

## The Massachusetts Foundation Budget

In Massachusetts, the definition of an adequate spending level for a school district is called its “foundation budget.” It is a statistical measure that was developed by a group of superintendents and an economist in the early 1990s. They developed a “model school budget” which quantified “for the average school district what constitutes an adequate—but not excessive—level of funding<sup>1</sup>.” The goal of the Chapter 70 formula is to ensure that every district has sufficient resources to meet its foundation budget spending level, through an equitable combination of local property taxes and state aid.

Each district’s foundation budget is updated each year to reflect inflation and changes in enrollment. Enrollment plays an important role not just because of the total number of pupils, but also because there are differences in the costs associated with various educational programs, grade levels, and student needs. Districts differ greatly in the percentages of their student population that fall into these enrollment categories. As a result, when districts’ foundation budgets are presented in per pupil terms, there is considerable variation. The FY16 statewide average is \$10,709 per pupil, but the range for academic districts is from \$8,739 in Topsfield to \$12,549 in Boston. The FY16 foundation per pupil expenditure for Sutton is \$ 9,208, less than \$500 above the lowest district. Vocational districts, whose programs are more expensive, range from \$15,051 to \$20,413. The town of Sutton belongs to the Blackstone Valley Regional Vocational school district, or BVT. The FY2016 foundation per pupil expenditure for BVT is \$15,132.

The FY16 foundation budget continues the major changes to the calculations first implemented in FY07. The changes directly aligned the foundation budget categories with the chart of accounts which schools use to track how they spend their money.

Since FY05, charter school tuition rates have relied upon foundation budgets calculated for each sending district’s pupils at each charter school.

### How the Foundation Budget Is Calculated

A district’s foundation budget is derived by multiplying the number of pupils in fourteen enrollment categories by cost rates in eleven functional areas. Below is the calculation for Sutton’s foundation budget.

#### **Foundation Enrollment**

Any given year’s foundation enrollment is a count of the number of pupils for whom a school district is financially responsible, on October 1st of the previous year<sup>2</sup>. It is comprised primarily of local resident school-children attending their community’s local or regional school district. However, the measure also includes students for whom the district is paying tuition, at Commonwealth charter schools, other school districts, special education schools and other settings. It does not include tuitioned-in students from other districts, because their home districts are paying for those students’ costs.

The columns going across the page are the fourteen enrollment categories used in the foundation budget calculation.

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<sup>1</sup> Edward Moscovitch, “Model School Budget”. Cape Ann Economics, Rockport, Massachusetts, 1992, p1

<sup>2</sup> For example, FY16 foundation enrollment is based upon Oct 1, 2015 headcount. The one-year lag is necessary because the next year’s enrollment is not known until after the state budget is finalized.

**Massachusetts Department of Elementary and Secondary Education**  
Office of School Finance

**FY16 Chapter 70 Foundation Budget**

**290 SUTTON**

	Base Foundation Components										Incremental Costs Above The Base				TOTAL*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
	Pre-School	Kindergarten Half-Day	Kindergarten Full-Day	Elementary	Jr High/Middle	High School	ELL PK	ELL K Half	ELL KF-12	Vocational	Special Ed In District	Special Ed Out of Dist	Low Income Elem	Other	
Foundation Enrollment	36	0	100	540	378	443	0	0	8	3	55	15	99	71	1,490
1 Administration	6,567	0	36,480	196,992	137,894	161,606	0	0	2,918	1,094	138,479	37,767	0	0	719,798
2 Instructional Leadership	11,860	0	65,887	355,790	249,053	291,879	0	0	5,271	1,977	0	0	0	0	981,716
3 Classroom and Specialist Teachers	54,381	0	302,116	1,631,405	1,004,951	1,731,993	0	0	36,400	19,940	456,946	0	269,090	145,794	5,653,014
4 Other Teaching Services	13,947	0	77,486	418,424	210,841	205,711	0	0	4,957	1,393	426,644	577	0	0	1,359,981
5 Professional Development	2,151	0	11,954	64,562	48,993	55,672	0	0	1,295	623	22,043	0	5,922	4,247	217,462
6 Instructional Equipment & Tech	7,871	0	43,727	236,126	165,288	309,941	0	0	3,498	3,673	19,240	0	0	0	789,364
7 Guidance and Psychological	3,956	0	21,984	118,714	110,614	162,506	0	0	2,341	1,100	0	0	0	0	421,215
8 Pupil Services	1,574	0	8,746	70,843	80,998	218,895	0	0	1,050	1,482	0	0	0	0	383,587
9 Operations and Maintenance	15,101	0	83,894	453,028	343,799	390,668	0	0	9,086	4,951	154,688	0	41,559	29,805	1,526,579
10 Employee Benefits/Fixed Charges	13,612	0	75,618	408,364	271,790	306,020	0	0	7,610	3,366	175,243	0	27,315	19,590	1,308,527
11 Special Ed Tuition	0	0	0	0	0	0	0	0	0	0	0	358,578	0	0	358,578
12 Total	131,019	0	727,892	3,954,247	2,624,220	3,834,892	0	0	74,425	39,600	1,393,283	396,822	343,886	199,436	13,719,823
13 Wage Adjustment Factor	100.0%										Foundation Budget Per Pupil				9,208

\* Total foundation enrollment does not include columns 11 through 14, because those columns represent increments above the base. The pupils are already counted in columns 1 to 10.  
 Total foundation enrollment assigns pupils in pre-kindergarten and half-time kindergarten an enrollment count of .5.  
 Special education in-district headcount is an assumed percentage, representing 3.75 percent of K to 12 non-vocational enrollment and 4.75 percent of vocational enrollment.  
 Special education out-of-district headcount is also an assumed percentage, representing 1 percent of non-vocational K-12 enrollment.  
 Low income headcounts are the number of pupils in columns 1 through 10 who are eligible for free or reduced lunch.  
 Each component of the foundation budget represents the enrollment on line 1 multiplied by the appropriate state-wide foundation allotment.  
 The wage adjustment factor is applied to underlying rates in all functions except instructional equipment, benefits and special education tuition.  
 The foundation budget shown on this page may differ from the final number used in the formula, due to rounding error.

Based upon the pupil-specific information submitted by each school district to the Massachusetts Department of Elementary and Secondary Education, a student is classified as being in one of the following categories, which appear in columns 1 through 10 of the report.

Column	Description
1	regular education or special education pre-kindergarten
2	regular or special education half-day kindergarten
3	regular or special education full-day kindergarten
4	regular or special education elementary (grades 1-5)
5	regular or special education junior high/middle (grades 6-8)
6	regular or special education senior high (grades 9-13)
7	limited English pre-kindergarten
8	limited English half-day kindergarten
9	limited English (grades 1-12)
10	vocational education (grades 9-12) <sup>3</sup>

These headcounts are used to compute total foundation enrollment at the far right of the report. Note that for the purpose of computing this total, pre-school and half-day kindergarten categories count as .5 full-time equivalent pupils because they typically attend for half the school day. For example, Sutton's total foundation enrollment of 1,490 (shown in the last column on the right) counts its 36 pre-schoolers (columns 1 and 7) as 18 pupils. Sutton does not offer half day kindergarten (column 2 and 8).

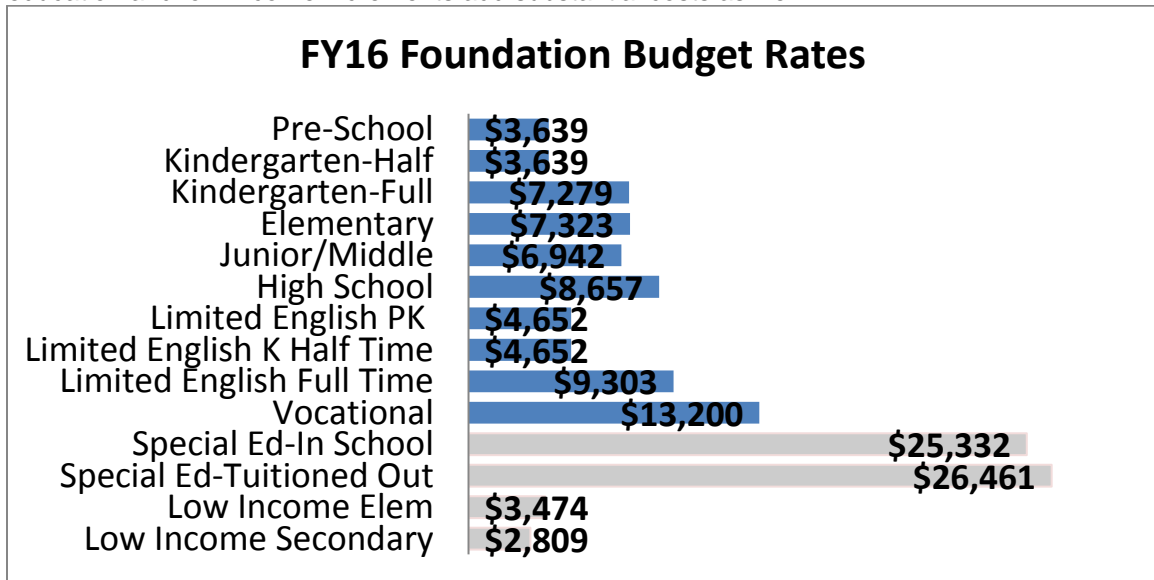
<sup>3</sup> If a town is a member of a regional vocational district, its resident pupils at that district are not counted in local district enrollment. The vocational district reports those pupils and Chapter 70 aid goes directly to the vocational district. Post-graduate and post-secondary pupils in programs run by vocational districts may be counted if they pay less than the state-approved tuition rate.

In columns 11 through 14 there are four cost increment categories that are intended to reflect the additional resources needed to educate special education and low-income students. These students have already been counted in columns 1 through 10, and are therefore not added to total enrollment.

- Assumed in-district special education enrollment (column 11) is set at 3.75 percent of foundation enrollment (not including pre-kindergarten and vocational pupils) and 4.75 percent of vocational enrollment. These headcounts are “assumed” rather than actual counts of pupils, an approach which is practiced in other states around the country.<sup>4</sup>
- Assumed out-of-district special education enrollment (column 12) is set at one percent of total foundation enrollment (again not including pre-kindergarten and vocational pupils).
- Low-income status is reported on the basis of eligibility for free and reduced lunch programs. The FY16 increment for grade 1 to 8 low income students (column 13) is \$3,474 per pupil. The FY16 increment for grade 9 to 12 low income students is \$2,809 (column 14). Massachusetts has been ranked as having the highest such poverty factors in the nation.<sup>5</sup>

**Associating a cost with each enrollment category and function**

Each pupil generates a specific cost in each functional category. The costs are higher at the upper grades. They are also higher in the limited English and vocational programs. Special education and low-income increments add substantial costs as well.



<sup>4</sup> Versteegen, D. A. (2011) “Public education finance systems in the United States and funding policies for populations with special educational needs”. Education Policy Analysis Archives, 19 (21). Retrieved 7/5/2012, from <http://epaa.asu.edu/ojs/article/view/769>. As of 2011, 5 states used a “census-based approach” similar to Massachusetts.

<sup>5</sup> Kevin Carey, “The Funding Gap 2004.” The Education Trust, Special Report: Washington, DC. 2005, p.13.

A summary of the assumptions underlying the FY16 foundation budget rates describes how all eleven categories are derived. The largest dollar amount is represented by the class size and salary assumptions for teachers. The statutory class sizes of 22 for elementary, 25 for junior high/middle, and 17 for high school remain in effect. The FY94 teacher salary of \$38,000 has been factored up by inflation so that in FY16 it stands at \$66,918.

#### Assumptions Underlying FY16 Foundation Budget Rates

function	derivation of FY16 rate*
administration	81.7** percent of FY04 state average expenditure per pupil for administration, factored up by inflation, for a FY16 average of \$481 per pupil.
instructional leadership	81.7 percent of FY04 state average expenditure per pupil for instructional leadership, factored up by inflation for a FY16 average of \$657 per pupil.
classroom and specialist teachers	Assumed class sizes of 22 for elementary, 25 for junior high/middle, and 17 for high school; at an average salary in FY94 of \$38,000. Inflation has increased this salary by 68 percent through FY16, to \$66,918 per teacher. In per pupil terms, the rates are \$3,013 for elementary, \$2,650 for junior high/middle, and \$3,897 for senior high. These rates include the statutory \$394 per pupil for expanded programs for low income students, factored up by inflation.
other teaching services	81.7 percent of the FY04 state average expenditure per pupil for other teaching services, factored up by inflation and further adjusted by the following ratios: elementary (1.25), junior high/middle (.90) and senior high (.75). FY16 per pupil rates are \$772 for elementary, \$556 for junior high/middle, and \$463 for senior high.
professional development	3 percent of the salary of teachers and support staff as described in the statutory foundation budget, factored up by inflation. FY16 per pupil rates are \$121 for elementary, \$130 for junior high/middle, and \$126 for senior high.
instructional equipment and technology	Statutory per pupil amounts factored up by inflation. FY16 per pupil rates are \$435 for elementary and junior high/middle, and \$695 for senior high.
guidance and psychological	81.7 percent of FY04 state average expenditure per pupil for guidance and psychological, factored up by inflation and further adjusted by the following ratios: elementary (.75), senior high (1.25). In FY16, the per pupil rates are \$217 for elementary, \$290 for junior high/middle, and \$364 for senior high.
pupil services	Combined statutory per pupil rates for health staff (\$50 elem/jr hi, \$38 at high school); athletics (\$50 jr high/middle, \$200 senior high); and activities (\$25 elementary, \$35 junior high/middle, and \$45 senior high). After inflation the FY16 rates are \$131 for elementary, \$213 for jr high/middle, and \$492 for senior high.
operations and maintenance	Combined statutory assumptions for custodial salaries (ten percent of the number of foundation teaching and support staff, at a custodial salary of \$25,000); maintenance (\$3,300 times the number of foundation teaching and support staff); and extraordinary maintenance (\$2,200 times the number of foundation teaching and support staff). The combined FY16 per pupil amount after inflation equals \$837 for elementary, \$907 for junior high/middle, and \$879 for high school.
employee benefits and fixed charges	Statutory assumption for salary benefits (\$4,320 times the number of foundation staff in all categories, adjusted by the wage adjustment factor, plus \$468 times the same number of staff, not adjusted by the wage adjustment factor), increased by inflation. In FY16 the per pupil rate equals \$753 for elementary, \$718 for junior high/middle, and \$688 for high school.
special education tuition	Statutory assumption for special education tuition rate of \$13,500 per pupil, factored up by inflation. In FY16 the per pupil rate is \$23,905.

\* Note: in many of the categories, there are higher rates for limited-English and vocational pupils. There are also additional increments for low-income and assumed in-district special education pupils.

\*\*81.7 percent of the statewide average expenditure was chosen for all four of the newly-created categories in FY07, because that is the factor which in combination with the other rates, yields the same statewide total foundation as would have been generated under the statutory calculations. The changes were fiscally neutral in the aggregate.

### The Wage Adjustment Factor

The “wage adjustment factor” gives a district credit for having higher school costs if it is located in a geographic area where average wages are higher than in other areas of the state. In theory it is more expensive for them to attract teachers and other staff to come to work there, because the cost of living is higher. Massachusetts is one of the few states in the country to use such a factor.

The wage factor is calculated using the latest available average wage data supplied by the state’s Department of Employment. The factor reflects a town’s own average, but is much more heavily weighted to the average of the “labor market area” the town is located in. There are 23 labor market areas used. There are real differences in these averages, which represent the combined total for all industries both private and public.

Labor Market Area	CY13 Wages	CY13 Employment	CY13 LMA Avg
unassigned	165,068,168	4,687	35,218
Great Barrington, MA LMA	495,364,474	13,737	36,061

<b>Labor Market Area</b>	<b>CY13 Wages</b>	<b>CY13 Employment</b>	<b>CY13 LMA Avg</b>
Tisbury, MA LMA	363,412,040	8,220	44,211
Nantucket County/town LMA	321,133,013	6,415	50,060
Amherst Center, MA Micropolitan NECTA	789,893,893	16,979	46,522
Athol, MA Micropolitan NECTA	204,798,138	5,682	36,043
Barnstable MA Metropolitan NECTA	4,172,130,765	100,308	41,593
Boston-Cambridge-Quincy, MA NECTA Division	125,218,314,294	1,734,851	72,178
Brockton-Bridgewater-Easton, MA NECTA Division	4,126,682,966	90,429	45,635
Framingham, MA NECTA Division	11,435,485,189	159,074	71,888
Greenfield, MA Micropolitan NECTA	589,378,429	15,974	36,896
Haverhill-North Andover-Amesbury, MA-NH NECTA Division	2,165,317,440	46,591	46,475
Lawrence-Methuen-Salem, MA-NH NECTA Division	1,907,275,744	41,307	46,173
Leominster-Fitchburg-Gardner, MA Metropolitan NECTA	1,952,267,918	47,870	40,783
Lowell-Billerica-Chelmsford, MA-NH NECTA Division	7,098,991,748	115,214	61,616
Nashua, NH-MA NECTA Division	140,437,254	3,420	41,064
New Bedford, MA Metropolitan NECTA	2,944,973,446	68,025	43,293
North Adams, MA-VT Micropolitan NECTA	463,054,762	11,840	39,109
Peabody, MA NECTA Division	4,971,041,750	101,890	48,788
Pittsfield, MA Metropolitan NECTA	1,528,169,075	35,454	43,103
Providence-Fall River-Warwick, RI-MA Metropolitan NECTA	3,839,399,943	96,731	39,692
Springfield, MA-CT Metropolitan NECTA	10,951,937,812	248,715	44,034
Taunton-Norton-Raynham, MA NECTA Division	2,103,941,536	43,882	47,945
Worcester, MA-CT Metropolitan NECTA	11,600,957,102	234,716	49,426
<b>State Total</b>	<b>199,549,426,899</b>	<b>3,252,011</b>	<b>61,362</b>

A district's wage factor is a percentage that is applied to the eight salary-related functional categories in the foundation budget<sup>6</sup>. The labor market area for a district is compared to the state average and weighted at 80 percent. The town's own factor is weighted at 20 percent. The distance above or below the state average is then divided by three to determine the wage adjustment factor.

Prior to FY2000, districts in lower-wage areas saw significant reductions in their foundation budgets, by as much as ten percent. Since then, annual budget language has cushioned districts from these reductions, to the point where beginning in FY04, only those with above-average wages have been affected by the wage adjustment factor. Those below the state average are set to 100 percent. In FY16, 115 municipalities in just three labor market areas are affected:

Boston/Cambridge/Quincy NECTA division  
Framingham  
Lowell/Billerica/Chelmsford NECTA division

A district's wage factor appears at the bottom left of its foundation budget report. Sutton's wage factor is set to 100 percent.

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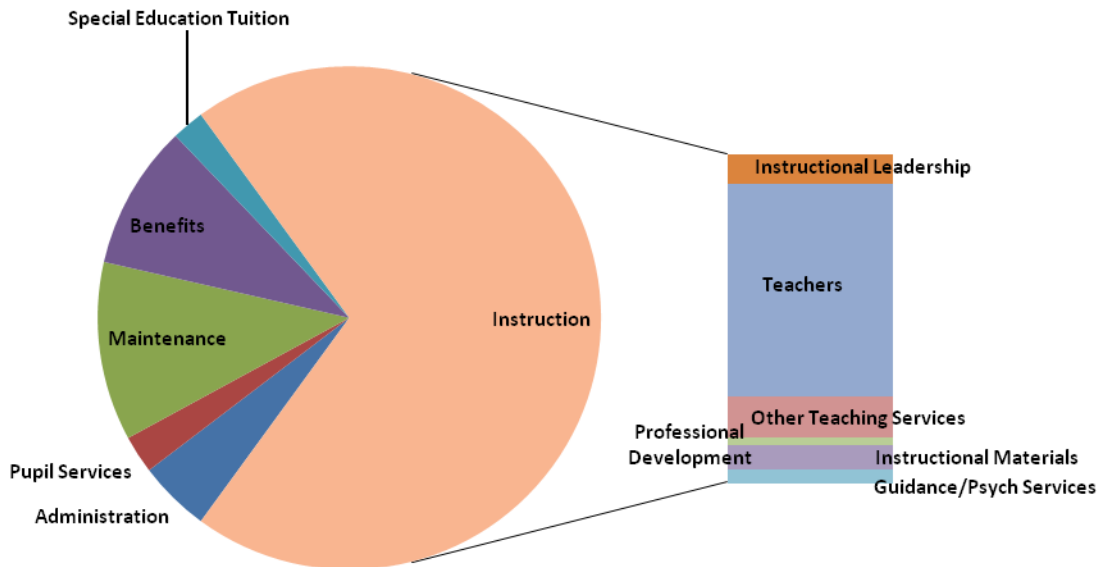
<sup>6</sup> The wage factor is not applied to instructional equipment, employee benefits, or special education tuition.

**FY16 Foundation Budget: Massachusetts State Totals**

After applying the wage factor, the statewide total for all school districts in FY15 is \$10,090,177,263. Teaching makes up 45 percent. The six instructional categories (instructional leadership, teachers, other teaching services, professional development, instructional materials/technology, and guidance/psychological) account for a combined 70 percent.

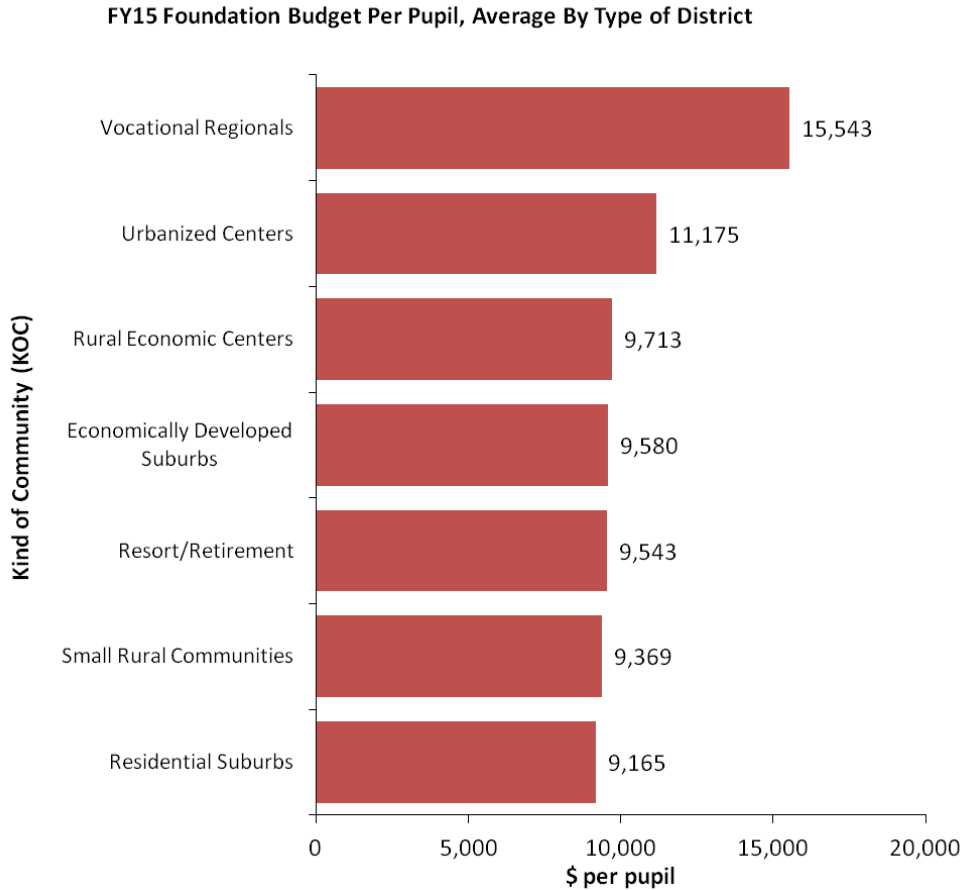
**FY16 Foundation Budget by Category**

Category	Dollars	Pct of Total
Administration	465,078,668	4.6%
Pupil Services	245,879,672	2.4%
Maintenance	1,158,885,040	11.5%
Benefits	938,520,997	9.3%
Special Education Tuition	211,083,004	2.1%
Instructional Leadership	634,578,503	6.3%
Teachers	4,594,296,187	45.5%
Other Teaching Services	879,474,086	8.7%
Professional Development	163,824,664	1.6%
Instructional Materials	523,304,277	5.2%
Guidance/Psych Services	275,252,165	2.7%
Total	10,090,177,263	100.0%



## **FY15 Foundation Budget: District Results**

When presented in per pupil terms there is considerable variation among districts in their foundation budgets. After separating out vocational districts as a separate category, urbanized centers are higher than other types of districts by more than \$1,400 per pupil.



Sutton would fall in the Residential Suburbs district type, with an average FY15 foundation per pupil of \$9,165. Again, the FY16 foundation per pupil expenditure for Sutton is \$9,208.