Facility Condition Assessment

Lincoln - Lincoln Senior High School | *June 2017*

135 Old River Road, Lincoln, RI 02865

Introduction

Lincoln Senior High School, located at 135 Old River Road in Lincoln, Rhode Island, was built in 1964. It comprises 212,323 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.

Lincoln Senior High School serves grades 9 - 12, has 90 instructional spaces, and has an enrollment of 886. Instructional spaces are defined as rooms in which a student receives education. The LEA reported capacity for Lincoln Senior High School is 1,200 with a resulting utilization of 74%.

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 Lincoln Senior High School the 5-year need is $35,189,215. 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 Lincoln 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 Lincoln 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
	Asphalt Pedestrian Pavement

Building Envelope

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

01 - Main Building:	Brick Exterior Wall
	CMU Exterior Wall
	Pre-cast Concrete Panel Exterior Wall
	Wood Exterior Windows
	Aluminum Exterior Windows
	Storefront / Curtain Wall
	Storefront Entrance Doors
	Steel Exterior Entrance Doors
	Overhead Exterior Utility Doors
02 - Building 02:	Clear Polycarbonate Exterior Wall
	Storefront Entrance Doors
03 - Building 03:	Vinyl Siding Exterior Wall
	Wood Exterior Doors
04 - Storage Shed:	Vinyl Siding Exterior Wall
	Wood Exterior Doors
05 - Stadium Press Box:	Metal Panel Exterior Wall
	Aluminum Exterior Windows
	Steel Exterior Entrance Doors
06 - Metal Storage:	Metal Panel Exterior Wall
	Overhead Exterior Utility Doors

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

01 - Main Building:	Single Ply Membrane Ballasted Roofing
	Canopy Roofing
02 - Building 02:	Clear Polycarbonate Roofing
03 - Building 03:	Composition Shingle Roofing
04 - Storage Shed:	Composition Shingle Roofing
05 - Stadium Press Box:	Metal Low-Slope Roofing
06 - Metal Storage:	Metal Low-Slope 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
	Suspended Acoustical Grid System
	Suspended Acoustical Ceiling Tile
	Painted Ceilings
	Ceramic Tile Wall
	Wood Wall Paneling
	Interior Wall Painting
	Concrete Flooring
	Ceramic Tile Flooring
	Wood Flooring
	Vinyl Composition Tile Flooring
	Rubber Tile Flooring
	Terrazzo Flooring
	Carpet
	Athletic/Sport Flooring
03 - Building 03:	Door Hardware
	Interior Wall Painting
	Wood Flooring
04 - Storage Shed:	Door Hardware
	Interior Wall Painting
	Wood Flooring
05 - Stadium Press Box:	Painted Ceilings
	Vinyl/Fabric Wall Covering
	Vinyl Composition Tile Flooring
06 - Metal Storage:	Exposed Metal Structure Ceiling
	Interior Wall Painting
	Wood Flooring

Mechanical

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

01 - Main Building:	3,060 MBH Cast Iron Steam Boiler
	4,488 MBH Cast Iron Water Boiler
	240 GPM Steam to Water Heat Exchanger
	Radiant Steam Heater
	Radiant Water Heater

01 - Main Building:	12 MBH Steam Unit Heater
	Pneumatic Heating System Controls
	Window Units
	2-Pipe Hot Water Hydronic Distribution System
	1 HP or Smaller Pump
	5 HP Pump
	10 HP Pump
	2,000 CFM Interior AHU
	2,000 CFM Outdoor AHU
	Kitchen Exhaust Hoods
	4'x6' Ventilator/Relief Vent
	Wall Exhaust Fan
	Roof Exhaust Fan
02 - Building 02:	20 MBH Gas Unit Heater
	Wall Exhaust Fan

Plumbing

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

01 - Main Building:	100 Gallon Water Storage Tank
	500 Gallon Water Storage Tank
	Gas Piping System
	52 Gallon Electric Water Heater
	9.4 GPM Instant Water Heater
	Domestic Water Piping System
	Lavatories
	Mop/Service Sinks
	Non-Refrigerated Drinking Fountain
	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:	1200 kW Emergency Generator
	208/120v Switch
	1,600 Amp Switchgear
	1,500 KVA Transformer
	Panelboard - 120/208 100A
	Panelboard - 120/208 225A

01 - Main Building:	Panelboard - 120/208 400A
	Panelboard - 120/240 100A
	Panelboard - 120/240 225A
	Panelboard - 120/240 400A
	Panelboard - 400+ Amps
	Electrical Disconnect
	Building Mounted Lighting Fixtures
	Light Fixtures
02 - Building 02:	Light Fixtures
05 - Stadium Press Box:	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	-	-	$83,022	$1,017,487	$94,430	$1,194,939	3.80 %
Roofing	-	$6,411,881	$18,253	-	-	$6,430,134	20.47 %
Structural	-	-	-	-	-	$0	0.00 %
Exterior	-	$2,550,964	-	-	$2,183	$2,553,146	8.13 %
Interior	-	-	$2,918,510	$5,598,190	$19,451	$8,536,151	27.17 %
Mechanical	-	$4,385,361	$497,770	$2,303,892	-	$7,187,023	22.88 %
Electrical	-	$534,723	$13,400	-	$146,894	$695,018	2.21 %
Plumbing	-	-	$2,551,170	$500,500	$49,514	$3,101,185	9.87 %
Fire and Life Safety	$91,267	-	-	-	-	$91,267	0.29 %
Technology	-	-	$1,516,172	-	-	$1,516,172	4.83 %
Conveyances	-	-	-	-	-	$0	0.00 %
Specialties	-	-	$4,563	$20,192	$87,274	$112,029	0.36 %
Total	$91,267	$13,882,929	$7,602,861	$9,440,262	$399,746	$31,417,064	

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

The building systems with the most need include:

Interior	-	$8,536,151
Mechanical	-	$7,187,023
Roofing	-	$6,430,134

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

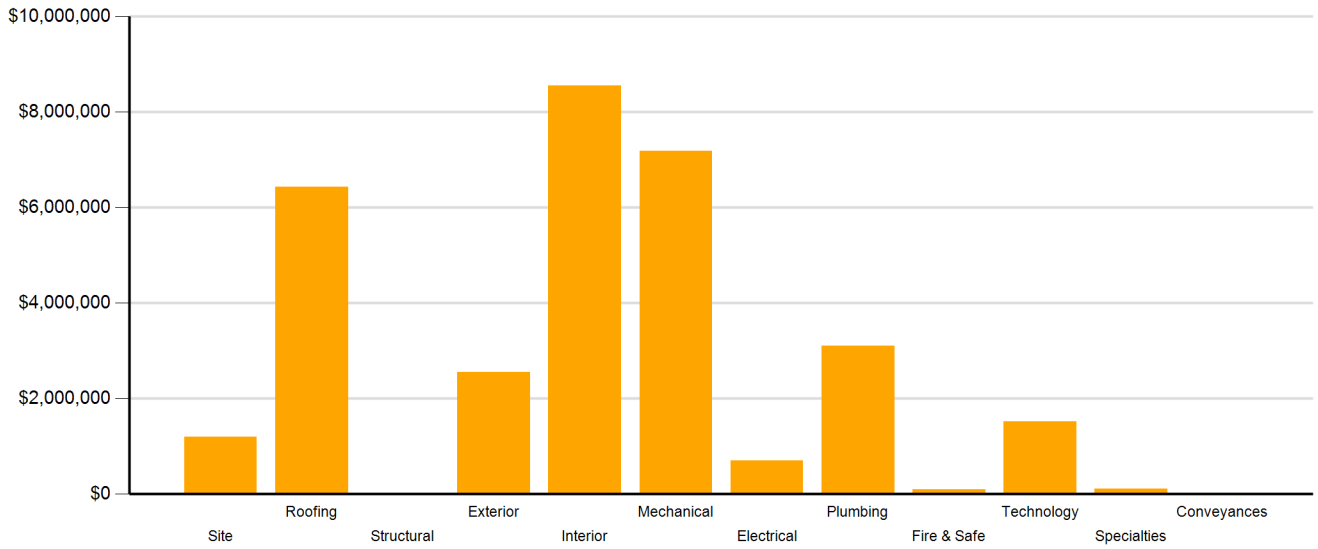

Figure 2: System Deficiencies

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	-	-	$315,127	-	-	$315,127
Capital Renewal	-	$13,882,929	$5,729,604	$5,477,746	$2,183	$25,092,462
Code Compliance	-	-	-	-	-	$0
Educational Adequacy	$91,267	-	$15,972	$1,466,878	$397,563	$1,971,680
Functional Deficiency	-	-	-	-	-	$0
Hazardous Material	-	-	-	$2,495,639	-	$2,495,639
Technology	-	-	$1,504,763	-	-	$1,504,763
Traffic	-	-	$37,394	-	-	$37,394
Total	$91,267	$13,882,929	$7,602,861	$9,440,262	$399,746	$31,417,064

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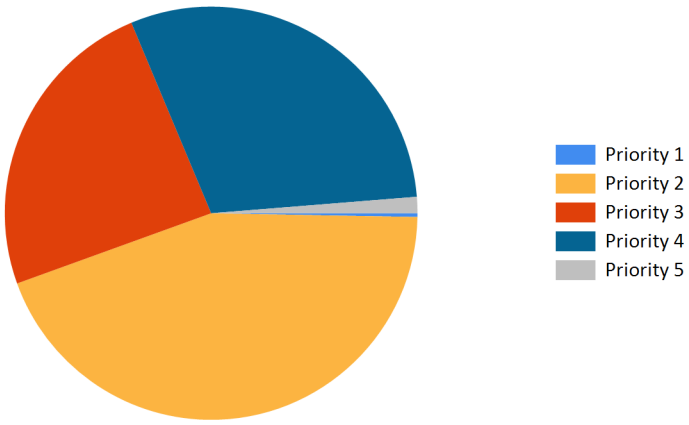

Figure 3: Current deficiencies by priority

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	$1,194,939	$0	$0	$0	$585,608	$0	$585,608	$1,780,547
Roofing	$6,430,134	$0	$0	$0	$0	$0	$0	$6,430,134
Structural	$0	$0	$0	$0	$0	$0	$0	$0
Exterior	$2,553,146	$0	$0	$0	$0	$0	$0	$2,553,147
Interior	$8,536,151	$0	$0	$792	$1,796,708	$1,018,492	$2,815,992	$11,352,140
Mechanical	$7,187,023	$0	$0	$0	$0	$0	$0	$7,187,023
Electrical	$695,018	$0	$0	$0	$0	$0	$0	$695,018
Plumbing	$3,101,185	$0	$0	$103,284	$0	$41,865	$145,149	$3,246,334
Fire and Life Safety	$91,267	$0	$0	$0	$0	$0	$0	$91,267
Technology	$1,516,172	$0	$0	$0	$0	$0	$0	$1,516,172
Conveyances	$0	$0	$0	$0	$0	$0	$0	$0
Specialties	$112,029	$0	$0	$0	$201,380	$0	$201,380	$313,409
Total	**$31,417,064**	**$0**	**$0**	**$104,076**	**$2,583,696**	**$1,060,357**	**$3,748,129**	**$35,165,193**

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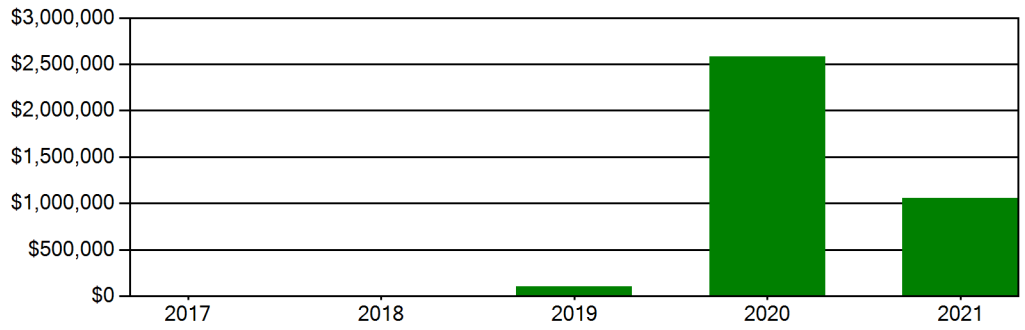
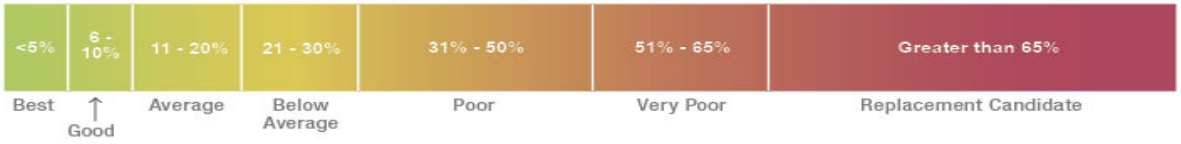


Figure 4: Life Cycle Capital Renewal Forecast

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 $76,609,080. For planning purposes, the total 5-year need at the Lincoln Senior High School is $35,189,215 (Life Cycle Years 1-5 plus the FCI deficiency cost). The Lincoln Senior High School facility has a 5-year FCI of 45.90%.

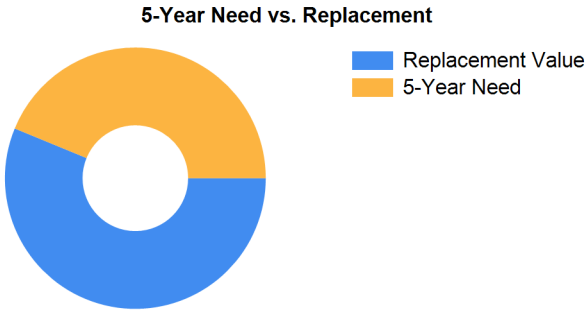


Figure 5: 5-Year FCI

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 1,150 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 Lincoln Senior High School cafeteria and/or library/media center to the size prescribed by the SCRs is estimated to be $862,747.

Summary of Findings

The Lincoln Senior High School comprises 212,323 square feet and was constructed in 1964. Current deficiencies at this school total $31,441,086. Five year capital renewal costs total $3,748,129. The total identified need for the Lincoln Senior High School (current deficiencies and 5-year capital renewal costs) is $35,189,215. The 5-year FCI is 45.90%.

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
Lincoln Senior High School Totals	212,323	1964	$31,441,086	$3,748,129	$35,189,215	45.90%

**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
Install New Paving	Traffic	1,800	SF	3	$37,394	4471
Note: Construct pavement to create loop for proposed parent pick up/drop off						
Parking Or Roadway Curbs Require Replacement	Capital Renewal	339	LF	3	$25,609	2020
Parking Or Roadway Curbs Require Replacement	Capital Renewal	265	LF	3	$20,019	2021
Asphalt Paving Requires Replacement	Capital Renewal	301	CAR	4	$989,159	2019
Backstops Require Replacement	Educational Adequacy	1	Ea.	4	$28,329	28492
Note: Backstops Require Replacement						
School has insufficient football/soccer fields.	Educational Adequacy	1	Ea.	5	$94,430	28189
Note: School has insufficient football/soccer fields.						
	Sub Total for System	**6**	**items**		**$1,194,939**	
	Sub Total for School and Site Level	**6**	**items**		**$1,194,939**	

Building: 01 - Main Building

Roofing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Single-Ply Membrane Roof Covering Requires Replacement	Capital Renewal	168,610	SF	2	$6,411,881	2028
Note: Excessive ponding, edge flashing failing, drainage problems, ballast is missing in several areas.						
Awning Or Canopy Metal Roofing System Requires Replacement	Capital Renewal	320	SF	3	$18,253	2026
Note: Canopies are rotting.						
Location: East entrances						
	Sub Total for System	**2**	**items**		**$6,430,134**	

Exterior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Aluminum Window Requires Replacement	Capital Renewal	8,854	SF	2	$1,498,310	2040
Note: Single pane glass, air infiltrates, leaking.						
The Metal Exterior Door Requires Replacement	Capital Renewal	25	Door	2	$160,430	2045
Note: Doors are rotting and allow water into the building.						
The Wood Window Requires Replacement	Capital Renewal	4,673	SF	2	$892,224	2039
Note: Single pane glass in rotting wood frame.						
The Exterior Soffit Requires Repair	Capital Renewal	100	SF	5	$2,183	2044
	Sub Total for System	**4**	**items**		**$2,553,146**	

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Doors Require Replacement	Capital Renewal	296	Door	3	$1,364,821	1965
The Acoustical Ceiling Tiles Require Replacement	Capital Renewal	147,534	SF	3	$1,332,471	1986
The Carpet Flooring Requires Replacement	Capital Renewal	4,215	SF	3	$91,702	1968
Note: Carpet is worn, torn and buckling.						
Location: Main office, guidance and teachers lounge, auditorium, library, Rooms 1&2 in north wing						
The Ceramic Tile Flooring Requires Replacement	Capital Renewal	4,823	SF	3	$129,516	1976
9x9 Asbestos Tile Present and In Active Use, Greater than 25 Percent has Significant Deterioration	Hazardous Material	51,139	SF	4	$1,458,531	Rollup
Caulking - significant areas of broken pieces &/or deteriorating caulk	Hazardous Material	35,000	LF	4	$665,488	Rollup
Ceiling Grid Requires Replacement	Capital Renewal	147,534	SF	4	$1,749,827	1991
Interior Ceramic Walls Require Repair Or Replacement	Capital Renewal	500	SF	4	$11,123	2043
Location: Classroom entrances						
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	232	Ea.	4	$66,169	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	3,400	LF	4	$77,577	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	14,570	SF	4	$138,517	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	2	Ea.	4	$570	Rollup

Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
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	2,900	SF	4	$27,570	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	13	Ea.	4	$3,708	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	2,008	LF	4	$45,816	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	1,230	SF	4	$11,694	Rollup
Room Lighting Is Inadequate Or In Poor Condition.	Educational Adequacy	35,209	SF	4	$1,341,601	Rollup
Classroom Door Requires Vision Panel	Educational Adequacy	7	Ea.	5	$15,972	Rollup
Room lacks appropriate sound control.	Educational Adequacy	100	SF	5	$3,480	Rollup
	Sub Total for System	**19**	**items**		**$8,536,151**	

Mechanical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Steam Heat Exchanger Requires Replacement	Capital Renewal	1	Ea.	2	$45,519	1950
Steam/HW Unit Heater Requires Replacement	Capital Renewal	90	Ea.	2	$214,934	1974
Steam/HW Unit Heater Requires Replacement	Capital Renewal	56	Ea.	2	$133,736	1975
The Air Handler HVAC Component Requires Replacement	Capital Renewal	8	Ea.	2	$345,095	1981
The Boiler HVAC Component Requires Replacement	Capital Renewal	2	Ea.	2	$340,684	1963
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	1	Ea.	2	$265,630	1964
The Cast Iron Water Boiler Requires Replacement	Capital Renewal	2	Ea.	2	$531,261	1966
The Mechanical / HVAC Piping / System Is Beyond Its Useful Life	Capital Renewal	210,763	SF	2	$1,624,601	1972
Note: Currently an additional old steam system also serves a portion of the school. Both systems require replacement; system should be consolidated to one heating system upon replacement.						
The Steam/Hot Water Radiant Heater Requires Replacement	Capital Renewal	78	Ea.	2	$402,955	1970
The Steam/Hot Water Radiant Heater Requires Replacement	Capital Renewal	75	Ea.	2	$387,457	1971
The Window AC Unit Component Requires Replacement	Capital Renewal	28	Ea.	2	$93,488	1977
Large HVAC Circulating Pump Requires Replacement	Capital Renewal	4	Ea.	3	$60,449	1978
The 4 X 6 Exhausts/Ventilators Require Replacement	Capital Renewal	23	Ea.	3	$437,321	2431
1200 KW Emergency Generator	Capital Renewal	1	Ea.	4	$713,023	1983
Exhaust Fan Ventilation Requires Replacement	Capital Renewal	5	Ea.	4	$13,388	1982
Existing Controls Are Inadequate And Should Be Replaced With DDC Controls	Capital Renewal	210,763	SF	4	$1,423,641	2429
Lab lacks an appropriate fume hood.	Educational Adequacy	4	Ea.	4	$87,943	Rollup
Small HVAC Circulating Pump Requires Replacement	Capital Renewal	2	Ea.	4	$19,060	1980
The Exhaust Hood Requires Replacement	Capital Renewal	9	Ea.	4	$46,837	2430
	Sub Total for System	**19**	**items**		**$7,187,023**	

Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Switchgear Is Needed Or Requires Replacement	Capital Renewal	2	Ea.	2	$164,204	2432
The Electrical Disconnect Requires Replacement	Capital Renewal	28	Ea.	2	$51,322	1984
The Panelboard Requires Replacement	Capital Renewal	19	Ea.	2	$92,123	2433
The Panelboard Requires Replacement	Capital Renewal	2	Ea.	2	$35,575	2434
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$11,437	2435
The Panelboard Requires Replacement	Capital Renewal	3	Ea.	2	$28,806	2436
The Panelboard Requires Replacement	Capital Renewal	3	Ea.	2	$17,398	2437
The Panelboard Requires Replacement	Capital Renewal	22	Ea.	2	$127,584	2438
The Panelboard Requires Replacement	Capital Renewal	1	Ea.	2	$6,275	2439
Transfer Switch Requires Replacement	Capital Renewal	400	Amps	3	$13,400	4499
Room Has Insufficient Electrical Outlets	Educational Adequacy	296	Ea.	5	$146,894	Rollup
	Sub Total for System	**11**	**items**		**$695,018**	

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Instant Water Heater Requires Replacement	Capital Renewal	2	Ea.	3	$13,310	1953

Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Plumbing / Domestic Water Piping System Is Beyond Its Useful Life	Capital Renewal	210,000	SF	3	$1,689,636	2428
The Restroom Is Not ADA Compliant	Barrier to Accessibility	1,130	SF	3	$315,127	53544
Note: ADA compliant bathrooms and concession stand - there are currently no ADA compliant restrooms associated with the athletic fields. Included in Lincoln Public Schools 5 year capital improvement plan.						
The Sanitary Sewer Piping Requires Replacement	Capital Renewal	750	LF	3	$116,765	1961
The Showers Plumbing Fixtures Require Replacement	Capital Renewal	39	Ea.	3	$296,617	1958
The Urinal Plumbing Fixtures Require Replacement	Capital Renewal	38	Ea.	3	$50,505	1957
Water Storage Tank Requires Replacement	Capital Renewal	2	Ea.	3	$69,211	1951
The Custodial Mop Or Service Sink Requires Replacement	Capital Renewal	14	Ea.	4	$36,069	1959
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	57	Ea.	4	$181,319	1955
The Restroom Lavatories Plumbing Fixtures Require Replacement	Capital Renewal	89	Ea.	4	$283,112	1990
Room lacks a drinking fountain.	Educational Adequacy	14	Ea.	5	$15,439	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	9	Ea.	5	$13,604	Rollup
	Sub Total for System	**13**	**items**		**$3,101,185**	

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	8	Ea.	1	$91,267	Rollup
	Sub Total for System	**1**	**items**		**$91,267**	

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks Interactive White Board	Educational Adequacy	2	Ea.	3	$11,408	Rollup
Technology: Auditorium AV/Multimedia system is inadequate.	Technology	1	Room	3	$332,744	3527
Technology: Instructional spaces do not have local sound reinforcement.	Technology	73	Ea.	3	$347,004	3530
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	3514
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	3516
Technology: Intermediate Telecommunications Room is not dedicated. Room requires partial walls and/or major improvements.	Technology	1	Ea.	3	$37,648	3521
Technology: Intermediate Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$16,732	3519
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3515
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3518
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3520
Technology: Intermediate Telecommunications Room UPS does not meet standards, is inadequate, or non-existent.	Technology	1	Ea.	3	$4,753	3523
Technology: Main Telecommunications Room needs minor improvements.	Technology	1	Ea.	3	$21,676	3512
Technology: Network system inadequate and/or near end of useful life	Technology	10	Ea.	3	$76,056	3528
Technology: Network system inadequate and/or near end of useful life	Technology	66	Ea.	3	$313,730	3529
Technology: Special Space AV/Multimedia system is inadequate.	Technology	1	Ea.	3	$54,190	3525
Technology: Special Space AV/Multimedia systems are in need of minor improvements.	Technology	3	Room	3	$190,139	3526

Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3517
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3522
Technology: Telecommunications Room (small size room) needs dedicated cooling system improvements.	Technology	1	Ea.	3	$4,753	3524
Technology: Telecommunications Room fiber connectivity infrastructure is outdated and/or inadequate.	Technology	1	Ea.	3	$6,275	3513
	Sub Total for System	**20**	**items**		**$1,516,172**	

Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient writing area.	Educational Adequacy	1	Ea.	3	$4,563	Rollup
Replace Cabinetry In Classes/Labs	Capital Renewal	1	Room	4	$11,188	1989
Location: Art room						
Welding Bays Are Required	Educational Adequacy	1	Ea.	4	$5,419	Rollup
Work Tables Are Required	Educational Adequacy	1	Ea.	4	$3,585	Rollup
Room lacks an appropriate refrigerator.	Educational Adequacy	7	Ea.	5	$59,894	Rollup
The room lacks a washer and/or dryer.	Educational Adequacy	2	Ea.	5	$27,380	Rollup
	Sub Total for System	**6**	**items**		**$112,029**	
	Sub Total for Building 01 - Main Building	**95**	**items**		**$30,222,125**	
	Total for Campus	**101**	**items**		**$31,417,064**	

Buildings with no reported deficiencies

02 - Building 02

03 - Building 03

04 - Storage Shed

05 - Stadium Press Box

06 - Metal Storage

Lincoln Senior 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
Roadway Pavement	Asphalt		177	CAR	$585,608	4
		Sub Total for System	**1**	**items**	**$585,608**	
		Sub Total for Building -	**1**	**items**	**$585,608**	

Building: 01 - Main Building

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Suspended Plaster and	Painted ceilings		63,229	SF	$264,491	4
Wall Paneling	Wood Panel wall		4,215	SF	$38,469	4
Wall Painting and Coating	Painting/Staining (Bldg SF)		122,243	SF	$807,702	4
Flooring Treatment	Concrete Floor - Finished		52,691	SF	$686,046	4
Interior Coiling Doors	Overhead		1	Door	$36,792	5
Note:	North gym					
Resilient Flooring	Vinyl Composition Tile Flooring		79,534	SF	$912,394	5
Interior Operable Partitions	Foldable partition (Bldg SF)		600	SF Wall	$69,306	5
		Sub Total for System	**7**	**items**	**$2,815,199**	

Plumbing

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Plumbing Fixtures	Refrigerated Drinking Fountain		14	Ea.	$103,284	3
Domestic Water Equipment	Water Heater - Electric - 52 gallon		2	Ea.	$6,510	5
Compressed-Air Systems	Air Compressor (5 hp)		3	Ea.	$35,355	5
		Sub Total for System	**3**	**items**	**$145,149**	

Specialties

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Casework	Fixed Cabinetry		18	Room	$201,380	4
		Sub Total for System	**1**	**items**	**$201,380**	
		Sub Total for Building 01 - Main Building	**11**	**items**	**$3,161,728**	

Building: 03 - Building 03

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		60	SF	$396	3
		Sub Total for System	**1**	**items**	**$396**	
		Sub Total for Building 03 - Building 03	**1**	**items**	**$396**	

Building: 04 - Storage Shed

Interior

Uniformat Description	LC Type Description		Qty	UoM	Repair Cost	Remaining Life
Wall Painting and Coating	Painting/Staining (Bldg SF)		60	SF	$396	3
		Sub Total for System	**1**	**items**	**$396**	
		Sub Total for Building 04 - Storage Shed	**1**	**items**	**$396**	
		Total for: Lincoln Senior High School	**14**	**items**	**$3,748,129**	

Supporting Photos

Site Aerial

Music Room

Auxiliary Gym

Roof


Heat Exchanger


Storage Tank


Circulating Pumps


Damaged Ceramic Tile Flooring


Broken Ceiling Tile


Worn And Lifting VCT Flooring

Ballasted Roof

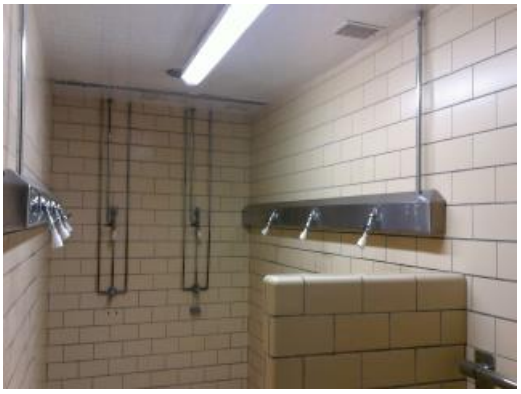
Library

East Parking

Broken Curb

Typical Restroom Lavatories

Roof Ponding


Typical Showers


Typical Urinals


Restroom Fixtures And Finishes


Science Room


Gymnasium


Cafeteria


Auditorium


Showers


Classroom


Classroom


Elevation