



Burrillville totals 535,622 square feet and consists of the school type(s) detailed below. School(s) were visited three times during the Statewide Facilities Assessment by teams of specialists from March-April 2016. This report provides LEA summary findings for the statewide assessment program.

School Type by Count



School Type	SqFt
Elementary School	179,622
Middle School	126,000
High School	230,000
Total:	535,622

Demographics

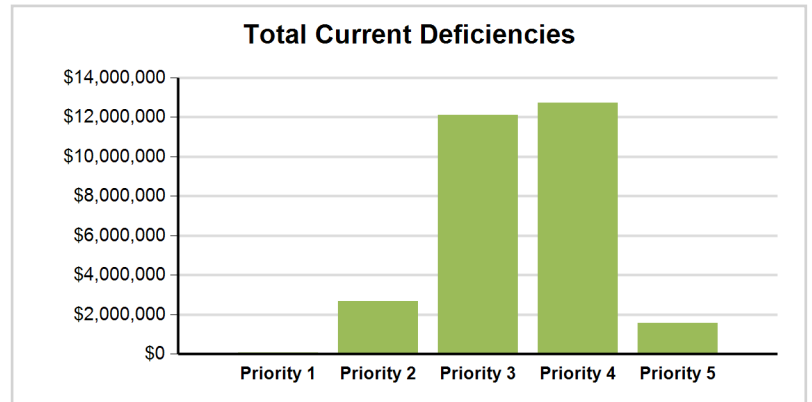
Enrollment is projected to decrease by 9.5% over the next 10 years in Burrillville. The total LEA enrollment at 5 school(s) is 2,366 students with a total capacity of 3,784 as reported by the LEA. Utilization is calculated by dividing enrollment by capacity, resulting in 62.5% utilization at Burrillville.

62.5 % Utilization



Educational Program Space Analysis

In Burrillville there are 222 instructional spaces; of these spaces 31.5% meet or exceed the space size standards. Of the total current deficiencies identified, \$5,284,144 are related to the educational program space assessment. Addressing these identified deficiencies will improve the learning environment and bring the school(s) in the district closer to 21st century learning facilities.



Five Year Need Summary

The current deficiencies total \$29,133,218, with 43.6% categorized as Priority 4 and another 41.6% as Priority 3. The building systems with the highest current deficiency costs are Technology and Interior.

School(s) with Greatest Need	Combined 5-Year Need
Burrillville High School	\$16,998,294
Burrillville Middle School	\$11,027,735
William L. Callahan School	\$6,171,198

The projected life cycle need in Years 1 through 5 is \$15,218,859. It is anticipated that the majority of the need will occur in Year 5. School(s) with the greatest need are represented in the adjacent table and make up 77.1% of the combined 5-Year need at Burrillville.

Five Year Facility Condition Index (FCI)

For master planning purposes, the total current deficiencies, less new construction, and the first 5 years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-Year FCI was calculated by dividing the 5-Year need by the total replacement cost. The 5-Year need is \$44,352,077 with a district replacement value of \$187,247,700. The resulting 5-Year FCI is 23.7%.

5-Year FCI Ranges



LEA Summary Data

Gross SqFt	Avg Year Built	Current Deficiencies (Less New Construction)	Life Cycle Year 1-5 Total	Total 5-Year Need (Year 1-5 + Current Defs)	5-Year FCI
535,622	1969	\$29,133,218	\$15,218,859	\$44,352,077	23.7%



Facility Condition Assessment

Burrillville - Austin T. Levy School

June 2017

135 Harrisville Main Street, Harrisville, RI 02830





Introduction

Austin T. Levy School, located at 135 Harrisville Main Street in Harrisville, Rhode Island, was built in 1958. It comprises 42,600 gross square feet. Each school across the district was visited three times during the Facility Condition Assessments by three teams of specialists in the spring/summer of 2016.

Austin T. Levy School serves grades PK - 1, has 25 instructional spaces, and has an enrollment of 344. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Austin T. Levy School is 368 with a resulting utilization of 93%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Austin T. Levy School the 5-year need is \$4,567,705. The findings contained within this report resulted from an assessment of building systems performed by building professionals experienced in disciplines including: architecture, mechanical, plumbing, electrical, acoustics, hazardous materials, and technology infrastructure.

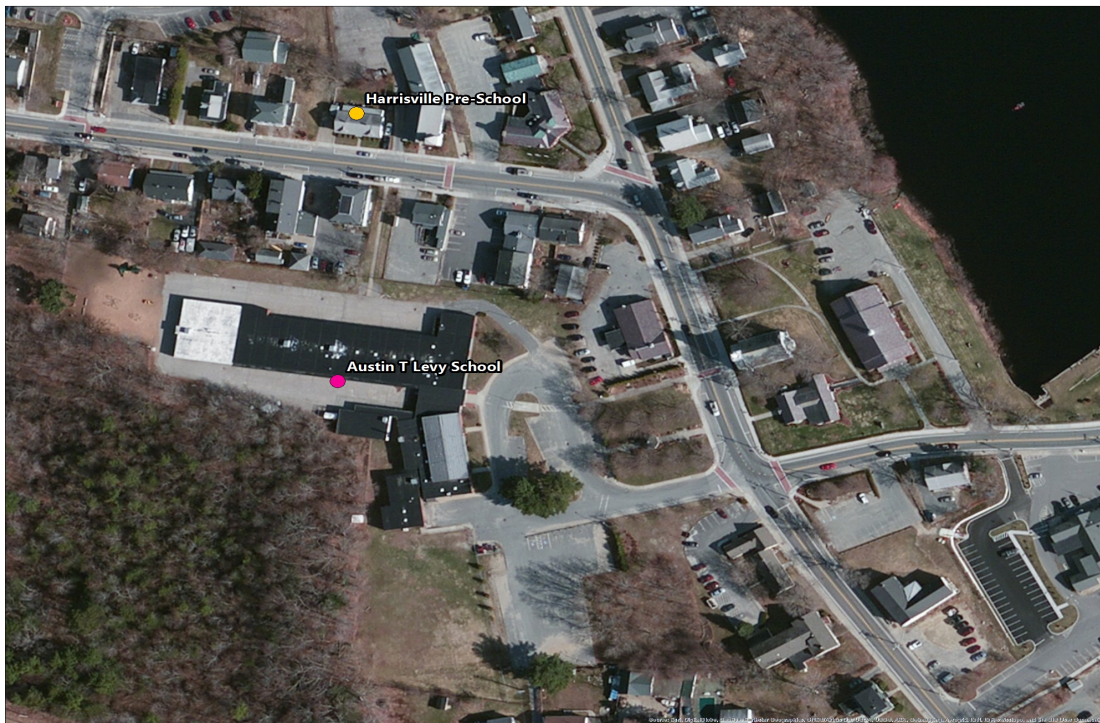


Figure 1: Aerial view of Austin T. Levy School



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates ages of a building's systems to forecast system replacement as they reach the end of serviceable life. An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

Discipline Specialists

All assessment teams produced current deficiencies associated with each school. The assessment for the school facilities at the Rhode Island Department of Education included several specialties:

Facility Condition Assessment: Architectural, mechanical, and electrical engineering professionals observed conditions via a visual observation that did not include intrusive measures, destructive investigations, or testing. Additionally, the assessment incorporated input provided by district facilities and maintenance staff where applicable. The assessment team recorded existing conditions, identified problems and deficiencies, documented corrective action and quantities, and identified the priority of the repair in accordance with parameters defined during the planning phase. The team took digital photos at each school to better identify significant deficiencies.

Technology: Technology specialists visited RIDE facilities and met with technology directors to observe and assess each facility's technology infrastructure. The assessment included network architecture, major infrastructure components, classroom instructional systems, necessary building space and support for technology. The technology assessment took into account the desired technology outcome and best practices and processes to ensure results can be attained effectively.

Hazardous Materials: Schools constructed prior to 1990 were assessed by specialists to identify the presence of hazardous materials. The team focused on identifying asbestos containing building materials (ACBMs), lead-based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. If sampling and analysis was required, these activities were recommended but not included in the scope of work.

Traffic: A traffic specialist performed an in-office review of aerial imagery of the traffic infrastructure around the facilities in accordance with section 1.05-7 in the Rhode Island School Construction Regulations and reviewed data collected on site during the facility condition assessment. Based on this information, deficiencies and corrective actions were identified. High problem areas were identified for consideration of more detailed site-specific study and analysis in the future.

Acoustics: Specialists assessed each school's acoustics, including architectural acoustics, mechanical system noise and vibration, and environmental noise. The assessment team evaluated room acoustics with particular attention to the intelligibility of speech in learning spaces, interior and exterior sound isolation, and mechanical system noise and vibration control.

Educational Program Space Assessment: Teams evaluated schools to ensure that that all spaces adequately support the districts educational program. Standards are established for each classroom type or instructional space. Each space is evaluated to determine if it meets those standards and a listing of alterations that should be made to make the space a better environment for teaching and learning was created.



System Summaries

The following tables summarize major building systems at the Austin T. Levy School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Roadway Pavement
	Concrete Parking Lot Pavement
	Concrete Pedestrian Pavement

Building Envelope

The exterior systems for the building(s) at this campus includes:

01 - Main Building:	Brick Exterior Wall
	CMU Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors

The roofing for the building(s) at this campus consists of:

01 - Main Building:	Concrete Tile Roofing
	EPDM Roofing
	Aluminum Canopy Roofing

Interior

The interior systems for the building(s) at this campus include:

01 - Main Building:	Steel Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Adhered Acoustical Ceiling Tiles
	Non-Painted Plaster/Gypsum Board Ceiling
	Ceramic Tile Wall
	Wood Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Quarry Tile Flooring
	Ceramic Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring



Mechanical

The mechanical systems for the building(s) at this campus include:

01 - Main Building:	2,400 MBH Steel Tube Boiler
	Fin Tube Water Radiant Heater
	85 MBH Steam Unit Heater
	Pneumatic Heating System Controls
	1 Ton Ductless Split System
	Window Units
	1 HP or Smaller Pump
	2-Pipe Hot Water Hydronic Distribution System
	2,000 CFM Outdoor AHU
	10,000 CFM Interior AHU
	Ductwork
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Wall Exhaust Fan

Plumbing

The plumbing systems for the building(s) at this campus include:

01 - Main Building:	30 Gallon Electric Water Heater
	50 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals
	Air Compressor (1 hp)
	10,000 Gallon Above Ground Fuel Oil Storage Tank

Electrical

The electrical systems for the building(s) at this campus include:

01 - Main Building:	112.5 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 125A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Electrical Disconnect
	Light Fixtures
	Canopy Mounted Lighting Fixtures



Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the school's ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 - Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

Priority 3 - Short-Term Conditions: Deficiencies that are necessary to the school's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 - Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 - Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.



The following chart summarizes this site's current deficiencies by building system and priority. The listing details current deficiencies including deferred maintenance, functional deficiencies, code compliance, capital renewal, hazardous materials and technology categories.

Table 1: System by Priority

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	-	-	\$2,266	\$496,714	\$5,807	\$504,787	12.22 %
Roofing	-	\$636,340	-	\$190,139	-	\$826,479	20.01 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$38,503	-	-	-	\$38,503	0.93 %
Interior	-	-	\$250,665	\$563,681	\$167,897	\$982,244	23.78 %
Mechanical	-	\$244,101	\$79,778	\$291,779	-	\$615,658	14.90 %
Electrical	-	-	-	-	\$45,656	\$45,656	1.11 %
Plumbing	-	-	-	-	\$31,302	\$31,302	0.76 %
Fire and Life Safety	-	-	-	-	-	\$0	0.00 %
Technology	-	-	\$1,063,526	-	-	\$1,063,526	25.75 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$22,817	-	-	\$22,817	0.55 %
Total	\$0	\$918,944	\$1,419,052	\$1,542,313	\$250,663	\$4,130,972	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Technology	-	\$1,063,526
Interior	-	\$982,244
Roofing	-	\$826,479

The chart below represents the building systems and associated deficiency costs.

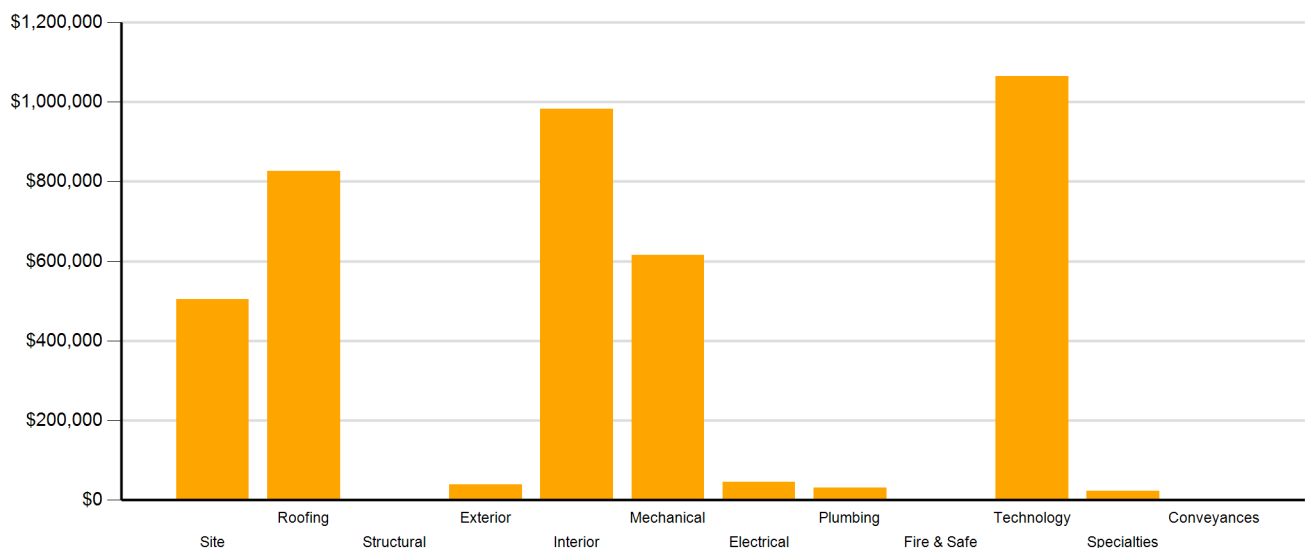


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

- **Acoustics** deficiencies relate to room acoustics, sound insulation, and mechanical systems and vibration control modeled after ANSI/ASA Standard S12.60-2010 and ASHRAE Handbook, Chapter 47 on Sound and Vibration Control.
- **Barrier to Accessibility** deficiencies relate to the Americans with Disabilities Act and the Rhode Island Governors Commission on Disability. Additional items related to accessibility may be included other categories.
- **Capital Renewal** items have reached or exceeded serviceable life and require replacement. These are current and do not include life cycle capital renewal forecasts. Also included are deficiencies correcting planned work postponed beyond its regular life expectancy.
- **Code Compliance** deficiencies related to current codes. Many may fall under grandfather clauses, which allow buildings to continue operating under codes effective at the time of construction. However, there are instances where the level of renovation requires full compliance which are reflected in the master plan.
- **Educational Adequacy** deficiencies identify where facilities do not align with the Basic Education Program and the RIDE School Construction Regulations.
- **Functional Deficiencies** are deficiencies for components or systems that have failed before the end of expected life or are not the right application, size, or design.
- **Hazardous Materials** include deficiencies for building systems or components containing potentially hazardous material. The team focused on identifying asbestos containing building materials (ACBMs), lead based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. With other scopes of work there may be other costs associated with hazardous materials.
- **Technology** deficiencies relate to network architecture, technology infrastructure, classroom systems, and support. Examples of technology deficiencies include: security cameras, secure electronic access, telephone handsets, and dedicated air conditioning for telecommunication rooms.
- **Traffic** deficiencies relate to vehicle or pedestrian traffic, such as bus loops, crosswalks, and pavement markings.



The following chart and table represent the deficiency category by priority. This listing includes current deficiencies for all building systems.

Table 2: Deficiency Category by Priority

Category	Priority					Total
	1	2	3	4	5	
Acoustics	-	-	\$193,467	\$68,450	-	\$261,917
Barrier to Accessibility	-	-	-	-	-	\$0
Capital Renewal	-	\$918,944	\$136,976	\$978,632	\$163,334	\$2,197,886
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	-	-	\$148,309	\$45,572	\$87,330	\$281,211
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$449,659	-	\$449,659
Technology	-	-	\$938,034	-	-	\$938,034
Traffic	-	-	\$2,266	-	-	\$2,266
Total	\$0	\$918,944	\$1,419,052	\$1,542,313	\$250,663	\$4,130,972

*Displayed totals may not sum exactly due to mathematical rounding

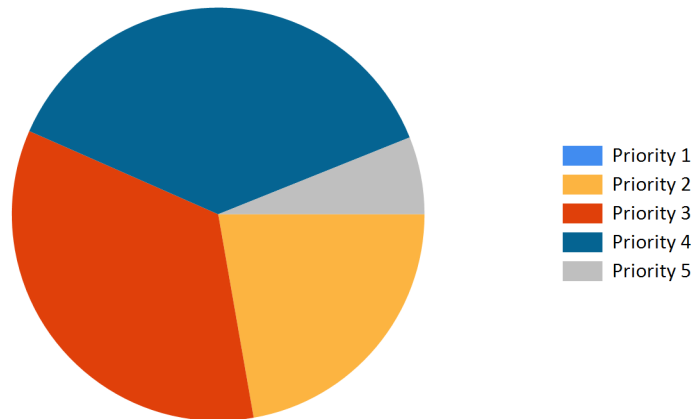


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If a need for immediate replacement was identified, a deficiency was created with the estimated repair costs. The identified deficiency contributes to the facility's total current repair costs.

Capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a 5-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following chart shows all current deficiencies and the subsequent 5-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3: Capital Renewal Forecast

System	Current Deficiencies	Life Cycle Capital Renewal Projections					LC Yr. 1-5 Total	Total 5-Year Need
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021		
Site	\$504,787	\$0	\$0	\$0	\$23,273	\$116,023	\$139,296	\$644,083
Roofing	\$826,479	\$0	\$0	\$0	\$0	\$0	\$0	\$826,479
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$38,503	\$0	\$0	\$0	\$0	\$0	\$0	\$38,503
Interior	\$982,244	\$0	\$0	\$0	\$0	\$0	\$0	\$982,244
Mechanical	\$615,658	\$0	\$0	\$0	\$74,550	\$48,926	\$123,476	\$739,134
Electrical	\$45,656	\$0	\$0	\$0	\$24,813	\$0	\$24,813	\$70,469
Plumbing	\$31,302	\$0	\$0	\$0	\$12,100	\$8,761	\$20,861	\$52,163
Fire and Life Safety	\$0	\$0	\$0	\$124,861	\$0	\$0	\$124,861	\$124,861
Technology	\$1,063,526	\$0	\$0	\$0	\$0	\$0	\$0	\$1,063,526
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$22,817	\$0	\$0	\$0	\$0	\$0	\$0	\$22,817
Total	\$4,130,972	\$0	\$0	\$124,861	\$134,736	\$173,710	\$433,307	\$4,564,279

*Displayed totals may not sum exactly due to mathematical rounding

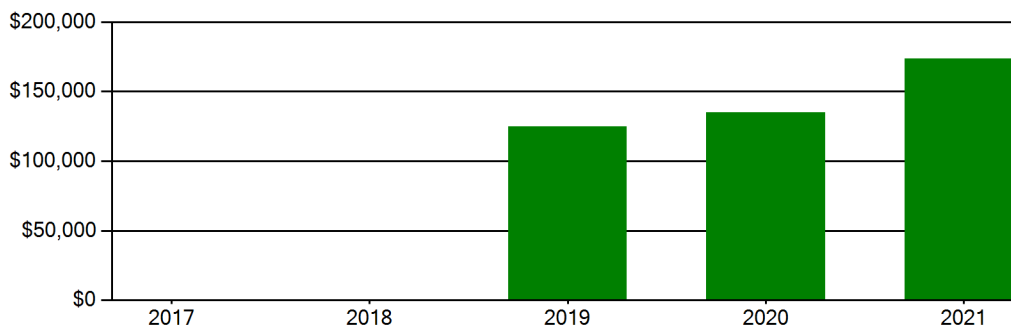
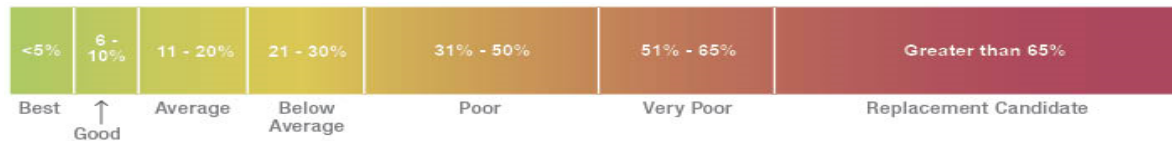


Figure 4: Life Cycle Capital Renewal Forecast



Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building’s health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of schools. The FCI is derived by dividing the total repair cost, including educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair schools with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making school facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today’s estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is \$14,910,000. For planning purposes, the total 5-year need at the Austin T. Levy School is \$4,567,705 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Austin T. Levy School facility has a 5-year FCI of 30.61%.

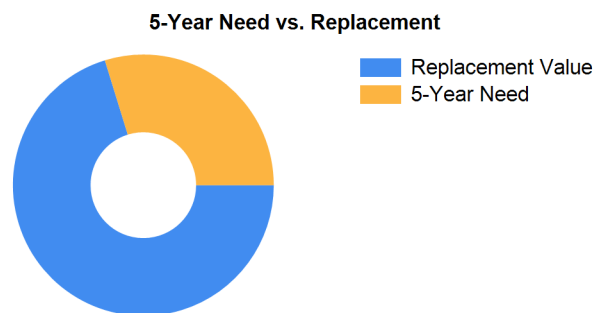


Figure 5: 5-Year FCI

It is important to reiterate that this FCI replacement threshold is not conclusive, but is intended to initiate planning discussion in which other relevant issues with regard to a facility’s disposition must be incorporated. This merely suggests where conversations regarding replacement might occur.



Rhode Island Aspirational Capacity

The capacity of a school reflects how many students the school's physical facility can effectively serve. There are various methodologies that exist to calculate capacity. It is not uncommon to review an existing building only to find that the capacity that had once been assigned is greater than what can be reasonably accommodated today. This is primarily because of a change in how programs are delivered.

The Rhode Island Aspirational Capacity is based on the Rhode Island School Construction Regulations (SCRs) and is an aspirational goal of space use. The capacity for each individual public school in the state of Rhode Island was designed to conform to Section 1.06-2 Space Allowance Guidelines of the Rhode Island Department of Education (RIDE) SCRs. These regulations outline the allowed gross square feet (GSF) per student at each school type (ES, MS, HS) by utilizing a sliding scale based on projected enrollment. The resulting capacities reflect how school capacities align to the SCRs for new construction. The existing enrollment was multiplied by the GSF per student for the appropriate bracket. For the purposes of this analysis, Pre-K centers were rolled into the elementary totals, and K-8 facilities were counted as middle schools.

The most consistent and equitable way a state can determine school capacities across a variety of districts and educational program offerings is to use square-foot-per-student standards. In contrast, in the 2013 Public Schoolhouse Assessment Report, LEAs self-reported capacities for their elementary, middle and high schools. Districts typically report "functional capacity," which is defined as the number of students each classroom can accommodate. Functional capacity counts how many students can occupy a space, not how much room students and teachers have within that space. For example, a 650-square-foot classroom and a 950-square-foot classroom can both have a reported capacity of 25 students, but the actual teaching and learning space per student varies greatly.

The variation in square feet per student impacts the kinds of teaching practices possible in each space. The lowest allocation of space per student restricts group and project-based learning strategies and requires teachers to teach in more traditional, lecture-style formats, due to a lack of space. Furthermore, the number of students that can be accommodated in a classroom does not account for access to sufficient common spaces such as libraries, cafeterias, and gymnasiums. When cafeterias are undersized relative to the population, schools must host four or more lunch periods a day, resulting in some students eating lunch mid-morning and some mid-afternoon. Similarly, undersized libraries and gymnasiums create scheduling headaches for schools and restrict student access. Finally, a classroom count-only approach to school capacity does not consider the inherent scheduling challenges schools face.

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 237 students.

Facility New Construction

As part of the Educational Program Space Assessment, select core spaces were compared to the RI School Construction Regulations. If it was determined that a facility was in need of square footage related to a cafeteria or library/media center, a cost for additional space was estimated. This cost is not included in the total 5-year need or the 5-year FCI calculation.

The New Construction cost to bring the Austin T. Levy School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$488,376.



Summary of Findings

The Austin T. Levy School comprises 42,600 square feet and was constructed in 1958. Current deficiencies at this school total \$4,134,398. Five year capital renewal costs total \$433,307. The total identified need for the Austin T. Levy School (current deficiencies and 5-year capital renewal costs) is \$4,567,705. The 5-year FCI is 30.61%.

Table 4: Facility Condition by Building

	Gross Sq Ft	Year Built	Current Deficiencies	LC Yr. 1-5 Total	Total 5 Yr Need (Yr 1-5 + Current Defs)	5-Year FCI
Austin T. Levy School Totals	42,600	1958	\$4,134,398	\$433,307	\$4,567,705	30.61%

**Displayed totals may not sum exactly due to mathematical rounding*

The following pages provide a listing of all current deficiencies and 5-year life cycle need and the associated costs, followed by photos taken during the assessment.

Cost Estimating

Cost estimates are derived from local cost estimating expertise and enhanced by industry best practices, historical cost data, and relevance to the Rhode Island region. Costs have been developed from current market rates as of the 2nd quarter in 2016. All costs are based on a replace-in-kind approach, unless the item was not in compliance with national or state regulations or standards.

For planning and budgeting purposes, facility assessments customarily add a soft cost multiplier onto deficiency repair cost estimates. This soft cost multiplier accounts for costs that are typically incurred when contracting for renovation and construction services. Soft costs typically include construction cost factors, such as contractor overhead and profit, as well as labor and material inflation, professional fees, and administrative costs. Based on the Rhode Island School Construction Regulations, a soft cost multiplier of 20% is included on all cost estimates. Other project allowances are included in the cost estimates based on school attributes such as age, location, and historic designation. All stated costs in the assessment report will include soft costs for planning and budgeting purposes. These are estimates, and costs will vary at the time of construction.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.



Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Crosswalk Requires Repainting	Traffic	3	Ea.	3	\$2,266	9340
Note: Repaint crosswalks in school parking lot						
Asphalt Paving Requires Replacement	Capital Renewal	10	CAR	4	\$32,862	8933
Concrete Paving Requires Replacement	Capital Renewal	82	CAR	4	\$433,620	8934
Fencing Requires Replacement (4' Chain Link Fence)	Capital Renewal	450	LF	4	\$28,895	8932
Fencing Requires Replacement (8' Chain Link Fence)	Capital Renewal	20	LF	4	\$1,336	8931
Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28692
Note: Exterior Basketball Goals are Required						
Sub Total for System		6	items		\$504,787	
Sub Total for School and Site Level		6	items		\$504,787	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF)	Capital Renewal	39,800	SF	2	\$503,242	8944
The Concrete Tile Roofing Roof Covering Requires Replacement	Capital Renewal	2,800	SF	2	\$133,098	8938
Note: Gym/cafeteria roof						
Aluminum Panel Canopy Or Awning Requires Replacement	Capital Renewal	1,000	SF	4	\$190,139	8945
Sub Total for System		3	items		\$826,479	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	6	Door	2	\$38,503	8935
Note: Replace doors, 4 close with a gap remaining, 2 have significant damage.						
Sub Total for System		1	items		\$38,503	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	22	Ea.	3	\$193,467	19678
Note: All classrooms						
The Ceramic Tile Flooring Requires Replacement	Capital Renewal	2,130	SF	3	\$57,198	8936
Note: Replace restroom ceramic tile.						
Light Deterioration or Damage of 9x9 Asbestos Floor Tile is Present	Hazardous Material	14,157	SF	4	\$403,771	Rollup
Paint (probable pre-1978 in base (layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	6	Ea.	4	\$1,711	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - linear feet)	Hazardous Material	190	LF	4	\$4,335	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - square feet)	Hazardous Material	300	SF	4	\$2,852	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - each)	Hazardous Material	5	Ea.	4	\$1,426	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. AND NOT in children-accessible area (measurement unit - square feet)	Hazardous Material	64	SF	4	\$608	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - each)	Hazardous Material	36	Ea.	4	\$10,268	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet)	Hazardous Material	132	LF	4	\$3,012	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	200	SF	4	\$1,901	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas (> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - square feet)	Hazardous Material	1,240	SF	4	\$11,789	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas(> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - each)	Hazardous Material	4	Ea.	4	\$1,141	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas(> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - linear feet)	Hazardous Material	300	LF	4	\$6,845	Rollup
Room Is Excessively Reverberant (Install Fiberglass Wall Panel)	Acoustics	1,200	SF	4	\$68,450	19679
Note: Gym						



Facility Condition Assessment

Burrillville - Austin T. Levy School

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	1,196	SF	4	\$45,572	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	2	Ea.	5	\$4,563	Rollup
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	24,720	SF	5	\$163,334	Rollup
Sub Total for System		18	items		\$982,244	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Steel Tube Boiler Requires Replacement Note: Replace with condensing boilers	Capital Renewal	2	Ea.	2	\$227,407	8942
The Window AC Unit Component Requires Replacement Note: Replace window units with DX Split systems	Capital Renewal	5	Ea.	2	\$16,694	8941
Testing And Balancing Required Note: Observed rooms without any ventilation means. Tenants comments on the inadequacy of room temperature controls. The building is experiencing lack of ventilation (outside air). Suggest considering performing an air balance of the dedicated outside air units and comply with the current ventilation requirements.	Capital Renewal	42,800	SF	3	\$79,778	8947
Exhaust Fan Ventilation Requires Replacement Note: The fan above the restroom between classrooms #2 and #3 is out of balance and is creating noise	Capital Renewal	1	Ea.	4	\$2,678	8937
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls Note: Controls require continuous calibration and tenants are not happy with the performance of the heating system. Constant complaints about room temperatures.	Capital Renewal	42,800	SF	4	\$289,101	8943
Sub Total for System		5	items		\$615,658	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	92	Ea.	5	\$45,656	Rollup
Sub Total for System		1	items		\$45,656	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks a drinking fountain.	Educational Adequacy	21	Ea.	5	\$23,159	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	8	Ea.	5	\$8,143	Rollup
Sub Total for System		2	items		\$31,302	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	22	Ea.	3	\$125,492	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	8	Ea.	3	\$3,803	10582
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,507	10590
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	24	Ea.	3	\$479,151	10593
Technology: Instructional spaces do not have local sound reinforcement.	Technology	24	Ea.	3	\$114,084	10591
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	10584
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$16,732	10581
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,655	10587
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$50,197	10586
Technology: Network system inadequate and/or near end of useful life	Technology	2	Ea.	3	\$15,211	10595
Technology: Network system inadequate and/or near end of useful life	Technology	12	Ea.	3	\$57,042	10596



Facility Condition Assessment

Burrillville - Austin T. Levy School

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	42,600	SF	3	\$72,899	10597
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$54,190	10592
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	2	Room	3	\$38,028	10594
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,606	10583
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,606	10589
Sub Total for System		16	items		\$1,063,526	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	5	Ea.	3	\$22,817	Rollup
Sub Total for System		1	items		\$22,817	
Sub Total for Building 01 - Main Building		47	items		\$3,626,185	
Total for Campus		53	items		\$4,130,972	



Austin T. Levy School - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fences and Gates	Fencing - Chain Link (4 Ft)	360	LF	\$23,273	4
	Note: 6' CL Fence (Not 4')				
Parking Lot Lighting	Pole Lighting	15	Ea.	\$116,023	5
	Sub Total for System	2	items	\$139,296	
	Sub Total for Building -	2	items	\$139,296	

Building: 01 - Main Building

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Facility Hydronic Distribution	Pump - 1HP or Less (Ea.)	8	Ea.	\$61,027	4
	Note: Primary and Secondary loops				
Decentralized Heating Equipment	Unit Heater Steam/HW (85 MBH)	7	Ea.	\$13,523	4
	Note: Six feet long Cabinet Heaters				
Exhaust Air	Roof Exhaust Fan - Small	7	Ea.	\$18,461	5
Exhaust Air	Wall Exhaust Fan	1	Ea.	\$2,678	5
Exhaust Air	Roof Exhaust Fan - Large	2	Ea.	\$27,787	5
	Note: One				
	Sub Total for System	5	items	\$123,475	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	18	Ea.	\$24,813	4
	Sub Total for System	1	items	\$24,813	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Compressed-Air Systems	Air Compressor (1 hp)	2	Ea.	\$12,100	4
Domestic Water Equipment	Water Heater - Electric - 30 gallon	2	Ea.	\$3,734	5
	Note: 4,000 watts				
Domestic Water Equipment	Water Heater - Electric - 30 gallon	1	Ea.	\$1,867	5
	Note: Actually 20 gallons and 2000 watts				
Domestic Water Equipment	Water Heater - Gas - 50 gallon	1	Ea.	\$3,160	5
	Note: 375 MBH oil fired				
	Sub Total for System	4	items	\$20,862	

Fire and Life Safety

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	42,600	SF	\$124,861	3
	Sub Total for System	1	items	\$124,861	
	Sub Total for Building 01 - Main Building	11	items	\$294,011	
	Total for: Austin T. Levy School	13	items	\$433,307	



Supporting Photos



School Plaque



Radiator



Pipe Insulation



Boilers



Facility Condition Assessment

Burrillville - Austin T. Levy School



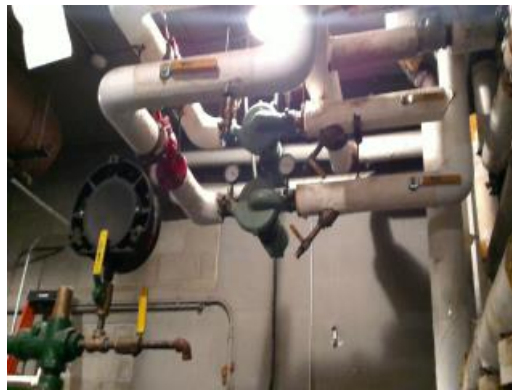
Transformer



Added Air Outlet



Art Room



Heating Hot Water Pumps



Roof Leak Damage To ACT



Corridor



Facility Condition Assessment

Burrillville - Austin T. Levy School



Gymnasium



Ventilation Unit



Library



Air Distribution Outlet



Typical Restroom



Computer Lab



Facility Condition Assessment

Burrillville - Austin T. Levy School



Damaged Fence



Typical Classroom



Cracked Pavement



Rusted and Damaged Fence



Site Aerial



Damaged Fence



Facility Condition Assessment

Burrillville - Austin T. Levy School



Rear Elevation



Parking Lot Damage



Side Elevation



Side Elevation



Front Elevation



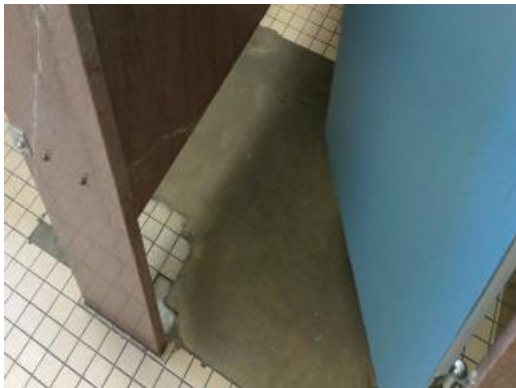
Side Elevation



Exterior Doors



Exterior Doors



Damaged Ceramic Tile



Damaged Ceramic Tile



Fan and Outdoor Air Unit



Damaged Ceramic Tile



Facility Condition Assessment

Burrillville - Austin T. Levy School



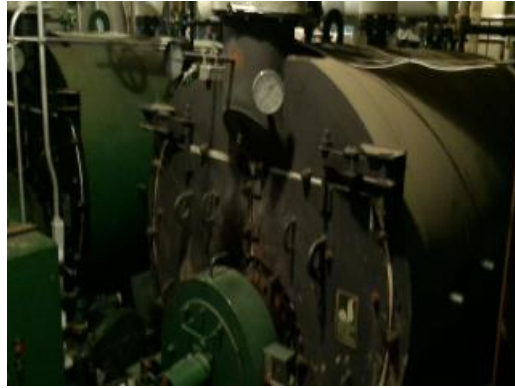
Window unit



Roof



Pneumatic Controls



Boilers



Roof With Ponding



Roof



Facility Condition Assessment

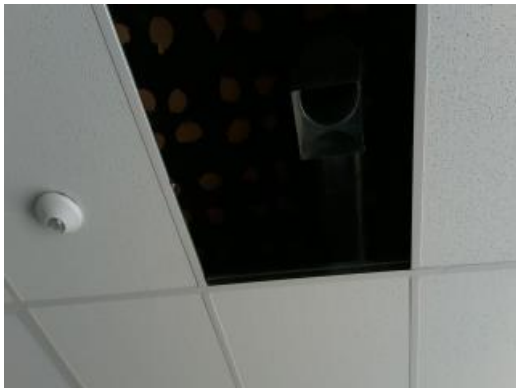
Burrillville - Austin T. Levy School



Canopy Awning



Roof With Ponding



Unfinished Ductwork



Repaint



Facility Condition Assessment

Burrillville - Burrillville High School

June 2017

425 East Avenue, Harrisville, RI 02830





Introduction

Burrillville High School, located at 425 East Avenue in Harrisville, Rhode Island, was built in 1966. It comprises 230,000 gross square feet. Each school across the district was visited three times during the Facility Condition Assessments by three teams of specialists in the spring/summer of 2016.

Burrillville High School serves grades 9 - 12, has 74 instructional spaces, and has an enrollment of 741. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Burrillville High School is 1,377 with a resulting utilization of 54%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Burrillville High School the 5-year need is \$16,998,294. The findings contained within this report resulted from an assessment of building systems performed by building professionals experienced in disciplines including: architecture, mechanical, plumbing, electrical, acoustics, hazardous materials, and technology infrastructure.



Figure 1: Aerial view of Burrillville High School



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates ages of a building's systems to forecast system replacement as they reach the end of serviceable life. An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

Discipline Specialists

All assessment teams produced current deficiencies associated with each school. The assessment for the school facilities at the Rhode Island Department of Education included several specialties:

Facility Condition Assessment: Architectural, mechanical, and electrical engineering professionals observed conditions via a visual observation that did not include intrusive measures, destructive investigations, or testing. Additionally, the assessment incorporated input provided by district facilities and maintenance staff where applicable. The assessment team recorded existing conditions, identified problems and deficiencies, documented corrective action and quantities, and identified the priority of the repair in accordance with parameters defined during the planning phase. The team took digital photos at each school to better identify significant deficiencies.

Technology: Technology specialists visited RIDE facilities and met with technology directors to observe and assess each facility's technology infrastructure. The assessment included network architecture, major infrastructure components, classroom instructional systems, necessary building space and support for technology. The technology assessment took into account the desired technology outcome and best practices and processes to ensure results can be attained effectively.

Hazardous Materials: Schools constructed prior to 1990 were assessed by specialists to identify the presence of hazardous materials. The team focused on identifying asbestos containing building materials (ACBMs), lead-based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. If sampling and analysis was required, these activities were recommended but not included in the scope of work.

Traffic: A traffic specialist performed an in-office review of aerial imagery of the traffic infrastructure around the facilities in accordance with section 1.05-7 in the Rhode Island School Construction Regulations and reviewed data collected on site during the facility condition assessment. Based on this information, deficiencies and corrective actions were identified. High problem areas were identified for consideration of more detailed site-specific study and analysis in the future.

Acoustics: Specialists assessed each school's acoustics, including architectural acoustics, mechanical system noise and vibration, and environmental noise. The assessment team evaluated room acoustics with particular attention to the intelligibility of speech in learning spaces, interior and exterior sound isolation, and mechanical system noise and vibration control.

Educational Program Space Assessment: Teams evaluated schools to ensure that that all spaces adequately support the districts educational program. Standards are established for each classroom type or instructional space. Each space is evaluated to determine if it meets those standards and a listing of alterations that should be made to make the space a better environment for teaching and learning was created.



System Summaries

The following tables summarize major building systems at the Burrillville High School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Concrete Pedestrian Pavement

Building Envelope

The exterior systems for the building(s) at this campus includes:

01 - Main Building:	Brick Exterior Wall
	Stucco Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
	Overhead Exterior Utility Doors

The roofing for the building(s) at this campus consists of:

01 - Main Building:	Concrete Tile Roofing
	EPDM Roofing
	Canopy Roofing

Interior

The interior systems for the building(s) at this campus include:

01 - Main Building:	Steel Interior Doors
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	Ceramic Tile Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Quarry Tile Flooring
	Wood Flooring



01 - Main Building:	Vinyl Composition Tile Flooring
	Carpet
	Athletic/Sport Flooring

Mechanical

The mechanical systems for the building(s) at this campus include:

01 - Main Building:	8,500 MBH Cast Iron Boiler
	250 MBH Steam Unit Heater
	36 MBH Steam Unit Heater
	50 MBH Steam Unit Heater
	85 MBH Steam Unit Heater
	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	3 Ton Ductless Split System
	5 Ton D/X Fan Coil
	5 Ton Condensing Unit
	5 Ton Package DX Unit
	10 Ton Package DX Unit
	15 Ton Package DX Unit
	20 Ton Package DX Unit
	30 Ton Package DX Unit
	50 Ton Package DX Unit
	15 HP VFD
	1 HP or Smaller Pump
	5 HP Pump
	10 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	10,000 CFM Interior AHU
	15,000 CFM Interior AHU
	Ductwork
	Roof Exhaust Fan
	Kitchen Exhaust Hoods
	Fire Sprinkler System

Plumbing

The plumbing systems for the building(s) at this campus include:

01 - Main Building:	Gas Piping System
	200 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Mop/Service Sinks



01 - Main Building:	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Urinals
	Air Compressor (10 hp)
	Air Compressor (5 hp)
	15,000 Gallon Underground Fuel Oil Storage Tank

Electrical

The electrical systems for the building(s) at this campus include:

01 - Main Building:	500 kW Emergency Generator
	480v Switch
	3,000 Amp Switchgear
	800 Amp Switchgear
	112.5 KVA Transformer
	225 KVA Transformer
	75 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Panelboard - 120/240 225A
	Panelboard - 277/480 100A
	Panelboard - 277/480 225A
	Panelboard - 277/480 400A
	Panelboard - 400+ Amps
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures



Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the school's ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 - Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

Priority 3 - Short-Term Conditions: Deficiencies that are necessary to the school's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 - Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 - Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.



The following chart summarizes this site's current deficiencies by building system and priority. The listing details current deficiencies including deferred maintenance, functional deficiencies, code compliance, capital renewal, hazardous materials and technology categories.

Table 1: System by Priority

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	-	-	\$226,631	\$1,283,843	\$532,582	\$2,043,056	19.01 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	-	-	-	-	\$0	0.00 %
Interior	-	-	\$809,043	\$2,314,138	\$4,563	\$3,127,744	29.11 %
Mechanical	-	\$863,252	\$3,411	\$1,641,525	-	\$2,508,188	23.34 %
Electrical	\$2,825	-	-	-	\$33,746	\$36,571	0.34 %
Plumbing	-	\$3,921	-	\$103,284	\$36,155	\$143,359	1.33 %
Fire and Life Safety	\$22,817	-	-	-	-	\$22,817	0.21 %
Technology	-	-	\$2,802,750	-	-	\$2,802,750	26.08 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$13,690	\$5,419	\$42,781	\$61,890	0.58 %
Total	\$25,641	\$867,173	\$3,855,524	\$5,348,208	\$649,828	\$10,746,374	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Interior	-	\$3,127,744
Technology	-	\$2,802,750
Mechanical	-	\$2,508,188

The chart below represents the building systems and associated deficiency costs.

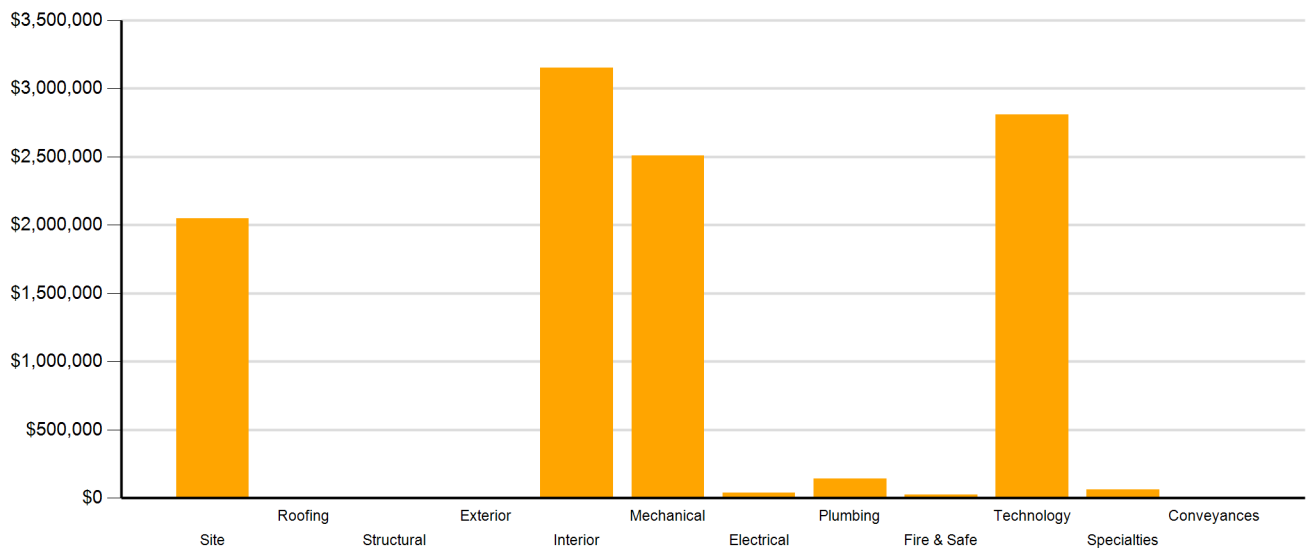


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

- **Acoustics** deficiencies relate to room acoustics, sound insulation, and mechanical systems and vibration control modeled after ANSI/ASA Standard S12.60-2010 and ASHRAE Handbook, Chapter 47 on Sound and Vibration Control.
- **Barrier to Accessibility** deficiencies relate to the Americans with Disabilities Act and the Rhode Island Governors Commission on Disability. Additional items related to accessibility may be included other categories.
- **Capital Renewal** items have reached or exceeded serviceable life and require replacement. These are current and do not include life cycle capital renewal forecasts. Also included are deficiencies correcting planned work postponed beyond its regular life expectancy.
- **Code Compliance** deficiencies related to current codes. Many may fall under grandfather clauses, which allow buildings to continue operating under codes effective at the time of construction. However, there are instances where the level of renovation requires full compliance which are reflected in the master plan.
- **Educational Adequacy** deficiencies identify where facilities do not align with the Basic Education Program and the RIDE School Construction Regulations.
- **Functional Deficiencies** are deficiencies for components or systems that have failed before the end of expected life or are not the right application, size, or design.
- **Hazardous Materials** include deficiencies for building systems or components containing potentially hazardous material. The team focused on identifying asbestos containing building materials (ACBMs), lead based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. With other scopes of work there may be other costs associated with hazardous materials.
- **Technology** deficiencies relate to network architecture, technology infrastructure, classroom systems, and support. Examples of technology deficiencies include: security cameras, secure electronic access, telephone handsets, and dedicated air conditioning for telecommunication rooms.
- **Traffic** deficiencies relate to vehicle or pedestrian traffic, such as bus loops, crosswalks, and pavement markings.



The following chart and table represent the deficiency category by priority. This listing includes current deficiencies for all building systems.

Table 2: Deficiency Category by Priority

Category	Priority					Total
	1	2	3	4	5	
Acoustics	-	-	\$809,043	-	-	\$809,043
Barrier to Accessibility	-	-	-	-	-	\$0
Capital Renewal	-	\$867,173	-	\$1,358,798	-	\$2,225,970
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	\$25,641	-	\$401,574	\$2,230,935	\$649,828	\$3,307,978
Functional Deficiency	-	-	\$3,411	\$1,553,582	-	\$1,556,992
Hazardous Material	-	-	-	\$204,894	-	\$204,894
Technology	-	-	\$2,414,865	-	-	\$2,414,865
Traffic	-	-	\$226,631	-	-	\$226,631
Total	\$25,641	\$867,173	\$3,855,524	\$5,348,208	\$649,828	\$10,746,374

*Displayed totals may not sum exactly due to mathematical rounding

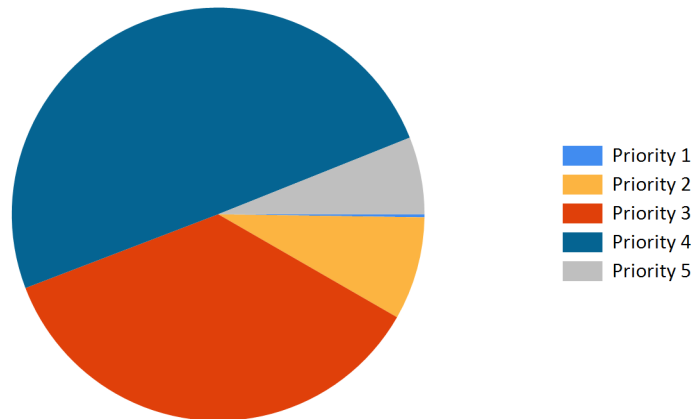


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If a need for immediate replacement was identified, a deficiency was created with the estimated repair costs. The identified deficiency contributes to the facility's total current repair costs.

Capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a 5-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following chart shows all current deficiencies and the subsequent 5-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3: Capital Renewal Forecast

System	Current Deficiencies	Life Cycle Capital Renewal Projections					LC Yr. 1-5 Total	Total 5-Year Need
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021		
Site	\$2,043,056	\$0	\$0	\$0	\$0	\$193,372	\$193,372	\$2,236,428
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interior	\$3,127,744	\$0	\$0	\$0	\$665,651	\$1,443,705	\$2,109,356	\$5,237,100
Mechanical	\$2,508,188	\$0	\$0	\$0	\$1,057,036	\$267,307	\$1,324,343	\$3,832,531
Electrical	\$36,571	\$0	\$0	\$0	\$92,788	\$1,784,423	\$1,877,211	\$1,913,782
Plumbing	\$143,359	\$0	\$0	\$12,926	\$20,278	\$0	\$33,204	\$176,563
Fire and Life Safety	\$22,817	\$0	\$0	\$674,130	\$0	\$0	\$674,130	\$696,947
Technology	\$2,802,750	\$0	\$0	\$0	\$0	\$0	\$0	\$2,802,750
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$61,890	\$0	\$0	\$0	\$0	\$0	\$0	\$61,890
Total	\$10,746,374	\$0	\$0	\$687,056	\$1,835,753	\$3,688,807	\$6,211,616	\$16,957,990

*Displayed totals may not sum exactly due to mathematical rounding

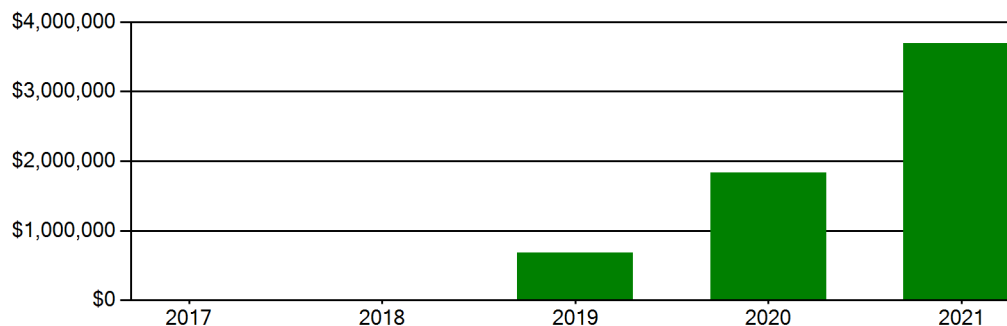
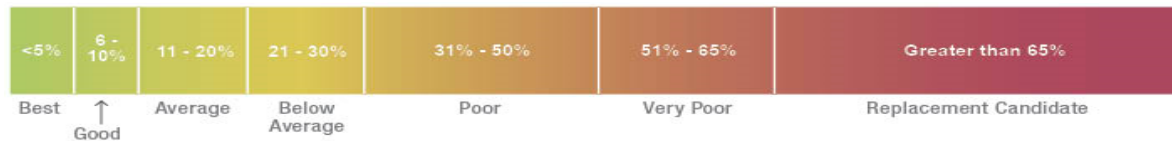


Figure 4: Life Cycle Capital Renewal Forecast



Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building's health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of schools. The FCI is derived by dividing the total repair cost, including educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair schools with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making school facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today's estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is \$82,800,000. For planning purposes, the total 5-year need at the Burrillville High School is \$16,998,294 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Burrillville High School facility has a 5-year FCI of 20.48%.

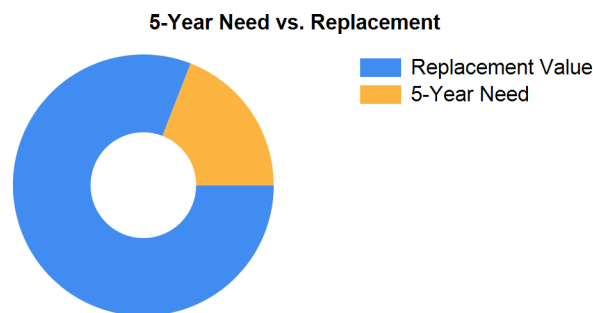


Figure 5: 5-Year FCI

It is important to reiterate that this FCI replacement threshold is not conclusive, but is intended to initiate planning discussion in which other relevant issues with regard to a facility's disposition must be incorporated. This merely suggests where conversations regarding replacement might occur.



Rhode Island Aspirational Capacity

The capacity of a school reflects how many students the school's physical facility can effectively serve. There are various methodologies that exist to calculate capacity. It is not uncommon to review an existing building only to find that the capacity that had once been assigned is greater than what can be reasonably accommodated today. This is primarily because of a change in how programs are delivered.

The Rhode Island Aspirational Capacity is based on the Rhode Island School Construction Regulations (SCRs) and is an aspirational goal of space use. The capacity for each individual public school in the state of Rhode Island was designed to conform to Section 1.06-2 Space Allowance Guidelines of the Rhode Island Department of Education (RIDE) SCRs. These regulations outline the allowed gross square feet (GSF) per student at each school type (ES, MS, HS) by utilizing a sliding scale based on projected enrollment. The resulting capacities reflect how school capacities align to the SCRs for new construction. The existing enrollment was multiplied by the GSF per student for the appropriate bracket. For the purposes of this analysis, Pre-K centers were rolled into the elementary totals, and K-8 facilities were counted as middle schools.

The most consistent and equitable way a state can determine school capacities across a variety of districts and educational program offerings is to use square-foot-per-student standards. In contrast, in the 2013 Public Schoolhouse Assessment Report, LEAs self-reported capacities for their elementary, middle and high schools. Districts typically report "functional capacity," which is defined as the number of students each classroom can accommodate. Functional capacity counts how many students can occupy a space, not how much room students and teachers have within that space. For example, a 650-square-foot classroom and a 950-square-foot classroom can both have a reported capacity of 25 students, but the actual teaching and learning space per student varies greatly.

The variation in square feet per student impacts the kinds of teaching practices possible in each space. The lowest allocation of space per student restricts group and project-based learning strategies and requires teachers to teach in more traditional, lecture-style formats, due to a lack of space. Furthermore, the number of students that can be accommodated in a classroom does not account for access to sufficient common spaces such as libraries, cafeterias, and gymnasiums. When cafeterias are undersized relative to the population, schools must host four or more lunch periods a day, resulting in some students eating lunch mid-morning and some mid-afternoon. Similarly, undersized libraries and gymnasiums create scheduling headaches for schools and restrict student access. Finally, a classroom count-only approach to school capacity does not consider the inherent scheduling challenges schools face.

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 1,243 students.

Facility New Construction

As part of the Educational Program Space Assessment, select core spaces were compared to the RI School Construction Regulations. If it was determined that a facility was in need of square footage related to a cafeteria or library/media center, a cost for additional space was estimated. This cost is not included in the total 5-year need or the 5-year FCI calculation.

The New Construction cost to bring the Burrillville High School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$0.



Summary of Findings

The Burrillville High School comprises 230,000 square feet and was constructed in 1966. Current deficiencies at this school total \$10,786,678. Five year capital renewal costs total \$6,211,616. The total identified need for the Burrillville High School (current deficiencies and 5-year capital renewal costs) is \$16,998,294. The 5-year FCI is 20.48%.

Table 4: Facility Condition by Building

	Gross Sq Ft	Year Built	Current Deficiencies	LC Yr. 1-5 Total	Total 5 Yr Need (Yr 1-5 + Current Defs)	5-Year FCI
Burrillville High School Totals	230,000	1966	\$10,786,678	\$6,211,616	\$16,998,294	20.48%

**Displayed totals may not sum exactly due to mathematical rounding*

The following pages provide a listing of all current deficiencies and 5-year life cycle need and the associated costs, followed by photos taken during the assessment.

Cost Estimating

Cost estimates are derived from local cost estimating expertise and enhanced by industry best practices, historical cost data, and relevance to the Rhode Island region. Costs have been developed from current market rates as of the 2nd quarter in 2016. All costs are based on a replace-in-kind approach, unless the item was not in compliance with national or state regulations or standards.

For planning and budgeting purposes, facility assessments customarily add a soft cost multiplier onto deficiency repair cost estimates. This soft cost multiplier accounts for costs that are typically incurred when contracting for renovation and construction services. Soft costs typically include construction cost factors, such as contractor overhead and profit, as well as labor and material inflation, professional fees, and administrative costs. Based on the Rhode Island School Construction Regulations, a soft cost multiplier of 20% is included on all cost estimates. Other project allowances are included in the cost estimates based on school attributes such as age, location, and historic designation. All stated costs in the assessment report will include soft costs for planning and budgeting purposes. These are estimates, and costs will vary at the time of construction.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.



Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Traffic Signage Is Required Note: Upgrade, install signs for school zone	Traffic	4	Ea.	3	\$151,087	9303
Traffic Signage Is Required Note: Add flashing beacons to school zone speed limit signs	Traffic	2	Ea.	3	\$75,544	9304
Asphalt Paving Requires Replacement	Capital Renewal	380	CAR	4	\$1,248,772	8498
Backstops Require Replacement Note: Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28413
Fencing Requires Replacement (4' Chain Link Fence) Note: Fencing at practice field is rusted and needs to be replaced.	Capital Renewal	105	LF	4	\$6,742	8497
School has insufficient baseball fields. Note: School has insufficient baseball fields.	Educational Adequacy	1	Ea.	5	\$207,745	28314
School lacks a competition track. Note: School lacks a competition track.	Educational Adequacy	1	Ea.	5	\$324,837	28226
Sub Total for System		7	items		\$2,043,056	
Sub Total for School and Site Level		7	items		\$2,043,056	

Building: 01 - Main Building

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	64	Ea.	3	\$562,813	19681
Classroom Interior Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	28	Ea.	3	\$246,231	19682
Paint (probable pre-1978 in base (layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	90	Ea.	4	\$25,669	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - square feet)	Hazardous Material	18,350	SF	4	\$174,453	Rollup
Paint (probable pre-1978 in base layer(s)) -large areas (> 10 sq. ft.)of peeling/damage & area in active use-adults only (measurement unit - square feet)	Hazardous Material	500	SF	4	\$4,753	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	55,355	SF	4	\$2,109,243	Rollup
Wall/ceiling materials - area < 9 sq. ft. AND in children-accessible area	Hazardous Material	2	SF	4	\$19	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	2	Ea.	5	\$4,563	Rollup
Sub Total for System		8	items		\$3,127,744	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Cast Iron Water Boiler Requires Replacement Note: Boilers are very old and require constant maintenance. It is very hard to obtain replacement parts for these boilers. They should be considered for replacement.	Capital Renewal	2	Ea.	2	\$863,252	8505
Component Insulation Deteriorated And Requires Replacement Note: Cast iron piping inside of classrooms A4 and B10 is not insulated.	Functional Deficiency	24	LF	3	\$773	8509
The Small Diameter Exhausts/Hoods Require Replacement Location: Exhaust fan B3	Functional Deficiency	1	Ea.	3	\$2,637	8500
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls Note: Pneumatic control system is aged and components go out of calibration often. Staff indicated service calls to recalibrate components occur frequently.	Functional Deficiency	230,000	SF	4	\$1,553,582	8503
Lab lacks an appropriate fume hood.	Educational Adequacy	4	Ea.	4	\$87,943	Rollup
Sub Total for System		5	items		\$2,508,188	



Facility Condition Assessment

Burrillville - Burrillville High School

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	2	Ea.	1	\$2,825	Rollup
Room Has Insufficient Electrical Outlets	Educational Adequacy	68	Ea.	5	\$33,746	Rollup
Sub Total for System		2	items		\$36,571	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Backflow Preventer Requires Replacement Note: Domestic and heating hot water, as well as main service to the site are lacking backflow preventer.	Capital Renewal	1	Ea.	2	\$3,921	8502
The Refrigerated Water Cooler Requires Replacement Note: Drinking fountains are non-functional.	Capital Renewal	14	Ea.	4	\$103,284	8501
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	\$4,411	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	21	Ea.	5	\$31,744	Rollup
Sub Total for System		4	items		\$143,359	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	2	Ea.	1	\$22,817	Rollup
Sub Total for System		1	items		\$22,817	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	68	Ea.	3	\$387,884	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	\$95,070	10658
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,507	10651
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	62	Ea.	3	\$1,237,807	10654
Technology: Instructional spaces do not have local sound reinforcement.	Technology	62	Ea.	3	\$294,716	10652
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	10625
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	10629
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,324	10634
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,648	10631
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,648	10639
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,648	10643
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$16,732	10628
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$16,732	10637
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	10627
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	10632
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	10636



Facility Condition Assessment

Burrillville - Burrillville High School

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	10641
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	10645
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,753	10649
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,655	10647
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$50,197	10646
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	30	Ea.	3	\$12,834	10633
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	14	Ea.	3	\$5,989	10640
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	130	Ea.	3	\$55,616	10644
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	96	Ea.	3	\$41,070	10650
Technology: Network system inadequate and/or near end of useful life	Technology	12	Ea.	3	\$91,267	10656
Technology: Network system inadequate and/or near end of useful life	Technology	50	Ea.	3	\$237,674	10657
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$54,190	10653
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,606	10648
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	10626
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	10630
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	10635
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	10638
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,753	10642

Sub Total for System 34 items \$2,802,750

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	3	Ea.	3	\$13,690	Rollup
Welding Bays Are Required	Educational Adequacy	1	Ea.	4	\$5,419	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	5	Ea.	5	\$42,781	Rollup
Sub Total for System		3	items		\$61,890	
Sub Total for Building 01 - Main Building		57	items		\$8,703,318	
Total for Campus		64	items		\$10,746,374	



Burrillville High School - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Lighting	Pole Mounted Fixtures (Ea.)	25	Ea.	\$193,372	5
Sub Total for System		1	items	\$193,372	
Sub Total for Building -		1	items	\$193,372	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Carpeting	Carpet	11,500	SF	\$250,196	4
Acoustical Suspended Ceilings	Ceilings - Acoustical Tiles	46,000	SF	\$415,455	4
Wall Painting and Coating	Painting/Staining (Bldg SF)	218,500	SF	\$1,443,705	5
Sub Total for System		3	items	\$2,109,356	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Ductless Split System (3 Ton)	5	Ea.	\$38,912	4
Other HVAC Distribution Systems	VFD (15 HP)	10	Ea.	\$104,101	4
Decentralized Cooling	Package DX Unit (10 Ton)	3	Ea.	\$66,351	4
	Note: 8 tons				
Decentralized Cooling	Package DX Unit (15 Ton)	1	Ea.	\$28,220	4
	Note: 13 tons				
Decentralized Cooling	Package DX Unit (20 Ton)	1	Ea.	\$39,439	4
Decentralized Cooling	Package DX Unit (50 Ton)	3	Ea.	\$281,165	4
	Note: 40 tons				
Decentralized Cooling	Package DX Unit (5 Ton)	3	Ea.	\$43,249	4
	Note: 4 tons				
Decentralized Cooling	Fan Coil - D/X only (5 Ton)	2	Ea.	\$7,864	4
Decentralized Heating Equipment	Unit Heater Steam/HW (250 MBH)	32	Ea.	\$108,364	4
Decentralized Heating Equipment	Unit Heater Steam/HW (36 MBH)	8	Ea.	\$13,173	4
Decentralized Heating Equipment	Unit Heater Steam/HW (50 MBH)	29	Ea.	\$85,799	4
Decentralized Heating Equipment	Unit Heater Steam/HW (85 MBH)	35	Ea.	\$67,614	4
Decentralized Cooling	Package DX Unit (30 Ton)	3	Ea.	\$172,785	4
	Note: 25 tons				
Decentralized Cooling	Condensing Unit (5 Ton)	2	Ea.	\$22,714	5
Exhaust Air	Roof Exhaust Fan	47	Ea.	\$244,593	5
Sub Total for System		15	items	\$1,324,344	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)	40	Ea.	\$59,704	4
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	24	Ea.	\$33,084	4
Electrical Service	Switchgear - Main Dist Panel (800 Amps)	1	Ea.	\$23,482	5
Packaged Generator Assemblies	Emergency Generator (500 KW)	1	Ea.	\$209,251	5
Electrical Service	Switchgear - Main Dist Panel (3000 Amps)	2	Ea.	\$185,063	5
Lighting Fixtures	Light Fixtures (Bldg SF)	230,000	SF	\$1,366,627	5
Sub Total for System		6	items	\$1,877,211	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Gas - 200 Gallon	1	Ea.	\$12,926	3
	Note: Oil fired water heater				
Compressed-Air Systems	Air Compressor (10 hp)	1	Ea.	\$20,278	4
Sub Total for System		2	items	\$33,204	



Facility Condition Assessment

Burrillville - Burrillville High School

Fire and Life Safety

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	230,000	SF	\$674,130	3
	Sub Total for System	1	items	\$674,130	
	Sub Total for Building 01 - Main Building	27	items	\$6,018,244	
	Total for: Burrillville High School	28	items	\$6,211,616	



Supporting Photos



Exterior Finishes



Stained Ceiling Tiles



Marquee



Damaged EPDM



Facility Condition Assessment

Burrillville - Burrillville High School



Ponding On Roof



Ponding On Roof



Ponding On Roof



Aged Boilers



Stained Ceiling Tile



Front Elevation



Facility Condition Assessment

Burrillville - Burrillville High School



Cafeteria



Hallway Finishes



Site Aerial



Science Classroom



Front Elevation



School Signage



Facility Condition Assessment

Burrillville - Burrillville High School



Auditorium



Heating Hot Water Control Valve



Computer Lab



Choir Room



Courtyard



Fuel Tank



Facility Condition Assessment

Burrillville - Burrillville High School



Dome Gym



Domestic Hot Water Heater and Air Compressor



Rooftop Units



Typical Classroom



Science Lab



Heating Hot Water Circulating Pumps



Facility Condition Assessment

Burrillville - Burrillville High School



Band Classroom



Gymnasium



Non-Insulated Storm Drain Piping



Restroom Fixtures And Finishes



Cafeteria



Media Center



Facility Condition Assessment

Burrillville - Burrillville High School



Switchgear



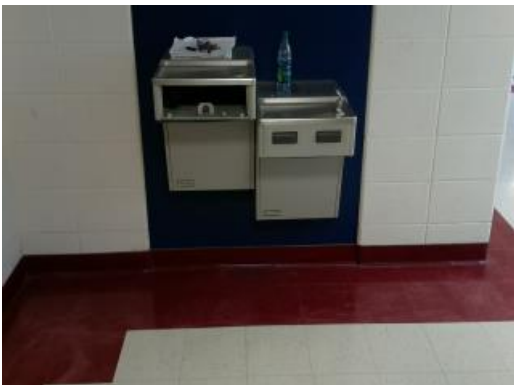
Exhaust Fans



Air Handling Unit



Pneumatic Control Valve



Damaged Drinking Fountains



Drop Off Area



Facility Condition Assessment

Burrillville - Burrillville High School



Pneumatic Controls



Hallway Finishes



Worn Asphalt Paving



Rusted Fencing



Stained Ceiling Tiles



Facility Condition Assessment

Burrillville - Burrillville Middle School

June 2017

2220 Broncos Highway, Harrisville, RI 02830





Introduction

Burrillville Middle School, located at 2220 Broncos Highway in Harrisville, Rhode Island, was built in 1989. It comprises 126,000 gross square feet. Each school across the district was visited three times during the Facility Condition Assessments by three teams of specialists in the spring/summer of 2016.

Burrillville Middle School serves grades 6 - 8, has 54 instructional spaces, and has an enrollment of 595. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Burrillville Middle School is 1,134 with a resulting utilization of 52%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Burrillville Middle School the 5-year need is \$11,027,735. The findings contained within this report resulted from an assessment of building systems performed by building professionals experienced in disciplines including: architecture, mechanical, plumbing, electrical, acoustics, hazardous materials, and technology infrastructure.



Figure 1: Aerial view of Burrillville Middle School



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates ages of a building's systems to forecast system replacement as they reach the end of serviceable life. An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

Discipline Specialists

All assessment teams produced current deficiencies associated with each school. The assessment for the school facilities at the Rhode Island Department of Education included several specialties:

Facility Condition Assessment: Architectural, mechanical, and electrical engineering professionals observed conditions via a visual observation that did not include intrusive measures, destructive investigations, or testing. Additionally, the assessment incorporated input provided by district facilities and maintenance staff where applicable. The assessment team recorded existing conditions, identified problems and deficiencies, documented corrective action and quantities, and identified the priority of the repair in accordance with parameters defined during the planning phase. The team took digital photos at each school to better identify significant deficiencies.

Technology: Technology specialists visited RIDE facilities and met with technology directors to observe and assess each facility's technology infrastructure. The assessment included network architecture, major infrastructure components, classroom instructional systems, necessary building space and support for technology. The technology assessment took into account the desired technology outcome and best practices and processes to ensure results can be attained effectively.

Hazardous Materials: Schools constructed prior to 1990 were assessed by specialists to identify the presence of hazardous materials. The team focused on identifying asbestos containing building materials (ACBMs), lead-based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. If sampling and analysis was required, these activities were recommended but not included in the scope of work.

Traffic: A traffic specialist performed an in-office review of aerial imagery of the traffic infrastructure around the facilities in accordance with section 1.05-7 in the Rhode Island School Construction Regulations and reviewed data collected on site during the facility condition assessment. Based on this information, deficiencies and corrective actions were identified. High problem areas were identified for consideration of more detailed site-specific study and analysis in the future.

Acoustics: Specialists assessed each school's acoustics, including architectural acoustics, mechanical system noise and vibration, and environmental noise. The assessment team evaluated room acoustics with particular attention to the intelligibility of speech in learning spaces, interior and exterior sound isolation, and mechanical system noise and vibration control.

Educational Program Space Assessment: Teams evaluated schools to ensure that that all spaces adequately support the districts educational program. Standards are established for each classroom type or instructional space. Each space is evaluated to determine if it meets those standards and a listing of alterations that should be made to make the space a better environment for teaching and learning was created.



System Summaries

The following tables summarize major building systems at the Burrillville Middle School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Roadway Pavement
	Concrete Parking Lot Pavement
	Concrete Pedestrian Pavement

Building Envelope

The exterior systems for the building(s) at this campus includes:

01 - Main Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors

The roofing for the building(s) at this campus consists of:

01 - Main Building:	EPDM Roofing
----------------------------	--------------

Interior

The interior systems for the building(s) at this campus include:

01 - Main Building:	Steel Interior Doors
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	Brick/Stone Veneer
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Quarry Tile Flooring
	Vinyl Composition Tile Flooring
	Carpet
	Athletic/Sport Flooring



Mechanical

The mechanical systems for the building(s) at this campus include:

01 - Main Building:	4,200 MBH Cast Iron Steam Boiler
	120 GPM Steam to Water Heat Exchanger
	240 GPM Steam to Water Heat Exchanger
	Steam Condensate Receiver, Tank and Pump
	250 MBH Steam Unit Heater
	36 MBH Steam Unit Heater
	50 MBH Steam Unit Heater
	85 MBH Steam Unit Heater
	Fin Tube Water Radiant Heater
	Finned Wall Radiator
	Electronic Heating System Controls
	Pneumatic Heating System Controls
	3 Ton Ductless Split System
	20 Ton Package DX Unit
	3 Ton Condensing Unit
	5 Ton Condensing Unit
	5 Ton D/X Fan Coil
	3 Ton D/X Fan Coil
	Window Units
	Make-up Air Unit
	15 HP VFD
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	5,000 CFM Interior AHU
	5,000 CFM Outdoor AHU
	10,000 CFM Interior AHU
	15,000 CFM Interior AHU
	Ductwork
	Roof Exhaust Fan

Plumbing

The plumbing systems for the building(s) at this campus include:

01 - Main Building:	15,000 Gallon Water Storage Tank
	3/4" Backflow Preventers
	Gas Piping System
	75 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain



01 - Main Building:	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Air Compressor (5 hp)

Electrical

The electrical systems for the building(s) at this campus include:

01 - Main Building:	100 kW Emergency Generator
	Automatic Transfer Switch
	1,200 Amp Switchgear
	4,000 Amp Switchgear
	800 Amp Switchgear
	225 KVA Transformer
	400 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 120/208 400A
	Panelboard - 277/480 100A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures



Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the school's ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 - Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

Priority 3 - Short-Term Conditions: Deficiencies that are necessary to the school's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 - Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 - Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.



Facility Condition Assessment

Burrillville - Burrillville Middle School

The following chart summarizes this site's current deficiencies by building system and priority. The listing details current deficiencies including deferred maintenance, functional deficiencies, code compliance, capital renewal, hazardous materials and technology categories.

Table 1: System by Priority

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	-	-	\$236,829	\$1,199,257	\$394,665	\$1,830,751	26.33 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$25,496	-	-	-	\$25,496	0.37 %
Interior	-	-	\$543,752	\$15,669	\$22,890	\$582,311	8.37 %
Mechanical	-	\$356,022	\$23,411	\$684,268	-	\$1,063,701	15.30 %
Electrical	\$4,208	-	-	-	\$102,528	\$106,736	1.53 %
Plumbing	-	-	-	\$99,925	\$8,886	\$108,811	1.56 %
Fire and Life Safety	\$33,995	-	-	-	-	\$33,995	0.49 %
Technology	-	-	\$2,183,446	-	-	\$2,183,446	31.40 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$4,533	\$988,585	\$25,496	\$1,018,613	14.65 %
Total	\$38,203	\$381,518	\$2,991,971	\$2,987,703	\$554,464	\$6,953,859	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Technology	-	\$2,183,446
Site	-	\$1,830,751
Mechanical	-	\$1,063,701

The chart below represents the building systems and associated deficiency costs.

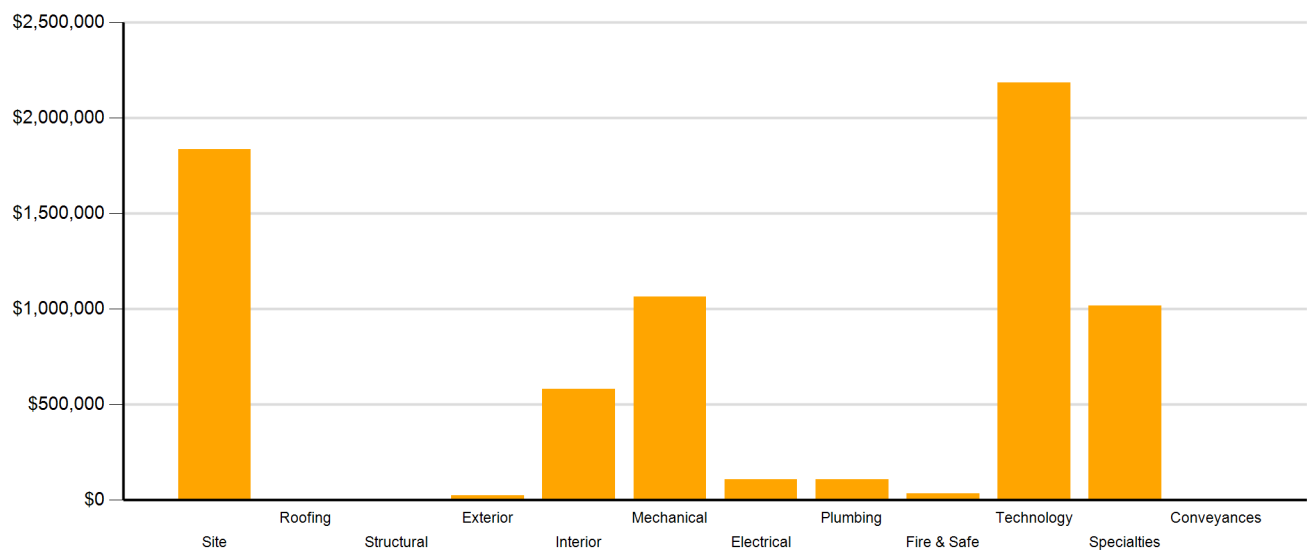


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

- **Acoustics** deficiencies relate to room acoustics, sound insulation, and mechanical systems and vibration control modeled after ANSI/ASA Standard S12.60-2010 and ASHRAE Handbook, Chapter 47 on Sound and Vibration Control.
- **Barrier to Accessibility** deficiencies relate to the Americans with Disabilities Act and the Rhode Island Governors Commission on Disability. Additional items related to accessibility may be included other categories.
- **Capital Renewal** items have reached or exceeded serviceable life and require replacement. These are current and do not include life cycle capital renewal forecasts. Also included are deficiencies correcting planned work postponed beyond its regular life expectancy.
- **Code Compliance** deficiencies related to current codes. Many may fall under grandfather clauses, which allow buildings to continue operating under codes effective at the time of construction. However, there are instances where the level of renovation requires full compliance which are reflected in the master plan.
- **Educational Adequacy** deficiencies identify where facilities do not align with the Basic Education Program and the RIDE School Construction Regulations.
- **Functional Deficiencies** are deficiencies for components or systems that have failed before the end of expected life or are not the right application, size, or design.
- **Hazardous Materials** include deficiencies for building systems or components containing potentially hazardous material. The team focused on identifying asbestos containing building materials (ACBMs), lead based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. With other scopes of work there may be other costs associated with hazardous materials.
- **Technology** deficiencies relate to network architecture, technology infrastructure, classroom systems, and support. Examples of technology deficiencies include: security cameras, secure electronic access, telephone handsets, and dedicated air conditioning for telecommunication rooms.
- **Traffic** deficiencies relate to vehicle or pedestrian traffic, such as bus loops, crosswalks, and pavement markings.



The following chart and table represent the deficiency category by priority. This listing includes current deficiencies for all building systems.

Table 2: Deficiency Category by Priority

Category	Priority					Total
	1	2	3	4	5	
Acoustics	-	-	\$262,042	-	-	\$262,042
Barrier to Accessibility	-	\$25,496	-	-	-	\$25,496
Capital Renewal	-	\$356,022	\$305,121	\$2,943,706	-	\$3,604,849
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	\$38,203	-	\$100,851	\$43,998	\$554,464	\$737,516
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	-	-	\$0
Technology	-	-	\$2,087,128	-	-	\$2,087,128
Traffic	-	-	\$236,829	-	-	\$236,829
Total	\$38,203	\$381,518	\$2,991,971	\$2,987,703	\$554,464	\$6,953,859

*Displayed totals may not sum exactly due to mathematical rounding

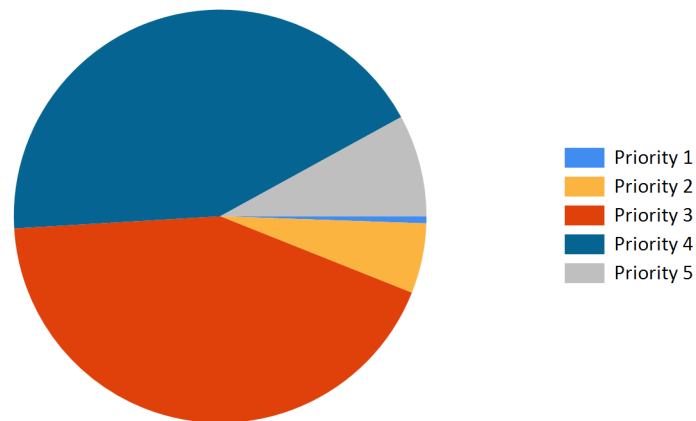


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If a need for immediate replacement was identified, a deficiency was created with the estimated repair costs. The identified deficiency contributes to the facility's total current repair costs.

Capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a 5-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following chart shows all current deficiencies and the subsequent 5-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3: Capital Renewal Forecast

System	Current Deficiencies	Life Cycle Capital Renewal Projections					LC Yr. 1-5 Total	Total 5-Year Need
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021		
Site	\$1,830,751	\$0	\$0	\$0	\$0	\$154,697	\$154,697	\$1,985,448
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$25,496	\$0	\$0	\$0	\$0	\$0	\$0	\$25,496
Interior	\$582,311	\$0	\$0	\$0	\$790,899	\$0	\$790,899	\$1,373,210
Mechanical	\$1,063,701	\$0	\$0	\$0	\$1,608,211	\$218,141	\$1,826,352	\$2,890,053
Electrical	\$106,736	\$0	\$0	\$0	\$62,461	\$1,153,832	\$1,216,293	\$1,323,029
Plumbing	\$108,811	\$0	\$0	\$0	\$59,019	\$17,630	\$76,649	\$185,460
Fire and Life Safety	\$33,995	\$0	\$0	\$0	\$0	\$0	\$0	\$33,995
Technology	\$2,183,446	\$0	\$0	\$0	\$0	\$0	\$0	\$2,183,446
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$1,018,613	\$0	\$0	\$0	\$0	\$0	\$0	\$1,018,613
Total	\$6,953,859	\$0	\$0	\$0	\$2,520,590	\$1,544,300	\$4,064,890	\$11,018,749

*Displayed totals may not sum exactly due to mathematical rounding

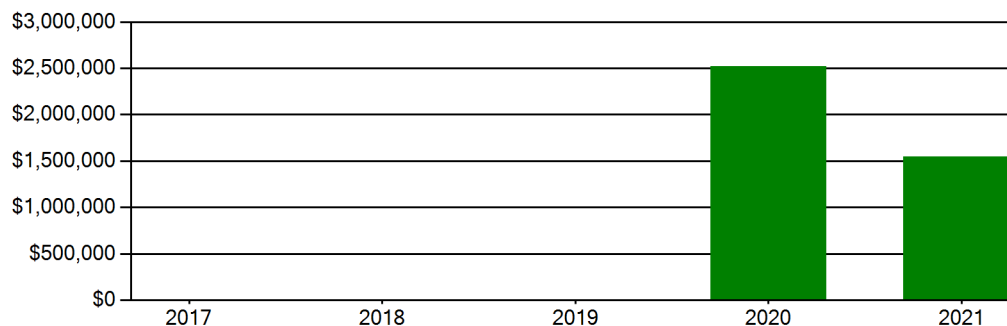
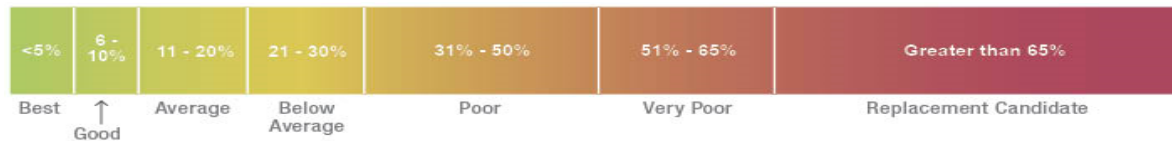


Figure 4: Life Cycle Capital Renewal Forecast



Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building’s health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of schools. The FCI is derived by dividing the total repair cost, including educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair schools with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making school facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today’s estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is \$41,580,000. For planning purposes, the total 5-year need at the Burrillville Middle School is \$11,027,735 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Burrillville Middle School facility has a 5-year FCI of 26.50%.

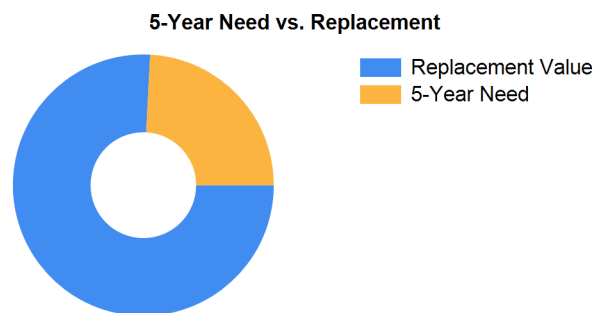


Figure 5: 5-Year FCI

It is important to reiterate that this FCI replacement threshold is not conclusive, but is intended to initiate planning discussion in which other relevant issues with regard to a facility’s disposition must be incorporated. This merely suggests where conversations regarding replacement might occur.



Rhode Island Aspirational Capacity

The capacity of a school reflects how many students the school's physical facility can effectively serve. There are various methodologies that exist to calculate capacity. It is not uncommon to review an existing building only to find that the capacity that had once been assigned is greater than what can be reasonably accommodated today. This is primarily because of a change in how programs are delivered.

The Rhode Island Aspirational Capacity is based on the Rhode Island School Construction Regulations (SCRs) and is an aspirational goal of space use. The capacity for each individual public school in the state of Rhode Island was designed to conform to Section 1.06-2 Space Allowance Guidelines of the Rhode Island Department of Education (RIDE) SCRs. These regulations outline the allowed gross square feet (GSF) per student at each school type (ES, MS, HS) by utilizing a sliding scale based on projected enrollment. The resulting capacities reflect how school capacities align to the SCRs for new construction. The existing enrollment was multiplied by the GSF per student for the appropriate bracket. For the purposes of this analysis, Pre-K centers were rolled into the elementary totals, and K-8 facilities were counted as middle schools.

The most consistent and equitable way a state can determine school capacities across a variety of districts and educational program offerings is to use square-foot-per-student standards. In contrast, in the 2013 Public Schoolhouse Assessment Report, LEAs self-reported capacities for their elementary, middle and high schools. Districts typically report "functional capacity," which is defined as the number of students each classroom can accommodate. Functional capacity counts how many students can occupy a space, not how much room students and teachers have within that space. For example, a 650-square-foot classroom and a 950-square-foot classroom can both have a reported capacity of 25 students, but the actual teaching and learning space per student varies greatly.

The variation in square feet per student impacts the kinds of teaching practices possible in each space. The lowest allocation of space per student restricts group and project-based learning strategies and requires teachers to teach in more traditional, lecture-style formats, due to a lack of space. Furthermore, the number of students that can be accommodated in a classroom does not account for access to sufficient common spaces such as libraries, cafeterias, and gymnasiums. When cafeterias are undersized relative to the population, schools must host four or more lunch periods a day, resulting in some students eating lunch mid-morning and some mid-afternoon. Similarly, undersized libraries and gymnasiums create scheduling headaches for schools and restrict student access. Finally, a classroom count-only approach to school capacity does not consider the inherent scheduling challenges schools face.

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 700 students.

Facility New Construction

As part of the Educational Program Space Assessment, select core spaces were compared to the RI School Construction Regulations. If it was determined that a facility was in need of square footage related to a cafeteria or library/media center, a cost for additional space was estimated. This cost is not included in the total 5-year need or the 5-year FCI calculation.

The New Construction cost to bring the Burrillville Middle School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$2,223,580.



Summary of Findings

The Burrillville Middle School comprises 126,000 square feet and was constructed in 1989. Current deficiencies at this school total \$6,962,845. Five year capital renewal costs total \$4,064,890. The total identified need for the Burrillville Middle School (current deficiencies and 5-year capital renewal costs) is \$11,027,735. The 5-year FCI is 26.50%.

Table 4: Facility Condition by Building

	Gross Sq Ft	Year Built	Current Deficiencies	LC Yr. 1-5 Total	Total 5 Yr Need (Yr 1-5 + Current Defs)	5-Year FCI
Burrillville Middle School Totals	126,000	1989	\$6,962,845	\$4,064,890	\$11,027,735	26.50%

**Displayed totals may not sum exactly due to mathematical rounding*

The following pages provide a listing of all current deficiencies and 5-year life cycle need and the associated costs, followed by photos taken during the assessment.

Cost Estimating

Cost estimates are derived from local cost estimating expertise and enhanced by industry best practices, historical cost data, and relevance to the Rhode Island region. Costs have been developed from current market rates as of the 2nd quarter in 2016. All costs are based on a replace-in-kind approach, unless the item was not in compliance with national or state regulations or standards.

For planning and budgeting purposes, facility assessments customarily add a soft cost multiplier onto deficiency repair cost estimates. This soft cost multiplier accounts for costs that are typically incurred when contracting for renovation and construction services. Soft costs typically include construction cost factors, such as contractor overhead and profit, as well as labor and material inflation, professional fees, and administrative costs. Based on the Rhode Island School Construction Regulations, a soft cost multiplier of 20% is included on all cost estimates. Other project allowances are included in the cost estimates based on school attributes such as age, location, and historic designation. All stated costs in the assessment report will include soft costs for planning and budgeting purposes. These are estimates, and costs will vary at the time of construction.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.



Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
New Sidewalk Is Required Note: Install sidewalk from current end point to crosswalk along Broncos Hwy (6' wide)	Traffic	450	SF	3	\$10,198	9319
Traffic Signage Is Required Note: Add flashing beacons to school zone speed limit signs and warning sign for crosswalk	Traffic	6	Ea.	3	\$226,631	9318
Asphalt Paving Requires Replacement	Capital Renewal	20	CAR	4	\$65,725	8828
Backstops Require Replacement Note: Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28414
Concrete Paving Requires Replacement Note: Repave and restripe parking lot pavement.	Capital Renewal	209	CAR	4	\$1,105,203	8829
Exterior Basketball Goals are Required Note: Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28693
PE / Recess Playfield is Missing and is Needed Note: PE / Recess Playfield is Missing and is Needed	Educational Adequacy	1	Ea.	5	\$64,020	54861
School lacks a competition track. Note: School lacks a competition track.	Educational Adequacy	1	Ea.	5	\$324,837	28227
Sub Total for System		8	items		\$1,830,751	
Sub Total for School and Site Level		8	items		\$1,830,751	

Building: 01 - Main Building

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement Note: Non-ADA.	Barrier to Accessibility	4	Door	2	\$25,496	8830
Sub Total for System		1	items		\$25,496	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	20	Ea.	3	\$174,695	19683
Classroom Interior Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	10	Ea.	3	\$87,347	19684
Interior CMU Walls Require Repair Note: CMU is cracked throughout.	Capital Renewal	6,300	SF	3	\$227,254	8832
The Carpet Flooring Requires Replacement	Capital Renewal	2,520	SF	3	\$54,456	9262
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	414	SF	4	\$15,669	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	4	Ea.	5	\$9,065	Rollup
Room lacks appropriate sound control.	Educational Adequacy	400	SF	5	\$13,824	Rollup
Sub Total for System		7	items		\$582,311	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Steam Condensate Receiver Requires Replacement Note: Condensate receiver showing signs of leakage and corrosion.	Capital Renewal	1	Ea.	2	\$349,389	8837
The Window AC Unit Component Requires Replacement	Capital Renewal	2	Ea.	2	\$6,633	9286
Air Compressor Is Inoperable And Requires Replacement	Capital Renewal	2	Ea.	3	\$23,411	8838
Exhaust Fan Ventilation Requires Replacement Note: Fans are vibrating and fan wheels are out of balance. Location: Above girls locker room area, restrooms adjacent to the gymnasium and technical arts room.	Capital Renewal	3	Ea.	4	\$7,979	8835



Facility Condition Assessment

Burrillville - Burrillville Middle School

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	100,800	SF	4	\$676,289	8839
Note: The pneumatic system is unreliable and requires constant calibration.						
Sub Total for System		5	items		\$1,063,701	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	3	Ea.	1	\$4,208	Rollup
Room Has Insufficient Electrical Outlets	Educational Adequacy	208	Ea.	5	\$102,528	Rollup
Sub Total for System		2	items		\$106,736	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Classroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	37	Ea.	4	\$99,925	9266
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	\$4,382	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	3	Ea.	5	\$4,504	Rollup
Sub Total for System		3	items		\$108,811	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	3	Ea.	1	\$33,995	Rollup
Sub Total for System		1	items		\$33,995	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	17	Ea.	3	\$96,318	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	\$94,430	10622
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,443	10614
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	48	Ea.	3	\$951,849	10617
Technology: Instructional spaces do not have local sound reinforcement.	Technology	48	Ea.	3	\$226,631	10615
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,288	10600
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,288	10604
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,288	10608
Technology: Intermediate Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$44,948	10602
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,394	10598
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,394	10606
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,610	10612
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$49,859	10611
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	150	Ea.	3	\$63,740	10601
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	88	Ea.	3	\$37,394	10605



Facility Condition Assessment

Burrillville - Burrillville Middle School

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	91	Ea.	3	\$38,669	10609
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	144	Ea.	3	\$61,190	10621
Technology: Network system inadequate and/or near end of useful life	Technology	4	Ea.	3	\$30,217	10619
Technology: Network system inadequate and/or near end of useful life	Technology	23	Ea.	3	\$108,594	10620
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$53,825	10616
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	10	Room	3	\$188,859	10618
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	10599
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	10603
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	10607
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	10613
Sub Total for System		25	items		\$2,183,446	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	1	Ea.	3	\$4,533	Rollup
The Metal Student Lockers Require Replacement Note: Replace all lockers.	Capital Renewal	2,023	Ea.	4	\$988,585	8834
Room lacks an appropriate refrigerator.	Educational Adequacy	3	Ea.	5	\$25,496	Rollup
Sub Total for System		3	items		\$1,018,613	
Sub Total for Building 01 - Main Building		47	items		\$5,123,109	
Total for Campus		55	items		\$6,953,859	



Burrillville Middle School - Life Cycle Summary Yrs 1-5

Site Level Life Cycle Items

Site

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Parking Lot Lighting	Pole Lighting	20	Ea.	\$154,697	5
Sub Total for System		1	items	\$154,697	
Sub Total for Building -		1	items	\$154,697	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	119,700	SF	\$790,899	4
Sub Total for System		1	items	\$790,899	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Heating System Supplementary Components	Controls - Electronic (Bldg.SF)	25,200	SF	\$170,219	4
Decentralized Cooling	Ductless Split System (3 Ton)	1	Ea.	\$7,782	4
Other HVAC Distribution Systems	VFD (15 HP)	1	Ea.	\$10,410	4
Air Distribution	Make-up Air Unit	1	Ea.	\$15,899	4
Decentralized Heating Equipment	Unit Heater Steam/HW (250 MBH)	25	Ea.	\$84,660	4
Decentralized Heating Equipment	Unit Heater Steam/HW (50 MBH)	25	Ea.	\$73,964	4
Decentralized Cooling	Package DX Unit (20 Ton)	1	Ea.	\$39,439	4
Decentralized Cooling	Fan Coil - D/X only (5 Ton)	2	Ea.	\$7,864	4
Decentralized Heating Equipment	Unit Heater Steam/HW (50 MBH)	12	Ea.	\$35,503	4
	Note: Five feet long				
Decentralized Heating Equipment	Unit Heater Steam/HW (85 MBH)	35	Ea.	\$67,614	4
	Note: Six feet long				
Decentralized Heating Equipment	Unit Heater Steam/HW (36 MBH)	9	Ea.	\$14,819	4
Decentralized Cooling	Fan Coil - D/X Only (3 Ton)	1	Ea.	\$5,704	4
Facility Hydronic Distribution	Pump - 5HP	2	Ea.	\$19,060	4
	Note: 3 HP				
Heat Generation	Steam Condensate Reciever, Tank and Pump	3	Ea.	\$1,055,274	4
Exhaust Air	Roof Exhaust Fan	34	Ea.	\$176,940	5
Decentralized Cooling	Condensing Unit (5 Ton)	2	Ea.	\$22,714	5
Decentralized Cooling	Condensing Unit (3 Ton)	1	Ea.	\$7,130	5
Decentralized Cooling	Condensing Unit (5 Ton)	1	Ea.	\$11,357	5
	Note: 4 ton				
Sub Total for System		18	items	\$1,826,352	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)	40	Ea.	\$59,704	4
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	2	Ea.	\$2,757	4
Electrical Service	Switchgear - Main Dist Panel (1200 Amps)	2	Ea.	\$138,117	5
Electrical Service	Switchgear - Main Dist Panel (800 Amps)	2	Ea.	\$46,964	5
Packaged Generator Assemblies	Emergency Generator (100 KW)	1	Ea.	\$104,577	5
Electrical Service	Switchgear - Main Dist Panel (4000 Amps)	1	Ea.	\$115,500	5
Lighting Fixtures	Light Fixtures (Bldg SF)	126,000	SF	\$748,674	5
Sub Total for System		7	items	\$1,216,293	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Refrigerated Drinking Fountain	8	Ea.	\$59,019	4
Domestic Water Equipment	Water Heater - Gas - 75 Gallons	1	Ea.	\$5,845	5
	Note: Oil/gas fired 300 MBH.				
Compressed-Air Systems	Air Compressor (5 hp)	1	Ea.	\$11,785	5
Sub Total for System		3	items	\$76,649	
Sub Total for Building 01 - Main Building		29	items	\$3,910,193	
Total for: Burrillville Middle School		30	items	\$4,064,890	



Supporting Photos



Parking Lot Pavement



Damaged Pavement



Site Aerial



Marquee



Facility Condition Assessment

Burrillville - Burrillville Middle School



Side Elevation



Front Elevation



Cracked CMU



Cracked CMU



Roof



Roof



Facility Condition Assessment

Burrillville - Burrillville Middle School



Lockers



Chorus Room



Theatre



Classroom



Cafeteria



Science Lab



Facility Condition Assessment

Burrillville - Burrillville Middle School



Restroom Wall Panels And Doors



Gymnasium



Exhaust Fans



Exhaust Fans



Leakage And Corrosion At Steam Condensate Receiver



Leakage And Corrosion At Steam Condensate Receiver



Facility Condition Assessment

Burrillville - Burrillville Middle School



Dual Air Compressor



Air Dryer



Pneumatic Controls



Electrical Panels



Heating and Ventilating Unit



Boilers



Facility Condition Assessment

Burrillville - Burrillville Middle School



Fuel Tanks



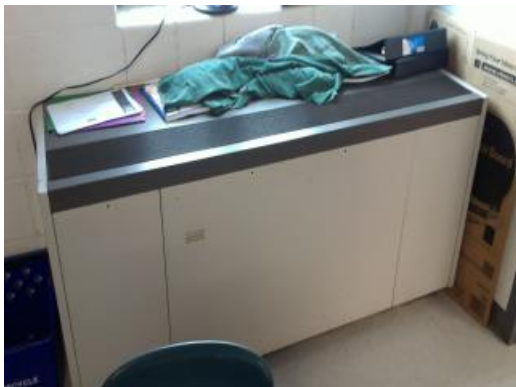
Transformer



LED Lamps



Generator



Cabinet Heater



Pneumatic Controls



Facility Condition Assessment

Burrillville - Burrillville Middle School



Fuel Oil Pumps



Facility Condition Assessment

Burrillville - Steere Farm Elementary School

June 2017

915 Steere Farm Road, Pascoag, RI 02859





Introduction

Steere Farm Elementary School, located at 915 Steere Farm Road in Pascoag, Rhode Island, was built in 1995. It comprises 68,522 gross square feet. Each school across the district was visited three times during the Facility Condition Assessments by three teams of specialists in the spring/summer of 2016.

Steere Farm Elementary School serves grades 2 - 5, has 36 instructional spaces, and has an enrollment of 384. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Steere Farm Elementary School is 489 with a resulting utilization of 79%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For Steere Farm Elementary School the 5-year need is \$5,587,146. The findings contained within this report resulted from an assessment of building systems performed by building professionals experienced in disciplines including: architecture, mechanical, plumbing, electrical, acoustics, hazardous materials, and technology infrastructure.



Figure 1: Aerial view of Steere Farm Elementary School



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates ages of a building's systems to forecast system replacement as they reach the end of serviceable life. An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

Discipline Specialists

All assessment teams produced current deficiencies associated with each school. The assessment for the school facilities at the Rhode Island Department of Education included several specialties:

Facility Condition Assessment: Architectural, mechanical, and electrical engineering professionals observed conditions via a visual observation that did not include intrusive measures, destructive investigations, or testing. Additionally, the assessment incorporated input provided by district facilities and maintenance staff where applicable. The assessment team recorded existing conditions, identified problems and deficiencies, documented corrective action and quantities, and identified the priority of the repair in accordance with parameters defined during the planning phase. The team took digital photos at each school to better identify significant deficiencies.

Technology: Technology specialists visited RIDE facilities and met with technology directors to observe and assess each facility's technology infrastructure. The assessment included network architecture, major infrastructure components, classroom instructional systems, necessary building space and support for technology. The technology assessment took into account the desired technology outcome and best practices and processes to ensure results can be attained effectively.

Hazardous Materials: Schools constructed prior to 1990 were assessed by specialists to identify the presence of hazardous materials. The team focused on identifying asbestos containing building materials (ACBMs), lead-based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. If sampling and analysis was required, these activities were recommended but not included in the scope of work.

Traffic: A traffic specialist performed an in-office review of aerial imagery of the traffic infrastructure around the facilities in accordance with section 1.05-7 in the Rhode Island School Construction Regulations and reviewed data collected on site during the facility condition assessment. Based on this information, deficiencies and corrective actions were identified. High problem areas were identified for consideration of more detailed site-specific study and analysis in the future.

Acoustics: Specialists assessed each school's acoustics, including architectural acoustics, mechanical system noise and vibration, and environmental noise. The assessment team evaluated room acoustics with particular attention to the intelligibility of speech in learning spaces, interior and exterior sound isolation, and mechanical system noise and vibration control.

Educational Program Space Assessment: Teams evaluated schools to ensure that that all spaces adequately support the districts educational program. Standards are established for each classroom type or instructional space. Each space is evaluated to determine if it meets those standards and a listing of alterations that should be made to make the space a better environment for teaching and learning was created.



System Summaries

The following tables summarize major building systems at the Steere Farm Elementary School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Roadway Pavement
	Concrete Parking Lot Pavement
	Concrete Pedestrian Pavement

Building Envelope

The exterior systems for the building(s) at this campus includes:

01 - Main Building:	Brick Exterior Wall
	Stucco Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Storefront Entrance Doors
	Overhead Exterior Utility Doors

The roofing for the building(s) at this campus consists of:

01 - Main Building:	EPDM Roofing
---------------------	--------------

Interior

The interior systems for the building(s) at this campus include:

01 - Main Building:	Steel Interior Doors
	Wood Interior Doors
	Interior Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	Ceramic Tile Wall
	CMU Wall
	Brick/Stone Veneer
	Interior Wall Painting
	Concrete Flooring
	Quarry Tile Flooring
	Ceramic Tile Flooring
	Vinyl Composition Tile Flooring
	Carpet
	Athletic/Sport Flooring



Mechanical

The mechanical systems for the building(s) at this campus include:

01 - Main Building:	3,264 MBH Cast Iron Water Boiler
	Fin Tube Water Radiant Heater
	200 MBH Gas Unit Heater
	12 MBH Steam Unit Heater
	Electronic Heating System Controls
	2 Ton Ductless Split System
	3 Ton Ductless Split System
	10 Ton D/X Fan Coil
	7.5 Ton Condensing Unit
	2-Pipe Hot Water Hydronic Distribution System
	10 HP Pump
	15,000 CFM Interior AHU
	30,000 CFM Outdoor AHU
	Roof Exhaust Fan
	Fire Sprinkler System

Plumbing

The plumbing systems for the building(s) at this campus include:

01 - Main Building:	2" Backflow Preventers
	100 Gallon Gas Water Heater
	Domestic Water Piping System
	Classroom Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Air Compressor (5 hp)
	5,000 Gallon Above Ground Fuel Oil Storage Tank

Electrical

The electrical systems for the building(s) at this campus include:

01 - Main Building:	150 kW Emergency Generator
	Automatic Transfer Switch
	1,500 KVA Transformer
	Panelboard - 120/208 125A
	Panelboard - 120/208 225A
	1600 Amp Distribution Panel
	400 Amp Distribution Panel



Facility Condition Assessment

Burrillville - Steere Farm Elementary School

01 - Main Building:	600 Amp Distribution Panel
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures



Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the school's ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 - Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

Priority 3 - Short-Term Conditions: Deficiencies that are necessary to the school's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 - Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 - Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.



Facility Condition Assessment

Burrillville - Steere Farm Elementary School

The following chart summarizes this site's current deficiencies by building system and priority. The listing details current deficiencies including deferred maintenance, functional deficiencies, code compliance, capital renewal, hazardous materials and technology categories.

Table 1: System by Priority

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	-	-	\$151,087	\$622,859	\$5,807	\$779,753	18.21 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	-	-	-	-	\$0	0.00 %
Interior	-	-	\$513,336	\$750,251	\$10,255	\$1,273,841	29.75 %
Mechanical	-	\$359,580	\$185	\$409,809	-	\$769,574	17.97 %
Electrical	-	\$122,758	-	-	\$19,717	\$142,475	3.33 %
Plumbing	-	-	\$5,286	-	\$20,142	\$25,428	0.59 %
Fire and Life Safety	-	-	-	-	-	\$0	0.00 %
Technology	-	-	\$1,277,574	-	-	\$1,277,574	29.83 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$13,598	-	-	\$13,598	0.32 %
Total	\$0	\$482,338	\$1,961,066	\$1,782,919	\$55,921	\$4,282,244	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Technology	-	\$1,277,574
Interior	-	\$1,273,841
Site	-	\$779,753

The chart below represents the building systems and associated deficiency costs.

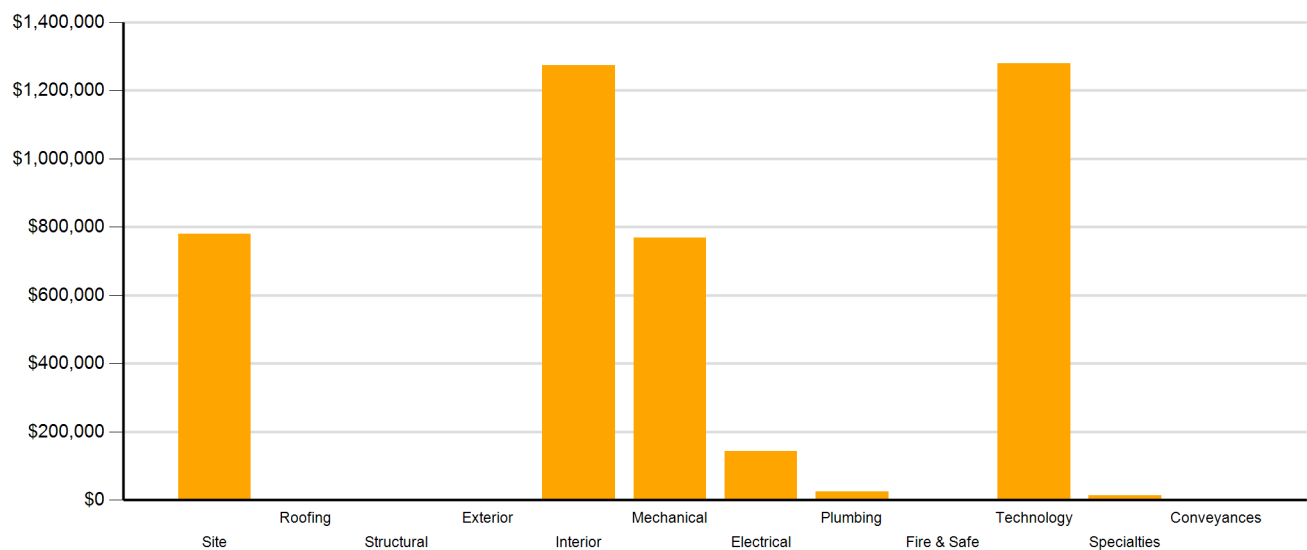


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

- **Acoustics** deficiencies relate to room acoustics, sound insulation, and mechanical systems and vibration control modeled after ANSI/ASA Standard S12.60-2010 and ASHRAE Handbook, Chapter 47 on Sound and Vibration Control.
- **Barrier to Accessibility** deficiencies relate to the Americans with Disabilities Act and the Rhode Island Governors Commission on Disability. Additional items related to accessibility may be included other categories.
- **Capital Renewal** items have reached or exceeded serviceable life and require replacement. These are current and do not include life cycle capital renewal forecasts. Also included are deficiencies correcting planned work postponed beyond its regular life expectancy.
- **Code Compliance** deficiencies related to current codes. Many may fall under grandfather clauses, which allow buildings to continue operating under codes effective at the time of construction. However, there are instances where the level of renovation requires full compliance which are reflected in the master plan.
- **Educational Adequacy** deficiencies identify where facilities do not align with the Basic Education Program and the RIDE School Construction Regulations.
- **Functional Deficiencies** are deficiencies for components or systems that have failed before the end of expected life or are not the right application, size, or design.
- **Hazardous Materials** include deficiencies for building systems or components containing potentially hazardous material. The team focused on identifying asbestos containing building materials (ACBMs), lead based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. With other scopes of work there may be other costs associated with hazardous materials.
- **Technology** deficiencies relate to network architecture, technology infrastructure, classroom systems, and support. Examples of technology deficiencies include: security cameras, secure electronic access, telephone handsets, and dedicated air conditioning for telecommunication rooms.
- **Traffic** deficiencies relate to vehicle or pedestrian traffic, such as bus loops, crosswalks, and pavement markings.



The following chart and table represent the deficiency category by priority. This listing includes current deficiencies for all building systems.

Table 2: Deficiency Category by Priority

Category	Priority					Total
	1	2	3	4	5	
Acoustics	-	-	\$139,756	\$33,995	-	\$173,750
Barrier to Accessibility	-	-	\$71,672	-	-	\$71,672
Capital Renewal	-	\$482,338	\$307,379	\$1,115,336	-	\$1,905,054
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	-	-	\$160,908	\$30,183	\$55,921	\$247,012
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$603,405	-	\$603,405
Technology	-	-	\$1,130,264	-	-	\$1,130,264
Traffic	-	-	\$151,087	-	-	\$151,087
Total	\$0	\$482,338	\$1,961,066	\$1,782,919	\$55,921	\$4,282,244

*Displayed totals may not sum exactly due to mathematical rounding

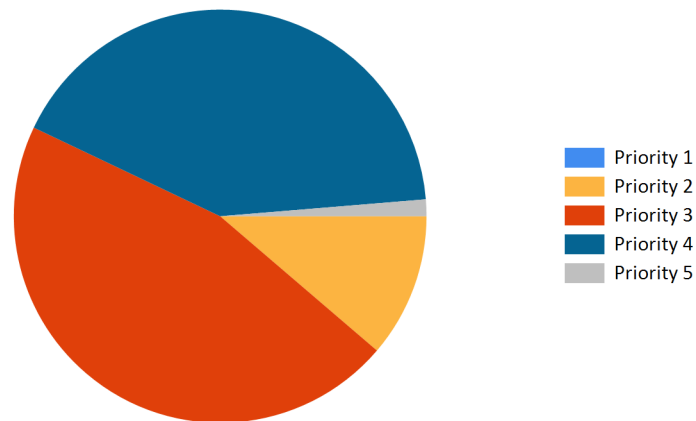


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If a need for immediate replacement was identified, a deficiency was created with the estimated repair costs. The identified deficiency contributes to the facility's total current repair costs.

Capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a 5-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following chart shows all current deficiencies and the subsequent 5-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3: Capital Renewal Forecast

System	Current Deficiencies	Life Cycle Capital Renewal Projections					LC Yr. 1-5 Total	Total 5-Year Need
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021		
Site	\$779,753	\$0	\$0	\$0	\$0	\$0	\$0	\$779,754
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interior	\$1,273,841	\$0	\$0	\$0	\$44,709	\$398,410	\$443,119	\$1,716,960
Mechanical	\$769,574	\$0	\$0	\$0	\$72,985	\$51,021	\$124,006	\$893,580
Electrical	\$142,475	\$0	\$0	\$0	\$0	\$477,880	\$477,880	\$620,355
Plumbing	\$25,428	\$0	\$0	\$0	\$56,049	\$0	\$56,049	\$81,477
Fire and Life Safety	\$0	\$0	\$0	\$200,838	\$0	\$0	\$200,838	\$200,838
Technology	\$1,277,574	\$0	\$0	\$0	\$0	\$0	\$0	\$1,277,574
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$13,598	\$0	\$0	\$0	\$0	\$0	\$0	\$13,598
Total	\$4,282,244	\$0	\$0	\$200,838	\$173,743	\$927,311	\$1,301,892	\$5,584,136

*Displayed totals may not sum exactly due to mathematical rounding

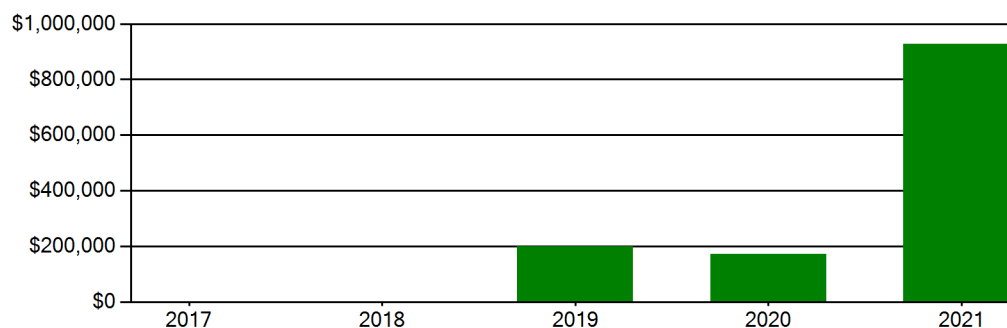
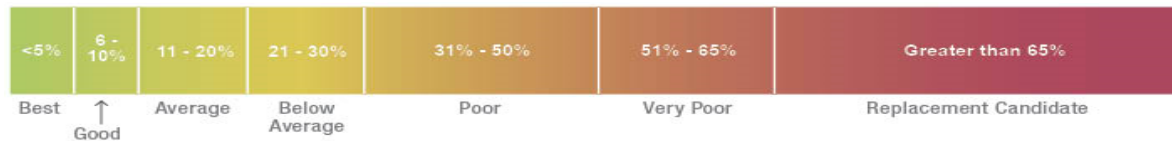


Figure 4: Life Cycle Capital Renewal Forecast



Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building’s health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of schools. The FCI is derived by dividing the total repair cost, including educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair schools with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making school facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today’s estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is \$23,982,700. For planning purposes, the total 5-year need at the Steere Farm Elementary School is \$5,587,146 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Steere Farm Elementary School facility has a 5-year FCI of 23.28%.

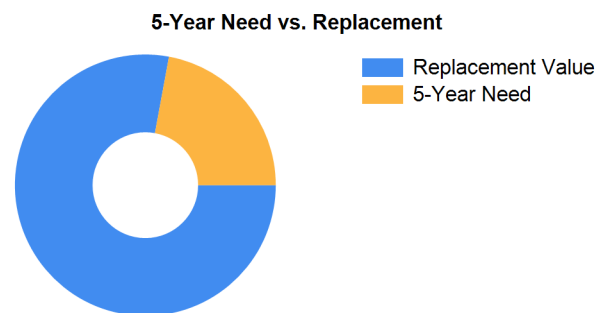


Figure 5: 5-Year FCI

It is important to reiterate that this FCI replacement threshold is not conclusive, but is intended to initiate planning discussion in which other relevant issues with regard to a facility’s disposition must be incorporated. This merely suggests where conversations regarding replacement might occur.



Rhode Island Aspirational Capacity

The capacity of a school reflects how many students the school's physical facility can effectively serve. There are various methodologies that exist to calculate capacity. It is not uncommon to review an existing building only to find that the capacity that had once been assigned is greater than what can be reasonably accommodated today. This is primarily because of a change in how programs are delivered.

The Rhode Island Aspirational Capacity is based on the Rhode Island School Construction Regulations (SCRs) and is an aspirational goal of space use. The capacity for each individual public school in the state of Rhode Island was designed to conform to Section 1.06-2 Space Allowance Guidelines of the Rhode Island Department of Education (RIDE) SCRs. These regulations outline the allowed gross square feet (GSF) per student at each school type (ES, MS, HS) by utilizing a sliding scale based on projected enrollment. The resulting capacities reflect how school capacities align to the SCRs for new construction. The existing enrollment was multiplied by the GSF per student for the appropriate bracket. For the purposes of this analysis, Pre-K centers were rolled into the elementary totals, and K-8 facilities were counted as middle schools.

The most consistent and equitable way a state can determine school capacities across a variety of districts and educational program offerings is to use square-foot-per-student standards. In contrast, in the 2013 Public Schoolhouse Assessment Report, LEAs self-reported capacities for their elementary, middle and high schools. Districts typically report "functional capacity," which is defined as the number of students each classroom can accommodate. Functional capacity counts how many students can occupy a space, not how much room students and teachers have within that space. For example, a 650-square-foot classroom and a 950-square-foot classroom can both have a reported capacity of 25 students, but the actual teaching and learning space per student varies greatly.

The variation in square feet per student impacts the kinds of teaching practices possible in each space. The lowest allocation of space per student restricts group and project-based learning strategies and requires teachers to teach in more traditional, lecture-style formats, due to a lack of space. Furthermore, the number of students that can be accommodated in a classroom does not account for access to sufficient common spaces such as libraries, cafeterias, and gymnasiums. When cafeterias are undersized relative to the population, schools must host four or more lunch periods a day, resulting in some students eating lunch mid-morning and some mid-afternoon. Similarly, undersized libraries and gymnasiums create scheduling headaches for schools and restrict student access. Finally, a classroom count-only approach to school capacity does not consider the inherent scheduling challenges schools face.

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 408 students.

Facility New Construction

As part of the Educational Program Space Assessment, select core spaces were compared to the RI School Construction Regulations. If it was determined that a facility was in need of square footage related to a cafeteria or library/media center, a cost for additional space was estimated. This cost is not included in the total 5-year need or the 5-year FCI calculation.

The New Construction cost to bring the Steere Farm Elementary School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$0.



Summary of Findings

The Steere Farm Elementary School comprises 68,522 square feet and was constructed in 1995. Current deficiencies at this school total \$4,285,254. Five year capital renewal costs total \$1,301,892. The total identified need for the Steere Farm Elementary School (current deficiencies and 5-year capital renewal costs) is \$5,587,146. The 5-year FCI is 23.28%.

Table 4: Facility Condition by Building

	Gross Sq Ft	Year Built	Current Deficiencies	LC Yr. 1-5 Total	Total 5 Yr Need (Yr 1-5 + Current Defs)	5-Year FCI
Steere Farm Elementary School Totals	68,522	1995	\$4,285,254	\$1,301,892	\$5,587,146	23.28%

**Displayed totals may not sum exactly due to mathematical rounding*

The following pages provide a listing of all current deficiencies and 5-year life cycle need and the associated costs, followed by photos taken during the assessment.

Cost Estimating

Cost estimates are derived from local cost estimating expertise and enhanced by industry best practices, historical cost data, and relevance to the Rhode Island region. Costs have been developed from current market rates as of the 2nd quarter in 2016. All costs are based on a replace-in-kind approach, unless the item was not in compliance with national or state regulations or standards.

For planning and budgeting purposes, facility assessments customarily add a soft cost multiplier onto deficiency repair cost estimates. This soft cost multiplier accounts for costs that are typically incurred when contracting for renovation and construction services. Soft costs typically include construction cost factors, such as contractor overhead and profit, as well as labor and material inflation, professional fees, and administrative costs. Based on the Rhode Island School Construction Regulations, a soft cost multiplier of 20% is included on all cost estimates. Other project allowances are included in the cost estimates based on school attributes such as age, location, and historic designation. All stated costs in the assessment report will include soft costs for planning and budgeting purposes. These are estimates, and costs will vary at the time of construction.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.



Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Traffic Signage Is Required Note: Add flashing beacons to school zone speed limit signs	Traffic	2	Ea.	3	\$75,544	9295
Traffic Signage Is Required Note: Add school zone warning signs on all approaches	Traffic	2	Ea.	3	\$75,544	9296
Asphalt Paving Requires Replacement	Capital Renewal	20	CAR	4	\$65,725	8710
Backstops Require Replacement Note: Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28415
Concrete Paving Requires Replacement Note: Repave parking.	Capital Renewal	100	CAR	4	\$528,805	8410
Exterior Basketball Goals are Required Note: Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28694
Sub Total for System		6 items			\$779,753	
Sub Total for School and Site Level		6 items			\$779,753	

Building: 01 - Main Building

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	16	Ea.	3	\$139,756	19726
The Acoustical Ceiling Tiles Require Replacement Note: Replace the damaged ACT on the 3rd and 4th floors and in the gym.	Capital Renewal	942	SF	3	\$8,451	8411
The Carpet Flooring Requires Replacement Note: Replace carpet on the 2nd and 3rd floors.	Capital Renewal	2,741	SF	3	\$59,232	8413
The Interior Door Hardware Requires Replacement Note: Replace with ADA appropriate hardware.	Barrier to Accessibility	23	Door	3	\$71,672	8711
The Vinyl Composition Tile Requires Replacement Note: Replace damaged VCT throughout the building on all floors.	Capital Renewal	20,556	SF	3	\$234,225	8414
Interior Ceramic Walls Require Repair Or Replacement Note: Replace damaged ceramic tile on the lower level of the building.	Capital Renewal	3,426	SF	4	\$75,703	8418
Interior Gypsum Board Walls Require Repair Note: Replace gypboard walls throughout the lower level of the school.	Capital Renewal	4,862	SF Wall	4	\$35,295	8412
Paint (probable pre-1978 in base (layers(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	150	Ea.	4	\$42,493	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - linear feet)	Hazardous Material	3,000	LF	4	\$67,989	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - square feet)	Hazardous Material	5,000	SF	4	\$47,215	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	45,000	SF	4	\$424,933	Rollup
Room Is Excessively Reverberant (Install Fiberglass Wall Panel) Note: Gym	Acoustics	600	SF	4	\$33,995	19728
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	49	SF	4	\$1,855	Rollup
Wall/ceiling materials - large areas (> 10 sq. ft.) of damage & area in active use - children	Hazardous Material	1,200	SF	4	\$11,332	Rollup
Wall/ceiling materials -large areas (> 10 sq. ft.) of damage & area in active use-adults only	Hazardous Material	1,000	SF	4	\$9,443	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	3	Ea.	5	\$6,799	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	\$3,456	Rollup
Sub Total for System		17 items			\$1,273,841	



Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	2	Ea.	2	\$359,580	8415
Note: Boilers are approximately 60 years old and are in constant need of repair. Very hard to find parts. Recommend for boilers to be replaced.						
Testing And Balancing Required	Capital Renewal	100	SF	3	\$185	8419
Note: Perform air balance, and determine whether new air outlets would be required to reduce noise levels, air noise is being produced at air outlets. Noise levels are too high for occupancy.						
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	68,522	SF	4	\$409,809	8420
Note: Each classroom is to be provided with a new thermostatic control valve and room thermostat for baseboard heating.						
Sub Total for System		3	items		\$769,574	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Generator Requires Replacement	Capital Renewal	1	Ea.	2	\$122,758	8416
Note: Generator is approximately 60 years old.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	40	Ea.	5	\$19,717	Rollup
Sub Total for System		2	items		\$142,475	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Gas Water Heater Requires Replacement	Capital Renewal	1	Ea.	3	\$5,286	8417
Note:						

Water heater should be replaced with a new condensing water heater. Improve efficiency from 80% to 92%.

Room lacks a drinking fountain.	Educational Adequacy	11	Ea.	5	\$12,049	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	7	Ea.	5	\$8,092	Rollup
Sub Total for System		3	items		\$25,428	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	26	Ea.	3	\$147,310	Rollup
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,443	10572
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	28	Ea.	3	\$555,245	10575
Technology: Instructional spaces do not have local sound reinforcement.	Technology	22	Ea.	3	\$103,872	10573
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,288	10564
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$16,620	10562
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,610	10568
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$49,859	10567
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	48	Ea.	3	\$20,397	10565
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	120	Ea.	3	\$50,992	10569
Technology: Network system inadequate and/or near end of useful life	Technology	3	Ea.	3	\$22,663	10577
Technology: Network system inadequate and/or near end of useful life	Technology	14	Ea.	3	\$66,101	10578
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	68,522	SF	3	\$116,469	10579



Facility Condition Assessment

Burrillville - Steere Farm Elementary School

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$53,825	10574
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	2	Room	3	\$37,772	10576
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	10563
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	10571
Sub Total for System		17	items		\$1,277,574	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	3	Ea.	3	\$13,598	Rollup
Sub Total for System		1	items		\$13,598	
Sub Total for Building 01 - Main Building		43	items		\$3,502,491	
Total for Campus		49	items		\$4,282,244	



Steere Farm Elementary School - Life Cycle Summary Yrs 1-5

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Carpeting	Carpet	2,055	SF	\$44,709	4
Wall Painting and Coating	Painting/Staining (Bldg SF)	60,298	SF	\$398,410	5
Sub Total for System		2	items	\$443,119	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Ductless Split System (2 Ton)	1	Ea.	\$6,832	4
Decentralized Cooling	Ductless Split System (3 Ton)	2	Ea.	\$15,565	4
Decentralized Cooling	Fan Coil - D/X only 10 Ton	1	Ea.	\$7,687	4
Decentralized Heating Equipment	Unit Heater Steam/HW (12 MBH)	3	Ea.	\$7,164	4
Decentralized Heating Equipment	Unit Heater Gas (200 MBH)	5	Ea.	\$35,737	4
Exhaust Air	Roof Exhaust Fan	1	Ea.	\$5,204	5
	Note: 6,000 CFM				
Exhaust Air	Roof Exhaust Fan	2	Ea.	\$10,408	5
	Note: 4,150 CFM				
Exhaust Air	Roof Exhaust Fan	2	Ea.	\$10,408	5
	Note: 5,900 CFM				
Exhaust Air	Roof Exhaust Fan	1	Ea.	\$5,204	5
	Note: 4,500 CFM				
Exhaust Air	Roof Exhaust Fan	1	Ea.	\$5,204	5
	Note: 8,300 CFM				
Decentralized Cooling	Condensing Unit (7.5 Ton)	1	Ea.	\$14,593	5
Sub Total for System		11	items	\$124,007	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Building Mounted Fixtures (Ea.)	40	Ea.	\$59,704	5
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	8	Ea.	\$11,028	5
Lighting Fixtures	Light Fixtures (Bldg SF)	68,522	SF	\$407,148	5
Sub Total for System		3	items	\$477,880	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Refrigerated Drinking Fountain	6	Ea.	\$44,264	4
Compressed-Air Systems	Air Compressor (5 hp)	1	Ea.	\$11,785	4
Sub Total for System		2	items	\$56,049	

Fire and Life Safety

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Fire Detection and Alarm	Fire Alarm	68,522	SF	\$200,838	3
Sub Total for System		1	items	\$200,838	
Sub Total for Building 01 - Main Building		19	items	\$1,301,893	
Total for: Steere Farm Elementary School		19	items	\$1,301,893	



Supporting Photos



Generator



Generator



Water Heater



Boiler



Facility Condition Assessment

Burrillville - Steere Farm Elementary School



Media Room



Damaged Tile



Cafeteria



Controls



Corridor



Heating Hot Water Circulating Pumps



Facility Condition Assessment

Burrillville - Steere Farm Elementary School



Typical Classroom



Exposed Fin Tube Behind Book Shelves



Cabinet Heater



Baseboard Heater



Gym



Electrical Panel



Facility Condition Assessment

Burrillville - Steere Farm Elementary School



Plumbing Fixtures



Heating Hot Water Boilers



Typical Restroom



Piping



Parking Lot Damage



Parking Lot Damage



Facility Condition Assessment

Burrillville - Steere Farm Elementary School



Site Aerial



Parking Lot Damage



Rear Elevation



Front Elevation



Rear Elevation



Playground



Facility Condition Assessment

Burrillville - Steere Farm Elementary School



Front Elevation



Marquee



Side Elevation



ACT



Damaged Gypsum Board



Damaged Gypsum Board



Facility Condition Assessment

Burrillville - Steere Farm Elementary School



Damaged Gypsum Board



Worn and Stained Carpet



Damaged VCT



Damaged VCT



Boiler



Facility Condition Assessment

Burrillville - William L. Callahan School

June 2017

75 Callahan School Street, Harrisville, RI 02830





Introduction

William L. Callahan School, located at 75 Callahan School Street in Harrisville, Rhode Island, was built in 1938. It comprises 68,500 gross square feet. Each school across the district was visited three times during the Facility Condition Assessments by three teams of specialists in the spring/summer of 2016.

William L. Callahan School serves grades 2 - 5, has 33 instructional spaces, and has an enrollment of 302. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for William L. Callahan School is 416 with a resulting utilization of 73%.

For master planning purposes a 5-year need was developed to provide an understanding of the current need as well as the projected needs in the near future. For William L. Callahan School the 5-year need is \$6,171,198. The findings contained within this report resulted from an assessment of building systems performed by building professionals experienced in disciplines including: architecture, mechanical, plumbing, electrical, acoustics, hazardous materials, and technology infrastructure.



Figure 1: Aerial view of William L. Callahan School



Approach and Methodology

A facility condition assessment evaluates each building's overall condition. Two components of the facility condition assessment are combined to total the cost for facility need. The two components of the facility condition assessment are current deficiencies and life cycle forecast.

Current Deficiencies: Deficiencies are items in need of repair or replacement as a result of being broken, obsolete, or beyond useful life. The existing deficiencies that currently require correction are identified and assigned a priority. An example of a current deficiency might include a broken lighting fixture or an inoperable roof top air conditioning unit.

Life Cycle Forecast: Life cycle analysis evaluates ages of a building's systems to forecast system replacement as they reach the end of serviceable life. An example of a life cycle system replacement is a roof with a 20-year life that has been in place for 15 years and may require replacement in five years.

Discipline Specialists

All assessment teams produced current deficiencies associated with each school. The assessment for the school facilities at the Rhode Island Department of Education included several specialties:

Facility Condition Assessment: Architectural, mechanical, and electrical engineering professionals observed conditions via a visual observation that did not include intrusive measures, destructive investigations, or testing. Additionally, the assessment incorporated input provided by district facilities and maintenance staff where applicable. The assessment team recorded existing conditions, identified problems and deficiencies, documented corrective action and quantities, and identified the priority of the repair in accordance with parameters defined during the planning phase. The team took digital photos at each school to better identify significant deficiencies.

Technology: Technology specialists visited RIDE facilities and met with technology directors to observe and assess each facility's technology infrastructure. The assessment included network architecture, major infrastructure components, classroom instructional systems, necessary building space and support for technology. The technology assessment took into account the desired technology outcome and best practices and processes to ensure results can be attained effectively.

Hazardous Materials: Schools constructed prior to 1990 were assessed by specialists to identify the presence of hazardous materials. The team focused on identifying asbestos containing building materials (ACBMs), lead-based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. If sampling and analysis was required, these activities were recommended but not included in the scope of work.

Traffic: A traffic specialist performed an in-office review of aerial imagery of the traffic infrastructure around the facilities in accordance with section 1.05-7 in the Rhode Island School Construction Regulations and reviewed data collected on site during the facility condition assessment. Based on this information, deficiencies and corrective actions were identified. High problem areas were identified for consideration of more detailed site-specific study and analysis in the future.

Acoustics: Specialists assessed each school's acoustics, including architectural acoustics, mechanical system noise and vibration, and environmental noise. The assessment team evaluated room acoustics with particular attention to the intelligibility of speech in learning spaces, interior and exterior sound isolation, and mechanical system noise and vibration control.

Educational Program Space Assessment: Teams evaluated schools to ensure that that all spaces adequately support the districts educational program. Standards are established for each classroom type or instructional space. Each space is evaluated to determine if it meets those standards and a listing of alterations that should be made to make the space a better environment for teaching and learning was created.



System Summaries

The following tables summarize major building systems at the William L. Callahan School campus, identified by discipline and building.

Site

The site level systems for this campus include:

Site	Asphalt Parking Lot Pavement
	Asphalt Roadway Pavement
	Asphalt Pedestrian Pavement

Building Envelope

The exterior systems for the building(s) at this campus includes:

01 - Main Building:	Brick Exterior Wall
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Storefront Entrance Doors
02 - Field House:	CMU Exterior Wall
	Steel Exterior Entrance Doors

The roofing for the building(s) at this campus consists of:

01 - Main Building:	Metal Steep Slope Roofing
	EPDM Roofing
02 - Field House:	Concrete Tile Roofing

Interior

The interior systems for the building(s) at this campus include:

01 - Main Building:	Foldable Interior Partition
	Wood Interior Doors
	Overhead Interior Coiling Doors
	Interior Door Hardware
	Exposed Metal Structure Ceiling
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Non-Painted Plaster/Gypsum Board Ceiling
	Ceramic Tile Wall
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Quarry Tile Flooring
	Rubber Tile Flooring
	Vinyl Composition Tile Flooring



01 - Main Building:	Carpet
	Athletic/Sport Flooring
02 - Field House:	Steel Interior Doors
	Interior Door Hardware
	Wood Ceilings
	Interior Wall Painting
	Concrete Flooring

Mechanical

The mechanical systems for the building(s) at this campus include:

01 - Main Building:	2,400 MBH Copper Tube Boiler
	Fin Tube Water Radiant Heater
	250 MBH Steam Unit Heater
	85 MBH Steam Unit Heater
	Electronic Heating System Controls
	2 Ton Ductless Split System
	10 Ton Package DX Unit
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	10,000 CFM Interior AHU
	Ductwork
	Roof Mounted Exhaust Fan
02 - Field House:	Make-up Air Unit
	Roof Mounted Exhaust Fan

Plumbing

The plumbing systems for the building(s) at this campus include:

01 - Main Building:	3/4" Backflow Preventers
	4" Backflow Preventers
	100 Gallon Gas Water Heater
02 - Field House:	2" Backflow Preventers
	100 Gallon Gas Water Heater
01 - Main Building:	Domestic Water Piping System
02 - Field House:	Domestic Water Piping System
01 - Main Building:	Classroom Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Toilets
	Urinals



02 - Field House:	Lavatories
	Showers
	Toilets
	Urinals
01 - Main Building:	Sump Pump

Electrical

The electrical systems for the building(s) at this campus include:

01 - Main Building:	2,000 Amp Switchgear
	225 KVA Transformer
	400 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Electrical Disconnect
	Light Fixtures
	Building Mounted Lighting Fixtures
02 - Field House:	Panelboard - 120/208 100A
	Electrical Disconnect
	Light Fixtures



Facility Deficiency Priority Levels

Deficiencies were ranked according to five priority levels, with Priority 1 items being the most critical to address:

Priority 1 – Mission Critical Concerns: Deficiencies or conditions that may directly affect the school's ability to remain open or deliver the educational curriculum. These deficiencies typically relate to building safety, code compliance, severely damaged or failing building components, and other items that require near-term correction. An example of a Priority 1 deficiency is a fire alarm system replacement.

Priority 2 - Indirect Impact to Educational Mission: Items that may progress to a Priority 1 item if not addressed in the near term. Examples of Priority 2 deficiencies include inadequate roofing that could cause deterioration of integral building systems, and conditions affecting building envelopes, such as roof and window replacements.

Priority 3 - Short-Term Conditions: Deficiencies that are necessary to the school's mission but may not require immediate attention. These items should be considered necessary improvements required to maximize facility efficiency and usefulness. Examples of Priority 3 items include site improvements and plumbing deficiencies.

Priority 4 - Long-Term Requirements: Items or systems that may be considered improvements to the instructional environment. The improvements may be aesthetic or provide greater functionality. Examples include cabinets, finishes, paving, removal of abandoned equipment, and educational accommodations associated with special programs.

Priority 5 - Enhancements: Deficiencies aesthetic in nature or considered enhancements. Typical deficiencies in this priority include repainting, replacing carpet, improved signage, or other improvements to the facility environment.



Facility Condition Assessment

Burrillville - William L. Callahan School

The following chart summarizes this site's current deficiencies by building system and priority. The listing details current deficiencies including deferred maintenance, functional deficiencies, code compliance, capital renewal, hazardous materials and technology categories.

Table 1: System by Priority

System	Priority					Total	% of Total
	1	2	3	4	5		
Site	-	-	\$1,511	\$28,329	-	\$29,840	1.01 %
Roofing	-	-	-	-	-	\$0	0.00 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$13,904	-	-	\$8,946	\$22,850	0.77 %
Interior	-	-	\$605,089	\$774,867	\$10,737	\$1,390,693	47.04 %
Mechanical	-	-	\$164,969	-	-	\$164,969	5.58 %
Electrical	-	-	-	-	\$23,821	\$23,821	0.81 %
Plumbing	-	-	\$65,915	-	\$12,285	\$78,200	2.65 %
Fire and Life Safety	-	-	-	-	-	\$0	0.00 %
Technology	-	-	\$1,009,248	-	-	\$1,009,248	34.14 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$22,817	\$213,727	-	\$236,544	8.00 %
Total	\$0	\$13,904	\$1,869,548	\$1,016,923	\$55,788	\$2,956,163	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Interior	-	\$1,390,693
Technology	-	\$1,009,248
Specialties	-	\$236,544

The chart below represents the building systems and associated deficiency costs.

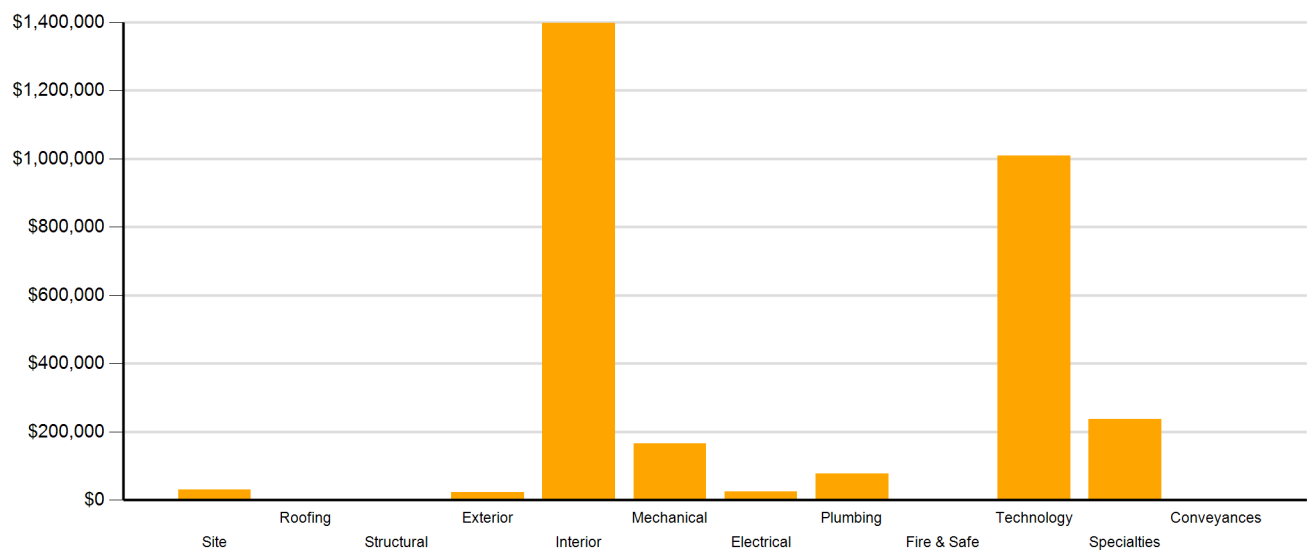


Figure 2: System Deficiencies



Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

- **Acoustics** deficiencies relate to room acoustics, sound insulation, and mechanical systems and vibration control modeled after ANSI/ASA Standard S12.60-2010 and ASHRAE Handbook, Chapter 47 on Sound and Vibration Control.
- **Barrier to Accessibility** deficiencies relate to the Americans with Disabilities Act and the Rhode Island Governors Commission on Disability. Additional items related to accessibility may be included other categories.
- **Capital Renewal** items have reached or exceeded serviceable life and require replacement. These are current and do not include life cycle capital renewal forecasts. Also included are deficiencies correcting planned work postponed beyond its regular life expectancy.
- **Code Compliance** deficiencies related to current codes. Many may fall under grandfather clauses, which allow buildings to continue operating under codes effective at the time of construction. However, there are instances where the level of renovation requires full compliance which are reflected in the master plan.
- **Educational Adequacy** deficiencies identify where facilities do not align with the Basic Education Program and the RIDE School Construction Regulations.
- **Functional Deficiencies** are deficiencies for components or systems that have failed before the end of expected life or are not the right application, size, or design.
- **Hazardous Materials** include deficiencies for building systems or components containing potentially hazardous material. The team focused on identifying asbestos containing building materials (ACBMs), lead based painted (LBP) areas, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs). As part of an indoor air and exterior air quality assessment, the team noted evidence of mold, water intrusion, mercury, and oil and hazardous materials (OHMs) exposure. With other scopes of work there may be other costs associated with hazardous materials.
- **Technology** deficiencies relate to network architecture, technology infrastructure, classroom systems, and support. Examples of technology deficiencies include: security cameras, secure electronic access, telephone handsets, and dedicated air conditioning for telecommunication rooms.
- **Traffic** deficiencies relate to vehicle or pedestrian traffic, such as bus loops, crosswalks, and pavement markings.



The following chart and table represent the deficiency category by priority. This listing includes current deficiencies for all building systems.

Table 2: Deficiency Category by Priority

Category	Priority					Total
	1	2	3	4	5	
Acoustics	-	-	\$546,040	\$99,233	-	\$645,273
Barrier to Accessibility	-	-	-	-	-	\$0
Capital Renewal	-	\$13,904	\$289,933	\$225,929	\$19,683	\$549,448
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	-	-	\$34,225	\$576,492	\$36,106	\$646,823
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$115,269	-	\$115,269
Technology	-	-	\$997,840	-	-	\$997,840
Traffic	-	-	\$1,511	-	-	\$1,511
Total	\$0	\$13,904	\$1,869,548	\$1,016,923	\$55,788	\$2,956,163

*Displayed totals may not sum exactly due to mathematical rounding

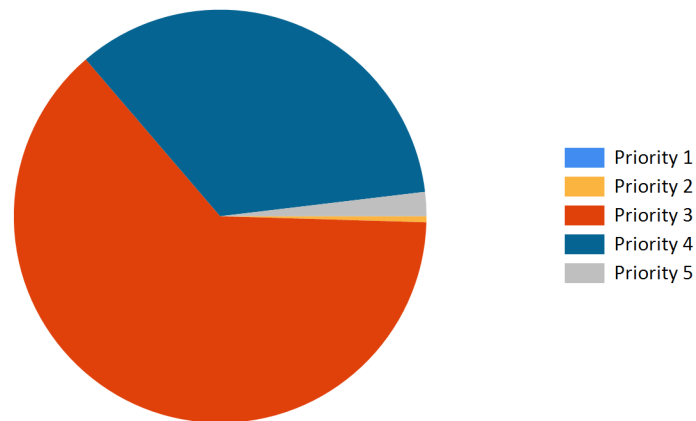


Figure 3: Current deficiencies by priority



Life Cycle Capital Renewal Forecast

During the facility condition assessment, assessors inspected all major building systems. If a need for immediate replacement was identified, a deficiency was created with the estimated repair costs. The identified deficiency contributes to the facility's total current repair costs.

Capital planning scenarios span multiple years, as opposed to being constrained to immediate repairs. Construction projects may begin several years after the initial facility condition assessment. Therefore, in addition to the current year repair costs, it is necessary to forecast the facility's future costs using a 5-year life cycle renewal forecast model.

Life cycle renewal is the projection of future building system costs based upon each individual system's expected serviceable life. Building systems and components age over time, eventually break down, reach the end of their useful lives, and may require replacement. While an item may be in good condition now, it might reach the end of its life before a planned construction project occurs.

The following chart shows all current deficiencies and the subsequent 5-year life cycle capital renewal projections. The projections outline costs for major building systems in which a component is expected to reach the end of its useful life and require capital funding for replacement.

Table 3: Capital Renewal Forecast

System	Current Deficiencies	Life Cycle Capital Renewal Projections					LC Yr. 1-5 Total	Total 5-Year Need
		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021		
Site	\$29,840	\$0	\$0	\$0	\$0	\$0	\$0	\$29,840
Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$22,850	\$0	\$0	\$0	\$0	\$0	\$0	\$22,850
Interior	\$1,390,693	\$0	\$265,615	\$0	\$116,613	\$0	\$382,228	\$1,772,921
Mechanical	\$164,969	\$0	\$2,693,537	\$0	\$0	\$0	\$2,693,537	\$2,858,506
Electrical	\$23,821	\$0	\$19,261	\$0	\$0	\$0	\$19,261	\$43,082
Plumbing	\$78,200	\$0	\$79,493	\$27,313	\$0	\$5,322	\$112,128	\$190,328
Fire and Life Safety	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Technology	\$1,009,248	\$0	\$0	\$0	\$0	\$0	\$0	\$1,009,248
Conveyances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Specialties	\$236,544	\$0	\$0	\$0	\$0	\$0	\$0	\$236,544
Total	\$2,956,163	\$0	\$3,057,906	\$27,313	\$116,613	\$5,322	\$3,207,154	\$6,163,317

*Displayed totals may not sum exactly due to mathematical rounding

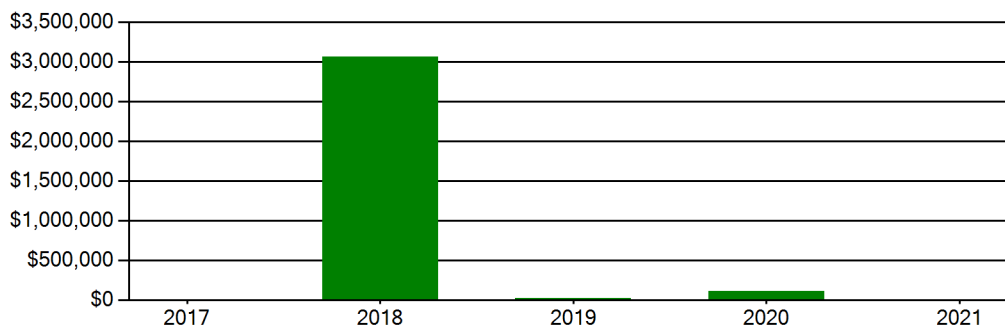
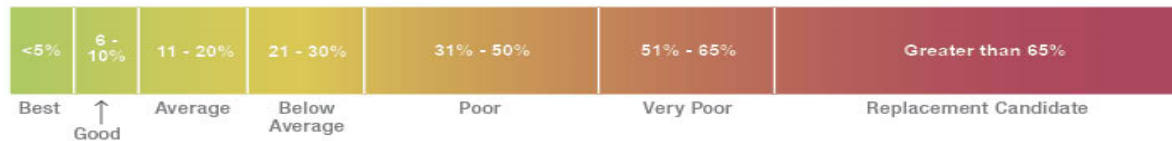


Figure 4: Life Cycle Capital Renewal Forecast



Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building’s health. Since 1991, the facility management industry has used an index called the FCI to benchmark the relative condition of a group of schools. The FCI is derived by dividing the total repair cost, including educational adequacy and site-related repairs, by the total replacement cost. A facility with a higher FCI percentage has more need, or higher priority, than a facility with a lower FCI. It should be noted that costs in the New Construction category are not included in the FCI calculation.



Financial modeling has shown that over a 30-year period, it is more cost effective to replace than repair schools with a FCI of 65 percent or greater. This is due to efficiency gains with facilities that are more modern and the value of the building at the end of the analysis period. It is important to note that the FCI at which a facility should be considered for replacement is typically debated and adjusted based on property owners and facility managers approach to facility management. Of course, FCI is not the only factor used to identify buildings that need renovation, replacement, or even closure. Historical significance, enrollment trends, community sentiment, and the availability of capital are additional factors that are analyzed when making school facility decisions.

For master planning purposes, the total current deficiencies and the first five years of projected life cycle needs were combined. This provides an understanding of the current needs of a facility as well as the projected needs in the near future. A 5-year FCI was calculated by dividing the 5-year need by the total replacement cost. Costs associated with new construction are not included in the FCI calculation.

The replacement value represents the estimated cost of replacing the current building with another building of like size, based on today’s estimated cost of construction in the Providence, Rhode Island area. The estimated replacement cost for this facility is \$23,975,000. For planning purposes, the total 5-year need at the William L. Callahan School is \$6,171,198 (Life Cycle Years 1-5 plus the FCI deficiency cost). The William L. Callahan School facility has a 5-year FCI of 25.71%.

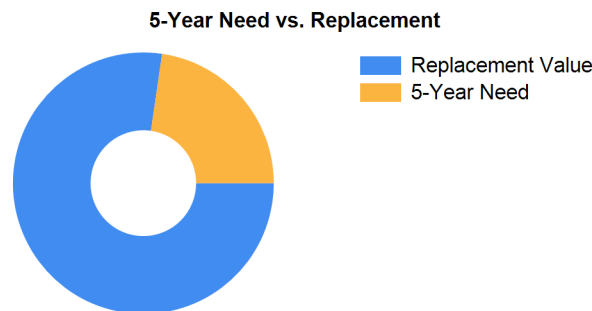


Figure 5: 5-Year FCI

It is important to reiterate that this FCI replacement threshold is not conclusive, but is intended to initiate planning discussion in which other relevant issues with regard to a facility’s disposition must be incorporated. This merely suggests where conversations regarding replacement might occur.



Rhode Island Aspirational Capacity

The capacity of a school reflects how many students the school's physical facility can effectively serve. There are various methodologies that exist to calculate capacity. It is not uncommon to review an existing building only to find that the capacity that had once been assigned is greater than what can be reasonably accommodated today. This is primarily because of a change in how programs are delivered.

The Rhode Island Aspirational Capacity is based on the Rhode Island School Construction Regulations (SCRs) and is an aspirational goal of space use. The capacity for each individual public school in the state of Rhode Island was designed to conform to Section 1.06-2 Space Allowance Guidelines of the Rhode Island Department of Education (RIDE) SCRs. These regulations outline the allowed gross square feet (GSF) per student at each school type (ES, MS, HS) by utilizing a sliding scale based on projected enrollment. The resulting capacities reflect how school capacities align to the SCRs for new construction. The existing enrollment was multiplied by the GSF per student for the appropriate bracket. For the purposes of this analysis, Pre-K centers were rolled into the elementary totals, and K-8 facilities were counted as middle schools.

The most consistent and equitable way a state can determine school capacities across a variety of districts and educational program offerings is to use square-foot-per-student standards. In contrast, in the 2013 Public Schoolhouse Assessment Report, LEAs self-reported capacities for their elementary, middle and high schools. Districts typically report "functional capacity," which is defined as the number of students each classroom can accommodate. Functional capacity counts how many students can occupy a space, not how much room students and teachers have within that space. For example, a 650-square-foot classroom and a 950-square-foot classroom can both have a reported capacity of 25 students, but the actual teaching and learning space per student varies greatly.

The variation in square feet per student impacts the kinds of teaching practices possible in each space. The lowest allocation of space per student restricts group and project-based learning strategies and requires teachers to teach in more traditional, lecture-style formats, due to a lack of space. Furthermore, the number of students that can be accommodated in a classroom does not account for access to sufficient common spaces such as libraries, cafeterias, and gymnasiums. When cafeterias are undersized relative to the population, schools must host four or more lunch periods a day, resulting in some students eating lunch mid-morning and some mid-afternoon. Similarly, undersized libraries and gymnasiums create scheduling headaches for schools and restrict student access. Finally, a classroom count-only approach to school capacity does not consider the inherent scheduling challenges schools face.

Applying the Rhode Island Aspirational Capacity, a facility of this size could ideally support an enrollment of approximately 408 students.

Facility New Construction

As part of the Educational Program Space Assessment, select core spaces were compared to the RI School Construction Regulations. If it was determined that a facility was in need of square footage related to a cafeteria or library/media center, a cost for additional space was estimated. This cost is not included in the total 5-year need or the 5-year FCI calculation.

The New Construction cost to bring the William L. Callahan School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$797,202.



Summary of Findings

The William L. Callahan School comprises 68,500 square feet and was constructed in 1938. Current deficiencies at this school total \$2,964,044. Five year capital renewal costs total \$3,207,154. The total identified need for the William L. Callahan School (current deficiencies and 5-year capital renewal costs) is \$6,171,198. The 5-year FCI is 25.71%.

Table 4: Facility Condition by Building

	Gross Sq Ft	Year Built	Current Deficiencies	LC Yr. 1-5 Total	Total 5 Yr Need (Yr 1-5 + Current Defs)	5-Year FCI
William L. Callahan School Totals	68,500	1938	\$2,964,044	\$3,207,154	\$6,171,198	25.71%

**Displayed totals may not sum exactly due to mathematical rounding*

The following pages provide a listing of all current deficiencies and 5-year life cycle need and the associated costs, followed by photos taken during the assessment.

Cost Estimating

Cost estimates are derived from local cost estimating expertise and enhanced by industry best practices, historical cost data, and relevance to the Rhode Island region. Costs have been developed from current market rates as of the 2nd quarter in 2016. All costs are based on a replace-in-kind approach, unless the item was not in compliance with national or state regulations or standards.

For planning and budgeting purposes, facility assessments customarily add a soft cost multiplier onto deficiency repair cost estimates. This soft cost multiplier accounts for costs that are typically incurred when contracting for renovation and construction services. Soft costs typically include construction cost factors, such as contractor overhead and profit, as well as labor and material inflation, professional fees, and administrative costs. Based on the Rhode Island School Construction Regulations, a soft cost multiplier of 20% is included on all cost estimates. Other project allowances are included in the cost estimates based on school attributes such as age, location, and historic designation. All stated costs in the assessment report will include soft costs for planning and budgeting purposes. These are estimates, and costs will vary at the time of construction.

LEA Feedback

As part of the assessment process, LEAs were given several opportunities to provide feedback on the data. Jacobs performed a thorough review of the comments provided relating to the Facilities Condition Assessment. Based on information provided, some adjustments were made to improve or refine the dataset. In other situations, enough information was not provided, item was out of scope, or evidence provided by assessment team did not align with the feedback and no adjustment was made. Finally, deficiency priorities, costs, and educational space/technology standards are consistent throughout the state.



Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Crosswalk: Needs to be added Note: Install crosswalks across driveways at Maple St and Foster St intersections	Traffic	2	Ea.	3	\$1,511	9289
Backstops Require Replacement Note: Backstops Require Replacement	Educational Adequacy	1	Ea.	4	\$28,329	28411
Sub Total for System		2	items		\$29,840	
Sub Total for School and Site Level		2	items		\$29,840	

Building: 01 - Main Building

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	28	Ea.	3	\$266,750	19732
Classroom Interior Doors Provide Insufficient Sound Isolation Note: All classrooms	Acoustics	12	Ea.	3	\$114,321	19733
The Acoustical Ceiling Tiles Require Replacement Note: Classrooms on 1st and 2nd floors.	Capital Renewal	500	SF	3	\$4,892	8359
The Vinyl Composition Tile Requires Replacement Note: Replace VCT in the computer lab, and 50% of the classrooms.	Capital Renewal	17,632	SF	3	\$219,126	8361
Paint (probable pre-1978 in base (layers(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - each)	Hazardous Material	120	Ea.	4	\$37,077	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - linear feet)	Hazardous Material	480	LF	4	\$11,865	Rollup
Paint (probable pre-1978 in base layer(s)) - large areas (> 10 sq. ft.) of peeling/damage & area in active use - children (measurement unit - square feet)	Hazardous Material	4,000	SF	4	\$41,197	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - linear feet)	Hazardous Material	100	LF	4	\$2,472	Rollup
Paint (probable pre-1978 in base layer(s)) - damaged area < 9 sq. ft. OR overall worn AND in children-accessible area (measurement unit - square feet)	Hazardous Material	2,200	SF	4	\$22,658	Rollup
Room Is Excessively Reverberant Note: Gym	Acoustics	4,100	SF	4	\$99,233	19736
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	14,386	SF	4	\$548,163	Rollup
Stair Treads Require Replacement Note: All stair locations.	Capital Renewal	100	LF	4	\$4,532	8364
The Concrete Flooring Requires Replacement Note: Water is coming in through the floor of the lower level in the old boiler room.	Capital Renewal	500	SF	4	\$7,053	8362
The Gypsum Board Ceilings Require Replacement Note: Replace damaged gypboard ceiling in classroom.	Capital Renewal	50	SF	4	\$618	8360
Sub Total for System		14	items		\$1,379,956	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Unit Ventilators Are Excessively Noisy Note: All classrooms	Acoustics	24	Ea.	3	\$164,969	19734
Sub Total for System		1	items		\$164,969	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room Has Insufficient Electrical Outlets	Educational Adequacy	48	Ea.	5	\$23,821	Rollup
Sub Total for System		1	items		\$23,821	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks a drinking fountain.	Educational Adequacy	7	Ea.	5	\$7,720	Rollup



Facility Condition Assessment

Burrillville - William L. Callahan School

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	4	Ea.	5	\$4,565	Rollup
Sub Total for System		2	items		\$12,285	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	\$11,408	Rollup
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$10,299	10553
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	19	Ea.	3	\$410,939	10556
Technology: Instructional spaces do not have local sound reinforcement.	Technology	22	Ea.	3	\$113,291	10554
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	\$18,127	10544
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$7,209	10548
Technology: Main Telecommunications Room is not dedicated and/or inadequate.	Technology	1	Ea.	3	\$54,380	10547
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	137	Ea.	3	\$63,495	10545
Technology: Network system inadequate and/or near end of useful life	Technology	2	Ea.	3	\$16,479	10558
Technology: Network system inadequate and/or near end of useful life	Technology	4	Ea.	3	\$20,598	10559
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	67,000	SF	3	\$124,209	10560
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$58,706	10555
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	2	Room	3	\$41,197	10557
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$8,239	10550
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	26	Ea.	3	\$42,845	10552
Technology: Telephone system is inadequate and/or non-existent.	Technology	1	Ea.	3	\$7,827	10551
Sub Total for System		16	items		\$1,009,248	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	5	Ea.	3	\$22,817	Rollup
The Metal Student Lockers Require Replacement	Capital Renewal	351	Ea.	4	\$187,078	8363
Sub Total for System		2	items		\$209,894	
Sub Total for Building 01 - Main Building		36	items		\$2,800,173	

Building: 02 - Field House

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	2	Door	2	\$13,904	8365
Note: These doors are to the restrooms on the exterior of the building. Both doors need to be replaced.						
The Exterior Requires Painting	Capital Renewal	1,500	SF Wall	5	\$8,946	8367
Sub Total for System		2	items		\$22,850	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Walls Require Repainting (Bldg SF)	Capital Renewal	1,500	SF	5	\$10,737	Rollup
Sub Total for System		1	items		\$10,737	



Facility Condition Assessment

Burrillville - William L. Callahan School

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	8	Ea.	3	\$65,915	8713
Note: The shower system is beyond useful life. Each shower head should have its own control valve in order to conserve water.						
	Sub Total for System	1	items		\$65,915	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Student Lockers Require Replacement	Capital Renewal	50	Ea.	4	\$26,649	8366
Note: Replace all.						
	Sub Total for System	1	items		\$26,649	
	Sub Total for Building 02 - Field House	5	items		\$126,151	
	Total for Campus	43	items		\$2,956,163	



William L. Callahan School - Life Cycle Summary Yrs 1-5

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	40,200	SF	\$265,615	2
Carpeting	Carpet	5,360	SF	\$116,613	4
		Sub Total for System		\$382,228	
		Sub Total for Building 01 - Main Building		\$382,228	

Building: 02 - Field House

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exhaust Air	Exhaust Fan - Roof Mounted (CFM)	1,000	CFM	\$2,677,638	2
Air Distribution	Make-up Air Unit	1	Ea.	\$15,899	2
Note: 1800 CFM					
		Sub Total for System		\$2,693,538	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)	1,500	SF	\$8,913	2
Wiring Devices	Electrical Disconnect	3	Ea.	\$5,499	2
Power Distribution	Panelboard - 120/208 100A	1	Ea.	\$4,849	2
		Sub Total for System		\$19,260	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Backflow Preventers - 2 in. (Ea.)	1	Ea.	\$3,921	2
Plumbing Fixtures	Showers	8	Ea.	\$60,845	2
Plumbing Fixtures	Urinals	2	Ea.	\$2,658	2
Domestic Water Piping	Domestic Water Piping System (Bldg.SF)	1,500	SF	\$12,069	2
Plumbing Fixtures	Lavatories	5	Ea.	\$15,905	3
Plumbing Fixtures	Toilets	4	Ea.	\$11,408	3
Domestic Water Equipment	Water Heater - Gas - 100 Gallon	1	Ea.	\$5,322	5
Note: Oil fired					
		Sub Total for System		\$112,128	
		Sub Total for Building 02 - Field House		\$2,824,926	
		Total for: William L. Callahan School		\$3,207,154	



Supporting Photos



Water Mixing Valve



Field House



Site Aerial



Library



Facility Condition Assessment

Burrillville - William L. Callahan School



Cafeteria



Front Elevation #2



Front Elevation #3



Front Elevation



Building Interior



Side Elevation



Facility Condition Assessment

Burrillville - William L. Callahan School



Gym



Side Elevation



Building Interior



Typical Classroom



Marquee



Building Interior



Facility Condition Assessment

Burrillville - William L. Callahan School



Typical Restroom



Art Room



Damaged Ceiling Tile



Damaged Ceiling



Damaged VCT



Flood in Boiler Room



Facility Condition Assessment

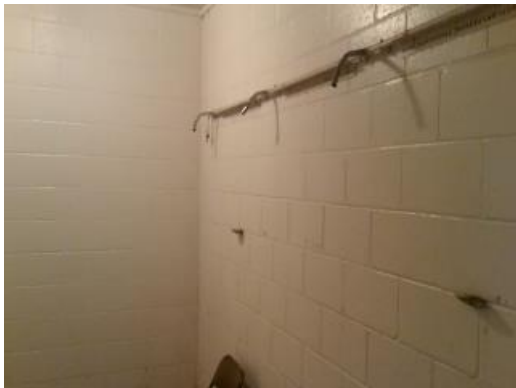
Burrillville - William L. Callahan School



Lockers



Stair Tread



Showers Field House



Restroom Lavatories



Heating Hot Water Boilers



Electrical Panel Board



Facility Condition Assessment

Burrillville - William L. Callahan School



Cabinet Heater



Heating Hot Water Circulating Pumps



Replace Restroom Doors



Field House Lockers



Repaint Exterior



Plumbing Fixtures



Facility Condition Assessment

Burrillville - William L. Callahan School



Shower Heads



Elevation