Facility Condition Assessment

West Warwick - West Warwick Senior High School | *June 2017*

1 Webster Knight Drive, West Warwick, RI 02893

Introduction

West Warwick Senior High School, located at 1 Webster Knight Drive in West Warwick, Rhode Island, was built in 1964. It comprises 135,706 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.

West Warwick Senior High School serves grades 9 - 12, has 58 instructional spaces, and has an enrollment of 992. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for West Warwick Senior High School is 1,150 with a resulting utilization of 86%.

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 West Warwick Senior High School the 5-year need is $8,819,591. 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 West Warwick Senior 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 West Warwick Senior 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
	CMU Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
04 - Concession Stand:	CMU Exterior Wall
	Vinyl Siding Exterior Wall
	Steel Exterior Entrance Doors
05 - Storage:	Vinyl Siding Exterior Wall
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors

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

01 - Main Building:	Built-Up Roofing With Ballast
	Aluminum Canopy Roofing
04 - Concession Stand:	Composition Shingle Roofing
05 - Storage:	Composition Shingle Roofing

Interior

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

01 - Main Building:	Foldable Interior Partition
	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

01 - Main Building:	Painted Ceilings
	Ceramic Tile Wall
	Brick/Stone Veneer
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Quarry Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Terrazzo Flooring
	Carpet
04 - Concession Stand:	Wood Ceilings
	Interior Wall Painting
	Concrete Flooring
05 - Storage:	Wood Ceilings
	Interior Wall Painting
	Concrete Flooring
	Wood Flooring

Mechanical

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

01 - Main Building:	4,800 MBH Steel Tube Boiler
	Finned Wall Radiator
	DDC Heating System Controls
	1 Ton Ductless Split System
	2 Ton Ductless Split System
	3 Ton Ductless Split System
	10 Ton Package DX Unit
	15 Ton Package DX Unit
	20 Ton Package DX Unit
	Make-up Air Unit
	1 HP or Smaller Pump
	5 HP Pump
	Ductwork
	15,000 CFM Interior AHU
	Kitchen Exhaust Hoods
	Large Roof Exhaust Fan
	Small Roof Exhaust Fan
	Fire Sprinkler System

Plumbing

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

01 - Main Building:	1,000 Gallon Water Storage Tank
	250 Gallon Water Storage Tank
	Gas Piping System
	40 Gallon Electric Water Heater
	80 Gallon Electric Water Heater
04 - Concession Stand:	40 Gallon Electric Water Heater
01 - Main Building:	Domestic Water Piping System
04 - Concession Stand:	Domestic Water Piping System
05 - Storage:	Domestic Water Piping System
01 - Main Building:	Classroom Lavatories
	Lavatories
	Mop/Service Sinks
	Refrigerated Drinking Fountain
	Restroom Lavatories
	Showers
	Toilets
	Urinals
04 - Concession Stand:	Restroom Lavatories
	Toilets
	Urinals
01 - Main Building:	Air Compressor (5 hp)

Electrical

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

01 - Main Building:	75 kW Emergency Generator
	Solar Panels
	208/120v Switch
	1,600 Amp Switchgear
	600 Amp Switchgear
	1600 Amp Distribution Panel
	400 Amp Distribution Panel
	Panelboard - 120/208 100A
	Panelboard - 120/208 125A
	Panelboard - 120/208 225A
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Canopy Mounted Lighting Fixtures
	Light Fixtures
04 - Concession Stand:	45 KVA Transformer
	400 Amp Distribution Panel

04 - Concession Stand:	Panelboard - 120/208 225A
	Panelboard - 277/480 225A
	Light Fixtures
	Canopy Mounted Lighting Fixtures
05 - Storage:	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

	Priority						
System	1	2	3	4	5	Total	% of Total
Site	-	-	$343,051	$35,651	$528,828	$907,529	13.46 %
Roofing	-	-	$660	$257,480	-	$258,141	3.83 %
Structural	$9,903	-	-	-	-	$9,903	0.15 %
Exterior	-	$1,469,374	$435,736	-	-	$1,905,110	28.26 %
Interior	-	-	$629,829	$210,751	$3,480	$844,059	12.52 %
Mechanical	-	-	$28,945	$87,943	-	$116,888	1.73 %
Electrical	-	$99,031	-	-	$105,208	$204,239	3.03 %
Plumbing	-	-	-	-	$43,021	$43,021	0.64 %
Fire and Life Safety	-	-	-	-	-	$0	0.00 %
Technology	-	-	$2,370,692	-	-	$2,370,692	35.17 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$4,563	$11,654	$65,028	$81,245	1.21 %
Total	$9,903	$1,568,404	$3,813,476	$603,480	$745,564	$6,740,827	

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

The building systems with the most need include:

Technology	-	$2,370,692
Exterior	-	$1,905,110
Site	-	$907,529

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

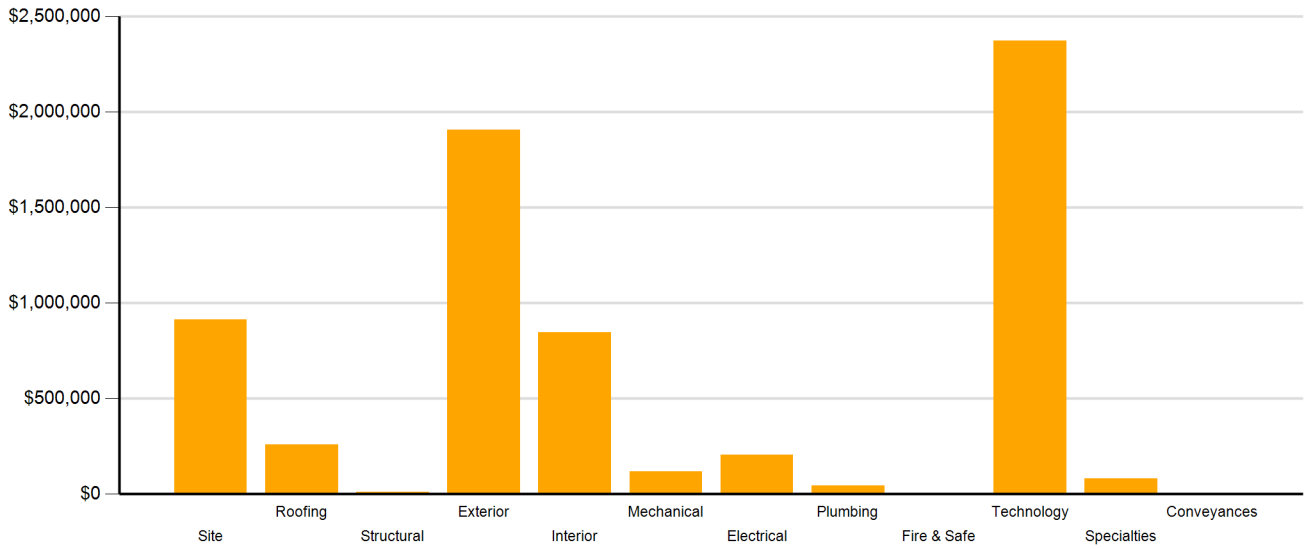

Figure 2: System Deficiencies

Current Deficiencies by Category

Deficiencies have been further grouped according to the observed category.

• **Acoustics** deficiencies relate to room acoustics, sound insolation, 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

	Priority					
Category	**1**	**2**	**3**	**4**	**5**	**Total**
Acoustics	-	-	-	-	-	$0
Barrier to Accessibility	-	-	-	-	-	$0
Capital Renewal	$9,903	$1,568,404	$1,432,516	$324,596	-	$3,335,420
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	-	-	$38,788	$229,943	$745,564	$1,014,295
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$48,941	-	$48,941
Technology	-	-	$2,336,467	-	-	$2,336,467
Traffic	-	-	$5,704	-	-	$5,704
Total	$9,903	$1,568,404	$3,813,476	$603,480	$745,564	$6,740,827

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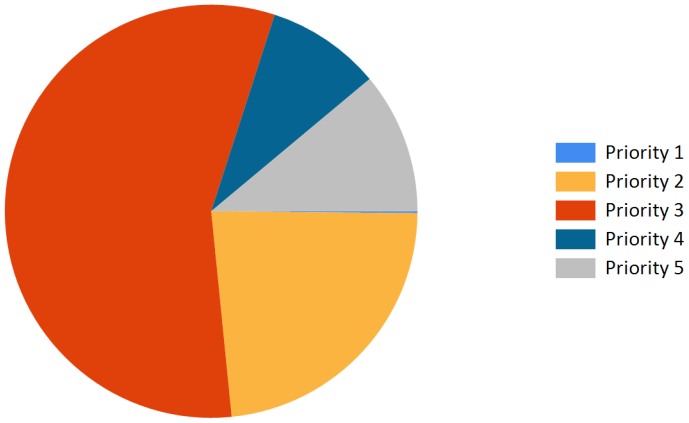

Figure 3: Current deficiencies by priority

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

		Life Cycle Capital Renewal Projections						
System	Current Deficiencies	Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021	LC Yr. 1-5 Total	Total 5-Year Need
Site	$907,529	$0	$0	$0	$0	$0	$0	$907,529
Roofing	$258,141	$0	$0	$0	$0	$0	$0	$258,141
Structural	$9,903	$0	$0	$0	$0	$0	$0	$9,903
Exterior	$1,905,110	$0	$0	$0	$0	$166,847	$166,847	$2,071,957
Interior	$844,059	$0	$3,964	$0	$0	$967,341	$971,305	$1,815,364
Mechanical	$116,888	$0	$0	$0	$322,028	$485,036	$807,064	$923,952
Electrical	$204,239	$0	$0	$0	$104,890	$3,565	$108,455	$312,694
Plumbing	$43,021	$0	$0	$3,540	$0	$9,195	$12,735	$55,756
Fire and Life Safety	$0	$0	$0	$0	$0	$0	$0	$0
Technology	$2,370,692	$0	$0	$0	$0	$0	$0	$2,370,692
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$81,245	$0	$0	$0	$0	$0	$0	$81,245
Total	**$6,740,827**	**$0**	**$3,964**	**$3,540**	**$426,918**	**$1,631,984**	**$2,066,406**	**$8,807,233**

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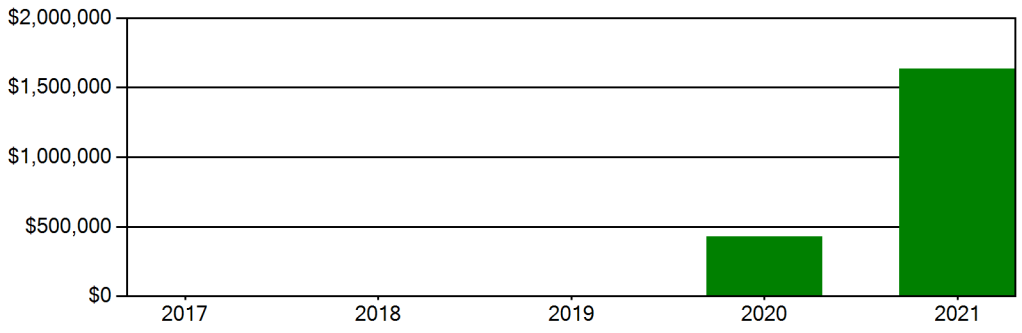
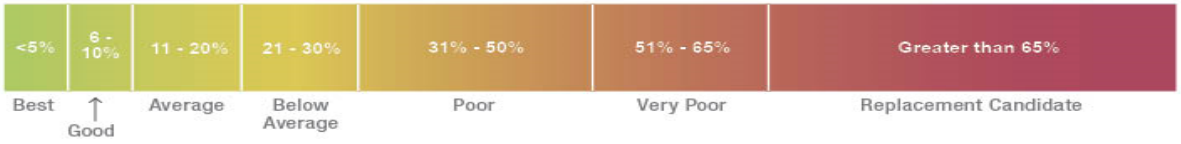


Figure 4: Life Cycle Capital Renewal Forecast

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 $48,854,160. For planning purposes, the total 5-year need at the West Warwick Senior High School is $8,819,591 (Life Cycle Years 1-5 plus the FCI deficiency cost). The West Warwick Senior High School facility has a 5-year FCI of 18.03%.

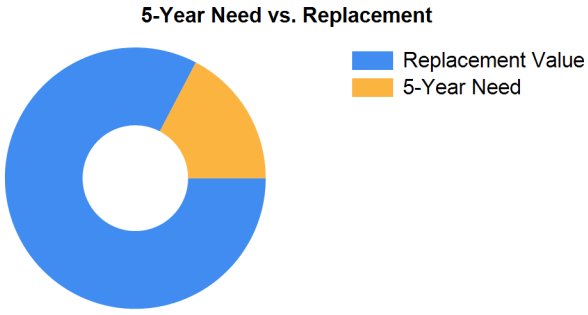


Figure 5: 5-Year FCI

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 672 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 West Warwick Senior High School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $0.

Summary of Findings

The West Warwick Senior High School comprises 135,706 square feet and was constructed in 1964. Current deficiencies at this school total $6,753,185. Five year capital renewal costs total $2,066,406. The total identified need for the West Warwick Senior High School (current deficiencies and 5-year capital renewal costs) is $8,819,591. The 5-year FCI is 18.03%.

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
West Warwick Senior High School Totals	135,706	1964	$6,753,185	$2,066,406	$8,819,591	18.03%

**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	Capital Renewal	5,000	SF	3	$127,748	19650
Note: Staff informed the assessment team that sidewalks are scheduled to be replaced summer 2016.						
Crosswalk Requires Repainting	Traffic	3	Ea.	3	$2,852	24661
Note: Repaint crosswalks at end of school driveway on Factory St and large crosswalk on campus						
Crosswalk Requires Repainting	Traffic	3	Ea.	3	$2,852	25089
Note: Repaint crosswalks at end of school driveway on Factory St and large crosswalk on campus						
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$35,651	28620
Note: Backstops Require Replacement						
PE / Recess Playfield is Missing and is Needed	Educational Adequacy	1	Ea.	5	$64,020	54957
Note: PE / Recess Playfield is Missing and is Needed						
School has insufficient # of tennis courts.	Educational Adequacy	1	Ea.	5	$203,366	29052
Note: School has insufficient # of tennis courts.						
School has insufficient baseball fields.	Educational Adequacy	1	Ea.	5	$261,442	28332
Note: School has insufficient baseball fields.						
	Sub Total for System	**7**	**items**		**$697,930**	
	Sub Total for School and Site Level	**7**	**items**		**$697,930**	

Building: 01 - Main Building

Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Retaining Wall Requires Repair	Capital Renewal	3,000	SF	3	$209,599	19603
Note: Concrete retaining wall is deteriorating.						
	Sub Total for System	**1**	**items**		**$209,599**	

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Roof Drains Require Cleaning	Capital Renewal	16	Ea.	3	$660	19596
Note: Drains are missing cages and have debris, gravel, and vegetation inside.						
Aluminum Panel Canopy Or Awning Requires Replacement	Capital Renewal	1,300	SF	4	$257,480	19605
Note: Canopy roofing panels are missing and columns are damaged.						
	Sub Total for System	**2**	**items**		**$258,141**	

Structural

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Foundation Study Recommended	Capital Renewal	1	Job	1	$9,903	19651
Note: Classroom 185 has a large deep crack in the floor.						
	Sub Total for System	**1**	**items**		**$9,903**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	8,184	SF	2	$1,442,635	19595
Note: Single pane windows have failing seals and should be replaced.						
The Brick Exterior Requires Repointing	Capital Renewal	10,000	SF Wall	3	$435,736	19601
	Sub Total for System	**2**	**items**		**$1,878,371**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Carpet Flooring Requires Replacement	Capital Renewal	10,488	SF	3	$237,686	19597
Note: Carpet is stained, bubbled, and tearing.						
The Vinyl Composition Tile Requires Replacement	Capital Renewal	32,776	SF	3	$391,664	19598
Note: VCT flooring is worn and seams are lifting.						

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Vinyl Composition Tile Requires Replacement	Capital Renewal	40	SF	3	$478	19600
Note: Classroom 185 has a large deep crack in the floor.						
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	45	Ea.	4	$13,369	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	220	LF	4	$5,229	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	3,064	SF	4	$30,343	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	2,791	SF	4	$106,348	Rollup
The Terrazzo Flooring Requires Repair	Capital Renewal	1,000	SF	4	$55,462	19602
Note: Terrazzo has various cracks in restrooms and classrooms.						
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,480	Rollup
	Sub Total for System	**9**	**items**		**$844,059**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Large Diameter Exhausts/Hoods Require Replacement	Capital Renewal	2	Ea.	3	$28,945	19599
Lab lacks an appropriate fume hood.	Educational Adequacy	4	Ea.	4	$87,943	Rollup
	Sub Total for System	**2**	**items**		**$116,888**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Generator Requires Replacement	Capital Renewal	1	Ea.	2	$99,031	19604
Note: Generator shows evidence of leaking.						
Room Has Insufficient Electrical Outlets	Educational Adequacy	212	Ea.	5	$105,208	Rollup
	Sub Total for System	**2**	**items**		**$204,239**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks a drinking fountain.	Educational Adequacy	4	Ea.	5	$4,411	Rollup
Room lacks a private shower area.	Educational Adequacy	2	Ea.	5	$20,470	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	12	Ea.	5	$18,139	Rollup
	Sub Total for System	**3**	**items**		**$43,021**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	6	Ea.	3	$34,225	Rollup
Technology: Campus network switching electronics are antiquated and/or do not meet standards.	Technology	624	Ea.	3	$308,977	18071
Technology: Classroom AV/Multimedia systems are in need of improvements.	Technology	55	Ea.	3	$544,670	18091
Technology: Classroom AV/Multimedia systems are inadequate and/or near end of useful life.	Technology	1	Ea.	3	$20,797	18092
Technology: Instructional spaces do not have local sound reinforcement.	Technology	57	Ea.	3	$282,238	18096
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,546	18076
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,546	18080
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,546	18084
Technology: Intermediate Telecommunications Room grounding system is inadequate or non-existent.	Technology	1	Ea.	3	$5,546	18088

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$39,216	18075
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$39,216	18079
Technology: Intermediate Telecommunications Room needs M/E improvements.	Technology	1	Ea.	3	$25,352	18083
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$17,429	18087
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,952	18078
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,952	18082
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,952	18086
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$22,579	18073
Technology: Main Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$9,408	18074
Technology: Network cabling infrastructure is outdated (Cat 5 or less) and/or does not meet standards.	Technology	549	Ea.	3	$244,656	18072
Technology: Network system inadequate and/or near end of useful life	Technology	8	Ea.	3	$63,380	18094
Technology: Network system inadequate and/or near end of useful life	Technology	60	Ea.	3	$297,093	18095
Technology: PA/Bell/Clock system is inadequate and/or near end of useful life.	Technology	124,100	SF	3	$221,215	18093
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$56,448	18090
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,952	18077
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,952	18081
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,952	18085
Technology: Telephone handsets are inadequate and sparsely deployed throughout the campus.	Technology	58	Ea.	3	$91,901	18089
	Sub Total for System	**27**	**items**		**$2,370,692**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	1	Ea.	3	$4,563	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	6	Ea.	5	$51,338	Rollup
The room lacks a washer and/or dryer.	Educational Adequacy	1	Ea.	5	$13,690	Rollup
	Sub Total for System	**3**	**items**		**$69,591**	
	Sub Total for Building 01 - Main Building	**52**	**items**		**$6,004,504**	

Building: 04 - Concession Stand

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Metal Exterior Door Requires Replacement	Capital Renewal	4	Door	2	$26,738	19895
	Sub Total for System	**1**	**items**		**$26,738**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Replace Cabinetry In Classes/Labs	Capital Renewal	1	Room	4	$11,654	19896
	Sub Total for System	**1**	**items**		**$11,654**	
	Sub Total for Building 04 - Concession Stand	**2**	**items**		**$38,392**	
	Total for Campus	**61**	**items**		**$6,740,827**	

Buildings with no reported deficiencies

05 - Storage

West Warwick Senior High School - Life Cycle Summary Yrs 1-5

Building: 01 - Main Building

Exterior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Exterior Entrance Doors	Steel - Insulated and Painted	26	Door	$166,847	5
	Sub Total for System	**1**	**items**	**$166,847**	

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Interior Operable Partitions	Foldable partition (Bldg SF)	2,000	SF Wall	$231,019	5
Note:	Gym & Room 129				
Wall Painting and Coating	Painting/Staining (Bldg SF)	111,440	SF	$736,322	5
	Sub Total for System	**2**	**items**	**$967,342**	

Mechanical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Decentralized Cooling	Package DX Unit (10 Ton)	2	Ea.	$44,234	4
Note:	8.5 Tons				
Decentralized Cooling	Package DX Unit (15 Ton)	2	Ea.	$56,441	4
Note:	1 @ 15 tons; 1 @ 12.5 tons				
Decentralized Cooling	Package DX Unit (20 Ton)	4	Ea.	$157,755	4
Note:	3 @ 20 tons; 1 @ 17.5 tons				
Air Distribution	Make-up Air Unit	4	Ea.	$63,598	4
Exhaust Air	Roof Exhaust Fan - Small	28	Ea.	$73,843	5
Exhaust Air	Kitchen Exhaust Hoods	4	Ea.	$63,856	5
Exhaust Air	Roof Exhaust Fan - Large	25	Ea.	$347,337	5
	Sub Total for System	**7**	**items**	**$807,064**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Power Distribution	Panelboard - 120/208 100A	4	Ea.	$19,394	4
Power Distribution	Panelboard - 120/208 225A	11	Ea.	$63,792	4
Lighting Fixtures	Canopy Mounted Fixtures (Ea.)	6	Ea.	$8,271	4
Lighting Fixtures	Building Mounted Fixtures (Ea.)	9	Ea.	$13,433	4
	Sub Total for System	**4**	**items**	**$104,890**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 40 gallon	1	Ea.	$3,540	3
Domestic Water Equipment	Water Heater - Electric - 80 gallon	1	Ea.	$5,655	5
	Sub Total for System	**2**	**items**	**$9,195**	
	Sub Total for Building 01 - Main Building	**16**	**items**	**$2,055,338**	

Building: 04 - Concession Stand

Interior

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)	600	SF	$3,964	2
	Sub Total for System	**1**	**items**	**$3,964**	

Electrical

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Lighting Fixtures	Light Fixtures (Bldg SF)	600	SF	$3,565	5
	Sub Total for System	**1**	**items**	**$3,565**	

Plumbing

Uniformat Description	LC Type Description	Qty	UoM	Repair Cost	Remaining Life
Domestic Water Equipment	Water Heater - Electric - 40 gallon	1	Ea.	$3,540	5
	Sub Total for System	**1**	**items**	**$3,540**	
	Sub Total for Building 04 - Concession Stand	**3**	**items**	**$11,070**	
	Total for: West Warwick Senior High School	**19**	**items**	**$2,066,408**	

Supporting Photos


Storage Building Exterior


Worn VCT


Concessions Building Exterior


Storage Building Exterior


Concessions Building Exterior


Asphalt Replacement In Progress


VCT Seams Separating


Cracked Flooring


Crack In VCT Floor


Toilet Partitions

Site Aerial

Computer Lab

Library

East Elevation

Typical Classroom

Main Entry


Computer Room


Cafeteria


Restroom Lavatories


North Elevation


Southeast Exterior


Art Room

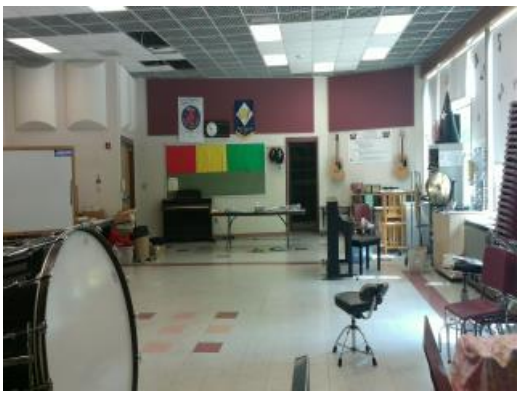
Auditorium

Plaque

Music Room

Gymnasium

Library



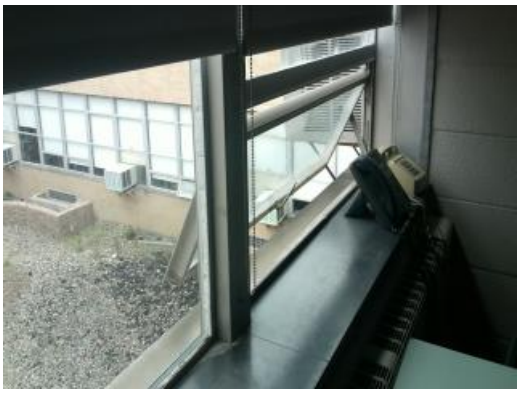
Band Room

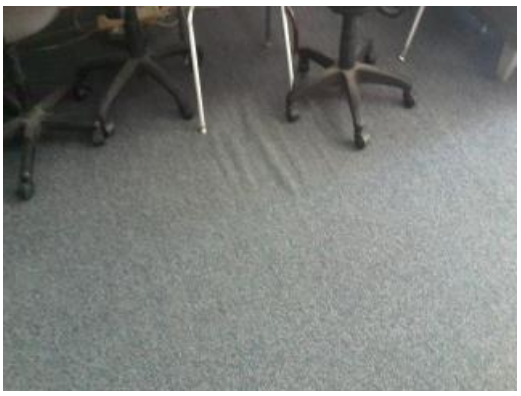

Cafeteria


Damaged Window


Exterior Finishes


Missing Drain Cover


Single Pane Window


Bubbled Carpet


Debris In Roof Drain


Repointing Needed


Worn And Torn Carpet


Cracked Terrazzo


Cracked Terrazzo


Concrete Retaining Wall


Deteriorated Concrete Retaining Wall


Damaged Canopy Columns


Missing Canopy Panels


Weathered Package Unit


Damaged Small Exhaust Fan

Leaking Generator

Large Exhaust Fan Missing Cover