Employee	Ratio Employment to Total Population	Per Capita (Total Population)	Per Housing Unit (Assessment Data)	Per Housing Unit (Census & NHOEP)
Floor Area of All Non-Residential Uses Relative to Housing, Population, and Employment											
1990	7,724,753	11,466	11,307	25,042	609	14,380	537	0.57	308	674	683
2000	9,118,791	12,361	11,924	26,884	757	14,807	616	0.55	339	738	765
2010	10,338,493	14,001	13,685	29,987	896	16,402	630	0.55	345	738	755
2016	10,905,019	14,663	14,176	30,683	959	17,406	627	0.57	355	744	769
Floor Area of Non-Government Uses Relative to Housing, Population, and Employment											
1990	6,547,547	11,466	11,307	25,042	609	12,070	542	0.48	261	571	579
2000	7,940,701	12,361	11,924	26,884	757	12,838	619	0.48	295	642	666
2010	8,909,875	14,001	13,685	29,987	896	14,574	611	0.49	297	636	651
2016	9,360,866	14,663	14,176	30,683	959	15,575	601	0.51	305	638	660

Source: BCM Planning, LLC tabulation and analysis of indicated source material

Key measures derived from this comparison include the floor area in non-residential uses per employee and the ratio of employment (jobs) in the City relative to its total population.

In the public safety impact fee models, BCM Planning has assumed that the City's 2016 ratio of total employment to population will remain at 0.57 and that the 2016 ratio 627 square feet of non-residential floor area per employee will be constant. This method reflects the assumption that over the long term the relative demand from the two major land use sectors (residential vs. non-residential) will remain proportionate to one another as the City continues to develop.

B. School Impact Fee Update

This section provides an update of the public school impact fee assessment originally adopted by the City of Dover Planning Board in 2002, and updated in 2007-2008. The original methodology anticipated the need for period adjustments to the principal elements of the assessment formula. The update reviews and modifies the key elements of the basis for school impact fee assessment:

- Resident public school enrollment per housing unit
- School floor area per pupil capacity
- Cost of school facilities per square foot
- Local share of cost adjusted for State Building Aid
- Credit allowances for pre-existing needs

1. Enrollment Per Housing Unit Assumptions

The original school impact fee assessment from 2002 relied on a series of enrollment multipliers calculated by the City of Dover based on actual enrollment by address, linked to property tax assessment data. Similar information was not available to the 2008 update, which used a statistical estimate to adjust the 2002 data to 2008.

For this update, BCM Planning, LLC matched resident pupil enrollment counts by grade level and address to property tax data. Tabulations of enrollment per housing unit were made, excluding developments with age restrictions on occupancy (62 or older, or age 55+).

Enrollment counts were negligible within the properties that were classified as age-restricted or retirement housing.

Dover Resident Enrollment by Housing Type Excluding Age-Restricted Developments and Mixed Use Property										
Structure Type	Enrollment by Structure Type				Living Units	Average Enrollent Per Unit				Avg Living Area (Square Feet)
	Elementary	Middle	High	Total		Total	Elementary	Middle	High	
Single Family	831	733	656	2,220	6,198	0.3582	0.1341	0.1183	0.1058	1,815
Townhouse	74	47	51	172	1,232	0.1396	0.0601	0.0381	0.0414	1,402
Two to Three Family	155	93	96	344	1,570	0.2191	0.0987	0.0592	0.0611	1,147
Four or More Family	390	263	198	851	4,693	0.1813	0.0831	0.0560	0.0422	944
<i>Subtotal Public Housing (DHA)</i>	73	62	32	167	221	0.7557	0.3303	0.2805	0.1448	1,029
Subtotal Private Ownership	317	201	166	684	4,472	0.1530	0.0709	0.0449	0.0371	939
Manufactured Housing	6	10	11	27	180	0.1500	0.0333	0.0556	0.0611	815
Total	1,456	1,146	1,012	3,614	13,873	0.2605	0.1050	0.0826	0.0729	1,395

Source: Based on BCM Planning, LLC matching of student counts by grade level and address to housing characteristics from tax assessment data.

In addition to the enrollment count shown here for residential structures, a number of pupils were associated with addresses of mixed use properties that also contain commercial floor area. Those pupils are not shown in the above table.

For a certain class of properties, described in assessing data as “Retail/Office First Floor, Apartments Upper”, enrollment ratios were tabulated based on the number of apartments within the upper floors of the buildings. Most of these are older buildings located on Central Avenue. The results showed a total of 6 pupils living in 181 upper floor apartments or an average of 0.033 pupils per unit. This ratio is 21.6% of the enrollment assigned to privately-owned multifamily properties (four or more unit buildings) at 0.1529 pupils per unit.

The enrolment ratios used for this update are shown in the next chart. Enrolment ratios are applied to two facility categories: (1) elementary and middle school level; and (2) high school level.

2017 Public School Enrollment Ratios Per Housing Unit - Dover, NH (1) (Averages Exclude Units in Age-Restricted Developments)						
Grade Level	Type of Structure					
	Single Family Detached	Two and Three Family Structures	Apartments - Four or More Family (2)	Townhouse	Manufactured Housing (3)	Average All Housing Units
Elementary	0.1341	0.0987	0.0709	0.0601	0.0426	0.1050
Middle	0.1183	0.0592	0.0449	0.0381	0.0710	0.0826
PK to Grade 8 Total	0.2524	0.1579	0.1158	0.0982	0.1136	0.1876
High School	0.1058	0.0612	0.0371	0.0414	0.0781	0.0729
Total	0.3582	0.2191	0.1529	0.1396	0.1917	0.2605
<i>(1) Averages computed based on total housing stock, not adjusted for occupancy rate</i>						
<i>(2) Ratio for apartments (4+ family structures) excludes public housing and other subsidized units owned by Dover Housing Authority</i>						
<i>(3) Due to relatively small sample of units outside of age restricted developments, the ratio for manufactured housing units has been estimated based on adjusted ratios derived from American Community Survey (ACS) data (see text)</i>						

Because of the relatively small sample of manufactured housing units that are not within age restricted developments, BCM Planning computed a ration based on historical data from the American Community Survey (ACS) public use sample from 2005-2009 data (as tabulated by the NH Housing Finance Authority). The public use sample data was adjusted relative to Dover enrollment characteristics for single family homes to derive a 2017 estimate for manufactured housing.

2. Facility Standards: School Floor Area per Pupil Capacity

Updated estimates of school facility floor areas per pupil capacity, and enrollment as a percent of school capacity are summarized below.

INVENTORY OF DOVER PUBLIC SCHOOLS, FLOOR AREA AND PUPIL CAPACITY - 2017						
School Facilities	Year Built and Expansion Dates	Facility Floor Area	Estimated Capacity	Gross Sq. Ft./Pupil Capacity	October 2017 Enrollment	Enrollment as % of Capacity
ELEMENTARY SCHOOLS						
Garrison Elementary	1962, 1967, 1969, 1999, 2005, 2006	65,938	672	98	440	65%
Horne Street Elementary	1957, 1993, 1999, 2002, 2008	58,233	620	94	491	79%
Woodman Elementary	1950, 1999, 2007	105,178	594	177	477	80%
Total Elementary		229,349	1,886	122	1,408	75%
MIDDLE SCHOOL						
Dover Middle School	1998, 2003	175,020	1,380	127	1,209	88%
Total Elementary and Middle		404,369	3,266	124	2,617	80%
HIGH SCHOOL <i>Estimate of Sq. Ft. Excludes Career Tech Ctr</i>						
Dover High School	New High School 2017	237,248	1,500	158	1,344	90%
Total School System		641,617	4,766	135	3,961	83%

Capacities for the elementary and middle schools are based on the City's Comprehensive Annual Financial Report (CAFR) for 2016.

The capacity of the new high school reflects the estimated design capacity of the new facility (1,500 pupils) according to an on-line report from the Dover School District project archive (website) for the high school project entitled Dover High School Space Summary, describing the planned space allocation for the new high school.

Based on October 2017 enrollment counts, elementary and middle school enrollment represents 80% of school capacity, and current high school enrollment represents 90% of the capacity assigned to the new high school.

The enrollment projections reviewed in Section A of this report indicate that sufficient capacity should be available at all levels over the projection period through 2026.

Estimated Floor Area Per Pupil Capacity - New Dover High School	
Space Component	New High School
Capacity	1,500
Classrooms	64
Core Academic Space	69,470
Art & Music	9,650
Career & Tech Ed Center (CTC)	60,350
Health & Phys. Education	27,600
Media Center	8,600
Auditorium/Drama	10,400
Dining & Food Service	13,650
Medical	910
Admin. & Guidance	5,045
Custodial & Maint	5,150
Other	7,440
District Storage	250
Net Floor Area Total Facility	218,515
Net Floor Area w/o CTC	158,165
Gross Floor Area With CTC	327,773
Grossing Factor Per Space Study	1.50
Es. Gross Floor Area High School Only	237,248
Stated Capacity of Facility	1,500
Square Feet Per Pupil Capacity	158

Spatial components and grossing factor from Dover School District online project archive report: Dover High School Space Summary

While the average floor area per pupil capacity for elementary and middle school space is virtually unchanged since the 2008 update, the design basis for the new high school represents a significant increase in the floor area standard.

Based on the estimated gross floor area of the new high school (excluding the area devoted to the Career Technical Center (CTC), BCM Planning estimates that the core and classroom space associated with the high school is 158 square feet per pupil capacity.

This raises the standard for floor area per high school pupil from the 129 square feet per pupil to an estimated 158 square feet per pupil capacity at the new high school (excluding the floor area devoted to the CTC portion of the site). This is an increase of 22.5% in the space standard applicable to high school facilities.

3. Facility Development Cost per Square Foot

Total Development Costs of New High School - Dover			
Facility Components of Project	Total Cost	Allocated Gross Sq. Ft.	Est. Cost Per Sq. Ft.
Total Facility Development Cost	\$87,622,756	327,773	\$267
CTC Cost @ 22.8% of Total	\$19,977,988	90,525	\$221
High School Cost @ 77.2%	\$67,644,768	237,248	\$285

Based on a review of the comprehensive development costs of the new high school, the total development costs for the new high

school, including the CTC portion of the project, will average \$267 per square foot. Excluding the CTC portion, the allocated cost indicates that the high school portion of total development costs will average \$285 per square foot.

In keeping with the 2008 impact fee methodology, BCM Planning has assigned facility development costs using the most recent State Department of Education construction cost guidelines. The cost guidelines are intended to establish reasonable estimates of school constructions costs that will be subject to reimbursement from State Building Aid when available.

The most recent publication of cost guideline was applicable to 2015-2016 construction. Standard costs were computed by the NH Department of Education at an average of \$208 per

square foot for elementary / middle schools and at \$222 for high schools in Strafford County. Using an RS Means time adjustment to 2016-2017 costs, these estimates were adjusted to **\$209** and **\$223** per square foot respectively for this impact fee update.

4. State Building Aid

The portion of the school impact fee assessed for elementary and middle school facilities reflects a recoupment of the cost of capacity that benefited from past State Building Aid provided for 30% of principal costs. While the same benefit applied to high school costs in the past, the new high school will receive State aid only for the CTC portion of construction. No State Building Aid is available to offset costs attributable to the high school portion of the project.

5. Credit Allowances

All credit allowances for bonded debt costs attributable to existing capacity needs have been updated to 2017 values using the same methods as prior updates.

The new high school construction will replace the existing facility with a more modern school that will provide more space per pupil than the old facility.

While the new high school will have sufficient capacity to accommodate projected enrollment over the next 10 years, its construction centers on providing more space per pupil in a better facility rather than a simple increase in capacity.

Deficiency in High School Space Rectified by New Facility	
Old Floor Area Standard Per Pupil	129
New High School - Area Per Pupil Capacity	158
Net Change Per Pupil	29
New High School Capacity	1,500
Floor Area Required to Meet New Standard	43,500
Gross Floor Area Estimate - High school Excluding CTC	237,248
Percent of Cost Attributable to Base Year Deficiency	18.3%

A portion of high school project cost is attributable to the increase in the floor area standard per pupil. This increase essentially represents a pre-existing space deficiency per pupil.

The credit allowance is computed at 18.3% of net school district costs for the development of the new high school (excluding CTC and the related State funds that will reimburse part of the CTC component of the project). Bonded debt service costs used in the credit calculation pertain to the non-CTC portion of debt service costs. Detailed credit allowance calculations are included at the end of this chapter.

5. Summary Fee Schedules

a. Fee Table and Comparison 2007 vs. 2018

Dover School Impact Fee: 2017 Calculations of Fee Per Dwelling Unit		
Type of Structure	2017 School Impact Fee Per Dwelling Unit	
	A	B
	Fee as Calculated	Discounted Fee (3)
Single Family Detached	\$6,629	\$5,648
Townhouse	\$2,125	\$1,778
Two and Three Unit Structures	\$4,346	\$3,754
Multi-family Structures 4+ Units	\$3,003	\$2,644
Manufactured Housing	\$4,338	\$3,551
Accessory Dwelling Unit (1)	\$1,989	\$1,694
Apartment Over 1st Floor Non-Residential Use (2)	\$649	\$571
Age Restricted Dwelling Unit 55+	No Fee	No Fee
Age Restricted Dwelling Unit 62+	No Fee	No Fee
<i>(1) Fee for ADU Computed at 30% of fee for single family detached home</i>		
<i>(2) Reduced fee for apartments in upper stories of buildings with commercial first floor may be subject to other specific conditions established by the City or limited to certain zoning districts</i>		
<i>(3) The discounted fee option (B) is based on applying traditional State Building Aid at 30% of principal to compute the cost basis and credit allowances for high school facility space. The fee as calculated reflects actual conditions (no State funding was applicable to the non-CTC portion of new high school)</i>		

The results of the revised impact fee calculation for public schools is shown in column A. One of the principal reasons for the increase in fee compared with the 2007 calculation centers on the high school. The floor are per pupil standard has increased at the high school, and the new facility will not benefit from traditional levels of State Building Aid that have historically reduced local district capital costs.

For comparison purposes column B shows what the school impact fee schedule would be if State Building Aid (at 30% of principal) was available to the new high school.

Change in Components of Dover School Impact Fee Calculation for Single Family Home						
Single Family Detached Unit - Impact Fee Components	2001-2002	2007-2008	2017-2018	Change from 2007 to 2017	% Change	Annualized Pct Change (10 Yrs)
Enrollment Per Unit						
Elementary and Middle	0.2656	0.2554	0.2524	-0.0030	-1.2%	-0.12%
High School	0.1082	0.1140	0.1058	-0.0082	-7.2%	-0.72%
Total	0.3738	0.3694	0.3582	-0.0112	-3.0%	-0.30%
Square Feet Per Pupil Capacity						
Elementary and Middle	136	125	124	-1	-0.8%	-0.08%
High School	133	129	158	29	22.5%	2.25%
Facility Cost Per Square Foot						
Elementary and Middle	\$128	\$151	\$209	\$58	38.4%	3.84%
High School	\$150	\$168	\$223	\$55	32.7%	3.27%
Total Facility Cost Attributed						
Elementary and Middle	\$4,624	\$4,821	\$6,541	\$1,720	35.7%	3.57%
High School	\$2,159	\$2,471	\$3,728	\$1,257	50.9%	5.09%
Total	\$6,783	\$7,292	\$10,269	\$2,977	40.8%	4.08%
State Building Aid % of Principal						
Elementary and Middle	30%	30%	30%	0%	0.0%	0.00%
High School	30%	30%	0%	-30%	-100.0%	-10.00%
Net Local Cost						
Elementary and Middle	\$3,236	\$3,374	\$4,579	\$1,205	35.7%	3.57%
High School	\$1,511	\$1,729	\$3,728	\$1,999	115.6%	11.56%
Total	\$4,747	\$5,103	\$8,307	\$3,204	62.8%	6.28%
Credit Allowance (Deduct from Local Cost)						
Past	\$29	\$113	\$370	\$257	227.4%	22.74%
Future	\$1,759	\$1,340	\$1,308	-\$32	-2.4%	-0.24%
Total	\$1,788	\$1,453	\$1,678	\$225	15.5%	1.55%
Impact Fee - Single Family Unit	\$2,959	\$3,650	\$6,629	\$2,979	81.6%	8.16%

This chart shows the change in the components of the Dover school impact fee as applied to a single family detached home.

The principal reasons for the increase in the single family are (1) the time adjustment (10 years) update to 2017 equivalent facility development costs; (2) the increased floor area standard for the high school; and (3) the absence of State Building Aid for the new high school facility.

2017 IMPACT FEE CALCULATION PER HOUSING UNIT BY STRUCTURE TYPE - DOVER, NEW HAMPSHIRE - A							School Cost Per Housing Unit @ Indicated \$/Sq.Ft. of School Area		
Structure Type	Dover Public School Enrollment Per Housing Unit			Existing Facilities Avg Sq. Ft. Per Pupil Capacity			\$209	\$223	Total Capital Cost Per D.U.
	Elementary & Middle	High School	Total Public Schools	Elementary & Middle	High School	Overall Average	Elementary & Middle	High School	
Single Family Detached	0.2524	0.1058	0.3582	124	158	134	\$ 6,541	\$ 3,728	\$ 10,269
Townhouse	0.0982	0.0414	0.1396	124	158	134	\$ 2,545	\$ 1,459	\$ 4,004
Two and Three Unit Structures	0.1579	0.0612	0.2191	124	158	133	\$ 4,092	\$ 2,156	\$ 6,248
Four or More Unit Structures	0.1158	0.0371	0.1529	124	158	132	\$ 3,001	\$ 1,307	\$ 4,308
Manufactured Housing	0.1136	0.0781	0.1917	124	158	138	\$ 2,944	\$ 2,752	\$ 5,696
Structure Type	Local Capital Cost Per Unit			Credit Allowances for Debt Service (See Credit Explanations)			Impact Fee Assessment Per Dwelling Unit		
	(Total Capital Cost Less 30% State Building Aid on Elementary & Middle)						(Local Capital Cost Less Credits)		
	Elementary And Middle	High School	Total Public Schools	Past Payments	Future Payments	Total Credit	Impact Fee Per Unit:		
Single Family Detached	\$ 4,579	\$ 3,728	\$ 8,307	\$ (370)	\$ (1,308)	\$ (1,678)	\$6,629		
Townhouse	\$ 1,782	\$ 1,459	\$ 3,241	\$ (245)	\$ (871)	\$ (1,116)	\$2,125		
Two and Three Unit Structures	\$ 2,864	\$ 2,156	\$ 5,020	\$ (150)	\$ (524)	\$ (674)	\$4,346		
Four or More Unit Structures	\$ 2,101	\$ 1,307	\$ 3,408	\$ (89)	\$ (316)	\$ (405)	\$3,003		
Manufactured Housing	\$ 2,061	\$ 2,752	\$ 4,813	\$ (105)	\$ (370)	\$ (475)	\$4,338		

b. Special Fee Categories

Accessory Dwelling Units. In Dover, an ADU is allowed only in association with a single family detached home. Dover zoning standards require that an ADU shall have an area of no less than 300 square feet and no more than 800 square feet. The living area of the ADU can be no more than 30% of the combined living area of the ADU and the principal unit, and the property owner must live in either the ADU or the principal unit. BCM Planning was not able to compute a direct enrollment ratio for accessory units, as no property tax assessment designation was available to identify single family homes with apartments. Other studies by BCM Planning have compared enrollment data for single family homes with apartments to all other single family homes in Salem, Manchester, Plaistow and Sandown. These studies indicated an average living differential of about 600 square feet between homes with accessory apartments and those without them. Those with an apartment had enrollment ratios that were 30% to 35% higher than the homes without accessory apartments.

In this update, the impact fee for an accessory dwelling unit (ADU) has been computed at 30% of the standard fee applicable to a single family detached home. Based on the Dover zoning standards, an ADU might be smaller than a typical studio apartment or as large as an average two bedroom unit. Exceptions or reductions might be considered for ADUs or other apartments that have living area below selected thresholds.

Apartments in Upper Stories of Buildings with Commercial First Floor. The City requested a review of the enrollment impacts and a school impact fee option for apartments in the upper stories of commercial buildings. Buildings with these characteristics were identified based on City property assessment data. Total public school enrollment in these selected properties totaled 6 pupils among 181 upper floor apartments (a ratio of 0.033 per unit). That enrollment is 21.6% of the multipliers (0.1529 per unit) assigned to privately owned apartment buildings with four or more units. If a school fee category were established for units similar to this sample of center city, upper floor apartments, the fee could be computed as function of the standard apartment fee:

Apartment fee of \$3,003 x 21.6% = **\$649 per unit** for qualified upper floor apartments.

The sample of units from which the adjustment is derived reflects data for buildings that are an average of about 100 years old, most of which are on Central Avenue. Only a portion of these properties represent new construction or substantial renovation.

Age Restricted Housing Units. No school impact fees are proposed housing units in congregate senior housing developments or in age restricted housing units in which deed restrictions limited their occupancy to persons age 62 or older, or to persons age 55 or older. If an age-restricted housing development has less than 100% of its units restricted to these age groups, then the school impact fee may be assessed in proportion to the percentage subject to the age restriction. For example, if 80% of units are subject to an age restriction, then 20% of the school fee could be assessed per unit.

CREDIT ALLOWANCE UPDATES: SCHOOL FACILITIES

Elementary Schools

CREDIT CALCULATION

IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS DOVER SCHOOL DISTRICT

Bond: Garrison Elementary School - New Gym/Admin/Classrooms (\$2,150,000) June 2005

State Aid To District: 30% of Principal Due on Bonds

Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2005	\$ -	\$ 83,402	\$ 83,402	\$ -	\$ 83,402
2006	\$ 108,000	\$ 83,402	\$ 191,402	\$ (32,400)	\$ 159,002
2007	\$ 108,000	\$ 78,002	\$ 186,002	\$ (32,400)	\$ 153,602
2008	\$ 108,000	\$ 72,602	\$ 180,602	\$ (32,400)	\$ 148,202
2009	\$ 108,000	\$ 68,282	\$ 176,282	\$ (32,400)	\$ 143,882
2010	\$ 108,000	\$ 65,042	\$ 173,042	\$ (32,400)	\$ 140,642
2011	\$ 108,000	\$ 61,802	\$ 169,802	\$ (32,400)	\$ 137,402
2012	\$ 108,000	\$ 58,454	\$ 166,454	\$ (32,400)	\$ 134,054
2013	\$ 108,000	\$ 54,998	\$ 162,998	\$ (32,400)	\$ 130,598
2014	\$ 108,000	\$ 51,434	\$ 159,434	\$ (32,400)	\$ 127,034
2015	\$ 108,000	\$ 47,762	\$ 155,762	\$ (32,400)	\$ 123,362
2016	\$ 107,000	\$ 43,442	\$ 150,442	\$ (32,100)	\$ 118,342
2017	\$ 107,000	\$ 39,162	\$ 146,162	\$ (32,100)	\$ 114,062

Present Value of Past Payments \$ 2,347,664
 Percent of Capacity Utilized as of 2017 65%
 Credited Amount \$ 1,525,982
 Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
 Past Payment Credit Per \$1000 Raw Land Value \$ 0.48

FUTURE PAYMENTS

2018	\$ 107,000	\$ 34,882	\$ 141,882	\$ (32,100)	\$ 109,782
2019	\$ 107,000	\$ 30,602	\$ 137,602	\$ (32,100)	\$ 105,502
2020	\$ 107,000	\$ 26,322	\$ 133,322	\$ (32,100)	\$ 101,222
2021	\$ 107,000	\$ 22,042	\$ 129,042	\$ (32,100)	\$ 96,942
2022	\$ 107,000	\$ 17,762	\$ 124,762	\$ (32,100)	\$ 92,662
2023	\$ 107,000	\$ 13,376	\$ 120,376	\$ (32,100)	\$ 88,276
2024	\$ 107,000	\$ 8,988	\$ 115,988	\$ (32,100)	\$ 83,888
2025	\$ 107,000	\$ 4,494	\$ 111,494	\$ (32,100)	\$ 79,394
Total Past & Future	\$ 2,150,000	\$ 966,254	\$ 3,116,254	\$ (645,000)	\$ 3,156,576,361

Net Present Value of Future Payments (2018-2025) @ 5% discount rate: \$ 619,272
 Percent of Capacity Utilized as of 2017 65%
 Credited Amount \$ 402,527
 Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
 Credit per thousand assessed value of completed home: \$ 0.13

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$269,000	\$ 34,970	\$ (17)	\$ (35)
Townhouse	\$179,000	\$ 23,270	\$ (11)	\$ (23)
Two and Three Family	\$108,000	\$ 14,040	\$ (7)	\$ (14)
Four or More Family	\$65,000	\$ 8,450	\$ (4)	\$ (8)
Manufactured Housing	\$76,000	\$ 9,880	\$ (5)	\$ (10)

**CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT**

Bonds: Woodman Park Elementary - 17-Room Addition - \$4,805,000 - June 2006

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2006	\$ -	\$ 204,850	\$ 204,850	\$ -	\$ 204,850
2007	\$ 240,000	\$ 204,850	\$ 444,850	\$ (72,000)	\$ 372,850
2008	\$ 245,000	\$ 192,600	\$ 437,600	\$ (73,500)	\$ 364,100
2009	\$ 240,000	\$ 182,700	\$ 422,700	\$ (72,000)	\$ 350,700
2010	\$ 240,000	\$ 173,100	\$ 413,100	\$ (72,000)	\$ 341,100
2011	\$ 240,000	\$ 163,500	\$ 403,500	\$ (72,000)	\$ 331,500
2012	\$ 240,000	\$ 153,900	\$ 393,900	\$ (72,000)	\$ 321,900
2013	\$ 240,000	\$ 141,900	\$ 381,900	\$ (72,000)	\$ 309,900
2014	\$ 240,000	\$ 132,300	\$ 372,300	\$ (72,000)	\$ 300,300
2015	\$ 240,000	\$ 120,300	\$ 360,300	\$ (72,000)	\$ 288,300
2016	\$ 240,000	\$ 110,100	\$ 350,100	\$ (72,000)	\$ 278,100
2017	\$ 240,000	\$ 100,500	\$ 340,500	\$ (72,000)	\$ 268,500

Present Value of Past Payments \$ 4,978,393
Percent of Capacity Utilized as of 2017 80%
Amount Credited \$ 3,982,715
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Past Payment Credit Per \$1000 Land Value \$ 1.26

FUTURE PAYMENTS

2018	\$ 240,000	\$ 90,900	\$ 330,900	\$ (72,000)	\$ 258,900
2019	\$ 240,000	\$ 81,300	\$ 321,300	\$ (72,000)	\$ 249,300
2020	\$ 240,000	\$ 71,700	\$ 311,700	\$ (72,000)	\$ 239,700
2021	\$ 240,000	\$ 61,800	\$ 301,800	\$ (72,000)	\$ 229,800
2022	\$ 240,000	\$ 51,600	\$ 291,600	\$ (72,000)	\$ 219,600
2023	\$ 240,000	\$ 41,400	\$ 281,400	\$ (72,000)	\$ 209,400
2024	\$ 240,000	\$ 31,200	\$ 271,200	\$ (72,000)	\$ 199,200
2025	\$ 240,000	\$ 21,000	\$ 261,000	\$ (72,000)	\$ 189,000
2026	\$ 240,000	\$ 10,500	\$ 250,500	\$ (72,000)	\$ 178,500
Total Past and future	\$ 4,805,000	\$ 2,342,000	\$ 7,147,000	\$ (1,441,500)	\$ 3,164,898,070

Net Present Value of Future Payments (2018-2026) @ 5% discount rate: \$ 1,581,686
Percent of Capacity Utilized as of 2017 80%
Amount Credited \$ 1,265,349
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Credit per thousand assessed value of completed home: \$ 0.40

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$ 269,000	\$ 34,970	\$ (14)	(\$108)
Townhouse	\$ 179,000	\$ 23,270	\$ (9)	(\$72)
Two and Three Family	\$ 108,000	\$ 14,040	\$ (6)	(\$43)
Four or More Family	\$ 65,000	\$ 8,450	\$ (3)	(\$26)
Manufactured Housing	\$ 76,000	\$ 9,880	\$ (4)	(\$30)

**CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT**

Bonds: Horne Street School - Two Improvement Bonds \$365,000 (2003) and \$225,000 (2004)

State Aid To District: 30% of Principal Due on Bonds

Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2004	\$ -	\$ 10,262	\$ 10,262	\$ -	\$ 10,262
2005	\$ 25,000	\$ 18,324	\$ 43,324	\$ (7,500)	\$ 35,824
2006	\$ 40,000	\$ 17,824	\$ 57,824	\$ (12,000)	\$ 45,824
2007	\$ 40,000	\$ 16,800	\$ 56,800	\$ (12,000)	\$ 44,800
2008	\$ 40,000	\$ 15,774	\$ 55,774	\$ (12,000)	\$ 43,774
2009	\$ 40,000	\$ 14,688	\$ 54,688	\$ (12,000)	\$ 42,688
2010	\$ 40,000	\$ 13,538	\$ 53,538	\$ (12,000)	\$ 41,538
2011	\$ 40,000	\$ 12,326	\$ 52,326	\$ (12,000)	\$ 40,326
2012	\$ 40,000	\$ 11,014	\$ 51,014	\$ (12,000)	\$ 39,014
2013	\$ 40,000	\$ 9,664	\$ 49,664	\$ (12,000)	\$ 37,664
2014	\$ 40,000	\$ 8,252	\$ 48,252	\$ (12,000)	\$ 36,252
2015	\$ 40,000	\$ 6,902	\$ 46,902	\$ (12,000)	\$ 34,902
2016	\$ 40,000	\$ 5,502	\$ 45,502	\$ (12,000)	\$ 33,502
2017	\$ 40,000	\$ 4,036	\$ 44,036	\$ (12,000)	\$ 32,036

Present Value of Past Payments \$ 721,733
Percent of Capacity Utilized as of 2017 79%
Amount Credited \$ 570,169
Net Local Assessed Valuation Nov 2016 \$ 3,150,231,460
Past Payment Credit Per \$1000 Land Value \$ 0.18

FUTURE PAYMENTS

2018	\$ 35,000	\$ 2,706	\$ 37,706	\$ (10,500)	\$ 27,206
2019	\$ 35,000	\$ 1,336	\$ 36,336	\$ (10,500)	\$ 25,836
2020	\$ 15,000	\$ 676	\$ 15,676	\$ (4,500)	\$ 11,176
Total	\$ 590,000	\$ 169,624	\$ 759,624	\$ (177,000)	\$ 3,152,105,987

Net Present Value of Future Payments (2018-2029) @ 5% discount rate: \$ 58,999
Percent of Capacity Utilized as of 2007 79%
Amount Credited \$ 46,609
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Credit per thousand assessed value of completed home: \$ 0.01

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$ 269,000	\$ 34,970	\$ (6)	(\$3)
Townhouse	\$ 179,000	\$ 23,270	\$ (4)	(\$2)
Two and Three Family	\$ 108,000	\$ 14,040	\$ (3)	(\$1)
Four or More Family	\$ 65,000	\$ 8,450	\$ (2)	(\$1)
Manufactured Housing	\$ 76,000	\$ 9,880	\$ (2)	(\$1)

**CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT**

Bonds: Horne Street School - Improvement Bonds 11/15/08 and 4/15/2010

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2009	\$ 25,000	\$ 18,944	\$ 43,944	\$ (7,500)	\$ 36,444
2010	\$ 25,000	\$ 110,882	\$ 135,882	\$ (7,500)	\$ 128,382
2011	\$ 337,942	\$ 215,463	\$ 553,405	\$ (101,383)	\$ 452,022
2012	\$ 335,000	\$ 205,368	\$ 540,368	\$ (100,500)	\$ 439,868
2013	\$ 335,000	\$ 195,256	\$ 530,256	\$ (100,500)	\$ 429,756
2014	\$ 335,000	\$ 185,081	\$ 520,081	\$ (100,500)	\$ 419,581
2015	\$ 335,000	\$ 174,906	\$ 509,906	\$ (100,500)	\$ 409,406
2016	\$ 335,000	\$ 164,669	\$ 499,669	\$ (100,500)	\$ 399,169
2017	\$ 335,000	\$ 154,369	\$ 489,369	\$ (100,500)	\$ 388,869

Present Worth of Past Payments \$ 3,669,095
Percent of Capacity Utilized as of 2017 79%
Amount Credited \$ 2,898,585
Net Local Assessed Valuation Nov 2016 \$ 3,150,231,460
Past Payment Credit Per \$1000 Land Value \$ 0.92

FUTURE PAYMENTS

2018	\$ 335,000	\$ 144,069	\$ 479,069	\$ (100,500)	\$ 378,569
2019	\$ 325,000	\$ 133,656	\$ 458,656	\$ (97,500)	\$ 361,156
2020	\$ 325,000	\$ 123,506	\$ 448,506	\$ (97,500)	\$ 351,006
2021	\$ 320,000	\$ 113,045	\$ 433,045	\$ (96,000)	\$ 337,045
2022	\$ 320,000	\$ 102,278	\$ 422,278	\$ (96,000)	\$ 326,278
2023	\$ 320,000	\$ 91,125	\$ 411,125	\$ (96,000)	\$ 315,125
2024	\$ 320,000	\$ 79,775	\$ 399,775	\$ (96,000)	\$ 303,775
2025	\$ 320,000	\$ 68,040	\$ 388,040	\$ (96,000)	\$ 292,040
2026	\$ 320,000	\$ 55,920	\$ 375,920	\$ (96,000)	\$ 279,920
2027	\$ 320,000	\$ 43,603	\$ 363,603	\$ (96,000)	\$ 267,603
2028	\$ 320,000	\$ 30,000	\$ 350,000	\$ (96,000)	\$ 254,000
2029	\$ 300,000	\$ 18,000	\$ 318,000	\$ (90,000)	\$ 228,000
2030	\$ 300,000	\$ 6,000	\$ 306,000	\$ (90,000)	\$ 216,000

Total Past and future \$ 6,542,942 \$ 2,433,954 \$ 8,976,896 \$ (1,962,883) \$ 7,014,014

Net Present Value of Future Payments (2018-2026) @ 5% discount rate: \$ 2,353,409
Percent of Capacity Utilized as of 2007 79%
Amount Credited \$ 1,859,193
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Credit per thousand assessed value of completed home: \$ 0.59

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$ 269,000	\$ 34,970	\$ (14)	(\$108)
Townhouse	\$ 179,000	\$ 23,270	\$ (9)	(\$72)
Two and Three Family	\$ 108,000	\$ 14,040	\$ (6)	(\$43)
Four or More Family	\$ 65,000	\$ 8,450	\$ (3)	(\$26)
Manufactured Housing	\$ 76,000	\$ 9,880	\$ (4)	(\$30)

Middle School

CREDIT CALCULATION IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS DOVER SCHOOL DISTRICT

Bonds: Middle School Construction - 1999 Series C

State Aid To District: 30% of Principal Due on Bonds
Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2000	\$ 493,171	\$ 15,615	\$ 508,786	\$ (147,951)	\$ 360,835
2001	\$ 1,165,337	\$ 81,827	\$ 1,247,165	\$ (349,601)	\$ 897,563
2002	\$ 1,171,583	\$ 151,115	\$ 1,322,698	\$ (351,475)	\$ 971,223
2003	\$ 1,108,253	\$ 212,357	\$ 1,320,610	\$ (332,476)	\$ 988,134
2004	\$ 1,047,263	\$ 269,885	\$ 1,317,148	\$ (314,179)	\$ 1,002,969
2005	\$ 992,290	\$ 324,883	\$ 1,317,173	\$ (297,687)	\$ 1,019,486
2006	\$ 939,029	\$ 376,519	\$ 1,315,548	\$ (281,709)	\$ 1,033,839
2007	\$ 890,830	\$ 426,305	\$ 1,317,135	\$ (267,249)	\$ 1,049,886
2008	\$ 843,876	\$ 472,922	\$ 1,316,798	\$ (253,163)	\$ 1,063,635
2009	\$ 798,246	\$ 516,289	\$ 1,314,535	\$ (239,474)	\$ 1,075,061
2010	\$ 756,788	\$ 558,422	\$ 1,315,210	\$ (227,036)	\$ 1,088,174
2011	\$ 716,302	\$ 597,384	\$ 1,313,685	\$ (214,890)	\$ 1,098,795
2012	\$ 668,879	\$ 641,081	\$ 1,309,960	\$ (200,664)	\$ 1,109,296
2013	\$ 632,735	\$ 676,162	\$ 1,308,898	\$ (189,821)	\$ 1,119,077
2014	\$ 599,659	\$ 710,563	\$ 1,310,223	\$ (179,898)	\$ 1,130,325
2015	\$ 566,927	\$ 741,390	\$ 1,308,318	\$ (170,078)	\$ 1,138,239
2016	\$ 534,610	\$ 768,421	\$ 1,303,031	\$ (160,383)	\$ 1,142,648
2017	\$ 498,096	\$ 806,435	\$ 1,304,531	\$ (149,429)	\$ 1,155,102

Present Worth of Past Payments \$ 27,898,678
Percent of Capacity Utilized as of 2017 88%
Credited Amount \$ 24,550,837
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Past Payment Credit Per \$1000 Land Value \$ 7.79

FUTURE PAYMENTS

2018	\$ 466,687	\$ 835,969	\$ 1,302,656	\$ (140,006)	\$ 1,162,650
2019	\$ 439,264	\$ 857,398	\$ 1,296,663	\$ (131,779)	\$ 1,164,883
2020	\$ 411,201	\$ 885,024	\$ 1,296,225	\$ (123,360)	\$ 1,172,865
Total Past and future	\$ 15,741,027	\$ 10,925,965	\$ 26,666,992	\$ (4,722,308)	\$ 21,944,684

Net Present Value of Future Payments (2018-2020) @ 5% discount rate: \$ 3,177,034
Percent of Capacity Utilized as of 2007 88%
Credited Amount \$ 2,795,790
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Credit per thousand assessed value of completed home: \$ 0.89

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$ 269,000	\$ 34,970	(\$272)	(\$239)
Townhouse	\$ 179,000	\$ 23,270	(\$181)	(\$159)
Two and Three Family	\$ 108,000	\$ 14,040	(\$109)	(\$96)
Four or More Family	\$ 65,000	\$ 8,450	(\$66)	(\$58)
Manufactured Housing	\$ 76,000	\$ 9,880	(\$77)	(\$68)

**CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT**

Bonds: Middle School Improvement Bond - Two-wing addition - \$1,000,000 June 2003

State Aid To District: 30% of Principal Due on Bonds

Discount Rate: 5%

Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment	Less State Building Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2003	0	\$ 31,538	\$ 31,538	\$ -	\$ 31,538
2004	\$ 50,000	\$ 31,538	\$ 81,538	\$ (15,000)	\$ 66,538
2005	\$ 50,000	\$ 30,534	\$ 80,534	\$ (15,000)	\$ 65,534
2006	\$ 50,000	\$ 29,538	\$ 79,538	\$ (15,000)	\$ 64,538
2007	\$ 50,000	\$ 28,538	\$ 78,538	\$ (15,000)	\$ 63,538
2008	\$ 50,000	\$ 27,412	\$ 77,412	\$ (15,000)	\$ 62,412
2009	\$ 50,000	\$ 26,162	\$ 76,162	\$ (15,000)	\$ 61,162
2010	\$ 50,000	\$ 24,788	\$ 74,788	\$ (15,000)	\$ 59,788
2011	\$ 50,000	\$ 23,288	\$ 73,288	\$ (15,000)	\$ 58,288
2012	\$ 50,000	\$ 21,788	\$ 71,788	\$ (15,000)	\$ 56,788
2013	\$ 50,000	\$ 20,162	\$ 70,162	\$ (15,000)	\$ 55,162
2014	\$ 50,000	\$ 18,662	\$ 68,662	\$ (15,000)	\$ 53,662
2015	\$ 50,000	\$ 17,062	\$ 67,062	\$ (15,000)	\$ 52,062
2016	\$ 50,000	\$ 15,362	\$ 65,362	\$ (15,000)	\$ 50,362
2017	\$ 50,000	\$ 13,612	\$ 63,612	\$ (15,000)	\$ 48,612

Present Worth of Past Payments \$ 1,229,442
Percent of Capacity Utilized as of 2017 88%
Amount Credited \$ 1,081,909
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Past Payment Credit Per \$1000 Land Value \$ 0.34

FUTURE PAYMENTS

2018	\$ 50,000	\$ 11,800	\$ 61,800	\$ (15,000)	\$ 46,800
2019	\$ 50,000	\$ 9,950	\$ 59,950	\$ (15,000)	\$ 44,950
2020	\$ 50,000	\$ 8,050	\$ 58,050	\$ (15,000)	\$ 43,050
2021	\$ 50,000	\$ 6,050	\$ 56,050	\$ (15,000)	\$ 41,050
2022	\$ 50,000	\$ 4,050	\$ 54,050	\$ (15,000)	\$ 39,050
2023	\$ 50,000	\$ 2,050	\$ 52,050	\$ (15,000)	\$ 37,050
Total Past and future	\$ 1,000,000	\$ 401,934	\$ 1,401,934	\$ (300,000)	\$ 1,101,934

Net Present Value of Future Payments (2018-2024) @ 5% discount rate: \$ 214,546.53
Percent of Capacity Utilized as of 2017 88%
Amount Credited \$ 188,801
Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
Credit per thousand assessed value of completed home: \$ 0.06

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$ 269,000	\$ 34,970	(\$12)	(\$16)
Townhouse	\$ 179,000	\$ 23,270	(\$8)	(\$11)
Two and Three Family	\$ 108,000	\$ 14,040	(\$5)	(\$6)
Four or More Family	\$ 65,000	\$ 8,450	(\$3)	(\$4)
Manufactured Housing	\$ 76,000	\$ 9,880	(\$3)	(\$5)

High School (old)

**CREDIT CALCULATION
IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS
DOVER SCHOOL DISTRICT**

Bonds: High School - 8 Room Addition - 2 Bonds \$1,783,000 and \$500,000 June 2003

State Aid To District: 30% of Principal Due on Bonds

Discount Rate: 5%

Year	Total Principal Payment	Total Interest Payment	Less State Building Total Payment	Aid at 30% of Principal	Net Debt Service Cost To District
PAST PAYMENTS					
2003	\$ 119,000	\$ 64,714	\$ 183,714	\$ (35,700)	\$ 148,014
2004	\$ 154,000	\$ 61,144	\$ 215,144	\$ (46,200)	\$ 168,944
2005	\$ 154,000	\$ 58,064	\$ 212,064	\$ (46,200)	\$ 165,864
2006	\$ 154,000	\$ 54,984	\$ 208,984	\$ (46,200)	\$ 162,784
2007	\$ 154,000	\$ 51,904	\$ 205,904	\$ (46,200)	\$ 159,704
2008	\$ 154,000	\$ 48,438	\$ 202,438	\$ (46,200)	\$ 156,238
2009	\$ 154,000	\$ 44,590	\$ 198,590	\$ (46,200)	\$ 152,390
2010	\$ 154,000	\$ 40,356	\$ 194,356	\$ (46,200)	\$ 148,156
2011	\$ 154,000	\$ 35,736	\$ 189,736	\$ (46,200)	\$ 143,536
2012	\$ 154,000	\$ 31,116	\$ 185,116	\$ (46,200)	\$ 138,916
2013	\$ 154,000	\$ 26,110	\$ 180,110	\$ (46,200)	\$ 133,910
2014	\$ 149,000	\$ 21,490	\$ 170,490	\$ (44,700)	\$ 125,790
2015	\$ 149,000	\$ 16,722	\$ 165,722	\$ (44,700)	\$ 121,022
2016	\$ 148,000	\$ 11,656	\$ 159,656	\$ (44,400)	\$ 115,256
2017	\$ 148,000	\$ 6,476	\$ 154,476	\$ (44,400)	\$ 110,076

Present Value of Past Payments \$ 3,166,603
 Percent of Capacity Utilized as of 2017 (Old HS) 76%
 Credited Amount \$ 2,406,618
 Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
 Past Payment Credit Per \$1000 Land Value \$ 0.76

FUTURE PAYMENTS

2018	\$ 30,000	\$ 1,110	\$ 31,110	\$ (9,000)	\$ 22,110
Total Past & Future	\$ 2,283,000	\$ 574,610	\$ 2,857,610	\$ (684,900)	\$ 3,157,977,393

Net Present Value of Future Payments (2018)@ 5% discount rate: \$ 21,057
 Percent of Capacity Utilized as of 2017 (Old HS) 76%
 Credited Amount \$ 16,003
 Net Local Assessed Valuation Oct 2017 \$ 3,150,231,460
 Credit per thousand assessed value of completed home: \$ 0.01

CREDIT CALCULATION (PER DWELLING UNIT)				
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)
Single Family Detached	\$ 269,000	\$ 34,970	(\$27)	(\$3)
Townhouse	\$ 179,000	\$ 23,270	(\$18)	(\$2)
Two and Three Family	\$ 108,000	\$ 14,040	(\$11)	(\$1)
Four or More Family	\$ 65,000	\$ 8,450	(\$6)	(\$1)
Manufactured Housing	\$ 76,000	\$ 9,880	(\$8)	(\$1)

High School (New)

CREDIT CALCULATION IMPACT FEE CREDIT CALCULATION FOR PROPERTY TAX PAYMENTS DOVER SCHOOL DISTRICT					
Bonds: New High School - Excluding CTE Portion of Development					
State Building Aid on Bond:				None	
Discount Rate:				5%	
Local Debt Svc Cost Excluding CTE Portion:				93%	
Portion of Debt Service on Non-CTE Space Credited:				18.3%	
Year	Total Principal Payment	Total Interest Payment	Total Payment	Adjusted to Exclude Local Cost of CTE	18.3% of Adjusted Debt Service Credited
PAST PAYMENTS					
2016	\$ -	\$ 1,854,556	\$ 1,854,556	\$ 1,724,737	\$ 315,627
2017	\$ -	\$ 2,607,969	\$ 2,607,969	\$ 2,425,411	\$ 443,850
Present Value of Past Payments					\$ 775,258
Enrollment as Percent of New HS Capacity					90%
Credited Amount					\$ 697,732
Net Local Assessed Valuation Oct 2017					\$ 3,150,231,460
Past Payment Credit Per \$1000 Land Value					0.22
FUTURE PAYMENTS					
2018	\$ -	\$ 2,607,969	\$ 2,607,969	\$ 2,425,411	\$ 443,850
2019	\$ 60,000	\$ 2,606,469	\$ 2,666,469	\$ 2,479,816	\$ 453,806
2020	\$ 155,000	\$ 2,601,094	\$ 2,756,094	\$ 2,563,167	\$ 469,060
2021	\$ 1,545,000	\$ 2,581,769	\$ 4,126,769	\$ 3,837,895	\$ 702,335
2022	\$ 1,660,000	\$ 2,524,819	\$ 4,184,819	\$ 3,891,881	\$ 712,214
2023	\$ 1,825,000	\$ 2,437,694	\$ 4,262,694	\$ 3,964,305	\$ 725,468
2024	\$ 1,940,000	\$ 2,343,569	\$ 4,283,569	\$ 3,983,719	\$ 729,021
2025	\$ 2,105,000	\$ 2,242,444	\$ 4,347,444	\$ 4,043,123	\$ 739,892
2026	\$ 2,265,000	\$ 2,133,194	\$ 4,398,194	\$ 4,090,320	\$ 748,529
2027	\$ 2,500,000	\$ 2,014,069	\$ 4,514,069	\$ 4,198,084	\$ 768,249
2028	\$ 3,190,000	\$ 1,887,769	\$ 5,077,769	\$ 4,722,325	\$ 864,185
2029	\$ 3,300,000	\$ 1,757,969	\$ 5,057,969	\$ 4,703,911	\$ 860,816
2030	\$ 3,435,000	\$ 1,631,856	\$ 5,066,856	\$ 4,712,176	\$ 862,328
2031	\$ 3,860,000	\$ 1,513,844	\$ 5,373,844	\$ 4,997,675	\$ 914,575
2032	\$ 3,990,000	\$ 1,396,094	\$ 5,386,094	\$ 5,009,067	\$ 916,659
2033	\$ 4,125,000	\$ 1,274,369	\$ 5,399,369	\$ 5,021,413	\$ 918,919
2034	\$ 4,255,000	\$ 1,148,669	\$ 5,403,669	\$ 5,025,412	\$ 919,650
2035	\$ 4,410,000	\$ 1,018,694	\$ 5,428,694	\$ 5,048,685	\$ 923,909
2036	\$ 4,565,000	\$ 881,216	\$ 5,446,216	\$ 5,064,981	\$ 926,892
2037	\$ 4,740,000	\$ 735,825	\$ 5,475,825	\$ 5,092,517	\$ 931,931
2038	\$ 4,895,000	\$ 582,219	\$ 5,477,219	\$ 5,093,813	\$ 932,168
2039	\$ 5,020,000	\$ 421,100	\$ 5,441,100	\$ 5,060,223	\$ 926,021
2040	\$ 5,220,000	\$ 251,438	\$ 5,471,438	\$ 5,088,437	\$ 931,184
2041	\$ 4,840,000	\$ 81,675	\$ 4,921,675	\$ 4,577,158	\$ 837,620
Total Past & Future	\$ 73,900,000	\$ 43,138,346	\$ 117,038,346	\$ 108,845,662	\$ 19,918,758
NPV Future Payments (2018-2041)@ 5% discount rate:					\$ 10,372,721
Enrollment as Percent of New HS Capacity					90%
Credited Amount					\$ 9,335,449
Net Local Assessed Valuation Oct 2017					\$ 3,150,231,460
Credit per thousand assessed value of completed home:					2.96
CREDIT CALCULATION (PER DWELLING UNIT)					
Type of Structure	Assessed Value Per Dwelling Unit	Assessed Value Raw Land @ 13% Of Home Value	Credit For Past Payments (Vac Land)	Credit for Future Payments (Completed Unit)	
Single Family Detached	\$ 269,000	\$ 34,970	(\$8)	(\$796)	
Townhouse	\$ 179,000	\$ 23,270	(\$5)	(\$530)	
Two and Three Family	\$ 108,000	\$ 14,040	(\$3)	(\$320)	
Four or More Family	\$ 65,000	\$ 8,450	(\$2)	(\$192)	
Manufactured Housing	\$ 76,000	\$ 9,880	(\$2)	(\$225)	

Note: The new high school has a design capacity that is less than that of the old high school on which the original fees were based. The floor area per pupil capacity standard has increased from 129 square feet per pupil to 158 square feet per pupil capacity. Credit is given for the portion of the bond related to the change in the floor area standard per pupil. The floor area required to meet that deficiency in space is estimated to be 18.3% of the floor area of the new high school (excluding CTC space).

C. Public Safety Impact Fees

1. Proportionate Demand Factors

a. Residential vs. Non-Residential Demand Measures.

Because public safety services provide protection for all persons and property, impact fees for safety facilities must recognize proportionate demand from both the residential and commercial sectors. The first step in the update was to review alternative measures of proportionate demand on these services by type of property.

PROPORTIONATE DEMAND MEASURES FOR DOVER PUBLIC SAFETY FACILITIES						
Demand Sector	Assessed Valuation 2016 (Assessor)	Square Feet Building Area 2017 (Millions)	Household Population and Total Employment 2016 (NHOEP and NH Employment Security) *	Police Department Calls Assignable by Address (July 2015 through June 2017)	Fire Dept Calls Assignable by Address (July 2015 through June 2017)	Fire Department NFIRS Incident Data (October 2015 through September 2017)**
Residential Uses	\$2.178	20.43	29,724	12,394	4,011	6,572
Non-Residential Uses Excluding Utilities	\$0.754	10.86	17,406	7,964	1,987	4,171
City Total	\$2.932	31.29	47,130	20,358	5,998	10,743
<i>Residential Share</i>	<i>74%</i>	<i>65%</i>	<i>63%</i>	<i>61%</i>	<i>67%</i>	<i>61%</i>
<i>Non-Residential Share</i>	<i>26%</i>	<i>35%</i>	<i>37%</i>	<i>39%</i>	<i>33%</i>	<i>39%</i>
* Total population for 2016 estimated at 30,683. Group quarters population of 959 deducted to estimate household population						
** Count excludes incidents related to unknown property type, or responses to vacant or undeveloped land						

The chart above compares proportionate demand ratios for residential vs. non-residential demand in Dover. Police and Fire Department call data shown in the chart are for a two year period, and are limited to the number of calls to which a specific street address was assigned by Dover Police Department dispatch records.

These data were drawn from records for the period July 2015 to June 2017, and the counts by address were paired to property tax assessment data by BCM Planning, LLC.

The Fire Department incident records shown in the last column are based on records classified by property use using the National Fire Incident Reporting Service (NFIRS). These records were compiled by the Fire Department for the period October 2015 to September 2017. The next chart shows a more detailed breakdown of the NFIRS data for Dover.

FIRE DEPARTMENT PROPERTY USE REPORT (NFIRS) FOR DOVER - TWO YEAR PERIOD (INCIDENTS 10-1-2015 TO 9-30-2017)		
Generalized Property Classification	Incidents Assignable to Developed Property Class	
	Number	% of Total
One and Two Family Dwelling	3,144	29%
Multifamily Residential	3,428	32%
Retail, Restaurant, Lodging, Entertainment	691	6%
Office	510	5%
Commercial Services	1,582	15%
Industrial, Transportation, Storage, Util.	142	1%
Institutional - Non Public	810	8%
Institutional - Public & Gov't	436	4%
Total Assignable to Developed Property	10,743	100%
Residential	6,572	61%
Non-Residential	4,171	39%

This summary of NFIRS data for the Dover Fire Department reflects only those incidents which were reported under use codes associated with developed property. Using this particular measure, 61% of incidents were associated with residential uses and 39% with non-residential uses.

In computing an average residential /non-residential split in service demand, the generic factors of property valuation, building floor area, and the population-employment relationship ratios comprise were weighted 50% while the call and incident data for each department were also weighted 50% in computing an overall percentage.

Weighted average for Police Department Factors: 64.2 % residential

Weighted average for Fire Department Factors: 65.8 % residential

For the purpose of general cost allocations, BCM Planning applied a cost allocation of 65% residential and 35% non-residential demand to both the Police Department and Fire Department impact fee calculations. ¹

b. Relative Call Ratios by Land Use Categories

Residential Uses. Using the public safety call data that was available by address, calls were tabulated by type of housing unit for residential units and by commercial sector for non-residential units. Annualized calls per unit (residential) and calls per 1,000 square foot of building area (both residential and non-residential) were tabulated.

In general, two to three family and multifamily properties generate Police Department call rates that are well above those for single family, townhouse, or manufactured housing. Call ratios for Fire/EMS services were higher for multifamily units and manufactured housing than for single family, townhouse, or two to three family units.

¹ In the 2008 public safety impact fee models, future demand was estimated based on projected calls for service estimated independently for each of the two sectors. The 2008 allocation of future costs used a 50/50 residential to non-residential demand ratio for the Police Department and a 60/40 ratio for Fire Department demand.

In the residential sector, senior housing generated significantly higher call ratios per dwelling unit for Fire and EMS services than the housing stock that was not age-restricted, but had lower call rates per unit for Police Department services.

Analysis of Public Safety Calls Associated with Specific Residential Locations									
Structure Type	Calls Last Two Years - Residential Property *		Housing Characteristics			Annualized Calls Per Dwelling		Annualized Calls Per 1000 Square Feet	
	Police	Fire/EMS	Living Area	Dwelling Units	Avg Living Area Per Unit	Police	Fire/EMS	Police	Fire/EMS
Single Family	4,281	1,633	11,368,366	6,262	1,815	0.34	0.13	0.19	0.07
Townhouse	446	233	1,762,088	1,247	1,413	0.18	0.09	0.13	0.07
Two to Three Family	1,792	399	1,801,313	1,570	1,147	0.57	0.13	0.50	0.11
Four or More Family	5,620	2,411	5,014,211	5,166	971	0.54	0.23	0.56	0.24
<i>Excluding DHA Housing</i>	4,530	1,859	4,463,263	4,721	945	0.48	0.20	0.51	0.21
Manufactured Housing	255	199	444,300	424	1,048	0.30	0.23	0.29	0.22
Total	12,394	4,875	20,390,278	14,669	1,390	0.42	0.17	0.30	0.12
Senior Housing Comparison (Excluding Assisted Living Facilities)									
Age 55+ (SF, TH and MF)	94	172	450,022	323	1,393	0.15	0.27	0.10	0.19
Total All SF, TH and MF Units	4,982	2,065	13,574,754	7,509	1,808	0.33	0.14	0.18	0.08
<i>Ratio Call Rate Age 55+ Housing to Average for Same Structure Types</i>						44%	194%	57%	251%
Age 62+ and Congregate/Ind. Lvg.	332	799	585,627	473	1,238	0.35	0.84	0.28	0.68
All Multifamily Housing	5,620	2,411	5,014,211	5,166	971	0.54	0.23	0.56	0.24
<i>Ratio Call Rate Age 62+ and Independent Living to Average Multifamily Unit</i>						65%	362%	51%	284%

* Raw data for calls by address provided by Dover Police Department for the period 10-01-2015 to 09-30-2017. Call data was associated to property characteristics by BCM Planning, LLC. Calls tabulated in these columns include only those that could be associated with a specific street address and assigned to a developed property

Within senior housing developments associated with age 55+ occupancy, Fire/EMS call generation per unit was nearly twice that of similar units with no age restriction.

For housing developments that have an even older resident profiles (limited to age 62+ and congregate housing) the call rate was about 3.6 times that of similar housing units that are not age restricted.

For both age restricted housing categories, however, the call rate for Police Department services was much lower than it was for units without an age restriction.

Non-Residential Uses. Public safety call rates for non-residential categories were computed per 1000 square feet of building area and indexed relative to the average of all non-residential properties.

The highest call ratios for Police Department activity occur among retail-food-entertainment uses.

Fire and EMS calls per 1,000 square feet were also high for the same category, and very high for nursing home and assisted living uses, where the advanced age of residents is associated with frequent calls for emergency medical services.

Analysis of Public Safety Calls to Non-Residential Property							
Structure Type	Calls Last Two Years - Residential Property *		Square Feet Floor Area	Annualized Calls Per 1000 Square Feet		Index to Non-Residential Average	
	Police	Fire/EMS		Police	Fire/EMS	Police	Fire/EMS
Retail-Food-Entertainment-Lodging	3,529	817	1,582,599	1.11	0.26	2.71	2.17
Offices and Commercial Services	1,512	475	1,383,199	0.55	0.17	1.34	1.42
Industrial, Transportation and Storage	687	202	4,119,068	0.08	0.02	0.20	0.17
Nursing Homes & Assisted Living	126	332	240,583	0.26	0.69	0.63	5.75
Private Institutional	929	161	1,055,453	0.44	0.08	1.07	0.67
Mixed Use	907	214	947,129	0.48	0.11	1.17	0.92
Total / Average Private Commercial Uses	7,690	2,201	9,328,031	0.41	0.12	1.00	1.00
Public Institutional Uses	1,181	361	1,544,153	0.38	0.12	0.93	1.00
Total Non-Residential Uses	8,871	2,562	10,872,184	0.41	0.12	1.00	1.00

* Raw data for calls by address provided by Dover Police Department for the period 10-01-2015 to 09-30-2017. Call data was associated to property characteristics by BCM Planning, LLC. Calls tabulated in these columns include only those that could be associated with a specific street address and assigned to a developed property.

Proportionate Adjustments in Fee Models Based on Call Ratios. In the impact fee model, fees for various categories of non-residential development are adjusted relative to the call rate per 1000 square associated with the commercial use category. These categories may be collapsed into more generalized divisions to simplify the fee allocation using less specific categories of assessment for commercial uses.

This update of public safety fees has used average household size by type of unit to allocate per capita costs by type of structure. The 2008 method used relative call demand to assign capital costs by type of unit. After testing both methods for this update, BCM Planning is of the opinion that a more equitable result for residential uses can be achieved using the per capita cost method.² However, relative call demand per unit has been applied to compute adjusted fees for *age-restricted* dwelling units.

2. Police Department Impact Fee

In order to define a service capacity and cost allocation basis for an expanded Police Department facility serving estimated long term needs, the following assumptions comprise the basis for the impact fee:

- a. Under 2016 conditions, the number of full time sworn personnel in the Police Department averages 1.65 per 1000 residents, and the number of total full time personnel averaged 2.59 per 1000 persons. It is assumed that the ratio of total to population will remain at this level in future years.
- b. The new police station (constructed 2015-2016) has a gross floor area of 29,837 square feet. The design process centered on accommodating projected needs through the year 2035.³

² Residential fee calculations based on adjusted call rates have been computed and are available as an alternative to the per capital assignment of costs per dwelling unit.

³ Architects Design Group, October 21, 2013 letter to Dover Police Department summarizing spatial needs and design concepts.

POLICE DEPARTMENT PROPORTIONATE DEMAND AND FACILITY STANDARD				
Service Demand Factor	Base Year of Fee Calculation (2008)	Current Conditions (2016-2017)	Supportable Service Base @ Design Population of 35,000	Change from Base Year
RESIDENTIAL SECTOR				
Population (Residential Demand)				
Total Persons	28,703	30,683	35,000	6,297
Group Quarters Population	959	959	1,094	135
Household Population	27,744	29,724	33,906	6,162
Households (Occupied Units)	12,554	13,255	16,082	3,528
Average Household Size	2.21	2.24	2.11	-0.10
Total Housing Units	13,077	14,176	17,200	4,123
NON-RESIDENTIAL SECTOR				
Employment (Total Including Government)	16,300	17,406	19,855	3,555
Employment to Total Population Ratio	0.57	0.57	0.57	
Non-Residential Floor Area Total	10,185,000	10,905,000	12,439,299	2,254,299
Non-Residential Uses: Floor Area Per Employee	625	627	627	
Police Department Staffing				
Full Time Sworn (Officers)	50.5	50.5	57.6	<i>Assumes</i>
Full Time Staff including Officers	78.1	79.5	90.7	<i>constant staff</i>
Full Time Officers Per 1000 City Population	1.76	1.65	1.65	<i>ratio per 1000</i>
Full Time Staff Per 1000 City Population	2.72	2.59	2.59	<i>population</i>
Floor Area of Facilities				
	2008 Conditions	2016-17 Conditions (New Police Station)	With New Police Station (2015-2016)	Change from Base Year
Floor Area of PD Buildings - (Gross Sq. Ft.)	16,213	29,837	29,837	13,624
Actual Floor Area Per FT Officer	321	591	518	197
Actual Floor Area Per FT Staff (Sq. Ft.)	208	375	329	121
Min. Staff Area Needed @ 2040 Staff Ratio	74.4			
Min. Base Year Space Needed at 2040 Standard	24,475			
Base Year Floor Area Deficiency Relative to Standard	(8,262)			

- c. Based on the ratios of police department staff to population, and design floor area for a target future population of 35,000 generates a space standard of 329 square feet of police station space per full time employee.
- d. Measured at that the long term design ratio of 329 square feet per full time employee, and minimum of 2.59 full time personnel per thousand population, we estimate that the comparable pre-existing police department space (16,213 square feet in the 2008 base year) was deficient by 8,262 square feet. ⁴
- e. The estimated base year deficiency of 8,262 square feet represents 28% of the space constructed in the new police station. This is a need that already existed at the time the impact fee was established. Therefore, a credit allowance based on tax payments made to support 28% of debt service costs for the new station.

⁴ Comparable space available to the Police Department prior to construction of the new station included the headquarters with 13,159 square feet in the lower level of City Hall, 2,340 square feet of garage space on River Street, and 360 square feet in storage buildings. (Source: [Space Needs Assessment](#), City of Dover, June 2007, AG Architects, P. C.)

- f. The comprehensive development cost of the new police station totaled \$9.9 million or about \$332 per square foot at the time of construction. The cost has been adjusted to an estimated 2017 cost of \$10.039 million (or about \$336 per square foot) using an RS Means Square Foot Cost index.
- g. Based on the combination of proportionate indicators introduced earlier, about 65% of the demand on Police Department services is estimated to be associated with residential land uses and 35% from non-residential uses.
- h. The service population associated with the new police station is assigned at 35,000 (approximately the same as a 2040 population projection). Employment in the City of Dover is assumed to maintain a constant ratio to resident population at a 2016 average of 0.57 jobs per capita. Non-residential floor area per employee is assumed to remain constant at the 2016 average of 627 square feet per employee.
- i. Residential costs associated with new development are assigned by structure type based on estimated household size in the dwelling unit.⁵
- j. Non-residential costs are assigned per square foot of floor area. Adjustments to the average fee per square foot are assigned to various commercial use categories based on the relative number of calls for service per 1,000 square feet in that category.
- k. Credit allowances are deducted from the assignable capital cost for each use based on the estimated present value of debt service costs required to rectify pre-existing police station deficiencies in space.
- l. Residential impact fees are assigned to accessory dwelling units (ADUs) at 64% of the standard rate for apartments based relative living area of the unit. Based on other studies, BCM Planning estimates an average ADU will have about 600 square feet of living area. That size is 64% of the average gross living area in apartment buildings estimated at 930 square feet per unit.
- m. A police department impact fee has been computed for age restricted housing based on the relative call volume per unit in age-restricted developments compared to the City average for residential units of the same structural categories. Police Department impact fees are computed at 44% of the average fee applicable to single family and townhouse units. Fees for units limited to persons age 62+ or in congregate housing are assigned at 65% of the fee applicable to standard apartment units.

⁵ The original (2008) methodology adjusted the Police Department fees per unit based on relative call rates per unit by structure type. BCM Planning is of the opinion that the per capita method generates a more equitable assessment. An alternative calculation using relative call volume has been prepared and is available as an alternative.

POLICE FACILITY COST APPORTIONMENT AND IMPACT FEE - DOVER, NH - 2017			
Capital Facility Cost Allocation and Impact Fee	Base Year of Fee Calculation (2008)	Supportable Service Base @ Design Population of 35,000	Change from Base Year
Cost Apportionment of Capital Facilities			
Building Costs for Police Department HQ	Attributed to Base Year Demand	Police Facility Replacement Cost	Attributed to New Development
Police Station Development Cost (2015-16) Adjusted to 2017 (RS Means Index)		\$9,900,000 1.014	
Attributed Building Costs - Police Department	\$8,234,566	\$10,038,600	\$1,804,034
Public Safety Demand By Sector - Police Department			
	Base Year of Fee	Future Year	New Development
Residential Share of Demand	65%	65%	65%
Non-Residential Share of Demand	35%	35%	35%
Apportioned to Residential Development	\$5,352,468	\$6,525,090	\$1,172,622
Apportioned to Commercial Development	\$2,882,098	\$3,513,510	\$631,412
Residential Cost Per Capita (Household Pop)	\$193	\$192	\$190
Non-Residential Cost Per Sq. Ft.	\$0.28	\$0.28	\$0.28
PUBLIC SAFETY FACILITY COSTS PER UNIT OF NEW DEVELOPMENT - POLICE DEPARTMENT			
Residential Capital Cost Per Dwelling Unit	Average Household Size	Capital Cost Per Unit (1)	
Average Household	2.24	\$426	
Single Family Detached	2.54	\$483	
Townhouse / Attached	2.18	\$414	
Two to Three Family Structure	2.21	\$420	
Four or More Unit Structure	1.67	\$317	
Manufactured Housing	2.35	\$447	
Commercial Cost Per Square Foot	Non-Residential PD Call Multiplier	Capital Cost Per Sq. Ft.	
Average Non-Residential	1.00	\$0.28	
Retail-Food-Entertainment-Lodging	2.71	\$0.76	
Offices and Commercial Services	1.34	\$0.38	
Industrial, Transportation, Whse, Storage	0.20	\$0.06	
Nursing Homes & Assisted Living	0.63	\$0.18	
Other Institutional Uses	1.07	\$0.30	
Credit Allowances for Base Year Deficiency and Net Impact Fee Assessment			
	Assessed Value	Credit Allowance Per Housing Unit	Impact Fee Schedule Per Dwelling Unit
Residential Uses	Per Dwelling Unit		
Single Family Detached	\$ 269,000	(\$158)	\$325
Townhouse / Attached	\$ 179,000	(\$105)	\$309
Two to Three Family Structure	\$ 108,000	(\$63)	\$357
Four or More Unit Structure	\$ 65,000	(\$38)	\$279
Manufactured Housing	\$ 76,000	(\$45)	\$402
Non-Residential Uses	Per Square Foot	Credit Per Sq. Foot	Fee Per Square Foot
Average Non-Residential	\$ 64	(\$0.04)	\$0.24
Retail-Food-Entertainment-Lodging	\$ 83	(\$0.05)	\$0.71
Offices and Commercial Services	\$ 96	(\$0.05)	\$0.33
Industrial, Transportation, Whse, Storage	\$ 43	(\$0.02)	\$0.04
Nursing Homes & Assisted Living	\$ 85	(\$0.05)	\$0.13
Other Institutional Uses	\$ 133	(\$0.07)	\$0.23

CREDIT CALCULATION FOR POLICE STATION BASE YEAR DEFICIENCY			
Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment
Past Payments			
2015	\$306,460.04	\$307,810.87	\$614,270.91
2016	\$438,193.54	\$332,049.76	\$770,243.30
2017	\$460,149.12	\$310,140.08	\$770,289.20
	Present Worth Past Payments @ 5%		\$2,256,278
	Percent of Project Rectifying Space Deficiencies		28%
	Credited Amount		\$631,758
	Net Local Assessed Valuation Oct 2017	\$	3,150,231,460
	Credit Per \$1000 Valuation Raw Land		\$0.20
Future Payments			
2018	\$480,148.66	\$287,132.64	\$767,281.30
2019	\$504,100.21	\$263,125.20	\$767,225.41
2020	\$528,051.76	\$237,920.18	\$765,971.94
2021	\$555,995.23	\$211,517.60	\$767,512.83
2022	\$583,938.70	\$183,717.84	\$767,656.54
2023	\$612,281.36	\$154,520.90	\$766,802.26
2024	\$642,220.79	\$123,906.84	\$766,127.63
2025	\$288,616.15	\$91,795.80	\$380,411.95
2026	\$276,640.36	\$83,137.32	\$359,777.68
2027	\$254,684.78	\$74,838.10	\$329,522.88
2028	\$248,696.89	\$67,197.56	\$315,894.45
2029	\$238,717.09	\$59,736.66	\$298,453.75
2030	\$309,374.13	\$52,276.74	\$361,650.87
2031	\$309,374.13	\$42,222.08	\$351,596.21
2032	\$309,374.13	\$32,167.42	\$341,541.55
2033	\$309,374.13	\$21,726.04	\$331,100.17
2034	\$311,370.10	\$10,897.96	\$322,268.06
Total Bond	\$7,967,761.30	\$2,947,837.59	\$10,915,598.89
	NPV of Future Payments (2018-2034) @ 5% discount rate:		\$6,306,425
	Percent of Project Rectifying Space Deficiencies		28%
	Credited Amount		\$1,765,799
	Net Local Assessed Valuation Oct 2017	\$	3,150,231,460
	Credit per thousand assessed value		\$0.56

CREDIT ALLOWANCES FOR POLICE STATION BASE YEAR DEFICIENCY					
Type of Development	Assessed Valuation Land & Bldgs	Assessed Value Raw Land @ 13% Of Valuation	Credit For Past Payments	Credit For Future Payments	Total Credit amount
Residential Uses Per Dwelling Unit					
Single Family Detached	\$ 269,000	\$ 34,970	\$ (7)	\$ (151)	\$ (158)
Townhouse	\$ 179,000	\$ 23,270	\$ (5)	\$ (100)	\$ (105)
Two and Three Unit Structures	\$ 108,000	\$ 14,040	\$ (3)	\$ (60)	\$ (63)
Multifamily Structures 4+ Units	\$ 65,000	\$ 8,450	\$ (2)	\$ (36)	\$ (38)
Manufactured Housing	\$ 76,000	\$ 9,880	\$ (2)	\$ (43)	\$ (45)
Non-Residential Uses Per Sq. Ft.					
Average Non-Residential	\$ 72	\$ 9	\$ -	\$ (0.04)	\$ (0.04)
Retail-Food-Entertainment-Lodging	\$ 82	\$ 11	\$ -	\$ (0.05)	\$ (0.05)
Offices and Commercial Services	\$ 96	\$ 12	\$ -	\$ (0.05)	\$ (0.05)
Industrial, Transportation, Whse, Storage	\$ 43	\$ 6	\$ -	\$ (0.02)	\$ (0.02)
Nursing Homes & Assisted Living	\$ 85	\$ 11	\$ -	\$ (0.05)	\$ (0.05)
Other Institutional Uses	\$ 133	\$ 17	\$ -	\$ (0.07)	\$ (0.07)

3. Fire Department Impact Fee

a. Fire Station Space

At the time the original Fire Department impact fee was being calculated in 2008, the Dover Fire & Rescue Department was anticipating construction of a new North End fire station, which has since been completed, providing 14,845 square feet of station space. Prior to this construction, the two pre-existing stations (the old Central Fire Station and the South Station built in the 1960s) contained a combined floor area of 14,500 square feet. The construction and improvement of the new North Station (2009-2012) doubled the total floor area of Fire & Rescue Department buildings serving the City.

While the construction of North Station was needed to accommodate new development, the 2008 study found a portion of the new space was attributable to pre-existing space needs in that base year. The North Station had been cited as a need since the 1988 City Master Plan was published. For purposes of impact fee assessment, the existing fire stations, including the newest facility (North Station) are assumed to be sufficient to serve a population of 35,000 along with related proportionate increases in non-residential development.

Another fire station is anticipated by the Fire Department as a long term need. The Fire Chief has provided a rough estimate of cost at \$3 million for a future station to be located somewhere on Dover Point Road. Other long term improvements have been indicated including a new training facility and more parking for the North Station.

As of November 2017, there do not appear to be specific designs established for these improvements, nor are the projects currently found in the City CIP (2018-2023). Therefore it may be premature to add these capital values into the fee system at this time. If the costs were to be added, then the long term service population (assumed at 35,000) should also be reconsidered in assigning the facility costs per capita for the fee computation.

For the purpose of impact fee assessment, the fire stations and fire / rescue vehicles are viewed as providing a city-wide network providing coverage to all land uses in Dover. It is necessary for staffing and equipment housed at one station to provide backup coverage to the others. Therefore, capital cost requirements are assumed to be distributed across the entire City rather than limited to serving particular geographic areas.

At the time the Fire Department impact fee was established in 2008, a portion of the new space to be constructed was attributed to existing baseline space deficiencies. If the floor area of the three stations serves a target population of 35,000 then an average of 0.84 square feet of station space per capita is indicated as a reasonable floor area standard. At that ratio an additional 9,565 square feet of station space was already needed in 2008 to meet baseline needs at the time the impact fee was first established.

The construction of North Station added 14,845 square feet of fire station space. If the base year deficiency was 9,565 square feet, then 64% of the new space created at North Station is attributable to a pre-existing need at the time the impact fee was initiated.

FIRE DEPARTMENT PROPORTIONATE DEMAND AND FACILITY STANDARD				
Service Demand Factor	Base Year of Fee Calculation (2008)	Current Conditions (2016-2017)	Service Base at Population of 35,000	Change from Base Year
RESIDENTIAL SECTOR				
Total Persons	28,703	30,683	35,000	6,297
Group Quarters Population	959	959	1,094	135
Household Population	27,744	29,724	33,906	6,162
Households (Occupied Units)	12,554	13,255	16,082	3,528
Average Household Size	2.21	2.24	2.11	-0.10
Total Housing Units	13,077	14,176	17,200	4,123
NON-RESIDENTIAL SECTOR				
Employment (Total Including Government)	16,300	17,406	19,855	3,555
Employment to Total Population Ratio	0.57	0.57	0.57	
Non-Residential Floor Area Total	10,185,000	10,905,000	12,439,299	2,254,299
Non-Residential Uses: Floor Area Per Employee	625	627	627	
Floor Area of Facilities				
	Base Year of Impact Fee	Current Conditions	Facilities Available	Change from Base Year
Floor Area of Fire Stations (Sq. Ft.)	14,500	29,435	29,345	14,845
Station Space Required Per Capita	0.84	0.96	0.84	
Station Space Needed @ Facility Standard	24,065			
Space Deficiency in Base Year of Fee	9,565			

As part of the impact fee calculation, 64% of the present value of debt service payments for the development of North Station has been computed as a credit allowance within the impact fee model.

The total cost of North Station was estimated using the City's fixed asset files pertaining to North Station improvement costs from 2009 to 2012, with cost components indexed to 2017 using R.S. Means Square Foot Costs time adjustment factors. Comprehensive costs were estimated at a 2017 equivalent of about \$3.53 million, or about \$238 per square foot. This cost per square foot was assigned as the average replacement cost for all City fire stations indicating a total cost for buildings at \$6.984 million.

The total cost of North Station was estimated using

Replacement Cost of Major Capital Equipment - Dover Fire Department					
Item	Number of Units	Vehicle Cost New	Associated Equipment	Total Per Unit	Total Capital Value
Engines	5	\$590,000	\$100,000	\$690,000	\$3,450,000
Ladder / Platform	1	\$1,100,000	\$100,000	\$1,200,000	\$1,200,000
Quint	1	\$890,000	\$100,000	\$990,000	\$990,000
Ambulances	4	\$240,000	\$100,000	\$340,000	\$1,360,000
Heavy Rescue	1	\$325,000	\$100,000	\$425,000	\$425,000
Forestry Pickup	1	\$70,000	included	\$70,000	\$70,000
SUV's & Pkckups	7	\$55,000	included	\$55,000	\$385,000
Total Major Capital Equipment					\$7,880,000
<i>Source: Replacement and equipment costs per vehicle estimated by Dover Fire Chief</i>					

The City also has a substantial investment in major fire and rescue vehicles and apparatus. Based on estimates from the Dover Fire Chief, the replacement cost (new) for the major vehicles plus on-board gear and equipment is about \$7.88 million.

FIRE DEPARTMENT COST APPORTIONMENT AND IMPACT FEE - DOVER, NH - 2017			
Building Costs for Fire Stations	Cost Apportionment of Capital Facilities		
	Attributed to Base Year of Fee	Total Capital Investment	Apportioned to New Development
Fire Station Development Cost/Sq. Ft. Adj. to 2017		\$238	
Attributed Building Costs - Fire Department	\$5,727,569	\$6,984,110	\$1,256,541
Major Apparatus & Vehicles - Replacement Cost	\$6,462,275	\$7,880,000	\$1,417,725
Total Capital Facility Investment - Fire Dept.	\$12,189,844	\$14,864,110	\$2,674,266
Public Safety Demand By Sector - Fire and EMS	Base Year	Future Year	Average
Residential Share of Demand	65%	65%	65%
Non-Residential Share of Demand	35%	35%	35%
Apportioned to Residential Development			\$1,738,273
Apportioned to Non-Residential Development			\$935,993
Residential Cost Per Capita			\$282
Non-Residential Cost Per Sq. Ft.			\$0.42
PUBLIC SAFETY FACILITY COSTS PER UNIT OF NEW DEVELOPMENT - FIRE DEPARTMENT			
Residential Capital Cost Per Dwelling Unit		Average Household Size	Capital Cost Impact Per Unit
Average Dwelling Unit		2.24	\$632
Single Family Detached		2.54	\$716
Townhouse / Attached		2.18	\$615
Two to Three Family Structure		2.21	\$623
Four or More Unit Structure		1.67	\$471
Manufactured Housing		2.35	\$663
Non-Residential Capital Cost Per Square Foot		Non-Residential FD Call Multiplier	Capital Cost Per Sq. Ft.
Average Non-Residential		1.00	\$0.42
Retail-Food-Entertainment-Lodging		2.17	\$0.91
Offices and Commercial Services		1.42	\$0.60
Industrial, Transportation, Whse, Storage		0.17	\$0.07
Nursing Homes & Assisted Living		5.75	\$2.42
Other Institutional Uses		0.67	\$0.28
Credit Allowances for Base Year Deficiency and Net Impact Fee		Credit Allowance for Base Year Deficiency	Impact Fee Per Dwelling Unit
Residential Uses	Assessment Per Dwelling Unit		
Single Family Detached	\$ 269,000	(\$101)	\$615
Townhouse / Attached	\$ 179,000	(\$67)	\$548
Two to Three Family Structure	\$ 108,000	(\$40)	\$583
Four or More Unit Structure	\$ 65,000	(\$24)	\$447
Manufactured Housing	\$ 76,000	(\$28)	\$635
Non-Residential Uses	Assessment Per Sq. Foot	Credit Per Sq. Foot	Fee Per Square Foot
Average Non-Residential	\$ 64	(\$0.03)	\$0.39
Retail-Food-Entertainment-Lodging	\$ 83	(\$0.04)	\$0.87
Offices and Commercial Services	\$ 96	(\$0.01)	\$0.59
Industrial, Transportation, Whse, Storage	\$ 43	(\$0.03)	\$0.04
Nursing Homes & Assisted Living	\$ 85	(\$0.05)	\$2.37
Other Institutional Uses	\$ 133	(\$0.03)	\$0.25

Together the total investment (at current replacement cost) for fire stations and major capital equipment totals to \$14.86 million.

The impact fee model assigns a portion of this total investment to new development based on the horizon population of 35,000 and proportionate growth in commercial development at that population level.

As with the Police Department impact fee, residential uses are assigned an average per capita cost multiplied by the expected average household size for various types of dwelling units.⁶

Non-residential uses are assigned a cost per square foot of floor area, then adjusted according to the relative call rates associated with commercial land use categories.

⁶ The original (2008) methodology adjusted the Fire Department fees per unit based on relative call rates per unit by structure type. BCM Planning is of the opinion that the per capita method generates a more equitable assessment. An alternative calculation using relative call volume has been prepared and is available as an alternative.

CREDIT CALCULATION FIRE STATION BASE YEAR DEFICIENCY			
Portion of North Station Construction Bond			
Fiscal Year	Total Principal Payment	Total Interest Payment	Total Payment
Past Payments			
2008	\$150,000.00	\$131,368.76	\$281,368.76
2009	\$150,000.00	\$124,618.76	\$274,618.76
2010	\$150,000.00	\$118,243.76	\$268,243.76
2011	\$150,000.00	\$111,868.76	\$261,868.76
2012	\$150,000.00	\$105,493.76	\$255,493.76
2013	\$150,000.00	\$99,118.76	\$249,118.76
2014	\$150,000.00	\$92,743.76	\$242,743.76
2015	\$150,000.00	\$86,368.72	\$236,368.72
2016	\$150,000.00	\$79,993.76	\$229,993.76
2017	\$150,000.00	\$73,618.76	\$223,618.76
Present Worth Past Payments @ 5%			\$ 3,206,210
Base Year Deficiency in Space as % of Project			64%
Credited Amount			\$ 2,051,974
Net Local Assessed Valuation Oct 2017			\$ 3,150,231,460
Credit Per \$1000 Valuation Raw Land			\$0.65
Future Payments			
2018	\$145,000.00	\$67,243.76	\$212,243.76
2019	\$145,000.00	\$61,081.24	\$206,081.24
2020	\$145,000.00	\$54,737.50	\$199,737.50
2021	\$145,000.00	\$48,031.26	\$193,031.26
2022	\$145,000.00	\$41,325.00	\$186,325.00
2023	\$145,000.00	\$34,437.50	\$179,437.50
2024	\$145,000.00	\$27,550.00	\$172,550.00
2025	\$145,000.00	\$20,662.50	\$165,662.50
2026	\$145,000.00	\$13,775.00	\$158,775.00
2027	\$145,000.00	\$6,887.50	\$151,887.50
NPV of Future Payments (2018-2027) @ 5% discount rate:			\$1,430,645
Base Year Deficiency in Space as % of Project			64%
Credited Amount			\$915,613
Net Local Assessed Valuation Oct 2017			\$3,150,231,460
Credit per thousand assessed value			\$0.29

The basis for the debt service credit allowances assigned in the Fire Department impact fee calculation are detailed here and in the summary chart that follows.

CREDIT ALLOWANCES FOR FIRE STATION BASE YEAR SPACE DEFICIENCY					
Type of Development	Assessed Valuation Land & Bldgs	Assessed Value Raw Land @ 13% Of Valuation	Credit For Past Payments	Credit For Future Payments	Total Credit amount
Residential Uses Per Dwelling Unit					
Single Family Detached	\$ 269,000	\$34,970	\$ (23)	\$ (78)	\$ (101)
Townhouse	\$ 179,000	\$23,270	\$ (15)	\$ (52)	\$ (67)
Two and Three Unit Structures	\$ 108,000	\$14,040	\$ (9)	\$ (31)	\$ (40)
Multifamily Structures 4+ Units	\$ 65,000	\$8,450	\$ (5)	\$ (19)	\$ (24)
Manufactured Housing	\$ 76,000	\$9,880	\$ (6)	\$ (22)	\$ (28)
Non-Residential Uses Per Sq. Ft.					
Average Non-Residential	\$ 72	\$9	\$ (0.01)	\$ (0.02)	\$ (0.03)
Retail-Food-Entertainment-Lodging	\$ 82	\$11	\$ (0.01)	\$ (0.02)	\$ (0.03)
Offices and Commercial Services	\$ 96	\$12	\$ (0.01)	\$ (0.03)	\$ (0.04)
Industrial, Transportation, Whse, Storage	\$ 43	\$6	\$ -	\$ (0.01)	\$ (0.01)
Nursing Homes & Assisted Living	\$ 85	\$11	\$ (0.01)	\$ (0.02)	\$ (0.03)
Other Institutional Uses	\$ 133	\$17	\$ (0.01)	\$ (0.04)	\$ (0.05)

Residential impact fees are assigned to accessory dwelling units (ADUs) at 64% of the standard rate for apartments based relative living area of the unit. Based on other studies in other New Hampshire communities, BCM Planning estimates that a typical ADU will result in a net addition of about 600 square feet of living area. That size is 64% of the average gross living area in Dover apartment buildings estimated at 930 square feet per unit. This ratio is used to assign a fire department impact fee to the ADU.

An adjusted Fire Department impact fee has been computed for age restricted housing. The basis for the adjusted fee is the relative call volume per unit found in Dover’s age-restricted developments compared to the City average for residential units of the the same structural categories. For units restricted to age 55 or older, fire department impact fees are computed at 1.94 times the average fee for single family and townhouse units. Fees for age restricted units for persons age 62+ or in congregate housing are assigned at 3.6 times the fee applicable to standard apartment units.

4. Summary Fee Schedules: Public Safety

PUBLIC SAFETY IMPACT FEE ASSESSMENT SCHEDULE - 2017			
Use Category	Public Safety Impact Fees Per Dwelling Unit		
Residential Uses	Police	Fire	Total Public Safety
Single Detached	\$325	\$615	\$940
Townhouse	\$309	\$548	\$857
Two to Three Family	\$357	\$583	\$940
Apartments 4+ Units	\$279	\$447	\$726
Manufactured Housing	\$402	\$635	\$1,037
Accessory Dwelling Unit	\$179	\$286	\$465
Age Restricted Unit 55+	\$152	\$1,163	\$1,315
Age Restricted Units 62+ or Congregate	\$181	\$1,609	\$1,790
	Public Safety Impact Fees Per Square Foot		
Commercial, Industrial & Institutional Uses	Police	Fire	Total Public Safety
Retail-Food-Entertainment-Lodging	\$0.71	\$0.87	\$1.58
Offices and Commercial Services	\$0.33	\$0.59	\$0.92
Industrial, Transportation, Whse, Storage	\$0.04	\$0.04	\$0.08
Nursing Homes & Assisted Living	\$0.13	\$2.37	\$2.50
Other Institutional Uses	\$0.23	\$0.25	\$0.48
Average Non-Residential or Other	\$0.24	\$0.39	\$0.63

It is possible to assess a single fee for “public safety facilities”. However, it is recommended that the fees collected be placed in two separate capital facility amounts: one for Police Department and one for Fire & Rescue Department facilities.

In this way, appropriate allocation of fee revenue may be made from the respective capital accounts to offset part of the debt service on for the police station or fire stations, retaining a connection to the particular the facilities for which

they were assessed. Public safety Impact fees in Dover may also be used to offset a portion of the cost of new equipment or improved replacement equipment that enhances the response time or capacity of either department to serve new development.

The models for impact fee assessment should always reflect, rather than define, capital improvement planning for related facilities and services. The impact fee assessment models are intended to reasonably represent the level of capital investment that the City will support, with a proportionate allocation of that cost to new development. The models should not be used to limit the way in which future capital improvement needs are defined for public safety facilities.

D. Recreation Facilities Impact Fee

1. Background

An impact fee for Dover public recreation facilities was first computed in a 2008. In the 2008 study, after testing a number of possible approaches, the option cited as the “investment approach” was adopted by the City as its basis of assessment. At that time, the use of individual facility standards (such as tennis courts per thousand persons, etc.) to anticipate specific incremental numbers of fields and facilities was not viewed as a method that would best reflect the types of improvements the City intended to make in recreation facilities.

The anticipated focus of recreation improvements in Dover was more focused on improvement and diversification of existing park and recreation sites. Consequently, the chosen method uses an average recreation capital investment amount per capita as the facility standard, rather than a ratio of the number of individual facilities to be provided.

In this update, the fee is based on a blended estimate of the replacement cost of existing facilities, plus the projected costs for future facility development anticipated within the term of the current Capital Improvement Program (CIP). The total estimated replacement cost of City recreation facilities is then apportioned across a future horizon service population (projected at 35,000 persons as a horizon year, or buildout, population) to arrive at a per capita cost.

2. Replacement Cost of Existing Recreation Facilities

The City Finance Department provided a listing of assets assigned to the Recreation Department. From this inventory, BCM Planning listed the selected asset, its original acquisition year (year placed in service) and original cost. For the purpose of this study, we excluded vehicles, capitalized interest, and assets placed in service over 40 years ago. The selected asset values comprise athletic fields, buildings and office equipment, tennis and basketball courts, playgrounds and related structures, fencing, paved surfaces, swimming pools and related equipment. Land values are not part of this asset inventory.

Summary of Estimated Replacement Cost Dover Recreation Facilities	
Building Improvements	\$3,680,037
Building Systems	\$653,870
Buildings	\$2,583,231
Land	\$319,049
Land Improvements	\$9,086,462
Machinery / Equipment	\$577,595
Roadways	\$190,784
Utilities	\$216,654
Total Capital Investment	\$17,307,682

A current replacement cost for each asset was estimated by adjusting the original cost in the year placed in service to 2017 using one of several adjustment factors. For buildings, costs were indexed using R.S. Means Square Foot Costs time adjustment factors for Manchester, NH. For ballfields, parks, general construction, and utilities, costs were adjusted using the Engineering News Record (ENR) Construction Cost Index.

For machinery and other assets, the Consumer Price Index (CPI) was applied. The total estimated replacement value is \$17.3 million.

2. Cost of Planned Facilities

In the 2008 study, a number of long term recreation facility improvements were added to the capital investment total, which were later offset in part by credit allowances to reflect the increased capital spending per capita that the additional projects would represent. Inclusion of the full value of these improvements proved premature, as projects did not move forward at the scale anticipated.

The City's capital expenditures on new recreation facilities or improvements since the last update have been very limited compared to the new project goals anticipated by the 2008 fee calculation. The investment in facilities placed in service over the past 10 years has averaged only \$127,000 per year compared to a 20-year average of about \$400,000 per year (2017 dollars). This means that the average capital investment in recreation facilities per capita may decline over time. Consequently, the incorporation of large scale multi-million dollar projects within the fee basis is likely to generate an impact fee that is too high.

In this update the capital basis of the recreation impact fee has been limited to existing completed capital facilities, plus recreation improvements already incorporated into the current CIP for the period 2018-2023. We identified \$400,000 in recreation improvements (not including replacement and maintenance costs). Improvements are planned at Garrison Hill Park (including new trails), and a new indoor pool solarium is indicated in the CIP.

3. Cumulative Investment Per Capita

The total investment value of existing and planned (CIP-based) improvements is just over \$17.7 million. The existing and planned facilities are assumed to be of benefit to a year 2040 scenario with a total population projected at 35,000 persons.

The impact fee is calculated on the household population of the City, excluding the group quarters and institutional population (nursing homes, licensed care, dormitories, group homes, etc.). The 2016 household population is estimated by the NH Office of Strategic Initiatives (formerly NH Office of Energy and Planning) at 29,724. A proportionate estimate of the household population for 2040 is 33,906 of a total population of 35,000.

The cumulative recreation facility investment as of 2016 averages \$582 per capita across the household population. The projected investment for the horizon year of 2040 is **\$522** per capita.

4. Impact Fee per Dwelling Unit – Facility Investment Method

The recreation impact fee is computed based on the 2040 horizon year investment in recreation facilities per person, times estimated average household size. Due to NH statutory

requirements⁷, the fees are based on facility development costs and do not include allowances for raw land parcels that do not have improved recreation facilities.

The recreation impact fee is based on the assumption that continued investment in recreation facilities will occur, and that a fee may be assessed to new development to recoup the average recreation investment per capita that has been incurred by the City.

DOVER RECREATION IMPACT FEE 2017		
Recreation Facility	2017 Estimated Replacement Cost	
Recreation - Long Term Facility Investments		
Buildings, Systems and Improvements	\$6,917,138	
Land Improvements	\$9,405,511	
Machinery & Equipment	\$577,595	
Roads and Utilities	\$407,438	
Total Existing Facilities	\$17,307,682	
CIP Planned Improvements 2018-2023		
Garrison Hill Park improvements, new trails	\$250,000	
Indoor Pool Solarium	\$150,000	
Total Estimated Replacement Cost of Facilities	\$17,707,682	
Service Population		
Pop. in Households (Excluding Group Quarters)	2016 Estimate	29,724
	2040 Projected	33,906
Average Capital Investment Per Person	<i>Service population excludes group quarters and institutional population</i>	Per Capita Avg
Recreation Investment Per Capita 2016		\$582
Recreation Investment Per Capita Horizon Year		\$522
Dover Recreation Impact Fee	Avg Household Size 2016 Est.	Impact Fee Per Unit Facility Value Only
Structure Type and Recreation Fee		
Single Family Detached	2.54	\$1,326
Townhouse / Attached	2.18	\$1,138
Two or Three Family Structure	2.21	\$1,154
Four or More Family Structure	1.67	\$872
Manufactured Housing	2.35	\$1,227
Accessory Dwelling Unit	64% of Apt Rate	\$558
Age Restricted Dwelling 55+	40% of Apt Rate	\$349
Age Restricted Dwelling 62+ or Congregate	21% of Apt Rate	\$183

Accessory Dwelling Units. As with the public safety fees, the fee for an ADU is based on the anticipated size of a typical ADU relative to the City average for multifamily apartments and is computed at 64% of the standard fee per apartment unit (4 or more family structures).

⁷ The fee schedules were computed in a manner that excluded investments that are solely to provide public open space. Under NH RSA 674:21, V impact fees may be assessed for public recreation facilities, "...not including public open space."

Age Restricted Dwelling Units. The recreation impact fees for age-restricted units were computed as a percentage of the standard rate applicable to apartments. Units in four or more family structures are estimated to have an average household size (1.67) that is close to the probable average size of senior households (about 1.5 persons per household for households headed by persons age 65 or older).

The adjustment factor used to compute a reduced impact fee for age restricted units is based on their relative demand on active recreation facilities. The adjustments presume that the frequency of use of active public recreation facilities is inversely related to the prevalence of disability in the adult population by age.

National surveys of developments that are limited to age 55+ residents indicates that about ¾ of residents in these developments are likely to be 65 or older. In developments for age 62 and older (primarily apartments) and congregate housing, the typical age of residents tends to be between 75 and 80.

The prevalence of disability in these older age groups can be expected to be considerably higher than the average for the younger adult population. Consequently, we would expect participation and use of recreation facilities to be proportionately lower than that of the average household.

Age Group	% With Disability (1)	Index Relative to Disability Rate for Age 18 to 64	Inverse of Index as Percent
18 to 34	5.8%	--	--
35 to 44	12.9%	--	--
18 to 64	10.3%	1.00	100%
65 to 74	25.5%	2.48	40%
75 or Older	50.2%	4.87	21%

** Derived by BCM Planning from American Community Survey (ACS) 2011-2015 5-year sample data for the United States. Ratios based on the non-institutionalized population by age group.*

Disability statistics for the United States (2015 estimates) indicate that the prevalence of disability is considerably higher among adults age 65-74 and age 75+ than among younger adults (age 18-64).

Based on the relative prevalence of disability by age group, the recreation impact fee for an age restricted unit for age 55+ occupants has been computed at 40% of the standard apartment fee per unit (in four or more unit structures).

The recreation fee for age restricted units for age 62+ occupancy and congregate housing is computed at 21% of the standard fee applicable to an apartment in a four or more unit structure.

Detail of Dover Recreation Facility Capital Investments				
Improvement Category & Description	Placed in Service Date	Original Acquisition Cost	Cost Adjustment Method	2017 Estimated Cost New
Building Improvements				
Lockerrooms>Showers	01/01/1985	\$70,077	RSM	\$180,712
Renovation, Butterfield Gym	01/01/1993	\$160,000	RSM	\$337,778
Renovation, Jenny Thompson Pool	01/01/1993	\$140,000	RSM	\$295,556
Renovation, Butterfield Gym	01/01/1995	\$50,000	RSM	\$94,554
Renovation, Butterfield Gym	01/01/1997	\$85,000	RSM	\$157,634
Renovation, Indoor Pool	01/01/1999	\$450,000	RSM	\$826,916
Renovation, Butterfield Gym	01/01/2001	\$75,000	RSM	\$129,991
Renovation, Indoor Pool	01/01/2001	\$50,000	RSM	\$86,661
Renovation, Indoor Pool	01/01/2003	\$68,040	RSM	\$111,954
Renovation, Jenny Thompson Pool	01/01/2004	\$22,788	RSM	\$36,952
Indoor Pool Lobby Renovations	01/01/2005	\$302,917	RSM	\$445,961
Butterfield Gym Improvements	01/01/2005	\$70,050	RSM	\$103,129
Indoor Pool Lobby Renovations	01/01/2005	\$115,150	RSM	\$169,526
Band shell	01/01/2005	\$250,952	RSM	\$369,457
Recr - Indoor Pool Lobby Renovations	01/01/2006	\$2,737	RSM	\$3,758
Recr - Butterfield Gym Improvements	01/01/2007	\$77,780	RSM	\$98,336
Recr - Butterfield Gym Improvements	01/01/2007	\$118,798	RSM	\$150,194
Recr - Butterfield Gym Imprvmnts	01/01/2008	\$40,100	RSM	\$49,699
Butterfield Gym Pool locker room improve	01/01/2008	\$14,385	RSM	\$17,829
Henry Law Park Band Shell	01/01/2009	\$1,584	RSM	\$1,834
Henry Law Park Bandshell	01/01/2009	\$1,213	RSM	\$1,404
Indoor Pool Filtration	01/01/2010	\$2,902	RSM	\$3,388
Recr - Indoor Pool Lobby Renovation	01/01/2014	\$5,725	RSM	\$5,800
Indoor Pool Roof Replacement	01/01/2015	\$1,000	RSM	\$1,014
				\$3,680,037
Building Systems				
Dehumidifier	01/01/1993	\$26,954	RSM	\$56,903
Energy Conservation Proj	01/01/1997	\$311,789	RSM	\$578,217
Boiler	01/01/1998	\$10,250	RSM	\$18,750
				\$653,870
Buildings				
Jenny Thompson Pool	01/01/1977	\$333,431	RSM	\$1,417,328
Pool Filtration Building	01/01/1977	\$108,603	RSM	\$461,644
Bath House	01/01/1980	\$89,623	RSM	\$318,906
Pavilion	01/01/1980	\$15,209	RSM	\$54,117
Concession/Pressbox	01/01/1988	\$14,613	RSM	\$34,931
Recreation Administration Building	01/01/2001	\$80,000	RSM	\$138,657
Recr - Shaws Lane Building	01/01/2008	\$125,100	RSM	\$155,047
Shaws Lane Rec Building	01/01/2009	\$281	RSM	\$325
Thompson Pool Filtration	01/01/2011	\$1,998	RSM	\$2,276
				\$2,583,231

Detail of Dover Recreation Facility Capital Investments				
Improvement Category & Description	Placed in Service Date	Original Acquisition Cost	Cost Adjustment Method	2017 Estimated Cost New
Land				
Athletic Field	01/01/2005	\$225,000	ENR CCI	\$319,049
				\$319,049
Land Improvements				
Jenny Thompson Pool	01/01/1977	\$871,700	ENR CCI	\$3,668,855
Guppy Park Deck & Fencing	01/01/1980	\$88,000	ENR CCI	\$294,747
Group of Asphalt Paving	01/01/1985	\$40,507	ENR CCI	\$104,690
Group of Chain Link Fencing	01/01/1985	\$10,311	ENR CCI	\$26,648
Multipurpose Field	01/01/1985	\$25,000	ENR CCI	\$64,613
Site Work, Maglaras Park	01/01/1987	\$125,000	ENR CCI	\$307,592
Group of Outdoor Lighting	01/01/1988	\$36,548	ENR CCI	\$87,686
Basketball Court	01/01/1990	\$12,388	ENR CCI	\$28,384
Basketball Court	01/01/1990	\$17,583	ENR CCI	\$40,287
Group of Chain Link Fencing	01/01/1990	\$14,386	ENR CCI	\$32,962
Group of Minor Land Improvements	01/01/1990	\$10,603	ENR CCI	\$24,294
Group of Minor Land Improvements	01/01/1990	\$11,310	ENR CCI	\$25,913
Tennis Court	01/01/1990	\$35,966	ENR CCI	\$82,406
Tennis Court	01/01/1990	\$39,962	ENR CCI	\$91,562
Tennis Court	01/01/1990	\$87,917	ENR CCI	\$201,436
Group of Minor Land Improvements	01/01/1991	\$17,710	ENR CCI	\$39,713
Observation Tower	01/01/1992	\$60,000	ENR CCI	\$130,495
Multipurpose Field	01/01/1993	\$15,000	ENR CCI	\$31,215
Brick Courtyard	01/01/1995	\$97,000	ENR CCI	\$192,227
Group of Minor Land Improvements	01/01/1995	\$48,427	ENR CCI	\$95,970
Group of Iron Fencing	01/01/1996	\$13,524	ENR CCI	\$26,090
Recreation field	01/01/1998	\$40,000	ENR CCI	\$73,257
Skate Park	01/01/1998	\$40,000	ENR CCI	\$73,257
Group of Minor Land Improvements	01/01/2000	\$13,548	ENR CCI	\$23,608
Outdoor Ice Rink	01/01/2000	\$20,000	ENR CCI	\$34,851
Group of Chain Link Fencing	01/01/2001	\$20,000	ENR CCI	\$34,186
Basketball Court	01/01/2001	\$10,000	ENR CCI	\$17,093
System, Irrigation	01/01/2001	\$15,000	ENR CCI	\$25,639
Trails	01/01/2001	\$75,000	ENR CCI	\$128,196
Parking Lot	01/01/2002	\$204,067	ENR CCI	\$338,406
Multipurpose Field	01/01/2003	\$40,000	ENR CCI	\$63,946
Parking Lot Improvements	01/01/2003	\$120,278	ENR CCI	\$192,282
Multipurpose Field	01/01/2004	\$499,628	ENR CCI	\$741,237
Parking Lot Improvements	01/01/2004	\$169,550	ENR CCI	\$251,540
Band shell	01/01/2005	\$183,677	ENR CCI	\$260,453
Athletic Field Development	01/01/2005	\$233,942	ENR CCI	\$331,729
Athletic Field Development	01/01/2005	\$108,058	ENR CCI	\$153,226
Athletic Field Development	01/01/2005	\$98,244	ENR CCI	\$139,310
Recr - Park Improvements	01/01/2006	\$53,898	ENR CCI	\$74,082
Recr - Athletic Field Development	01/01/2006	\$69,331	ENR CCI	\$95,295
Recr - Park Improvements	01/01/2007	\$135,567	ENR CCI	\$181,683
Recr - Park Improvements	01/01/2007	\$750	ENR CCI	\$895
Recr - Athletic Field Development	01/01/2007	\$22,370	ENR CCI	\$29,980
Recr - Park Improvements	01/01/2008	\$6,357	ENR CCI	\$8,519
Recr - Athletic Field Development	01/01/2008	\$183	ENR CCI	\$232
Woodman Park Tennis Courts	01/01/2009	\$102,956	ENR CCI	\$129,181
Recr - Park Improvements	01/01/2009	\$553	ENR CCI	\$694
Recr - Park Improvements 2004 Cip	01/01/2009	\$12,265	ENR CCI	\$15,389
Woodman Park Tennis Courts	01/01/2010	\$15,467	ENR CCI	\$18,757
Tennis & BB Courts	01/01/2010	\$13,843	ENR CCI	\$16,788
Athletic Fields Development	01/01/2011	\$10,031	ENR CCI	\$11,858
Recr - Woodman Park Tennis Courts	01/01/2012	\$1,285	ENR CCI	\$1,480
Shaws Lane Building (Field)	01/01/2016	\$21,008	ENR CCI	\$21,628
				\$9,086,462

Detail of Dover Recreation Facility Capital Investments				
Improvement Category & Description	Placed in Service Date	Original Acquisition Cost	Cost Adjustment Method	2017 Estimated Cost New
Machinery & Equipment				
Dehumidifier	01/01/1990	\$100,000	CPI	\$186,917
Playstructure	01/01/1990	\$15,000	CPI	\$28,037
Playstructure	01/01/1992	\$12,000	CPI	\$20,895
Generator, Emergency	01/01/1997	\$62,347	CPI	\$94,900
Playstructure	01/01/1999	\$12,000	CPI	\$17,597
Group of Minor Pool Equipment	01/01/2000	\$23,359	CPI	\$33,139
Playstructure	01/01/2000	\$60,000	CPI	\$85,122
Playstructure	01/01/2000	\$60,000	CPI	\$85,122
Playstructure	01/01/2004	\$20,000	CPI	\$25,866
				\$577,595
Roadways (Parking)				
Group of Asphalt Paving	01/01/1995	\$35,000	ENR CCI	\$69,360
Group of Asphalt Paving	01/01/1995	\$61,272	ENR CCI	\$121,424
				\$190,784
Utility Systems				
Park Improvements	01/01/2011	\$3,000	ENR - CCI	\$3,546
Recr - Thompson Pool Bath House Imprv	01/01/2012	\$185,000	ENR - CCI	\$213,108
				\$216,654
Total Recreation Facilities				
Total Selected Improvements				\$17,307,682