

SMMA

10 Year Facility Master Plan  
3 School Pilot Study for:

## *Boston Public Schools*

Boston, Massachusetts

11.09.2015







# *10 Year Facility Master Plan 3 School Pilot Study*

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# *Facility Master Plan Pilot Study Prepared for:*

City of Boston—Martin J. Walsh, Mayor

Boston Public Schools—Dr. Tommy Chang,  
Superintendent

**Prepared by:**

SMMA | Symmes Maini & McKee Associates  
1000 Massachusetts Avenue  
Cambridge, MA 02138

Mass Insight Education  
18 Tremont Street, Suite 1010  
Boston, MA 02108

MGT of America, Inc.  
3800 Esplanade Way, Suite 210  
Tallahassee, FL 32311

New Vista Design for Learning  
32 Sheridan Street, Suite 2  
Jamica Plain, MA 02130

WSP Group/Parsons Brinckerhoff  
One Penn Plaza, 2nd floor, 250 W 34th Street  
New York, NY 10119

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# Boston Public Schools SY2016 Organizational Chart (TBD)



# *Henderson Lower School Report*

## **1 Planning Considerations**

*Summary*

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*Wallace Floyd 1993 Report*

*MSBA 2010 Needs Survey*





# Planning Considerations

## Summary

### Context & Research

### Floor Plans

### Site

## Summary

The Henderson Lower School (Grades Pre-K to 4) is an all inclusion model serving the entire BPS district and is housed in a small post WWII (1957) single story brick building formerly known as the O'Hearn School on busy Dorchester Avenue in South Dorchester. The building is organized around a large protected internal courtyard that provides a welcoming outdoor learning environment due to the low one story scale of the building which allows for ample daylight. The building occupies its entire site perimeter with "zero lot line" exposure making expansion and or growth nearly impossible. The school is organized as a simple single loaded classroom corridor which brings in ample and high quality daylight throughout (unlike traditional double loaded corridor designs), the corridors are generally too narrow to allow for creating breakout spaces and gathering and teaching environments outside of the traditional classroom. The building area is generally undersized for the types of inclusionary programming and variety of student programs at the Henderson and its current physical state should be strongly be considered for closure or relocation due to the site and building inefficiencies. Consideration should be given if the building or site can serve alternative purposes for BPS and if the neighborhood is best served by the Henderson school seeking alternative sites nearby.

Future considerations and opportunities should include:

- Review feeder pattern and desirability and traffic/transportation concerns.
- Review if the building is worth saving – determine alternative school use (EEC or other).
- Review if site can support taller building with more area – consider site constraints when adding to building.

## At a Glance: Henderson Lower School

1669 Dorchester Avenue  
Dorchester, MA 02122  
Phone: 617.635.8725  
<http://www.bostonpublicschools.orgorg/>

**DOE Code:** 0035  
**BPS Code:** 0266

Building Educational (BEA)	Building Physical (FCA)
Building Operational	Community

Tax & Values as of 2015					
Tax Parcel ID 1601228000	Tax P Type 976	Tax Land Usage E	Tax Bld Value \$3,769,800	Tax Land Value \$2,563,100	Tax Total Value \$6,332,900
Tax Gross Area \$36,380	Tax LV SF \$59,340	Tax Living Area \$31,568	Compliance Trigger \$1,130,940		

MSBA School Data					
Year Built 1957	Year Founded 2014	Renovations	Additions		

### Historic District: None

Historic Building Designation: None  
Original Bldg. Name: O'Hearn Elementary School  
Site Acreage: 1.39  
Parking: No

Outdoor Learning Space: Yes

Building Gross Floor Area: 25,137+/-

School Gross Floor Area: 33,770+/-

Building Net Assignable Area: 22,000+/-

Ratio: 1.34

Site Expansion: Requires purchase of adjacent parcels

### Climate Preparedness






Flood Zone: No  
Shelter: No  
Resiliency: No  
Redundancy: No  
Energy Efficiency: Poor

Recommendation: No

Source: SMMA

Approximated using available data

Schools Housed			Community Uses	
	Population	Ed Plan	Connection w/School Programs	
Dr. William Henderson Lower	228	No	Boston Public Library:	No
Total	228		Community Center (Pool):	No
			Community Resource Room:	No

Documentation						
Plans:	Site: Yes	Architecture: Yes	Engineering: Yes			
Past Reports:	Wallace Floyd 1993			Excellent	Good	Fair
BeSafe Plans:	No					
MSBA 2010 Needs Survey:	Yes				Poor	Failing



## DOE Student Data

<b>FY2015 Total Enrollment:</b> 226	<b>Student Demographics</b>
<b>Enrolled by Grade</b>	25.7% African American
PreK: 33	23.9% Hispanic
K: 46	42% White
1st: 26	7.1% Asian
2nd: 49	1.3% Other/Multi-racial
3rd: 49	0% Native American
4th: 23	53.5% of students are low income
<b>Gender</b>	
114 Male	
112 Female	

<b>Out of School Suspension Rate:</b>	N/A
<b>In School Suspension Rate:</b>	0.0%
<b>Graduation Rate:</b>	N/A
<b>Absentee Students:</b>	6.6%
<b>Annual Dropout Rate:</b>	N/A
<b>2012 Graduates Attending Higher Ed.:</b>	N/A
<b>SAT Scores:</b>	N/A
<b>2013 Mass Core:</b>	No data reported

## DOE Teacher Data

<b>Number of Teachers:</b>	18.5
<b>Student/Teacher Ratio:</b>	13.1% to 1
<b>Teachers Licensed in Teaching Assignment:</b>	94.6%
<b>Number of Classes in Core Academic Areas:</b>	75
<b>Core Academic Classes Taught by Highly Qualified Teachers:</b>	88%

## BPS 2014 Vision Accommodations (current inclusion)

Pre-K	Inclusion	STEM	Technology	21st Century	FF&E
Yes	Full	No	Poor	No	No

## Contact

<b>School Hours</b>
8:30 am - 2:30 pm
Early Dismissal: 12:30 pm
<b>Grades:</b> Pre-K-4
<b>Level:</b> ____
<b>School Type:</b> Inclusion

## MSBA School Data

<b>MSBA GSF</b> 29,357	<b>MSBA SF/Student</b> 137
<b>MSBA Space Utilization</b> Average	<b>MSBA Students/Classroom</b> 19
<b>MSBA Enrollment</b> 228	<b>Building Conditions</b> 1 (1-4, 1 highest)
<b>Building Enrollment</b> __ (1-4, 1 highest)	<b>Classrooms</b> 11
<b>Floors</b> 1	<b>Structural Class</b> B

# Henderson Lower School: At A Glance

One of the more critical challenges facing the BPS leadership is developing consensus on how to evaluate the 128 schools in 133 building's in the public school system. How to select, evaluate, and "weight" the criteria most pertinent to alignment of each building's physical characteristics with its current and/or potential educational program for validating need for a new structure, renovations and additions or consolidation/closure.

For the pilot schools' discussion we have categorized criteria into four elements useful when considering masterplan options:

- Building: Educational Facility Assessment
- Building: Physical Facility Assessment
- Building: Operational Assessment
- Community

## Potential criteria in each category:

### 1. Building: Facility Educational Adequacy Assessment (FEA)

Dr. Chang's educational plan (currently in development during the 100 day plan) will ultimately align with or supersede the five goals of the School Committee's 2014 Strategic Vision Plan and will be the primary physical measure for BPS's facilities. Another tool we have employed is the basic Space Summary of the MSBA, the space summary is a good starting point with solid, well tested space allowances, most existing buildings will fall outside of the standards particularly for SPED, ELL and evolving technology programs. Understanding the rapidly evolving educational landscape will require a critical eye to ascertain if a school's physical attributes can be transformed for 21st Century Educational needs – whatever grade structure or school typology is envisioned. It is also important to measure each school with an understanding of the MSBA criteria relative to potential funding approval.

#### *Potential Criteria:*

- BPS Visioning and program goals
- MSBA Summary of Spaces
- Oversubscribed or under-subscribed facility
- Site availability for future growth
- BASYS report

### 2. Building: Physical Assessment (FCA)

The sheer scale of the BPS school inventory and the limited budget for physical analysis will require a "triage" approach to physically assessing the various facilities. By using the initial Educational Facility Assessments (FEA) as a primary filter during the master plan options and scenarios phase of a more nuanced or targeted strategy for understanding the scope of the FCA work can be developed for implementation in the summer of 2015.

#### *Potential Criteria:*

- Simplified Due Diligence Engineering Reports
- Security Systems complete and in place
- FCA Reports

3. Building: Operational Assessment

During recent conversations the cost of operations for various schools within the system have been discussed – although not directly a part of the 10 Year FMP this issue is acknowledged to be a critical factor for BPS to determine a plan direction for sustainability BPS into the future.

*The following criteria can be generated using the FMP data:*

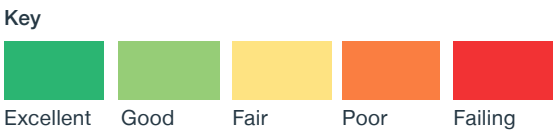
- Cost per student (cost to maintain the building and run the school)
- Cost per Square footage
- Cost analysis of school typology (Grade structure and program)
- Energy consumption

4. Community

Schools play an important physical and social roles in the communities and neighborhoods they serve, perhaps one of the intense topics of conversation with community engagement process will be how schools are valued at the grass roots level.

*Potential Criteria:*

- Demographic data
- Choice popularity
- Forced assignment
- Neighborhood “impact”
- Pathways and feeder patterns
- Access to community resources (City as a School)
- Climate readiness
- Open Space Utilization



Educational Performance of the School

For the Pilot study the DOE rating has been taken into account, as no school should be judged solely by its test scores BPS Leadership will provide additional criteria for consideration. BPS is in the process of refining this process through the SQI

*Potential Criteria:*

- DESE rating(s)
- Year over year changes
- Choice popularity
- Feeder school patterns
- Type of program





## Summary

## Context &amp; Research

## Floor Plans

## Site

## Educational Planning Summary

**Boston Public Schools 10 Year Facility Master Plan: Educational Vision Plan for Special Schools and Inclusion Models**

Superintendent Dr. Tommy Chang and his leadership team will be reviewing educational programs and pedagogy for the elementary and inclusion model school curriculum relative to the school committee's 2014 vision statement.

For the Pilot Study the MSBA's space metrics for elementary schools have been used to "evaluate" the Henderson Lower School's spaces as a school and determine its capacity. Note that additional Special Education (SPED), English Language Learners (ELL), and 21<sup>st</sup> Century space initiatives will have an impact in further space utilization analysis, particularly for a full inclusion model serving the Henderson's varied population.

*Grade Configurations*

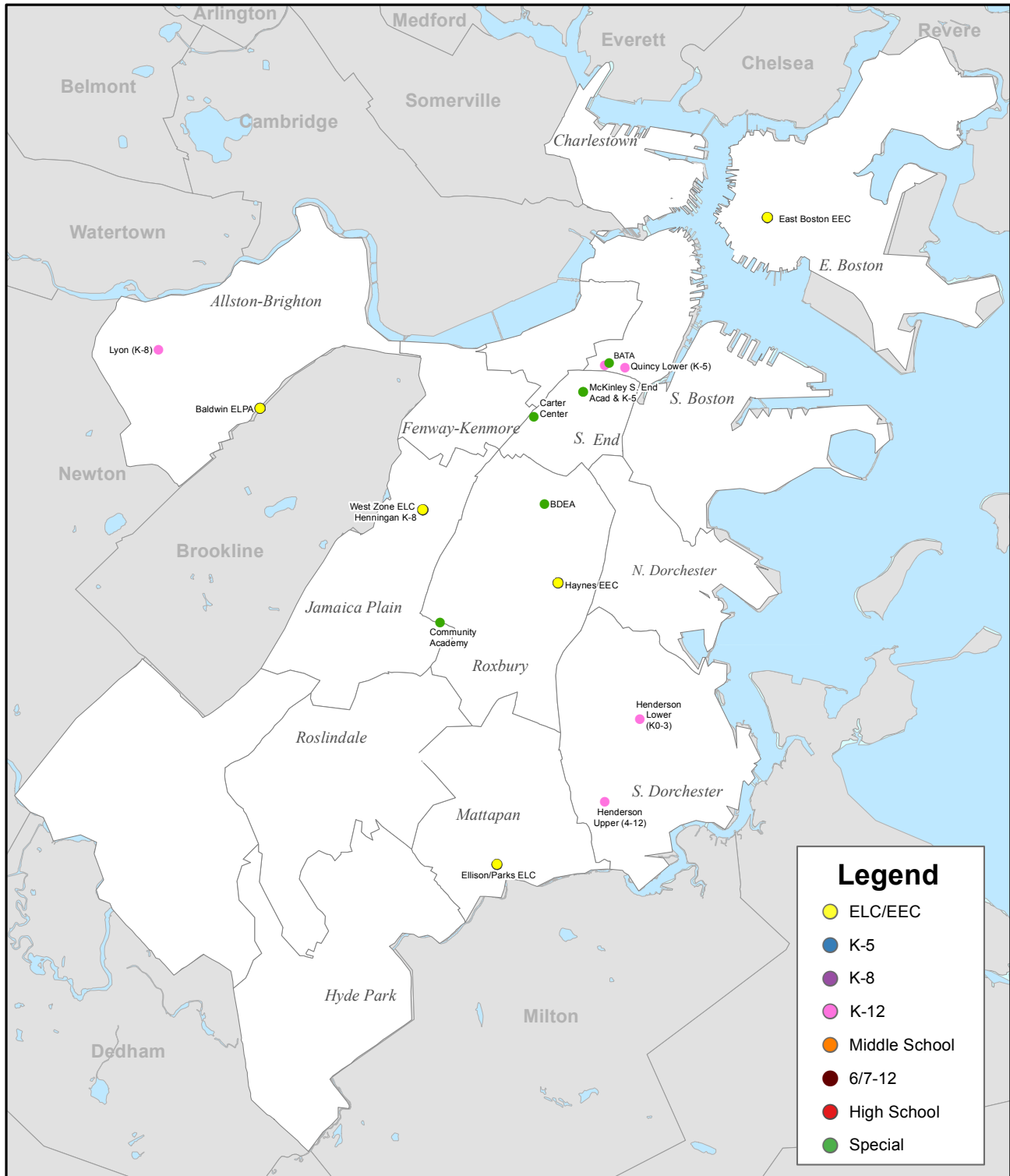
The Henderson's school's special status as a full inclusion model serving its populations from grades Pre-K through 12th grade in two separate buildings both located in Dorchester. BPS should evaluate the current grade configuration and confirm that this program is well served by the spaces available.

<b>Visioning and Issues for BPS</b> 19 Total Configurations	Grade Configuration	Number Of Schools	Grade Configuration	Number Of Schools
	K0-1	5	6-8	12 (11) *
	K0-4	1	6-9	1
	<b>K0-12</b>	<b>1</b>	6-12	3 (4) *
	K-1	3	7-12	3
	K-5	49	9-10	1
	K-6	1	9-11	1
	K-8	17	9-12	17
	2-8	1	10-12	1
	3-8	1	12+	2
	5-12	1	<b>Total</b>	<b>121</b>

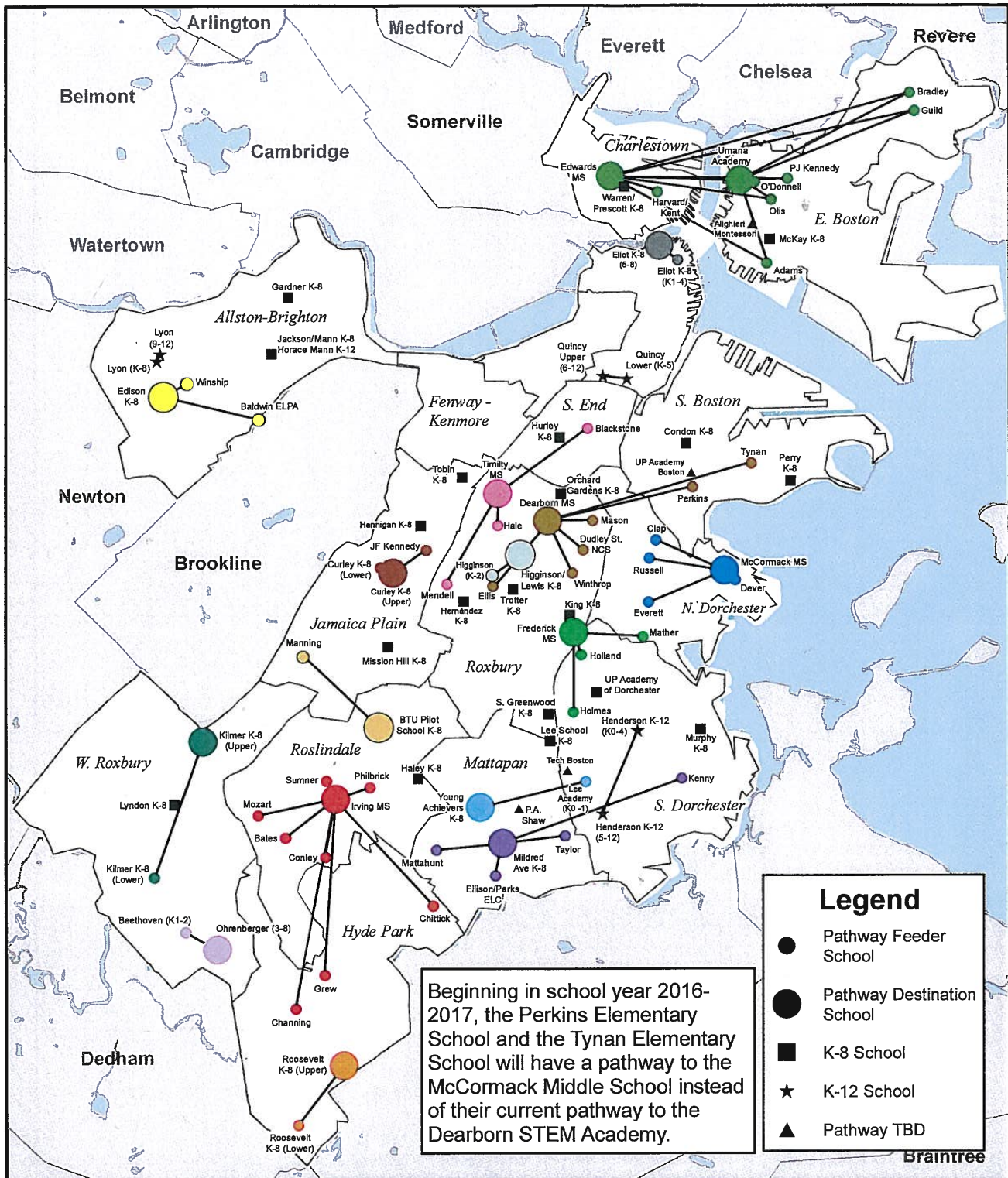
\*Dearborn will expand to High School grade levels SY2016.

☐ Includes Henderson Upper and Lower School in two buildings

## BPS K-12 Schools and Special Schools



# BPS Middle School Gen-Ed Pathways



## Typology and Relevancy K-4 School Performance Analysis



No Data Available

\*2013 School Profiles Massachusetts Department of Elementary and Secondary Education \* 2014 Accountability Report  
 \*\*September 2014 SchoolDigger.com Rankings; Data Source: National Center for Education Statistics, U.S. Dept of Education and MA Dept. of Education

### Network A (K-8)

**Network Supt:** Drew Echelson

**DNA:** Catarina daSilva

**DES:**

**OL:** Monique Carter, 617.635.6516

**SA:** Jenelle Lawson, 617.635.6073

Ellison/Parks Early Ed. School

Greenwood, E. Leadership Academy

Greenwood, Sarah K-8

Henderson Inclusion, K-12 ✱

Hernandez K-8

Kenny Elementary

Lee Academy at the FiField ◆

Lee K-8

Mather Elementary

Mildred Avenue

Murphy K-8

Shaw Elementary

Taylor Elementary

Young Achievers K-8 ◆

#### EDUCATIONAL OPTIONS

**Executive Director:**

SA: Jenelle Lawson

*Programs not located in BPS Buildings:*

ABCD University High School

College Bound Middle School

Dorchester Youth Alternative

EDCO Youth Alternative

Ostiguy High School

St. Mary's Alternative School

DNA Director of Network Academies

DES Director of Educational Services  
(Network G)

OL Operational Leader

SA Staff Assistant

► Exam School (3)

✧ Horace Mann (in-district)  
Charter School (6)

✱ Innovation School (8)

◆ Pilot School (20)

IB International Baccalaureate  
Program (2)

Option Summary: Henderson Lower School

Henderson Lower School  
(O’Hearn building)

188/226 (117%)  
Pre-K-4

Building Assessment

Building Educational (BEA)	Building Physical (FCA)
Building Operational	Community

Sciences, STEM, ELL, SPED

Repairs: \$  
Renovate for Program: \$  
Additions/Renovations: \$  
Full Replacement: \$

- School Name  
(Building if different)
- Design Capacity Enrollment
- Current Enrollment
- Utilization
- Grades or Sections
- Building Evaluation
- Renovations or Additions
- Program Modifications
- Cost Models

- Evaluation Criteria
- Program Support (FEA)
- BASYS Report
  - Deficiency Plans
  - Physical Conditions
  - FCA Report(s)
  - Due Diligence Report(s)
- Building Operations: (BPS)
- Energy (total)
  - Salary (per student)
  - Transportation
- Community:
- Location
  - Mass Historic Commission
  - Access
- Educational Performance:
- DESE Ratings
  - MCAS
  - BPS (SQWG)



Legend

Proposed Design Enrollment Capacity

Proposed # of Sections

Patrick Kennedy

210/319 (136%)

K-5

Building Usage Percentage

Current Building Enrollment

- Assumes SPED/Art/Music per Current MSBA Guidelines

No Major Renovations or System Upgrades

Code and System Upgrades Only

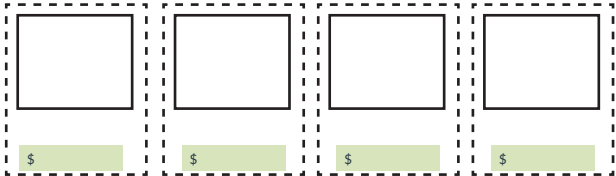
Major Building Renovation & System Upgrade

New Additions/Buildings

Existing Building to be Closed and/or Demolished

Varying Options for Pricing

K-4 Schools







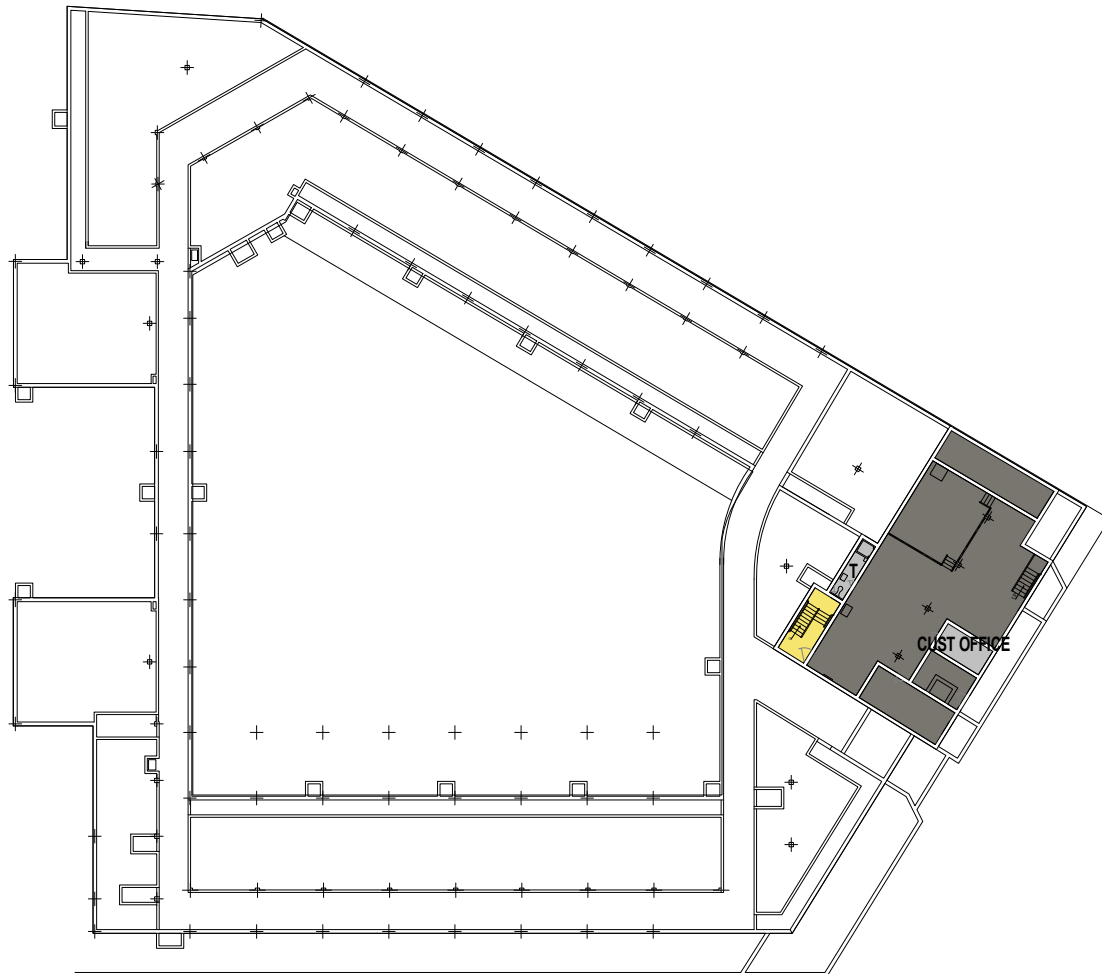
[Summary](#)[Context & Research](#)[Floor Plans](#)[Site](#)

## Floor Plans

Accurate floor plans can be a concise and clear way to describe a number of educational and physical attributes in a masterplanning process. For the pilot study we have added building plans to our study process for clarity and discussion purposes – PCMD and BPS facility staff and the facility assessment sub committee should review the long term potential for data visualization and storage.

- **Program Plans:** Illustrate the types of spaces currently in use by a given school program. This can be a quick visual tool to understand how well a program is fitting within its assigned building.
- **Deficiency Plans:** Illustrate where programs fall severely short (or greatly exceed) standards as established by the MSBA (eventually BPS vision “standards”). We have taken the plan analysis further to include adjacency or location inadequacies and spaces least likely supported by the MSBA grant program.

# Henderson Lower School Basement Program Plan

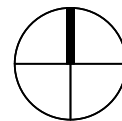


## PROGRAM PLAN LEGEND

- BUILDING EQUIPMENT
- CUSTODIAL / MAINTENANCE / STORAGE
- VERTICAL CIRCULATION

**Boston Public Schools**

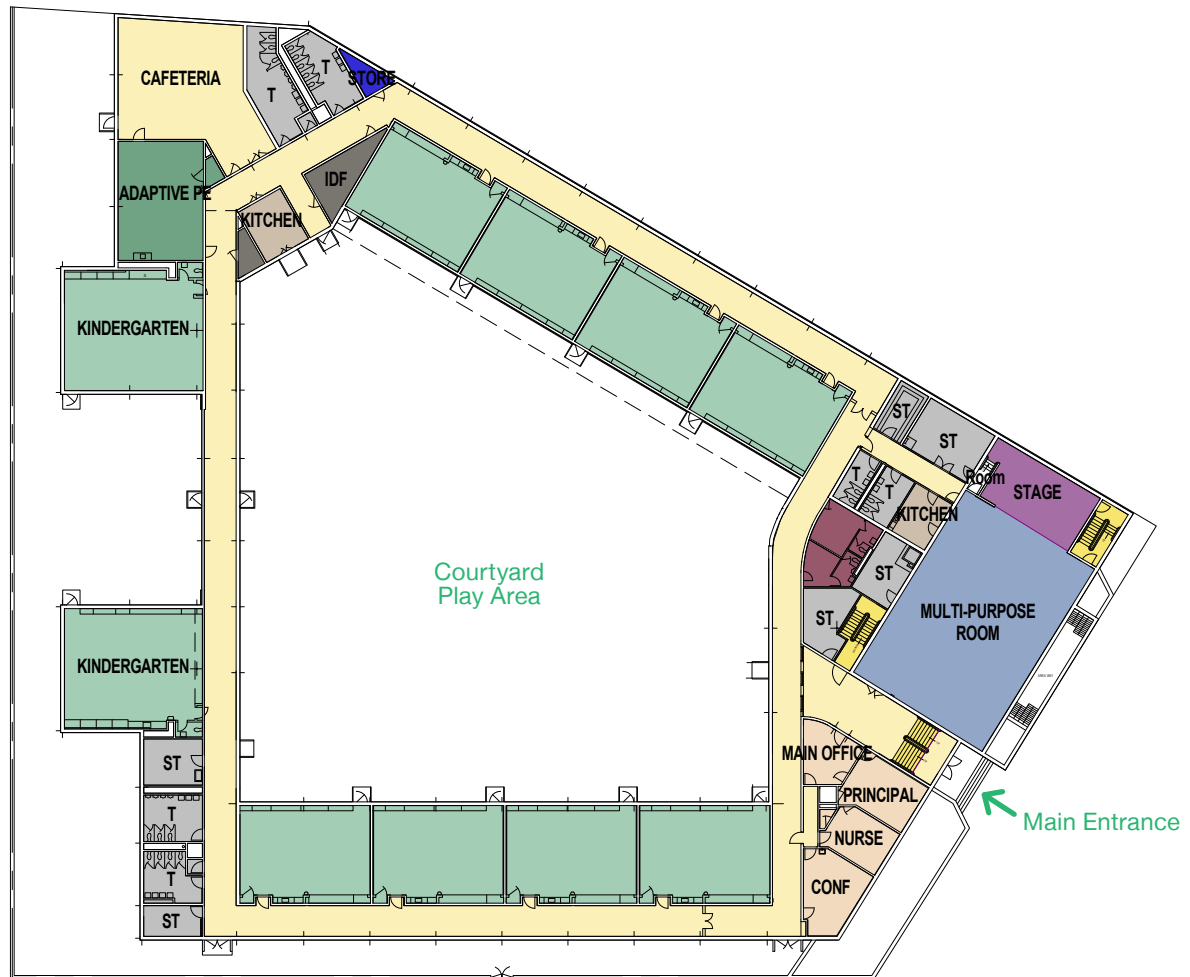
HENDERSON LOWER SCHOOL - BASEMENT PROGRAM PLAN





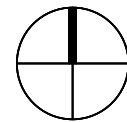
# Henderson Lower School

## First Floor Program Plan



### PROGRAM PLAN LEGEND

ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE	KITCHEN / SERVERY
AUDITORIUM / PERFORMING ARTS & DRAMA	OTHER
BUILDING EQUIPMENT	PHYSICAL EDUCATION & SPORT SUPPORT
CAFETERIA & CIRCULATION	SPECIAL EDUCATION
CLASSROOM & GENERAL EDUCATION SUPPORT	TEACHER PLANNING & SUPPORT
CUSTODIAL / MAINTENANCE / STORAGE	VERTICAL CIRCULATION



**Boston Public Schools**

HENDERSON LOWER SCHOOL - 1ST FLOOR PROGRAM PLAN



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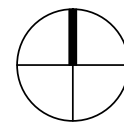
# Henderson Lower School

## First Floor MSBA Deficiency Plan



### MSBA DEFICIENCY PLAN

- INAPPROPRIATE LOCATION OR ADJACENCY
- NOT INCLUDED IN A TYPICAL MSBA PROJECT
- NSF 10% GREATER THAN MSBA GUIDELINES
- NSF AT LEAST 20% LESS THAN MSBA GUIDELINES
- NSF MEETS MSBA GUIDELINES (-20% TO +10%)



**Boston Public Schools**  
HENDERSON LOWER SCHOOL - 1ST FLOOR DEFICIENCY PLAN



# MSBA Space Summary Elementary Schools

<b>Henderson Lower - O'Hearn</b>		<b>Existing Conditions</b>	
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals
<b>CORE ACADEMIC SPACES</b>			<b>9,715</b>
<i>(List classrooms of different sizes separately)</i>			
Pre-Kindergarten w/ toilet		0	0
Kindergarten w/ toilet		2	2420
General Classrooms - Grade 1-6		8	7295
<b>SPECIAL EDUCATION</b>			<b>765</b>
<i>(List rooms of different sizes separately)</i>			
Self-Contained SPED		1	765
Self-Contained SPED - toilet		0	0
Resource Room		0	0
Small Group Room / Reading		0	0
<b>ART &amp; MUSIC</b>			<b>0</b>
Art Classroom - 25 seats		0	0
Art Workroom w/ Storage & kiln		0	0
Music Classroom / Large Group - 25-50 seats		0	0
Music Practice / Ensemble		0	0
<b>HEALTH &amp; PHYSICAL EDUCATION</b>			<b>0</b>
Gymnasium		0	0
Gym Storeroom		0	0
Health Instructor's Office w/ Shower & Toilet		0	0
<b>MEDIA CENTER</b>			<b>0</b>
Media Center / Reading Room		0	0
<b>DINING &amp; FOOD SERVICE</b>			<b>2,000</b>
Cafeteria / Dining		1	1224
Stage		1	482
Chair / Table / Equipment Storage		1	294
Kitchen		0	0
Staff Lunch Room		0	0
<b>MEDICAL</b>			<b>246</b>
Medical Suite Toilet		0	0
Nurses' Office / Waiting Room		1	246
Examination Room / Resting		0	0
<b>ADMINISTRATION &amp; GUIDANCE</b>			<b>1,132</b>
General Office / Waiting Room / Toilet		1	207
Teachers' Mail and Time Room		0	0
Duplicating Room		0	0
Records Room		0	0
Principal's Office w/ Conference Area		1	294
Principal's Secretary / Waiting		0	0
Assistant Principal's Office		0	0
Supervisory / Spare Office		0	0
Conference Room		1	315
Guidance Office		0	0
Guidance Storeroom		0	0
Teachers' Work Room		2	316
<b>CUSTODIAL &amp; MAINTENANCE</b>			<b>962</b>
Custodian's Office		1	105
Custodian's Workshop		0	0
Custodian's Storage		0	0
Recycling Room / Trash		0	0
Receiving and General Supply		0	0
Storeroom		5	857
Network / Telecom Room		0	0
<b>OTHER</b>			<b>10,317</b>
School Store, Circulation, Toilet Rooms, and Building Equipment		13	10317
<b>Total Building Net Floor Area (NFA)</b>			<b>25,137</b>
Proposed Student Capacity / Enrollment			
<b>Total Building Gross Floor Area (GFA)<sup>2</sup></b>			<b>32,770</b>
<b>Grossing factor (GFA/NFA)</b>			<b>1.30</b>

<b>MSBA Guidelines</b> (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
	<b>10</b>	<b>10,000</b>	
1,200		-	1,100 SF min - 1,300 SF max
1,200	2	2,400	1,100 SF min - 1,300 SF max
950	8	7,600	900 SF min - 1,000 SF max
		<b>3,020</b>	
950	2	1,900	8% of pop. in self-contained SPED
60	2	120	
500	1	500	1/2 size Genl. Clrm.
500	1	500	1/2 size Genl. Clrm.
		<b>2,500</b>	
1,000	1	1,000	assumed schedule 2 times / week / student
150	1	150	
1,200	1	1,200	assumed schedule 2 times / week / student
75	2	150	
		<b>6,300</b>	
6,000	1	6,000	6000 SF Min. Size
150	1	150	
150	1	150	
		<b>2,020</b>	
2,020	1	2,020	
		<b>4,695</b>	
1,695	1	1,695	2 seatings - 15SF per seat
1,000	1	1,000	
200	1	200	
1,600	1	1,600	1600 SF for first 300 + 1 SF/student Add'l
200	1	200	20 SF/Occupant
		<b>410</b>	
60	1	60	
250	1	250	
100	1	100	
		<b>2,015</b>	
300	1	300	
100	1	100	
150	1	150	
110	1	110	
375	1	375	
125	1	125	
120	0	-	
120	1	120	
250	1	250	
150	1	150	
35	1	35	
300	1	300	
		<b>1,900</b>	
150	1	150	
375	1	375	
375	1	375	
400	1	400	
200	1	200	
200	1	200	
200	1	200	
		<b>0</b>	
		<b>32,860</b>	
		<b>226</b>	
		<b>40,680</b>	
		<b>1.24</b>	

Schools with specialized populations are considered on a case by case basis by the MSBA



[Summary](#)[Context & Research](#)[Floor Plans](#)[Site](#)

## Site

### The Neighborhood

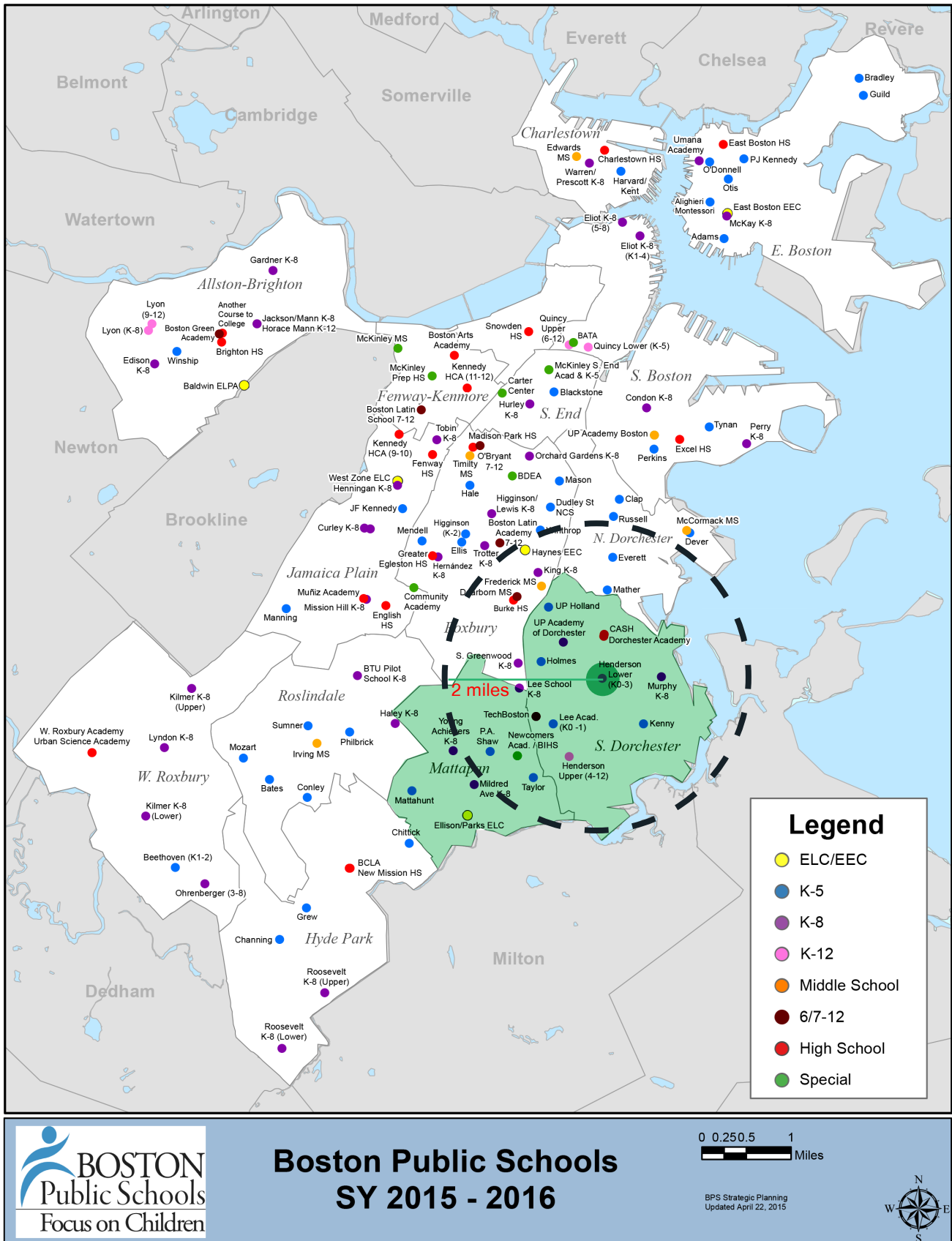
Boston prides itself on being a city of distinct neighborhoods, walkable due to its short blocks and dense urban fabric. Ease of access to urban schools like the Henderson, and the quality of the streets, sidewalks, bike-routes and vitality of the businesses surrounding an urban school site give confidence to parents and students investing in their students' future. By mapping local businesses, BPS can continue to grow its initiatives to recognize that the city is the school and foster relationships and partnerships with businesses, organizations, colleges and universities and provide students with mentoring and coop experience that benefit all partners involved while instilling confidence and civic pride in our students.

As a full inclusion school the Henderson Lower School services students from across the district and is not a "neighborhood" school in the traditional sense.

Located on busy Dorchester Avenue the original O'Hearn School fills its lot creating a sheltered inner courtyard as outdoor play/learning space - not accessible to the neighborhood.

South Dorchester, Mattapan and Roxbury currently have five K-5 elementary schools and six K-8 schools.

## Locus Plan





## Site Aerial

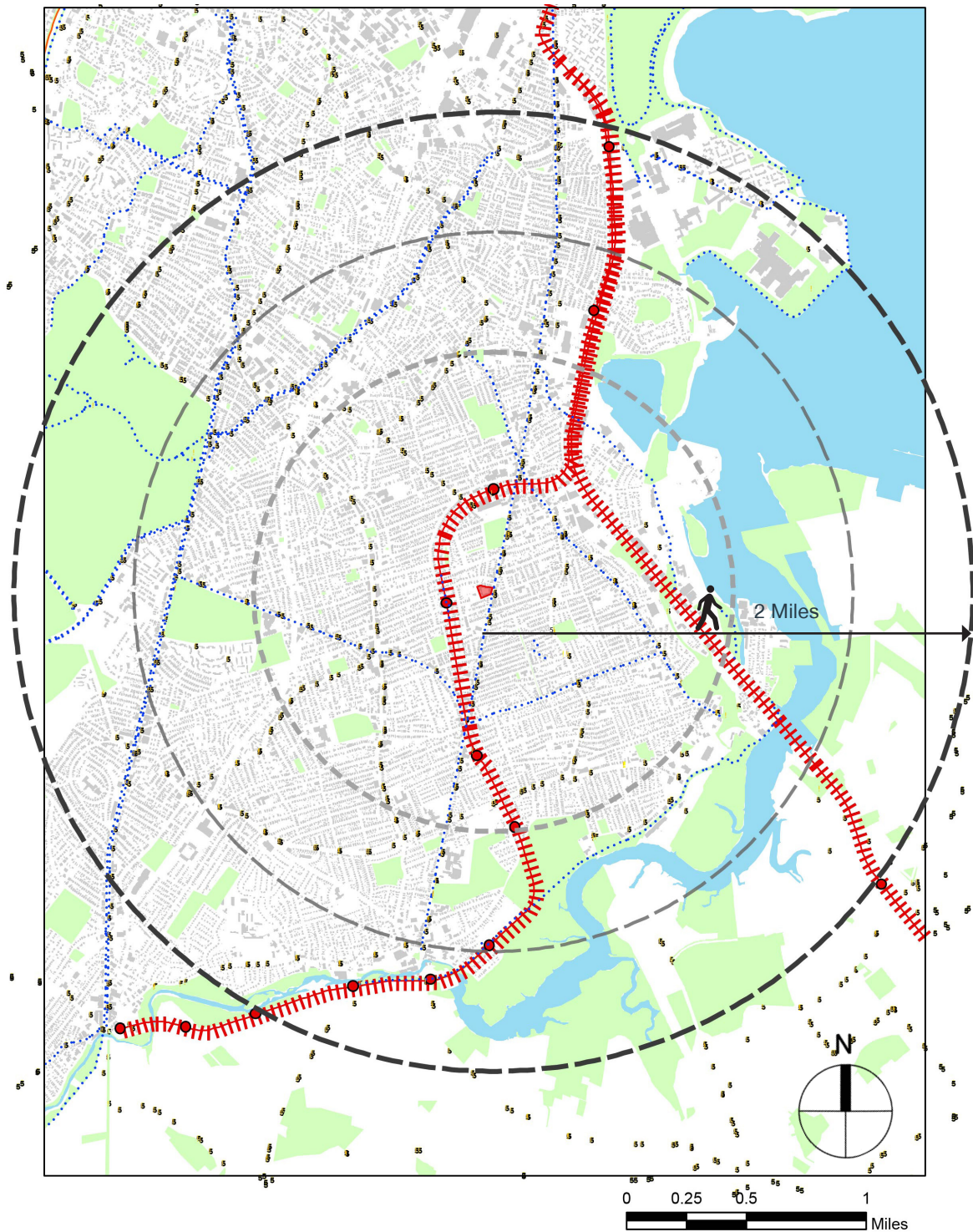


Site Area 1.39 Acres





## Site Plan



### Busing Policy Key

- >2mi High School T-Pass
- >1 ½ mi 6<sup>th</sup> Grade & Below
- >K-8 up to 8th Grade
- >1mi Grades K-5

### Transportation

- T Stops
- Bus Routes
- Bike Routes



## Climate Preparedness

School Buildings are often the largest facilities in a neighborhood or particular community and usually include large gathering spaces such as gymnasiums and cafeterias, and typically have cooking facilities. Schools serve well as emergency shelters when properly designed and equipped. Emergency shelter designation requires minimum requirements to safely serve this purpose for Red Cross or FEMA designation.

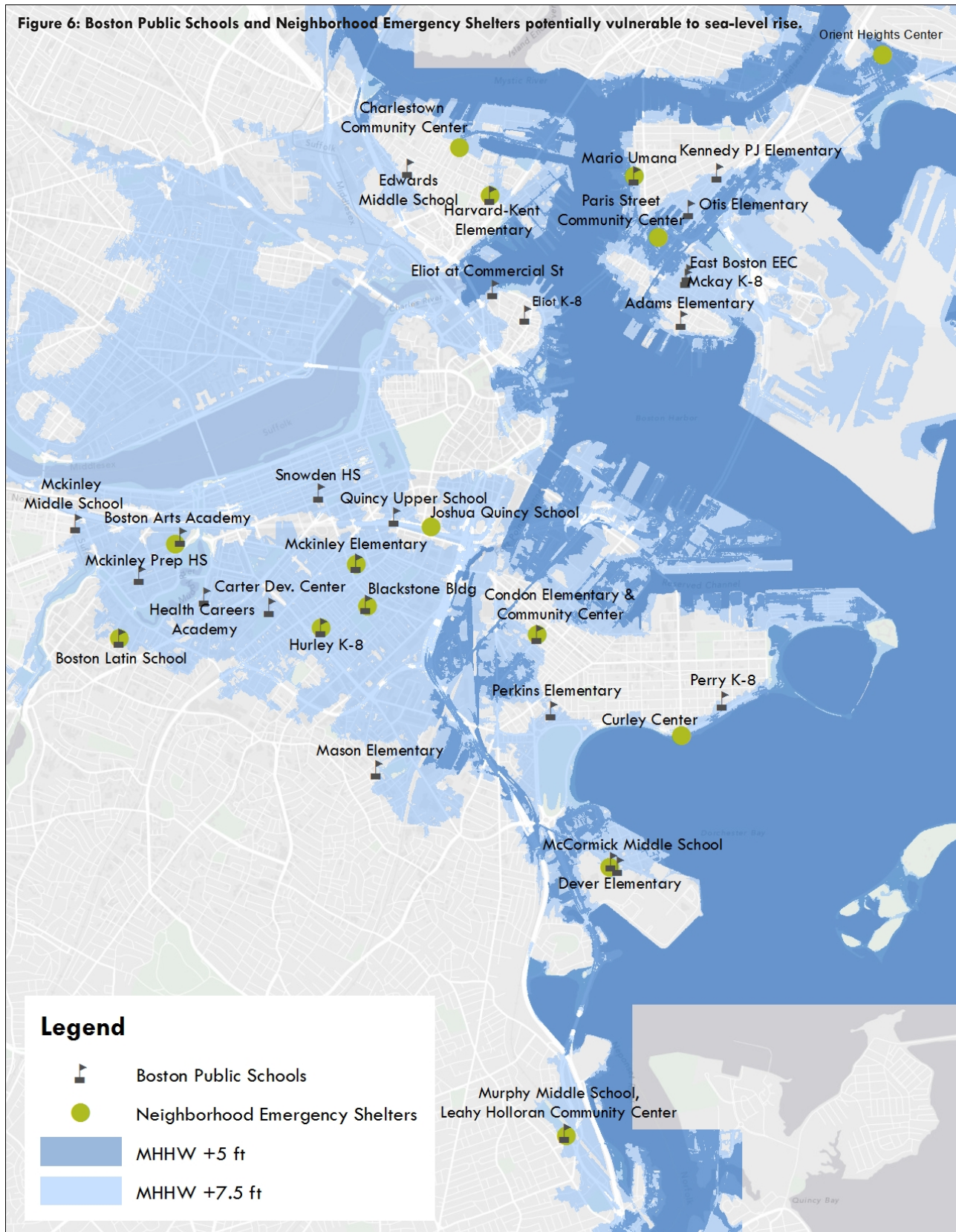
The Henderson Lower School falls outside of the zones within the City of Boston considered vulnerable to sea-level rise. The building and site is smaller and of an older vintage requiring substantial renovations and system upgrades to serve as a potential local emergency resource center.

Boston's sea coast location makes much of the City vulnerable and places additional pressure on facilities like the Henderson where evacuees may be housed during an extreme weather event, particularly if they are unable to reach the City's current designated emergency shelter the Boston Convention Center.

Considerations:

- Confirm roof structural capacity for PV installations and local energy to support neighborhood use as a cooling center and/or blizzard center.
- Increased emergency generator capacity.

## Flood and Climate/Change Map



Source: *Climate Ready Boston: Municipal Vulnerability to Climate Change*

# Building Educational Assessments

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## Summary & Mission

### Dr. William Henderson K-12 Inclusion School Mission Statement

(Source: William Henderson K-12 Inclusion School Website)

The Dr. William Henderson K-12 Inclusion School is comprised of two buildings: the Lower School (Grades K0-3) occupying the former Patrick O'Hearn Elementary School in the Fields Corner neighborhood and the Upper School (Grades 4 - 12) occupying the former Wilson School in the Ashmont Neighborhood.

The Henderson is Boston's only fully inclusive K-12 school. Students involved in general education, students with disabilities, and students considered talented and gifted learn together and from each other.

All students are instructed at their individual learning levels using a variety of curriculum materials. Technology is integrated as a learning tool in all content areas. Support and enrichment are provided based on individual students' needs. Therapies are provided in classrooms to the extent possible.

What makes the Henderson school special:

- Inclusive school: Student of all abilities learn together.
- Two teachers in every classroom
- Center playground and outdoor classroom
- Sensory motor room
- Fully accessible building
- Full time visual art, movement and music teachers, with arts integration for every student three times per week
- Inclusive before and after school programs
- Rigorous curriculum
- Massachusetts Level 1 school: Highest level of student achievement and growth on MCAS in math and English language arts

### Henderson Lower School

Historically known as the O'Hearn Elementary School is listed on the BPS Inventory as opened 1972.

The school focuses on Personalized Learning for children. Individual support is provided with "push-in" services rather than "pull out" services. The two teachers plus one para-professional for each classroom is quite unique for a public school.

The one story school, focused around an exterior courtyard is showing its' age. Although well maintained, some elements of the school interfere with teaching and learning. Despite physical short comings, the school is a Level 1 school.

- The approximately 800 sf classrooms are about 10% undersized
- Other undersized spaces include (by current MSBA Guidelines): Kindergarten classrooms; administration; cafeteria; medical suite; library /Media Center; art classroom
- The building lacks a proper gymnasium. Instead, the auditorium doubles as a play room
- Classrooms are noisy due to: lack of adequate acoustical treatment; mechanical noise and single glazed windows allowing noise infiltration
- Is not fully handicapped accessible

The building occupies virtually the entire site. Building additions are not possible.

The building is of a construction type and configuration that could be comprehensively renovated to provide updated environments. The small size (capacity) of the school increases costs due to lack of economy of scale for both renovation costs and operating costs.

## Background

### Purpose

The purpose of this pilot study for Boston Public Schools was to test a methodology for future, district-wide assessments, to test an assessment tool and determine any needed adjustments, and to identify issues or concerns that need to be explored or considered prior to the FMP on-site assessments. Put another way the pilot study is done to ensure that current and future curricular/instructional outcomes are defined, to ensure the facility implications of the instructional needs are defined, and to ensure that the tools utilized by the consultant team accurately assess those facility implications.

The pilot assessments were conducted without having completed initial program discussions with the district. Therefore, the standards used for the pilot are those routinely found in districts across the country, but are not necessarily aligned to Boston. Program discussions with BPS staff will enable us to assess schools based on current or planned educational program plans and ensure that the facility assessments are aligned with the program goals for Boston. In order to meet these expectations, staff from BPS needs to be actively engaged in defining both current and future educational programs and the resulting facility implications. MGT consultants will analyze the data collected during the pilot study and utilize that information along with information gathered from interviews and discussions with district staff prior to developing the final assessment tools.

### Pilot Sites

Four schools were selected for the pilot study because they represented a cross section of schools throughout the district. These schools provided a variety of grade levels, grade level configurations, specialized, as well as regular, program offerings, buildings of different ages, and locations in different Boston neighborhoods.

- **Dr. William W. Henderson PK-12 Full Inclusion (Upper and Lower).** This school is housed on two school campuses that are near, but not connected, to each other. It supports students with disabilities and students identified as talented and gifted within this comprehensive curriculum that includes enriched arts experiences. The lower school serves students in grades K0-4. The upper school serves students in grades 5-12. Although the Henderson is considered one program, the two schools are very different. Therefore, for the purposes of this pilot, each campus was assessed as a separate school to highlight the different needs based on the two different sites.

### Methodology to Determine Educational Adequacy

MGT's BASYS® facility assessment software was used to assess each of the pilot schools. The purpose of the educational suitability assessment is to evaluate how well the facility supports the educational program that it houses. Each school receives one suitability score which applies to all the buildings at the facility. The educational suitability of each pilot school was assessed using the following categories:

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## Methodology & Approach

Environment	The overall environment of the schools with respect to creating a safe and positive learning environment.
Circulation	Pedestrian/vehicular circulation and the appropriateness of site facilities and signage.
Support Space	The existence of facilities and spaces to support the educational program being offered. These include general classrooms, special learning spaces (e.g. music rooms, libraries, science labs), and support spaces (e.g. administrative offices, counseling offices, reception areas, kitchens, health clinics).
Size	The adequacy of the size of the program spaces.
Location	The appropriateness of adjacencies (e.g., physical education space separated from quiet spaces).
Storage & Fixed Equipment	The appropriateness of utilities, fixed equipment, storage, and room surfaces (e.g. flooring, ceiling materials, and wall coverings).

Educational suitability is intended to assess how well the facility supports the educational program that it houses. Since this was a pilot study and the actual program specifications needed to create an Educational Suitability Assessment Guide for the Boston Public Schools has not yet been developed, MGT used national program specifications developed over many similar assessments. MGT staff walked each school with the building principal to review each space based on the program housed there and then scored the various components based on the program standards outlined in BASYS®.

The pilot assessments were conducted without having completed initial program discussions with the district. Therefore, the standards used for the pilot are those routinely found in districts across the country, but are not necessarily aligned to Boston. Program discussions with BPS staff will enable us to assess schools based on current or planned educational program plans and ensure that the facility assessments are aligned with the program goals for Boston. In order to meet these expectations, staff from BPS needs to be actively engaged in defining both current and future educational programs and the resulting facility implications. MGT consultants will analyze the data collected during the pilot study and utilize that information along with information gathered from interviews and discussions with district staff prior to developing the final assessment tools. Suitability scores can be interpreted as follows:



90%	Good: The facility is designed to provide for and support the educational program offered. It may have minor suitability issues but generally meets the needs of the educational program.
75-89	Fair: The facility has some problems meeting the needs of the educational program and may require some remodeling.
50-74	Poor: The facility has numerous problems meeting the needs of the educational program and needs significant remodeling or additions.
Below 50	Unsatisfactory: The facility is unsuitable in many areas of the educational program.

### Methodology to Determine Technology Readiness

MGT's BASYS® software was also used to assess the technology readiness of each of the pilot schools. The BASYS® technology readiness score measures the capability of the existing infrastructure to support information technology and associated equipment. It is not based on the number of computers or interactive boards.

Technology readiness scores can be interpreted as follows:

90%	Good: The facility has the infrastructure to support information technology.
75-89	Fair: The facility is lacking in some infrastructure.
50-74	Poor: The facility is lacking significant infrastructure to support information technology.
Below 50	Unsatisfactory: The facility has little or no infrastructure to support information technology.

MGT staff walked each building with the principal to assess the technology readiness of the school based on the program standards outlined in BASYS®.

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## Pilot Study Report

### Results of the Pilot Assessment

School	Educational Adequacy Score	Technology Readiness Score	Rating Category
Henderson Upper	71	55	Adequacy - Poor Technology - Poor
Henderson Lower	61	48	<b>Adequacy - Poor Technology - Unsatisfactory</b>
Umana	71	66	Adequacy - Poor Technology - Poor
Burke	75	92	Adequacy - Fair Technology - Fair

Based on the assessments of these four pilot schools, there is likely to be a significant need in regard to improving both educational adequacy and technology readiness in many schools in Boston. The wide range in technology readiness scores is not uncommon, as improved technology is often seen as a necessity when schools are renovated, as was the case with the Burke HS. The score of “Fair” regarding educational adequacy at Burke points out the need to identify the facility implications of the instructional program prior to implementing facility renovations. Although many components of the instructional spaces at Burke are excellent – like the new media center, some rooms are too small (e.g., science and art), some rooms lack adequate storage, and some areas lack adequate HVAC to make them comfortable (e.g., the new art room spaces at the old gym). There are no fume hoods or exhaust fans in science rooms.

When the detail scores for each of the pilot schools are examined (See attached Suitability Report for the detailed scoring report for the Burke school), a number of specific program areas consistently scored low. Included among those are the following:

- Art Spaces
- Music Spaces
- Cafeteria and Food Services
- Parking and Access
- Safety and Security Issues





## Suitability Report - Full

Project #: 7330	County: Boston	Site #: 1
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Lo
Grade Config: K0 - 3	Site Type:	Site Size: 0.00

Suitability	Rating	Score	Possible Score	Percent Score
<b>Suitability - ES</b>				
<b>Learning Environment</b>				
Learning Style Variety	Poor	2.50	5.00	50.00
Interior Environment	Poor	1.00	2.00	50.00
Exterior Environment	Good	1.20	1.50	80.00
<b>General Classrooms</b>				
Environment	Fair	3.19	4.90	65.00
Size	Excel	12.25	12.25	100.00
Location	Good	2.94	3.68	80.00
Storage/Fixed Equip	Fair	2.39	3.68	65.00
<b>Kindergarten</b>				
Environment	Good	0.33	0.42	80.00
Size	Excel	1.04	1.04	100.00
Location	Excel	0.31	0.31	100.00
Storage/Fixed Equip	Good	0.25	0.31	80.00
<b>ECE</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>Self-Contained Special Ed</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>Instructional Resource Rooms</b>				
Environment	Poor	0.36	0.72	50.00
Size	Fair	1.17	1.80	65.00
Location	Good	0.43	0.54	80.00
Storage/Fixed Equip	Poor	0.27	0.54	50.00
<b>Science</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>Music</b>				
Environment	Unsat	0.00	0.74	0.00

Project #: 7330	County: Boston	Site #: 1
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Lo
Grade Config: K0 - 3	Site Type:	Site Size: 0.00

Suitability	Rating	Score	Possible Score	Percent Score
Size	Unsat	0.00	1.85	0.00
Location	Unsat	0.00	0.56	0.00
Storage/Fixed Equip	Unsat	0.00	0.56	0.00
<b>Art</b>				
Environment	Unsat	0.00	0.47	0.00
Size	Unsat	0.00	1.17	0.00
Location	Unsat	0.00	0.35	0.00
Storage/Fixed Equip	Unsat	0.00	0.35	0.00
<b>Computer Labs</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>P.E.</b>				
Environment	Poor	0.96	1.92	50.00
Size	Good	3.84	4.80	80.00
Location	Good	1.15	1.44	80.00
Storage/Fixed Equip	Poor	0.72	1.44	50.00
<b>Performing Arts</b>				
Environment	Poor	0.30	0.60	50.00
Size	Good	1.21	1.51	80.00
Location	Good	0.36	0.45	80.00
Storage/Fixed Equip	Poor	0.23	0.45	50.00
<b>Media Center</b>				
Environment	Unsat	0.00	0.97	0.00
Size	Unsat	0.00	2.44	0.00
Location	Unsat	0.00	0.73	0.00
Storage/Fixed Equip	Unsat	0.00	0.73	0.00
<b>Restrooms (Student)</b>	Good	0.71	0.89	80.00
<b>Administration</b>	Fair	1.66	2.56	65.00
<b>Counseling</b>	Poor	0.15	0.29	50.00
<b>Clinic</b>	Good	0.47	0.58	80.00
<b>Staff Lounge-WkRm</b>	Fair	0.82	1.27	65.00
<b>Cafeteria</b>	Poor	2.50	5.00	50.00
<b>Food Service and Prep</b>	Poor	3.10	6.20	50.00
<b>Custodial and Maintenance</b>	Fair	0.33	0.50	65.00
<b>Outside</b>				
Vehicular Traffic	Poor	1.00	2.00	50.00
Pedestrian Traffic	Poor	0.49	0.97	50.00
Parking	Unsat	0.00	0.81	0.00
Play Areas	Good	1.87	2.34	80.00
<b>Safety and Security</b>				
Fencing	Good	0.60	0.75	80.00
Signage & Way Finding	Poor	0.50	1.00	50.00
Ease of Supervision	Good	2.40	3.00	80.00
Controlled Entrances	Good	0.40	0.50	80.00

Project #: 7330	County: Boston	Site #: 1
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Lo
Grade Config: K0 - 3	Site Type:	Site Size: 0.00

Suitability	Rating	Score	Possible Score	Percent Score
Total For Site:		55.41	90.90	60.95

#### Comments

##### Suitability - ES

Henderson Inclusion Lower School houses grades K-3 students enrolled in the Henderson Inclusion Program. The program is an inclusive model with both regular education and special education students in each class. The facility is being used on a temporary basis until the Henderson Upper School is modified to house all grades.

##### Suitability - ES->Learning Environment-->Learning Style Variety

Henderson Lower School consists primarily of regular classrooms around a central courtyard. There is very little in the way of providing for differentiated instruction.

##### Suitability - ES->Learning Environment-->Interior Environment

Henderson Lower School consists primarily of regular classrooms around a central courtyard. There is very little in the way of providing for a stimulating environment.

##### Suitability - ES->Learning Environment-->Exterior Environment

Henderson Lower has a central courtyard that can be utilized for a number of learning labs or social gathering spaces. There is also an outdoor science lab.

##### Suitability - ES->General Classrooms-->Environment

The classroom space is dated but all rooms look out to a central courtyard providing good natural light.

##### Suitability - ES->General Classrooms-->Storage/Fixed Equip

Classrooms have a reasonable amount of storage but lack appropriate technology with the exception of wireless connections.

##### Suitability - ES->Self-Contained Special Ed

Henderson is an all inclusion school so all instructional spaces are utilized in part for self contained classes.

##### Suitability - ES->Instructional Resource Rooms-->Environment

Henderson Lower has two small spaces that can be used as resource room spaces. There is little in the way of providing a stimulating environment.

##### Suitability - ES->Instructional Resource Rooms-->Size

The spaces that can be used as resource room space meet approximately 75% of the size standard.

##### Suitability - ES->Instructional Resource Rooms-->Storage/Fixed Equip

The spaces that can be used for resource room instruction have little in the way of storage or fixed equipment.

##### Suitability - ES->Music

Henderson Lower has no dedicated music space.

##### Suitability - ES->Art

Henderson Lower has no dedicated art space.

##### Suitability - ES->P.E.-->Environment

The only PE space is in a gym with stage. There is little to provide for a stimulating environment.

##### Suitability - ES->P.E.-->Storage/Fixed Equip

The PE space has limited storage for equipment.

##### Suitability - ES->Performing Arts-->Environment

The only performing arts space is in a gym with stage. There is little to provide for a stimulating environment.

##### Suitability - ES->Performing Arts-->Storage/Fixed Equip

The only performing arts storage is on the stage.

Project #: 7330	County: Boston	Site #: 1
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Lo
Grade Config: K0 - 3	Site Type:	Site Size: 0.00

Suitability	Rating	Score	Possible Score	Percent Score
Suitability - ES->Media Center-->Environment The Henderson Lower media center is located in a classroom space with little to provide for a stimulating environment.				
Suitability - ES->Media Center-->Size The media space meets less than 50% of the size standard.				
Suitability - ES->Media Center-->Location While the library is located central within the school it is next to the cafeteria with no noise separation.				
Suitability - ES->Media Center-->Storage/Fixed Equip The media center has little in the way of expected equipment.				
Suitability - ES->Administration The administrative spaces are located appropriately but do not meet size standards.				
Suitability - ES->Counseling The only area for counseling is within the already small administrative area.				
Suitability - ES->Staff Lounge-WkRm The staff workroom is small and lacks appropriate equipment.				
Suitability - ES->Cafeteria The cafeteria is located appropriately but meets less than 50% of the size standard.				
Suitability - ES->Food Service and Prep The food preparation area does not meet size standards and is difficult to access for deliveries.				
Suitability - ES->Custodial and Maintenance Small custodial closets are located in each hall. Not all have water.				
Suitability - ES->Outside-->Vehicular Traffic Bus traffic is on street and is not separated from other traffic.				
Suitability - ES->Outside-->Pedestrian Traffic Pedestrian traffic crosses bus and parent access.				
Suitability - ES->Outside-->Parking All parking is on the street.				
Suitability - ES->Outside-->Play Areas The interior courtyard provides reasonable play space.				
Suitability - ES->Safety and Security-->Fencing While the school sits in a urban environment the central courtyard provides good security.				
Suitability - ES->Safety and Security-->Signage & Way Finding Most spaces are not identified.				



## Technology Readiness Report - Full

Project #: 7330	County: Boston	Site #: 1
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Lower

Technology Readiness	Rating	Score	Possible Score	Percent Score
<b>Technology Readiness</b>				
Comm\IT Equipment Environment	Unsat	0.00	15.00	0.00
Electrical Power	Unsat	0.00	10.00	0.00
Cooling	Unsat	0.00	10.00	0.00
Equity of Access	Good	10.00	10.00	100.00
LAN Connectivity	Good	15.00	15.00	100.00
WAN Backbone	Good	10.00	10.00	100.00
LAN-WAN Performance	Good	10.00	10.00	100.00
Video Distribution	Unsat	0.00	5.00	0.00
Voice Distribution	Unsat	0.00	5.00	0.00
Faculty & Staff Technology	Poor	3.30	10.00	33.00
<b>Total For Site:</b>		<b>48.30</b>	<b>100.00</b>	<b>48.30</b>

### Comments

Technology Readiness->Comm\IT Equipment Environment  
Comm/IT equipment is not located in an appropriate space.

Technology Readiness->Electrical Power  
Outlets are insufficient in number.

Technology Readiness->Cooling  
Cooling is inadequate.

Technology Readiness->Voice Distribution  
Instructional spaces have two way communication but no access to outside lines.

## Findings & Recommendations

### Findings and Recommendations

Based on the assessments of the four pilot schools, MGT provides the following findings and accompanying recommendations for next steps.

<b>Finding #1</b>	Educational programs/goals and the accompanying facility implications are unclear.
<b>Recommendation</b>	Conduct educational program discussions with district staff to ensure that existing/future educational program goals are understood and facility implications are outlined prior to renovation or reconstruction.
<b>Finding #2</b>	Facility standards designed to support the educational program are unclear.
<b>Recommendation</b>	Develop specific standards for each instructional area, including: <ul style="list-style-type: none"> <li>– Learning environment</li> <li>– Size</li> <li>– Location</li> <li>– Storage/Fixed equipment</li> <li>– Technology Readiness</li> </ul>
<b>Finding #3</b>	Future plans should reflect district priorities and coordination to support improved condition and educational adequacy as well as address long-term growth, capacity, and utilization.
<b>Recommendation</b>	Determine weighting for components, including facility condition, educational adequacy, technology readiness, and facility utilization in order to appropriately account for each factor as priorities are developed and the master plan is constructed.

# Building Physical Assessments

## Summary

### *Due Diligence Report*

## Summary

### **Evaluation of Existing Conditions: Henderson Lower School**

The following evaluations are based on building walkthroughs and reviews of the renovation construction documents performed by design professionals on August 6, 2015. The building was built in 1957 and not a historic structure.

### **General Description**

The building and systems have been maintained well, but systems and finishes are in fair condition in many cases and in need of upgrade. The existing infrastructure is not capable of supporting current technological needs and teaching methods. The building was built to meet the code requirements of the time, but as these have evolved and as accessibility standards have been established, the building and surrounding site are no longer in compliance with current standards. Extensive work will be required to bring the building up to meet current codes.

The following information is based on a walk-through performed on August 6, 2015 and a review of the available construction documents. The building was built in two phases.





## Summary

## Due Diligence Report

## Due Diligence Report

### Architectural Building Description

- 29,375 GSF and was completed in 1957
- Use Group: E- Education (with accessory occupancies A1 – Auditorium; A 2 Cafeteria)
- Type of Construction: IA or IB – Noncombustible, potentially steel encased in concrete and/or brick

The building is a 1-story structure. The basement includes a pipe tunnel and the utilities rooms. The original structural floor slabs is a concrete slab supported by unknown steel shape and size. The original roof is comprised of a traditional multi-ply asphalt and bitumen built-up roofing system with a gravel ballast.

#### Exterior Walls

The walls are a combination of 3 wythe brick, CMU with brick or concrete with brick. Given the age of construction, it is likely any damp-proofing material may contain components no longer permitted in construction materials and should be tested for asbestos content.

The walls are thermally inefficient. The wall is constructed of materials with good thermal mass, good moisture resistance and the mortar is generally in good condition. However there are no expansion joints and/or control joints in the exterior masonry façade.



#### Exterior Windows/Louvers

The window units have an operable hopper, awning and a fixed upper sash. All window units are without screens. The lintels are in generally good condition, even if surface rust is visible. The perimeter sealant at all window units throughout the building are in poor condition. The sash opening is more than 6" and most of the awning units do not stay open. It is a dangerous condition.



## Exterior Doors

Original doors and frames have been replaced by new hollow metal doors and frames. Egress hardware was also been added to the exterior doors. Sealant at the perimeter of all exterior door frames is in poor condition.

Most of the entries are not ADA compliant except for two. The force required to open doors appears to be compliant.

## Deliveries

There is no dedicated delivery area or trash storage area.

## Roofing

The flat roofs were comprised of a traditional multi-ply asphalt and bitumen built-up roofing system with a gravel ballast. Flat roofs are minimally pitched and drained internally. Ponding is occurring at different areas throughout the surface.

Drains appear to be original and in their original locations. Mechanical curbs appear to be in good condition.



## Interior Partitions

The interior partitions are generally in good condition at all corridors, common areas and maintenance/custodial areas. Partitions at classrooms and administration spaces are generally painted CMU or brick throughout.

Auditorium walls are painted plaster and wood panels at the sides and rear of the auditorium. Generally, all walls are in good condition.

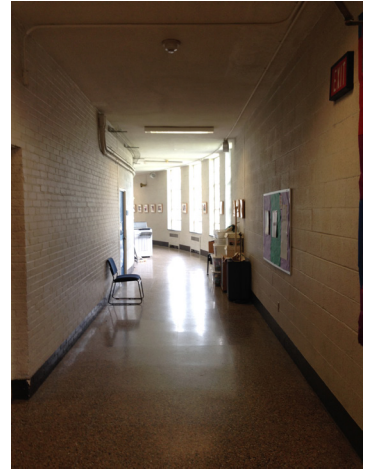
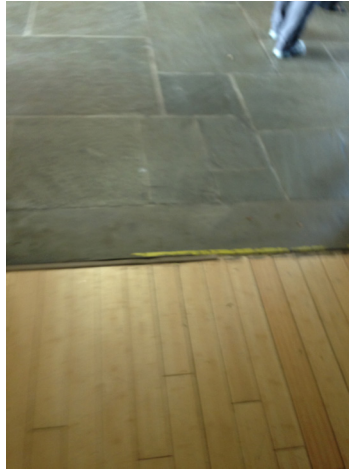




### Flooring

The main entry is sealed flagstone and in good condition. The corridors are original terrazzo and in good condition. The flooring shows some typical expansion/shrinkage cracks. In most classrooms the floor is a 24" x 24" vinyl and is in need of replacement. Toilet room floors have the original 2" x 2" ceramic tile and are in fair condition.

Flooring in general is in good condition other than a few locations where the conditions are poor. Wood flooring at the stage and in some classrooms is in good condition.



### Ceilings

Most classrooms and corridors have the original plaster ceiling and the paint is peeling off the surface. The plaster ceilings are in good condition other than needing a fresh coat of paint.

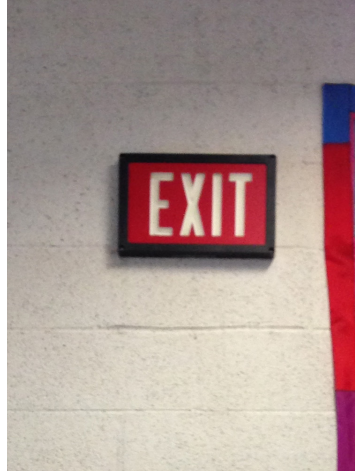
Ceiling heights are generous and provide for ample natural light except in some of the corridors.



## Signage, Way Finding and Exit Signs

Corridor wayfinding is nonexistent for the layout and geometry of the building.

The egress signage is not placed correctly or missing. Some of the existing signs are not illuminated and do not meet code.



## Casework

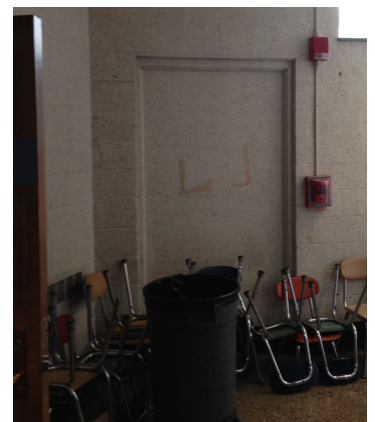
Offices, workrooms and administration spaces have original built-in wood casework. Casework at administrative areas is generally in fair condition. Existing casework in general does not provide any areas that are accessible.

Classroom storage is not adequate or is the original natural wood built-in units that are generally in good condition.



## Means of Egress and Doors

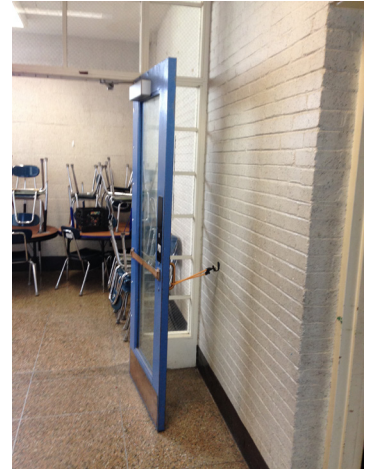
The configuration of the corridor egress system and capacity of the egress doors do not meet egress code requirements. One egress door was boarded up making the egress distance too far to comply with the code. Some of the egress doors open onto stepped landings with no ramps or areas of refuge provided.





The doors and hardware are deficient in several categories. No indications were visible (labels either missing or painted over) that stair doors were labeled by UL or other testing agency for the required fire rating. In addition, almost all of the glazed doors contain wired glass which is no longer permitted as safety glazing by the current codes for educational use. Most of the classroom doors throughout the building have not been updated with new hardware or continuous hinges.

Some corridor doors are held open by floor stoppers or latches. Many of these doors have full transoms and sidelights of wired glass which is no longer permitted as safety glazing. The doors themselves have no fire rating as the label is either missing or was never labeled making these doors non-compliant for fire or smoke separation.



### Passageways and Corridors

Vestibules are not present at the entries. Ceiling heights in corridors are generous although the width is too narrow. Corridor lighting is surface mounted and is insufficient.



## ADA/MAAB Accessibility

In general, the building does not meet current accessibility standards. Most toilet rooms do meet current standards, and some multi-fixture toilet rooms do provide a handicapped stall.



Handicapped door operators are not present at the main entries. The main entry is not accessible. Other means of egress doors open onto stepped pads without ramps or the ramp is too far away and leads onto the access road. While most of the auditorium is accessible, the path of travel to gain access to the stage is indirect and non-compliant.



Many of the classroom entrance doors are without the necessary side maneuvering clearances required to meet accessibility code.

There are a number of projections in rooms and corridors along the accessible path that do not meet the 4" maximum projection rules under the MAAB. These conditions pose a hazard to vision-impaired students and teachers.



**Fire Separation of the Buildings**

The building is not sprinklered. The building is not compartmentalized to meet today's code requirement for floor areas when not sprinklered. If sprinklered the building's small footprint should allow for non-compartmentalization.

**Energy Code and Exterior Issues**

The lack of insulated exterior walls in most locations, ground floor slab, lack of vestibule airlocks, and the absence of continuous air barrier make the structure non-compliant with the current energy code.

**Auditorium**

The auditorium is generally in good condition, but is dated and lighting quality is poor. The wood strip flooring is generally in good condition.



## Site/Civil

### Site Context

The Henderson Lower School is located at the northeast corner of the Dorchester Avenue and Centre Street intersection in the neighborhood of South Dorchester. The school is a perimeter zero lot-line building with a large recreational center courtyard. The building is surrounded by a perimeter wall at the streets, which accommodates the 8' of grade change along the adjacent streets and allowing the school site to be mostly flat. The site is not located in a FEMA flood zone (map # 25025C0087G), nor does there appear to be any localized site flooding.



### Utilities

The site drainage is in fair condition. The catchbasins appear to have hoods and sumps. The southwest catchbasin in the courtyard is full of sediment, covering the outlet. This catchbasin overflows and has seeped through and undermined the surrounding pavement. The north catchbasin in the courtyard appears to be a drywell with no overflow drain. The drywell is full of sediment and requires cleaning to maintain its continued function.

We found no records of the age or condition of the water, sewer, gas, electrical and communication utility connections. The utility connections are likely the age of the building. We recommend a TV inspection of the underground sewer and drainage systems.

### Surfaces

The main entrance is on the east side of the school facing Dorchester Avenue. The entrance has a large flight of steps entering the school with no adjacent accessible route. The stairs are in poor condition and require significant repair or replacement.

The south walk area along Centre Street is in fair condition. The side entrance here provides the only accessible entrance to the school, and appears to be the prime drop-off/pick-up location for the school. There is no designated service area. Garbage and recycling is located without enclosure adjacent to the side entrance.

The retaining walls along Dorchester Avenue and Centre Street are in fair to poor condition. They require significant concrete repair to prevent failure.

The courtyard is generally well maintained. There is some heavy weed growth that will damage pavement, and the asphalt is cracked and ponding in many places. The asphalt in the southwest corner has settled due to sub base failure, likely caused by the drainage failure discussed above. The rubber playsurface in the play area is cracked and requires repair. It appears the playsurface does not have sufficient pitch to drain. Seven of the classroom entrances onto the courtyard have a barrier step, and are not MAAB compliant.

The separate, small kindergarten play area is in poor condition. The play equipment is in poor condition. The playsurface tiles are very weedy, which will undermine the surface.

### RECOMMENDATIONS:

- Repair main entrance stairs, nosings and railings.
- Repair concrete retaining walls.
- Provide garbage and recycling enclosure at side entrance.
- Resurface asphalt and playsurface in courtyard.
- Clean southwest catchbasin and north drywell.
- Repair subbase surrounding southwest catchbasin.
- TV sewer and drain systems to assess condition.

## HVAC Systems

### Executive Summary

The building appears to have received low to average maintenance/service of the HVAC systems over its occupied years. Even with proper maintenance, through normal operation, systems gradually deteriorate due to scale, poor water conditions, and lack of preventive maintenance. Systems will gradually deteriorate to a point of exceeding their maximum serviceable life. This building is a typical example of said condition. Generally, the air handling units and half of the exhaust fans are operational. However, the other half of the exhaust fans are not operational. By maintenance personnel's statement, half of the finned tube radiation terminals are not operational. Due to the ventilation system's return exhaust layout, the return registers are blocked by classroom furniture and the classrooms lack proper air circulation and ventilation.

The space temperature controls do not appear to be fully operational.

The antiquated nature of the mechanical systems and the gradual scaling and corrosion of the various piping systems provide heat transfer at reduced rate and the overall system has become inefficient to operate and costly to maintain.

Many of the automatic temperature controls appear compromised due to failed controls and equipment. Ventilation rates and acceptable air-quality are likely compromised due to the surface contamination on many systems as well as misadjusted and possibly closed outside ventilation dampers in the unit ventilators. While there are no catastrophic failures obvious with the present equipment, the piping systems are experiencing signs of corrosion. This condition could present itself as a major failure due to poor return water flow in the condensate system. The systems could be repaired, replaced and modified on a sectional basis to maintain the system operation. However, continued operation will be at the expense of increased maintenance and operating costs due to the inefficiency of the existing systems and the generally antiquated nature of the systems themselves. All systems installed within this building have exceeded their maximum serviceable life and are in need of replacement. With overall repair, maintenance, cleaning and calibrating of the system, a continued limited service could be achieved however, its length of remaining service is unpredictable at best.

### Boiler Room

The boiler room has two (2) H.B. Smith gas-fired cast iron sectional boilers. Each boiler generates low pressure steam which is distributed to the various heating apparatus at a pressure of between 6 psi (controlled by school district). The boilers operating and safety controls most likely do not meet current building code requirements. Although showing wear and rust, the boilers appear to be in fair operational condition.

The two (2) boilers installed during the original construction combine to a single common header located over the boilers where various zones originate and run out to various heating points within the building.

The breeching from boilers is covered with foil facing insulation and appears in fair condition. We could not determine the flue material. The boilers are provided with induced draft fans which assist in the flow of combustion gases from the boiler to the chimney.

The breeching discharges into a masonry chimney which is vented vertically through the building to the exterior. We could not determine if a flue liner was in place. However, the overall size and height of the chimney appears adequate for the boilers that are connected.



All steam piping throughout the entire boiler room is insulated. It is possible, however, some piping, valves, fittings and tank insulation may contain asbestos. There was no evidence of major leakage on the piping.

Steam piping distribution to the school is provided via underground tunnels.

Condensate which is returned from the general building heating apparatus is collected in a floor mounted condensate receiver boiler feed water unit. Located next to this storage tank are centrifugal pumps which provide feed water to the individual boilers.

It is our understanding that the City water may not be chemically-treated before its introduction into the heating system and if this is the case, the excess oxygen suspended within the City water could potentially be eroding away the interior of the piping systems. It is our understanding through maintenance personnel that this condition has existed for a long period of time which would give strong indications that the piping systems are more than likely near the end of their useful life.

Combustion air is introduced through a combustion air duct via one high and one low opening. The motorized dampers were not noticed.

The automatic temperature control is of the pneumatic design. Located within the boiler room is an air compressor. The original automatic temperature control panel appears antiquated and does not operate. It appears that this automatic temperature control system is original to the building. Considering the age and antiquated nature, consideration should be given to upgrading. The automatic temperature controls pneumatic tubing appears to be leaking and many room temperature controls are not operational.

It appears that there was a partial retrofit given to the boiler control panel. It is our understanding the boilers are controlled by the school district remotely.

Steam is distributed to the building addition through an underground trench system which appears to run throughout the building. Located within the mechanical room is a condensate receiver tank with pumps to return condensate back to the boilers.

The condensate receiver is extremely antiquated with excessive surface soiling and contamination and is also in need of replacement.

### Classrooms

The classrooms are provided with a vertical discharge unit ventilator located along the exterior wall of the building. Each unit is provided with a supply fan which discharges vertically into the space; steam heating coil with valve control which ties into a main steam line which travels at the rear of the classroom unit ventilator; return air drawn at the base of the unit; filters and outside air drawn directly at the rear of the unit through a wall-mounted louver. Each unit is controlled by a wall-mounted pneumatic thermostat. The classroom unit ventilators and majority of thermostats are original to the building and appear to be antiquated. The majority of unit ventilator cabinets, room intake and discharge air louvers appear worn by time, have surface soiling, the interior areas of the cabinets are soiled. It does not appear that the outside intake dampers are operating as required and therefore ventilation air is compromised and below building code requirements. The majority of unit ventilator louvers are located just above grade level and by current code are required to be a minimum of 30 inches above grade. All equipment has reached its maximum serviceable life and is in need of replacement. The classroom temperature controls, by the maintenance personnel's statement, are not operational and are in need of replacement.

Located on the interior wall of each classroom is a horizontally-mounted (integrated in the back wall furniture cabinets) exhaust register which communicates to a roof-mounted exhaust fan through a series of galvanized sheet metal ductwork exhausts. The interior of all registers were extremely soiled and all grilles were antiquated. The exhaust registers are blocked in most of the classrooms by the cabinet doors, or other room furniture. About half of the classroom exhaust fans are not operational. The other half of fans (operational) are in desperate need of service/maintenance as the fans are very noisy and/or missing parts. There is no assurance that code required amounts of ventilation air are being exhausted from the classrooms. All roof-mounted exhaust fan systems are extremely antiquated and need replacement.

Steam and condensate piping distribution is installed in the underground tunnels. Condensate is returned to a common condensate return line (generally). The condensate system is nearing its maximum serviceable life. All condensate piping is original, has reached its maximum serviceable life, and is in need of replacement. The condensate receivers are provided with a primary and standby distribution pump, however, all systems were antiquated and in need of replacement.

All other heating terminal units (finned tube radiation, cabinet unit heaters, cabinet convectors) in the classrooms appear antiquated and beyond their life expectancy. The overall condition of the fin tube radiation is poor. There is surface damage and grille surfaces are soiled. The heating elements are full of debris. The enclosures are showing rust and at some locations are damaged. Finned tube radiation is original to the building and in need of replacement. The heating elements are not operational in over half of the classrooms due to either broken controls or damaged heating elements.

## Administration Area

The administration area is provided with fin tube radiation located along the exterior wall. The fin tube radiation is controlled by wall-mounted pneumatic thermostats. All of the radiation is fed from the underground tunnel steam distribution system. The condensate return piping also runs in the tunnels. A condensate receiver is located in boiler room. The overall condition of the fin tube radiation is poor. There is enclosure surface damage and air louvers are soiled. Finned tube radiation is original to the building and in need of replacement. A few thermostats were replaced at some point and the rest of the thermostats are original and questionable if any operate. The condensate receiver is extremely antiquated with excessive surface soiling and contamination and also in need of replacement.

The heating elements appear antiquated and beyond their life expectancy. The overall condition of the fin tube radiation is poor. There are surface damages and grille surfaces are soiled. The heating elements are full of debris, the enclosures are showing rust and at some locations are damaged. Finned tube radiation is original to the building and in need of replacement. The heating elements are not operational in more than half of the classrooms due to either broken controls or damaged heating elements.

There is no mechanical ventilation serving administration. The ventilation air is through the use of operable windows located along the exterior wall. It is not clear whether the percentage of operable area is adequate to meet the natural ventilation requirement of the building code. It is not a recommended application and the ventilation system should be upgraded.

## Auditorium, Stage and Adjacent Spaces

The auditorium and stage are served by a heating and ventilating air handling unit and return air fan located in the penthouse. The air handling units are provided with a supply fan, filters, and steam heating coils. The air distribution is via the wall-mounted supply and return registers. Auditorium heating is provided by steam through wall recessed cabinet convectors. It does not appear that the amount of air provided to the space is adequate for the population. All grilles

were noted to be slightly soiled and original to the building. Considering the general antiquated nature of the supply system, as well as its age, all systems appear to have reached their maximum serviceable life and generally are in need of replacement.

The heating elements appear antiquated and beyond their life expectancy. The overall condition of the fin tube radiation is poor. There are surface damages and grille surfaces are soiled. The heating elements are full of debris the enclosures are showing rust and at some locations are damaged. Finned tube radiation is original to the building and in need of replacement. Not all heating elements are operational due to broken controls and/or damaged heating elements.

The stage area air distribution is via supply grilles on stage.

The auditorium and stage units appear to be in fair condition, however the ventilation air amount should be verified for current code compliance.

The rooms adjacent to the auditorium are provided with ceiling supply, return and exhaust registers. All registers are original to the building, soiled and in some instances damaged. The exhaust fan does not appear to be operational in the small kitchen.

### Vestibules and Corridors

The corridors and vestibules are provided with steam heating elements. The heating elements are original to the building and beyond their life expectancy. The overall condition of the heating elements is poor in vestibules and fair in corridors. There are surface damages and grille surfaces are soiled. The vestibule heating elements are full of debris, the enclosures are showing rust and at some locations are damaged. All heating elements in vestibules and corridors are original to the building and in need of replacement. Many heating elements are not operational due to either broken controls or damaged heating elements.

The corridors are not provided with any supply or exhaust ventilation air which is not code compliant and should be improved upon. All vestibule and damaged finned tube radiation in corridors should be replaced.

### IT Server Room

The IT server room is provided with an exhaust fan that is not operational. The room should be provided with proper equipment to maintain temperature control.

### Gasoline Storage Room

Gasoline is being stored inside the school next to a classroom. There is a strong odor of gasoline in the room and outside of the room which could be unhealthy to students. The room is provided with a small exhaust fan that appears to be undersized. The exhaust fan is not operational. The room is not provided with a code compliant ventilation and exhaust system. The gasoline storage room does not comply with a fire protection code and other codes governing gasoline storage.

### Gymnasium

There is no gymnasium in the school.

### Cafeteria

There is no cafeteria in the school.

## RECOMMENDATIONS:

When considering the overall age and poor performance of the HVAC systems, their general state of disrepair, and for the most part a non-operating automatic temperature control system, all HVAC mechanical systems should be replaced. We do not recommend upgrading the components of the systems on a sectional basis since the mechanical systems and their components work together as a single system. As an example, changing the boilers without the piping systems, or the classroom unit ventilators without changing the automatic controls and ventilation system, would not result in achieving the benefits of the investment in upgrading the components since a failure is eminent at any point within the existing components. Any interruption at any point in the system could render the entire system inoperative, or poorly performing at best.

As the building presently exists, there does not appear to be any immediate life safety concerns associated with the HVAC systems. However, the building code has specific requirements relating to ventilation air of which is severely compromised within this building. It would be possible to manipulate the existing control system and air handling equipment to provide a limited amount of ventilation air to potentially meet minimum building code requirements. We would not recommend this condition as a "solution" to the problem and only endorse this as a temporary repair.

Due to the poorly performing automatic temperature controls, energy consumption within the building is very likely well above average when compared to similar buildings. Considering the general state of disrepair of the HVAC system, maintenance costs and repair costs would also be considered above average. The only alternative to correct the ventilation code deficiency on a long-term basis, high operating costs, and high maintenance and repair costs, would be an overall system replacement utilizing new high efficiency HVAC systems and energy conservation design techniques.



## Electrical Systems

### Electrical Power Distribution System

The O'Hearn School utility service was upgraded around 2001. During this upgrading the old 600 Amp distribution panel was re-fed from the new 800 Amp 120/208 volt 3 phase main switch/utility section and the new 800 Amp 120/208 volt 3 phase main switchboard, both manufactured by Siemens (photo 1). The old and new main distribution equipment and utility service meter are located in the main electric room at the lower level.

The old distribution panel was manufactured by GE and appears to be original to the building. Although it appears to be in fair and operational condition, its useful life expectancy is reaching its limit (photo 2).

In general, branch panelboards throughout the building appear to be original to the building, except for two "computer" panels, installed in 2001 (photo 3). The old panels, manufactured by GE, appear to be in fair, operational condition however their useful life expectancy is reaching its limit (photo 4), while a few panels found in unacceptable condition need to be repaired or replaced sooner (photo 5).

### RECOMMENDATIONS:

Old distribution panel and original panelboards found in fair condition with associated power feeders from the old distribution panel are recommended for replacement. The panels observed to be in unacceptable condition need immediate repair or full replacement.



*Photo 1: New main distribution equipment and utility meter*



*Photo 2: Old distribution panel*



Photo 3: Example of new computer panel



Photo 4: Example of old panel in fair operational condition

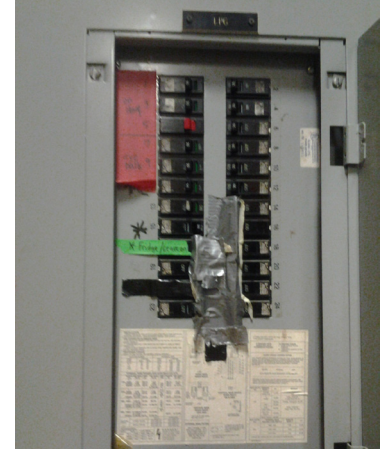


Photo 5: Example of old panel in unacceptable condition, Auditorium stage

## Branch Circuit Power Circuits

In general, power distribution and receptacle coverage is found to be adequate throughout. A typical classroom has a few old receptacles, and equipped with new metal raceways containing duplex receptacles. The majority of duplex receptacles are in good and operational condition.

Duplex receptacles in the Cafetorium (Cafeteria/Auditorium) server area were found to be of a regular non-GFCI type which violates the latest Electrical Code installation requirements. In addition, the surface-mounted conduits and outlet boxes associated with server area receptacles are showing rust (photo 6).



Photo 6: Example of receptacle installation in server area

## RECOMMENDATIONS:

The regular non-GFCI receptacles in the server area shall be replaced with GFCI type. The associated rusting conduits and outlet boxes shall be replaced as well.

## Building Lighting

The school lighting system was recently upgraded. New lighting fixtures were installed in administration area offices, corridors and classrooms. The new lighting system consists of the pendant-mounted direct/indirect and surface-mounted linear fixtures with energy-efficient T8 lamps and ballasts. These lights are found to be in good and operational condition. Lighting illumination levels (FC levels) produced by these fixtures appear to be adequate (photo 7).

Automatic controls such as occupancy sensors required per the latest Energy Code were observed in majority of offices and classrooms, however, the daylight sensors, also required by Energy Code, could not be found during site visit.

Cafetorium (cafeteria/auditorium) lighting system appears to be old and probably original to the building. Lighting consisting of recessed fluorescent downlights appears to provide inadequate lighting illumination (photo 8). Also, a few downlights were observed to be not operational.

Automatic controls such as occupancy sensors, daylight sensors or time-controls required per latest Energy Code were not observed in the cafetorium.

Lighting system in corridors is controlled by local switches only with no means of using automatic controls.

Emergency and egress lighting is implemented by use of battery packs/remote light heads and non-electrical exit signs (photo 8). Exit signs are marked non-electrical and were observed being not illuminated during site visit. Such arrangement is not in compliance with Building Code Chapter 27 requiring exit signs to be powered and illuminated at all times. At the same time, it was noticed that exit signs are installed at all exterior doors leading into the school courtyard. It was also noticed that a few exit signs are not visible in corridors (blocked from viewing by columns or wall extensions).

Emergency battery packs/remote heads in the cafetorium are installed too low, in violation of ADA, which requires installation of any equipment extending more than 4 inches from the wall minimum at 6'-8" (80") A.F.F. to the bottom (photo 10).

## RECOMMENDATIONS:

Improvement of lighting controls in compliance with the current Energy Code is recommended. Cafetorium lighting is recommended for upgrading in order to improve the current lighting levels.

The appropriate egress path and location of exit signs should be examined throughout. non-electrical exit signs shall be replaced with electrical models in compliance with Building Code, the not-required exit signs shall be removed and additional exit signs as required shall be added.

Installation of emergency battery packs/remote heads in the cafetorium shall be reviewed and mounting height of those in violation should be adjusted accordingly.



Photo 7: Example of lighting in classrooms, offices, and corridors



Photo 8: Cafetorium lighting



Photo 9: Egress exit signs

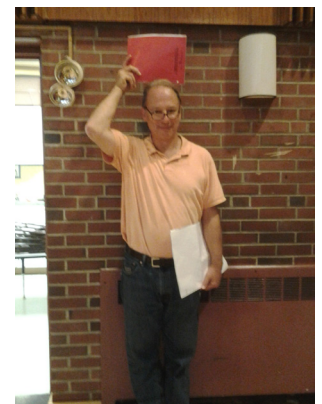


Photo 10: Cafetorium (cafeteria auditorium) emergency lighting installation



## Fire Alarm System

The existing fire alarm manufactured by EST is a zoned system. Building has limited fire protection system coverage (sprinklers) and therefore a full coverage automatic smoke detection system is required. An observed combination of heat and smoke detectors installed throughout the building is unusual, but acceptable.

The Fire Alarm Control Panel (FACP) is installed in the main electric room at the lower level. The fire alarm system remote annunciator and master box are installed in the main vestibule (photo 11).

In general, the fire alarm system is in fair and operational condition. However, it was noticed that some areas are not adequately covered with either detecting devices (smoke or heat detectors) and/or signaling devices (horn/strobes or strobe only units). A few private and student bathrooms are lacking the smoke/heat detectors and signaling devices. In some cases the fire alarm horn/strobes are not provided in corridors within 15 feet from the corridor end/corner as required by NFPA 72. The main electric room is missing a signaling device. Classrooms are not equipped with fire alarm signaling devices. Cafetorium has only one signaling device, which appears to be inadequate.

## RECOMMENDATIONS:

Upgrades to eliminate deficiencies noted above.



Photo 11: Existing FACP and associated equipment

## Exterior Lighting System

Existing courtyard lights are flood type, installed in locations remote from exterior doors (photo 12). A few of these lights are noted to be non-operational. All of these lighting fixtures are controlled by regular switches, with no automatic means of controls (photocell, motion sensors, time-controlled system) required by Energy Code.

## RECOMMENDATIONS:

Repair and/or replace existing not-operational lighting fixtures. Add lights near doors. Provide proper lighting controls including photocell and time clock.



Photo 12: Existing courtyard lighting

### Security

The school is equipped with one Aiphone video intercom unit at the front entrance only. The device provides two-way audio communication and a video signal to an attendant in the main office. The attendant can view and speak with the visitor and elect to remotely unlock the door from the office. There is no card access system in the building.



Aiphone door monitor



Aiphone master station

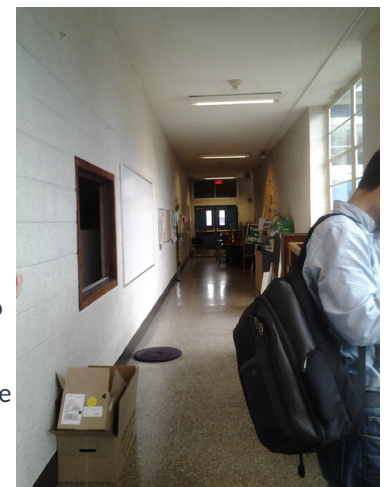
Egress doors are locked to prevent intruders from entering the school. There are numerous motion sensors distributed in corridors to detect intrusion.

There is no CCTV system on the premises.

The sightlines on approach from the street are good. Plantings near the building are low and do not obscure views of the exterior.

Visitors must use the video intercom to establish contact with the main office attendant. The attendant then releases the lock remotely, allowing the visitor to pass through a vestibule and enter the building. Upon entry, the main office is located on the left. Visitors must stop at the main office prior to continuing into the building.

Corridors are generally wide and long with straight views. There are numerous corridor intersections throughout the building where CCTV cameras would be useful for documenting events. Classroom doors are keyed.



Typical corridor sight lines



Exterior doors are not numbered. Room numbers are not posted on the building exterior.

Classrooms are equipped with wall mounted “Assistant” and “Nurse” call devices to contact the main office and the nurse’s office. Classrooms are not equipped with telephone handsets.



*Typical classroom call button*



*Main office call button console*

## Communications

Fiber optic and multi-pair copper communications service cabling is provided by Verizon. They are terminated in the lower level of the school. These cables and the associated entrance facility appear to be new and in good order. There is also a wall-mounted communications cable pull box in the entrance facility that has a variety of cables that are unmanaged and potential trip hazards.



*Verizon fiber optic cable*



*Multi-pair copper cable equipment*



*Wall-mounted communications cable pull box*

The horizontal cabling system for the school is Category 5e. Two telecommunication equipment rooms were observed. Room 33 (in the survey numbering scheme) is located in a room that is divided by a locked caged divider. The room has minimal air conditioning. A second telecommunications equipment room is located adjacent to room 19 (in the survey numbering scheme). The room has no air conditioning. Lighting and access is adequate in both spaces. The rooms are interconnected by a fiber optic cable backbone. Power services in the room will require upgrades to accommodate future equipment loads.

The typical classroom is equipped with surface mounted raceway for power and communications at teacher and student locations. Wireless access points are distributed throughout the classrooms and office areas. Cable television programming is not distributed in the building.

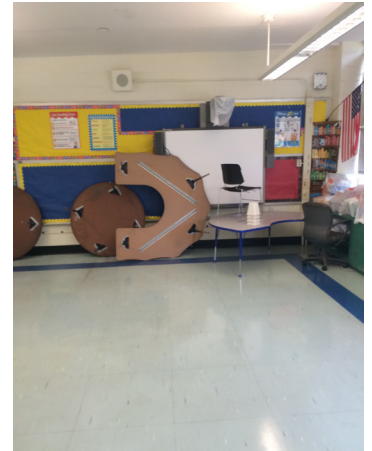
In addition, classrooms are equipped with interactive white boards.



*One of two telecommunication equipment rooms*



*Typical classroom raceway and access point configuration*



*Typical classroom interactive whiteboard*

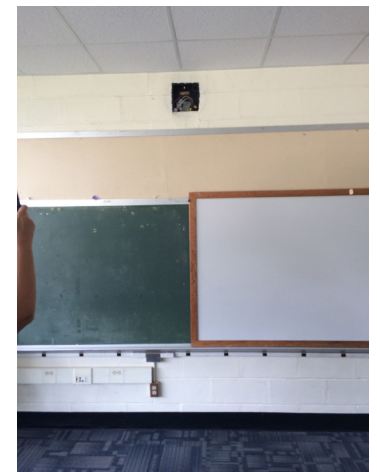
There are numerous locations where low voltage wire is exposed, obsolete wall mounted devices are damaged with exposed wires, and unused back boxes are not covered, leaving them open to rodents, insects or tampering.



*Exposed low voltage cabling*



*Exposed low voltage cabling*



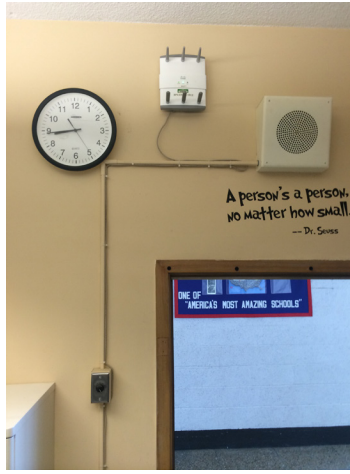
*Empty back box with exposed electrical cabling*



The auditorium is equipped with a local sound system that is no longer functional with unrelated components that do not interconnect. There is no permanent video projection system in the auditorium.



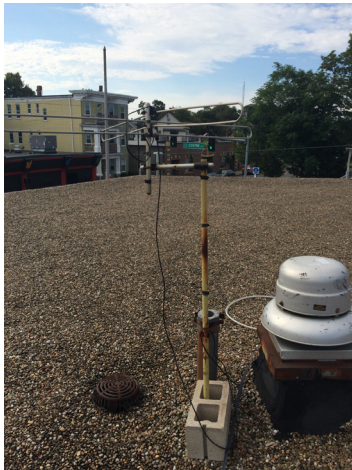
*Auditorium sound system control panel*



*Battery operated clock, paging speaker and wireless access point in main office*

The master clock system is no longer functioning. The school uses battery operated clocks that are individually set. The interior paging system speakers appear to have been replaced in the past 10 to 15 years. Exterior speakers in the courtyard are no longer operating.

There are two antennas and a cable TV trunk cable on the roof. All three systems have been abandoned in place.



*Abandoned roof mounted antenna*



*Abandoned CATV trunk cable*

## Plumbing and Fire Protection Systems

### Fire Protection System

The incoming 4-inch water service is a combination domestic water and fire service and it enters through the boiler room.

There is no fire protection system in the existing facility except for the boiler room.

The existing fire protection system includes a 3-inch main, O.S. & Y valve, check valve, 3-inch fire protection rise, flow switch, pressure gauge, drain piping. The existing fire protection service does not include double check valve assembly. Valves are in poor condition (see photo 1). Upright sprinkler heads without guards are installed and appear to be original. Sprinklers and piping are in fair condition (see photo 2).



Photo 1: Fire protection service



Photo 2: Upright sprinklers and piping

### Plumbing System

All piping is installed in the crawl spaces. Most piping is not visible and some system conditions noted herein are presumed due to age and the condition of piping which was visible.

#### *Domestic Cold Water*

Domestic cold water system for the facility includes a 3-inch main, main shut-off valve, 2-inch water meter, cold water rise for potable water system and cold water rise for non-potable water system (see photo 1). Water meter is in fair condition. All piping and valves appear to be original, in fair to poor condition, and has outlived/exceeded its useful life. Domestic cold water piping is not expected to last many more years without exhibiting widespread problems and possible failure. Some pipes are not insulated, others have poor insulation (see photo 2). Valve tags, pipe labels and flow arrows are not installed.

The existing water service does not include a backflow preventer assembly.

There is an existing backflow preventer in the boiler room for the HVAC make-up, non-potable cold water system (see photo 3).





*Photo 1: Domestic water service and water meter*



*Photo 2: Uninsulated pipes and poor insulation*



*Photo 3: RPBP for HVAC make-up*

### *Domestic Hot Water*

Domestic hot water for the facility is supplied from a single source; a 40 gallon gas-fired water heater. It was replaced in June of 2015.

The gas-fired water heater, manufactured/built on July 10, 2014, is located in the boiler room, and in excellent condition (see photo 4). All piping and valves appear to be original, in fair to poor condition, and has outlived/exceeded its useful life. Domestic hot water piping is not expected to last many more years without exhibiting widespread problems and possible failure. Hot water is circulated from hot water distribution loop via pump in the boiler room. Some pipes are not insulated and others have poor insulation. There are two types of insulation, black and white (see photo 5). Valve tags, pipe labels and flow arrows are not installed.



*Photo 4: Gas-fired water heater in the boiler room*



*Photo 5: Uninsulated pipes and poor insulation*

### *Natural Gas*

The existing natural gas system enters the building through the Boiler Room via a 4-inch gas main, in poor condition (see photo 6). The existing gas system includes two (2) gas meters, Romet gas meter and gas piping for the two gas boilers, and American meter and gas piping for the water heater (see photo 7). Piping and valves appear to be original, in fair to poor condition, and has outlived/exceeded its useful life. Gas piping is not expected to last many more years without exhibiting problems and possible failure.

The kitchen is used for heating food only.



*Photo 6: Gas service in poor condition*



*Photo 7: Gas meters*



## Sanitary Waste and Vent

Sanitary waste and vent system is collected below the slab and is therefore not visible. The above slab piping in the building was at times visible, and is expected to be in poor condition due to its age and has outlived/exceeded its useful life. Sanitary drainage piping is not expected to last many more years without exhibiting widespread problems and possible failure.

An existing vent in the roof is rusted and in poor condition (see photo 8).

The existing sewage ejector in a pit is original and in fair to poor condition (see photo 9).

The existing tank receiving condensate from boilers is original and in fair to poor condition (see photo 10).

The floor drain covers are rusted and deteriorating (see photo 11). There is also an issue regarding floor drains. During winter time, when the boilers are running, occupants smell sewer gas coming from the floor drains due to dry trap seals.

There is no emergency shower/eyewash installed in the boiler room.



Photo 8: Rusted vent piping



Photo 9: Existing sewage ejector



Photo 10: Existing tank receiving condensate





Photo 11: Rusted and deteriorating floor drain covers

### Storm Drainage

Storm drainage system is collected below the slab and is therefore not visible. The above slab piping in the building was at times visible, and is expected to be in poor condition due to its age and has outlived/exceeded its useful life. Storm drainage piping is not expected to last many more years without exhibiting widespread problems and possible failure.

An existing storm pipe is insulated with inadequate material and duct tape (see photo 12).

All roof drains and domes are original and in poor condition (see photo 13).

There are ponding issues on the roof.



Photo 12: Storm piping with poor insulation



Photo 13: Roof drains and domes



## Plumbing Fixtures

Plumbing fixtures in the facility are original or outdated fixtures, in fair to poor condition, and non-ADA compliant in some locations. No plumbing fixtures were observed to be current water-saving fixtures.

Some water closets are wall mounted with manual flush valves, and others are floor mounted with manual flush valves, generally in fair condition, and non-ADA compliant in some locations (see photo 14).

Urinals are wall mounted with manual flush valves, generally in fair condition (see photo 15).

Lavatories are wall hung with battery powered or self-closing push-down faucets or lever handles, generally in fair condition. Some of the lavatories are non-ADA compliant. Pipe insulation is not installed in some locations and others are in poor condition (see photo 16).

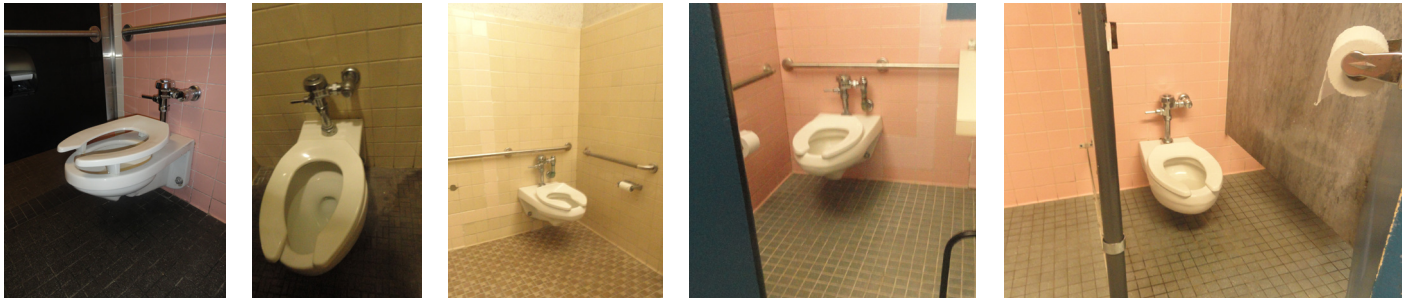
There is an issue on domestic water supply on some lavatories. It takes a while for hot water to come out on some lavatories.

No bi-level electric water coolers are installed in the facility. Water dispensers are used in the entire facility (see photo 17). Existing drinking fountains in the classrooms were removed but the capped sanitary and cold water piping in wall are exposed in most locations (see photo 18).

Classroom sinks are integral with casework and appear to be original and non-ADA compliant, and in fair to poor condition (see photo 19). Some sinks have leaking faucets.

The existing service sink in the boiler room is in poor condition and has a leaking faucet (see photo 20).

The shower in the boiler room has an outdated shower valve and is in poor condition (see photo 21).



*Wall-mounted water closets with manual flush valve*



*Floor-mounted water closets with manual flush valve*

*Photo 14: Different types of installed water closets*





Photo 15: Urinals



Photo 16: Non-ADA, ADA compliant lavatories and without pipe insulation



Photo 17: Water dispensers in lieu of bi-level water coolers





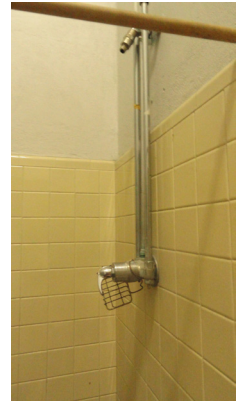
Photo 18: Exposed piping in wall



Photo 19: Classroom sinks



*Photo 20: Service sink in the boiler room*



*Photo 21: Outdated shower valve*



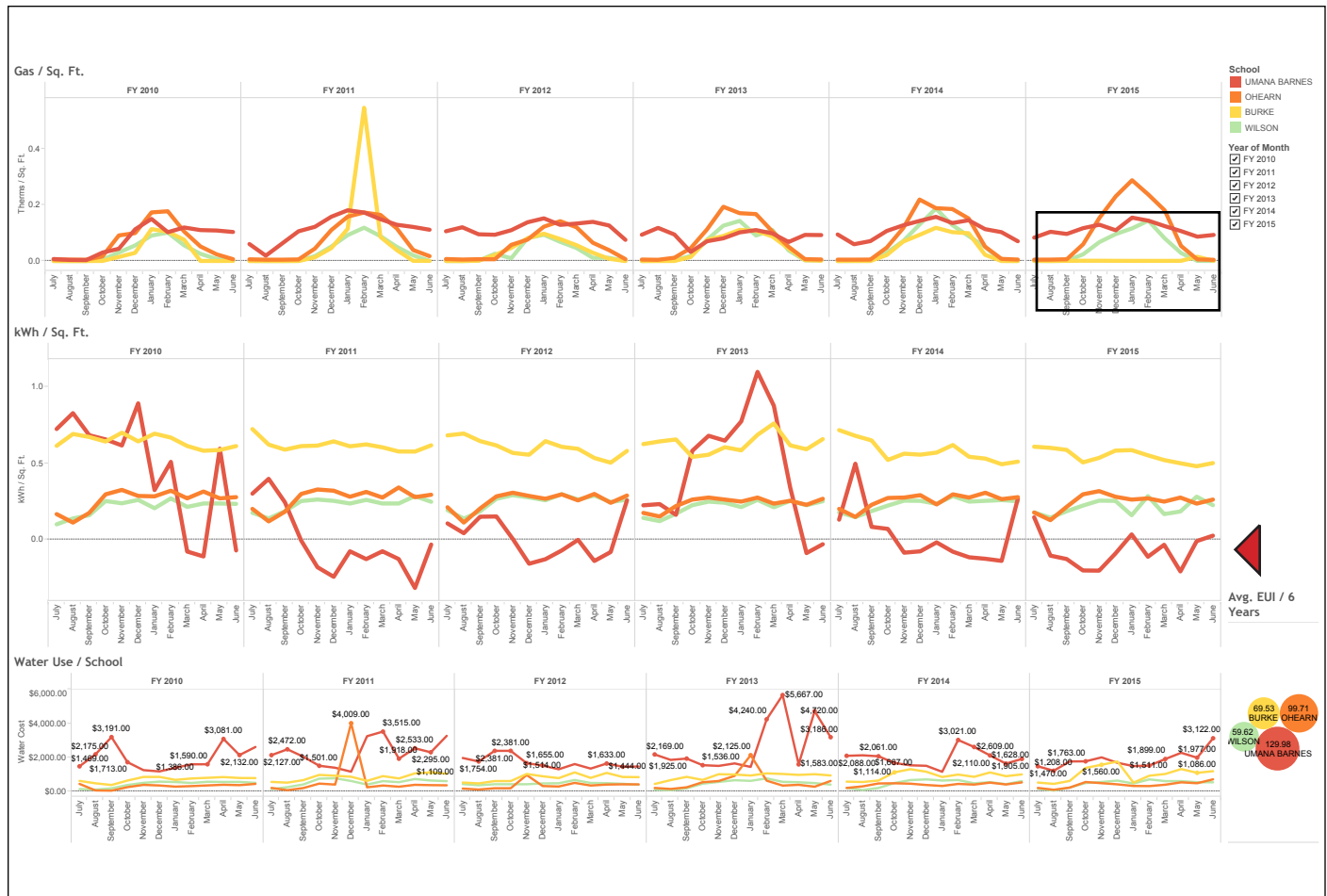
*Methodology**Reports***Energy &  
Sustainability**

## Energy & Sustainability

Understanding current energy consumption patterns for Boston Public School's existing facilities will be an important metric for determining building suitability for long-term usage and operational cost modeling. Currently BPS's Energy Division monitors utility usage, water consumption and operates an Energy Management System in an effort to aggressively save resources and money. Long-term reductions in climate change contributing energy sources (fossil fuels), utilizing utility company rebates and preparing facilities for redundancy and resiliency will be additional considerations for both building and site evaluations in the 10 Year Facility Master Plan.


The Pilot Study includes the last six years of electrical, gas and water consumption and total costs for the four buildings. More typically buildings can be analyzed by typology, age, renovation age, size, etc. The data should be used to spur investigation and encourage 'constant' vigilance necessitated with modern systems. This data can be analyzed in a number of ways as illustrated in the following pages.

## Month by Month Utility Use



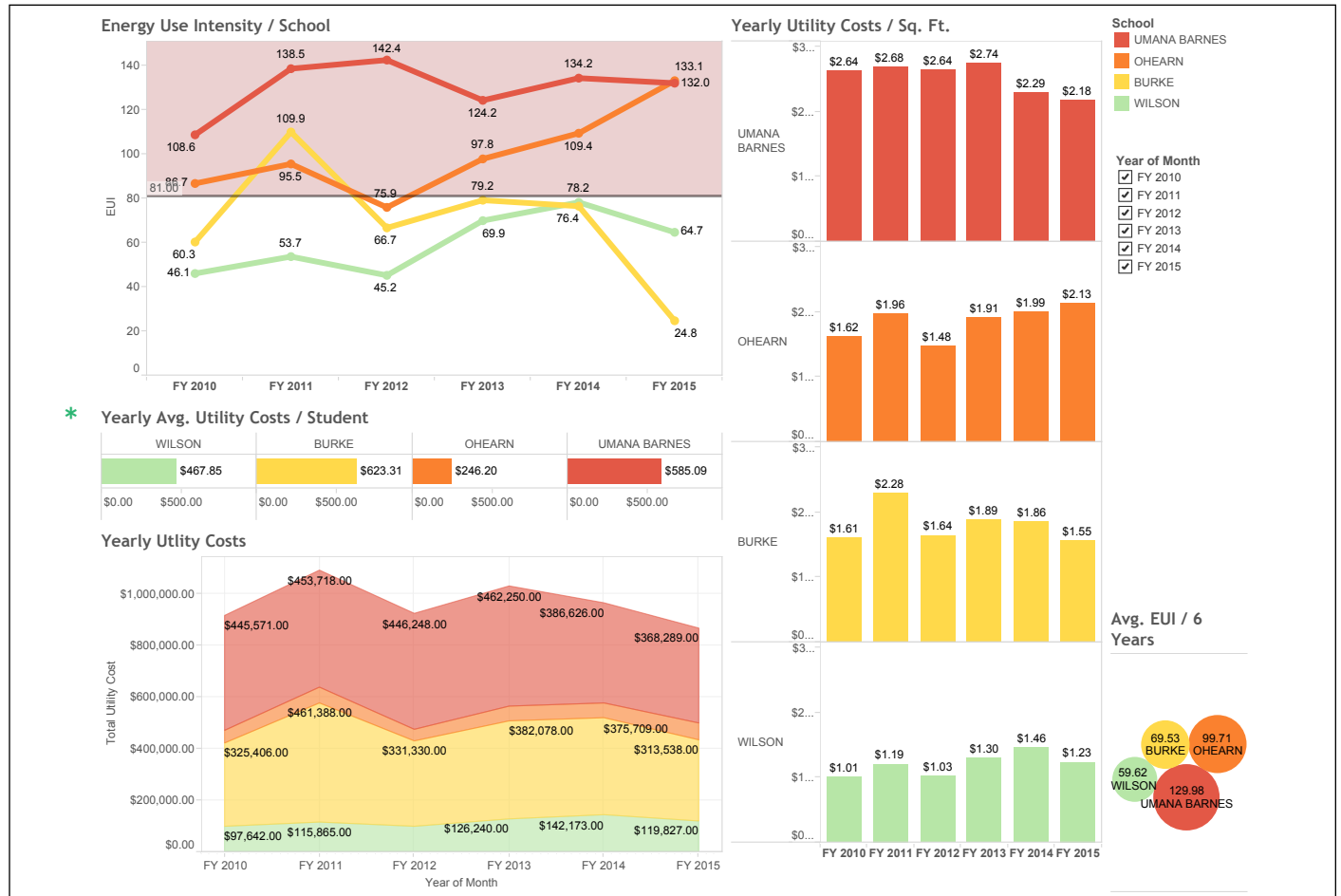
Month over month utility usage and cost data is the most powerful tool to analyze building and system functionality. Trendlines can be observed, operational cost planning and maintenance addressed through careful analysis. This can be a snapshot on how users are actually interfacing with building systems rather than relying on modeling. Operational behavior can then be addressed and modified.

☐ Example: Burke High School's flat line gas use through the winter of 2014/2015 reflects a failed meter, so consumption data is not captured correctly for this period throwing off year over year statistics.

 Negative electrical use at Umana suggests necessary investigations as well.



## Comparative Analysis



The City of Boston and BPS can monitor a number of useful benchmarks for the portfolio of schools in the district, comparing buildings of a certain era, typology (HS, MS, K-5), school size, etc.

Energy Use Intensity (EUI) is then evaluated against our regional average for similar schools. As codes and LEED ratings continue to evolve and tighten energy use in the buildings we consider high performing today will eventually move down the spectrum. Planning for Net Zero becomes imperative for the flexibility of BPS and improving operational costs and budget predictability.

\*Note: The cost per student metric is an “inverse indicator” (in this instance) the low cost per student at older schools such as O’Hearn and Wilson (Henderson Upper and Lower) are indicative of dated systems and non-code compliant ventilation provision, or systems operating below capacity that lack of power and data infrastructure required for BPS educational vision implementation.

### Energy Use Intensity (EUI)

EUI is an average measurement - in this instance specifically for K-12 schools in Climate Zone 5 is used as a baseline for comparative analysis from the US Energy Information Administration's - Commercial Buildings Energy Consumption Survey (CBECS) updated in 2012.

## Energy Performance

## O'Hearn

<u>Period</u>	<u>Kilowatt Hours</u>	<u>Electric Cost</u>	<u>Gas Therms</u>	<u>Gas Cost</u>	<u>mmbtu per sq. ft.</u>	<u>Total mmbtu</u>	<u>Water (Cubic Ft.)</u>	<u>Water Cost</u>	<u>Total Utility Cost</u>
<b><u>FY 2010</u></b>									
Jul-09	122,172	\$23,849	1,236	\$4,948	3.2	540	13,900	1,469	\$30,266
Aug-09	139,652	\$21,758	675	\$4,194	3.22	544	20,790	2,175	\$28,127
Sep-09	115,292	\$21,068	582	\$4,071	2.67	452	30,680	3,191	\$28,330
Oct-09	110,692	\$13,906	5,127	\$10,037	5.27	890	16,270	1,713	\$25,656
Nov-09	104,012	\$12,582	7,390	\$12,072	6.47	1,094	11,730	1,243	\$25,897
Dec-09	150,492	\$32,517	19,098	\$25,518	14.34	2,423	10,980	1,169	\$59,204
Jan-10	54,812	\$19,726	25,357	\$32,765	16.11	2,722	13,100	1,386	\$53,877
Feb-10	85,932	\$14,379	17,365	\$23,491	12.01	2,029	15,050	1,588	\$39,458
Mar-10	-12,948	\$5,583	20,199	\$26,743	11.69	1,975	15,120	1,590	\$33,916
Apr-10	-18,388	\$6,284	18,630	\$24,963	10.65	1,800	28,870	3,081	\$34,328
May-10	100,492	\$22,279	18,379	\$24,648	12.9	2,180	19,640	2,132	\$49,059
Jun-10	-11,788	\$11,352	17,491	\$23,491	10.11	1708	24110	2,610	\$37,453
	<b>940,424</b>	<b>\$205,283</b>	<b>151,529</b>	<b>\$216,941</b>	<b>108.64</b>	<b>18,357</b>	<b>220,240</b>	<b>23,347</b>	<b>\$445,571</b>
<b><u>FY 2011</u></b>									
Jul-10	50,892	\$17,556	10,240	\$15,133	7.09	1,197	19,550	2,127	\$34,826
Aug-10	67,212	\$18,078	3,229	\$7,025	3.27	552	22,800	2,472	\$27,575
Sep-10	41,372	\$19,390	10,593	\$15,550	7.1	1,200	18,710	2,036	\$36,976
Oct-10	-828	\$11,480	17,925	\$24,074	10.59	1,789	13,700	1,501	\$37,055
Nov-10	-30,228	\$2,660	20,605	\$27,236	11.58	1,957	12,610	1,385	\$31,281
Dec-10	-40,828	\$4,399	26,666	\$34,409	14.95	2,527	10,440	1,151	\$39,959
Jan-11	-12,708	\$4,512	30,560	\$38,964	17.82	3,012	29,510	3,245	\$46,721
Feb-11	-21,308	\$5,160	29,201	\$37,280	16.84	2,847	31,690	3,515	\$45,955
Mar-11	-12,668	\$6,732	25,180	\$32,613	14.64	2,474	17,160	1,918	\$41,263
Apr-11	-21,268	\$5,203	21,835	\$28,806	12.49	2,110	22,720	2,533	\$36,542
May-11	-53,148	\$4,537	20,519	\$25,862	11.07	1,870	20,560	2,295	\$32,694
Jun-11	-5,268	\$15,832	18,837	\$23,774	11.04	1,865	29,400	3,265	\$42,871
	<b>-38,776</b>	<b>\$115,539</b>	<b>235,390</b>	<b>\$310,726</b>	<b>138.48</b>	<b>23,400</b>	<b>248,850</b>	<b>27,443</b>	<b>\$453,718</b>
<b><u>FY 2012</u></b>									
Jul-11	18,052	\$13,861	17,925	\$23,177	10.97	1,854	17,530	1,960	\$39,998
Aug-11	7,252	\$16,260	20,336	\$26,113	12.18	2,058	15,660	1,754	\$44,127
Sep-11	25,452	\$18,599	16,100	\$21,013	10.04	1,696	21,340	2,381	\$41,993
Oct-11	25,692	\$11,999	15,829	\$20,879	9.88	1,670	21,340	2,381	\$35,259
Nov-11	972	\$8,517	18,568	\$24,092	11	1,860	14,750	1,655	\$34,264
Dec-11	-26,388	\$5,431	23,333	\$28,852	13.27	2,243	13,450	1,514	\$35,797
Jan-12	-21,428	\$6,746	25,703	\$31,083	14.77	2,497	11,080	1,295	\$39,124
Feb-12	-11,788	\$6,990	21,772	\$27,023	12.64	2,136	13,480	1,602	\$35,615
Mar-12	-68	\$7,362	22,562	\$28,144	13.35	2,255	11,170	1,335	\$36,841
Apr-12	-23,388	\$6,882	23,592	\$28,885	13.48	2,279	13,730	1,633	\$37,400
May-12	-13,508	\$8,643	21,383	\$22,628	12.38	2,092	12,120	1,444	\$32,715
Jun-12	43,412	\$17,408	12,760	\$14,250	8.42	1,424	12,210	1,457	\$33,115
	<b>24,264</b>	<b>\$128,698</b>	<b>239,863</b>	<b>\$296,139</b>	<b>142.38</b>	<b>24,064</b>	<b>177,860</b>	<b>20,411</b>	<b>\$446,248</b>

# Energy Performance

## O'Hearn

<u>Period</u>	<u>Kilowatt Hours</u>	<u>Electric Cost</u>	<u>Gas Therms</u>	<u>Gas Cost</u>	<u>mmbtu per sq. ft.</u>	<u>Total mmbtu</u>	<u>Water (Cubic Ft.)</u>	<u>Water Cost</u>	<u>Total Utility Cost</u>
<b><u>FY 2013</u></b>									
Jul-12	38,012	\$17,994	15,847	\$17,014	10.14	1,714	18,330	2,169	\$37,177
Aug-12	39,372	\$16,754	19,963	\$20,280	12.6	2,130	15,580	1,848	\$38,882
Sep-12	27,532	\$17,274	15,983	\$17,578	10.01	1,692	16,220	1,925	\$36,777
Oct-12	98,132	\$17,817	5,481	\$7,621	5.22	883	12,890	1,536	\$26,974
Nov-12	114,692	\$18,517	11,918	\$17,755	9.37	1,583	12,550	1,494	\$37,766
Dec-12	109,332	\$18,054	13,690	\$19,737	10.31	1,742	13,780	1,640	\$39,431
Jan-13	130,532	\$20,316	17,246	\$23,051	12.84	2,170	11,790	1,433	\$44,800
Feb-13	185,132	\$26,565	18,636	\$23,959	14.76	2,495	34,740	4,240	\$54,764
Mar-13	147,812	\$20,303	16,641	\$22,668	12.83	2,168	46,290	5,667	\$48,638
Apr-13	57,772	\$13,164	11,482	\$17,319	7.96	1,345	12,830	1,583	\$32,066
May-13	-14,668	\$8,743	15,736	\$16,740	9.01	1,523	38,670	4,720	\$30,203
Jun-13	-4,908	\$15,132	15,627	\$16,454	9.15	1,546	26,040	3,186	\$34,772
	<b>928,744</b>	<b>\$210,633</b>	<b>178,250</b>	<b>\$220,176</b>	<b>124.2</b>	<b>20,991</b>	<b>259,710</b>	<b>31,441</b>	<b>\$462,250</b>
<b><u>FY 2014</u></b>									
Jul-13	22,172	\$16,462	16,006	\$16,847	9.92	1,676	17,000	2,088	\$35,397
Aug-13	83,892	\$18,040	10,118	\$11,484	7.68	1,298	17,240	2,118	\$31,642
Sep-13	14,252	\$17,933	12,008	\$13,197	7.39	1,249	16,760	2,061	\$33,191
Oct-13	12,012	\$12,285	18,114	\$18,947	10.96	1,852	13,520	1,667	\$32,899
Nov-13	-14,228	\$8,069	21,499	\$23,480	12.43	2,101	12,380	1,529	\$33,078
Dec-13	-12,708	\$7,341	24,155	\$26,243	14.03	2,372	12,140	1,500	\$35,084
Jan-14	-2,868	\$9,002	26,603	\$28,385	15.68	2,650	8,950	1,147	\$38,534
Feb-14	-13,148	\$3,752	22,882	\$24,749	13.27	2,243	23,590	3,021	\$31,522
Mar-14	-19,308	\$3,794	24,556	\$26,563	14.14	2,389	20,360	2,609	\$32,966
Apr-14	-20,948	\$2,887	19,207	\$21,732	10.94	1,849	16,420	2,110	\$26,729
May-14	-23,268	\$5,775	17,395	\$16,906	9.82	1,660	12,630	1,628	\$24,309
Jun-14	45,412	\$16,131	11,906	\$13,239	7.96	1,345	14,810	1,905	\$31,275
	<b>71,264</b>	<b>\$121,471</b>	<b>224,449</b>	<b>\$241,772</b>	<b>134.22</b>	<b>22,684</b>	<b>185,800</b>	<b>23,383</b>	<b>\$386,626</b>
<b><u>FY 2015</u></b>									
Jul-14	24,812	\$15,912	14,091	\$15,073	8.84	1,493	11,380	1,470	\$32,455
Aug-14	-17,468	\$12,246	17,622	\$17,288	10.07	1,702	9,240	1,208	\$30,742
Sep-14	-21,228	\$14,955	16,308	\$16,327	9.22	1,558	13,630	1,757	\$33,039
Oct-14	-33,828	\$4,797	19,785	\$19,568	11.02	1,863	13,690	1,763	\$26,128
Nov-14	-34,028	\$5,658	21,866	\$24,056	12.25	2,070	15,520	1,996	\$31,710
Dec-14	-15,188	\$6,242	18,512	\$21,440	10.64	1,799	12,990	1,675	\$29,357
Jan-15	5,932	\$6,448	26,133	\$28,605	15.58	2,633	11,240	1,483	\$36,536
Feb-15	-18,708	\$3,070	24,301	\$26,657	14	2,366	11,180	1,511	\$31,238
Mar-15	-5,508	\$3,409	21,032	\$23,881	12.33	2,084	14,080	1,899	\$29,189
Apr-15	-34,908	\$4,802	18,026	\$20,542	9.96	1,683	16,830	2,266	\$27,610
May-15	-1,468	\$7,905	14,679	\$14,651	8.65	1,463	14,660	1,977	\$24,533
Jun-15	4,532	\$17,171	15,721	\$15,459	9.39	1,587	23,200	3,122	\$35,752
	<b>-147,056</b>	<b>\$102,615</b>	<b>228,076</b>	<b>\$243,547</b>	<b>131.95</b>	<b>22,301</b>	<b>167,640</b>	<b>22,127</b>	<b>\$368,289</b>



# Facility Condition Assessments

Methodology

Reports

Energy &  
Sustainability

## Reports

Facility Condition Assessment Data Report follows on next pages.





## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**Campus/School: **Dr. William W. Henderson Inclusion Lower School**Address: **1669 Dorchester Avenue**Building Name: **Dr. William W. Henderson Inclusion**City/Town: **Dorchester, MA 02122**

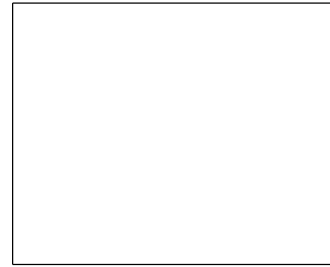
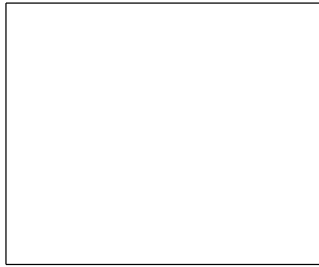
### Facility Campus Address

Address1	Address2	City	ZipCode
<b>1669 Dorchester Avenue</b>		<b>Boston</b>	<b>02122</b>

### Facility Asset / Building Address

Address1	Address2	City	ZipCode
<b>1669 Dorchester Avenue</b>		<b>Boston</b>	<b>02122</b>

### Building / Asset ID Photo(s)



### Facility Contact Information

Name	Title	Telephone	Email
<b>Patricia Lampron</b> <b>John Duwors</b>	<b>Principal</b> <b>Facility Manager</b>	<b>617-635-8725</b>	

### Facility Asset Basic Information - Provided by BPS

Asset Name ID	Alias Other Name ID	Historic Name ID1	Historic Name ID2	Neighbourhood
<b>Dr. William W. Henderson Inclusion</b>				
Year Constructed	GSF	Original Cost	Property Status	Floors Above Basement
	<b>36380</b>		<b>Active</b>	<b>1</b>
Date of Most Recent Renovation for Current Use				
Tile	Carpet	Painted	Windows	Roof
<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
General Condition of Building per BPS <b>Good</b>				

### Real Estate Tax Data - Provided by BPS

Tax Parcel ID	Tax Year Built	Tax_Bld Value	Tax_Land Value	Tax_Total Value
<b>1601230000</b>	<b>1957</b>	<b>3769800</b>	<b>2563100</b>	<b>6332900</b>
Tax_LVsf	Tax_Gross Area	Tax_Living Area	Tax_Year Reno	Tax_PTYPE
<b>59340</b>	<b>36380</b>	<b>31568</b>	<b>0</b>	<b>976</b>
Tax_Struct Class	Tax_Num Floor	Latitude	Longitude	
<b>B</b>	<b>1</b>	<b>42.293970000000</b>	<b>-71.062220000000</b>	



Boston Public Schools

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Assessment Team **Pilot**

Leader Initials

**CP**

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Printed: **28 Sep 2015**

## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**

Campus/School: **Dr. William W. Henderson Inclusion Lower School**

Address: **1669 Dorchester Avenue**

Building Name: **Dr. William W. Henderson Inclusion**

City/Town: **Dorchester, MA 02122**

### Use and Occupancy Information per DOE / BPS / MSBA

DOE Code <b>350266</b>	Category	Grades <b>K0-4</b>	Type <b>Innovation</b>	2014/2015 DOE Enrollment
Total Occupancy	Aud/Cafe Capacity	No. Teachers <b>18.5</b>	DOE Student Teacher Ratio <b>13.1 to 1</b>	DOE Total # of Classes <b>75</b>
BPS Open <b>8:30AM</b>	BPS Close <b>2:30PM</b>	MSBA Class Rooms <b>11</b>	MSBA_sf Student <b>137</b>	MSBA_Gen Envir <b>1</b>
MSBA_Space Util	MSBA_Students Class Room			
<b>Average</b>				

### Historical Listing

State Register <b>NA</b>	Local Significance <b>NA</b>	Federal Listing <b>NA</b>	Within Historical District <b>NA</b>	Recommended for Listing <b>NA</b>
Comments				



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Printed: **28 Sep 2015**

## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**Campus/School: **Dr. William W. Henderson Inclusion Lower School**Address: **1669 Dorchester Avenue**Building Name: **Dr. William W. Henderson Inclusion**City/Town: **Dorchester, MA 02122**

### Initial Interview

Lead/Contact Interviewee Title	Interviewee Name	Phone No.	Email
<b>Principal</b>	<b>Patricia Lampron</b>	<b>617-635-8725</b>	
Others at Interview			
<u>Question</u>		<u>Answer</u>	
Are there any special access requirements?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u> <b>Roof access issues. No main security</b>			
Are mechanical and electrical spaces accessible?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are there hazardous materials present? If so, what types?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u> <b>Gasoline in storage</b>			
Are there hazardous materials (asbestos) reports available?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u> <b>Unknown but more than likely</b>			
Are construction documents (drawings and specs) of the building available?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are certificates for building components available, i.e. elevator, boiler and pressure vessel, NFPA 101 Life Safety, ADA/UFAS, sprinkler system, and any others?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Do you have current issues of concern, i.e. inadequate heating, ventilation, power, etc., and if so what?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u> <b>Heat not working in half the rooms</b> <b>Noise</b> <b>Everything original</b>			
Have there been any recent or scheduled maintenance or renovation activities and what types?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<u>Comments</u> <b>12 years and no</b>			
Can you provide information on recently completed or proposed improvement projects? Please indicate whether proposed or completed.		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<u>Comments</u>			
Have you or your staff identified any deficiencies you wish noted, and what are the locations of the deficiencies?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u> <b>doors, windows, windows not opening, windows not closing</b> <b>Locates throughout the building</b>			
Can you make an assessment of the condition and performance of the building's existing components or systems?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u> <b>On a scale of 1-5, John gave the building a 4 with 1 being best</b> <b>Doors are awful. Not proper seals and significant infiltration.</b>			



Boston Public Schools

WSP Parsons Brinckerhoff / SMMA

Assessment Team **Pilot**

Leader Initials

**CP**

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Printed: **28 Sep 2015**

## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**

Campus/School: **Dr. William W. Henderson Inclusion Lower School**

Address: **1669 Dorchester Avenue**

Building Name: **Dr. William W. Henderson Inclusion**

City/Town: **Dorchester, MA 02122**

### Condition Assessment - Deficiencies

Floor <b>1</b>	Room ID	Room Alias		
System <b>B-SHELL-EXTERIOR</b>	Subsystem - Assembly <b>Walls</b>	Component <b>Masonry</b>	Type <b>Masonry: Brick</b>	Deficiency/Need <b>corroded metal component</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>2-Years 5 to 10</b>	Photo(s)	
Quantity <b>0</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$30</b>		
Total Cost <b>\$0</b>				
Notes				
Floor <b>exterior</b>	Room ID <b>east</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>Walkways</b>	Component <b>stairs</b>	Type <b>concrete</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>3-Renovate/Renew/Repoint</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>100</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$79,920</b>				
Notes <b>resurface main entry stairs before they fail</b>				



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Floor <b>exterior</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>drainage</b>	Component <b>catch basin</b>	Type <b>brick</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>3-Renovate/Renew/Repaint</b>	Reason to Correct <b>6- Functionality/Operations/ Restore</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s)	
Quantity <b>1</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$799.20</b>				
Notes <b>grate support failing, reset grate to proper grade and repave surround</b>				

Floor <b>exterior</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>Patio</b>	Component <b>rubber play surface</b>	Type	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>3-Renovate/Renew/Repaint</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>200</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$127,872</b>				
Notes <b>rubber surface deteriorating, resurface and relevel to drain</b>				



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City/Town: **Dorchester, MA 02122**

Floor <b>exterior</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>Patio</b>	Component <b>asphalt</b>	Type	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>3-Renovate/Renew/Repoint</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>10000</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$6,393,600</b>				
Notes <b>repave and relevel surface</b>				
Floor <b>exterior</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>drainage</b>	Component <b>drywell</b>	Type <b>concrete</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>1-Maintain</b>	Reason to Correct <b>5-Maintenance/Efficiency</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>1</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$149.85</b>				
Notes <b>requires cleaning to maintain operations</b>				



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Floor <b>exterior</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>Building Egress</b>	Component <b>Handicap Approach</b>	Type <b>steps</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>7-ADA/Accessibility</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>7</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$4,195.80</b>				
Notes <b>replace steps with ramp</b>				

Floor <b>exterior</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>drainage</b>	Component <b>catch basin</b>	Type <b>brick</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>1-Maintain</b>	Reason to Correct <b>5-Maintenance/Efficiency</b>	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s)	
Quantity <b>1</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$999</b>		
Total Cost <b>\$149.85</b>				
Notes <b>clean basin. to expose outlet pipe. and avoid future failure</b>				



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Floor <b>exterior</b>	Room ID <b>south</b>	Room Alias		
System <b>G-SITEWORK</b>	Subsystem - Assembly <b>Retaining Wall</b>	Component <b>concrete</b>	Type	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>6-Functionality/Operations/Restore</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>1</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$9</b>		
Total Cost <b>\$5.40</b>				
Notes <b>numerous cracks and loose concrete that requires repair to continue life</b>				
Floor <b>1</b>	Room ID	Room Alias <b>Room 29</b>		
System <b>D-SERVICES-ELECTRICAL</b>	Subsystem - Assembly <b>Distribution</b>	Component <b>Outlets</b>	Type <b>Receptacle (Only)</b>	Deficiency/Need <b>Rusted and improper</b>
Correction/Enhancement	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s)	
Quantity <b>0</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$11</b>		
Total Cost <b>\$0</b>			<b>Chimney near roof exit</b>	<b>Room 29 receptacle</b>
Notes				



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Floor <b>1</b>	Room ID	Room Alias <b>Staff Toilet Room Men</b>		
System <b>D-SERVICES-ELECTRICAL</b>	Subsystem - Assembly <b>Fire Protection</b>	Component <b>Smoke Detectors</b>	Type <b>Smoke Detector</b>	Deficiency/Need <b>none</b>
Correction/Enhancement	Reason to Correct	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s) 	
Quantity <b>0</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$1</b>		
Total Cost <b>\$0</b>	<b>Terrazzo</b>			
Notes				
Floor <b>1</b>	Room ID	Room Alias <b>1A</b>		
System <b>D-SERVICES-ELECTRICAL</b>	Subsystem - Assembly <b>Lighting</b>	Component <b>Fixture</b>	Type <b>Emergency Lighting</b>	Deficiency/Need <b>Not code compliant</b>
Correction/Enhancement	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s) 	
Quantity <b>0</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$1</b>		
Total Cost <b>\$0</b>	<b>Exit Light 1A</b>			
Notes				



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Floor <b>1</b>	Room ID	Room Alias <b>Corridor near Room 8</b>		
System <b>D-SERVICES-ELECTRICAL</b>	Subsystem - Assembly <b>Lighting</b>	Component <b>Fixture</b>	Type <b>Emergency Lighting</b>	Deficiency/Need <b>Loose, Damaged, Missing Fixture</b>
Correction/Enhancement	Reason to Correct <b>4-Security</b>	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s)	
Quantity <b>0</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$349.80</b>		
Total Cost <b>\$0</b>			<b>Room 7</b>	<b>Corridor near Room 8</b>
Notes				
Floor <b>1</b>	Room ID	Room Alias <b>Cafeteria</b>		
System <b>B-SHELL-EXTERIOR</b>	Subsystem - Assembly <b>Windows/Glazed Walls</b>	Component <b>Window Wall</b>	Type <b>Metal</b>	Deficiency/Need <b>Replace</b>
Correction/Enhancement <b>4-Replace/Install New</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s)	
Quantity <b>5</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$348.71</b>		
Total Cost <b>\$1,743.55</b>			<b>Corridor near Room 9</b>	<b>Cafeteria Windows</b>
Notes				



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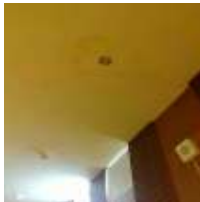

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Floor	Room ID	Room Alias				
Roof						
System	Subsystem - Assembly	Component	Type	Deficiency/Need		
B-SHELL-EXTERIOR	Walls	Trim	Finished Metal	Excess Corrosion		
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)			
3-Renovate/Renew/Repoint	5-Maintenance/Efficiency	3-Years 2 to 5				
Quantity	Unit of Measure	Unit Cost				
4	LNFT	\$5.04				
Total Cost						
\$6.05						
Notes						

Floor	Room ID	Room Alias		
1		Room 30		
System	Subsystem - Assembly	Component	Type	Deficiency/Need
C-INTERIORS	Ceiling	Plaster/Stucco	Plaster/Stucco	Water Penetration
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)	
2-Repair	3-Wear/Damage/Asset Preservation	4-Years 0 to 2		
Quantity	Unit of Measure	Unit Cost		
30	SQFT	\$3.01	<div></div> <div>Inside Room 30Room 30 Active Leak</div>	
Total Cost				
\$90.30				
Notes				



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Floor Roof	Room ID	Room Alias				
System B-SHELL-EXTERIOR	Subsystem - Assembly Walls	Component Masonry	Type Masonry: Brick	Deficiency/Need Joint Mortar Eroded		
Correction/Enhancement 3-Renovate/Renew/Repoint	Reason to Correct 3-Wear/Damage/Asset Preservation	Priority/Urgency 3-Years 2 to 5	Photo(s)			
Quantity 40	Unit of Measure SQFT	Unit Cost \$24.36				
Total Cost \$487.20						
Notes						

Floor <b>1</b>	Room ID	Room Alias <b>1st Floor Boys Toilet Room near Cafe</b>				
System <b>C-INTERIORS</b>	Subsystem - Assembly <b>Doors</b>	Component <b>Wood</b>	Type <b>Solid Core</b>	Deficiency/Need <b>Damaged Louver</b>		
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>2-Aesthetics/Image</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)			
Quantity <b>0</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$732.48</b>				
Total Cost <b>\$0</b>						
Notes						



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Floor <b>exterior</b>	Room ID	Room Alias				
System <b>B-SHELL-EXTERIOR</b>	Subsystem - Assembly <b>Walls</b>	Component <b>Concrete</b>	Type <b>Cast-In-Place Concrete</b>	Deficiency/Need <b>Cracking, Crumbling</b>		
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s) 			
Quantity <b>100</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$12.16</b>				
Total Cost <b>\$364.80</b>						
Notes						

Floor <b>1</b>	Room ID	Room Alias				
System <b>D-SERVICES-MECHANICAL</b>	Subsystem - Assembly <b>Plumbing</b>	Component <b>Pipe, Fittings</b>	Type <b>Plumbing piping valves</b>	Deficiency/Need <b>Major Rust</b>		
Correction/Enhancement <b>4-Replace/Install New</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s) 			
Quantity <b>0</b>	Unit of Measure <b>LNFT</b>	Unit Cost <b>\$45</b>				
Total Cost <b>\$0</b>						
Notes						



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Floor <b>1</b>	Room ID	Room Alias <b>Room</b>		
System <b>B-SHELL-EXTERIOR</b>	Subsystem - Assembly <b>Windows/Glazed Walls</b>	Component <b>Window Wall</b>	Type <b>Metal</b>	Deficiency/Need <b>Replace</b>
Correction/Enhancement <b>3-Renovate/Renew/Repaint</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s)	
Quantity <b>3</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$348.71</b>		
Total Cost <b>\$1,046.13</b>			<b>Room 30 Exit</b>	<b>Room 6</b>
Notes				
Floor <b>1</b>	Room ID	Room Alias		
System <b>B-SHELL-EXTERIOR</b>	Subsystem - Assembly <b>Walls</b>	Component <b>lintles repair</b>	Type <b>repair</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>2-Years 5 to 10</b>	Photo(s)	
Quantity <b>16</b>	Unit of Measure <b>LNFT</b>	Unit Cost <b>\$10</b>		
Total Cost <b>\$96</b>				
Notes	<b>corroded steel lintels on roof at 4 windows in bricks masonry. a layer of bricks will need to be removed</b>			



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Floor	Room ID	Room Alias				
Roof	roof					
System	Subsystem - Assembly	Component	Type	Deficiency/Need		
B-SHELL-EXTERIOR	Walls	lintles repair	repair	Generic - Per Correction/Enhancement		
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)			
2-Repair	3-Wear/Damage/Asset Preservation	2-Years 5 to 10				
Quantity	Unit of Measure	Unit Cost				
16	LNFT	\$10	 			
Total Cost						
\$96						
Notes						
corroded steel lintels on roof at 4 windows in bricks masonry. a laver of bricks will need to be removed						



roof lintels



roof window lintels

Floor	Room ID	Room Alias		
Basement	stair 4			
System	Subsystem - Assembly	Component	Type	Deficiency/Need
B-SHELL-SUPERSTRUCTURE	walls	lintels	replace	Generic - Per Correction/Enhancement
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)	
2-Repair	6-Functionality/Operations/Restore	3-Years 2 to 5		
Quantity	Unit of Measure	Unit Cost		
12	LNFT	\$150		
Total Cost				
\$1,080				
Notes				
leakage through exterior wall leading to corrosion of the window lintels, mortar deterioration in the brick, efflorescence staining and deposits. repair 1-2 or replace in 5 maybe at same time as windows 12 ft of lintels. MSW think at least \$5k to repair.				



stair 4 lintel



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Floor <b>1</b>	Room ID <b>courtyard</b>	Room Alias		
System <b>B-SHELL-ROOF</b>	Subsystem - Assembly <b>Membrane</b>	Component <b>Asphalt</b>	Type <b>Built-up</b>	Deficiency/Need <b>Water Penetration</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s)	
Quantity <b>30</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$4.13</b>		

Total Cost  
**\$123.90**

## Notes

there appears to be roof leakage at the northeast and northwest corners of the court yard, and at the southwest corner of the exterior south elevation. the concrete soffits in these areas are damaged, missing sections and have locally exposed reinforcing steel. The water penetration at the northeast courtyard location has also caused brick masonry deterioration. throughout the concrete soffit there is also cracks perpendicular to the slab edge which have evidence of leakage. this could be from leakage through the perimeter membrane or durnto an insoficient dripmedge in the perimeter roof flashings.

Floor <b>Roof</b>	Room ID <b>roof</b>	Room Alias		
System <b>B-SHELL-ROOF</b>	Subsystem - Assembly <b>Membrane</b>	Component <b>Asphalt</b>	Type <b>Built-up</b>	Deficiency/Need <b>Ponding</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>3-Years 2 to 5</b>	Photo(s) 	<b>1 more photos available</b>
Quantity <b>600</b>	Unit of Measure <b>SQFT</b>	Unit Cost <b>\$4.13</b>	<b>evidence of ponding water</b>	<b>roof details</b>
Total Cost <b>\$2,478</b>				

## Notes

evidence of standing water which will lead to advanced roof deterioration. tar and gravel roof with single ply details and upturns. about to locations of dry exposed membrane about 5ftsq



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Floor <b>1</b>	Room ID	Room Alias		
System <b>B-SHELL-EXTERIOR</b>	Subsystem - Assembly <b>Walls</b>	Component <b>lintles repair</b>	Type <b>repair</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>3-Wear/Damage/Asset Preservation</b>	Priority/Urgency <b>2-Years 5 to 10</b>	Photo(s)	
Quantity <b>16</b>	Unit of Measure <b>LNFT</b>	Unit Cost <b>\$10</b>		
Total Cost <b>\$96</b>				
Notes <b>corroded steel lintels on roof at 4 windows in bricks masonry. a layer of bricks will need to be removed</b>				
Floor <b>Roof</b>	Room ID <b>roof</b>	Room Alias		
System <b>D-SERVICES-MECHANICAL</b>	Subsystem - Assembly <b>D30-Heating, Ventilating, and Air Conditioning (Hvac)</b>	Component <b>Building Exhaust</b>	Type <b>Small: &lt; 1 hp</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>1-Maintain</b>	Reason to Correct <b>5-Maintenance/Efficiency</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s)	
Quantity <b>10</b>	Unit of Measure <b>HP</b>	Unit Cost <b>\$3,600</b>		
Total Cost <b>\$5,400</b>				
Notes <b>Replacement fan belts are left on the roof and are being damaged by weather. Should have a attic stock storage space for replacement parts</b>				



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Building Name: **Dr. William W. Henderson Inclusion**

City/Town: **Dorchester, MA 02122**

Floor <b>Roof</b>	Room ID <b>Roof</b>	Room Alias <b>Roof Fans</b>		
System <b>D-SERVICES-MECHANICAL</b>	Subsystem - Assembly <b>D30-Heating, Ventilating, and Air Conditioning (Hvac)</b>	Component <b>Building Exhaust</b>	Type <b>Medium: 30 to 8,000 mbh</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>2-Repair</b>	Reason to Correct <b>6-Functionality/Operations/Restore</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s)	
Quantity <b>10</b>	Unit of Measure <b>MBH</b>	Unit Cost <b>\$7,200</b>		
Total Cost <b>\$43,200</b>				
Notes <b>There are newer exhaust fans from the original roof curbs. Original curbs are rusted and the new fans do not sit properly on the old curbs. There does not appear to be proper seals and alignment which may be causing addition vibration as stated in previous deficiency.</b>				

Floor <b>All Floors</b>	Room ID <b>All rooms</b>	Room Alias		
System <b>D-SERVICES-MECHANICAL</b>	Subsystem - Assembly <b>Ventilation</b>	Component <b>Air Cleaner/Filter</b>	Type <b>Air Cleaner/Filter</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>3-Renovate/Renew/Repoint</b>	Reason to Correct <b>9-Safety: Structural/Life/Fire Life/Health</b>	Priority/Urgency <b>5-Highest-Immediate</b>	Photo(s)	
Quantity <b>1</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$48,013.50</b>		
Total Cost <b>\$38,410.80</b>				
Notes <b>Lack of ventilation and poor indoor air quality. broken fans, dirty filters, broken windows intended for OA are all causing poor air ventilation and indoor air quality.</b>				



**Boston Public Schools**

**WSP Parsons Brinckerhoff / SMMA**

Assessment Team **Pilot**

Leader Initials **CP**

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Printed: **28 Sep 2015**

## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**Campus/School: **Dr. William W. Henderson Inclusion Lower School**Address: **1669 Dorchester Avenue**Building Name: **Dr. William W. Henderson Inclusion**City/Town: **Dorchester, MA 02122**

Floor	Room ID	Room Alias				
All Floors	All floors					
System	Subsystem - Assembly	Component	Type	Deficiency/Need		
D-SERVICES-MECHANICAL	D30-Heating, Ventilating, and Air Conditioning (Hvac)	Controls	Pneumatic Controls	Generic - Per Correction/Enhancement		
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)			
2-Repair	6-Functionality/Operations/Restore	4-Years 0 to 2				
Quantity	Unit of Measure	Unit Cost				
1	WATTS	\$0				
Total Cost						
\$0						
Notes	Pneumatic control devices are leaking everywhere. Thermostats, valves and dampers are leaking air provided from the air compressor					

Floor	Room ID	Room Alias				
Roof	roof					
System	Subsystem - Assembly	Component	Type	Deficiency/Need		
D-SERVICES-MECHANICAL	D30-Heating, Ventilating, and Air Conditioning (Hvac)	Building Exhaust	Small: < 1 hp	Generic - Per Correction/Enhancement		
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)			
2-Repair	6-Functionality/Operations/Restore	5-Highest-Immediate				
Quantity	Unit of Measure	Unit Cost				
10	HP	\$3,600				
Total Cost						
\$21,600						
Notes	Half of the exhaust fans on the roof are not operational due to a number of reasons. For example, the principle's office exhaust fan does not have the motor. Aside from not operating, the remainder of the fans either have fan belt issues, motor bearing issues or are misaligned on their roof curbs. This causes severe noise and vibration from the fans resulting in the custodial staff turning them off due to teacher and neighbor complaints.					



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## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**

Campus/School: **Dr. William W. Henderson Inclusion Lower School**

Address: **1669 Dorchester Avenue**

Building Name: **Dr. William W. Henderson Inclusion**

City/Town: **Dorchester, MA 02122**

Floor <b>Basement</b>	Room ID <b>Mechanical Room</b>	Room Alias <b>Boiler Room</b>		
System <b>D-SERVICES-MECHANICAL</b>	Subsystem - Assembly <b>Boiler, Package</b>	Component <b>Hot Water</b>	Type <b>Steam</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>4-Replace/Install New</b>	Reason to Correct <b>6-Functionality/Operations/Restore</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s)	
Quantity <b>2</b>	Unit of Measure <b>EACH</b>	Unit Cost <b>\$47,004.40</b>		
Total Cost <b>\$94,008.80</b>				
Notes <b>Operational but beyond useful life cycle and should be considered for replacement and upgrade.</b>				

Floor <b>1</b>	Room ID <b>Auditorium</b>	Room Alias		
System <b>D-SERVICES-MECHANICAL</b>	Subsystem - Assembly <b>D30-Heating, Ventilating, and Air Conditioning (Hvac)</b>	Component <b>Air Handler Unit</b>	Type <b>Small: &lt; 20 hp</b>	Deficiency/Need <b>Generic - Per Correction/Enhancement</b>
Correction/Enhancement <b>1-Maintain</b>	Reason to Correct <b>5-Maintenance/Efficiency</b>	Priority/Urgency <b>4-Years 0 to 2</b>	Photo(s)	
Quantity <b>1</b>	Unit of Measure <b>HP</b>	Unit Cost <b>\$11,000</b>		
Total Cost <b>\$1,650</b>				
Notes <b>Dirty filters</b>				

### Equipment Inventory

**Not in scope - Not Performed for this Assessment**

### Energy & Climate

**Not in scope - Not Performed for this Assessment**



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## Facilities Condition Assessment Data Report

Assessment Date: **04 Aug 2015**Campus/School: **Dr. William W. Henderson Inclusion Lower School**Address: **1669 Dorchester Avenue**Building Name: **Dr. William W. Henderson Inclusion**City/Town: **Dorchester, MA 02122**

### Exit Interview

#### Staff Debriefed

Title	Name
<u>Top Five Major Findings/Staff Priorities</u>	
Building Discipline/Technical Discipline	
<u>Comments</u>	
Building Discipline/Technical Discipline	
<u>Comments</u>	
Building Discipline/Technical Discipline	
<u>Comments</u>	
Building Discipline/Technical Discipline	
<u>Comments</u>	
Building Discipline/Technical Discipline	
<u>Comments</u>	

#### Top Five Major Findings/Staff Priorities

Building Discipline/Technical Discipline

Comments

Building Discipline/Technical Discipline

Comments

Building Discipline/Technical Discipline

Comments

Building Discipline/Technical Discipline

Comments

Building Discipline/Technical Discipline

Comments

### Physical Conditions - Overall Systems Ratings

A-Foundations	A-Substructure	B-Shell-Exterior	B-Sheel-Roof
<b>2-Good/Fair</b>	<b>2-Good/Fair</b>	<b>4-Fair/Poor</b>	<b>3-Fair</b>
B-Shell-Superstructure	C-Interiors	C-Interiors-Speciality	D-Services-Conveying
<b>2-Good/Fair</b>	<b>2-Good/Fair</b>	<b>NA-Not Applicable/Not Assessed</b>	<b>NA-Not Applicable/Not Assessed</b>
D-Services-Mechanical	D-Services-Electrical	E-Equipment	G-SiteWork
<b>4-Fair/Poor</b>	<b>4-Fair/Poor</b>	<b>NA-Not Applicable/Not Assessed</b>	<b>4-Fair/Poor</b>
F-Special Construction (e.g. Modulares,Pools, etc.)	<b>Overall Facility-Judgement</b>	<b>Overall Facility Rating - System Averaged, Excluding Special Construction</b>	
<b>NA-Not Applicable/Not Assessed</b>	<b>3-Fair</b>	<b>3.06</b>	

### Cost Information Summary

Asset Replacement Value (ARV)	Equipment Replacement Value	Tax Assessed Value
<b>\$8,454,816</b>	<b>Not Inventoried</b>	<b>\$3,769,800</b>
Facility Deficiencies	Facility Enhancement (Energy & Climate)	Equipment Replacement Cost - Fail or Poor Only
<b>\$6,818,669.63</b>	<b>Not Assessed</b>	<b>Not Assessed</b>
Total Capital Project and Repair Cost	Facility Condition Index (FCI)	
<b>\$6,818,669.63</b>	<b>0.806</b>	



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## *Appendix*

- 1 1993 Wallace Floyd Report
- 2 MSBA 2010 Needs Survey





# 1993 Wallace Floyd Report

FACILITY PROFILE				O'HEARN ELEMENTARY	
Year Built: 1957	Zone: East	Enrollment as of 12/92: 210 pupils			1669 Dorchester Avenue
Number of Stories: 1	Neighborhood: Dorchester	S.F. per Enrolled Pupil: 145 s.f.			Dorchester, MA 02122
Estimated Gross Area: 30,381 s.f.	Facility Type: Elementary School				
Interior Space Summary				Exterior Space Summary	
Room Type	# of Spaces	Approx. Area (s.f.)	Use	Approx. Area	
Administration Office	2	644	Parking Spaces	0 spaces	
Art	1	215	Paved Area	29,981 s.f.	
Auditorium	1	3,127	Landscaped Area	1,366 s.f.	
Cafeteria	1	1,270	Building Footprint	29,357 s.f.	
Classroom (Regular)	8	6,413	Approximate Total Site Area	60,703 s.f.	
Computer Room	0	0			
Faculty Room	1	165			
Guidance Office	0	0			
Gymnasium	0	0			
Hallway/Stairway/Vestibule	1	7,635			
Kindergarten/Pre-Kindergarten	3	3,430			
Kitchen	1	220			
Library/Media Center	1	756			
Locker Room	0	0			
Mechanical	2	2,437			
Multi-Purpose Room	0	0			
Music 2 (Instruction)	0	0			
Music 3 (Practice Room)	0	0			
Music 4 (Ensemble Room)	0	0			
Not Used	0	0			
Nurse/Health Suite	1	182			
Other Office	5	981			
Remedial and Seminar	1	368			
Service/Other Support	1	25			
Special Education and Collaborative	0	0			
Storage	8	764			
Toilet	13	1,749			
Approximate Total Gross Area:		30,381			
Regularly Used Other BPS Facilities				Regularly Used Non-BPS Facilities	
Facility	Purpose	Schedule			
Campbell Resource Center	meeting	sometimes			
Wayne Wright	meeting/parents	occasionally			
Local churches	play/recreation	occasionally			
Town field		few times a week			

# FACILITY PROFILE

## Physical Condition Summary

Facility:	O'HEARN ELEMENTARY
Facility Type:	Elementary School
Estimated Total Area:	30,381 s.f.
Facility S.F. Replacement Cost [1]:	\$150
Facility Full Replacement Value [2]:	\$4,557,150

Building System	System Deficiency Cost	Syst. Repl. Cost as % of Bldg. Repl. Cost	System Condition Grade
Primary Structure	\$1,660	12%	6
Envelope	\$3,915	19%	6
Site	\$0	8%	6
Interior Architecture & Finishes	\$1,687	32%	6
Mechanical	\$5,400	12%	6
Electrical	\$28,350	10%	5
Plumbing & Fire Protection	\$3,577	7%	6
Total Facility [3]	\$44,589	100	

## NACUBO Grade [4]:

.01

## System Condition Grade Key

Grade	System Deficiency Cost / System Replacement Cost
0	> .30
1	.25 - .30
2	.20 - .25
3	.15 - .20
4	.10 - .15
5	.05 - .10
6	.00 - .05

## Footnotes

- [1] Square foot replacement costs as provided by PFD.
- [2] 1993 costs.
- [3] Excludes costs to make facility accessible. See information in Access Summary.
- [4] National Association of College and University Business Officers. This grade represents the ratio of the total deficiency cost to the full facility replacement value.

# O'HEARN ELEMENTARY

## Access Summary

Facility's Existing Rating: 5

## Rating Key and Accessibility Improvement Costs

0	Inaccessible school		\$0
1	Accessible entry at grade (includes accessible parking)		\$0
2	Accessible entry + accessible toilets (at grade)		\$12,500
3	Accessible entry + toilets (at grade) + access to offices/assembly		\$12,500
4	All floors accessible but not accessible toilets on each floor		\$12,500
5	All floors accessible + accessible toilet facilities (each floor)		\$12,500
6	Total 504 costs (#5 costs + other facilities + site + interior stairs + accessible exit)		\$22,596

## Component Summary Rating

Building Component	Grade	Estimated Cost to Make Accessible
Entrances/exits	Accessible	\$0
Site	Partially Accessible	\$1,096
Building Circulation	Accessible	\$0
Toilet Facilities	Partially Accessible	\$12,500
Other Facilities	Partially Accessible	\$9,000
		\$22,596

## Principal Rooms on Accessible Pathways, Assuming an Access Entry at Grade (Rating Level 1)

NOTE: If existing rating is higher than level 1, then the higher level is assumed.

Space Type	Present	Floor(s)	Quantity on Accessible Pathway
Offices	Yes	1	1
Nurse's room/medical suite	Yes	1	1
Teachers' room	Yes	1	1
Auditorium/assembly/theater	Yes	1	1
Gymnasium	No		
Shower/locker rooms	No		
Swimming pool	No		
Cafeteria/lunch room	Yes	1	1
Library	Yes	1	1

**FACILITY PROFILE****O'HEARN ELEMENTARY****Educational Program and Community Use Inventory**

Educational Programs		Special Education	Bilingual Education
Regular Education			English as a Second Language
AIDS Education	Kindergarten I	A4 Academic Remediation SS	
After School Program	Kindergarten II	W4 Aphasic SS	
Art	Mathematics	X4 Autistic SS	
Athletics	Media Production	O4 Education Social	
Computer Training	Music	K4 Evaluation Program SS	
Dance	Parent Center Program	H4 Hearing (Total)	
English	Physical Education	I4 Integrated Program SS	
Extended Day Program	Reading Recovery	J4 Language Adaptive Behavior	
External Degree Program	Recycling Center Program	U4 Language SS	
Foreign Languages	Science	B4 Language/Adaptive Behavior	
Geography	Social Studies	L4 Learning Disabled	
Health Education	Speech	Q4 Low Incidence Language	
Health Services	Theatre	T4 Low Incidence Learning	
History		M4 Multi-handicapped SS	
		N4 Part-time Language Adaptive	
		P4 Physically Handicapped	
		R1 Resource - 1 Programs	
		R2 Resource - 2 Programs	
		R3 Resource - 3 Programs	
		S1 Speech - 1 Programs	
		S2 Speech - 2 Programs	
		S3 Speech - 3 Programs	
		V4 Vision Impaired SS	

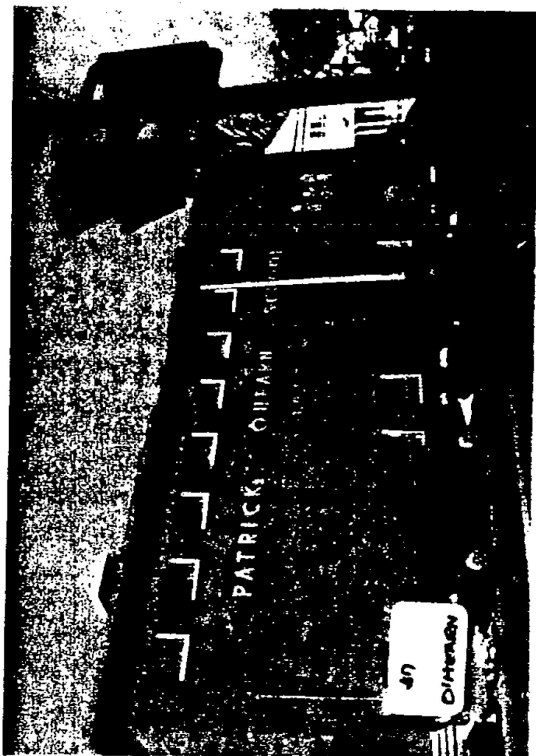
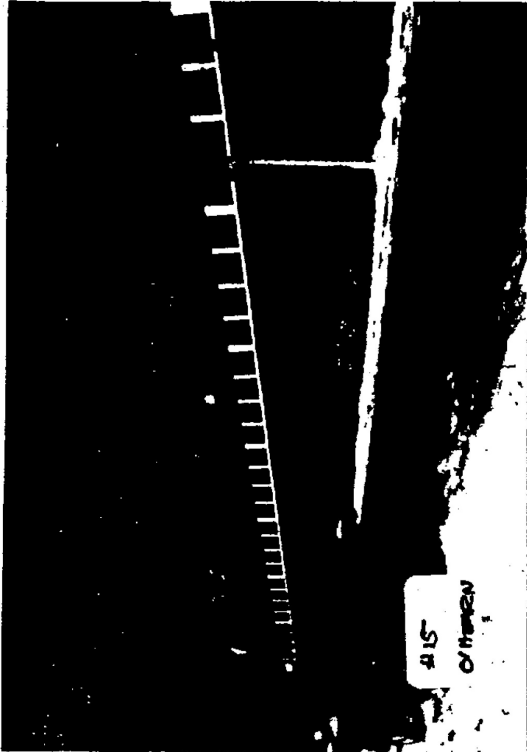
**Community Uses of the School**

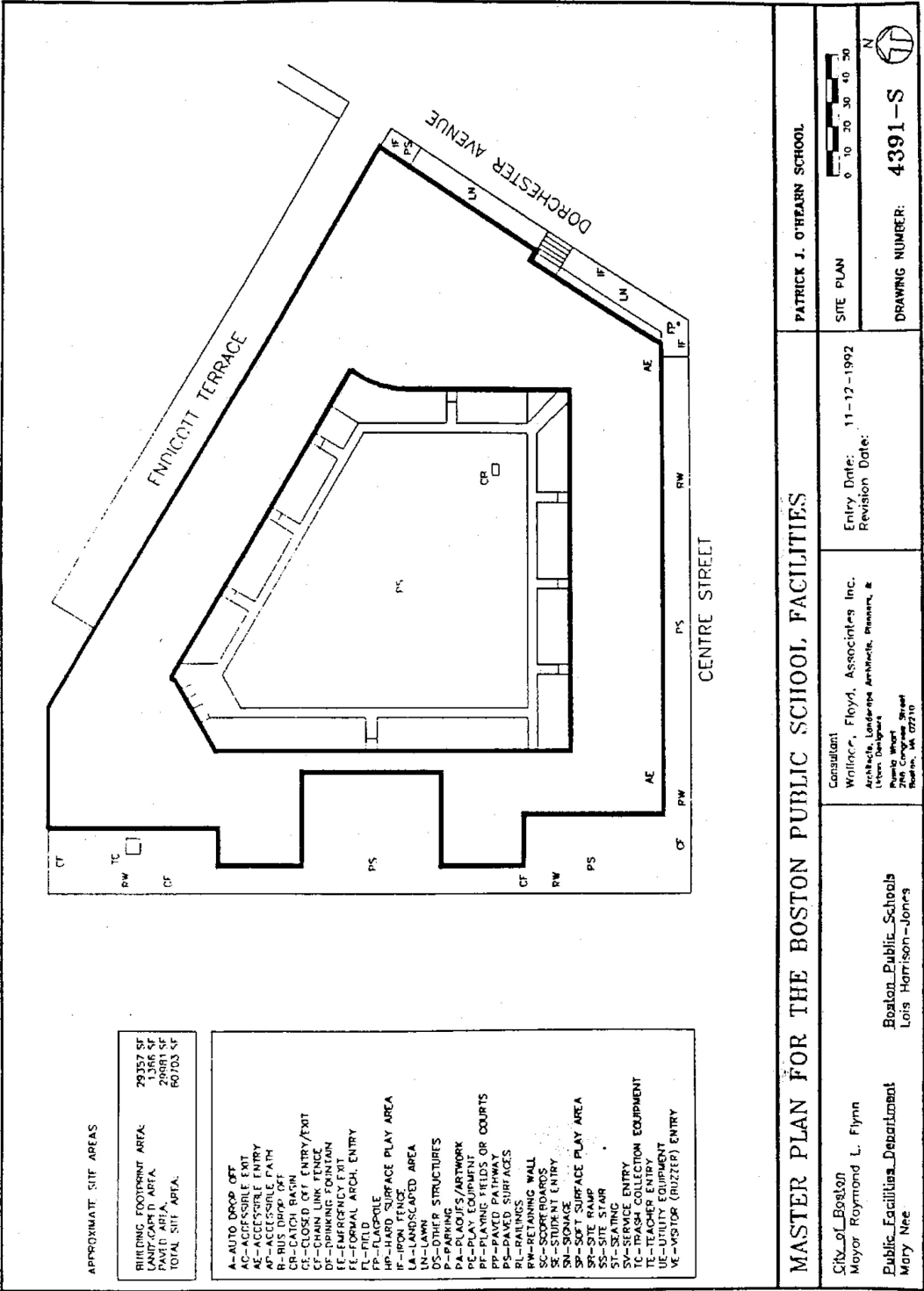
Program	Schedule	# of Partic.	Room
Voting			

**Supplemental Programs before or after School**

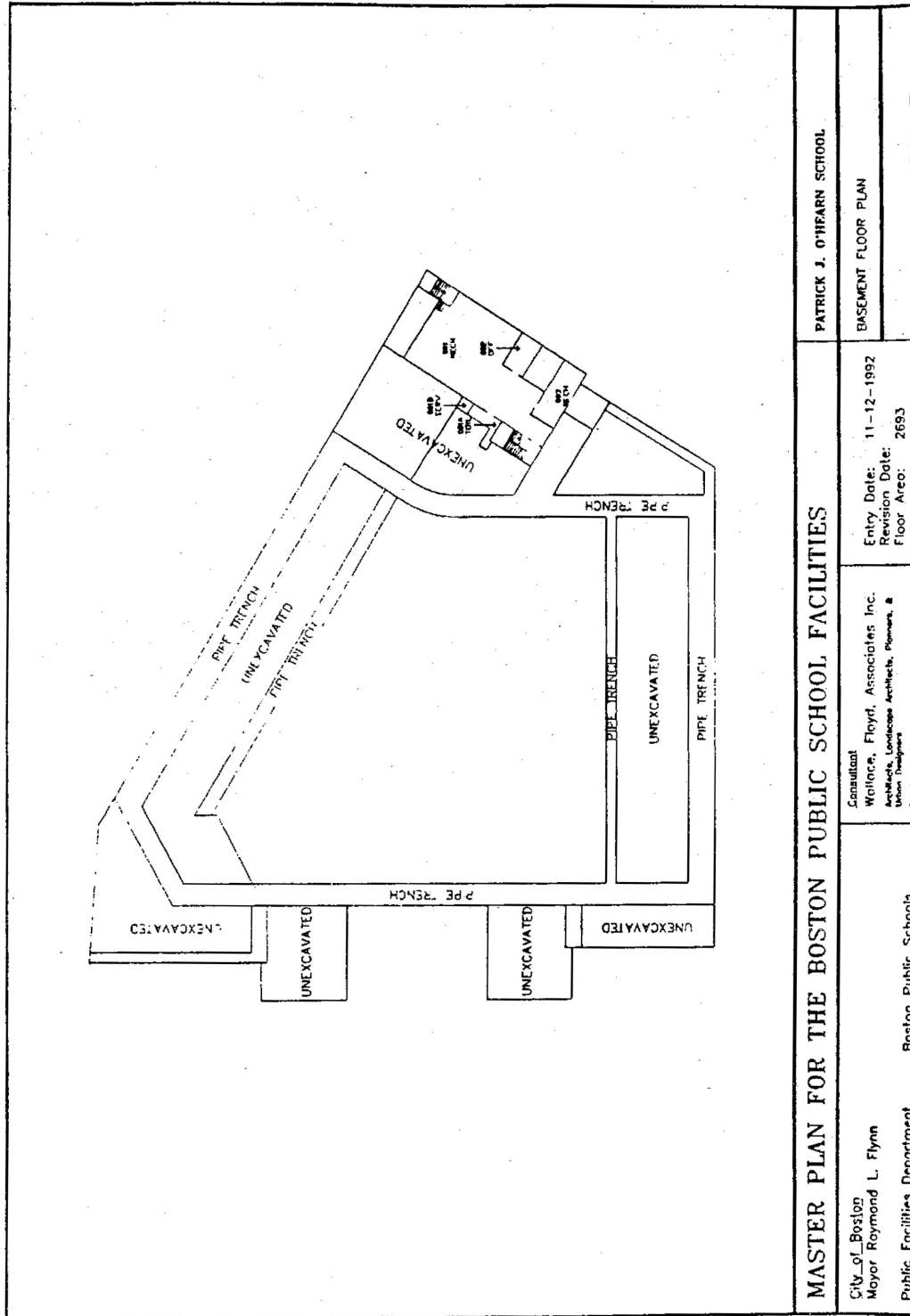
Program	Schedule	# of Partic.	Needs	Comments
Arts	weekly	30	Auditorium and cafeteria.	
Before School Tutor	daily	20	Classroom	
Computer Enrichment	daily	15	Computer	
Dance Program	weekly	50	Auditorium and cafeteria.	
Evening Forums	monthly	50	Auditorium	
Musical In-Training Classes	weekly	15	Auditorium	
Presentations (Plays)	monthly	30	Auditorium	
Special Family Nights	every few month	100	Auditorium and classrooms.	
Sports Clubs	weekly	30	Courtyard	

PROLINE # 14919  
KLEER-VU 3 1/2 x 5









MASTER PLAN FOR THE BOSTON PUBLIC SCHOOL FACILITIES

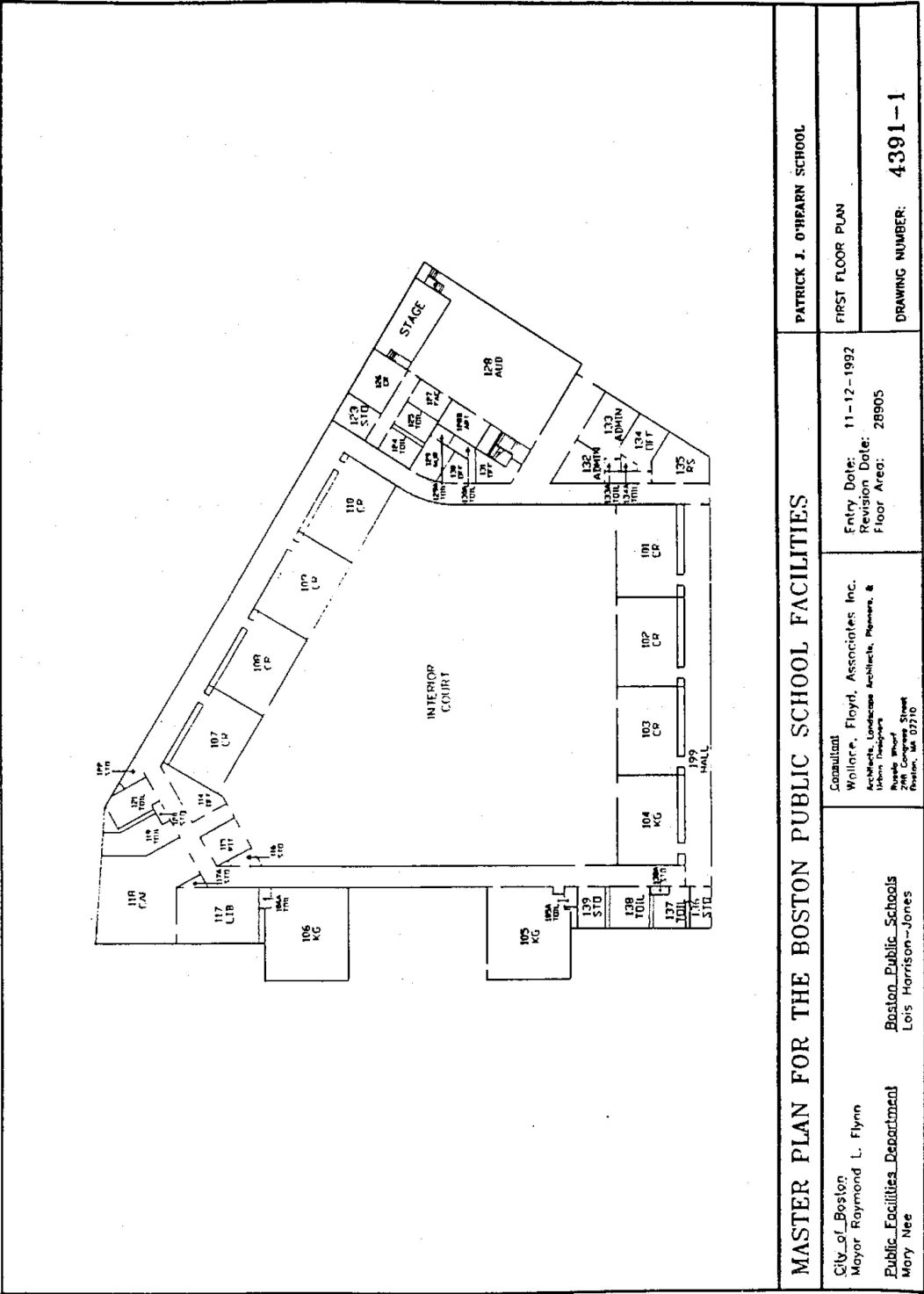
PATRICK J. O'HEARN SCHOOL

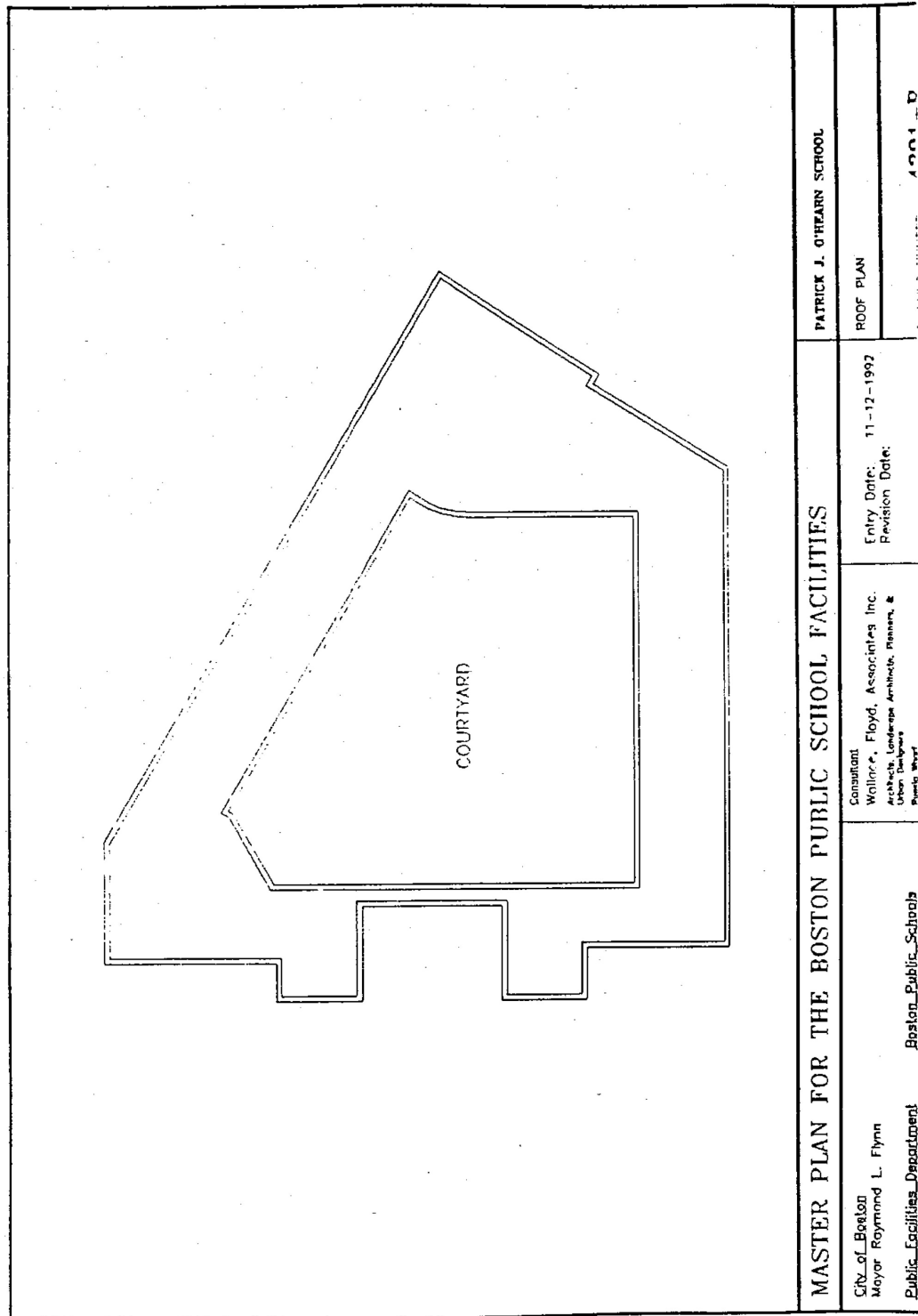
BASMENT FLOOR PLAN

Entry Date: 11-12-1992  
Revision Date:  
Floor Area: 2693

Consultant:  
Wellcome, Floyd, Associates Inc.  
Architect, Landscape Architect, Planner, &  
Engineer

City of Boston  
Mayor Raymond L. Flynn  
Public Facilities Department  
Boston Public Schools







## MSBA 2010 Needs Survey

School Details	Enrollment	Notes	Site Analysis	Buildings
District Code	0035	District Name	Boston	
School Code	0266	School Name	Henderson Inclusion	
School Area (GSF)	29,357	GSF per Student	0	
Year Opened	1957	Total Enrollment	0	
Historic?	No	Total Permanent Staff	37.0	

**CONTACT DETAILS**

Name	Title	Email	Phone	School Assessment Representative?	View
<a href="#">Patricia Lampron</a>	Principal	plampron@boston.k12.ma.us	(617) 635-8725	Yes	View
<a href="#">John Duwors</a>	Head Custodian	None@none.com	(617) 635-8725	No	View

**SHARED SCHOOL**

Shared School? ☐ Yes ☒ No

**SCHOOL DETAILS**

Design Enrollment	9,999
School Area (GSF)	29,357
Grades Served	<input checked="" type="checkbox"/> Pre-K <input checked="" type="checkbox"/> K <input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12
Year Opened	1957
Historic?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Total Permanent Staff	37.0
Does this school have a nurse on site?	<input checked="" type="radio"/> Yes <input type="radio"/> No
If <input checked="" type="radio"/> YES, please specify how many nurses at this school are:	Full Time <input type="text"/> 1 Part Time <input type="text"/>
Please provide the quantity of each classroom type below:	
General Classroom	10
Science Demo	0
Science Lab	0
Computer Lab	0
Special Education	1
Art	0 <input checked="" type="checkbox"/> Art on a Cart?
Music	0 <input checked="" type="checkbox"/> Music on a Cart?
Vocational Classroom	0
Vocational Shop	0
Vocational Classroom/Shop	0
Non-traditional Classroom	0
Other	0
Classroom and Core Spaces Notes	<div></div>
Are the hallways being used for storage, copy areas, student breakout spaces, etc?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are most general classrooms undersized?	<input type="radio"/> Yes <input checked="" type="radio"/> No
In addition, does the School have classrooms that are not used as classrooms?	
Collaborative	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	

How many?	
Name of Collaborative	<input type="text"/>
Provide the approximate square footage of collaborative space	
District Administration	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	
How many?	
Notes	<input type="text"/>
Storage	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	
How many?	
Notes	<input type="text"/>
Other	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	
How many?	
Notes	<input type="text"/>
Open Floor Plan?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does the school have interior classrooms that lack views to outside daylight?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	
How many?	
Does the school have internet access?	<input checked="" type="radio"/> Yes <input type="radio"/> No
If "Yes",	
Is internet access wireless?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Indicate whether full or partial	<input type="radio"/> Full <input checked="" type="radio"/> Partial
Does every classroom have a computer for instructional use?	<input checked="" type="radio"/> All <input type="radio"/> Most <input type="radio"/> Some <input type="radio"/> None

### SECURITY SYSTEMS

Surveillance Camera Coverage	<input type="radio"/> Full <input type="radio"/> Partial <input checked="" type="radio"/> None	Notes	None
Intrusion Alarm Coverage	<input checked="" type="radio"/> Full <input type="radio"/> Partial <input type="radio"/> None	Notes	Exterior doors are alarmed. Interior motion detectors.
Metal Detector Coverage	<input type="radio"/> Full <input type="radio"/> Partial <input checked="" type="radio"/> None	Notes	None
Secure Entry?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Notes	Aiphone
Full-Time Security Staff?	<input type="radio"/> Yes <input checked="" type="radio"/> No	Notes	None

### ELEVATORS

Does the School have an Elevator(s)?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	
How many?	
Does the School have a chair lift?	<input checked="" type="radio"/> Yes <input type="radio"/> No
If "Yes",	
How many?	1

### STRUCTURAL DEFICIENCY

Is there an imminent danger of structural failure that could cause significant harm to building occupants?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If "Yes",	



Has this been verified by a professional in a written report? ☐ Yes ☒ No

If "Yes",

Name of firm

Date of Report

Has the report been submitted to the MSBA? ☐ Yes ☒ No

#### BUILDING LIST

Building Name	Year Built	Last Add/Reno Year	Does the building have A/C?	Is the building vacant?
Main Building	1957		No	No

#### CORE AREAS

##### LIBRARY/MEDIA CENTER

Does the School have a Library/Media Center? ☐ Yes ☒ No

If "No",

Does the School share a Library/Media Center with another School? ☐ Yes ☒ No

Comments

None

##### CAFETERIA

Does the School have a Cafeteria? ☒ Yes ☐ No

If "YES",

What is the Number of Lunch Seatings? 6

Does the Cafeteria have a Stage? ☐ Yes ☒ No

If "NO",

Does the School share a Cafeteria with another School? ☐ Yes ☒ No

Comments

None

##### GYMNASIUM

Does the School have a one or more Gymnasium(s)? ☐ Yes ☒ No

If "YES",

What is the Number of Gymnasiums? 0

If "NO",

Does the School share a Gymnasium with another School? ☐ Yes ☒ No

Does the School have a Multi-purpose Room that is used as a Gymnasium? ☐ Yes ☒ No

Does the School have a swimming pool? ☐ Yes ☒ No

Does the School have an ice rink? ☐ Yes ☒ No

Comments

None

##### AUDITORIUM

Does the School have an Auditorium? ☒ Yes ☐ No

If "YES",

What is the Total Number of Seats? 400

Comments

Stage is accessible with a chair lift.

#### SPECIAL EDUCATION

<b>Inclusion</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No	<b>Notes</b>	Special education is included in general classrooms.
<b>Self-contained</b>	<input checked="" type="radio"/> Yes <input type="radio"/> No	<b>Notes</b>	Special education space is provided.
<b>Collaborative</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No	<b>Notes</b>	None

**MAINTENANCE**

<b>General Cleanliness</b>	<input checked="" type="radio"/> Above Average <input type="radio"/> Average <input type="radio"/> Below Average	<b>Notes</b>	Most finishes clean with localized marks on corridor walls.
<b>Routine System Maintenance</b>	<input type="radio"/> Above Average <input checked="" type="radio"/> Average <input type="radio"/> Below Average	<b>Notes</b>	Most systems and finishes are in good condition with exception of exterior window frames which have had no refinishing.
<b>Capital Repair</b>	<input type="radio"/> Above Average <input checked="" type="radio"/> Average <input type="radio"/> Below Average	<b>Notes</b>	Roof and boiler indicated as maintained with no impacts to operations. Single pane windows are capital repair items which require work.

School Details	Enrollment	Notes	Site Analysis	Buildings
----------------	------------	-------	---------------	-----------

District Code	0035	District Name	Boston
School Code	0266	School Name	Henderson Inclusion
School Area (GSF)	29,357	GSF per Student	0
Year Opened	1957	Total Enrollment	0
Historic?	No	Total Permanent Staff	37.0

#### SCHOOL ENROLLMENT

Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Other	Total
2010-2011	33	22	46	24	23	45	35	0	0	0	0	0	0	0	0	195
2011-2012	36	47	24	48	24	23	42	0	0	0	0	0	0	0	0	208
2012-2013	34	46	46	25	47	25	21	0	0	0	0	0	0	0	0	210

School Details	Enrollment	Notes	Site Analysis	Buildings
<b>District Code</b>	0035	<b>District Name</b>	Boston	
<b>School Code</b>	0266	<b>School Name</b>	Henderson Inclusion	
<b>School Area (GSF)</b>	29,357	<b>GSF per Student</b>	0	
<b>Year Opened</b>	1957	<b>Total Enrollment</b>	0	
<b>Historic?</b>	No	<b>Total Permanent Staff</b>	37.0	

**SCHOOL NOTES**

School Details	Enrollment	Notes	Site Analysis	Buildings
District Code	0035	District Name	Boston	
School Code	0266	School Name	Henderson Inclusion	
School Area (GSF)	29,357	GSF per Student	0	
Year Opened	1957	Total Enrollment	0	
Historic?	No	Total Permanent Staff	37.0	

### BASE INFORMATION

Site Area (Acres)	1.16		
Site Constraints	<input checked="" type="checkbox"/> Shape	Shape is triangular.	
	<input type="checkbox"/> Septic	None	
	<input checked="" type="checkbox"/> Sewer	City sewer.	
	<input type="checkbox"/> Well	City water.	
	<input type="checkbox"/> Retention Ponds	None	
	<input type="checkbox"/> Topography	None	
	<input type="checkbox"/> Hazardous Materials	None	
	<input type="checkbox"/> Wetlands	None	
	<input checked="" type="checkbox"/> Landlocked by Neighborhood	City neighborhood.	

### SITE CONDITION ANALYSIS

	N/A	GMO	Minor	Moderate	Major	Replace	Notes
Parking Lot, Drives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No parking, city school.
Walkways, Drop Areas	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Walks were redone in 2008 and still appear like new.
Playgrounds, Playfields	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	The school yard is three years old and the hard top is like new.
Site Lighting	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Building pole mount, with adequate lighting indicated.
Fencing	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Chain link fencing, polycoat protected. Weathered but rigid.
Drainage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No issues reported.
Accessibility			<input checked="" type="radio"/> Full	<input type="radio"/> Partial	<input type="radio"/> Minimal		ADA signage at every entrance. Curb cut from city


							sidewalk so it is accessible.
--	--	--	--	--	--	--	-------------------------------

**SITE ANALYSIS - OTHER NOTES**

None



School Details	Enrollment	Notes	Site Analysis	Buildings
District Code	0035	District Name	Boston	
School Code	0266	School Name	Henderson Inclusion	
School Area (GSF)	29,357	GSF per Student	0	
Year Opened	1957	Total Enrollment	0	
Historic?	No	Total Permanent Staff	37.0	

Please select a building: Main Building 

Last Updated By	Eric Sheppard
Last Updated Date	08/19/2010

**BRIEF BUILDING HISTORY**

Year Built	1957
For what grade level was the school originally built?	<input checked="" type="checkbox"/> Elementary School <input type="checkbox"/> Middle School <input type="checkbox"/> High School



**ADDITION/RENOVATION DETAILS**

**BUILDING DETAILS**



Number of Floors	1
Does the building have central A/C?	<input type="radio"/> Yes <input checked="" type="radio"/> No
If yes, indicate whether it is	<input type="radio"/> Full <input type="radio"/> Partial
Is any portion of the building vacant?	<input type="radio"/> Yes <input checked="" type="radio"/> No

**BUILDING SYSTEMS**


**Roof**

Age of Oldest(in years)	7
Type(s)	Tar with gravel ballast. 
Total Square Footage	29357 <input checked="" type="radio"/> School Reported <input type="radio"/> Assessor Estimated
Year of Last Repair or Replacement	2003
Description of Last Repair or Replacement	Had leaks where tree impacted but patched immediately. New install 2003. 

**Exterior Windows**

Age of Oldest(in years)	53
Type(s)	Single pane, metal frame. 
Year of Last Repair or Replacement	1992
Description of Last Repair or Replacement	Replaced panels only, metal frames are original. 

**Boilers**

Age of Oldest(in years)	20
Year of Last Repair or Replacement	2006
Description of Last Repair or Replacement	Two boilers in 1990. Converted to gas in 2006. 

**HVAC**

<b>Age of Oldest(in years)</b>	53						
<b>Year of Last Repair or Replacement</b>	1957						
<b>Description of Last Repair or Replacement</b>	Univents are original and toilet exhaust original. Ongoing maintenance.						

	N/A	GMO	Minor	Moderate	Major	Replace	Notes
Roof	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Proactive, no leaks.
Exterior Windows	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Single pane, energy issue. Frames on exterior require refinishing. Appear clean,
Boilers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Two boilers localized rust. Appear well maintained overall. Clean boiler room.
HVAC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Exhaust toilet room, function well. Univents original, marks on housing. Moderate due to
Structural Soundness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No issues reported.
Exterior Doors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Metal with glass panel. Current panic hardware. Minor du to age.
Exterior Walls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Brick thats relatively clean with localized graffiti.
Interior Floors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	VAT was removed in 2002. Terrazzo in corridors. VQT 2x2 in good condition
Interior Walls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Painted CMU. Glaze paint CMU thats clean with localized marks. Moderate due to age.
Interior Ceilings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Painted plaster with localized cracks. Moderate due to age.
Interior (Other)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Interior doors are solid and stable but have marks, refinish required along with
Electrical Services and Distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Mains appear relatively new. Spares available. Wiremold electric outlets are 75%
Electrical Lighting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	T8's, efficient. Adequate lighting.
Plumbing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Few lavatories, most older. Porcelain in good condition and no leaks.
Fire/Life Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No general. Sprinklers at boiler only. Exit signs. A/L
Specialities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Desk and chairs are clean but localized stains. Toilet part in good condition and relatively

Technology	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Intercom system for communicating. Adequate outlets 75% with cords present.
Accessibility			<input type="radio"/> Full	<input checked="" type="radio"/> Partial	<input type="radio"/> Minimal		No auto entry. Braille signage at classrooms. No level hardware. Lift present.



SMMA

10 Year Facility Master Plan  
3 School Pilot Study for:

## *Boston Public Schools*

Boston, Massachusetts

11.09.2015



# *Henderson Upper School Report*

## **1 Planning Considerations**

*Summary*

*Context and Research*

*Floor Plans*

*Site*

## **2 Building Educational Assessments**

*Summary & Mission*

*Background*

*Methodology & Approach*

*Pilot Study Report*

*Findings and Recommendations*

## **3 Building Physical Assessments**

*Summary*

*Due Diligence Report*

*Energy & Sustainability*

## **4 Facility Condition Assessments**

*Methodology*

*Reports*

## **5 Appendix**



# Planning Considerations

## Summary

### Context & Research

### Floor Plans

### Site

## Summary

The Henderson Upper School (Grades 5 to 12) is an all inclusion model serving the entire BPS district and is housed in a small 1932 three story brick building formerly known as the Wilson School in the dense South Dorchester residential neighborhood. The building is organized around an open courtyard that is primarily used for parking but could be repurposed as a welcoming outdoor learning environment. The building occupies much of its site perimeter with “zero lot line” exposure on three sides making expansion and or growth less possible. The school is organized as a simple single and double loaded classroom corridor wings with many undersized spaces particularly considering the grades and programs being served. The corridors are generally too narrow to allow for creating breakout spaces and gathering and teaching environments outside of the traditional classroom, for the older students classroom spaces have been taken over as locker room alcoves but these could serve as open commons spaces with redesign. The building area is generally undersized for the types of inclusionary programming and variety of student programs at the Henderson and its current physical state should be strongly be considered for closure or relocation due to the site and building inefficiencies. Consideration should be given if the building or site can serve alternative purposes for BPS and if the neighborhood is best served by the Henderson school seeking alternative sites nearby and whether colocation nearer to the Lower Henderson is also desirable.

Future considerations and opportunities should include:

- Review if the building is worth saving – determine alternative school use (EEC or other).
- Review if the building can be expanded at the rear despite its tight site.
- Review if site can support taller building with more area – consider site constraints when adding to building.



## At a Glance: Henderson Upper School

18 Croftland Avenue

DOE Code: 0035

Dorchester, MA 02124

Phone: 617.635.8827

<http://www.bostonpublicschools.org/org/>

Building Educational (FEA)	Building Physical (FCA)
Building Operational	Community

### Tax & Values as of 2015

Tax Parcel ID ?	Tax P Type ?	Tax Land Usage ?	Tax Bld Value \$_____	Tax Land Value \$?	Tax Total Value \$?
Tax Gross Area \$?	Tax LV SF \$?	Tax Living Area \$?	Compliance Trigger \$_____		

### MSBA School Data

**Historic District:** None

**Historic Building Designation:** None

**Original Bldg. Name:** Woodrow Wilson Middle School

**Site Acreage:** 2.63

**Parking:** Yes

**Outdoor Learning Space:** Yes

**Building Gross Floor Area:** 97,170

**School Gross Floor Area:** 97,170

**Building Net Assignable Area:** 60,280

**Ratio:** ???

**Site Expansion:** Requires purchase of adjacent parcels

**Climate Preparedness**

**Flood Zone:** No

**Shelter:** No

**Resiliency:** No

**Redundancy:** No

**Energy Efficiency:** No

**Recommendation:** No

**Source:** SMMA

**Approximated using available data**

### Schools Housed

Dr. William Henderson Upper:	Population	Ed Plan
Grade 5	43	No
Grades 6-8	193	
Grades 9-12	125	
TOTAL	361	

### Community Uses

**Connection w/School Programs**

Boston Public Library:	No
Community Center:	No
Community Resource Room:	No

### Documentation

<b>Plans:</b>	Site: Yes	Architecture: Yes	Engineering: Yes
<b>Past Reports:</b>	Wallace Floyd 1993		
<b>BeSafe Plans:</b>	No		
<b>MSBA 2010 Needs Survey:</b>	No		

Excellent	Good	Fair
Poor	Failing	

## DOE Student Data

<b>FY2015 Total Enrollment:</b> 361	<b>Student Demographics</b>
<b>Enrolled by Grade</b>	53.5% African American
5th: 43	16.3% Hispanic
6th: 66	19.7% White
7th: 58	6.9% Asian
8th: 69	1.9% Other/Multi-racial
9th: 71	1.4% Native American
10th: 22	53.5% of students are low income
11th: 32	

## Gender

196 Male	
<b>Out of School Suspension Rate:</b>	20.5%
165 Female	
<b>In School Suspension Rate:</b>	0.3%
<b>Graduation Rate:</b>	N/A
<b>Absentee Students:</b>	15.1%
<b>Annual Dropout Rate:</b>	N/A
<b>2012 Graduates Attending Higher Ed.:</b>	N/A
<b>SAT Scores:</b>	N/A
<b>2013 Mass Core:</b>	No data reported

## DOE Teacher Data

<b>Number of Teachers:</b>	32.9
<b>Student/Teacher Ratio:</b>	9.1% to 1
<b>Teachers Licensed in Teaching Assignment:</b>	97.5%
<b>Number of Classes in Core Academic Areas:</b>	145
<b>Core Academic Classes Taught by Highly Qualified Teachers:</b>	78.6%

## BPS 2014 Vision Accommodations (current inclusion)

Pre-K	Inclusion	STEM	Technology	21st Century	FF&E
No	Full	No	Poor	No	No

## Contact

## School Hours

8:30 am - 2:30 pm

Early Dismissal: 12:30 pm

Grades: 5-12

Level: \_\_\_\_

School Type: Inclusion

## MSBA School Data

<b>MSBA GSF</b>	<b>MSBA SF/Student</b>
29,357	137
<b>MSBA Space Utilization</b>	<b>MSBA Students/Classroom</b>
Average	19
<b>MSBA Enrollment</b>	<b>Building Conditions</b>
228	1 (1-4, 1 highest)
<b>Building Enrollment</b>	<b>Classrooms</b>
__ (1-4, 1 highest)	11
<b>Floors</b>	<b>Structural Class</b>
?	?

# Henderson Upper School: At A Glance

One of the more critical challenges facing the BPS leadership is developing consensus on how to evaluate the 128 schools in 133 building's in the public school system. How to select, evaluate, and "weight" the criteria most pertinent to alignment of each building's physical characteristics with its current and/or potential educational program for validating need for a new structure, renovations and additions or consolidation/closure.

For the pilot schools' discussion we have categorized criteria into four elements useful when considering masterplan options:

- Building: Educational Facility Assessment
- Building: Physical Facility Assessment
- Building: Operational Assessment
- Community

## **Potential criteria in each category:**

### **1. Building: Facility Educational Adequacy Assessment (FEA)**

Dr. Chang's educational plan (currently in development during the 100 day plan) will ultimately align with or supersede the five goals of the School Committee's 2014 Strategic Vision Plan and will be the primary physical measure for BPS's facilities. Another tool we have employed is the basic Space Summary of the MSBA, the space summary is a good starting point with solid, well tested space allowances, most existing buildings will fall outside of the standards particularly for SPED, ELL and evolving technology programs. Understanding the rapidly evolving educational landscape will require a critical eye to ascertain if a school's physical attributes can be transformed for 21st Century Educational needs – whatever grade structure or school typology is envisioned. It is also important to measure each school with an understanding of the MSBA criteria relative to potential funding approval.

#### *Potential Criteria:*

- BPS Visioning and program goals
- MSBA Summary of Spaces
- Oversubscribed or under-subscribed facility
- Site availability for future growth
- BASYS report

## 2. Building: Physical Assessment (FCA)

The sheer scale of the BPS school inventory and the limited budget for physical analysis will require a “triage” approach to physically assessing the various facilities. By using the initial Educational Facility Assessments (FEA) as a primary filter during the master plan options and scenarios phase of a more nuanced or targeted strategy for understanding the scope of the FCA work can be developed for implementation in the summer of 2015.

*Potential Criteria:*

- Simplified Due Diligence Engineering Reports
- Security Systems complete and in place
- FCA Reports

## 3. Building: Operational Assessment

During recent conversations the cost of operations for various schools within the system have been discussed – although not directly a part of the 10 Year FMP this issue is acknowledged to be a critical factor for BPS to determine a plan direction for sustainability BPS into the future.

*The following criteria can be generated using the FMP data:*

- Cost per student (cost to maintain the building and run the school)
- Cost per Square footage

Key



- Cost analysis of school typology (Grade structure and program)
- Energy consumption

## 4. Community

Schools play an important physical and social roles in the communities and neighborhoods they serve, perhaps one of the intense topics of conversation with community engagement process will be how schools are valued at the grass roots level.

*Potential Criteria:*

- Demographic data
- Choice popularity
- Forced assignment
- Neighborhood “impact”
- Pathways and feeder patterns
- Access to community resources (City as a School)
- Climate readiness
- Open Space Utilization

## Summary

## Context &amp; Research

## Floor Plans

## Site

## Educational Planning Summary

### Boston Public Schools 10 Year Facility Master Plan: Educational Vision Plan for Special Schools and Inclusion Models

Superintendent Dr. Tommy Chang and his leadership team will be reviewing educational programs and pedagogy for the special needs and inclusion school curriculum relative to the school committee's 2014 vision statement.

For the Pilot Study the MSBA's space metrics for elementary and middle schools have been used to "evaluate" the Henderson's spaces as a school and determine its capacity. Note that additional Special Education (SPED), English Language Learners (ELL), and 21<sup>st</sup> Century space initiatives will have an impact in further space utilization analysis, particularly for a full inclusionary model serving the Henderson's varied population.

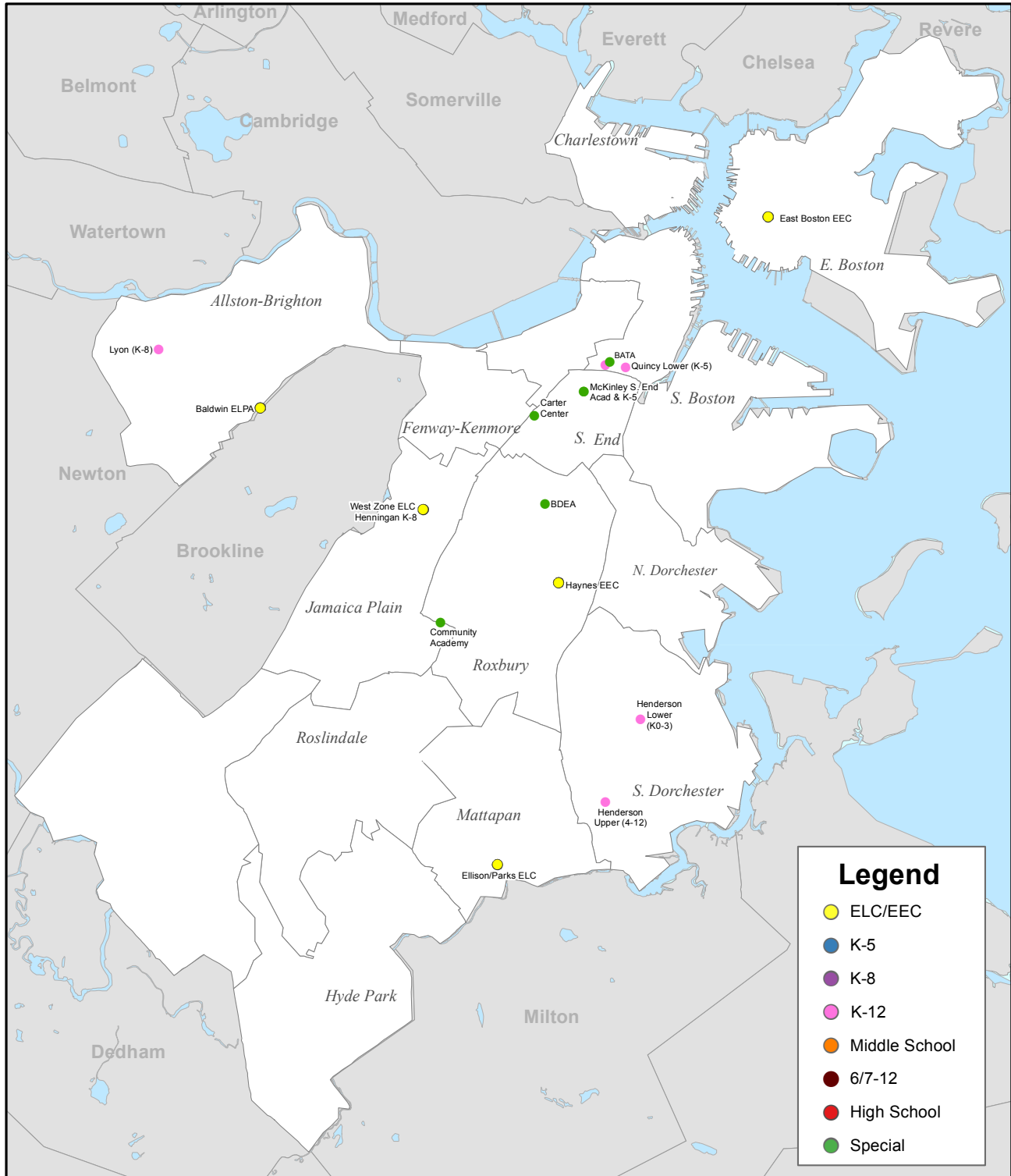
#### Grade Configurations

<b>Visioning and Issues for BPS</b> 19 Total Configurations	Grade Configuration	Number Of Schools	Grade Configuration	Number Of Schools
	K0-1	5	6-8	12 (11) *
	K0-4	1	6-9	1
	<b>K0-12</b>	<b>1</b>	6-12	3 (4) *
	K-1	3	7-12	3
	K-5	49	9-10	1
	K-6	1	9-11	1
	K-8	17	9-12	17
	2-8	1	10-12	1
	3-8	1	12+	2
	5-12	1		

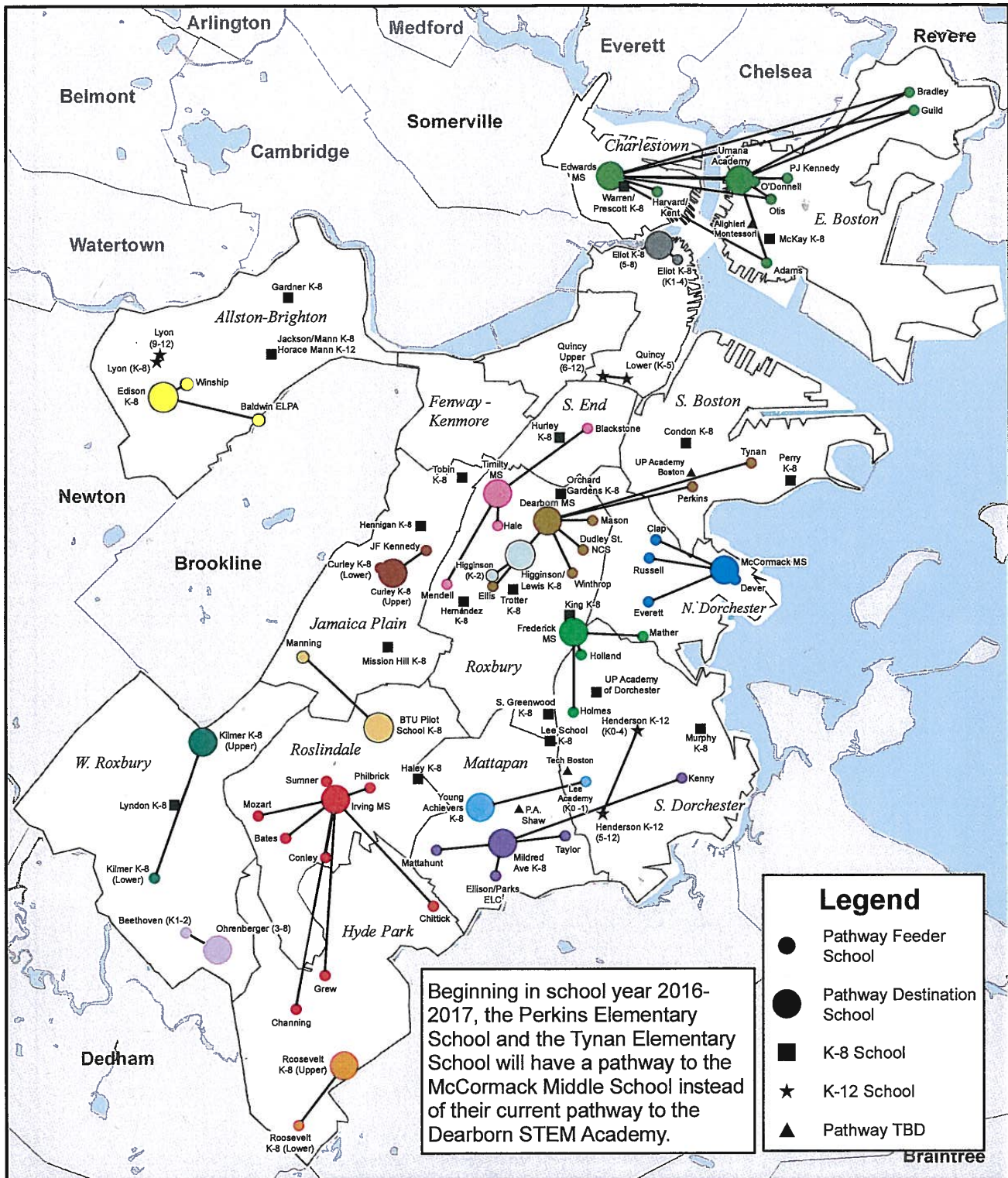
\*Dearborn will expand to High School grade levels SY2016.

☐ Includes Henderson Upper and Lower School in two buildings

## BPS K-12 Schools and Special Schools







## Typology and Relevancy

### 5-11 School Performance Analysis



No Data Available

\*2013 School Profiles Massachusetts Department of Elementary and Secondary Education \* 2014 Accountability Report  
 \*\*September 2014 SchoolDigger.com Rankings; Data Source: National Center for Education Statistics, U.S. Dept of Education and MA Dept. of Education

#### Network A (K-8)

**Network Supt:** Drew Echelson

**DNA:** Catarina daSilva

**DES:**

**OL:** Monique Carter, 617.635.6516

**SA:** Jenelle Lawson, 617.635.6073

Ellison/Parks Early Ed. School Greenwood, E. Leadership Academy Greenwood, Sarah K-8 Henderson Inclusion, K-12 Hernandez K-8 Kenny Elementary Lee Academy at the FiField	Lee K-8 Mather Elementary Mildred Avenue Murphy K-8 Shaw Elementary Taylor Elementary Young Achievers K-8	<b>EDUCATIONAL OPTIONS</b>  <b>Executive Director:</b> SA: Jenelle Lawson  <i>Programs not located in BPS Buildings:</i> ABCD University High School College Bound Middle School Dorchester Youth Alternative EDCO Youth Alternative Ostiguy High School St. Mary's Alternative School
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DNA Director of Network Academies  
 DES Director of Educational Services (Network G)  
 OL Operational Leader  
 SA Staff Assistant  
 ► Exam School (3)  
 ❖ Horace Mann (in-district) Charter School (6)  
 \* Innovation School (8)  
 ◆ Pilot School (20)  
 IB International Baccalaureate Program (2)

# Option Summary: Henderson Upper School

Henderson Upper School  
(Wilson building)

168/361 (154%)

5-12

Building Assessment

Building Educational (FEA)

Building Physical (FCA)

Building Operational

Community

Sciences, STEM, ELL, SPED

Repairs: \$  
Renovate for Program: \$  
Additions/Renovations: \$  
Full Replacement: \$

- School Name
- (Building if different)
- Design Capacity Enrollment
- Current Enrollment
- Utilization
- Grades or Sections
- Building Evaluation
- Renovations or Additions
- Program Modifications
- Cost Models

- Evaluation Criteria
- Program Support (FEA)
- BASYS Report

• Deficiency Plans

• Physical Conditions

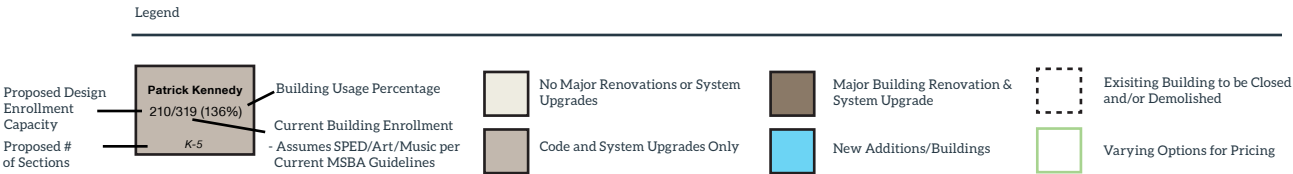
• FCA Report(s)

• Due Diligence Report(s)
- Building Operations: (BPS)
- Energy (total)

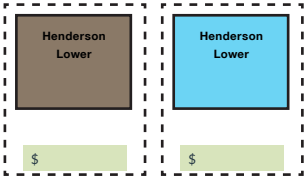
• Salary (per student)

• Transportation
- Community:
- Location

• Mass Historic Commission



## Elementary Schools





[Summary](#)[Context & Research](#)[Floor Plans](#)[Site](#)

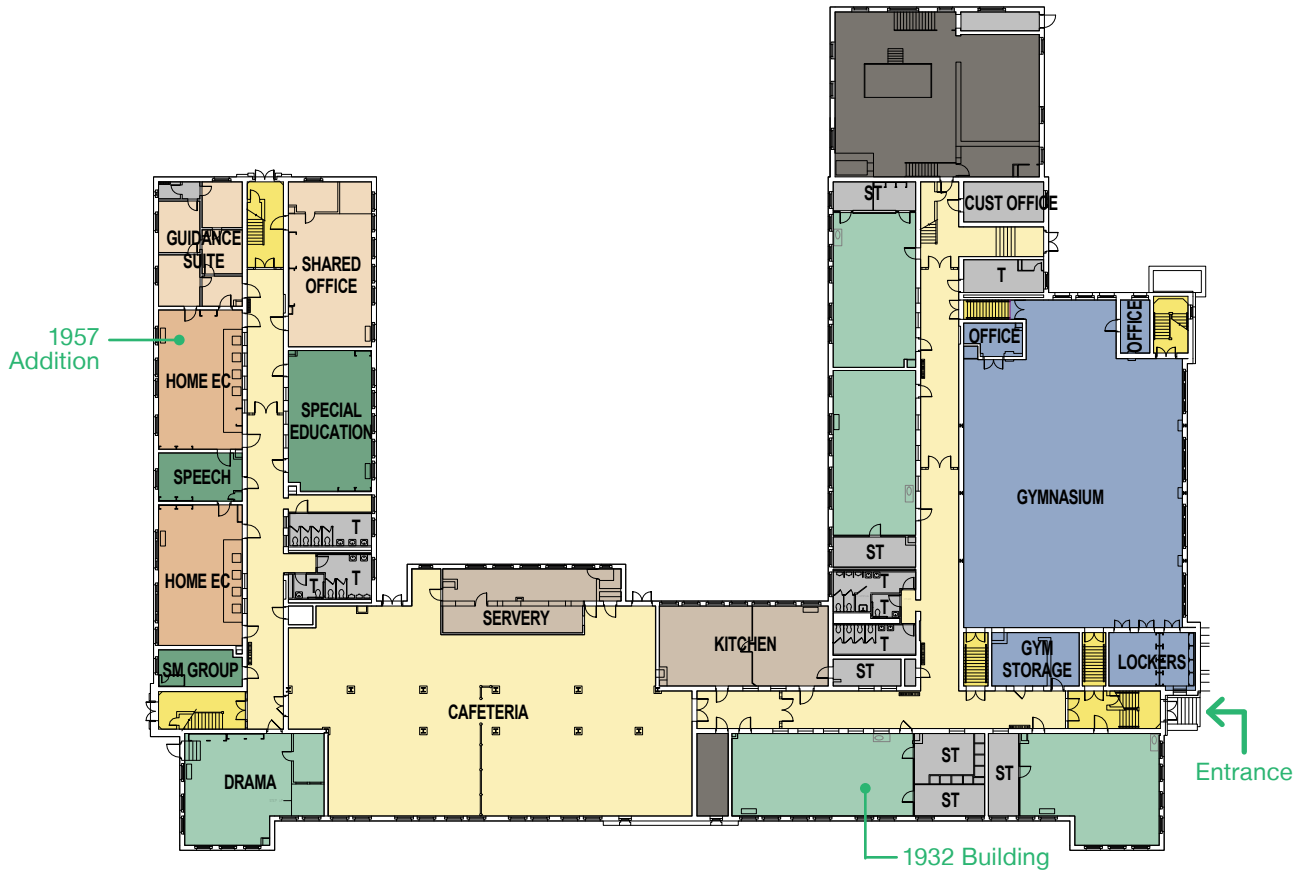
## Floor Plans

Accurate floor plans can be a concise and clear way to describe a number of educational and physical attributes in a masterplanning process. For the pilot study we have added building plans to our study process for clarity and discussion purposes – PCMD and BPS facility staff and the facility assessment sub committee should review the long term potential for data visualization and storage.

- **Program Plans:** Illustrate the types of spaces currently in use by a given school program. This can be a quick visual tool to understand how well a program is fitting within its assigned building.
- **Deficiency Plans:** Illustrate where programs fall severely short (or greatly exceed) standards as established by the MSBA (eventually BPS vision “standards”). We have taken the plan analysis further to include adjacency or location inadequacies and spaces least likely supported by the MSBA grant program.

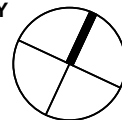
# Henderson Upper School

## First Floor Program Plan



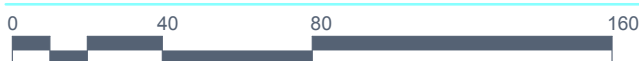
### PROGRAM PLAN LEGEND

<span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE	<span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> KITCHEN / SERVERY
<span style="display:inline-block; width:15px; height:15px; background-color:gray; border:1px solid black;"></span> BUILDING EQUIPMENT	<span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> PHYSICAL EDUCATION & SPORT SUPPORT
<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> CAFETERIA & CIRCULATION	<span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span> SPECIAL EDUCATION
<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> CLASSROOM & GENERAL EDUCATION SUPPORT	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> VERTICAL CIRCULATION
<span style="display:inline-block; width:15px; height:15px; background-color:lightgray; border:1px solid black;"></span> CUSTODIAL / MAINTENANCE / STORAGE	<span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> VOCATIONAL & TECHNOLOGY



**Boston Public Schools**

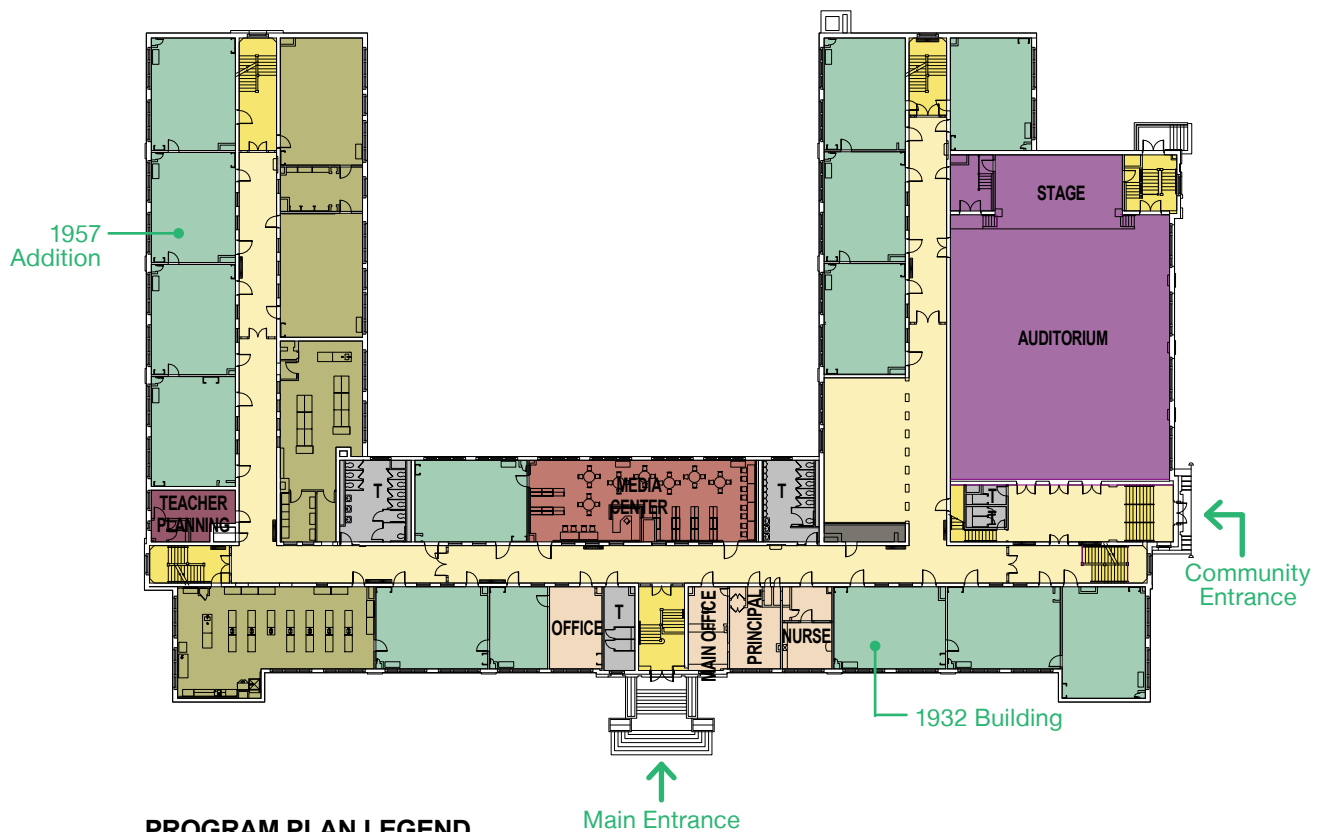
HENDERSON UPPER SCHOOL - 1ST FLOOR PROGRAM PLAN





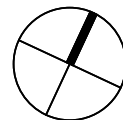
# Henderson Upper School

## Second Floor Program Plan



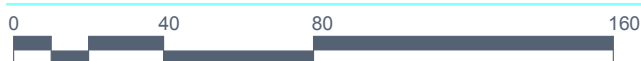
### PROGRAM PLAN LEGEND

ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE	CUSTODIAL / MAINTENANCE / STORAGE
AUDITORIUM / PERFORMING ARTS & DRAMA	MEDIA CENTER
BUILDING EQUIPMENT	SCIENCE CLASSROOMS & SUPPORT
CAFETERIA & CIRCULATION	TEACHER PLANNING & SUPPORT
CLASSROOM & GENERAL EDUCATION SUPPORT	VERTICAL CIRCULATION



**Boston Public Schools**

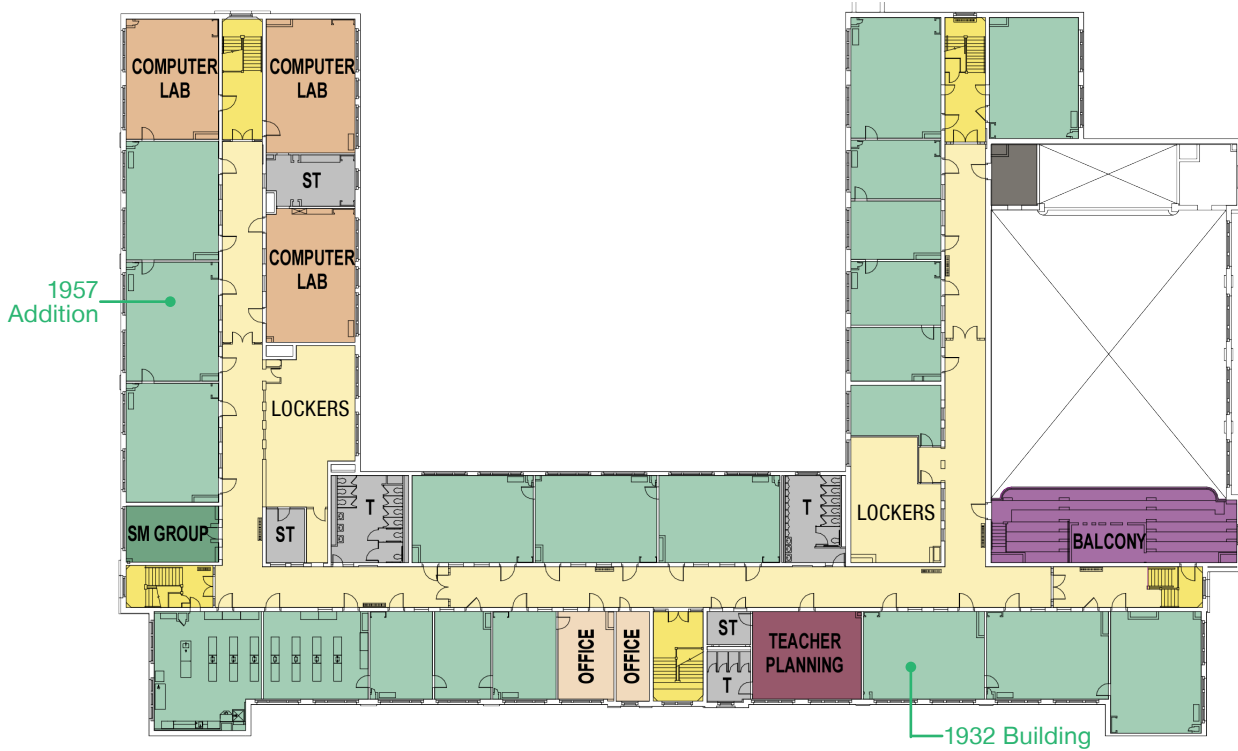
HENDERSON UPPER SCHOOL - 2ND FLOOR PROGRAM PLAN



SMMA

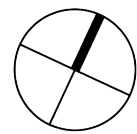
# Henderson Upper School

## Third Floor Program Plan



### PROGRAM PLAN LEGEND

ADMINISTRATION / GUIDANCE / STUDENT SERVICES / NURSE	CUSTODIAL / MAINTENANCE / STORAGE
AUDITORIUM / PERFORMING ARTS & DRAMA	SPECIAL EDUCATION
BUILDING EQUIPMENT	TEACHER PLANNING & SUPPORT
CAFETERIA & CIRCULATION	VERTICAL CIRCULATION
CLASSROOM & GENERAL EDUCATION SUPPORT	VOCATIONAL & TECHNOLOGY



Boston Public Schools  
HENDERSON UPPER SCHOOL - 3RD FLOOR PROGRAM PLAN

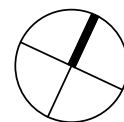


## Henderson Upper School

## First Floor MSBA Deficiency Plan

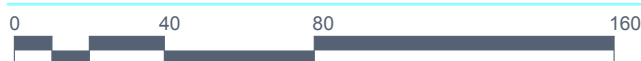
**MSBA DEFICIENCY PLAN**

- INAPPROPRIATE LOCATION OR ADJACENCY
- NOT INCLUDED IN A TYPICAL MSBA PROJECT
- NSF 10% GREATER THAN MSBA GUIDELINES
- NSF AT LEAST 20% LESS THAN MSBA GUIDELINES
- NSF MEETS MSBA GUIDELINES (-20% TO +10%)



Boston Public Schools

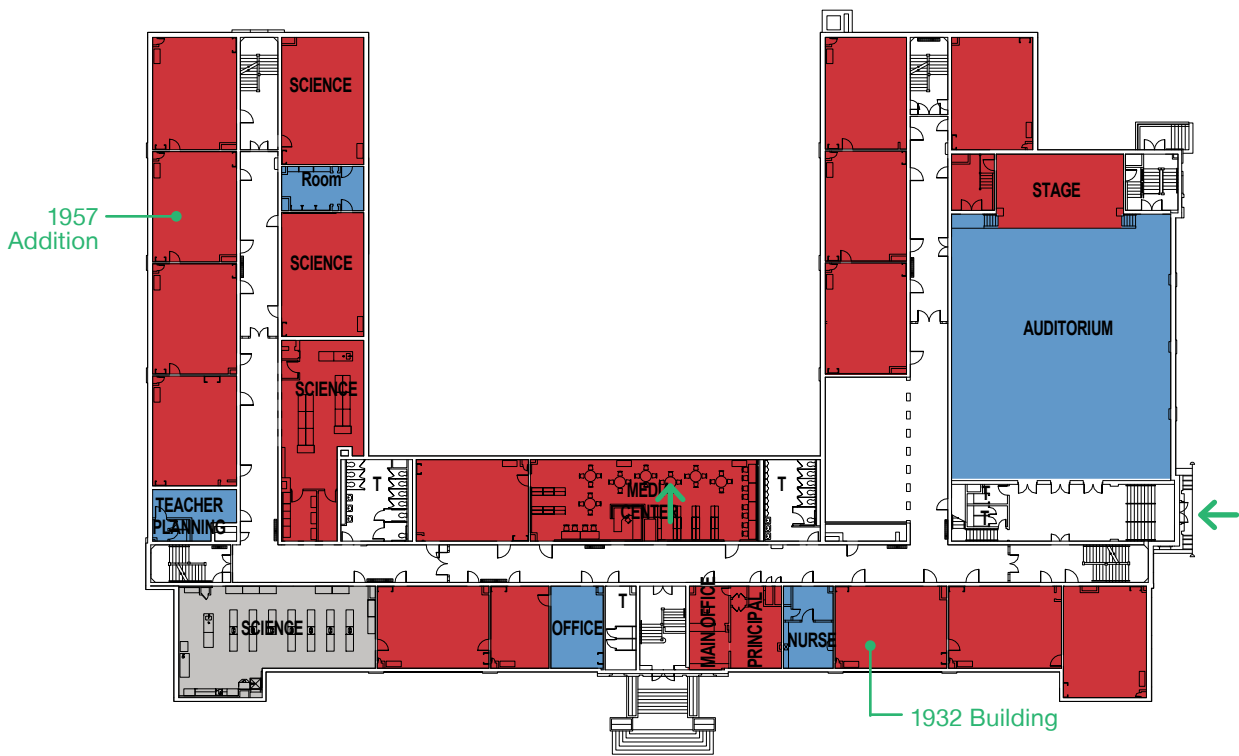
HENDERSON UPPER SCHOOL - 1ST FLOOR DEFICIENCY PLAN



SMMA

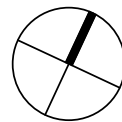
## Henderson Upper School

### Second Floor MSBA Deficiency Plan



#### MSBA DEFICIENCY PLAN

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**Boston Public Schools**

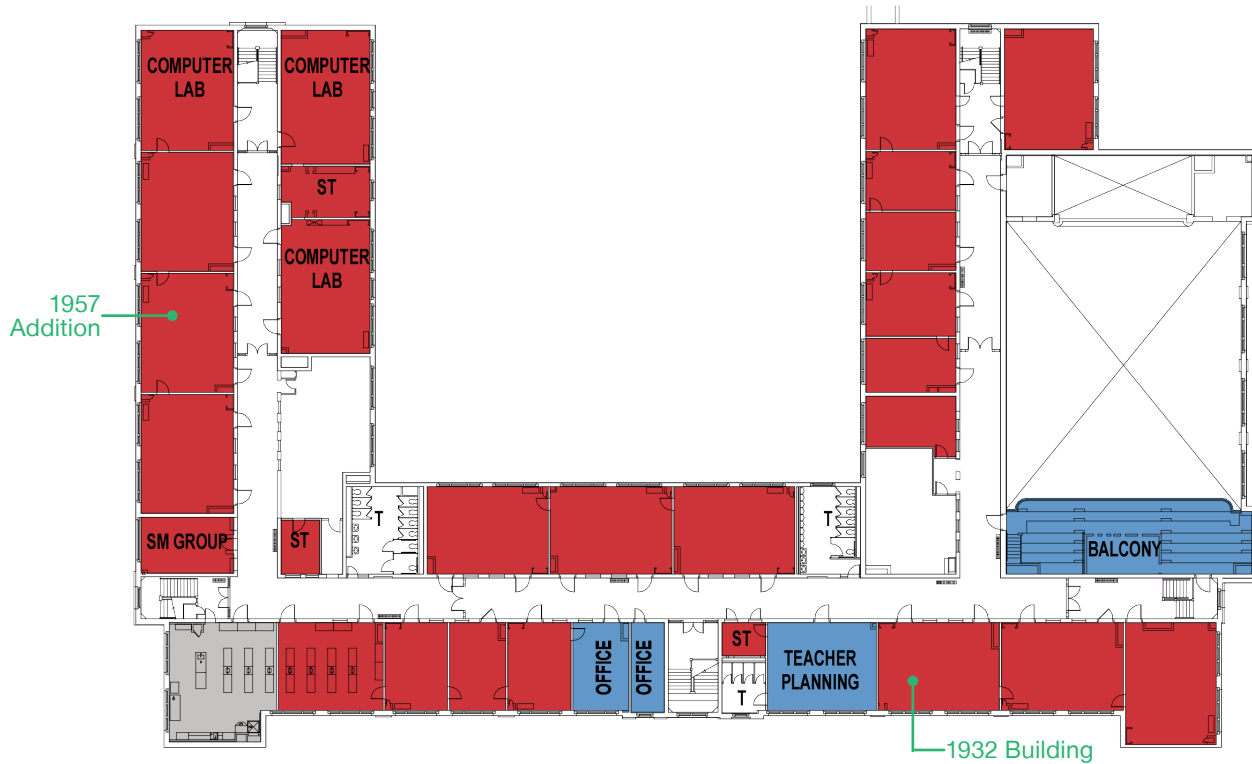
HENDERSON UPPER SCHOOL - 2ND FLOOR DEFICIENCY PLAN



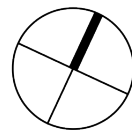
SMMA

## Henderson Upper School

## Third Floor MSBA Deficiency Plan

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Boston Public Schools

HENDERSON UPPER SCHOOL - 3RD FLOOR DEFICIENCY PLAN



SMMA

# MSBA Space Summary 5-12 Schools

Henderson Upper School				MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	Existing Conditions			ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
	ROOM NFA <sup>1</sup>	# OF RMS	area totals				
<b>CORE ACADEMIC SPACES</b>			<b>29,907</b>			<b>18,660</b>	
<i>(List classrooms of different sizes separately)</i>							
Classroom - General		40	24992	850	12	10,200	825 SF min - 950 SF max
Teacher Planning		2	862	100	12	1,200	
Small Group Seminar (20-30 seats)		0	0	500	1	500	
Science Classroom / Lab		4	3794	1,440	4	5,760	3 x 85% ut=20 Seats-1 per /day/student
Prep Room		1	259	200	4	800	
Central Chemical Storage Rm		0	0	200	1	200	
<b>SPECIAL EDUCATION</b>			<b>1,645</b>			<b>4,030</b>	
<i>(List classrooms of different sizes separately)</i>							
Self-Contained SPED		1	824	950	3	2,850	assumed 8% of pop. in self-contained SPED
Self-Contained SPED Toilet		0	0	60	3	180	
Resource Room		0	0	500	1	500	1/2 size Gent. Clrm.
Small Group Room		3	821	500	1	500	1/2 size Gent. Clrm.
<b>ART &amp; MUSIC</b>						<b>5,050</b>	
Art Classroom - 25 seats		0	0	1,200	1	1,200	Assumed use - 25% Population - 5 times/week
Art Workroom w/ Storage & kiln		0	0	150	1	150	
Band - 50 - 100 seats		0	0	1,500	1	1,500	Assumed use - 25% Population - 5 times/week
Chorus - 50 - 100 seats		0	0	1,500	1	1,500	
Ensemble		0	0	200	1	200	
Music Practice		0	0	75	0	-	
Music Storage		0	0	500	1	500	
<b>VOCATIONS &amp; TECHNOLOGY</b>			<b>3,812</b>			<b>3,200</b>	
Tech Clrm. - (E.G. Drafting, Business)		3	2144	1,200	1	1,200	Assumed use - 50% Population - 5 times/week
Tech Shop - (E.G. Consumer, Wood)		2	1668	2,000	1	2,000	Assumed use - 50% Population - 5 times/week
<b>HEALTH &amp; PHYSICAL EDUCATION</b>			<b>5,500</b>			<b>18,222</b>	
Gymnasium		1	4593	12,000	1	12,000	
PE Alternatives		0	0	3,000	1	3,000	
Gym Storeroom		1	333	300	1	300	
Locker Rooms - Boys / Girls w/ Toilets		1	338	2,022	1	2,022	5.6 sf/student total
Phys. Ed. Storage		0	0	500	1	500	
Athletic Director's Office		2	236	150	1	150	
Health Instructor's Office w/ Shower & Toilet		0	0	250	1	250	
<b>MEDIA CENTER</b>			<b>1,313</b>			<b>3,650</b>	
Media Center / Reading Room		1	1313	3,650	1	3,650	
Computer Lab		0	0				
<b>AUDITORIUM / DRAMA</b>			<b>5,968</b>			<b>5,147</b>	
Auditorium		2	5129	2,407	1	2,407	2/3 Enrollment @ 10 SF/Seat - 750 seats MAX
Stage		1	668	1,600	1	1,600	
Auditorium Storage		1	171	340	1	340	
Make-up / Dressing Rooms		0	0	300	2	600	
Controls / Lighting / Projection		0	0	200	1	200	
<b>DINING &amp; FOOD SERVICE</b>			<b>6,983</b>			<b>4,766</b>	
Cafeteria / Student Lounge / Break-out		1	5300	1,805	1	1,805	3 seatings - 15SF per seat
Chair / Table Storage		0	0	300	1	300	
Scramble Serving Area		1	721	600	1	600	
Kitchen		1	962	1,661	1	1,661	1600 SF for first 300 + 1 SF/student Add'l
Staff Lunch Room		0	0	400	1	400	20 SF/Occupant
<b>MEDICAL</b>			<b>283</b>			<b>510</b>	
Medical Suite Toilet		0	0	60	1	60	
Nurses' Office / Waiting Room		1	120	250	1	250	
Interview Room		0	0	100	0	-	
Examination Room / Resting		1	163	100	2	200	
<b>ADMINISTRATION &amp; GUIDANCE</b>			<b>2,952</b>			<b>3,220</b>	
General Office / Waiting Room / Toilet		1	234	300	1	300	
Teachers' Mail and Time Room		0	0	100	1	100	
Duplicating Room		0	0	200	1	200	
Records Room		0	0	200	1	200	
Principal's Office w/ Conference Area		1	298	375	1	375	
Principal's Secretary / Waiting		0	0	125	1	125	
Assistant Principal's Office - AP1		0	0	150	1	150	
Assistant Principal's Office - AP2		0	0	150	0	-	
Supervisory / Spare Office		4	1769	120	1	120	
Conference Room		0	0	450	1	450	
Guidance Office		4	564	150	2	300	
Guidance Waiting Room		1	87	100	1	100	
Guidance Storeroom		0	0	100	1	100	
Career Center		0	0	300	1	300	
Records Room		0	0	100	1	100	
Teachers' Work Room		0	0	300	1	300	



## MSBA Space Summary 5-12 Schools

Henderson Upper School				MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
Existing Conditions							
ROOM TYPE	ROOM NFA <sup>1</sup>	# OF RMS	area totals	ROOM NFA <sup>1</sup>	# OF RMS	area totals	Comments
<b>CUSTODIAL &amp; MAINTENANCE</b>			<b>1,917</b>			<b>2,075</b>	
Custodian's Office		1	228	150	1	150	
Custodian's Workshop		0	0	250	1	250	
Custodian's Storage		0	0	375	1	375	
Recycling Room / Trash		0	0	400	1	400	
Receiving and General Supply		0	0	300	1	300	
Storeroom		10	1689	400	1	400	
Network / Telecom Room		0	0	200	1	200	
<b>OTHER</b>			<b>0</b>			<b>0</b>	
Other (specify)		0	0				
Total Building Net Floor Area (NFA)			<b>60,280</b>			<b>68,530</b>	
Proposed Student Capacity / Enrollment						<b>361</b>	226
Total Building Gross Floor Area (GFA) <sup>2</sup>			96,170			<b>81,586</b>	
Grossing factor (GFA/NFA)			<b>1.60</b>			<b>1.19</b>	

Schools with specialized populations are considered on a case by case basis by the MSBA

[Summary](#)[Context & Research](#)[Floor Plans](#)[Site](#)

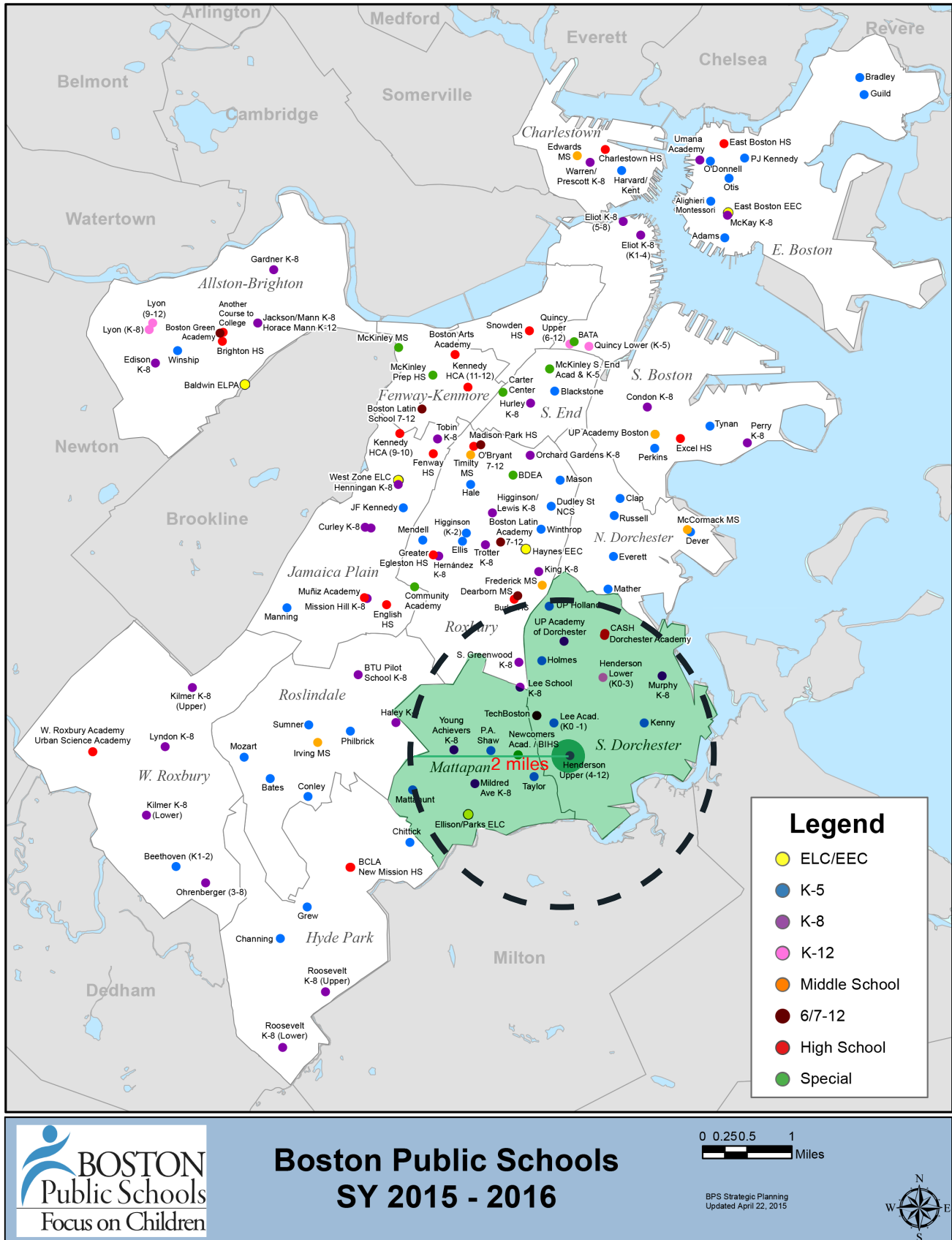
## Site

### The Neighborhood

Boston prides itself on being a city of distinct neighborhoods, walkable due to its short blocks and dense urban fabric. Ease of access to urban schools like the Henderson, and the quality of the streets, sidewalks, bike-routes and vitality of the businesses surrounding an urban school site give confidence to parents and students investing in their students' future. By mapping local businesses, BPS can continue to grow its initiatives to recognize that the city is the school and foster relationships and partnerships with businesses, organizations, colleges and universities and provide students with mentoring and coop experience that benefit all partners involved while instilling confidence and civic pride in our students.

As a full inclusion school the Henderson community services students from across the district and is not a "neighborhood" school in the traditional sense, and depending upon the transportation needs for students attending the Henderson, population growth trends, etc. the Henderson site is located in a very dense and tight residential neighborhood making the site less useful as a potential consolidation location.

## Locus Plan



## Site Aerial

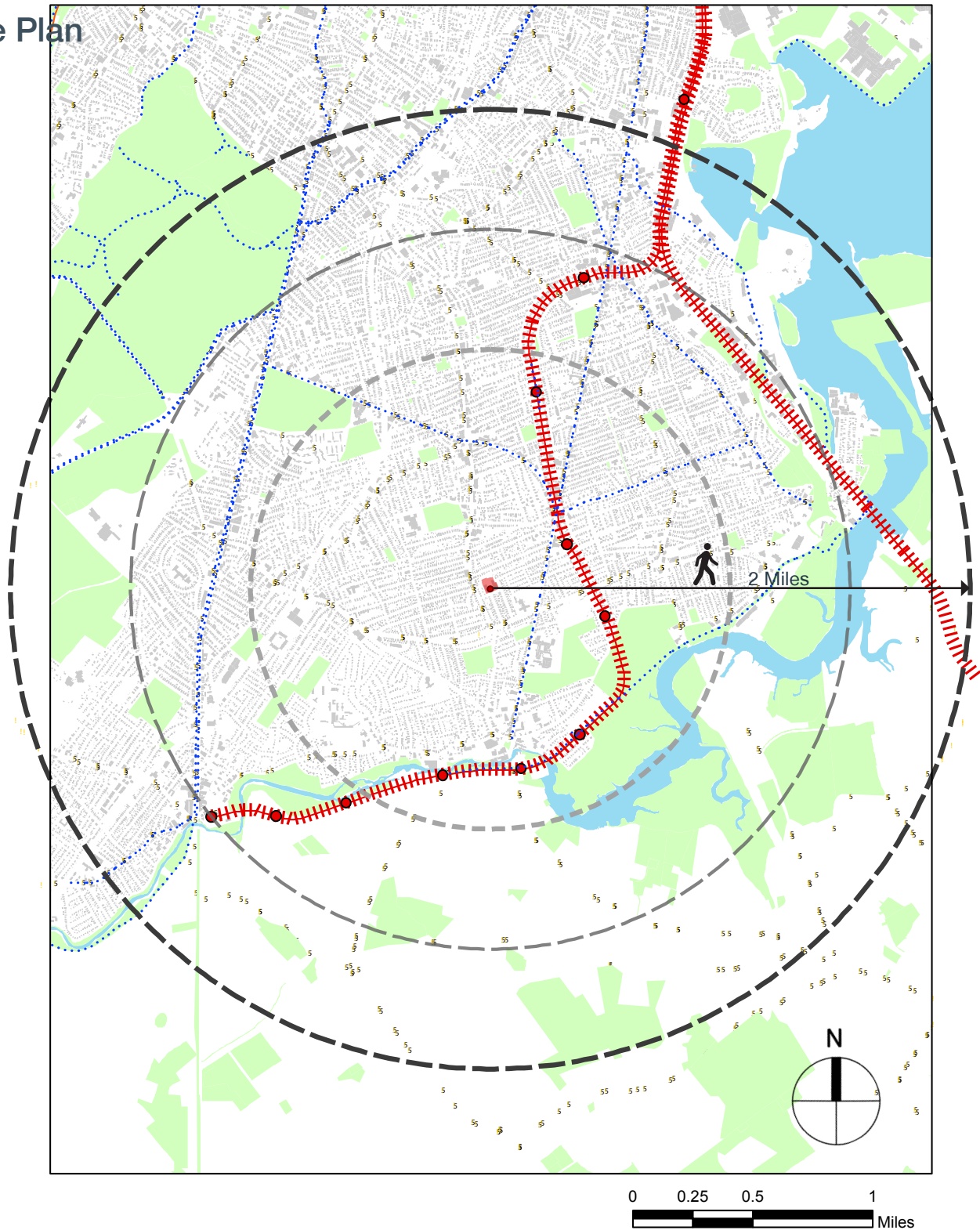


Site Area 2.63 Acres





# Site Plan



## Busing Policy Key

- >2mi High School T-Pass
- >1 ½ mi 6<sup>th</sup> Grade & Below
- >K-8 up to 8th Grade
- >1mi Grades K-5

## Transportation

- T Stops
- Bus Routes
- Bike Routes

### Climate Preparedness

School Buildings are often the largest facilities in a neighborhood or particular community and usually include large gathering spaces such as gymnasiums and cafeterias, and typically have cooking facilities. Schools serve well as emergency shelters when properly designed and equipped. Emergency shelter designation requires minimum requirements to safely serve this purpose for Red Cross or FEMA designation.

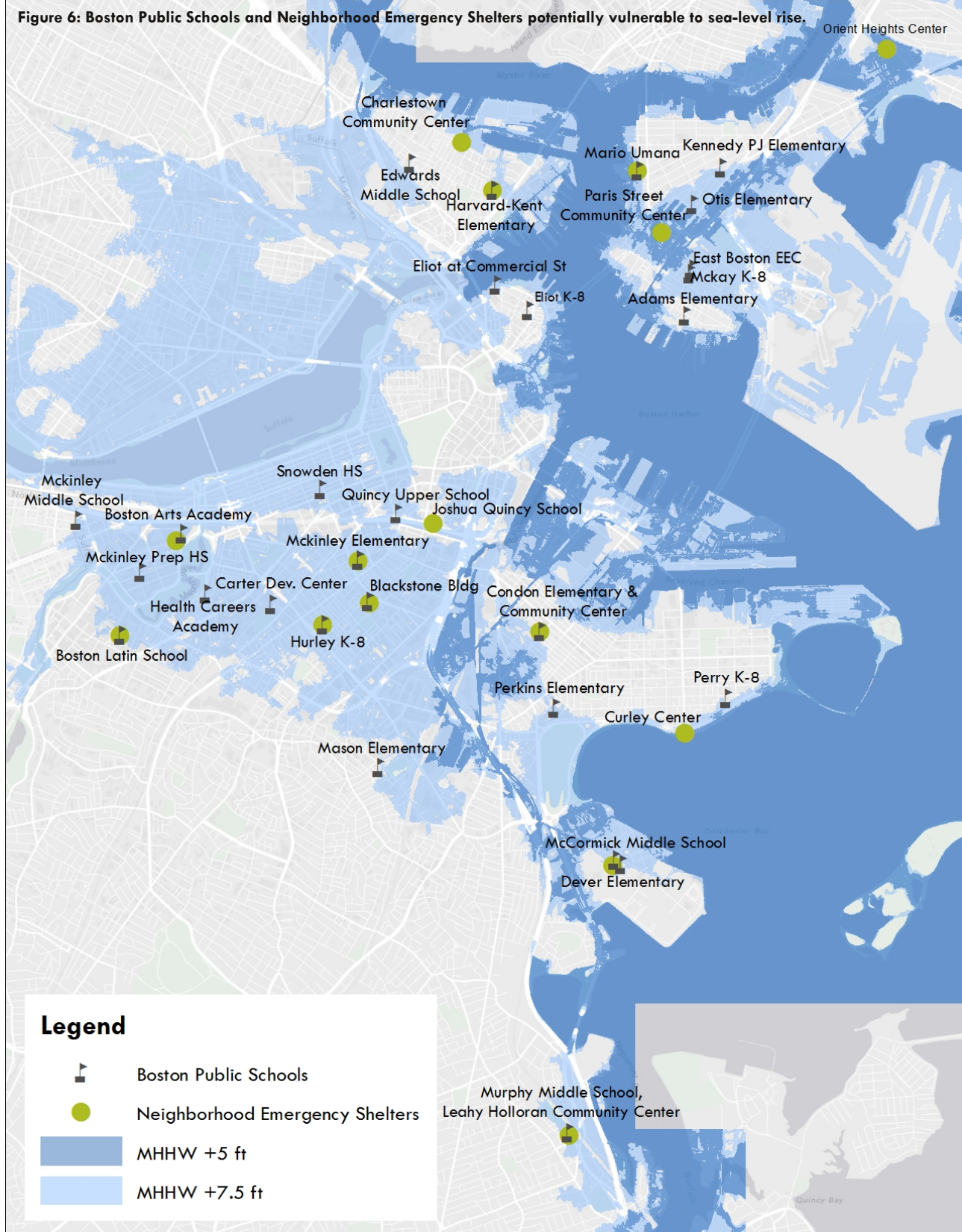
The Henderson Upper School falls outside of the zones within the City of Boston considered vulnerable to sea-level rise. The building and site is smaller and of an older vintage requiring substantial renovations and system upgrades to serve as a potential local emergency resource center.

Boston's sea coast location makes much of the City vulnerable and places additional pressure on facilities like the Henderson where evacuees may be housed during an extreme weather event, particularly if they are unable to reach the City's current designated emergency shelter the Boston Convention Center.

Considerations:

- Confirm roof structural capacity for PV installations and local energy to support neighborhood use as a cooling center and/or blizzard center.
- Increased emergency generator capacity.





Source: *Climate Ready Boston: Municipal Vulnerability to Climate Change*



# Building Educational Assessments

## Summary & Mission

Background

Methodology &  
Approach

Pilot Study Report

Findings &  
Recommendations

## Summary & Mission

### Dr. William Henderson K-12 Inclusion School Mission Statement

(Source: William Henderson K-12 Inclusion School Website)

The Dr. William Henderson K-12 Inclusion School is comprised of two buildings: the Lower School (Grades K0-4) occupying the former Patrick O'Hearn Elementary School in the Fields Corner neighborhood and the Upper School (Grades 5 - 12) occupying the former Wilson School in the Ashmont Neighborhood.

The Henderson is Boston's only fully inclusive K-12 school. Students involved in general education, students with disabilities, and students considered talented and gifted learn together and from each other.

All students are instructed at their individual learning levels using a variety of curriculum materials. Technology is integrated as a learning tool in all content areas. Support and enrichment are provided based on individual students' needs. Therapies are provided in classrooms to the extent possible.

What makes the Henderson school special:

- Inclusive school: Student of all abilities learn together.
- Two teachers in every classroom
- Center playground and outdoor classroom
- Sensory motor room
- Fully accessible building
- Full time visual art, movement and music teachers, with arts integration for every student three times per week
- Inclusive before and after school programs
- Rigorous curriculum
- Massachusetts Level 1 school: Highest level of student achievement and growth on MCAS in math and English language arts

### Henderson Upper School

Historically known as the Woodrow Wilson Middle School the upper school is a traditional mid 20th Century double loaded school building, center entry with reasonable public use spaces. Many spaces are undersized due to the school's vintage.



## Background

### Purpose

The purpose of this pilot study for Boston Public Schools was to test a methodology for future, district-wide assessments, to test an assessment tool and determine any needed adjustments, and to identify issues or concerns that need to be explored or considered prior to the FMP on-site assessments. Put another way the pilot study is done to ensure that current and future curricular/instructional outcomes are defined, to ensure the facility implications of the instructional needs are defined, and to ensure that the tools utilized by the consultant team accurately assess those facility implications.

The pilot assessments were conducted without having completed initial program discussions with the district. Therefore, the standards used for the pilot are those routinely found in districts across the country, but are not necessarily aligned to Boston. Program discussions with BPS staff will enable us to assess schools based on current or planned educational program plans and ensure that the facility assessments are aligned with the program goals for Boston. In order to meet these expectations, staff from BPS needs to be actively engaged in defining both current and future educational programs and the resulting facility implications. MGT consultants will analyze the data collected during the pilot study and utilize that information along with information gathered from interviews and discussions with district staff prior to developing the final assessment tools.

### Pilot Sites

Four schools were selected for the pilot study because they represented a cross section of schools throughout the district. These schools provided a variety of grade levels, grade level configurations, specialized, as well as regular, program offerings, buildings of different ages, and locations in different Boston neighborhoods.

- **Dr. William W. Henderson PK-12 Full Inclusion (Upper and Lower).** This school is housed on two school campuses that are near, but not connected, to each other. It supports students with disabilities and students identified as talented and gifted within this comprehensive curriculum that includes enriched arts experiences. The lower school serves students in grades K0-4. The upper school serves students in grades 5-12. Although the Henderson is considered one program, the two schools are very different. Therefore, for the purposes of this pilot, each campus was assessed as a separate school to highlight the different needs based on the two different sites.

### Methodology to Determine Educational Adequacy

MGT's BASYS® facility assessment software was used to assess each of the pilot schools. The purpose of the educational suitability assessment is to evaluate how well the facility supports the educational program that it houses. Each school receives one suitability score which applies

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[Background](#)
[Methodology & Approach](#)
[Pilot Study Report](#)
[Findings & Recommendations](#)

## Methodology & Approach

to all the buildings at the facility. The educational suitability of each pilot school was assessed using the following categories:

<b>Environment</b>	The overall environment of the schools with respect to creating a safe and positive learning environment.
<b>Circulation</b>	Pedestrian/vehicular circulation and the appropriateness of site facilities and signage.
<b>Support Space</b>	The existence of facilities and spaces to support the educational program being offered. These include general classrooms, special learning spaces (e.g. music rooms, libraries, science labs), and support spaces (e.g. administrative offices, counseling offices, reception areas, kitchens, health clinics).
<b>Size</b>	The adequacy of the size of the program spaces.
<b>Location</b>	The appropriateness of adjacencies (e.g., physical education space separated from quiet spaces).
<b>Storage &amp; Fixed Equipment</b>	The appropriateness of utilities, fixed equipment, storage, and room surfaces (e.g. flooring, ceiling materials, and wall coverings).

Educational suitability is intended to assess how well the facility supports the educational program that it houses. Since this was a pilot study and the actual program specifications needed to create an Educational Suitability Assessment Guide for the Boston Public Schools has not yet been developed, MGT used national program specifications developed over many similar assessments. MGT staff walked each school with the building principal to review each space based on the program housed there and then scored the various components based on the program standards outlined in BASYS®.

The pilot assessments were conducted without having completed initial program discussions with the district. Therefore, the standards used for the pilot are those routinely found in districts across the country, but are not necessarily aligned to Boston. Program discussions with BPS staff will enable us to assess schools based on current or planned educational program plans and ensure that the facility assessments are aligned with the program goals for Boston. In order to meet these expectations, staff from BPS needs to be actively engaged in defining both current and future educational programs and the resulting facility implications. MGT consultants



will analyze the data collected during the pilot study and utilize that information along with information gathered from interviews and discussions with district staff prior to developing the final assessment tools. Suitability scores can be interpreted as follows:

90%	Good: The facility is designed to provide for and support the educational program offered. It may have minor suitability issues but generally meets the needs of the educational program.
75-89	Fair: The facility has some problems meeting the needs of the educational program and may require some remodeling.
50-74	Poor: The facility has numerous problems meeting the needs of the educational program and needs significant remodeling or additions.
Below 50	Unsatisfactory: The facility is unsuitable in many areas of the educational program.

#### Methodology to Determine Technology Readiness

MGT's BASYS® software was also used to assess the technology readiness of each of the pilot schools. The BASYS® technology readiness score measures the capability of the existing infrastructure to support information technology and associated equipment. It is not based on the number of computers or interactive boards.

Technology readiness scores can be interpreted as follows:

90%	Good: The facility has the infrastructure to support information technology.
75-89	Fair: The facility is lacking in some infrastructure.
50-74	Poor: The facility is lacking significant infrastructure to support information technology.
Below 50	Unsatisfactory: The facility has little or no infrastructure to support information technology.

Summary &amp; Mission

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## Pilot Study Report

MGT staff walked each building with the principal to assess the technology readiness of the school based on the program standards outlined in BASYS®.

### Results of the Pilot Assessment

School	Educational Adequacy Score	Technology Readiness Score	Rating Category
Henderson Upper	71	55	<b>Adequacy - Poor Technology - Poor</b>
Henderson Lower	61	48	Adequacy - Poor Technology - Unsatisfactory
Umana	71	66	Adequacy - Poor Technology - Poor
Burke	75	92	Adequacy - Fair Technology - Fair

Based on the assessments of these four pilot schools, there is likely to be a significant need in regard to improving both educational adequacy and technology readiness in many schools in Boston. The wide range in technology readiness scores is not uncommon, as improved technology is often seen as a necessity when schools are renovated, as was the case with the Burke HS. The score of "Fair" regarding educational adequacy at Burke points out the need to identify the facility implications of the instructional program prior to implementing facility renovations. Although many components of the instructional spaces at Burke are excellent – like the new media center, some rooms are too small (e.g., science and art), some rooms lack adequate storage, and some areas lack adequate HVAC to make them comfortable (e.g., the new art room spaces at the old gym). There are no fume hoods or exhaust fans in science rooms.

When the detail scores for each of the pilot schools are examined (See attached Suitability Report for the detailed scoring report for the Burke school), a number of specific program areas consistently scored low. Included among those are the following:

- Art Spaces
- Music Spaces
- Cafeteria and Food Services
- Parking and Access
- Safety and Security Issues



## Suitability Report - Full

Project #: 7330	County: Boston	Site #: 2
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Up
Grade Config: 4-12	Site Type:	Site Size: 0.00

Suitability	Rating	Score	Possible Score	Percent Score
<b>Suitability - PK-12</b>				
<b>Learning Environment</b>				
Learning Style Variety	Good	4.00	5.00	80.00
Interior Environment	Fair	1.30	2.00	65.00
Exterior Environment	Good	1.20	1.50	80.00
<b>General Classrooms</b>				
Environment	Fair	2.28	3.50	65.00
Size	Good	7.00	8.75	80.00
Location	Good	2.10	2.63	80.00
Storage/Fixed Equip	Poor	1.31	2.63	50.00
<b>Kindergarten</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>ECE</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>Self-Contained Special Ed</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>Instructional Resource Rooms</b>				
Environment	Fair	0.46	0.71	65.00
Size	Fair	1.15	1.77	65.00
Location	Good	0.43	0.53	80.00
Storage/Fixed Equip	Fair	0.35	0.53	65.00
<b>Science</b>				
Environment	Excel	0.58	0.58	100.00
Size	Good	1.16	1.45	80.00
Location	Excel	0.43	0.43	100.00
Storage/Fixed Equip	Good	0.35	0.43	80.00
<b>Music</b>				
Environment	Poor	0.34	0.68	50.00

Project #: <b>7330</b>	County: <b>Boston</b>	Site #: <b>2</b>
Project: <b>Assessments 2015</b>	Region: <b>1</b>	Site: <b>Henderson Inclusion Up</b>
Grade Config: <b>4-12</b>	Site Type:	Site Size: <b>0.00</b>

Suitability	Rating	Score	Possible Score	Percent Score
Size	Poor	0.85	1.70	50.00
Location	Fair	0.33	0.51	65.00
Storage/Fixed Equip	Poor	0.26	0.51	50.00
<b>Art</b>				
Environment	Fair	0.34	0.53	65.00
Size	Poor	0.66	1.32	50.00
Location	Poor	0.20	0.40	50.00
Storage/Fixed Equip	Poor	0.20	0.40	50.00
<b>Career Tech Ed</b>				
Environment	Good	1.01	1.27	80.00
Size	Good	2.54	3.17	80.00
Location	Good	0.76	0.95	80.00
Storage/Fixed Equip	Good	0.76	0.95	80.00
<b>Computer Labs</b>				
Environment	(N/A)	0.00	0.00	0.00
Size	(N/A)	0.00	0.00	0.00
Location	(N/A)	0.00	0.00	0.00
Storage/Fixed Equip	(N/A)	0.00	0.00	0.00
<b>P.E.</b>				
Environment	Poor	1.20	2.40	50.00
Size	Fair	3.90	6.00	65.00
Location	Fair	1.17	1.80	65.00
Storage/Fixed Equip	Poor	0.90	1.80	50.00
<b>Performing Arts</b>				
Environment	Good	0.72	0.90	80.00
Size	Excel	2.26	2.26	100.00
Location	Excel	0.68	0.68	100.00
Storage/Fixed Equip	Fair	0.44	0.68	65.00
<b>Media Center</b>				
Environment	Good	0.58	0.72	80.00
Size	Fair	1.17	1.80	65.00
Location	Excel	0.54	0.54	100.00
Storage/Fixed Equip	Fair	0.35	0.54	65.00
<b>Restrooms (Student)</b>	Good	0.71	0.89	80.00
<b>Administration</b>	Fair	1.13	1.73	65.00
<b>Counseling</b>	Fair	0.20	0.31	65.00
<b>Clinic</b>	Good	0.20	0.26	80.00
<b>Staff Lounge-WkRm</b>	Good	0.54	0.68	80.00
<b>Cafeteria</b>	Good	4.00	5.00	80.00
<b>Food Service and Prep</b>	Good	5.31	6.63	80.00
<b>Custodial and Maintenance</b>	Good	0.40	0.50	80.00
<b>Outside</b>				
Vehicular Traffic	Poor	1.50	3.00	50.00
Pedestrian Traffic	Fair	0.22	0.34	65.00
Parking	Poor	1.28	2.55	50.00
Athletic Courts and Fields	Fair	1.73	2.66	65.00

Project #: 7330	County: Boston	Site #: 2
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Up
Grade Config: 4-12	Site Type:	Site Size: 0.00

Suitability	Rating	Score	Possible Score	Percent Score
<b>Safety and Security</b>				
Fencing	Fair	0.93	1.43	65.00
Signage & Way Finding	Poor	0.09	0.18	50.00
Ease of Supervision	Fair	1.30	2.00	65.00
Controlled Entrances	Poor	0.25	0.50	50.00
<b>Total For Site:</b>		<b>66.04</b>	<b>93.61</b>	<b>70.55</b>

#### Comments

##### Suitability - PK-12

Henderson Inclusion Upper School is housed in the original Wilson School built originally as a Junior High School. The program currently houses grades 4-12 in an inclusive model with both regular education and special education students in each class. The intent is to expand to a K-12 program over time.

##### Suitability - PK-12->Learning Environment-->Learning Style Variety

The facility has been re-designed to encompass all grades with flexible spaces located throughout.

##### Suitability - PK-12->Learning Environment-->Interior Environment

Many, but not all, instructional spaces have been updated and provide a stimulating environment for students and staff. Some classrooms still reflect the original age of the building.

##### Suitability - PK-12->General Classrooms-->Environment

Most general classroom have inadequate lighting and no air conditioning.

##### Suitability - PK-12->General Classrooms-->Location

The program has been planned to add grade levels over time with each space being placed appropriately.

##### Suitability - PK-12->General Classrooms-->Storage/Fixed Equip

Since the program is for an inclusion program many instructional spaces lack specialized storage equipment usually associated with special education programs.

##### Suitability - PK-12->Kindergarten

The Kindergarten is currently housed at Henderson Lower.

##### Suitability - PK-12->Self-Contained Special Ed

The program is intended to house special education and regular education students in the same instructional spaces.

##### Suitability - PK-12->Instructional Resource Rooms-->Environment

Most resource rooms have inadequate lighting and do not have air conditioning.

##### Suitability - PK-12->Instructional Resource Rooms-->Size

Some office type spaces are being used as resource rooms.

##### Suitability - PK-12->Instructional Resource Rooms-->Storage/Fixed Equip

Some of the smaller resource rooms lack appropriate storage and equipment.

##### Suitability - PK-12->Music-->Environment

The music rooms do not have appropriate configuration and have little to provide a stimulating environment.

##### Suitability - PK-12->Music-->Size

In total (classroom, storage, practice rooms, etc.) the music space meets approximately 50% of the standard.

##### Suitability - PK-12->Music-->Location

The music rooms is reasonably near the performance area but are not acoustically isolated.

##### Suitability - PK-12->Music-->Storage/Fixed Equip

Music rooms do not have adequate storage for equipment and supplies.

Project #: <b>7330</b>	County: <b>Boston</b>	Site #: <b>2</b>
Project: <b>Assessments 2015</b>	Region: <b>1</b>	Site: <b>Henderson Inclusion Up</b>
Grade Config: <b>4-12</b>	Site Type:	Site Size: <b>0.00</b>

Suitability	Rating	Score	Possible Score	Percent Score
Suitability - PK-12->Art-->Environment Art room does not have appropriate natural light.				
Suitability - PK-12->Art-->Size Art room does not meet size standards.				
Suitability - PK-12->Art-->Location Art room does not have good access to outside areas.				
Suitability - PK-12->Art-->Storage/Fixed Equip Art room does not have specialized storage normally associated with this type of space.				
Suitability - PK-12->P.E.-->Environment The gym is located in the basement with little in the way of an inviting / stimulating space.				
Suitability - PK-12->P.E.-->Size PE space does not meet the size requirements both in terms of the gym size and availability of support spaces.				
Suitability - PK-12->P.E.-->Location The gym is away from other instructional spaces but is difficult to access.				
Suitability - PK-12->P.E.-->Storage/Fixed Equip PE storage space is minimal.				
Suitability - PK-12->Performing Arts-->Storage/Fixed Equip There is no storage specifically associated with performing arts. Most storage is on the stage.				
Suitability - PK-12->Media Center-->Size The media center does not meet size standards usually associated with a K-12 program.				
Suitability - PK-12->Media Center-->Storage/Fixed Equip The media center does not have storage and equipment usually associated with a K-12 program.				
Suitability - PK-12->Administration The administrative areas are small and are not located for ease of supervision.				
Suitability - PK-12->Counseling Counseling areas are small compared to spaces normally associated with an inclusive program.				
Suitability - PK-12->Outside-->Vehicular Traffic There are no specific traffic lanes. Most is on street.				
Suitability - PK-12->Outside-->Pedestrian Traffic Pedestrian traffic crosses other traffic lanes.				
Suitability - PK-12->Outside-->Parking Parking for staff is minimal. Visitor parking is on the street.				
Suitability - PK-12->Outside-->Athletic Courts and Fields Outside areas do not meet the needs of a multi grade inclusion program.				
Suitability - PK-12->Safety and Security-->Fencing Some of the access in the back of the facility is fenced but there is no security features.				
Suitability - PK-12->Safety and Security-->Signage & Way Finding Entrances and spaces are not clearly identified.				
Suitability - PK-12->Safety and Security-->Ease of Supervision The facility is not configured for ease of supervision.				
Suitability - PK-12->Safety and Security-->Controlled Entrances There are numerous access points.				





## Technology Readiness Report - Full

Project #: 7330	County: Boston	Site #: 2
Project: Assessments 2015	Region: 1	Site: Henderson Inclusion Upper

Technology Readiness	Rating	Score	Possible Score	Percent Score
<b>Technology Readiness</b>				
Comm\IT Equipment Environment	Unsat	0.00	15.00	0.00
Electrical Power	Fair	5.00	10.00	50.00
Cooling	Fair	5.00	10.00	50.00
Equity of Access	Poor	3.30	10.00	33.00
LAN Connectivity	Good	15.00	15.00	100.00
WAN Backbone	Good	10.00	10.00	100.00
LAN-WAN Performance	Good	10.00	10.00	100.00
Video Distribution	Unsat	0.00	5.00	0.00
Voice Distribution	Unsat	0.00	5.00	0.00
Faculty & Staff Technology	Fair	6.70	10.00	67.00
<b>Total For Site:</b>		<b>55.00</b>	<b>100.00</b>	<b>55.00</b>

### Comments

Technology Readiness->Comm\IT Equipment Environment  
Comm/IT equipment is not located in an appropriate space.

Technology Readiness->Electrical Power  
Outlets are limited.

Technology Readiness->Cooling  
Cooling is not adequate in some locations.

Technology Readiness->Equity of Access  
Network access is not adequate for about 60% of the school.

Technology Readiness->Video Distribution  
There is no infrastructure for video distribution.

Technology Readiness->Voice Distribution  
Voice communication is lacking throughout school.

Technology Readiness->Faculty & Staff Technology  
Most spaces have adequate faculty and staff technology.

## Findings & Recommendations

### Findings and Recommendations

Based on the assessments of the four pilot schools, MGT provides the following findings and accompanying recommendations for next steps.

<b>Finding #1</b>	Educational programs/goals and the accompanying facility implications are unclear.
<b>Recommendation</b>	Conduct educational program discussions with district staff to ensure that existing/future educational program goals are understood and facility implications are outlined prior to renovation or reconstruction.
<b>Finding #2</b>	Facility standards designed to support the educational program are unclear.
<b>Recommendation</b>	Develop specific standards for each instructional area, including: <ul style="list-style-type: none"> <li>– Learning environment</li> <li>– Size</li> <li>– Location</li> <li>– Storage/Fixed equipment</li> <li>– Technology Readiness</li> </ul>
<b>Finding #3</b>	Future plans should reflect district priorities and coordination to support improved condition and educational adequacy as well as address long-term growth, capacity, and utilization.
<b>Recommendation</b>	Determine weighting for components, including facility condition, educational adequacy, technology readiness, and facility utilization in order to appropriately account for each factor as priorities are developed and the master plan is constructed.

# Building Physical Assessments

## Summary

### *Due Diligence Report*

## Summary

### **Evaluation of Existing Conditions: Henderson Upper School**

The following evaluations are based on building walkthroughs and reviews of the renovation construction documents performed by design professionals on August 4, 2015. The building was built in 1932 and not an historic structure.

### **General Description**

The building and systems have been maintained well, but systems and finishes are in fair condition in many cases and in need of upgrade. The existing infrastructure is not capable of supporting current technological needs and teaching methods. The building was built to meet the code requirements of the time, but as these have evolved, and as accessibility standards have been established, the building and surrounding site are no longer in compliance with current standards. Extensive work will be required to bring the building up to meet current codes.

The following information is based on a walk through performed on August 6, 2015 and a review of the available construction documents. The building was built in two phases.



## Summary

## Due Diligence Report

## Due Diligence Report

### Architectural Building Description

- 97,130 GSF and was completed in 1932
- Use Group: E- Education (with accessory occupancies A1 – Auditorium; A 2 Cafeteria)
- Type of Construction: IA or IB – Noncombustible, potentially steel encased in concrete and/or brick.

The building is a 3 story structure. The basement includes a pipe tunnel and the utilities rooms. The original structural floor slabs are a concrete slab supported by unknown steel shape and size. The original roof is comprised of a traditional multi-ply asphalt and bitumen built-up roofing system with a gravel ballast.

#### Exterior Walls

The walls are a combination of brick, CMU with brick or concrete with brick. Given the age of construction it is likely any damp-proofing material may contain components no longer permitted in construction materials and should be tested for asbestos content. The walls are thermally inefficient. The wall is constructed of materials with good thermal mass, good moisture resistance and the mortar is generally in good condition. However there are no expansion joints and/or control joints in the exterior masonry façade.



#### Exterior Windows/Louvers

The window units are an operable triple hung windows all without screens. Only the bottom sash is operable. The opening is more than 6" and most of the window units do not stay open. It is a very dangerous condition.

The lintels are in generally good condition. The perimeter sealants at all window units throughout the building are in poor condition.

#### Exterior Doors

Some of the original doors and frames have been replaced by new hollow metal doors and frames. Egress hardware was also been added to the exterior doors. Sealant at the perimeter of all exterior door frames is in poor condition.

Most of the entries are not ADA compliant except for two.

## Interior Partitions

The interior partitions are in good condition at all corridors, common areas and at maintenance/custodial areas. Partitions at classrooms and administration spaces are generally painted plaster with a masonry core throughout the facility.

Auditorium walls are painted plaster with decorative stone details at the sides, rear and framing the stage of the auditorium. Generally, all walls are in good condition.



## Flooring

The main entry and corridors are original terrazzo and in good condition. In most classrooms the floor is a 12" x 12" vinyl and in good condition or wood strips and also in good condition. The auditorium is sealed concrete under the seats and vinyl tile in the travel areas - both in good condition. Wood floor at the stage is in good condition. The Gym has experienced flooding in the past and the original wood floor was destroyed. In its place is an unknown type of 12"x12" synthetic tile that is cupping and in poor condition.



## Ceilings

Most classrooms and corridors are the original plaster ceiling and require some paint touch up but are generally in good condition. Some offices and additional areas have an ACT ceiling and are in good condition. Ceiling heights are generous and provide for ample natural light except in some of the corridors.



## Signage, Way Finding and Exit Signs

Corridor way finding is nonexistent for the layout and geometry of the building.

The egress signage is placed correctly but the new code requires additional units. Some of the existing signs are not illuminated and do not meet code.



### Casework

Offices, workrooms and administration spaces have original built-in wood casework. Casework at administrative areas is generally in fair condition. Existing casework in general does not provide any areas that are accessible.

Classroom storage is the original natural wood built-in units that are generally in good conditions, the quantity is not adequate.

### Means of Egress and Doors

The configuration of the corridor egress system and capacity of the egress doors do not meet egress code requirements. Some of the egress doors open on to stepped landings with no ramps or area of refuge provided.

The doors and hardware are deficient in several categories. No indications were visible to indicate that stair doors were labeled by UL or other testing agency to indicate the required fire rating. In addition, almost all of the glazed doors contain wired glass which is no longer permitted as safety glazing by the current codes for educational use. Most of the classroom doors throughout the building have not been updated with new hardware but do not have a continuous hinge.

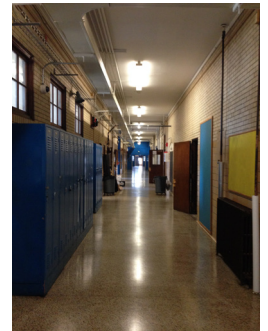
The corridor doors are held open by floor stoppers or latches. Many of these doors have transoms and sidelights of plexi or wired glass which is not permitted as safety glazing. The doors themselves have no fire rating as the label is either missing or was never a labeled door making these doors non-compliant for fire or smoke separation.

### Passageways and Corridors

Vestibules are not present at the entries. Ceiling heights in corridors are generous although the width is very narrow. Corridor lighting is surface mounted and is insufficient.

### ADA/MAAB Accessibility

In general the building does not meet current accessibility standards. Most toilet rooms do meet current standards, and some multi-fixture toilet rooms do provide handicapped stall.



Handicapped door operators are not present at the main entries. The main entry is not accessible. Other Means of Egress doors open onto stepped pads without ramps. While most of the Auditorium is accessible, the path of travel to gain access to the stage is non-compliant. At the date of inspection an elevator was being added onto the building.

There are a number of projections in rooms and corridors along the accessible path that do not meet the 4" maximum projection rules under the MAAB. These conditions pose a hazard to vision-impaired students and teachers.

### Fire Separation of the Buildings

The building is not sprinklered. The building is not compartmentalized to meet today's code requirement for floor areas when not sprinklered. If sprinklered the building's small footprint should allow for non-compartmentalization.

### Energy Code and Exterior Issues

As indicated above, the lack of insulated exterior walls (in most locations), ground floor slab, lack of vestibule airlocks, and the absence of any continuous air barrier make the structure non-compliant with the current energy code.

## Auditorium

The Auditorium is generally in good condition, but is dated the lighting and acoustic quality is poor. The wood strip flooring is generally in good condition. The seats are bolted in place wood folding type and are in good condition but uncomfortable by today's standard.



## Site/Civil

### Site Context

The upper school is located at the northeast corner of Croftland Avenue and Alicia Road intersection in the neighborhood of South Dorchester. The school is a square “U” shaped building with parking and play areas at the rear of the building. There is 4’ to 6’ grade change across the site with retaining walls at the rear of the site to meet the higher grade of the adjacent properties. The site is not located in a FEMA flood zone (map # 25025C0087G), nor does there appear to be any localized site flooding.

### Utilities

The site drainage system is in fair to good condition. The catchbasins appear to have neither hoods nor deep sumps. Otherwise, the drainage system appears to function well.

We found no records of the age or condition of the water, sewer, gas, electrical and communication utility connections. The utility connections are likely the age of the building. We recommend a TV inspection of the underground sewer and drainage systems.

### Surfaces

The main entrance for the school is on the southern side facing Croftland Avenue. The entrance is at the top of a large flight of steps with no nearby accessible route. The stairs are otherwise in fair to good condition. The iron fencing along the sidewalk is in good condition.

The west side of the school along Alicia Road is in poor condition. The iron fence is not well maintained. The building entrance stairs are not well maintained and require immediate maintenance on some treads to avoid failure.

The parking and drive aisle at the north (rear) side of the building are in good condition. The concrete curbing is in poor condition, justifying selective repair. The asphalt play areas and gardens are in fair condition. The masonry outdoor classroom/stage is in fair condition, with a few blocks that need to be repaired.

The walkway to Fuller Street is in poor condition. The stairs are missing railings. The adjacent retaining walls are failing and require significant repair or reconstruction. The fencing is in poor condition and some sections should be repaired.

The walkway along the east side is in fair condition. The stairs connecting to Croftland Avenue are in poor condition.

## RECOMMENDATIONS:

- Repair west stairs.
- Repair/reconstruct Fuller Street walkway walls and fencing.
- TV sewer and drain systems to assess condition.



## HVAC Systems

### Executive Summary

The following information is based on a walk through performed on August 4, 2015. The building was built circa 1932.

The Wilson Middle and High School appears to have received good to average maintenance of the HVAC systems over its occupied years. Even with proper maintenance, through normal operation, systems gradually deteriorate due to scale, poor water conditions, and lack of preventive maintenance. Systems will gradually deteriorate to a point of exceeding their maximum serviceable life. This building is a typical example of such. Generally, most systems are operational and maintain reasonable space temperature. However, due to the antiquated nature of the mechanical systems and controls and the gradual scaling and corrosion of the various piping systems, heat transfer rates have become reduced and the overall system has become inefficient to operate and costly to maintain. The ventilation rates and acceptable air-quality are likely compromised due to the surface contamination on many systems as well as mis-adjusted and closed outside ventilation dampers. The systems could continuously be repaired, replaced and modified on a sectional basis that will keep the systems in operation. However, continued operation will be at the expense of increased maintenance and operating costs due to the inefficiency of the existing systems and through the generally antiquated nature of the systems themselves. All systems installed within the building have exceeded their maximum serviceable life and are in need of replacement. With overall repair, maintenance, cleaning and calibrating of the system, a continued limited service could be achieved.

### Boiler Room

The boiler room is provided with two (2) H.B. Smith gas fired cast iron sectional boilers. The boilers appear to be original to the building. The boilers generate low pressure steam. The condensate return tank and pumps appear to be in a good operational condition. The steam piping distribution throughout the building is installed in an underground trench system.

The boilers and breeching/flues show signs of wear and rust, but are operational. The breeching discharges into a masonry chimney which is vented vertically through the building to the exterior.

The maintenance personnel stated the boilers' operation are satisfactory.

The boilers are provided with induced draft fans. There is surface contamination on each draft fan. The fans insulation is not present.

It is not clear whether the boiler room ventilation is operational.

Combustion air is introduced directly to the boiler room.

The existing automatic temperature controls are pneumatic. Located within the boiler room is the air compressor. It appears some of the controls were replaced over the years by a similar pneumatic type. Maintenance staff is not knowledgeable on the temperature control system.

It appears there was a retrofit given to the boiler control panel. It is our understanding the boilers and other controls throughout the school are controlled by the School District Energy department.

### Electrical Rooms

The main electric room does not appear to be temperature controlled.

### Chemical Storage, Science Prep Rooms

Chemical Storage and Science Prep rooms are not provided with exhaust fans.

### Science Classrooms

Science classrooms are not provided with Fume hoods.

### Cafeteria/Kitchen

Cafeteria is provided with heating and ventilating air handling unit. The equipment appears to be in good operational condition. The air is distributed via wall mounted registers. The registers are soiled and require cleaning. The kitchen is provided with an exhaust air hood. The dishwasher is exhausted into the kitchen exhaust hood. The kitchen hood appears to be in fair condition and operational. It is not clear whether the hood provides adequate exhaust to the kitchen.

### Auditorium and Stage

The auditorium and stage are provided with heating and ventilating air handling units. The air distribution is provided via wall registers.

### Administration Area

The administration area is air conditioned via window air conditioners.

### Classrooms

Classrooms are provided with classroom unit ventilators (located along the exterior wall of the building) and finned tube radiation. The air is exhausted via a low wall mounted exhaust register in each classroom. Each classroom has a wall-mounted thermostat.

The classroom unit ventilators and finned tube radiation are original to the building, but appear to be in a good operational condition, although the interior of unit ventilator cabinets require cleaning and debris removal. The operation of outside intake dampers could not be verified. The majority of unit ventilator louvers are located above grade level. All equipment has reached its maximum serviceable life.

Some heating distribution piping in the classrooms was not insulated. The seals are missing at the piping wall penetrations throughout the building.

### Corridors, Stairs

The corridors and stairs are provided with finned tube radiation. The air distribution and finned tube radiation appear to be in good condition and operational. Some heating distribution piping in the classrooms was not insulated.

### IT Server Room

The IT server room was not accessible.

### Data Room

The data room was not accessible.

### Gym

The gym is provided with heating and ventilating air handling unit(s) that appear to be in operational condition. The air distribution is via wall mounted wall registers. The registers are soiled and require cleaning.



## RECOMMENDATIONS:

When considering the overall age of all HVAC mechanical systems, they should be replaced. But given the fact the HVAC systems are well maintained and operational, they could continue to serve the building. We do not recommend upgrading the components of the systems on a sectional basis since the mechanical systems and their components work together as a single system and, as an example, changing the boilers without the piping systems or classroom unit ventilators without air intake ductwork and motorized dampers would not result in achieving the benefits of the investment of upgrading the components since a failure is imminent at any point within the existing components. Any interruption at any point in the system could render the entire system inoperative, or poor performing at best.

As the building presently exists, there does not appear to be any immediate life safety concerns associated with the HVAC systems, however, the current building code specific requirements relating to ventilation air could be compromised within this building.

To correct the ventilation code deficiency, high operating costs, and high maintenance and repair costs, would be an overall system replacement utilizing new high efficiency HVAC systems and energy conservation design techniques.



## Electrical Systems

### Electrical Power Distribution System

The Wilson School utility service terminates in the main switchboard located in the main electric room at the first floor. The Switchboard is manufactured by Westinghouse. It's rated 1,200 amp at 120/208 volt 3 phase and consists of fused disconnect switches utilized as overcurrent protection devices for downstream feeders to panelboards. The main switchboard appears to be in fair operational condition, but original to the building, and therefore its useful life expectancy is reaching its limit. It was also noticed that clearance in front of the switchboard appears insufficient and less than required by Electrical Code as a dedicated maintenance space due to the fact that other equipment is installed on the opposite wall. Utility service meter is located in the main electric room (photo 1).

Panelboards installed throughout the building consist mostly of recessed wall models in the corridors and surface-mounted in a few classrooms/labs. The panelboards installed in corridors appear to be in fair and operational condition, but original to the building, and therefore their useful life expectancy is reaching its limit (photo 2). Power feeders (conduits and wires) to these panels running from the old switchboard are assumed to be original to the building, and therefore exceed their expected useful life.

Panelboards in the boiler room appear to be original to the building. They are in poor but operational condition.

The panelboard installed outside of the auditorium is in poor condition (photo 3).



*Photo 1: Existing main switchboard and utility meter*



*Photo 2: Examples of old panelboards in fair, operational condition*



*Photo 3: Old panelboard outside of Auditorium in poor condition*

The surface mounted panelboards installed in classrooms/labs appear to be newer, in good and operational condition. These panels associate with the newer surface-mounted raceways added throughout the building (photo 4).



*Photo 4: Example of newer panelboards and newer raceways*

## RECOMMENDATIONS:

The old switchboard is recommended for replacement. All old corridor wall-recessed panels throughout the building (observed and/or estimated quantity - about twelve total), the panel outside of the auditorium and the boiler room panels with associated power feeders from the old switchboard are recommended for replacement.

### Branch Circuit Power Circuits

A typical classroom has a few old receptacles, and is also equipped with a new metal raceway containing duplex receptacles. It is assumed that old receptacle branch wiring was never replaced and is original to the building. The new raceway receptacles are fed from the new panelboards (photo 4, above).

The science labs were upgraded with bench-mounted devices. It was noticed that a few new receptacles installed adjacent to sinks were non-GFCI type in violation of Electrical Code (photo 5).

Overall, the quantity and location of duplex receptacles throughout the building was found adequate and appropriate.

Duplex receptacles in the kitchen areas are old (some may not be functioning/broken) and non-GFCI type as required by the latest Electrical Code (photo 6).



Photo 5: Example of non-GFI receptacles near sinks in science labs



Photo 6: Example of non-GFI receptacles in the kitchen areas

## RECOMMENDATIONS:

Old receptacles with associated branch wiring installed throughout the building are recommended for replacement. Non-GFCI receptacles in labs located within 6 feet from sinks shall be replaced with GFCI type. All non-GFCI receptacles in the kitchen areas shall be replaced with GFCI type.

### Building Lighting

The lighting system was recently upgraded. New lighting fixtures were installed in administration area offices, science labs and classrooms, computer rooms, cafeteria, etc. (photo 7).

The corridor lighting system was upgraded, but not throughout the building. Auditorium lighting system consisting of decorative pendants is old and inefficient (photo 8).

Lighting in typical classrooms consist of two or three continuous rows of pendant linear fixtures with 2-lamp per cross section. Lighting in a typical science lab consist of 2'x4' 4-lamp recessed fixtures with lenses. These lights are found to be in good and operational condition. Lighting illumination levels (FC levels) produced by these fixtures appear to be adequate. All new lights are equipped with energy-efficient T8 lamps and electronic ballasts.

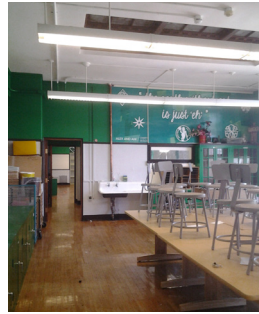


Photo 7: Examples of new lighting systems in classrooms, labs, cafeteria, etc.



Photo 8: Examples of old lighting systems

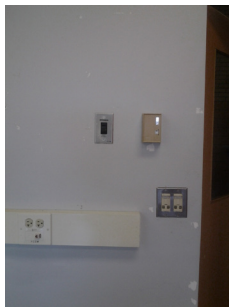


Photo 9: Example of occupancy sensor/switches



Photo 10: Egress emergency lighting

Automatic controls such as occupancy sensors required per the latest Energy Code were observed in majority of offices, science labs and classrooms (photo 9), however, the daylight sensors, also required by Energy Code, could not be found during the site visit.

The lighting system in corridors is controlled by local switches only. There are no automatic controls.

Emergency and egress lighting is implemented by use of battery packs/remote light heads (photo 10), electrical exist signs, and non-electrical exit signs (photo 11). Some exit signs were observed being not illuminated during site visit. Such arrangement is not in compliance with Building Code Chapter 27 requiring exit signs to be powered and illuminated at all times. It was also noticed that a few exit signs are not visible in corridors (blocked from view by columns or wall extensions).



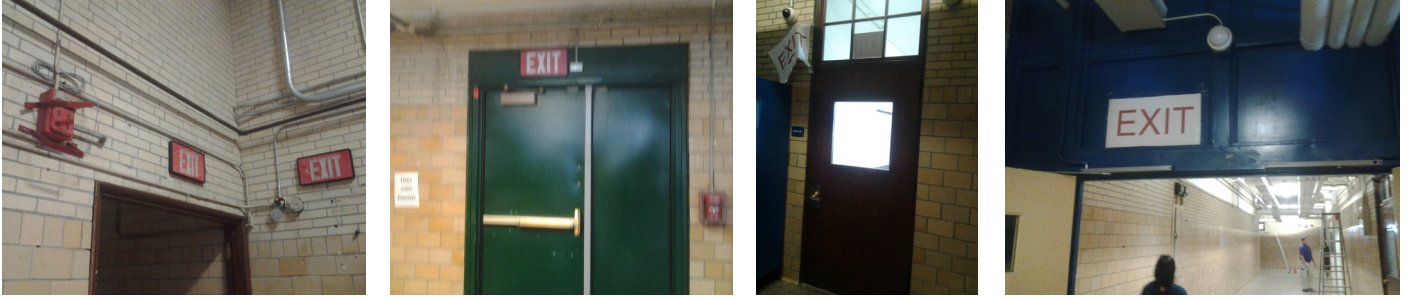


Photo 11: Egress exit signs

## RECOMMENDATIONS:

Improving of lighting controls in compliance with Energy Code is recommended. Auditorium lighting is recommended for upgrading. Installation of occupancy sensors and daylight sensors in all rooms not time-controlled in compliance with Energy Code is recommended.

The appropriate egress path and location of exit signs should be examined throughout. Non-electrical exit signs should be replaced with electrical models in compliance with Building Code.

## Fire Alarm System

The existing fire alarm is manufactured by Simplex (photo 12).

In general, the fire alarm system is in good operational condition, however, a few deficiencies were observed, as summarized below:

- A few private and student bathrooms are not equipped with fire alarm signaling devices.
- Educational spaces such as classrooms, science labs and computer rooms are not equipped with fire alarm signaling devices.

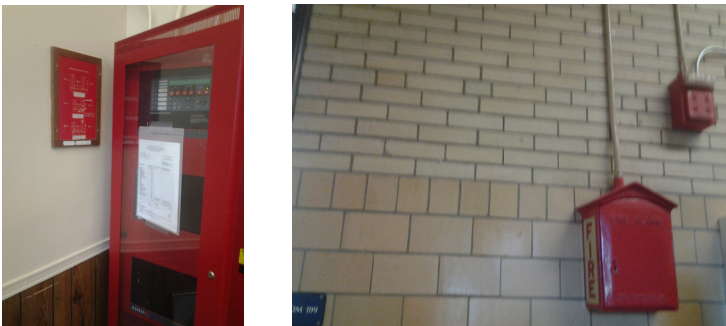


Photo 12: Existing FACP and master box

## Security

The school is equipped with a video intercom and a proximity card reader at the front entrance. The video intercom provides two-way audio communication and a video signal to an attendant in the main office. The attendant can view and speak with the visitor and elect to remotely unlock the door from the office. There is a second proximity card reader located at the rear of the building adjacent to Room 10A (as numbered in the assessment set of plans). No card access readers were identified inside the building.

Motion sensors are distributed in corridors on the first floor to detect intrusion. Exterior doors are equipped with door contacts. A newer intrusion detection system has been installed to monitor doors.

The school is equipped with a closed circuit television system. Cameras are distributed throughout corridors and around the exterior of the school. Coverage appears adequate.



Photo 1: Wall-mounted motion sensor



Photo 2: Intrusion detection panel



Photo 3: Wall CCTV camera

There are areas in back of the building where students or intruders could hide. The back of the school does not appear to be well lit. The sightlines on approach from the street are good. Exterior doors are not numbered. Room numbers are not posted on the building exterior. Plantings near the building are low or pruned and do not obscure views of the exterior.

Corridors are generally narrow and long with straight views. Classroom doors are keyed.



Photo 4: and 5: Exterior views

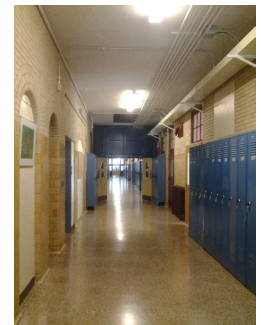


Photo 6: Corridor views

### Communications

The horizontal cable infrastructure in the original building is comprised of Category 5e cable. Voice over IP telephones were not noted during the walk-through.

Verizon provides a combination of multi-pair copper and fiber optic cable that terminates in an entrance facility (labeled room 26 in the assessment plans). The space is crowded, without air conditioning, security or adequate clearance creating a difficult working environment to perform future upgrades. There are a number of unused/abandoned systems remaining in this room that contribute to crowding.



Photo 7 and 8: Views of abandoned equipment in entrance facility



Photo 9: Examples of IDP

IDF rooms are distributed throughout the building. None of the IDFs in the building are air conditioned. They are located in closets or storage spaces that are not secured, leaving the equipment subject to potential damage or vandalism. Electrical services in each location will require upgrades to accommodate future equipment loads.

The typical classroom is equipped with a wireless access point. Science labs appear to have received cable communication system upgrades in the past 10 years. There are no telephone handsets in the classrooms.

Clocks are wired to the master clock. The bells in the original building are as old as the facility. The paging system is a combination of new and older speakers. There are no speakers in the stairways. A number of older (seemingly abandoned) speakers were documented throughout the building. The paging system control panel is out dated and nearing the end of its useful life. Wiring from the paging console is run through the original paging system wall box. Further review of functionality is recommended.

There is no local sound system or scoreboard in the gym.



*Photo 10: Example of older speaker*



*Photo 11: Paging system console*



*Photo 12: Original paging system wall box*



## Plumbing and Fire Protection Systems

### Fire Protection System

There is no fire protection system in the building.

### Plumbing System

Most piping is not visible and some system conditions noted herein are presumed due to age and the condition of piping which was visible.

#### *Domestic Cold Water*

Domestic cold water for the facility is fed from a single water service; a 4-inch main entering the building in the boiler room. The water meter is in fair condition (see photo 1). All piping, valves and risers appear to be original, in fair to poor condition, and has outlived/exceeded its useful life. Domestic cold water piping is not expected to last a many more years without exhibiting widespread problems and possible failure. Some pipes are not insulated (see photo 2). One of the cold water risers is leaking (see photo 3).

The existing water service does not include a backflow preventer assembly.

There is an existing backflow preventer in the boiler room for HVAC make-up, non-potable cold water system (see photo 4).



*Photo 1: Domestic water service and water meter*



*Photo 2: Uninsulated Pipes*



*Photo 3: Leaking cold water riser*



*Photo 4: RPBP for HVAC make-up*

## Domestic Hot Water

Domestic hot water for the facility is supplied from two sources; two (2) 40 gallon gas-fired water heaters.

One gas-fired water heater, manufactured in 2011, is located in the boiler room and appears to be in good condition (see photo 5). The other gas-fired water heater, manufactured in 2013, is located and serves the kitchen, appears to be in good condition (see photo 6). All piping and valves appear to be original, in fair to poor condition, and have outlived/exceeded their useful life. Domestic hot water piping is not expected to last many more years without exhibiting widespread problems and possible failure. Some pipes are not insulated and there are two types of insulation, black and white. Hot water is circulated from hot water distribution loops by pumps in the boiler room and in the kitchen.



Photo 5: Gas-fired water heater in the boiler room



Photo 6: Gas-fired water heater in the kitchen

## Natural Gas

The existing natural gas system enters the building through the boiler room via a 6-inch gas main (see photo 7) and through the kitchen area (see photo 8). The existing gas system includes a gas meter, gas boosters, valves, and gas regulators. Gas is distributed throughout for the kitchen equipment, water heaters and gas boilers and laboratory classroom gas turrets. All piping and valves appear to be original, in fair to poor condition, and has outlived/exceeded its useful life and is not expected to last many more years without exhibiting widespread problems and possible failure.



Photo 7: Gas service, gas meter and piping in the boiler room





Photo 8: Gas service, gas meter and piping in the kitchen area

### Sanitary Waste and Vent

Sanitary waste and vent system is collected below the slab and is therefore not visible. The above slab piping in the building was at times visible, and is expected to be in poor condition due to its age. Sanitary drainage piping is not expected to last many more years without exhibiting widespread problems and possible failure.

The kitchen's triple pot sink and prep sink are provided with above slab grease trap. Piping installation at triple pot sink is not code compliant (see photo 9). The air intake is not terminating above fixture's flood rim (see photo 10).

The hand sink is not ADA compliant and the piping is not insulated (see photo 11).

There is no emergency shower/eyewash installed in the boiler room.



Photo 9: Waste piping installation at triple pot sink and prep sink



Photo 10: Air intake at triple pot sink



Photo 11: Hand sink

## Acid Waste and Vent

Science labs were renovated approximately five years ago.

Acid neutralization tanks were installed in the first floor janitor's closet to collect laboratory waste (see photo 12).

The non-potable water system includes only one backflow preventer. There should be one for non-potable cold water and one for non-potable hot water (see photo 13).

Only one water supply is provided for the laboratory faucets (see photo 14).

The existing emergency shower/eyewash installed in the science lab is non-ADA compliant (see photo 15).

Pipe insulation at pipe risers are in poor condition (see photo 16).

There is no emergency shower/eyewash installed in the boiler room.



Photo 12: Acid neutralization tanks



Photo 13: Backflow preventer for non-potable water system

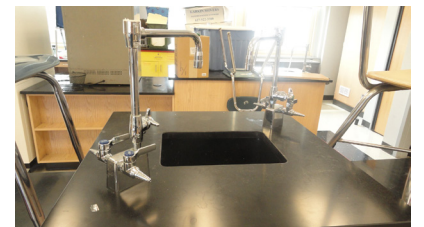


Photo 14: Water supply for the laboratory faucets







Photo 15: Non-ADA compliant emergency shower/eyewash



Photo 16: Pipe insulation in poor condition

### Storm Drainage

The storm drainage system is collected below the slab and is therefore not visible. The above slab piping in the building was at times visible, and is expected to be in poor condition due to its age. Storm drainage piping is not expected to last many more years without exhibiting widespread problems and possible failure.

### Plumbing Fixtures

Some toilet plumbing fixtures in the facility were replaced approximately five years ago and appear to be ADA compliant in some locations. Most locations include original or outdated fixtures, in fair to poor condition, and are not ADA compliant. No plumbing fixtures were observed to be current water-saving fixtures.

Some water closets are wall-mounted with manual flush valves, some have dual flush and others are floor-mounted, tank-type and some with manual flush valves. They are in fair condition (see photo 17).

Urinals are wall-mounted with manual flush valves, generally in fair condition (see photo 18).

Lavatories are wall hung with self-closing push-down faucets or lever handles, generally in fair condition. Some of the lavatories are free-standing and non-ADA compliant. Pipe insulation is not installed in some locations and others are in poor condition (see photo 19).

There is an issue on domestic water supply on some lavatories. It takes a while for hot water to come out on some lavatories.

Bi-level electric water coolers are not installed in the entire facility. Water dispensers are used in the entire facility.

Some classrooms sinks are non-ADA compliant (see photo 20).



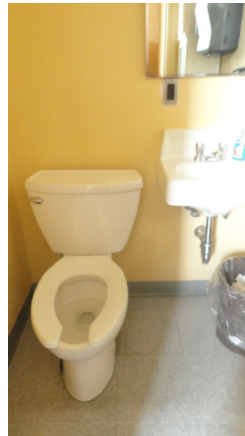
*Wall-mounted water closet with manual flush valve*



*Wall mounted water closets with dual flush valves*



*Floor mounted water closets with manual flush valves*



*Floor mounted tank type water closet*

*Photo 17: Different types of installed water closets*



*Photo 18: Urinals*





*Non-ADA Lavatories and without pipe insulation*



*Lavatory with poor pipe insulation*



*Free-Standing non-ADA Lavatories*



*Photo 20: Non-ADA classroom sink*

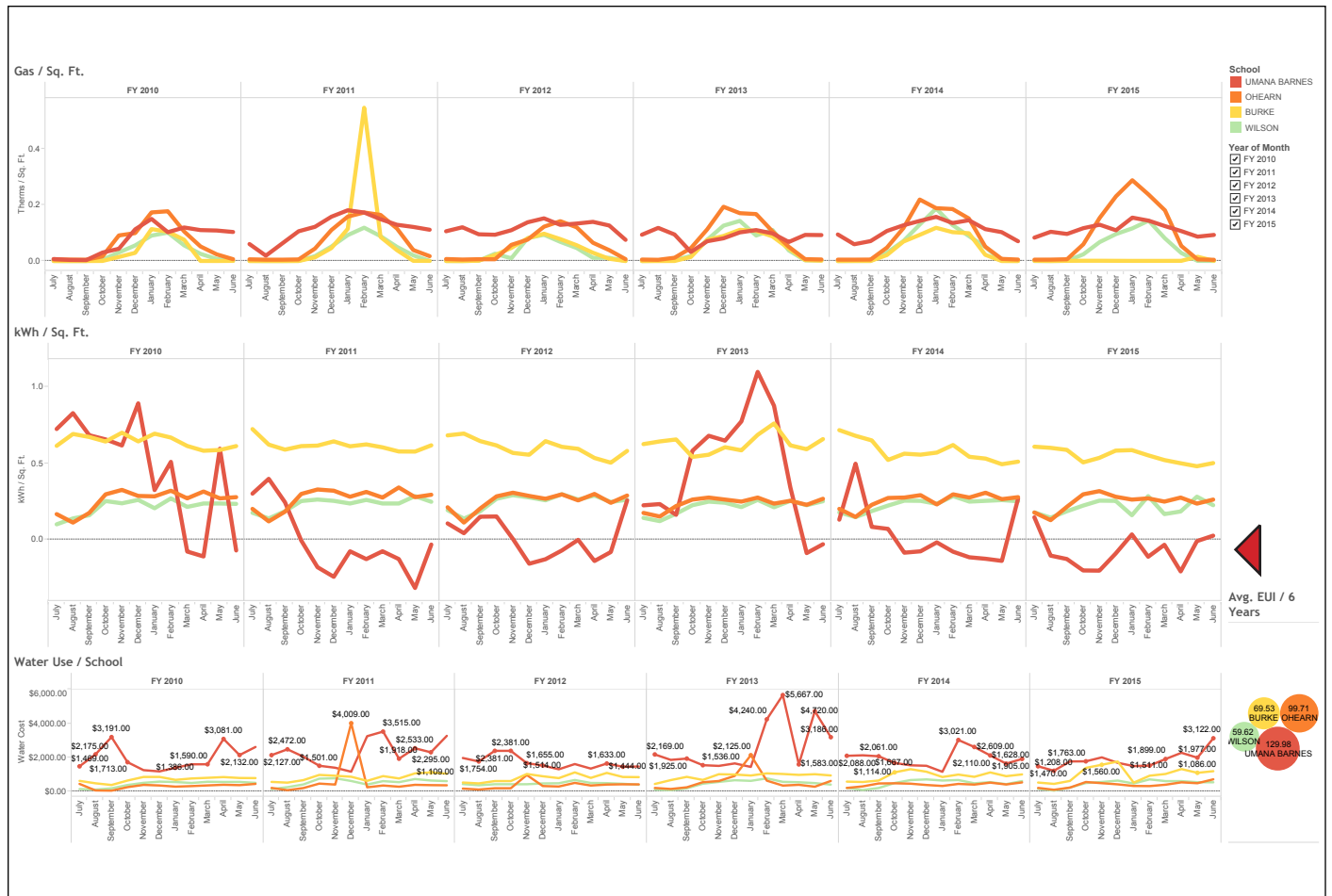
*Methodology**Reports***Energy &  
Sustainability**

## Energy & Sustainability


Understanding current energy consumption patterns for Boston Public School's existing facilities will be an important metric for determining building suitability for long-term usage and operational cost modeling. Currently BPS's Energy Division monitors utility usage, water consumption and operates an Energy Management System in an effort to aggressively save resources and money. Long-term reductions in climate change contributing energy sources (fossil fuels), utilizing utility company rebates and preparing facilities for redundancy and resiliency will be additional considerations for both building and site evaluations in the 10 Year Facility Master Plan.


The Pilot Study includes the last six years of electrical, gas and water consumption and total costs for the four buildings. More typically buildings can be analyzed by typology, age, renovation age, size, etc. The data should be used to spur investigation and encourage 'constant' vigilance necessitated with modern systems. This data can be analyzed in a number of ways as illustrated in the following pages.

## Month by Month Utility Use



Month over month utility usage and cost data is the most powerful tool to analyze building and system functionality. Trendlines can be observed, operational cost planning and maintenance addressed through careful analysis. This can be a snapshot on how users are actually interfacing with building systems rather than relying on modeling. Operational behavior can then be addressed and modified.

 Example: Burke High School's flat line gas use through the winter of 2014/2015 reflects a failed meter, so consumption data is not captured correctly for this period throwing off year over year statistics.

 Negative electrical use at Umana suggests necessary investigations as well.

## Comparative Analysis



The City of Boston and BPS can monitor a number of useful benchmarks for the portfolio of schools in the district, comparing buildings of a certain era, typology (HS, MS, K-5), school size, etc.

Energy Use Intensity (EUI) is then evaluated against our regional average for similar schools. As codes and LEED ratings continue to evolve and tighten energy use in the buildings we consider high performing today will eventually move down the spectrum. Planning for Net Zero becomes imperative for the flexibility of BPS and improving operational costs and budget predictability.

\*Note: The cost per student metric is an “inverse indicator” (in this instance) the low cost per student at older schools such as O’Hearn and Wilson (Henderson Upper and Lower) are indicative of dated systems and non-code compliant ventilation provision, or systems operating below capacity that lack of power and data infrastructure required for BPS educational vision implementation.

### Energy Use Intensity (EUI)

EUI is an average measurement - in this instance specifically for K-12 schools in Climate Zone 5 is used as a baseline for comparative analysis from the US Energy Information Administration's - Commercial Buildings Energy Consumption Survey (CBECS) updated in 2012.

# Energy Performance

## Wilson

<u>Period</u>	<u>Kilowatt Hours</u>	<u>Electric Cost</u>	<u>Gas Therms</u>	<u>Gas Cost</u>	<u>mmbtu per sq. ft.</u>	<u>Total mmbtu</u>	<u>Water (Cubic Ft.)</u>	<u>Water Cost</u>	<u>Total Utility Cost</u>
<b><u>FY 2010</u></b>									
Jul-09	9798	\$2,407	37	\$772	0.38	37	1450	129	\$3,308
Aug-09	13,518	\$2,067	18	\$670	0.49	48	1,100	97	\$2,834
Sep-09	15,558	\$3,445	26	\$765	0.57	56	1,900	171	\$4,381
Oct-09	24,558	\$3,830	491	\$1,220	1.37	133	3,900	369	\$5,419
Nov-09	23,118	\$2,999	2,964	\$4,543	3.86	375	5,250	495	\$8,037
Dec-09	25,278	\$3,381	5,416	\$7,612	6.46	628	6,000	567	\$11,560
Jan-10	19,998	\$3,619	8,806	\$10,868	9.77	949	5,750	542	\$15,029
Feb-10	26,238	\$3,938	9,826	\$12,099	11.04	1,072	5,200	488	\$16,525
Mar-10	20,838	\$3,450	5,426	\$7,361	6.32	614	5,900	559	\$11,370
Apr-10	22,998	\$3,214	2,496	\$4,538	3.38	328	5,650	547	\$8,299
May-10	22,998	\$3,205	717	\$2,095	1.55	150	5,600	550	\$5,850
Jun-10	22,758	\$3,695	73	\$841	0.87	85	5,050	494	\$5,030
	<b>247,656</b>	<b>\$39,250</b>	<b>36,296</b>	<b>\$53,384</b>	<b>46.06</b>	<b>4,475</b>	<b>52,750</b>	<b>5,008</b>	<b>\$97,642</b>
<b><u>FY 2011</u></b>									
Jul-10	17,118	\$4,089	54	\$862	0.66	64	1,400	129	\$5,080
Aug-10	13,518	\$2,126	18	\$819	0.49	48	2,550	240	\$3,185
Sep-10	18,078	\$3,993	29	\$845	0.66	65	4,450	401	\$5,239
Oct-10	24,558	\$4,152	57	\$772	0.92	89	7,500	742	\$5,666
Nov-10	25,518	\$3,520	1,719	\$3,038	2.67	259	7,750	766	\$7,324
Dec-10	24,678	\$3,981	5,014	\$7,442	6.03	585	6,150	605	\$12,028
Jan-11	22,998	\$4,116	8,979	\$11,843	10.05	976	4,000	395	\$16,354
Feb-11	25,278	\$4,300	11,539	\$14,666	12.77	1,240	5,900	597	\$19,563
Mar-11	22,998	\$3,550	8,618	\$11,389	9.68	940	5,300	535	\$15,474
Apr-11	22,998	\$3,417	4,911	\$7,331	5.86	569	7,100	720	\$11,468
May-11	27,678	\$3,999	1,978	\$4,538	3.01	292	6,250	632	\$9,169
Jun-11	24,078	\$4,012	40	\$707	0.89	86	5,900	596	\$5,315
	<b>269,496</b>	<b>\$45,255</b>	<b>42,956</b>	<b>\$64,252</b>	<b>53.69</b>	<b>5,213</b>	<b>64,250</b>	<b>6,358</b>	<b>\$115,865</b>
<b><u>FY 2012</u></b>									
Jul-11	18,768	\$4,050	22	\$692	0.68	66	4,250	424	\$5,166
Aug-11	13,398	\$2,284	21	\$709	0.49	48	3,550	352	\$3,345
Sep-11	18,078	\$3,957	125	\$740	0.76	74	4,150	412	\$5,109
Oct-11	25,998	\$4,349	2,541	\$3,929	3.53	343	4,150	412	\$8,690
Nov-11	28,278	\$3,806	949	\$3,747	1.97	191	4,150	413	\$7,966
Dec-11	26,838	\$3,664	7,931	\$10,037	9.11	884	4,600	460	\$14,161
Jan-12	25,038	\$3,627	9,090	\$11,059	10.24	994	4,550	471	\$15,157
Feb-12	28,878	\$3,781	6,642	\$8,713	7.85	763	6,150	662	\$13,156
Mar-12	25,518	\$3,319	4,520	\$6,920	5.55	539	4,600	489	\$10,728
Apr-12	28,038	\$3,492	1,112	\$2,284	2.13	207	4,500	478	\$6,254
May-12	23,958	\$3,024	1,116	\$2,264	1.99	193	4,150	440	\$5,728
Jun-12	25,398	\$3,607	39	\$585	0.93	91	3,650	383	\$4,575
	<b>288,186</b>	<b>\$42,960</b>	<b>34,108</b>	<b>\$51,679</b>	<b>45.23</b>	<b>4,393</b>	<b>52,450</b>	<b>5,396</b>	<b>\$100,035</b>

## Energy Performance

### Wilson

<u>Period</u>	<u>Kilowatt Hours</u>	<u>Electric Cost</u>	<u>Gas Therms</u>	<u>Gas Cost</u>	<u>mmbtu per sq. ft.</u>	<u>Total mmbtu</u>	<u>Water (Cubic Ft.)</u>	<u>Water Cost</u>	<u>Total Utility Cost</u>
<b><u>FY 2013</u></b>									
Jul-12	13,878	\$3,289	23	\$576	0.51	50	1,000	100	\$3,965
Aug-12	11,838	\$1,915	101	\$774	0.52	50	650	64	\$2,753
Sep-12	16,518	\$3,233	283	\$829	0.87	85	1,700	173	\$4,235
Oct-12	21,918	\$3,706	1,786	\$2,550	2.61	253	4,200	444	\$6,700
Nov-12	24,198	\$3,637	7,362	\$9,733	8.43	819	5,150	551	\$13,921
Dec-12	23,478	\$3,671	12,247	\$14,754	13.43	1,305	6,050	650	\$19,075
Jan-13	20,718	\$3,574	13,892	\$16,110	15.03	1,460	5,600	612	\$20,296
Feb-13	25,278	\$6,025	8,828	\$11,399	9.97	969	6,750	758	\$18,182
Mar-13	20,598	\$3,767	10,762	\$12,801	11.8	1,146	5,000	554	\$17,122
Apr-13	24,678	\$3,849	3,666	\$5,572	4.64	451	4,800	531	\$9,952
May-13	21,918	\$3,430	252	\$864	1.03	100	4,350	480	\$4,774
Jun-13	24,438	\$4,034	220	\$839	1.08	105	3,600	392	\$5,265
	<b>249,456</b>	<b>\$44,130</b>	<b>59,422</b>	<b>\$76,801</b>	<b>69.92</b>	<b>6,793</b>	<b>48,850</b>	<b>5,309</b>	<b>\$126,240</b>
<b><u>FY 2014</u></b>									
Jul-13	17,358	\$4,142	23	\$641	0.63	62	1,900	202	\$4,985
Aug-13	14,358	\$2,382	29	\$709	0.53	52	700	72	\$3,163
Sep-13	18,198	\$3,790	59	\$605	0.7	68	1,800	191	\$4,586
Oct-13	21,678	\$3,601	2,882	\$3,765	3.73	362	4,400	485	\$7,851
Nov-13	24,798	\$3,398	6,893	\$9,627	7.97	774	5,900	659	\$13,684
Dec-13	24,678	\$4,430	12,615	\$14,940	13.85	1,345	6,250	698	\$20,068
Jan-14	22,758	\$5,715	18,151	\$19,424	19.48	1,892	5,550	632	\$25,771
Feb-14	27,678	\$7,728	12,454	\$14,686	13.79	1,340	5,650	661	\$23,075
Mar-14	24,198	\$6,211	8,646	\$10,776	9.75	947	4,050	468	\$17,455
Apr-14	24,678	\$4,228	4,883	\$7,160	5.89	572	4,650	538	\$11,926
May-14	25,158	\$3,391	74	\$593	0.96	93	3,650	419	\$4,403
Jun-14	24,438	\$4,064	43	\$543	0.9	88	5,150	599	\$5,206
	<b>269,976</b>	<b>\$53,080</b>	<b>66,752</b>	<b>\$83,469</b>	<b>78.18</b>	<b>7,595</b>	<b>49,650</b>	<b>5,624</b>	<b>\$142,173</b>
<b><u>FY 2015</u></b>									
Jul-14	17,358	\$4,043	19	\$499	0.63	61	1,350	148	\$4,690
Aug-14	13,998	\$2,010	24	\$502	0.52	50	350	37	\$2,549
Sep-14	18,078	\$3,681	81	\$616	0.72	70	1,950	216	\$4,513
Oct-14	21,678	\$2,615	2,332	\$3,353	3.16	307	4,200	484	\$6,452
Nov-14	24,798	\$3,477	6,564	\$9,849	7.63	741	4,700	545	\$13,871
Dec-14	24,678	\$3,672	9,335	\$12,012	10.48	1,017	5,400	628	\$16,312
Jan-15	15,558	\$2,980	11,300	\$13,932	12.18	1,183	3,900	457	\$17,369
Feb-15	27,678	\$5,249	13,967	\$16,145	15.35	1,491	5,700	700	\$22,094
Mar-15	16,278	\$3,711	7,846	\$10,354	8.65	840	4,900	597	\$14,662
Apr-15	17,958	\$2,875	2,788	\$5,258	3.5	340	4,900	597	\$8,730
May-15	27,318	\$3,142	63	\$661	1.02	100	4,400	532	\$4,335
Jun-15	21,918	\$3,086	44	\$636	0.82	79	4,350	528	\$4,250
	<b>247,296</b>	<b>\$40,541</b>	<b>54,363</b>	<b>\$73,817</b>	<b>64.66</b>	<b>6,279</b>	<b>46,100</b>	<b>5,469</b>	<b>\$119,827</b>





# Facility Condition Assessments

Methodology

Reports

Energy &  
Sustainability

## Reports

Facility Condition Assessment Data Report follows on next pages.

## Facilities Condition Assessment Data Report

Assessment Date 04 Aug 2015

Campus/School: Dr. William W. Henderson Inclusion Upper School

Address: 18 Croftland Avenue

Building Name: Dr. William W. Henderson Inclusion

City/Town: Dorchester, MA 02124

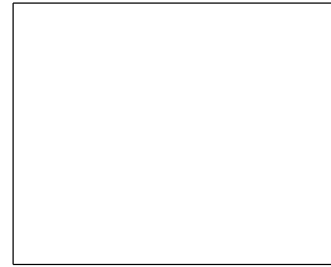
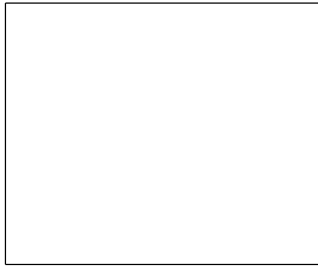
## Facility Campus Address

Address1	Address2	City	ZipCode
18 Croftland Avenue		Boston	02124

## Facility Asset / Building Address

Address1	Address2	City	ZipCode
18 Croftland Avenue		Boston	02124

## Building / Asset ID Photo(s)



## Facility Contact Information

Name	Title	Telephone	Email
Nadia Cyprien	Principal	617-635-6365	

## Facility Asset Basic Information - Provided by BPS

Asset Name ID	Alias Other Name ID	Historic Name ID1	Historic Name ID2	Neighbourhood
Dr. William W. Henderson Inclusion				
Year Constructed	GSF	Original Cost	Property Status	Floors Above Basement
			Active	3
Date of Most Recent Renovation for Current Use				
Tile	Carpet	Painted	Windows	Roof
NA	NA	NA	NA	NA
General Condition of Building per BPS: Good				

## Real Estate Tax Data - Provided by BPS

Tax Parcel ID	Tax Year Built	Tax_Bld Value	Tax_Land Value	Tax_Total Value
Tax_LVsf	Tax_Gross Area	Tax_Living Area	Tax_Year Reno	Tax_PTYPE
				0
Tax_Struct Class	Tax_Num Floor	Latitude	Longitude	



Boston Public Schools

WSP Parsons Brinckerhoff / SMMA

Assessment Team Pilot

Leader Initials

CP

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Printed: 28 Sep 2015

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Assessment Date 04 Aug 2015

Campus/School: Dr. William W. Henderson Inclusion Upper School

Address: 18 Croftland Avenue

Building Name: Dr. William W. Henderson Inclusion

City/Town: Dorchester, MA 02124

### Use and Occupancy Information per DOE / BPS / MSBA

DOE Code	Category	Grades	Type	2014/2015 DOE Enrollment
350426		5 . 11	Traditional	
Total Occupancy	Aud/Cafe Capacity	No. Teachers	DOE Student Teacher Ratio	DOE Total # of Classes
		32.9	9.1 to 1	145
BPS Open	BPS Close	MSBA Class Rooms	MSBA_sf Student	MSBA_Gen Envir
7:40AM	3:05PM	11	137	1
MSBA_Space Util	MSBA_Students Class Room			
Average				

### Historical Listing

State Register	Local Significance	Federal Listing	Within Historical District	Recommended for Listing
NA	NA	NA	NA	NA
Comments				



Boston Public Schools

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Printed: 28 Sep 2015

## Facilities Condition Assessment Data Report

Assessment Date: 04 Aug 2015

Campus/School: Dr. William W. Henderson Inclusion Upper School

Address: 18 Croftland Avenue

Building Name: Dr. William W. Henderson Inclusion

City/Town: Dorchester, MA 02124

## Initial Interview

Lead/Contact Interviewee Title	Interviewee Name	Phone No.	Email
Principal	Nadia Cyprien	617-635-6365	
Others at Interview			
<u>Question</u>		<u>Answer</u>	
Are there any special access requirements?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are mechanical and electrical spaces accessible?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are there hazardous materials present? If so, what types?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are there hazardous materials (asbestos) reports available?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are construction documents (drawings and specs) of the building available?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Are certificates for building components available, i.e. elevator, boiler and pressure vessel, NFPA 101 Life Safety, ADA/UFAS, sprinkler system, and any others?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Do you have current issues of concern, i.e. inadequate heating, ventilation, power, etc., and if so what?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Have there been any recent or scheduled maintenance or renovation activities and what types?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Can you provide information on recently completed or proposed improvement projects? Please indicate whether proposed or completed.		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Have you or your staff identified any deficiencies you wish noted, and what are the locations of the deficiencies?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			
Can you make an assessment of the condition and performance of the building's existing components or systems?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Comments</u>			



Boston Public Schools

WSP Parsons Brinckerhoff / SMMA

Assessment Team Pilot

Leader Initials

CP

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Printed: 28 Sep 2015

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Assessment Date 04 Aug 2015

Campus/School: Dr. William W. Henderson Inclusion Upper School

Address: 18 Croftland Avenue

Building Name: Dr. William W. Henderson Inclusion

City/Town: Dorchester, MA 02124

### Condition Assessment - Deficiencies

Floor	Room ID	Room Alias		
Entire Building				
System	Subsystem - Assembly	Component	Type	Deficiency/Need
B-SHELL-EXTERIOR	Walls	Masonry	Masonry: Brick	Joint Mortar Eroded
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)	
2-Repair	4-Security			
Quantity	Unit of Measure	Unit Cost		
1000	SQFT	\$24.36		
Total Cost				
\$17,052				
Notes				
Floor	Room ID	Room Alias		
2	2	toilet		
System	Subsystem - Assembly	Component	Type	Deficiency/Need
C-INTERIORS	Ceiling	Gypsum Board	Gypsum Board	Replace
Correction/Enhancement	Reason to Correct	Priority/Urgency	Photo(s)	
	4-Security	5-Highest-Immediate		
Quantity	Unit of Measure	Unit Cost		
0	SQFT	\$2.08		
Total Cost				
\$0				
Notes				

### Equipment Inventory

Not in scope - Not Performed for this Assessment

### Energy & Climate

Not in scope - Not Performed for this Assessment



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## Facilities Condition Assessment Data Report

Assessment Date 04 Aug 2015

Campus/School: Dr. William W. Henderson Inclusion Upper School

Address: 18 Croftland Avenue

Building Name: Dr. William W. Henderson Inclusion

City/Town: Dorchester, MA 02124

### Exit Interview

Staff Debriefed	
Title	Name
<u>Top Five Major Findings/Staff Priorities</u>	
Building Discipline/Technical Discipline	<u>Comments</u>
Building Discipline/Technical Discipline	<u>Comments</u>
Building Discipline/Technical Discipline	<u>Comments</u>
Building Discipline/Technical Discipline	<u>Comments</u>
Building Discipline/Technical Discipline	<u>Comments</u>

### Physical Conditions - Overall Systems Ratings

A-Foundations	A-Substructure	B-Shell-Exterior	B-Sheel-Roof
2-Good/Fair	2-Good/Fair	2-Good/Fair	3-Fair
B-Shell-Superstructure	C-Interiors	C-Interiors-Speciality	D-Services-Conveying
2-Good/Fair	2-Good/Fair	NA-Not Applicable/Not Assessed	NA-Not Applicable/Not Assessed
D-Services-Mechanical	D-Services-Electrical	E-Equipment	G-SiteWork
3-Fair	3-Fair	NA-Not Applicable/Not Assessed	3-Fair
F-Special Construction (e.g. Modulares,Pools, etc.)	<b>Overall Facility-Judgement</b>	<b>Overall Facility Rating - System Averaged, Excluding Special Construction</b>	
NA-Not Applicable/Not Assessed	2-Good/Fair	2.40	

### Cost Information Summary

Asset Replacement Value (ARV)	Equipment Replacement Value	Tax Assessed Value
\$8,454,816	Not Inventoried	Not Assessed
Facility Deficiencies	Facility Enhancement (Energy & Climate)	Equipment Replacement Cost - Fail or Poor Only
\$17,052	Not Assessed	Not Assessed
Total Capital Project and Repair Cost	Facility Condition Index (FCI)	
\$17,052	0.002	



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## *Appendix*

- 1 1993 Wallace Floyd Report
- 2 MSBA 2010 Needs Survey

# 1993 Wallace Floyd Report

## FACILITY PROFILE

Year Built: 1932  
Number of Stories: 3  
Estimated Gross Area: 93,744 s.f.

Zone: East  
Neighborhood: Dorchester  
Facility Type: Middle School

Enrollment as of 12/92: 552 pupils  
S.F. per Enrolled Pupil: 170 s.f.

## WILSON MIDDLE

18 Croftland Avenue  
Dorchester, MA 02124

### Interior Space Summary

(Room Type)	# of Spaces	Approx. Area (s.f.)
Administration Office	3	964
Art 1 (General)	0	0
Art 2 (Specialized: Photography, etc.)	0	0
Auditorium	3	6,498
Business 1 (Classroom)	0	0
Business 2 (Lab: Computer, Typing, Cafeteria)	0	0
Classroom 1 (Small Group Seminar)	2	6,478
Classroom 2 (Regular: 20-30 pupils)	1	726
Classroom 3 (Large Groups: 80-125)	24	19,656
Computer Room	0	0
Faculty Room	4	3,021
Guidance Office	2	875
Gymnasium	2	419
Hallway/Stairway/Vestibule	1	5,134
Homemaking 1 (Food Preparation)	3	18,138
Homemaking 2 (General Instruction)	2	1,800
Homemaking 3 (Sewing)	0	0
Kitchen	0	0
Library/Media Center	1	425
Locker Room	1	791
Mechanical	4	3,694
Multi-Purpose Room	4	2,282
Music 1 (Rehearsal: Band, Chorus, Music 2 (Instruction))	0	0
Music 3 (Practice Room)	0	0
Music 4 (Ensemble Room)	0	0
Not Used	0	0
Nurse/Health Suite	0	0
Other Office	2	312
Science (General Instruction)	14	5,322
Science Laboratory	1	718
Service/Other Support	1	801
Shop 1 (Wood, Metal, Electric, etc.)	0	0
Shop 2 (Drafting)	0	0
Special Education and Collaborative	13	7,227
Storage	16	4,077
Toilet	12	4,386
Approximate Total Gross Area:		93,744

### Exterior Space Summary

Use	Approx. Area
Parking Spaces	40 spaces
Paved Area	60,873 s.f.
Landscaped Area	18,135 s.f.
Building Footprint	35,440 s.f.
Approximate Total Site Area:	114,447 s.f.

### Regularly Used Other BPS Facilities

Facility	Purpose	Schedule
none		

### Regularly Used Non-BPS Facilities

Facility	Purpose	Schedule
none		

**FACILITY PROFILE**

**WILSON MIDDLE**

**Physical Condition Summary**

Facility:	WILSON MIDDLE
Facility Type:	Middle School
Estimated Total Area:	93,744 s.f.
Facility S.F. Replacement Cost [1]:	\$160
Facility Full Replacement Value [2]:	\$14,999,040

Building System	System Deficiency Cost	Syst. Repl. Cost as % of Bldg. Repl. Cost	System Condition Grade
Primary Structure	\$2,646	12%	6
Envelope	\$86,197	19%	6
Site	\$16,726	8%	6
Interior Architecture & Finishes	\$36,129	32%	6
Mechanical	\$675	12%	6
Electrical	\$114,277	10%	5
Plumbing & Fire Protection	\$14,782	7%	6
Total Facility [3]	\$271,432	100	

**NACUBO Grade [4]:**

**.02**

**System Condition Grade Key**

Grade	System Deficiency Cost / System Replacement Cost
0	> .30
1	.25 - .30
2	.20 - .25
3	.15 - .20
4	.10 - .15
5	.05 - .10
6	.00 - .05

**Footnotes**

- [1] Square foot replacement costs as provided by PFD.
- [2] 1993 costs.
- [3] Excludes costs to make facility accessible. See information in Access Summary.
- [4] National Association of College and University Business Officers. This grade represents the ratio of the total deficiency cost to the full facility replacement value.

**Access Summary**

Facility's Existing Rating: **1**

**Rating Key and Accessibility Improvement Costs**

0	Inaccessible school	
1	Accessible entry at grade (includes accessible parking)	\$11,860
2	Accessible entry + accessible toilets (at grade)	\$11,860
3	Accessible entry + toilets (at grade) + access to offices/assembly	\$124,288
4	All floors accessible but not accessible toilets on each floor	\$124,288
5	All floors accessible + accessible toilet facilities (each floor)	\$155,818
6	Total 504 costs (#5 costs + other facilities + site + interior stairs + accessible exit)	\$227,974

**Component Summary Rating**

Building Component	Grade	Estimated Cost to Make Accessible
Entrances/exits	Partially Accessible	\$3,999
Site	Partially Accessible	\$22,878
Building Circulation	Inaccessible	\$130,428
Toilet Facilities	Inaccessible	\$41,530
Other Facilities	Partially Accessible	\$29,139
		<b>\$227,974</b>

**Principal Rooms on Accessible Pathways, Assuming an Access Entry at Grade (Rating Level 1)**

NOTE: If existing rating is higher than level 1, then the higher level is assumed.

Space Type	Present	Floor(s)	Quantity on Accessible Pathway
Offices	Yes	2	0
Nurse's room/medical suite	Yes	2	0
Teachers' room	Yes	3	0
Auditorium/assembly/theater	Yes	2	0
Gymnasium	Yes	G	0
Shower/locker rooms	No	-	-
Swimming pool	No	-	-
Cafeteria/lunch room	Yes	G	1
Library	Yes	?	0

**FACILITY PROFILE****WILSON MIDDLE****Educational Program and Community Use Inventory****Educational Programs**

Regular Education		(Special Education)	(Bilingual Education)
AIDS Education	Mathematics	A4 Academic Remediation SS	English as a Second Language
Adult Education	Music	F4 Academic Remediation,	French/Haitian
Athletics	Other	L4 Learning Disabled	
Computer Training	Parent Center Program	R1 Resource - 1 Programs	
Cooking	Physical Education	R2 Resource - 2 Programs	
Foreign Languages	Recycling Center Program	R3 Resource - 3 Programs	
Health Services	Science	S1 Speech - 1 Programs	
History	Social Studies	S2 Speech - 2 Programs	
Intramural Athletics	Speech	S3 Speech - 3 Programs	
		S4 Speech - 4 Programs	

**Community Uses of the School**

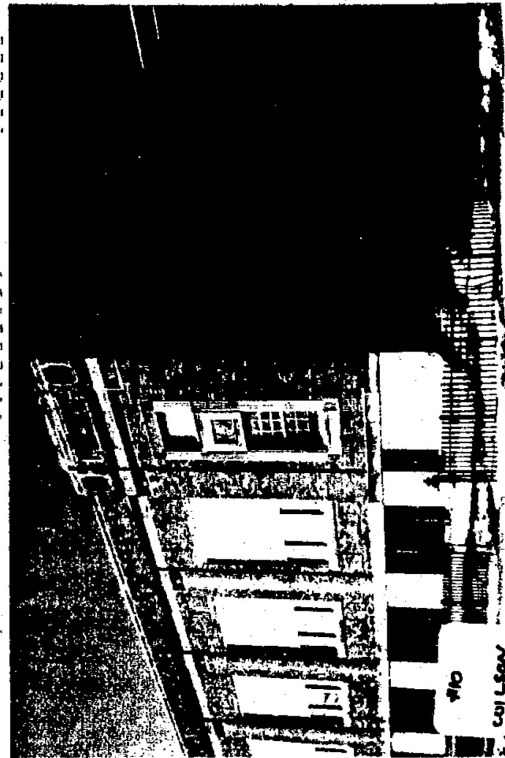
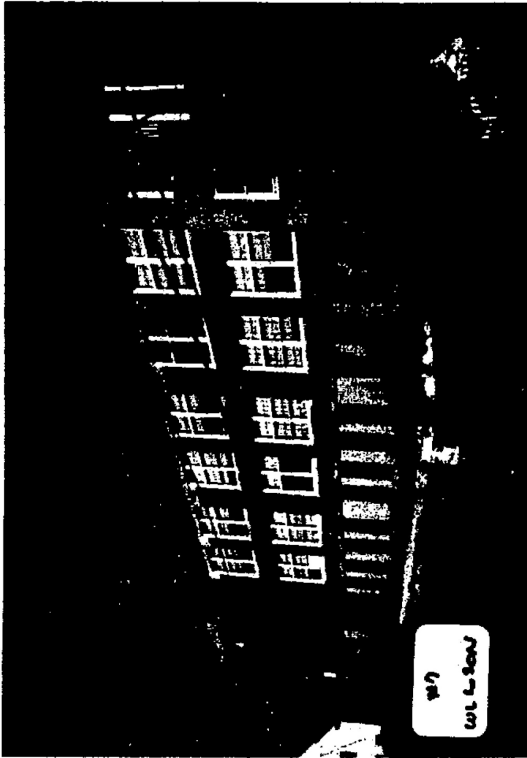
Program	Schedule	# of Partic.	Room
Adult Education	2 night/week	200	lib.
Community meeting	occasional	50	aud.
Youth/community groups	nightly, 6-10 PM	700	gym

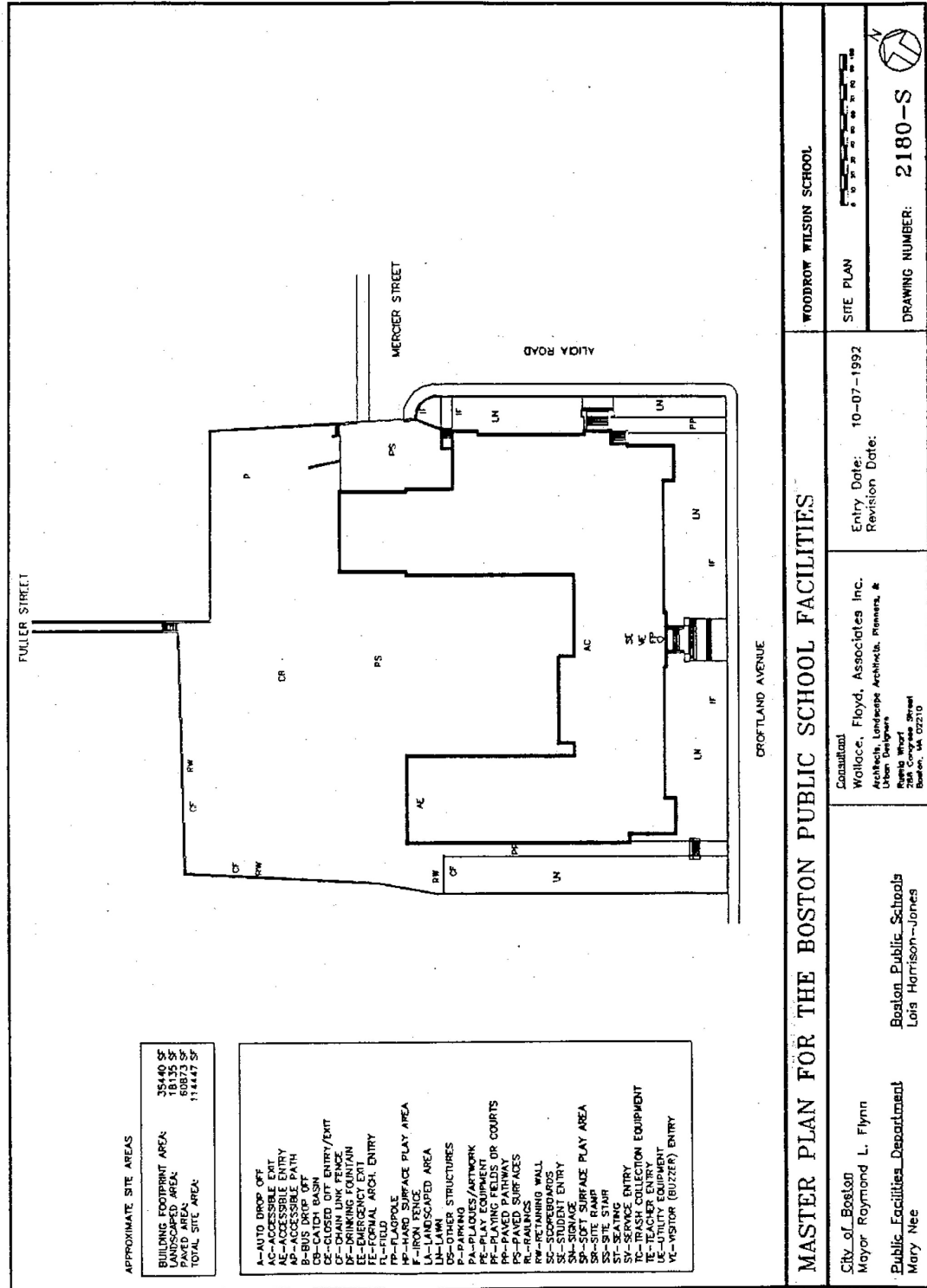
**Supplemental Programs before or after School**

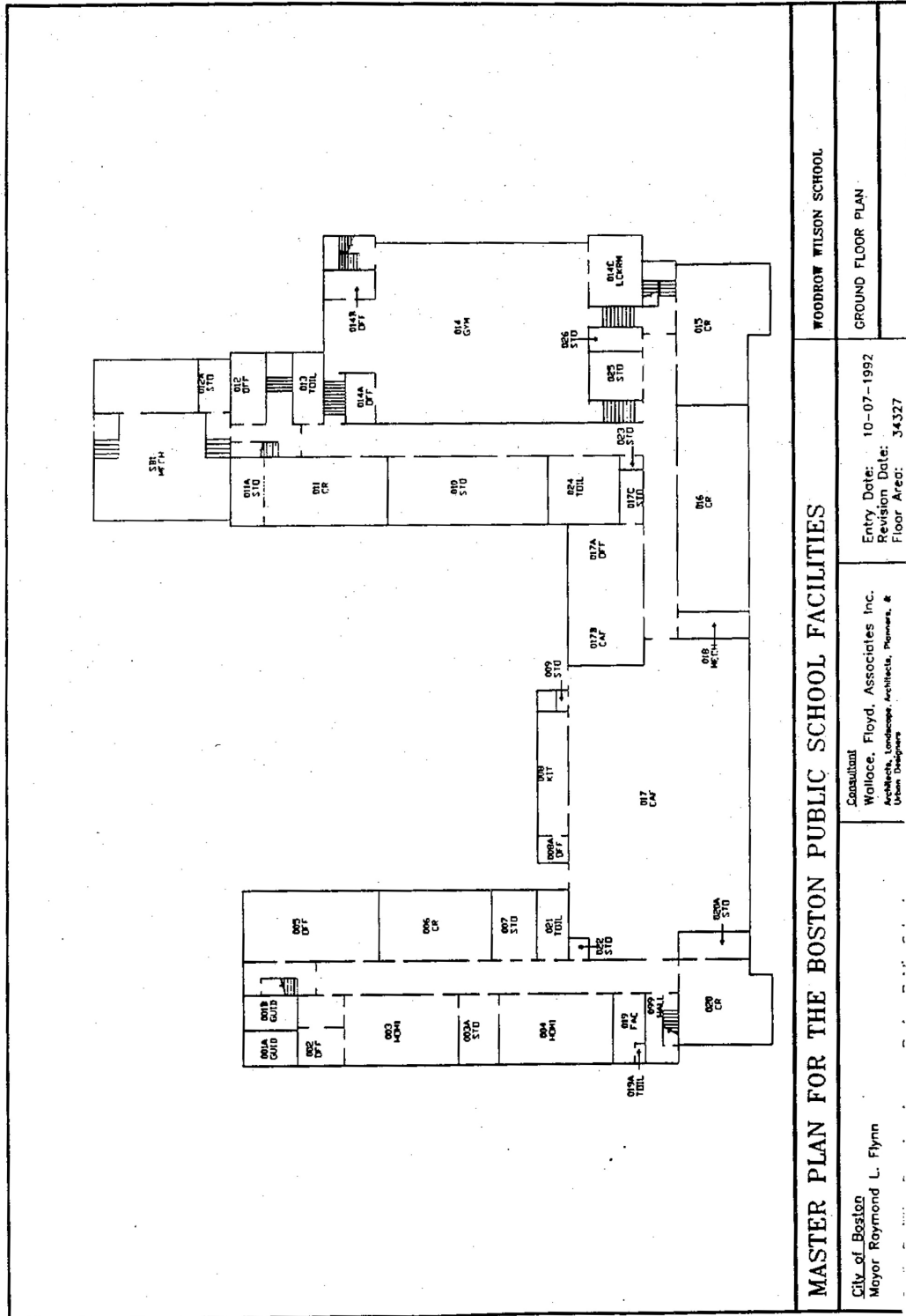
Program	Schedule	# of Partic.	Needs	Comments
After School Enrichment Courses	daily	100	Computer lab, classroom and gym.	
After School Tutoring	twice a week	80	Cafeteria.	
Parent Training	3 times/year	10	Library	
Sports	daily	200	Gym.	



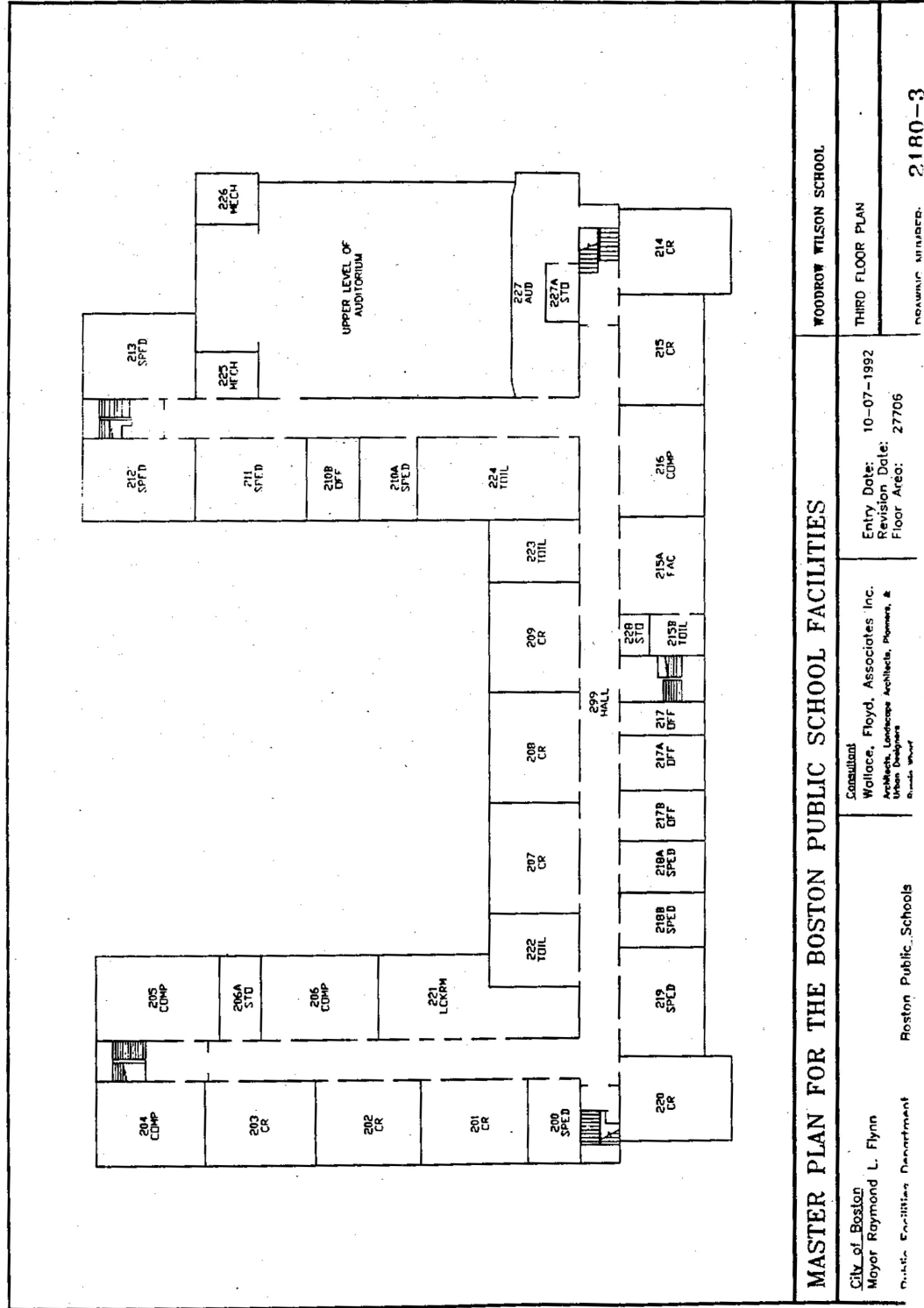
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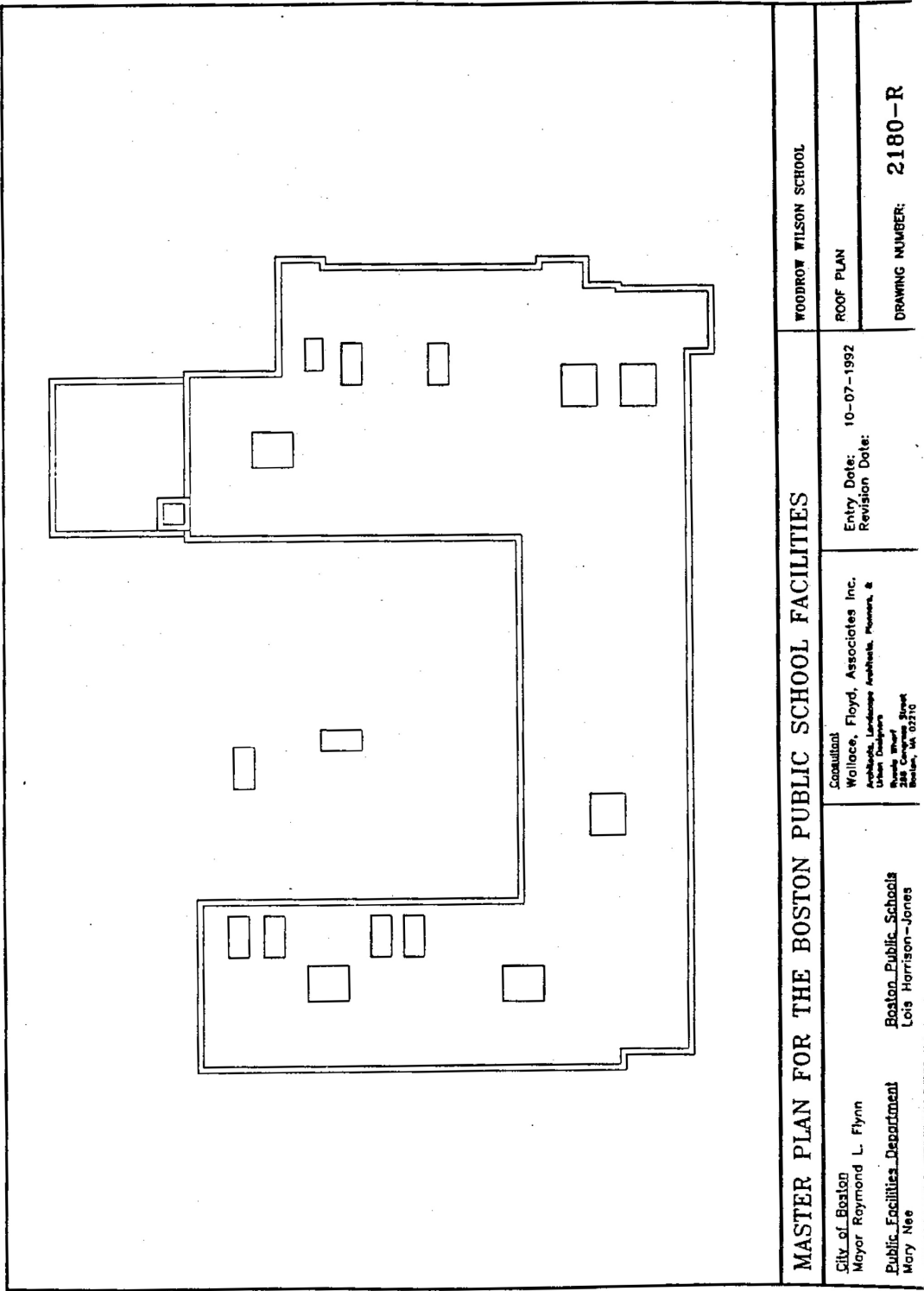
















An aerial photograph of Cambridge, Massachusetts, showing the Charles River, the city grid, and surrounding areas. The image is monochromatic, with a blue tint.

# SMMA

Symmes Maini & McKee Associates  
1000 Massachusetts Avenue  
Cambridge, MA 02138  
617.547.5400