Bridgeport Public Schools

Facility Master Plan: Phase III

Background Report

Executive Summary

DeJONG RICHTER

August 2013

Introduction

In 2003, Bridgeport Public Schools undertook a comprehensive overview and long-term plan that included a review of existing facility conditions, established educational and demographic needs, and recommended a plan of action to create school buildings that will remain viable for the next 30-50 years. This process included leadership from a Steering Committee of citizen volunteers and two city-wide community dialogues in which residents of Bridgeport expressed their community and educational values, and evaluated several long-term facility options.

A facility master plan is not a stagnant document. In fact, master plans should be updated periodically to incorporate building improvements, changes in demographics, transformations in educational direction, and available funding sources. In 2008, an abbreviated master plan update process revised some of the projects in the original master plan as well as clarified some new programs. The follow page details the recommendation for each facility along with the current status.

This document provides a comprehensive update on the demographics of BPS and the capacity and educational adequacy of the existing facilities. This document is intended to serve as a resource for Phase III of the Facility Master Planning Process.

Accomplishments to Date

New Facilities

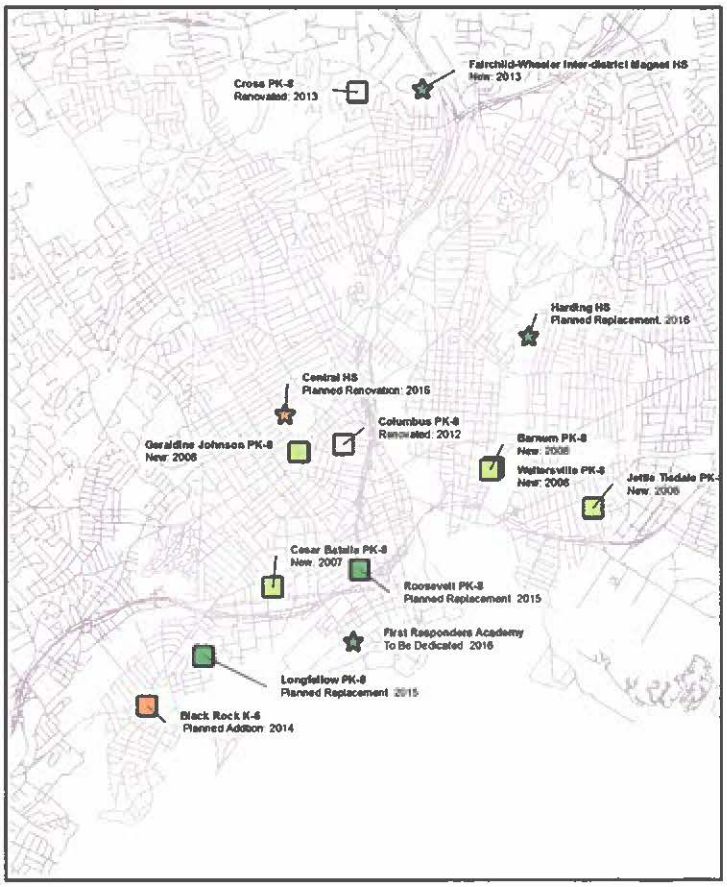
- **Cesar Batalla School** (Opened 2007)
- **Jettie Tisdale School** (Opened 2008)
- **Barnum School** (Opened 2008)
- **Waltersville School** (Opened 2008)
- **Geraldine Johnson School** (Opened 2008)
- **Fairchild Wheeler Inter-district Magnet High Schools** (Opened 2013)

Renovated Facilities

- **Columbus School** (Completed 2012)
- **Wilbur Cross School** (Completed 2013)

Planned and Funded Future Projects

- **Black Rock K-8 Addition** (Opens 2014)
- **Longfellow School on-site Replacement** (Opens 2015)
- **Roosevelt School on-site Replacement** (Opens 2015)
- **New Harding High School on the GE Site** (Opens 2016)
- **Central High School Renovation** (Opens 2016)
- **First Responders Academy** (Opens 2016 in South End Facility)



Past Recommendations and Current Facility Status

The table below lists the full portfolio of BPS operated facilities from 2003 to present and their corresponding recommended action at each phase of the master plan along with the current status. The facility action corresponds to the color key shown below.

Facility Actions Key
New / Renovated Facility (No Action)
General Maintenance
General Maintenance / Addition
Minor Renovation
Moderate Renovation
Major Renovation
New Building - Replace on Site
Retired / Demolished / Lease Discontinued

	School	Year Built	Last Renovation	2003 FMP Recommended Action (Phase I)	2008 Result / FMP Update Recommended Action (Phase II)	2013 Status
WEST K-8	Black Rock	1900	1992	General Maintenance / Addition	General Maintenance	Funded K-8 Addition Opens August 2014
	Blackham	1964	1989	Moderate Renovation	Moderate Renovation	Unchanged
	Bryant	1912	1995	General Maintenance	General Maintenance	Unchanged
	Cesar Batalla	2007	-		Opened 2007	General Maintenance
	Columbus School	1965	2012	Moderate Renovation / Addition	Minor Renovation	Renovation Completed 2012
	Geraldine W. Johnson	2008	-		Opened 2009	General Maintenance
	Hallen	1930	1976	General Maintenance / Addition	General Maintenance	Unchanged
	Howe	1889	1972	New Building / New Site	Replaced by Cesar Batalla School	Retired
	James Curiale	1984	1996	Moderate Renovation	Moderate Renovation	Unchanged
	Longfellow	1959	1987	Major Renovation	Major Renovation	Demolished, Replacement Funded On-Site
	Longfellow (New)	2015	-			Opens August 2015
	Longfellow Annex / Whitt	Lease		Discontinue Lease	Lease Discontinued	
	Madison	1916	1999	General Maintenance	General Maintenance	Unchanged
	Maplewood (Classical Stu	1890	1984	Historic Re	General Maintenance	Unchanged
	Maplewood Annex	Lease		Discontinue Lease	Lease Discontinued	
	Park City Magnet	1959	-	Move Program to Skane, Reuse as a high school	Major Renovation / Replace on Skane Site	Unchanged
	Read	1968	1999	General Maintenance	Moderate Renovation	Unchanged
	Roosevelt	1965	1980	Major Renovation / Addition	New Building - Replace on Site	Demolished, Replacement Funded On-Site
	Roosevelt (New)	2015	-			Opens January 2015
	Sheridan (BLC)	1895	1980	Relocate as district program	Major Renovation	Unchanged
	Skane Center	1952	1996	Moderate Renovation / Addition	Major Renovation / Replace on Park City Site	Unchanged
	Webster	1884	1940	New Building / New Site	Replaced by Geraldine W. Johnson School	Retired
	Wilbur Cross	1959	2013	Major Renovation / Addition	Minor Renovation	Renovation Completed 2013
	Winthrop School	1955	1997	Moderate Renovation / Addition	Moderate Renovation	Unchanged
EAST K-8	Barnum	1892	1984	Historic Renovation / Addition	Replaced on New Site	Retired
	Barnum (New)	2008	-		Opened 2008	General Maintenance
	Barnum Annex	Lease		Discontinue Lease	Lease Discontinued	
	Beardsley	1904	1985	New Building / Expand on site	New Building / New Site	Unchanged
	Dunbar	1984	-	Minor Renovation	Moderate Renovation	Unchanged
	Edison	1935	1999	Redistrict / New Building / New Site	Redistrict / New Building / New Site	Unchanged
	Garfield	1911	1979	New Building / New Site	Replaced by Barnum School	Retired
	Hall	1914	1939	Redistrict / New Building / New Site	Redistrict / New Building / New Site	Unchanged
	High Horizon	1969	1992	Moderate Renovation / Addition	Moderate Renovation	Unchanged
	Jettie Tisdale	2008	-		Opened 2008	General Maintenance
	Luis Munoz Marin	1990	-	General Maintenance / Minor Addition	General Maintenance	Unchanged
	McKinley	1908	1976	Redistrict with Newfield / New Building / New Site	Replaced by Jettie S. Tisdale	Retired
	Multi-Cultural	1969	1993	Moderate Renovation / Addition	Moderate Renovation	Unchanged
	Newfield	1906	1940			
	South End Swing Space	2005	-	General Maintenance	General Maintenance	Will become First Responders Academy in January 2015
	Thomas Hooker	1927	2000	General Maintenance / Addition	General Maintenance	Unchanged
	Waltersville	1890	1981	New Building / New Site	Replaced on New Site	Retired
	Waltersville (New)	2008	-		Opened 2008	General Maintenance
	Waltersville Annex	Lease		Discontinue Lease	Lease Discontinued	
HIGH	Bassick High School	1929	1967	New Building / New Site	New Building / New Site	Unchanged
	Central High School	1962	1998	Major Renvation + Community Use	Major Renovation	Funded Major Renovation Opens August 2016
	Harding High School	1925	1997	New Building / New Site	New Building / New Site	Funded Replacement Opens August 2016
	New High School (Fairchil	2013	-	New Building / Park City Magnet Site	New Building / New Site	Opens August 2013
	Regional Vocational Aquaculture Center	1990	2010	General Maintenance	General Maintenance	Unchanged

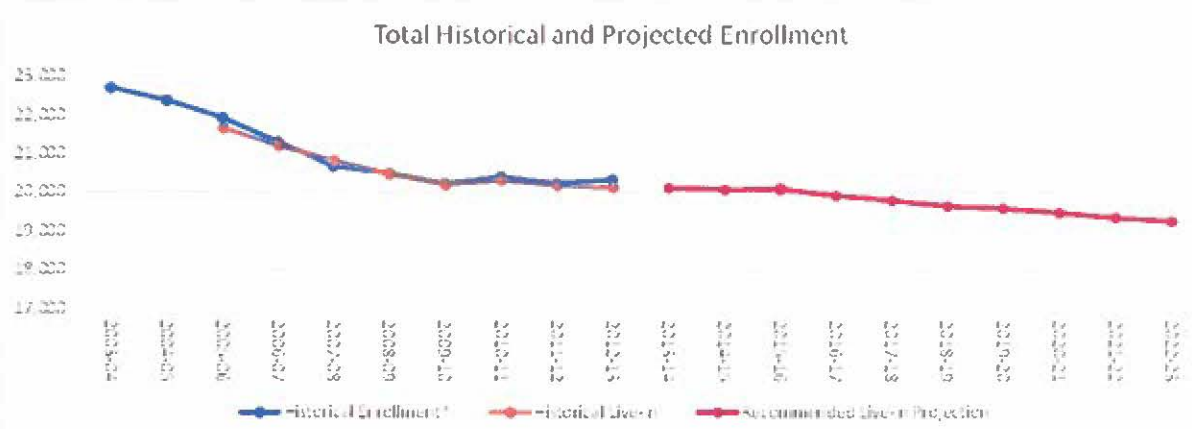
Enrollment Projections

Accurate and frequently updated enrollment projections are crucial in any facility planning process. A traditional cohort survival enrollment projection analyzes trends in historical birth and enrollment by school and projects student enrollment forward. Due to the high number of transfers between schools within the system, the same mythology was applied to the live-in enrollment. For example, if a student resides in the Curial school boundary, but attends Cesar Batalla, that student would be accounted for in the projection for Curial. This methodology allows the use of more consistent data that is not directly impacted by changes in programs at each school from year to year. This produces more accurate projections and also shows areas where students are leaving their home schools in greater or smaller numbers. Four projection levels were created: low, moderate, high, and recommended. For this summary, the recommended projection is used.

The total live-in enrollment in the district has declined from 21,660 to 20,131 the last 8 years. This is a total of 1,529 students representing 7.1% of the 2005-06 total enrollment. This decline can be broken down to PK-8 and 9-12 grade levels. There was a decline of 780 students PK-8 and a decline of 749 students at the high school level.

This decline is projected to continue, declining to 19,246 by the 2022-23 school year. This is a projected decrease of 885 PK-12 students representing 4.3% of the 2012-13 total enrollment. This projected decline can be broken down to the K-8 and 9-12 grade levels. The PK-8 grade level is projected to by 952 students and the 9-12 enrollment is projected to increase by 67 students. This projected overall decline is less than the decline observed over the past 8 years.

The chart and corresponding table below show the historical and projected enrollment. School level and district wide projections (low, moderate, high, and recommended) can be found in the enrollment projection section of this report.



	Historical Enrollment and Historical Live-in										Recommended Projected Enrollment									
Total Enrollment	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
PK Enrollment	402	396	396	551	611	650	687	774	790	827										
K-8 Enrollment	14,667	15,511	15,064	15,179	14,669	14,510	14,464	14,692	14,798	14,784										
9-12 Enrollment	5,044	5,087	5,214	5,582	5,397	5,306	5,084	5,041	4,657	4,727										
SPED Enrollment	1,188	1,397	1,260																	
Historical Enrollment*	22,713	23,391	21,734	21,312	20,677	20,496	20,236	20,407	20,245	20,338										
PK Live-in			514	560	646	697	708	793	791	820	820	820	820	820	820	820	820	820	820	820
K-8 Live-in			15,486	14,989	14,666	14,426	14,396	14,466	14,684	14,600	14,598	14,532	14,464	14,402	14,230	14,128	13,999	13,838	13,740	13,648
9-12 Live-in			5,460	5,662	5,499	5,344	5,098	5,057	4,711	4,711	4,700	4,716	4,761	4,697	4,737	4,694	4,767	4,810	4,785	4,778
Historical Live-in			21,460	21,211	20,811	20,467	20,202	20,316	20,186	20,131	20,118	20,067	20,085	19,919	19,795	19,642	19,586	19,468	19,345	19,246

Note: lighter and darker shades of color compare high and lower enrollments within each grade level from year to year.

Capacity

Capacity can be difficult to calculate because there are a variety of programs that have different requirements within each building. In PK-8 programs, when students leave their home room to attend a specialty class like art or music, their homeroom remains empty. Therefore, general classrooms (English, math, social studies) carry a student capacity, and specialty spaces such as art rooms, music rooms, or gymnasiums do not.

DeJONG-RICHTER assessed all of the PK-6, and PK-8 facilities that were built prior to 2005, that did not have any funded projects associated with them. For this study, capacity was calculated in two different ways, "as used" capacity, and a recommended capacity which is based on a sliding scale allocation. This was done to show how some facilities run their programs differently to accommodate higher or lower enrollment.

As Used Capacity

Each facility was assessed, existing room uses were identified, and capacity was allocated to each general classroom.

The list below outlines the capacities assigned to each room type.

- Pre-Kindergarten: 18 Students / Classroom
- Kindergarten - 1st Grade: 24 Students / Classroom
- 2nd - 12th Grade: 29 Students / Classroom
- Special Education or ELL Resource Rooms: 0 students
- Instructional spaces smaller than 600 square feet: 0 students

The room types were counted and multiplied by the factors listed above. This methodology takes room use into account and returns a capacity number that is representative of how the facility is being operated.

Example 1: (School with dedicated art and music rooms)

2 Kindergarten Classrooms @ 24 students + 8 2nd – 8th grade classrooms @ 29 + 1 art room @ 0 + 1 music room @ 0 = 280 Student Capacity

Example 2: (The same school with art and music on carts)

2 Kindergarten Classrooms @ 24 students + 10 2nd – 8th grade classrooms @ 29 + 1 art room @ 0 + 1 music room @ 0 = 338 Student Capacity

Capacity (Continued)

Recommended Capacity

The table to the right illustrates best practices for the number of specialty classrooms that should be allocated in a facility based on the total number of classrooms. The total number of net classrooms is then multiplied by 27.3 to arrive at a recommended capacity. 27.3 is the weighted average of the students per classroom parameters listed on the previous page. This methodology provides a uniform capacity standard based on the total number of teaching spaces and is not impacted by classroom allocations at individual schools.

Returning to the same school shown as an example in the "As used" capacity:

Example 1: (School with dedicated art and music rooms)

2 Kindergarten Classrooms + 8 2nd – 8th grade classrooms + 1 art room + 1 music room = 12 general classrooms = 245 student capacity

Example 2: (The same school with art and music on carts)

2 Kindergarten Classrooms + 10 2nd – 8th grade classrooms + 0 art room + 0 music room = 12 general classrooms = 245 student capacity

Recommended Capacity Allocations

# General Classrooms	# Specialty Rooms	Net	Student Capacity
10	2	8	218
11	2	9	245
12	3	9	245
13	3	10	273
14	3	11	300
15	4	11	300
16	4	12	327
17	5	12	327
18	5	13	354
19	5	14	382
20	6	14	382
21	6	15	409
22	6	16	436
23	7	16	436
24	7	17	463
25	7	18	491
26	8	18	491
27	8	19	518
28	8	20	545
29	8	21	572
30	8	22	600
31	8	23	627
32	8	24	654
33	9	24	654
34	9	25	681
35	10	25	681
36	10	26	709
37	11	26	709
38	11	27	736
39	11	28	763
40	12	28	763
41	12	29	790
42	12	30	818
43	13	30	818
44	13	31	845
45	12	33	899
46	12	34	927
47	12	35	954
48	12	36	981
49	13	36	981
50	13	37	1008
51	13	38	1036
52	13	39	1063
53	14	39	1063
54	14	40	1090
55	14	41	1117
56	14	42	1145
57	15	42	1145
58	15	43	1172
59	15	44	1199

Design Capacity

In the cases where facilities were built after 2005 and a detailed floor plan with room use was not available, an intended design capacity was used.

Facilities in which Design Capacity is used:

- Barnum School
- Bassick High School
- Black Rock (before addition)
- Black Rock School (after addition)
- Central High School
- Cesar Batalla School
- Fairchild-Wheeler Inter-district Magnet High School
- First Responders Academy (Planned)
- Harding High School (Current)
- Harding High School (Planned)
- Jettie S. Tisdale School
- Longfellow (Planned)
- Roosevelt (Planned)
- Waltersville School

Facility Utilization

Facility utilization can be calculated by dividing enrollment by capacity. For this purpose design and recommend capacity are used to arrive at a total district capacity. The intent for any educational program is not to fill each building to 100% capacity. Industry standards and best practices recommend a target of 85%-95% utilization for PK-12 facilities. However there can be deviations in this target based on programmatic needs at specific schools.

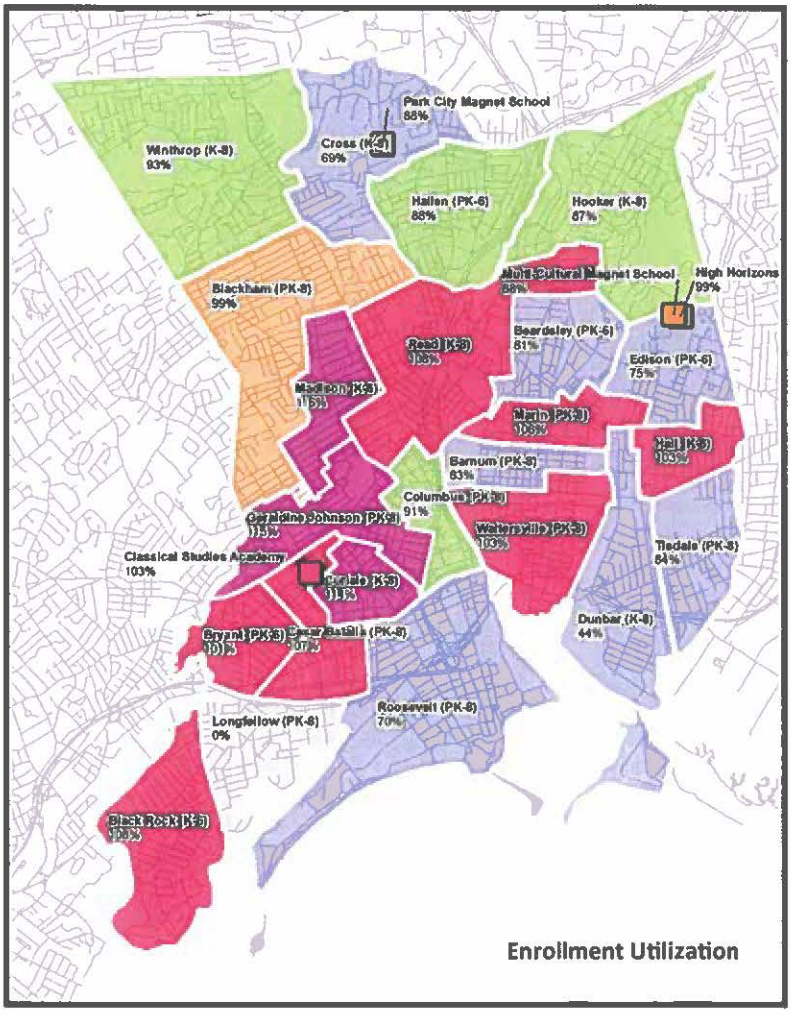
Over Utilized Schools

Based on the recommended capacity or design capacity where applicable, the following table shows individual schools that are currently over 100% utilized as of the 2012-13 school year. Many of these schools will be relieved by new schools opening in the near future. Other schools will be discussed in the facility master planning process.

School	Utilization	Planned Remedy
Geraldine Johnson School	118%	Possible Redistricting when Longfellow and Roosevelt are Rebuilt
Central High School	117%	Opening of Fairchild-Wheeler Intra-district Magnet High School
Madison School	116%	None
James J. Curiale	114%	Possible Redistricting when Longfellow and Roosevelt are Rebuilt
Bassick High School	111%	Opening of Fairchild-Wheeler Intra-district Magnet High School
Read School	110%	None
Black Rock School	108%	Planned K-8 addition
Cesar Batalla School	108%	Possible Redistricting when Longfellow and Roosevelt are Rebuilt
Luis Munoz Mann School	108%	None
Classical Studies	104%	Lease space for K-8 expansion
Hall School	103%	None
Waltersville	103%	None
Bryant School	101%	Possible Redistricting when Longfellow and Roosevelt are Rebuilt

PK-8 Utilization Map

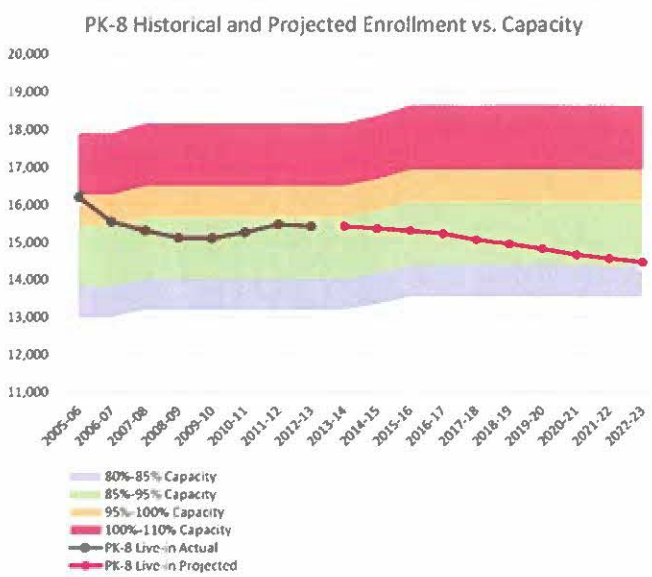
The following map illustrates the current utilization of the PK-8 facilities. Schools over 115% utilized are shown in magenta, 100%—115% in red, 95% - 100% in orange, 85% - 95% in green, and below 85% in blue. Please note that Longfellow is shown in grey because the students are currently being displaced among nearby schools while the new building is under construction. The Roosevelt students are currently in habiting the South End Swing Space.



Facility Utilization (Continued)

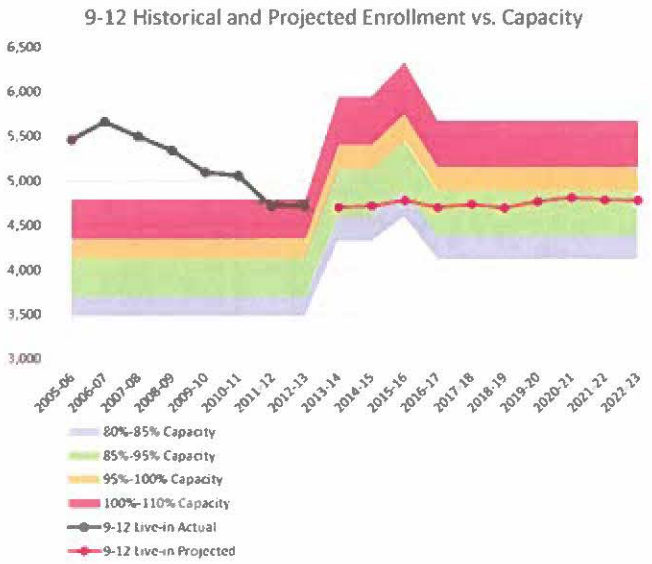
PK– 8 Districtwide Utilization

The chart to the right shows historical and projected enrollment for all of the PK-8 schools within the district. The varying shades of color represent utilization thresholds. During the past 8 years, the total PK-8 utilization has decreased from 100% down to 93% utilization. This is due to the overall decline in enrollment and the increase in capacity with the replacement of many of the oldest schools in the district in 2007-2008. When the Longfellow and Roosevelt replacements come online in 2015-2016 the capacity will increase again. The overall utilization is projected to decline to 85% by the 2022-23 school year.



9-12 Districtwide Utilization

The chart to the right shows historical and projected enrollment for all of the 9-12 schools within the district. The varying shades of color represent utilization thresholds. During the past 8 years, the total 9-12 utilization has decreased from 130% utilization down to 108% utilization. This is due to the overall decline in enrollment. The current over utilization is projected to be relieved by opening of the Fairchild-Wheeler Inter-district Magnet High School in the 2013-14 school year. This is projected to reduce the utilization to 87%. The overall 9-12 utilization is projected to be 93% during the 2022-23 school year which will be after the opening of the First Responders Academy and the new, smaller Harding High School.



Educational Adequacy

A critical component to functional equity across the broad spectrum of Bridgeport Public Schools facilities is educational adequacy. The Educational Adequacy Index [EAI] is used as a comparative indicator to identify the relative programmatic needs of a facility, group of buildings, or an entire portfolio. DeJONG-RICHTER assessed all of the PK-6 and PK-8 facilities that were built prior to 2005, that did not have any funded projects associated with them.

Not only used as a way to compare facilities, an educational adequacy assessment is imperative to determine how well an aging school will support the current curriculum. The assessment is valuable when campuses are faced with renovation versus replacement decisions. Decision makers must evaluate the cost trade-offs of using an educationally inferior facility for long term use.

An educational adequacy assessment evaluates how well a campus is equipped to deliver the current instructional curriculum. This assessment answers such questions as the following:

- Is the classroom the correct size?
- Are labs appropriately equipped?
- Does technology support the classroom activities?
- Are there adequate provisions for administration, guidance, and resource areas?
- Are the core spaces [cafeterias, gyms, library / media centers] present, of sufficient size, and appropriately equipped?
- Are the desired outdoor spaces present?
- Does the building include all of the spaces necessary to deliver the desired educational program?
- Does the facility have proper air handling?
- Is the facility compliant with current Americans with Disabilities Act [ADA] standards?

The biggest challenge in assessing educational adequacy is that programmatic needs change more rapidly than the facilities themselves do. For example, many facilities built before1960 do not have a separate music and art room. These programs were held in the student's home room as "art on a cart" or on the stage of the multi-purpose room. Special education programs were not delivered in the regular public schools and spaces have been retro-fitted with the proper restrooms, changing rooms, and specialty spaces required to serve that student population.

Methodology & Component Ratings

For the purposes of this study, each facility was evaluated in four different areas. The findings of this study are not intended as a scope of work, they are for the purposes of comparing and prioritizing the relative needs of the facilities. Ranking criteria used are detailed in the Educational Adequacy section of this report.

Existing Spaces Educational Adequacy – This measures how well each of the existing individual spaces compare to the educational specifications.

Missing Spaces Educational Adequacy – This lists the required spaces that are not present in each facility.

HVAC Index– This rates the quality of the heating and ventilation systems compared to the current standards.

ADA Index – This rates the level of compliance with current ADA standards.

The deficiencies in these four areas are combined to show the total deficiencies, which are then divided by the replacement cost of the building to yield the total Educational Adequacy Index [EAI].

Educational Adequacy (Continued)

Ratings

Based on the scores for each space, a dollar amount was applied to the various assessment areas. The table below shows the percentage of replacement cost allocated to each of the four assessment areas calculating the total Educational Adequacy Index [EAI].

School	Square Footage	Replacement Value	Existing Spaces	Missing Space	HVAC	ADA	Total [EAI]
Hall School	39,144	$ 19,572,000	9%	49%	14%	18%	91%
Anna Baum Skane Center	27,287	$ 13,643,500	12%	60%	11%	5%	88%
Edison School	51,263	$ 25,631,500	10%	43%	14%	18%	85%
Classical Studies Academy	39,835	$ 19,917,500	10%	41%	14%	5%	70%
Beardsley School	56,567	$ 28,283,500	17%	19%	14%	18%	68%
Bridgeport Learning Center	43,357	$ 21,678,500	11%	16%	11%	18%	56%
Park City Magnet	54,099	$ 27,049,500	15%	9%	11%	18%	53%
Bryant School	50,000	$ 25,000,000	8%	27%	11%	0%	46%
John Winthrop School	89,508	$ 44,754,000	12%	8%	11%	14%	45%
Hallen School	47,998	$ 23,999,000	13%	21%	8%	2%	43%
High Horizons Magnet	43,711	$ 21,855,500	15%	15%	0%	5%	40%
Thomas Hooker School	62,172	$ 31,086,000	12%	11%	10%	4%	36%
Blackham School	132,596	$ 66,298,000	14%	3%	11%	7%	35%
Madison School	60,694	$ 30,347,000	11%	15%	8%	0%	34%
Multi-Cultural Magnet	109,479	$ 54,739,500	21%	4%	0%	5%	31%
Luis Munoz Marin Marin School	104,100	$ 52,050,000	11%	12%	6%	2%	31%
James J. Curiale School	76,531	$ 38,265,500	11%	11%	1%	4%	28%
Read School	83,405	$ 41,702,500	11%	6%	8%	2%	27%
Paul Laurence Dunbar School	70,344	$ 35,172,000	10%	12%	0%	4%	25%
Wilbur Cross School	66,415	$ 33,207,500	8%	7%	8%	0%	23%

General Findings

- Hall, Edison, and Beardsley schools were assessed as having the some of the greatest need in the district. This is mostly due to the fact that they have not had any significant recent renovations. They lack elevators and in some cases the only bathrooms are located in the basement of the building. Some of these school are also missing large spaces such as media centers and dedicated gymnasiums. Careful consideration should be taken regarding the actions of these facility since any minor upgrades or renovations may trigger major required code compliance updates.

- The Anna Baum Skane Center along with Bridgeport Learning Center were assessed to an industry standard model since the district does not have educational specifications for those programs. Due to the special nature of the programs, the facilities do not suit the programs well since they were not designed with them in mind.

- Air conditioning systems were lacking in most facilities. Careful consideration must be taken to ensure that the electrical and roofing systems can accommodate those kinds of upgrades if they are recommended in future planning actions.

- Wilbur Cross school received the highest rating. This is due to the very recent renovation to the facility.

- Paul Lawrence Dunbar also received a high rating. This is due to the fact that it is fully air conditioned and the relatively new construction of the building.

Conclusion

Bridgeport Public Schools has made great progress in replacing or upgrading its aging facilities over the past 10 years. There are only 14 facilities in which their previous recommendation has not been implemented for planned.

It is the recommendation of DeJONG-RICHTER that BPS begin Phase III of the master planning process using a community engagement process to address the needs of the remaining facilities and to also come up with some recommendations to balance utilization among all the schools in the district.

School	Year Built	Last Renovation	2003 FMP Recommended Action (Phase I)	2008 Result / FMP Update Recommended Action (Phase II)	2013 Status
Blackham	1964	1989	Moderate Renovation	Moderate Renovation	Unchanged
James Curiale	1984	1996	Moderate Renovation	Moderate Renovation	Unchanged
Park City Magnet	1959	-	Relocate Program to Skane; Reuse as a High School	Major Renovation / Replace on Skane Site	Unchanged
Read	1968	1999	General Maintenance	Moderate Renovation	Unchanged
Sheridan (BLC)	1895	1980	Repurpose as District program	Major Renovation	Unchanged
Skane Center	1952	1996	Moderate Renovation / Addition	Major Renovation / Replace on Park City Site	Unchanged
Winthrop School	1955	1997	Moderate Renovation / Addition	Moderate Renovation	Unchanged
Beardsley	1904	1985	New Building / Expand on site	New Building / New Site	Unchanged
Dunbar	1984	-	Minor Renovation	Moderate Renovation	Unchanged
Edison	1935	1999	Redistrict / New Building / New Site	Redistrict / New Building / New Site	Unchanged
Hall	1914	1939	Redistrict / New Building / New Site	Redistrict / New Building / New Site	Unchanged
High Horizon	1969	1992	Moderate Renovation / Addition	Moderate Renovation	Unchanged
Multi-Cultural	1969	1993	Moderate Renovation / Addition	Moderate Renovation	Unchanged
Bassick High School	1929	1967	New Building / New Site	New Building / New Site	Unchanged