

# Wakelee Elementary School



## 2 Executive Summary

### Building Information

This section contains the executive summary, which provides an overview of the building and summarizes the survey results. Graphs are included to represent current conditions of the building's components and conformity with IBC, NFPA and ADA requirements. Photographs of various elevations of the building are provided for reference. This section also provides a summary of the opinion of probable costs, presenting a graphic comparison of the work required to address the deficiencies uncovered during the survey versus the cost of replacing the structure. At the end of Section 2, a chart provides an overview of the required work addressed by the building survey and potential replacement costs.

### Wakelee Elementary School

<b>Stories</b>	Two
<b>Area</b>	85,155
<b>Address</b>	12 Hempel Drive, Wolcott
<b>Original Construction</b>	1960
<b>Addition(s)</b>	2000
<b>Grades</b>	Kindergarten - 5th Grade
<b>Description</b>	School

## Architectural Survey

The exterior skin of Wakelee Elementary School is brick, which is in good to excellent condition. The secondary surface is precast concrete panels which are in good condition. The roof consists of three different materials; Built-up roofing, EPDM and standing seam metal. They are in poor to fair, good and excellent condition respectively.

Typical windows have insulated glass and aluminum frames; exterior doors are aluminum and painted metal. The windows are in fair to good condition and the exterior doors are in good condition. The exterior sealants of the doors and windows are in fair to good condition.

The building interior is in good condition.

The work recommended to address architectural conditions includes:

- Remove and replace all original building canopies at entrance / exit locations
- Replace and/or repair all cracked brick masonry veneer
- Repair and refinish all existing soffits at entrance / exit locations (addition)
- Clean, repair and resurface existing precast concrete (addition)
- Seal all joints which are not properly sealed
- Properly enclose all modified openings in the existing masonry veneer, window wall and precast concrete panels
- Paint all materials which are not properly painted
- Repair entrance / exit door (addition)
- Clean the masonry veneer and precast concrete panels
- Window wall maintenance, weather-stripping, panels, seals, etc.
- Remove and replace Vinyl Asbestos Tile flooring and fiber ceiling tiles
- Remove and replace the vinyl tile through the building
- Replace wood handrails
- Upgrade / modernize the existing elevator

The work recommended to address roofing conditions includes:

- Complete tear off of the existing built-up tar and gravel roof system down to the structural roof deck
- Install new tapered roof insulation and cover board
- Install new roof drains
- Install new metal flashing at all roof penetrations
- Install new 20-year EPDM single-ply roofing system
- Install new gutters and downspouts at all original building canopies

## Structural Survey

The building is typically constructed of a steel frame that is in good condition. The roof is supported by steel joists and beams. The foundation has a concrete slab on grade. The flooring systems are concrete on steel deck.

The work recommended to address structural conditions includes:

- No structural deficiencies were noted during the existing conditions survey.

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### Mechanical Survey

The mechanical system is comprised of two oil-fired hot water boiler for heating, window air condition units and ductless split for cooling. All systems are in fair to good condition.

The work recommended to address mechanical systems conditions includes:

- An air conditioning system should be considered for the building.
- The boilers are 20 plus years old and nearing the end of its life and recommend replacing equipment.
- Replace existing pipe insulation.
- Circulating pumps are 20 plus years old and recommend replacing equipment.
- Exhaust shall be provided for the Chemical Storage/Prep Room as required per 2003 IMC, section 510.
- Provide make-up air for Kitchen hood as required per 2003 IMC, section 508.
- Install exhaust for all Custodial closets as required per 2003 IMC, section 510.
- Consider replacing pneumatic controls to DDC.
- Perimeter fin tube radiation not working.
- Consideration should be given to rebalance entire HVAC system.

### Electrical Survey

The electrical service is fed from a transformer vault located adjacent to the boiler room. There is an overhead service that is fed from Hempel Drive.

The work recommended to address electrical system conditions includes:

- Consider service upgrade if additional power requirements are needed.
- Receptacles are at there maximum usage, numerous power strips being utilized. Consider installation of additional receptacles.
- Replace damaged interior and exterior receptacles.
- Remediate general electrical issues (i.e.. open j-boxes, etc.)

### Plumbing Survey

The plumbing system receives water from a dedicated line from Hempel Drive to a well house. The plumbing fixtures are American Standard and are in good condition overall.

The work recommended to address plumbing systems conditions includes:

- Provide emergency eyewash station at all custodial closets with mop sinks per IPC 2012.
- Provide ADA compliant toilet rooms per ANSI A117.1 2009.
- Provide ADA compliant drinking fountains per ANSI 117.1 2009.
- Upgrade plumbing fixtures as necessary to water conservation type.
- Domestic thermostatic mixing valve is uninsulated and should be insulated.
- Provide insulation for all ADA toilet rooms per ANSI 117.1 2009
- Replace damaged roof drain covers/clear debris from roof drains.

## Fire Protection Survey

The fire protection system is limited to the gymnasium storage, custodial closets and the kitchen. The maintenance garage is protected by a "Wet" pipe system.

The work recommended to address the fire protection system conditions includes:

- This building is protected by a limited fire protection system located in Custodial areas and the Kitchen. The installation of a fire protection system throughout the building should be considered.
- Numerous penetrations for the fire protection are not fire stopped.
- Isolation valves controlling the fire protection system are unmonitored ball valves with "Zip" ties as a means of monitored control.
- Maintenance garage is protected by a "Wet" piped system.
- There is no spare head box with the appropriate number of and type of sprinkler heads used.

## Lighting Survey

The lighting service is comprised of LED, Fluorescent and CFL interior lighting fixtures. Exterior lighting consists of wall packs and pole lighting.

The work recommended to address lighting system conditions includes:

- Replace lighting fixtures with energy efficient LED type as necessary.
- Replace existing emergency lighting fixtures.
- Replace exterior lighting (site & building) with LED type fixtures.

## Fire Alarm Survey

The fire alarm service is an addressable Honeywell E3 system with an audio voice generator. The system is in good condition overall.

The work recommended to address fire alarm system conditions includes:

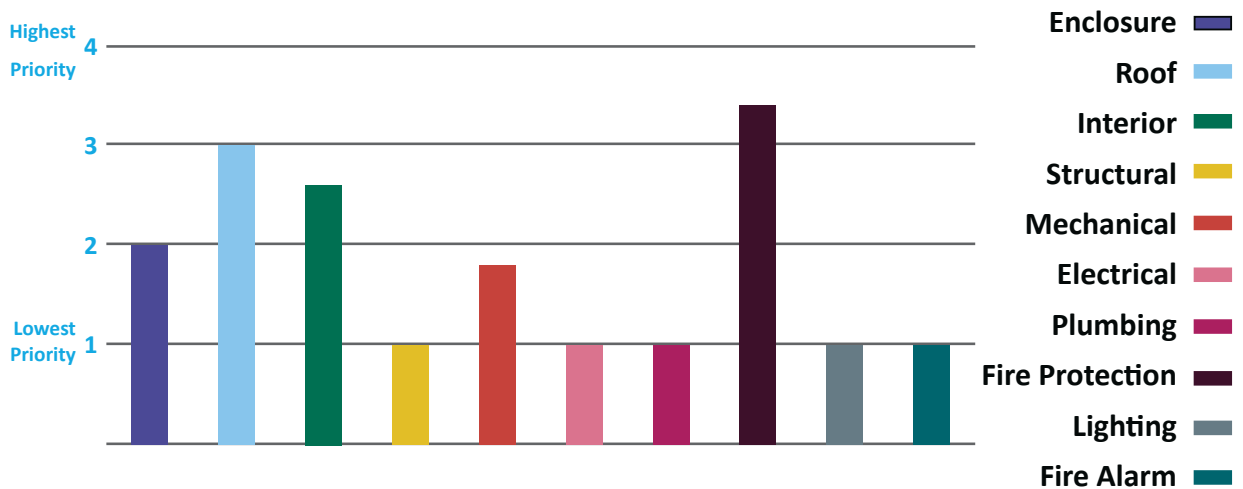
- Upgrade system to meet NFPA 101, IBC 2012, IFC 2012 & ANSI 117.1 2009.
- Install additional devices to meet NFPA 101, IBC 2012 & IFC 2012.
- Exercise voice evacuation system.

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### Survey Results

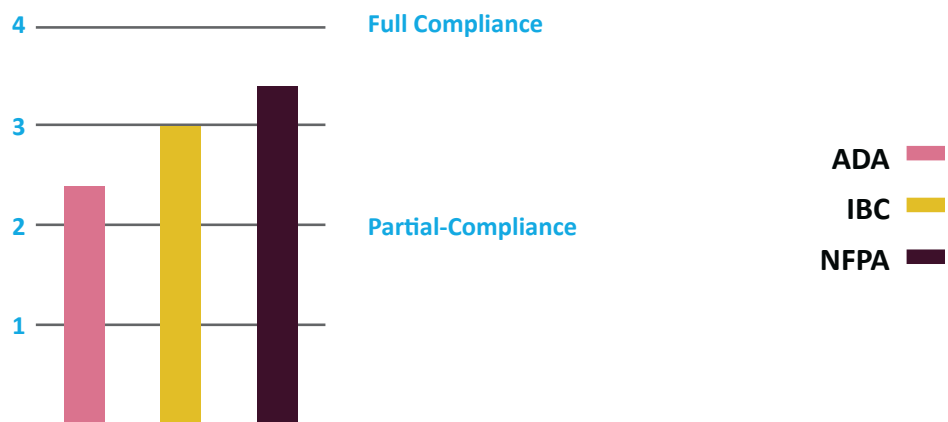
Each of the elements that were reviewed under this assessment was ranked on a scale of 1-4, with a 4 rating equating to the highest priority. Components that received a ranking of 3 should be considered to be moderate priorities, while rankings of 2 and 1 are considered to be low priorities. The following chart graphically presents the survey results (reference Section 4 for a detailed description for each category).

### Prioritization of Required Work

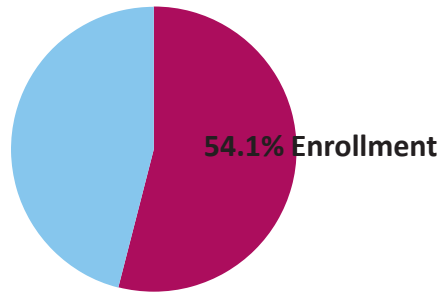


The graph below represents the building's overall conformity with IBC, NFPA and ADA requirements. Compliance was rated on a scale of 1-4, with a 4 rating equating to full compliance. A rating of 2 or under indicates that the building requires moderate to substantial code compliance updates in order to protect the safety of the building's occupants.

### Code Compliance Evaluation



**State Space Standards Capacity**



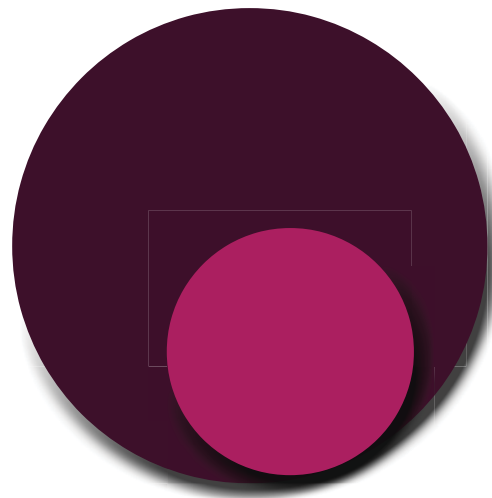
**Summary of Recommendations**

<p><b>Program and Conceptual Plan</b></p>	<p>Based upon the space utilization information gathered, a program accommodating the various functions of the building indicates the following minimum needs:</p> <ul style="list-style-type: none"> <li>• Modernization of the existing elevator</li> <li>• Replacement of the roof and M/E/P systems past their useful life</li> <li>• Consideration of an electrical service upgrade</li> </ul> <p>These program recommendations have been used to generate a conceptual plan (Section 10) which illustrates the program assessment and recommended improvements. The proposed plan is based on meeting the needs of the users and upgrades required to comply with current applicable code, while also meeting the overall goals and projected enrollment of Wolcott Board of Education.</p>
<p><b>Opinion of Probable Costs</b></p>	<p>The estimate of probable costs included in Section 8 of this report is designed as a planning tool for Wolcott Board of Education. Estimates do not account for a possible change of use.</p>
<p><b>Required Work</b></p>	<p>The estimates reflect bringing the building, in its present configuration, into compliance with current applicable codes and addressing the needs of the various building components (architectural, structural, mechanical / electrical / plumbing / fire protection and site). The projected renovations for these components would upgrade the building to a good condition.</p> <p>Based on analysis, over the next 10 years, the required work at this building will cost approximately \$10,151,701. At 85,155 square feet, renovations at this building equate to approximately \$120 per square foot. This cost-per-square-foot figure falls within industry standards for renovations / upgrades of this nature.</p>
<p><b>Replacement Cost</b></p>	<p>A similarly constructed building would cost \$400 per square foot. Using this figure, the replacement cost for this building is approximately \$43,500,000 which follows state standards for structures of this type. The \$400 per square foot replacement cost was obtained from R.S. Means Construction Cost Data and current local market conditions for buildings of this type. The estimate includes hard construction costs, demolition costs, construction contingencies, design costs, and other "soft costs".</p>
<p><b>State Reimbursement</b></p>	<p>The municipality's current reimbursement from the State of Connecticut Department of Education for eligible items is 62.5%, and the building is at 54% capacity. These factors would effectively adjust the community's portion of the costs from 37.5% to 66.25%.</p>

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### Executive Summary Chart

The chart below indicates the estimated value of the required work addressed by the building survey alongside the potential replacement cost. The replacement cost is provided as a guideline for comparative purposes and is based on replacing the building as is, i.e. size and use. Information considered includes the type of structure, year built and existing area for the building.



**Survey Estimate** ■ \$10,151,701  
**Renovate Like New Project** ■ \$36,318,180

The required Alteration work addressed in this survey equates to approximately 28% of the construction cost of a Renovate like New project.

Comparative Replacement costs for a new building would be \$43,502,760. Site acquisition costs were not factored into this comparison.