



Facility Condition Assessment

Tiverton - Tiverton Middle School

June 2017

10 Quintal Drive, Tiverton, RI 02878





Introduction

Tiverton Middle School, located at 10 Quintal Drive in Tiverton, Rhode Island, was built in 1976. It comprises 142,000 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.

Tiverton Middle School serves grades 5 - 8, has 55 instructional spaces, and has an enrollment of 562. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Tiverton Middle School is 825 with a resulting utilization of 68%.

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 Tiverton Middle School the 5-year need is \$25,190,668. 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 Tiverton 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 Tiverton Middle 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
	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
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Interior

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

01 - Main Building:	Foldable Interior Partition
	Steel Interior Doors
	Interior Door Hardware
	Door Hardware
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Ceramic Tile Wall
	Wood Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Carpet

Mechanical

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

01 - Main Building:	1,275 MBH Cast Iron Water Boiler
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01 - Main Building:	14,000 MBH Cast Iron Boiler
	Steam/Hot Water Heating Unit Vent
	Fin Tube Water Radiant Heater
	Pneumatic Heating System Controls
	3 Ton D/X Fan Coil
	3 Ton Outside Air Cooled Condenser
	Window Units
	Make-up Air Unit
	5 HP Pump
	2-Pipe Hot Water Hydronic Distribution System
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Wall Exhaust Fan
	Kitchen Exhaust Hoods
	Fire Sprinkler System

Plumbing

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

01 - Main Building:	2,000 Gallon Water Storage Tank
	4" Backflow Preventers
	Gas Piping System
	Domestic Water Piping System
	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
	Sump Pump
	Air Compressor (2 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
	1,200 Amp Switchgear
	15 KVA Transformer
	75 KVA Transformer
	1600 Amp Distribution Panel



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01 - Main Building:	Panelboard - 120/208 100A
	Panelboard - 120/208 225A
	Panelboard - 277/480 100A
	Electrical Disconnect
	Building 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.



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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	-	-	\$270,233	\$1,207,296	\$330,645	\$1,808,174	8.59 %
Roofing	-	\$3,561,796	-	-	-	\$3,561,796	16.92 %
Structural	-	-	-	-	-	\$0	0.00 %
Exterior	-	\$852,296	-	-	\$99,576	\$951,872	4.52 %
Interior	-	-	\$2,683,275	\$1,324,179	\$1,536	\$4,008,990	19.04 %
Mechanical	-	\$2,688,722	\$763,521	\$1,033,753	-	\$4,485,996	21.31 %
Electrical	\$9,819	\$1,532,544	\$308,069	-	\$100,556	\$1,950,988	9.27 %
Plumbing	-	\$27,547	\$460,246	\$520,061	\$85,408	\$1,093,261	5.19 %
Fire and Life Safety	\$111,034	-	-	-	-	\$111,034	0.53 %
Technology	-	-	\$2,344,779	-	-	\$2,344,779	11.14 %
Conveyances	-	-	-	-	-	\$0	0.00 %
Specialties	-	-	\$9,065	\$666,748	\$59,491	\$735,304	3.49 %
Total	\$120,853	\$8,662,905	\$6,839,187	\$4,752,037	\$677,212	\$21,052,194	

*Displayed totals may not sum exactly due to mathematical rounding

The building systems with the most need include:

Mechanical	-	\$4,485,996
Interior	-	\$4,008,990
Roofing	-	\$3,561,796

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

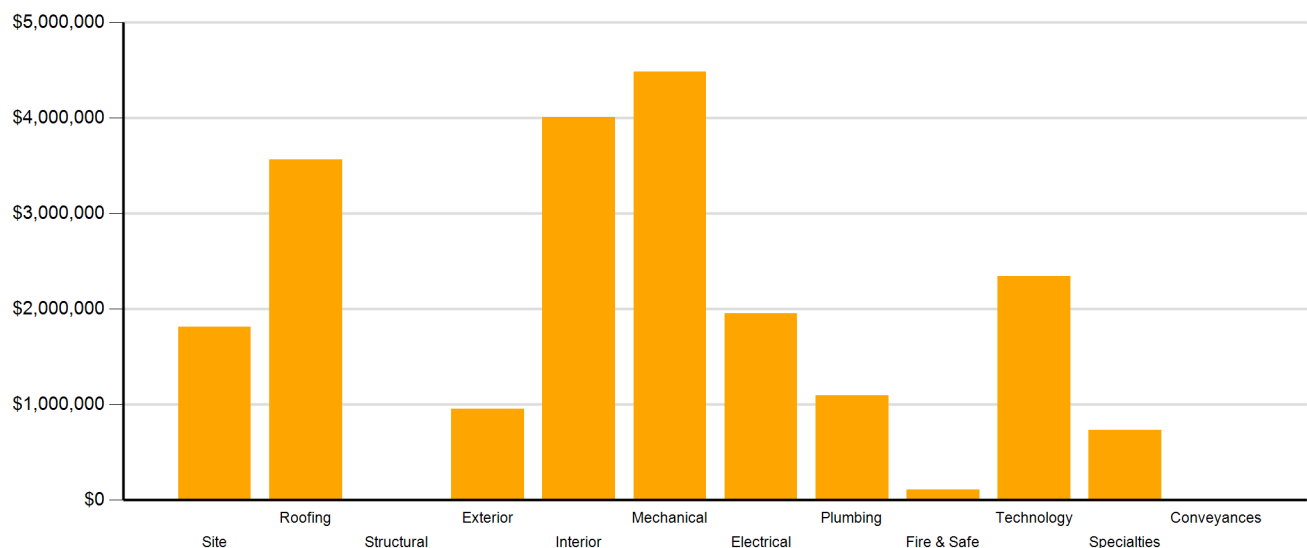


Figure 2: System Deficiencies



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.



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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	-	-	\$815,894	-	-	\$815,894
Barrier to Accessibility	-	-	-	-	-	\$0
Capital Renewal	\$31,713	\$8,662,905	\$3,629,562	\$4,682,495	\$156,234	\$17,162,909
Code Compliance	-	-	-	-	-	\$0
Educational Adequacy	\$89,140	-	\$128,046	-	\$520,978	\$738,165
Functional Deficiency	-	-	-	-	-	\$0
Hazardous Material	-	-	-	\$69,542	-	\$69,542
Technology	-	-	\$2,225,798	-	-	\$2,225,798
Traffic	-	-	\$39,887	-	-	\$39,887
Total	\$120,853	\$8,662,905	\$6,839,187	\$4,752,037	\$677,212	\$21,052,194

*Displayed totals may not sum exactly due to mathematical rounding

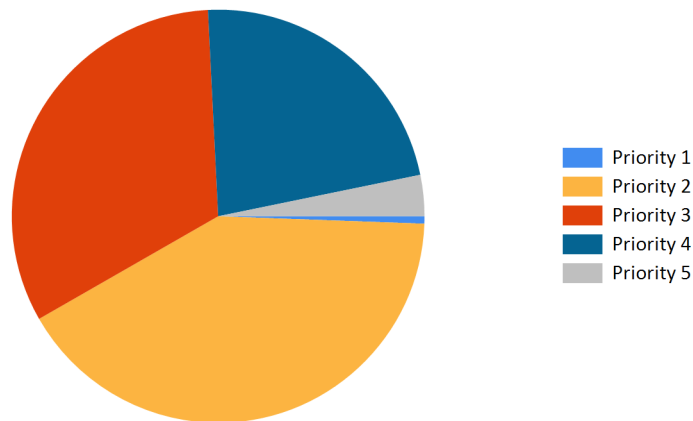


Figure 3: Current deficiencies by priority



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	\$1,808,174	\$0	\$0	\$339,701	\$0	\$0	\$339,701	\$2,147,875
Roofing	\$3,561,796	\$0	\$0	\$0	\$0	\$89,774	\$89,774	\$3,651,570
Structural	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Exterior	\$951,872	\$0	\$0	\$0	\$0	\$0	\$0	\$951,872
Interior	\$4,008,990	\$0	\$831,204	\$0	\$156,865	\$470,595	\$1,458,664	\$5,467,654
Mechanical	\$4,485,996	\$0	\$0	\$1,094,563	\$0	\$0	\$1,094,563	\$5,580,559
Electrical	\$1,950,988	\$0	\$0	\$0	\$0	\$123,591	\$123,591	\$2,074,579
Plumbing	\$1,093,261	\$0	\$0	\$0	\$0	\$0	\$0	\$1,093,261
Fire and Life Safety	\$111,034	\$0	\$0	\$0	\$0	\$0	\$0	\$111,034
Technology	\$2,344,779	\$0	\$0	\$0	\$0	\$0	\$0	\$2,344,779
Conveyances	\$0	\$0	\$0	\$0	\$0	\$285,209	\$285,209	\$285,209
Specialties	\$735,304	\$0	\$0	\$0	\$737,979	\$0	\$737,979	\$1,473,283
Total	\$21,052,194	\$0	\$831,204	\$1,434,264	\$894,844	\$969,169	\$4,129,481	\$25,181,675

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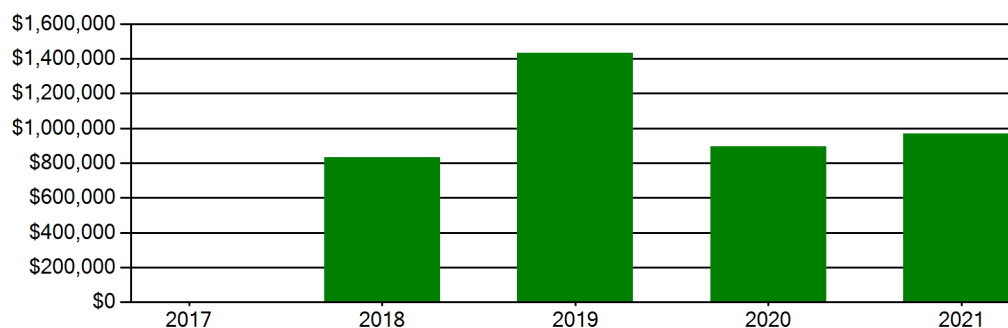
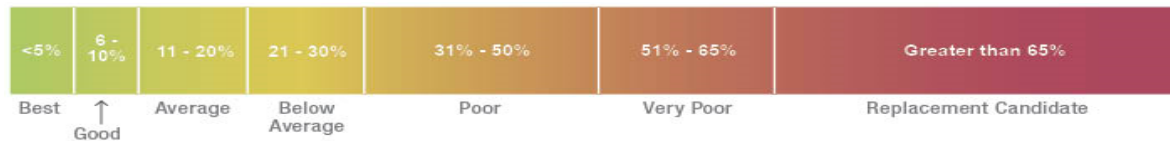


Figure 4: Life Cycle Capital Renewal Forecast



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 \$46,860,000. For planning purposes, the total 5-year need at the Tiverton Middle School is \$25,190,668 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Tiverton Middle School facility has a 5-year FCI of 53.74%.

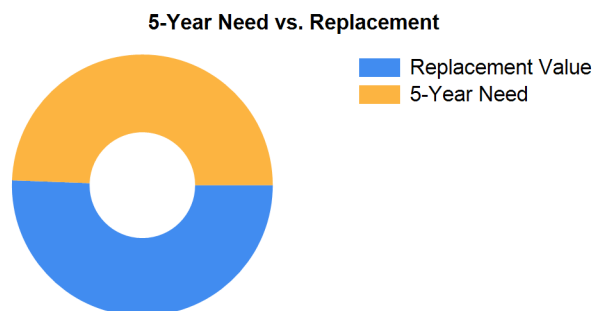


Figure 5: 5-Year FCI

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 780 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 Tiverton Middle School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be \$1,235,995.



Summary of Findings

The Tiverton Middle School comprises 142,000 square feet and was constructed in 1976. Current deficiencies at this school total \$21,061,187. Five year capital renewal costs total \$4,129,481. The total identified need for the Tiverton Middle School (current deficiencies and 5-year capital renewal costs) is \$25,190,668. The 5-year FCI is 53.74%.

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
Tiverton Middle School Totals	142,000	1976	\$21,061,187	\$4,129,481	\$25,190,668	53.74%

**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.



Site Level Deficiencies

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Concrete Walks Require Replacement Note: Sidewalks are splitting and cracking and steps are settling.	Capital Renewal	11,346	SF	3	\$230,346	2685
Install New Paving Note: Construct exit further down Quintal Road	Traffic	1,920	SF	3	\$39,887	4492
Asphalt Paving Requires Replacement Note: Alligating, cracking, and splitting throughout.	Capital Renewal	128	CAR	4	\$420,639	2682
Asphalt Paving Requires Replacement Note: Cracking, splitting, and ponding throughout.	Capital Renewal	230	CAR	4	\$755,835	2684
Fencing Requires Replacement (4' Chain Link Fence) Note: Fencing is falling and poles and chain link are rusting.	Capital Renewal	480	LF	4	\$30,822	2681
Exterior Basketball Goals are Required Note: Exterior Basketball Goals are Required	Educational Adequacy	1	Ea.	5	\$5,807	28813
School lacks a competition track. Note: School lacks a competition track.	Educational Adequacy	1	Ea.	5	\$324,837	28276
Sub Total for System		7 items			\$1,808,174	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Pole Lighting Requires Replacement Note: Mercury vapor lights with broken or clouded lenses.	Capital Renewal	33	Ea.	3	\$253,532	2680
Sub Total for System		1 items			\$253,532	
Sub Total for School and Site Level		8 items			\$2,061,706	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
EPDM Roofing Requires Replacement (Bldg SF) Note: The roof has ongoing issues. There are bubbles throughout and there is evidence of water infiltration.	Capital Renewal	75,300	SF	2	\$945,702	2946
The Tectum Decking Requires Replacement Note: Tectum is aged, with warping and general wear.	Capital Renewal	35,500	SF	2	\$2,616,094	2948
Sub Total for System		2 items			\$3,561,796	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement Note: 81 @ 3x6 - Windows are aged with many not operational.	Capital Renewal	1,458	SF	2	\$245,067	2938
The Aluminum Window Requires Replacement Note: 85 @ 2x6 - Windows are aged with many not operational.	Capital Renewal	1,020	SF	2	\$171,446	2939
The Aluminum Window Requires Replacement Note: 30 @ 4x6 - Windows are aged with many not operational.	Capital Renewal	720	SF	2	\$121,021	2940
The Aluminum Window Requires Replacement Note: 9 @ 3x3 - Windows are aged with many not operational.	Capital Renewal	81	SF	2	\$13,615	2941
The Aluminum Window Requires Replacement Note: 8 @ 1x6 - Windows are aged with many not operational.	Capital Renewal	48	SF	2	\$8,068	2942
The Aluminum Window Requires Replacement Note: 22 @ 1x3 - Windows are aged with many not operational.	Capital Renewal	66	SF	2	\$11,094	2943
The Aluminum Window Requires Replacement Note: 10 @ 1x18 - Windows are aged with many not operational.	Capital Renewal	180	SF	2	\$30,255	2944
The Aluminum Window Requires Replacement Note: 5 @ 4x18 - Windows are aged with many not operational.	Capital Renewal	360	SF	2	\$60,510	2945
The Metal Exterior Door Requires Replacement Note: Original exterior doors are worn with some not fully operation. They should be replaced.	Capital Renewal	30	Door	2	\$191,220	2716



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Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Exterior Requires Cleaning	Capital Renewal	37,000	SF Wall	5	\$99,576	3023
Note: Exterior brick facade should be cleaned.						
Sub Total for System		10	items		\$951,872	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Classroom Entry Doors Provide Insufficient Sound Isolation	Acoustics	56	Ea.	3	\$462,969	4741
Note: All classrooms						
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	104,145	SF	3	\$934,264	2711
The Carpet Flooring Requires Replacement	Capital Renewal	7,100	SF	3	\$153,429	2949
Note: There is carpet in the main office and library. The carpet has been patched and in some areas is fraying.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	99,400	SF	3	\$1,132,613	2714
Note: Original tile is chipped, aged, and very worn out.						
Acoustic ceiling tile - large area (>10%) of broken or falling broken tiles	Hazardous Material	2,355	SF	4	\$27,379	Rollup
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	100	LF	4	\$1,889	Rollup
Ceiling Grid Requires Replacement	Capital Renewal	106,500	SF	4	\$1,254,637	2947
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	2	Ea.	4	\$567	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	3,725	SF	4	\$35,175	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	\$1,133	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	150	LF	4	\$3,399	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	1	Ea.	5	\$1,536	Rollup
Sub Total for System		12	items		\$4,008,990	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Unit Vent	Capital Renewal	48	Ea.	2	\$806,443	2689
Note: Units are aged with clogged fins, blowers, and coils.						
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	2	Ea.	2	\$1,578,219	2728
Note: 11,074 MBH oil fired - propane pilot boilers						
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	1	Ea.	2	\$74,797	2737
The Exterior Condenser Requires Replacement	Capital Renewal	1	Ea.	2	\$8,066	2738
Note: Coils have collapsed.						
The Fan Coil HVAC Component Requires Replacement	Capital Renewal	1	Ea.	2	\$5,666	2740
The Radiant Heat HVAC Component Requires Replacement	Capital Renewal	25	Ea.	2	\$189,001	2705
Note: Aged with corroded connections and clogged fins.						
The Window AC Unit Component Requires Replacement	Capital Renewal	8	Ea.	2	\$26,531	2712
Note: Units are missing parts or are non-functional.						
The Large Diameter Exhausts/Hoods Require Replacement	Capital Renewal	21	Ea.	3	\$289,798	2709
Note: Units are rusted and damaged, missing hoods and/or belts.						
The Make Up Air Equipment Requires Replacement	Capital Renewal	4	Ea.	3	\$63,170	2720
Note: Gym units are non-functional. Locker room units do not heat.						
Location: 2 in gym, 2 in locker rooms						
The Small Diameter Exhausts/Hoods Require Replacement	Capital Renewal	22	Ea.	3	\$57,628	2708
Note: Units are rusted and damaged, missing hoods and/or belts.						
Unit Ventilators Are Excessively Noisy	Acoustics	56	Ea.	3	\$352,925	4742
Note: All classrooms						
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	2	Ea.	4	\$5,319	2723
Note: Units are aged and blades and louvers are packed with dirt.						
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	142,000	SF	4	\$952,709	2744
Note: System has leaks throughout.						
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	8	Ea.	4	\$75,725	2713
Note: Pumps leak.						
Sub Total for System		14	items		\$4,485,996	



Facility Condition Assessment

Tiverton - Tiverton Middle School

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room last power shut-off valves for utilities	Educational Adequacy	7	Ea.	1	\$9,819	Rollup
Switchgear Is Needed Or Requires Replacement Note: Switchgear and breakers are aged and not tested.	Capital Renewal	5	Ea.	2	\$342,968	2717
The Distribution Panel Requires Replacement	Capital Renewal	1	Ea.	2	\$51,559	2950
The Distribution Panel Requires Replacement	Capital Renewal	1	Ea.	2	\$51,559	2951
The Electrical Disconnect Requires Replacement Note: Corrosion at contact tabs	Capital Renewal	3	Ea.	2	\$5,462	2721
The Electrical Transformer Requires Replacement	Capital Renewal	1	Ea.	2	\$10,450	2734
The Lighting Fixtures Require Replacement	Capital Renewal	142,000	SF	2	\$838,062	2743
The Panelboard Requires Replacement Note: Panels have corroded connections.	Capital Renewal	26	Ea.	2	\$149,765	2704
The Panelboard Requires Replacement Note: Panels have corrosion at connections and are missing twist outs.	Capital Renewal	14	Ea.	2	\$67,423	2715
The Panelboard Requires Replacement Note: Aged panelboards missing covers.	Capital Renewal	2	Ea.	2	\$15,298	2724
The Mounted Building Lighting Requires Replacement	Capital Renewal	32	Ea.	3	\$47,441	2702
Transfer Switch Requires Replacement Note: Contacts are burned.	Capital Renewal	200	Amps	3	\$7,095	2688
Room Has Insufficient Electrical Outlets	Educational Adequacy	204	Ea.	5	\$100,556	Rollup
Sub Total for System		13	items		\$1,697,456	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Backflow Preventer Requires Replacement Note: Backflow preventer is aged and connections are rusted.	Capital Renewal	3	Ea.	2	\$27,547	2731
Sump Pump Requires Replacement Note: Pumps are failing. Sump is full.	Capital Renewal	2	Ea.	3	\$2,878	2729
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	56	Ea.	3	\$423,044	2699
The Urinal Plumbing Fixtures Require Replacement Note: Aged urinals are stained and cracking.	Capital Renewal	26	Ea.	3	\$34,323	2703
The Classroom Lavatories Plumbing Fixtures Require Replacement Note: Classroom lavatories are stained and rusted and the science units are non-functional.	Capital Renewal	67	Ea.	4	\$180,946	2692
The Custodial Mop Or Service Sink Requires Replacement Note: Sinks are corroded and stained.	Capital Renewal	6	Ea.	4	\$15,354	2718
The Refrigerated Water Cooler Requires Replacement Note: Units are aged and rusted. Some have missing parts or are broken.	Capital Renewal	14	Ea.	4	\$102,588	2710
The Restroom Lavatories Plumbing Fixtures Require Replacement Note: Restroom lavatories are aged and stained.	Capital Renewal	47	Ea.	4	\$148,502	2700
The Restroom Lavatories Plumbing Fixtures Require Replacement Note: Lavatories aged, stained, and drains are clogged.	Capital Renewal	23	Ea.	4	\$72,671	2707
Above Ground Fuel/Oil Storage Tank Requires Replacement Note: There is no tank gauging system and the concrete protection is cracked with damaged insulation.	Capital Renewal	1	Ea.	5	\$56,658	2745
Room lacks a drinking fountain.	Educational Adequacy	6	Ea.	5	\$6,572	Rollup
Room lacks a private shower area.	Educational Adequacy	1	Ea.	5	\$10,166	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	8	Ea.	5	\$12,011	Rollup
Sub Total for System		13	items		\$1,093,261	

Fire and Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Kitchen Exhaust Hood Note: System is aged and has damaged and clogged filters.	Capital Renewal	2	Ea.	1	\$31,713	2722
Room lacks shut-off valves for utilities. (International Fuel Gas Code, Section 409.6)	Educational Adequacy	7	Ea.	1	\$79,321	Rollup
Sub Total for System		2	items		\$111,034	



Facility Condition Assessment

Tiverton - Tiverton Middle School

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	21	Ea.	3	\$118,981	Rollup
Technology: Auditorium AV/Multimedia system is in need of minor improvements.	Technology	1	Room	3	\$94,430	4003
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	1	Ea.	3	\$9,443	3998
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	48	Ea.	3	\$951,849	3999
Technology: Instructional spaces do not have local sound reinforcement.	Technology	48	Ea.	3	\$226,631	3996
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	\$5,288	3991
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	\$37,394	3990
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$4,721	3995
Technology: Main Telecommunications Room ground system is inadequate or non-existent.	Technology	1	Ea.	3	\$6,610	3987
Technology: Main Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	\$8,971	3989
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	78	Ea.	3	\$33,145	3988
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	166	Ea.	3	\$70,539	3993
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	192	Ea.	3	\$81,587	4005
Technology: Network system inadequate and/or near end of useful life	Technology	8	Ea.	3	\$60,435	4001
Technology: Network system inadequate and/or near end of useful life	Technology	44	Ea.	3	\$207,745	4002
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	142,000	SF	3	\$241,362	4004
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	\$53,825	3997
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	6	Room	3	\$113,315	4000
Technology: Telecommunications Room (large size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$7,554	3986
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	\$4,721	3992
Technology: Telecommunications Room fiber connectivity infrastructure is outdated and/or inadequate.	Technology	1	Ea.	3	\$6,232	3994
Sub Total for System		21	items		\$2,344,779	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	2	Ea.	3	\$9,065	Rollup
Replace Cabinetry In Classes/Labs	Capital Renewal	60	Room	4	\$666,748	2952
Room lacks an appropriate refrigerator.	Educational Adequacy	7	Ea.	5	\$59,491	Rollup
Sub Total for System		3	items		\$735,304	
Sub Total for Building 01 - Main Building		90	items		\$18,990,488	
Total for Campus		98	items		\$21,052,194	



Tiverton 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
Playfield Areas	MS Athletic Components	1	Ea.	\$339,701	3
Sub Total for System		1	items	\$339,701	
Sub Total for Building -		1	items	\$339,701	

Building: 01 - Main Building

Roofing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Low-Slope Roofing	EPDM - Rubber Roofing Material	7,100	SF	\$89,774	5
Sub Total for System		1	items	\$89,774	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	125,800	SF	\$831,204	2
Interior Operable Partitions	Foldable partition (Bldg SF)	1,200	SF Wall	\$138,612	4
Wall Paneling	Wood Panel wall	2,000	SF	\$18,253	4
Note: Stage area					
Interior Door Supplementary Components	Door Hardware	150	Door	\$470,595	5
Sub Total for System		4	items	\$1,458,664	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Facility Hydronic Distribution	2-Pipe Water System (Hot)	142,000	SF	\$1,094,563	3
Sub Total for System		1	items	\$1,094,563	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Packaged Generator Assemblies	Emergency Generator (150 KW)	1	Ea.	\$123,591	5
Sub Total for System		1	items	\$123,591	

Conveyances

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Elevators	Hydraulic (Passenger Elev)	1	Ea.	\$285,209	5
Sub Total for System		1	items	\$285,209	

Specialties

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Casework	Lockers	1,500	Ea.	\$737,979	4
Sub Total for System		1	items	\$737,979	
Sub Total for Building 01 - Main Building		9	items	\$3,789,780	
Total for: Tiverton Middle School		10	items	\$4,129,481	



Supporting Photos



Site Aerial



Aged Pole Mounted Lights



Alligatoring Parking Lot Pavement



Cracked Concrete Walkway



Facility Condition Assessment

Tiverton - Tiverton Middle School



Cracked Roadway Asphalt



Concrete Stairs Settling



Hallway Finishes



Condenser With Collapsed Coils



Science Room



100A Panelboard



Facility Condition Assessment

Tiverton - Tiverton Middle School



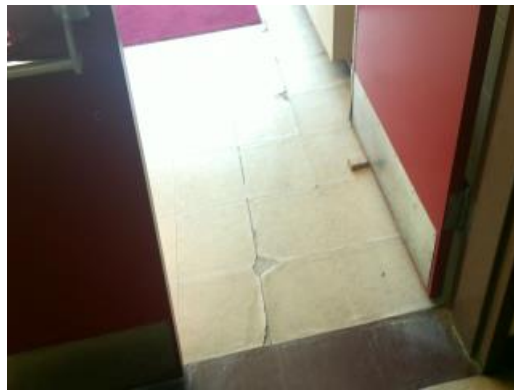
Roof General Condition



Transformer



Typical Restroom Lavatory Fixture



Peeling VCT Flooring



Aged Boilers



Original Exterior Doors



Facility Condition Assessment

Tiverton - Tiverton Middle School



Pneumatic Controls Panel



Typical Urinal Fixture



Transfer Switch With Burned Contacts



Transformer Disconnect



Damaged Small Exhaust Fan

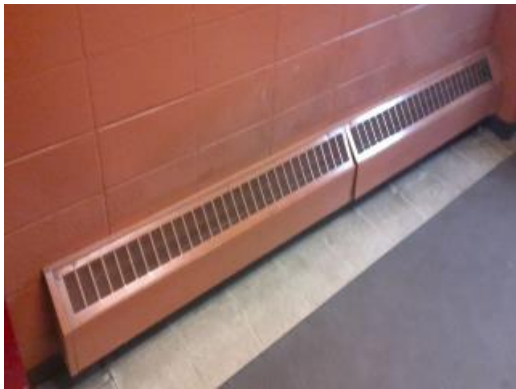


Typical Building Mounted Fixture



Facility Condition Assessment

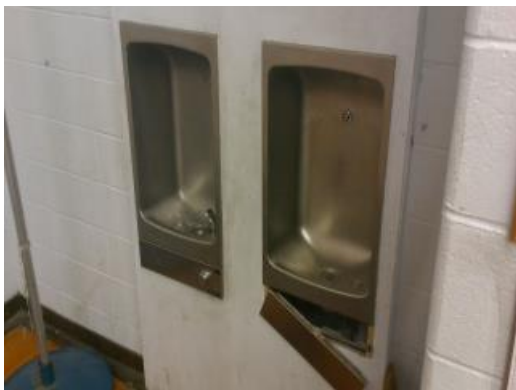
Tiverton - Tiverton Middle School



Aged Radiant Heaters



Non-Functional Make-up Air Unit



Damaged Drinking Fountain



Building Signage



Gymnasium



Fire Panel



Facility Condition Assessment

Tiverton - Tiverton Middle School



Music Room



Aged Heating Unit



Damaged And Missing Ceiling Tiles



Typical Classroom



Exhaust Fan Missing Hood



Window Unit



Facility Condition Assessment

Tiverton - Tiverton Middle School



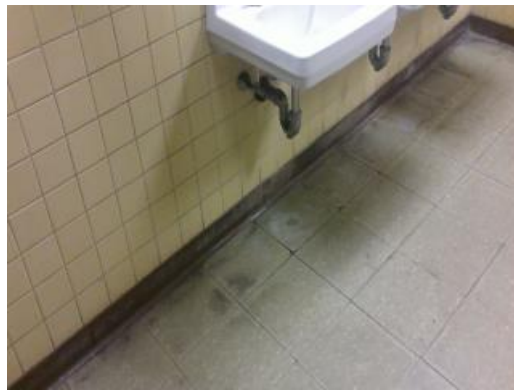
Switchgear



Non-Functional Heating Unit



Stained Mop Sink



Curling VCT Flooring In Restroom



Failing Sump Pump



Compressor For Pneumatic Controls

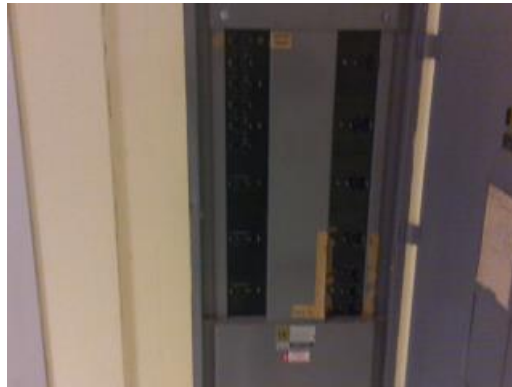


Facility Condition Assessment

Tiverton - Tiverton Middle School



Cafeteria



225A Panel With Corroded Connections



Aged Boiler For Hot Water



Aged Water Pumps



Worn VCT Flooring



Boys Bathroom



Facility Condition Assessment

Tiverton - Tiverton Middle School



Shower Fixtures



Fuel Storage Tank



Damaged Insulation At Fuel Tank



Cracked Concrete On Fuel Tank



Main Entrance



Aged Wall Exhaust



Facility Condition Assessment

Tiverton - Tiverton Middle School



Stained Lavatory



Stained And Corroded Service Sink



Aged Backflow Preventer



Stained And Worn Classroom Lavatory