Facilities Assessment of School Buildings

Oyster River Cooperative School District

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NOVO STUDIO | ARCHITECTS

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Executive Summary

INTRODUCTION

The Oyster River Cooperative School District occupies two elementary school buildings and one high school building of different generations ranging in 36 to 65 years of age. Over this period of time, the delivery of education, technology, building codes, sustainability, and accessibility requirements have all greatly changed and evolved. All of these have an impact on the ability of a facility to function as it was intended and as it needs to, to serve the community into the future.

In the Summer of 2024, the Oyster River Cooperative School District engaged Novo Studio Architects an its consultants to develop a Facilities Assessment and Capital Spending Plan for Moharimet Elementary School, Mast Way Elementary School, and the High School.

The scope was two-fold:

- Perform a physical assessment of the facilities to identify the deficiencies and develop a comprehensive ten-year Capital Plan to implement recommended repairs and improvements.
- Perform an audit of the elementary school's existing educational space program and make recommendations to accommodate current and future space needs.

The assessment included evaluations and documentation of the existing conditions of the three buildings included in the study. Our team reviewed the overall condition of the structures and compliance with federal, state, and accessibility codes. We investigated all components of the structural systems and exterior envelopes to assess rain, air, heat, and vapor control. Furthermore, we evaluated all building systems and utilities including HVAC, automatic temperature controls (ATC), electrical, plumbing, fire protection, communications, plumbing systems.

The development of the Capital Plan started with a comprehensive analysis of the facility conditions identified in the previous step followed by recommendations to address critical upgrades and improvements. Recommended repairs, replacements, modifications, and improvements for each building were prioritized into a phased plan over a ten-year period, including options for bundling projects to achieve additional savings. Opinions of probable costs for each recommendation are provided.

ORGANIZATION

The report is organized as follows:

- Participants, Project Goals, Methodology
- Educational Space Analysis and Programming
- Capital Plan
- Appendices

Each section has a short overview followed by narratives, graphics, charts, and other descriptive information. The following is a summary of each section of the report.

Participants, Project Goals, Methodology

These sections document the goals and objectives for the study, the process by which the study was conducted, and the parties involved.

Existing Conditions Documentation and Findings

This section includes graphic summaries and the full existing conditions reports for the three facilities considered in this study. These reports cover the characteristics and physical conditions related to the grounds, structure, exterior envelope, roofing, fire protection, plumbing, mechanical, electrical, and building interior as viewed through existing documentation provided by the school department and during site visits.

Educational Space Analysis and Programming

This section includes an audit and analysis of the existing educational spaces and recommendations to guide expansion decisions moving forward for current and future needs.

Capital Plan

This section includes the proposed Ten Year Capital Plan and detailed scopes of work for the repairs based on immediate, short term and long term prioritization, and capital budgeting purposes.

Appendices

This section includes a list of abbreviations used throughout the report as well as discussion notes from meetings held with stakeholders.

EXISTING CONDITIONS AND RECOMMENDATIONS SYNOPSIS

Given the diversity of age and characteristics of the buildings included in this study, there was a variety of conditions observed. However, it should be noted that each building has been well maintained and cared for, and the conditions noted in this report are primarily due to materials, equipment, and systems nearing the end of their expected service life.

Refer to the individual existing conditions reports for each building for more detailed information.

Grounds

The grounds at all three buildings are generally in good condition, apart from the parking lot asphalt paving at all three buildings. Additionally, the High School track and turf field are nearing the end of their useful service life.

Recommendations:

- Reconstruct parking areas at Moharimet, Mast Way, and High School.
- Replace track and turf field at the High School.

Structural Systems

Although the structural system of each building is in good condition, they are not compliant with current building codes. As such, any significant alteration to the buildings, including additions, major renovations, roof replacements, or rooftop solar arrays, will require more thorough structural review.

Exterior Envelope

The exterior envelope at the High School and Moharimet are generally in good condition apart from typical maintenance and service repairs. The painted insulation finish (EIFS) at Mast Way is in poor condition.

Recommendations:

- Masonry repairs are required at all three buildings.
- Replacement of exterior sealants are required at all three buildings.
- Replacement of the EIFS finish at Mast Way.

Roofing

The roof at Moharimet, except for metal roofing, is in good condition. Most of the High School roof is nearing the end of its service life as is significant portions of the roof at Mast Way.

Recommendations:

- Repairs to metal roof system at Moharimet.
- Phased roof restoration program at the High School and Mast Way.

Building Systems

Generally, the Fire Protection, Plumbing, and Electrical systems at all three buildings are in good condition apart from expected repairs. However, various aspects of the mechanical systems in all three buildings have either reached or are nearing the end of their service life and will need to be replaced.

Recommendations:

- Typical small-scale replacements and upgrades of fire protection, plumbing, and electrical components.
- Phased replacement of major mechanical equipment at all three buildings.

Building Interior

The interior finishes at all three buildings have been well maintained and serviced. However, much of the flooring and ceiling finishes which haven't been replaced or recently installed are nearing the end of useful service life and will need replacement. Additionally, much of the classroom casework in the elementary schools is worn and not ADA compliant.

Recommendations:

- Phased replacement of flooring and ceiling finishes.
- Replacement of older classroom casework in the elementary schools.

Participants

We would like to thank and acknowledge those noted below who contributed their valuable time, shared their expertise, and offered advice and counsel during this planning process:

Oyster River Cooperative School District

Dr. Robert Shaps, Superintendent of Schools
Amy Ransom, Business Administrator
Dave Totty, Director of Facilities
Catherine Plourde, Director of Student Services
Misty Lowe, Mast Way Elementary School Principal
David Goldsmith, Moharimet Elementary School Principal
Diana Eisenhaure, PEP Program Director
Michael Nicolosi, School Resource Officer

Architect

Novo Studio Architects
Manchester, NH

Structural Engineer

Foley Buhl Roberts & Associates, Inc.
Manchester, NH

Mechanical, Electrical, Plumbing, and Fire Protection Engineer

DuBois & King, Inc.
Bedford, NH

Estimating

Bauen Corporation
Meredith, NH

Project Goals

The goals of this assessment are twofold:

1. To understand the existing conditions of the subject facilities, identify deficiencies, and recommend improvements as part of a long-term capital spending plan.

   To accomplish this goal, this study shall:
   - Evaluate existing conditions including architectural features, code compliance, the building envelope, structural systems, and mechanical, plumbing, fire protection, electrical, communications and data systems.
   - Identify deficiencies to be addressed.
   - Provide Recommendations to address identified deficiencies
   - Develop a final report consisting of:
     - Facility Condition Assessment
     - 10-year Capital Improvement Plan and Budget for each facility to implement the recommendations.

2. To perform an audit of the existing educational space program of the elementary schools and Preschool Education Program (PEP) and make recommendations to accommodate current and future educational space needs.

   To accomplish this goal, this study shall:
   - Document and evaluate existing space usage.
   - Identify dysfunctional and deficient spaces.
   - Provide recommendations to address the issues identified.

Methodology

Building conditions assessments for both elementary schools and the high school were conducted during August and September of 2024. Design team members from Novo Studio Architects, structural engineers Foley Buhl Roberts & Associates, and building system engineers from Dubois & King performed the existing conditions evaluations.

The study consisted of two primary qualitative assessment methods:

- The first was focused exclusively on the physical condition of the building with general construction and use-wear criteria not specifically related to school building functionality.
- The second focused on the educational space program seeking to understand the current and future needs of educational spaces.

This Assessment consists of the following components:

- Field inspection of the properties, including comprehensive walk-throughs of the buildings by the consultant team accompanied by District officials. This portion of the study also included walking around all sides of the properties, externally, and visual inspection of the grounds.
- Non-destructive visual examination and photographic documentation of major building components and spaces, generally corresponding with the Construction Specifications Institute's Uniformat designations as follows:
    - Code and Accessibility
    - Structural System
    - Exterior Envelope
    - Roofing
    - Fire Protection System
    - Plumbing System
    - Mechanical Systems
    - Electrical Systems
    - Building Interior
- A desktop study consisting of gathering existing drawings and reports relating to the facilities, from the archives of the District.
- Interviews with school principals and staff for information on building history and current issues.
- Documents for each school were prepared, including site analyses graphics, existing building conditions evaluation reports and a selection of representative photographs.
- Use of existing conditions floor plans to develop existing conditions spatial programs.

The evaluations were developed to identify current deficiencies and needs, to both establish the scope of required repairs and to assist in understanding the existing conditions as they related to determining the capital plan recommendations.

Existing Conditions Documentation and Findings

OVERVIEW

The existing conditions reports for each building are organized into several major categories - general building information, overview, and detailed findings including analyses of code/accessibility, grounds, structural systems, exterior envelope, roofing, fire protection system, plumbing systems, mechanical systems, electrical systems, and building interior.

Please note the reports in this section assess the existing physical building conditions only and do not address any space program concerns. Please refer to Section Six for educational space analysis and programming.

Following each narrative is a detailed spreadsheet documenting the existing conditions, organized into major building component categories. Within each category are many elements, each having a condition description and an accompanying action recommendation, if applicable. Actions are given a priority ranking to indicate whether the item should be addressed in the immediate (within one to two years), short term (within years one through five) or long term (within years six through ten) time frames over the 10-year capital plan period.

For ease of use, items have numerically ranked condition levels to provide a ready understanding of their state. The reports include an age factor, noting whether an item is considered new or recently installed, is within its expected service life or is obsolete and no longer suitable.

Where applicable, actionable items carry estimated quantities of associated areas or materials. Refer to the Capital Plan section of this report for both individual line item costs and order-of magnitude school repair project costs.

These existing conditions evaluations provide clear and comprehensive information about the current state of the Elementary and High School buildings and provide the District with critical information for prioritizing and budgeting the repair work necessary to maintain and upgrade the facilities.

This information was instrumental for understanding these facilities as a whole, informing options and recommendations, and determining the scope of work and scheduling of projects for the proposed ten-year capital plan.

GENERAL STRUCTURAL COMMENTARY

Code Commentary

It is likely that all buildings built between 1968 and 2000 were constructed to the requirements of the BOCA Building Code that was current at the time of construction. It is not known if the BOCA Code, Uniform Building Code (UBC) or other custom code would have been used as a design standard for the buildings constructed before 1968. Buildings constructed after 2000 were likely to have been designed to the requirements of the International Building Code (IBC). At present, the State of New Hampshire has adopted the 2021 IBC, with State amendments, as the legal standard for new construction.

Floor load capacities generally were found to be consistent with live load requirements for schools with classrooms, corridors, lobbies, assembly spaces and storage rooms meeting current code requirements.

Several of the buildings were constructed prior to 1980. Accordingly, the design standards used for pre-1980 construction would not conform to current code requirements for new construction. However, unless noted otherwise, the buildings remain code-compliant in a "grandfathered" status.

Notable changes that have been adopted into newer versions of the State Building Code include the following:

- Increased minimum roof snow load requirements: In general, successive editions of the building code have steadily increased roof design snow loads. This design load changed most significantly after the Cold Regions Research and Engineering Laboratory released their *Ground Snow Loads for New Hampshire* study in 2002. This study mapped the ground snow loads for every town in New Hampshire. Prior to this study, much of New Hampshire was listed as a case study in the building codes. As a result, many buildings constructed more than 20 years ago were designed for lower roof snow loads than what would be mandated for new construction today. However, in some instances, replacement of older, ballasted roofing materials with adhered or mechanically fastened single ply membrane roofing has partially offset these changes, effectively increasing the snow load capacity of existing roofs. Some of the buildings or additions have benefited from this change in roofing systems.
- Requirement to consider snow drift loads occurring on low roofs adjacent to taller sections of the building: This requirement was incorporated into the model building codes in the 1970s. Peak drift snow loads can be more than three times the minimum flat roof snow load requirement.
- Future requirements to consider thermal factor of roof system. The 2022 edition of the ASCE 7 "Minimum Design Loads and associated criteria for Buildings …" referenced in the 2024 edition of the IBC will introduce changes to the way the thermal factor is calculated. Roofs with higher R values hold more snow longer and so the design snow loads will increase proportionally with the R value.
- Seismic design standards: Requirements for seismic design loads first appeared in the model building codes in the mid-1970s and have become successively more stringent since that time. In the case of the older buildings the relatively low, one-story buildings and the light steel joist/steel deck construction would result in a relatively low seismic vulnerability.

Summary

While the structural systems in each of the buildings generally appear to have performed satisfactorily, the structural design of most structures is dated, relative to current building code requirements. This is more so for the schools constructed before the 1990's due to the significant changes to wind and seismic design criteria which have evolved over the course of many recent code changes. General comments and school-wide areas that reflect this concern are as follows:

- Code-mandated flat roof minimum snow loads have increased since the original buildings were constructed. The current building code dictates flat roof design snow loads for the schools are approximately 42 pounds per square foot (psf). The existing buildings were typically designed for snow loads ranging from 42 psf to 70 psf leaving most buildings compliant with the current code requirement. See further commentary below.
- The older buildings (prior to 1980) pre-date any Building Code requirements for consideration of drifted snow accumulations on low roof areas adjacent to taller portions of the building. Lower roof areas around the original High School and Mast Way elementary school buildings may be undersized for large drift loads.
- The older buildings predate code-mandated seismic design criteria. This mainly pertains to the parts of the Mast Way and High School constructed before the mid-1970's.
- The structural systems used for many of the buildings (i.e., open web steel joists) are relatively difficult to alter, reinforce, modify or adapt to facilitate later renovations. These systems are generally designed to strictly meet the design load criteria with little to no additional capacity available.

Any proposed renovations to the building may have to address the above concerns and shortcomings as they relate to the International Existing Building Code 2021 (IEBC). In addition, the IEBC also dictates various structural upgrades that *may* become necessary when renovating or adding to these buildings. Some of the considerations for future upgrades include:

Reroofing, Solar Panel Installations and Mechanical System Upgrades: Added weight of new roofing, insulation, equipment, finishes (etc.) cannot exceed 3 psf or 5% of the original design load on the structural members. Exceeding this limit will require evaluation and possible reinforcement of the structural systems. Where open web joists are the primary structural elements, reinforcing is often difficult and cost prohibitive. Typically, the weight of new roofing could fall below the 5% threshold but Solar Panel Arrays on flat roofs can range from 10 psf to 15 psf which will exceed the 5% threshold on most if not all existing roofs.

Change in Occupancy or Use: Changes in live load due to reconfiguration. Any areas currently designed for classroom, office or bathroom use would need to be evaluated and potentially reinforced if reconfiguration of the space dictated a higher live load for these areas.

Additions and alterations: Any proposed attached additions or alterations to the existing buildings must meet the requirements in IEBC for the gravity and lateral systems in those buildings. In short, modifications to the building that would increase the loads on existing structural elements supporting gravity loads and lateral (wind and seismic) loads by more than 5% and 10%, respectively, would require structural evaluation and may require structural/seismic reinforcing. For this reason, it is recommended that vertical expansion of any of the existing structures be avoided. Reinforcing existing beams, columns and foundations to support added stories would be cost prohibitive.

General Conclusions / Future Upgrades

When reroofing the older buildings and adding to or replacing the insulation on the roof there are two considerations to keep in mind.

1. The additional weight of the insulation and new roofing system may result in a higher dead load than the roof was originally designed for, and;
2. Increasing the insulation R value on a roof. While current codes do not directly address the effect of insulation R-values, codes adopted in the near future (see notes above) will consider the R-value of the roof which could have the effect of further increasing the load carrying capacity requirement on the roofing members.

For either of these reasons the roof framing may need to be evaluated and reinforced (if necessary) when reroofing the building.

With regard to the possibility of strengthening or reinforcing the roof structures to provide additional gravity load capacity (i.e. for solar panel arrays), wholesale reinforcement of the roof structures is not a practical solution. Limited areas can potentially be reinforced (such as potential snow drift areas) by inserting new rolled steel beams between the existing open web joists but this can be labor intensive and costly. In extreme cases the increased loading may also exceed the capacity of the existing columns and foundations; both of which can be disruptive and costly to replace.

The lateral resisting systems in most of these buildings are outdated relative to today's wind and seismic code requirements. These requirements have evolved progressively over the years making the lateral design of even the most recent building out of date. For this reason, we are generally going to recommend that all future additions to the buildings be designed as a separate stand-alone structure separated from the existing building with a seismic expansion joint. This approach will reduce or eliminate the need to evaluate and upgrade the existing building structural systems which can remain code compliant in a "Grandfather" status.

MOHARIMET ELEMENTARY SCHOOL

Aerial View

Main Entry

GENERAL BUILDING DATA

Address: 11 Lee Road, Madbury, NH 03823

Serving Grade Levels: Kindergarten - 4

Number of Students: 310

Number of Faculty and Staff: 70

Construction Date / Building Age:

	Year	Age
Original Construction	1988	36 Years
Addition	1994	30 Years
Addition	2019	5 Years

Building Area:

	Area
Original Construction	38,286 SF
1994 Additions	7,460 SF
2019 Addition	1,165 SF
Total	46,911 SF

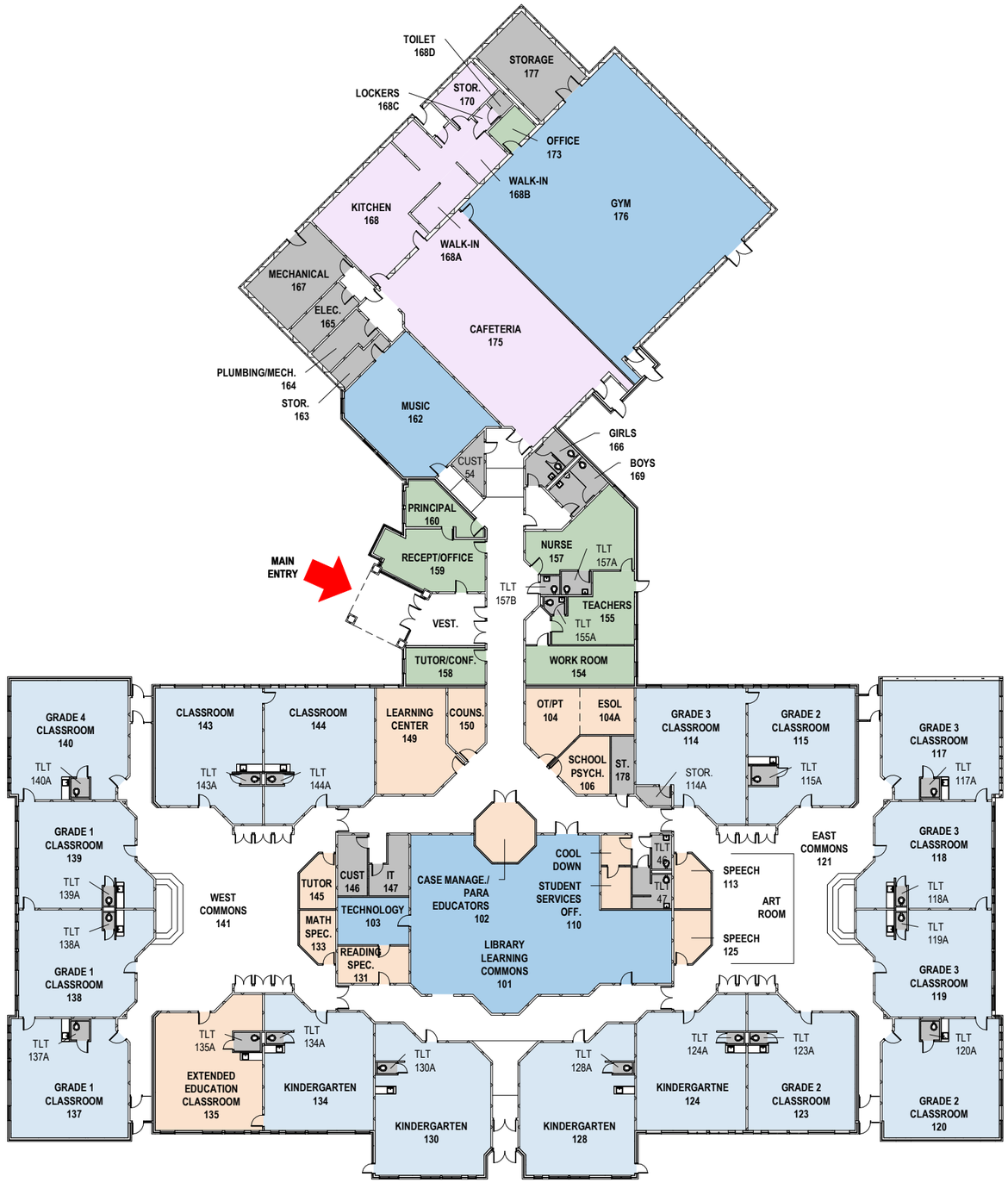
Building Footprint: 46,911 Square Feet

Total Site Area: 15.08 Acres

OVERVIEW

Moharimet Elementary School is a one-story, predominantly brick veneer building located on Lee Road in Madbury, New Hampshire. The original building dates from 1988 and was expanded with additions in 1994 and 2019. The site includes the school building, playground and playing field, parking and bus drop-off loop, as well as a storage out-building and water pumphouse. The Moharimet grounds includes a maple sugar house that provides a unique educational experience for the students served by this school.

Overall, the building is in good condition and has been well maintained. However, a number of mechanical systems and interior finishes have reached the end of their useful service life and need replacement. Furthermore, there are site drainage issues the front entry, along the south elevation, and at the Gym that need to be addressed.



MOHARIMET ELEMENTARY SCHOOL - FLOOR PLAN

DETAILED FINDINGS

Code and Accessibility Analysis

Code Analysis:

Non-Separated Mixed Uses:

Use Group E (Elementary School)

Use Group A-2 and A-3 (Cafeteria and Gymnasium)

Use Group B (Offices)

Construction Type (based on field observation):

Based on field observations, the building construction most closely resembles Type IIB construction, based on the noncombustible construction and unprotected steel frame.

Interior Finishes:

The existing interior finishes appeared to be compliant (typically painted CMU or drywall).

Means of Egress:

The number and arrangement of exits seemed to be sufficient for the expected number of occupants.

Fire Protection Systems:

Based on the site visit, it was observed that the building is provided with a fire alarm system, smoke alarm system, and fire extinguishers.

Accessibility Analysis:

The building generally has accessible routes to all areas. Although we did not conduct a comprehensive accessibility survey, the following deficiencies were noted:

- While some classroom toilet rooms were found to be accessible, a number were not, lacking proper clearances, grab bar accessories, and compliant door widths.
- Typically, sinks in classrooms were found to not be accessible, lacking compliant knee clearance.
- Exterior concrete steps of the kindergarten classrooms are not compliant, lacking proper handrails and inconsistent riser heights due to the grading in these areas.

Grounds Analysis

Although Moharimet enjoys a picturesque site with an ample playground and unique maple sugaring facility, three predominant deficiencies were noted:

- The parking lot is in a serious state of disrepair, with the asphalt paving in a state of failure.
- Parent drop-off and pick-up is not consolidated on school property and relies on the use of the adjacent Madbury

Church parking lot.

- Serious drainage issues resulting in ponding occur at the main entry and along the south elevation. When ponding occurs at the main entry, students are required to enter the building through the mechanical room which is not a safe condition.
- The parking lot is at capacity for current staff and visitor levels.

Structural System Analysis

The building and all additions are one-story structures with steel roof deck on open web steel joists and steel wide flange girders bearing on steel columns.

Gravity Systems:

No significant issues were observed with any of the primary structural elements. Installation of solar panel arrays on the existing flat roofs is not recommended as the weight of the array will exceed the original design load for the roofs. Wide-spread reinforcement of the roof framing, and possibly the columns and foundations, could be required to accommodate the weight of these PV systems. Installation of Solar Panel arrays on some of the sloped roofs might be possible if an adhered system weighing 3 psf or less can be used. Distribution of load and connections of the Solar array to the existing structure would need to be evaluated by a structural engineer.

Lateral Systems:

Lateral resistance appears to be primarily through a rigid frame comprised of open web joist girders connected to the columns and detailed for moment resistance. The gymnasium and gym expansion appear to be restrained by the CMU walls of the gym. The 2019 addition is small relative to the main building and appears to be connected such that it gets its lateral stability from the main building. No evidence of distress in the lateral system was observed. The rigidity of the moment resisting system would be difficult to quantify and not easily reinforceable therefore future expansion to the building should be constructed as structurally independent.

Exterior Envelope Analysis

The exterior finishes consist of a mixture of brick veneer, EIFS (exterior insulation and finish system). Windows are typically aluminum frames set in punched openings with glazed insulated glazing units. Windowsills are typically brick.

Façade Observations:

Foundation:

- No visible distress, except for chipping damage at the south east corner of the classroom wing.
- Concrete stairs have cracking on south (playground) elevation; uneven riser height due to previous grading adjustments; Rusted and non ADA complaint handrails at stairs at east elevation

Finish Systems:

- Brick mortar is failing at areas of the older portions of the building and brick repointing is recommended, especially at the south elevation.

- Mildew and moss growth was noted on brick veneer, especially at the entry courtyard.

Steel Window and Door Lintels:
- Brick veneer cracking was noted at several window headers, especially at the courtyard windows.

Windows and Doors:
- Hollow metal door frames and doors exhibited rust and corrosion near the ground.

Joint Sealants:
- Window perimeter sealants generally appeared in good condition.
- With the exception of the newest addition, building joint sealants are generally beyond expected serviceable life and exhibit cohesive and adhesive failure.

Pests:
- Wasp nests were observed under the roof and eave overhangs around the entire perimeter of the building.

Roofing Analysis

(from 2023 Roofing Update report prepared by Jon Mac Donald, Durapax Commercial Roofing Systems)

The existing roofing consists of EPDM (rubber) membrane that was restored in 2020, the roof is in good condition. There are newer EPDM roofs at the Office (2019) and Gym (2014) and a metal roof that is original and installed in 1989. There is also a built-up roof that was installed in 2016 at the connector from the Office to the Gym. The overall condition of these roofs is good, with the exception of the metal roof.

Metal roof panels are prone to thermal movement due to the nature of materials and design. Caulking and sealants are used to waterproof the joints at these roofs in areas of movement. Currently the seam caulking and sealants have broken down and deteriorated over time, causing the roof to open up at the seams and leak.

In the valleys at this roof, numerous repairs have been made. It is recommended that these valleys be secured as necessary using new rivets and sealed. As a final step, the valleys should be primed and sealed with two coats elastomeric coating.

Curbs and stack penetrations on the roof are areas where differential movement can result in open joints and eventual roof leaks. These areas should be sealed and coated.

The caulking joints at the windows should also be sealed prior to the application of coatings on the metal roofing. The counter-flashing joint above the roofline should be re-sealed with caulking.

It is recommended that the base of the metal roof be sealed to cover the ends of the standing seams and provide strength to the joint between the membrane and metal roofing.

Fire Protection System Analysis

Fire Service:

The existing fire service, fire pump, and sprinkler cistern are in fine condition and located out in the pump building out on site. The fire pump and all associated equipment is in good condition and does not require replacement at this time.

Automatic Sprinklers:

The automatic sprinkler system serves the entire building and is in good condition. Nothing was noted as requiring replacement at this time.

Plumbing Systems Analysis

Domestic Water Service:

The existing domestic water service consists of a reduced pressure zone assembly to prevent backflow and dual water meters for accuracy in flow measurement. The service is located in the boiler room and is in good condition and does not require replacement at this time. However, the control system for the wells located in the plumbing mechanical room is at the end of its service life and should be replaced.

Domestic Hot Water Heater:

The water heater (installed on 6/2/23) is an atmospheric type and utilizes combustion air from the space to operate. The combustion air ducts that previously served the boiler room were capped when they changed to direct combustion boilers therefore the code required combustion air is not being provided for the domestic hot water heater. This should be remedied either by replacing the water heater with a new sealed combustion type or by providing the required openings at 12" above the floor and 12" below the ceiling as per the fuel gas code. As it is currently operating there is a chance of CO build up in the space due to the potential of pressure differentials with the outside affecting the draft of the flue hood located on the equipment that could cause flue gas to exit into the mechanical room instead of leaving through the flue. This should be remedied as soon as possible.

Fixtures:

The bathrooms in the south wing consist of wall hung lavatories with manual faucets and floor mounted manual flush valve water closets. They are original to the building but in good condition and do not appear to require repair or replacement at this time.

The fixtures in the gang bathroom appear to be original to the construction of the building. The lavatory faucets are manually operated while the urinals and water closets have been converted to sensor operated flush valves are in fair condition and do not require replacement at this time.

All sinks in the classrooms, which include integrated drinking spouts, are in poor condition and require replacement. It is recommended that new sinks do not include drinking spouts to avoid cross contamination.

The kitchen staff bathroom consists of a wall mounted lavatory and a floor mounted flush valve water closet. Both utilize manual operators and are in good condition and do not require replacement.

During the site survey of the kitchen, an internal grease trap was found to serve the heavy grease producing fixtures within the kitchen. It is recommended that an internal grease interceptor should be considered to be installed at the pot sink to reduce the loading on the external grease trap and reduce any potential grease accumulation in the lines out to the exterior trap.

Storm Drainage:

The roof drains are in fair condition and do not appear to need replacement at this time.

Mechanical Systems Analysis

Administration Area:

The administration addition including conference room 158 was constructed in 2019 and is ventilated by an Energy Recovery Ventilator (ERV) located above the ceiling and ducted to all the rooms in the administration addition. The space is heated and cooled by cassette type fan coils connected to exterior located mini-split heat pumps. This equipment is original to the 2019 addition and is in good working condition and does not require replacement or repair.

The vestibule is heated by a ceiling mounted hydronic cabinet unit heater served off the existing hot water supply/return system and is original to the addition and in good working condition.

Connector:

The gang bathrooms in the connector are heated by hydronic fin tube and are in good condition. The bathrooms are provided with exhaust utilizing EF-3 which is located above the ceiling. This fan is original to the 1988 construction and appears in fair operable condition. As the fan is currently nearing end of life replacement should be considered before it fails.

Rooms 155, 154, 105, 103, and 150 are served with ventilation air, heating and cooling through AC-1 which was installed in 1998. The unit is ducted to each of the spaces and modulating dampers are controlled via thermostats in each space to control the air volume to the zone. A hydronic duct coil is provided in the ductwork for heating as the unit is cooling only. This unit is nearing end of life (26 years old) and should be considered for replacement.

North Wing:

The gymnasium, cafeteria, and 162 music room is provided ventilation air and heating through the roof top unit located above the gym and ducted to each space. The rooftop unit serving the space was installed when the gym addition was constructed. The unit is understood to be circa 2010 and is in fair working condition and should have 5-10 years of expected lifetime left. The music room has zone heating provided by fin tube radiation along the exterior wall. The fin tube is in fair condition and doesn't require replacement at this time.

The gym storage is served with ventilation air from the gym RTU and has supplemental heating provided by a wall mounted standalone electric heater. The heater is in fair condition and does not require replacement at this time.

Kitchen:

The kitchen has a Type I kitchen exhaust hood and a Type II dishwasher hood both in good condition and do not require replacement at this point. There is no conditioned make up air provided for the exhaust hoods as is required per current code. It is recommended that a kitchen makeup air system should be considered to be provided in a future project.

The kitchen is heated utilizing a cabinet unit heater which appears to be original to the construction of this addition. It is in poor condition and has reached end of life and should be replaced.

The bathroom is heated by a fin tube radiation which is in good condition and does not require replacement.

Mechanical Room:

The building hot water heating system is served by two (2) HTP Modcon1700 gas fired boilers located in the mechanical room. They are direct vent (sealed combustion) type with both flue and combustion air ducted from the exterior of the space. They were installed in 2018 and are in good condition and do not require any repair or replacement at this time. The associated pumps, valves, tanks and other appurtenances all appear to have been installed in 2018 and are in good condition and require no repair or replacement. There are two building circulator pumps, one for the boiler loop and one for the building loop. There is no redundancy on the boiler loop side and it is recommended to add a second circulator pump.

The dryer located in the space is venting into the abandoned combustion air intake which is not allowed per code as no dampers or other obstructions should be in the dryer vent ductwork. There is a damper and a louver on which lint can collect and no apparent means to remove any build up. The dryer should be vented properly to the exterior of the building in a code compliant manner.

South Wing:

The classrooms in the south wing are served with ventilation air from air handlers located on the roof and ducted to all the classrooms. A return duct with a return air fan brings the air back to the unit for recirculation. The relief air is discharged out gravity ventilators located on the roof and controlled via a damper to redirect the air from recirculation to exhaust. The system appears original to the building and while currently functional is at end of life and should be considered for replacement in the near future before a major failure occurs.

The classrooms are heated by perimeter hydronic fin tube radiation located on the exterior walls of the rooms. The fin tube is in good condition and does not require replacement or repair at this time.

The library is served by AH-3 which is located on the roof and provides heating and ventilation for the library. The unit is at end life and should be considered for replacement. There are destratification fans located high on the library ceiling which are mismatched and of unknown age. Replacement with a pair of matching fans is recommended as they do not appear to be newly installed.

The Reading Room is provided with a split DX Heat Pump for temperature control of the zone. It appears to be in fair condition but is reaching end of life and a replacement should be considered in the near future.

Rooms113, 125, 133, and 145 are served ventilation by ceiling exhaust fans that pull air from the space into the larger common space which is ventilated. The spaces are provided with split DX heat pumps for zone control which were installed in 2010. These units are in good condition and have up to 5 years of life left in them.

The IT room (Room 147) is cooled by a cassette type fan coil connected to a split DX heat pump located on the roof. It is newly installed and in good condition and does not require any repair or replacement at this time.

Electrical Room:

The electrical room is not provided with an exhaust or a split DX fan coil to ensure that the space temperature remains below 80°F. It is recommended that an exhaust fan or split DX cooling wall mounted fan coil should be provided for the electrical room.

Control Systems:

The building is controlled by a DDC BMS provided by Siemens and the main panel is located in the mechanical room. The system is still current (allows for modifications). All of the ethernet floor level controllers and field panels are at the end of useful service life and need to be replaced.

Electrical Systems Analysis

Electrical Service:

The building is fed from a pad mount transformer and terminates at the exterior service entrance automatic transfer switch with an 1200A main circuit breaker. The service runs underground to the main electrical room 1200A, 208/120V, 3ph, 4w main switchboard with bolted pressure switch main disconnect. The main switchboard is approximately 36 years old and is in good condition with no reported issues. The school building service is entirely backed up on a standby generator.

There is a second service fed from the pole mounted transformers that serve the fire pump located in a remote building from an overhead secondary service drop.

Recommendations: None.

Electrical Distribution:

Most of panels are 30+ years old and are in fair condition. The panels are located in the custodial room and main electrical room. Most of these panels don't have adequate spares/space capacity for future growth.

The main switchboard has some spares and spaces for future circuit breakers.

Recommendation: Add and/or upgrade distribution panels for substantial renovation.

Lighting & Controls:

The lighting throughout consists mostly of surface and pendant mounted 1x4 wraparound style retrofitted with LED lamps in the corridors and 2x4 fixtures in the music room. There are recessed 2x4s in classrooms, recessed 2x2s in the main entrance lobby, and high bay fixtures in the gym, all of which are LED.

The utility fixtures in BOH areas have been retrofitted with LED lamps.

Exterior lighting consists of building mounted wall packs which are LED.

Room 167 missing wallpack at exterior door.

Lighting controls consist of light fixtures with integral occupancy sensors and remote sensors, manually toggle switches (bi-level control) or dimmers in classrooms and toggle switches in corridors.

Recommendation: Add wallpack outside Room 167.

Devices & Wiring:

Power receptacles and tele/data devices are mostly recessed with wiring concealed in areas with gypsum and CMU walls/ceilings. There is some surface mounted raceway, plugmold and boxes for power and tele/data outlets that are utilized in areas with CMU walls and exposed ceilings.

Power wiring consist mostly of conduit/wire and type MC cable concealed in walls/ceilings.

Circuits serving appliances in teacher's room constantly trip.

Recommendation: Provide more dedicated circuits in the teacher's room.

Telecom/Public Address/Security:

The MDF is located in Room 147. No reported issues.

Classrooms have a combination of either wall mounted projectors with whiteboards or portable smart LCD displays.

The Public Address System is a traditional analog Bogen system. Phone system is integrated with PA system but no longer functions.

The clocks are stand-alone with batteries. No reported issues.

There is an intrusion alarm with motion detectors and access control at entries. There are exterior security cameras around building as well as interior cameras in common areas/corridors.

Recommendation: Upgrading the public address system to an IP based system to integrate with phone system and network.

Emergency Equipment:

There is an exterior standby diesel generator (125kW, 208/120V, 3ph) with exterior mounted automatic transfer switch and service disconnect. The transfer switch is located outside the kitchen loading dock area. The generator backs up the whole building service. The generator is approximately 9 years old and is in good condition.

There are thermoplastic illuminated exit signs with battery backup. Coverage appears to be adequate with the exception of the locations noted below.

Music room exit sign is photoluminescent and non-illuminated.

Classroom 130 is missing exit sign to exterior door.

A combination of emergency battery units 'bug-eyes' and central batteries with remote heads are utilized throughout. Coverage appears to be adequate with the exception of the locations noted below.

The Men's restroom near the cafeteria and kitchen restroom are missing an EBUs.

The restrooms near Room 110 are missing an EBUs.

The exterior egress doors around building other than the main entrance and gym are missing emergency lights.

Recommendations:

- Add emergency lighting consisting of battery units/remote heads or fixtures with integral battery backup to the listed area noted above.
- Add exit signs to locations noted above and replace music room exit sign with illuminated sign.

Fire Alarm:

The fire alarm control panel is addressable with voice evacuation and in good condition. The FACP Product is Mircom FX-2000. The main FACP with voice evacuation console and is located in the main entrance vestibule. The FACP transmit alarm/supervisory signals via an AES IntelliNet radio-transmitter.

There is notification coverage throughout including strobes in small rooms such as bathrooms, conference rooms and offices. There are speaker/strobe devices in the classrooms and in the common areas/corridors. The notification coverage throughout is adequate.

There are smoke detectors throughout the common areas/corridors and manual pull stations at the egress doors. The building is fully sprinklered. The detectors are in good condition and coverage is adequate.

The teacher's room egress door is missing a pull station.

Recommendations:

- Add CO detector in kitchen that contain fossil fuel burning equipment.
- Add pull station at teacher's room egress door.

Building Interior

The building interior was noted to be well maintained and in good condition. Notable deficiencies include the following items.

Flooring:

- Vinyl tile flooring throughout is in poor condition and nearing the end of useful service life.
- Carpeting at the Library is worn and is nearing end of useful service life.

Ceilings:

- Acoustic ceilings throughout the building are nearing the end of useful service life and are sagging with numerous broken and stained tiles.

Casework/Millwork:

- Classroom built-ins are worn and not ADA compliant.

PHOTOGRAPHS

Asphalt Paving in Poor Condition.

Berm Provides Easy Access to Roof, Gas Service, and Top of Transformer.

Area Susceptible to Ponding.

Cracking of Brick Veneer at Window Head Conditions.

Cracking of Brick Veneer at Window Head Conditions.

Clogged Area Drain.

Area Susceptible to Ponding.

Vinyl Flooring on Poor Condition.

Typical Classroom Casework.

Moss Growth on Brick Veneer.

Corrosion at Exterior Doors.

View of Roof.

View of Library.

Fan coils in the Administrative Addition.

Cabinet Unit Heater in Vestibule.

Ductwork in Gymnasium.

Gymnasium Roof Top Unit.

Destratification Fans in the Library.

Gang Bathrooms in the Connector.

Gang Bathrooms in the Connector.

Bottle Fill in the Connector.

Existing Wall Mounted Fan Coils.

Typical Classroom Water Closets.

Data Room Fan Coil.

Type I Hood.

Type II Hood.

HTP Boilers.

Non-Compliant Dryer Vent.

Domestic Hot Water Heater Vent.

Roof Top Unit Original to Building.

DDC BMS Panel.

Gravity Ventilators.

Fire Pump Building.

Main Switchboard.

Public Address System.

Classroom Lighting.

Main Fire Alarm Control Panel.

Standby Generator.

Main Switchboard.

Public Address System.

MAST WAY ELEMENTARY SCHOOL

Aerial View

Main Entry

GENERAL BUILDING DATA

Address:	23 Mast Road, Lee, NH 03861
Serving Grade Levels:	Kindergarten - 4
Number of Students:	348
Number of Faculty and Staff:	75

Construction Date / Building Age:	Year	Age
Original Construction	1959	65 Years
Addition	1967	57 Years
Addition	1994	30 Years
Addition	1998	26 Years
Addition	2018	6 Years

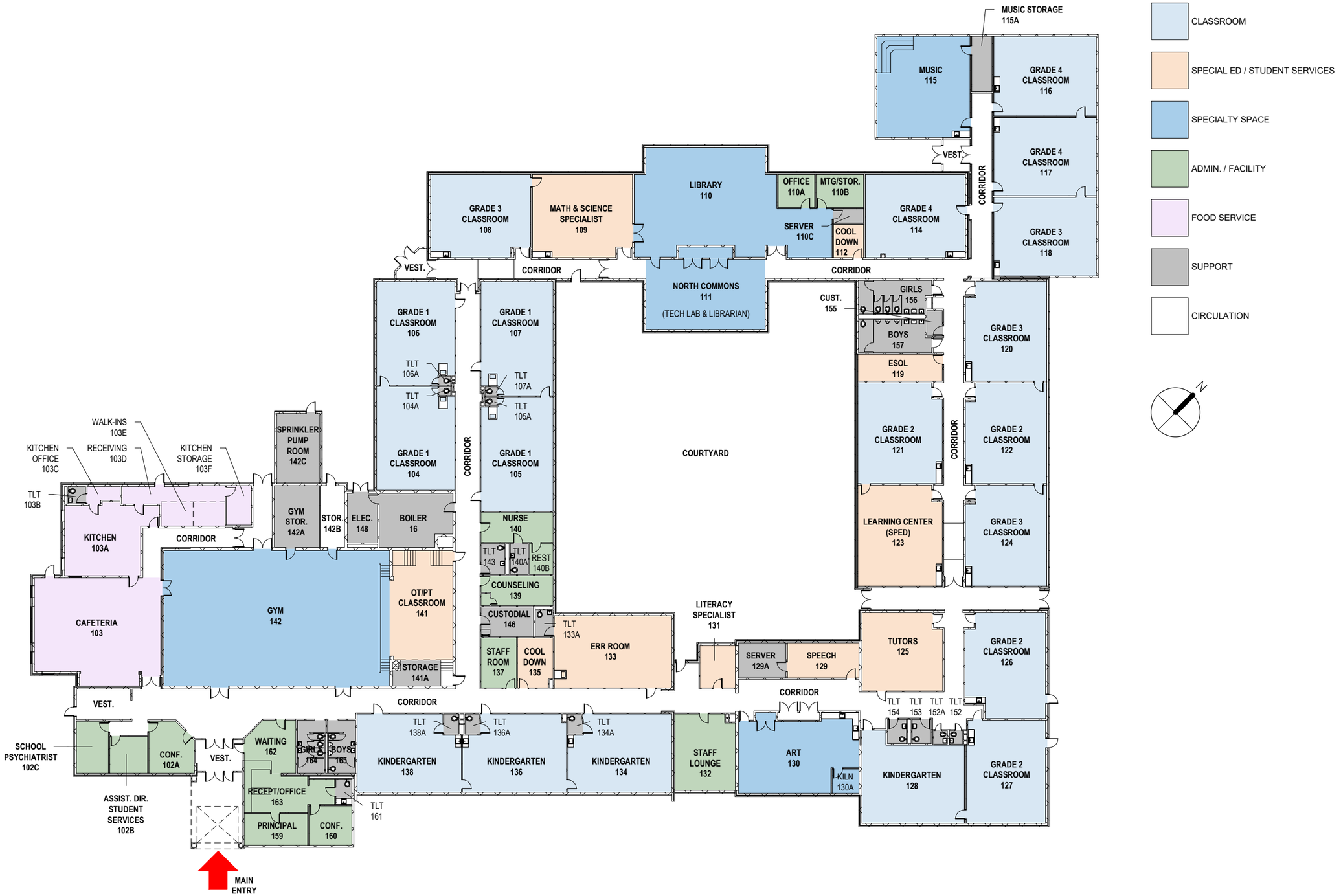
Building Area:	Area
Original Construction	33,907 SF
1967 Addition	7,705 SF
1994 Addition	14,783 SF
1998 Addition	377 SF
2018 Addition	5,538 SF
Total	62,310 SF

Building Footprint:	62,310 Square Feet
Building Area:	62,310 Gross Square Feet
Total Site Area:	10.50 Acres

OVERVIEW

Mast Way Elementary School is a one-story, predominantly brick veneer building located on Mast Road in Lee, New Hampshire. The original building dates from 1959 with four additions and renovations over the years. The site includes the school building, playground and playing field, parking and bus drop-off loop, as well as a storage out-building. Mast Way benefits from an interior courtyard which offers educational and recreational opportunities to the school community.

Overall, the building is in good condition and has been well maintained. However, several building components, including parking lot paving, flooring, ceilings, roofing, and some mechanical systems are nearing the end of their useful service lives and will require replacement.



MAST WAY ELEMENTARY SCHOOL - FLOOR PLAN

OYSTER RIVER COOPERATIVE SCHOOL DISTRICT

NOVO STUDIO | ARCHITECTS

DETAILED FINDINGS

Code and Accessibility Analysis

Code Analysis:

Non-Separated Mixed Uses:

Use Group E (Elementary School)
Use Group A-2 (Cafeteria)
Use Group A-3 (Gymnasium)
Use Group B (Offices)

Construction Type (based on field observation):

Based on field observations, the building construction most closely resembles Type IIB construction, based on the noncombustible construction and unprotected steel frame.

Interior Finishes:

The existing interior finishes appeared to be compliant (typically painted CMU or drywall).

Means of Egress:

The number and arrangement of exits seemed to be sufficient for the expected number of occupants.

Fire Protection Systems:

Based on the site visit, it was observed that the building is provided with a fire alarm system, smoke alarm system, and fire extinguishers.

Accessibility Analysis:

The building generally has accessible routes to all areas, including a lift to the stage which is currently used as the OT/PT classroom. Although we did not conduct a comprehensive accessibility survey, the following deficiencies were noted:

- Toilet rooms in the Grade 1 classrooms were found to be not accessible, lacking proper clearances, grab bar accessories, and compliant door widths.
- With the exception of the most recent addition, sinks in classrooms were found to not be accessible, lacking compliant knee clearance.

Grounds Analysis

The Mast Way site is well maintained and includes a large play area in addition to a landscape enclosed courtyard. Notable deficiencies include the following:

The parking lot is in a serious state of disrepair, with the asphalt paving in a state of failure.

Parent drop-off and pick-up is not consolidated on school property and relies on the use of the adjacent Lee Congregational Church as part of the vehicular circulation. This traffic pattern makes a row of parking unusable during these times.

Structural System Analysis

The building and all additions are one-story structures with open web steel joists and steel wide flange girders bearing on steel columns and concrete masonry unit (CMU) bearing walls. The original building and 1967 addition were constructed with Insulrock (gypsum) plank roof decks. The later additions have corrugated steel deck for the roof diaphragm.

Gravity Systems:

No significant issues were observed with any of the primary structural elements. Some cracks in brick joints of the chimney and nearby corner of gym had previously been filled with elastomeric sealant. It appeared that some additional cracks may have developed since the repair was made. FBRA recommends review by a building envelope specialist.

Installation of solar panel arrays on the existing flat roofs is not recommended as the weight of the array will exceed the original design load for the roofs. Widespread reinforcement of the roof framing, and possibly the columns and foundations, could be required to accommodate the weight of these PV systems.

Lateral Systems:

The original building and 1967 addition were constructed prior to code mandated considerations for Seismic design. Wind resistance appears to have been intended to be resisted by the CMU bearing walls. Seismic resistance of these buildings is not required unless alterations to the building would add or modify the seismic demand or capacity. The 1994 and 2000s additions were designed to meet the seismic design criteria mandated by the codes at the time and are provided by the reinforced CMU bearing walls.

No signs of distress from wind or seismic forces were observed aside from the cracks in the chimney and corners of the gym noted in Photo 1 which may be a result of high wind forces.

Exterior Envelope Analysis

The exterior finishes consist of a mixture of brick veneer, EIFS (exterior insulation and finish system), and composite paneling at the new additions and renovated areas. Windows are typically aluminum frames set in punched openings with glazed insulated glazing units. Windowsills are typically aluminum.

Façade Observations:

Foundation:

- Previous parging of exposed concrete foundation is failing.

Finish Systems:

- Brick mortar is failing at areas of the older portions of the building and brick repointing is recommended.
- Efflorescence observed at brick at Library wing of building.
- Mildew and moss growth was noted on brick veneer, especially the sills below EIFS.
- The EIFS exterior finish is very thin (3/8") and brittle. It is easily damaged and numerous holes and punctures were noted throughout. Such damage allows water infiltration which can lead to additional issues.
- Wood fascia trim generally needs repair and repainting.

Steel Window and Door Lintels:

- No visible distress.

Windows and Doors:

- Hollow metal door frames and doors exhibited rust and corrosion near the ground.

Joint Sealants:

- Window perimeter sealants generally appeared in good condition.
- With the exception of the new additions, building joint sealants are generally beyond expected serviceable life and exhibit cohesive and adhesive failure.

Roofing Analysis

(from 2023 Roofing Update report prepared by Jon Mac Donald, Durapax Commercial Roofing Systems)

The existing roofing at Mast Way consists of EPDM (rubber) roofing installed during renovations and additions in approximately 1998 and 2019. In between those additions, built-up roofing was installed from 2014 to 2017 at various areas throughout the facility. The overall condition of the roofing varies greatly, mostly based on the time of the installation.

EPDM roofing consists of EPDM (rubber) membranes that are glued together with adhesives or tapes at the field seams and flashings and are sealed with caulking. These types of membranes are usually installed (adhered or fastened) over polyisocyanurate (foam) insulation, which in turn is secured to the roof deck (metal or tectum). The 1998 EPDM roods are in fair to poor condition and are in need of attention. The caulking and sealants used at the field seams and flashings have been failing over the past several years and have resulted in a number of roof leaks requiring temporary repairs. While these repairs have been effective, a longer term solution should be employed to return the integrity of the roofing overall instead of reactive repairs.

Seam sealants and adhesives will deteriorate over time with exposure and thermal movement. As the sealants and

caulking open up, moisture will get in and cause further deterioration.

Sealants and adhesives at flashings will undergo the same type of deterioration as those at the field seams. Membrane that becomes un0adhered and opens up at roof top penetration flashings will allow water into the substrate, resulting in roof leaks. These are repaired by caulking the joints or by patching over the lifted membrane.

Punctures and open seams in the field of the roof require patches.

Built-up roofing gets its name from the process in which it is installed. Fiberglass felts are set in asphalt or tar adhesive and "built up" generally four to five piles of adhesive and felt creating the roof membrane. The roof is then flood coated with bitumen (tar or asphalt) into which aggregate is embedded. These roof areas are generally adhered over fiberboard and foam insulation which in turn is fastened to the roof deck. The condition f the built-up roofing varies with age. Most of the roofing is in fair to good condition with few leaks reported in these areas. It would be an opportune time to provide maintenance at these roofs in terms of resealing the perimeter flashings with cement and membrane on the older roofs as well as coating the curb and raised flashings with a protective surface coating.

There is a non-roofing item that should also be noted. On the back side of the Gym there are panels that appear to have been places over old windows. This paneling is in poor condition and should be replaced.

Fire Protection System Analysis

Fire Service:

The existing fire service, fire pump, and sprinkler cistern are in fine condition and do not require replacement at this time but replacement/refurbishment of the fire pump should be considered within the next 5-10 years as it is showing signs of corrosion.

Automatic Sprinklers:

The automatic sprinkler system serves the entire building and is in good condition. Nothing was noted as requiring replacement at this time.

Plumbing Systems Analysis

Domestic Water Service:

The existing domestic water service consists of a reduced pressure zone assembly to prevent backflow and dual water meters for accuracy in flow measurement. The service is located in the boiler room and is in good condition and does not require replacement at this time.

Domestic Hot Water Heater:

The domestic hot water heater plant consists of a HTP superstore indirect hot water heater. It is recently installed and in good condition. The water temperature is controlled via a mechanical thermostatic mixing valve located adjacent to the

water heater and set for 120°F. The valve is in good condition. Some of the pipe insulation visible in the boiler room is in poor condition and should be replaced when possible.

The hot water recirculation pump is in fine condition and does not require replacement at this time.

Fixtures:

The bathroom fixtures in the building are overall in good condition with sensor operated fixtures installed in the newer additions while a number of older manually operated fixtures (good conditions) still exist in the original building.

All sinks in the classrooms, which include integrated drinking spouts, are in poor condition and require replacement. It is recommended that new sinks do not include drinking spouts to avoid cross contamination.

The drinking fountains are in good condition and do not require replacement at this time.

Storm Drainage:

The roof drains are in fair condition and do not appear to need replacement at this time.

Mechanical Systems Analysis

The Administration Addition is served by an Energy Recovery Ventilator (ERV) located above the ceiling. The fresh air is heated utilizing an electric duct coil (EDC-1) and then distributed throughout the space utilizing ceiling supply diffusers. The return air is pulled from the spaces utilizing ceiling return grilles. The outdoor air intake and exhaust are routed up through the roof and terminated with goosenecks. The system is original to the 2018 addition and is in good condition and does not require any work.

The 2018 classroom addition is served by ERV-1 located on the roof of the building. The exhaust and supply air is ducted to the ventilate the classrooms and corridor that are part of the addition. The ERV supply air is tempered in the winter via a hot water duct coil (HC-1) that brings the air up to 55°F before discharging to the fan powered VAV boxes at the spaces. The supply air for this addition terminates at a fan powered VAV boxes with hydronic reheat to provide ventilation air and heating. The exhaust air is taken directly from the space back to the ERV via ceiling return grilles. This equipment is original to the 2018 addition and in good condition and does not require any work.

The building corridors are not provided with any ventilation air per site observations or examination of existing plans. Per current code (IMC 2021) corridors should be provided with a minimum fresh air ventilation rate of 0.06 CFM/SF. In future projects it is recommended that this oversite be corrected through either new equipment of rebalancing of existing ventilation units.

The electrical room is not provided with exhaust or cooling. Per code a system needs to be provided to maintain the electrical room temperature below the maximum temperature set by code which is typically done via an exhaust terminal or fan or by a split DX cooling system in the space. In future projects it is recommended that this oversite be corrected through either new equipment of rebalancing of existing ventilation units.

The kitchen is provided with a type I exhaust hood which is in fair condition and doesn't require replacement. The hood is not provided with conditioned make up air which is required by the current code and should be considered for update with future work.

The dishwasher is not provided with a type II hood as per current code and is only provided with an exhaust grille at the ceiling. This is not currently code compliant as it does not adequately contain the humidity from the operating dishwasher and should be considered for update in a future project.

Bathroom 103D is served by a ceiling exhaust fan which was not exhibiting noise during the survey and appears to be in fine operable condition and does not yet require replacement. The adjacent room 103C is not provided with ventilation air and should be considered to provide per code in a future project.

The gym, stage, and cafeteria are provided ventilation air and heating from RTU-1 located on the roof. The spaces are independently controlled via hydronic duct coils for each space. The unit is in fair condition and does not currently require replacement. The unit's location on the roof is within 10' of the edge of the roof and fall protection should be looked into with a future project. Secondary heating is provided by fin tube radiation in the gym and stage (fair condition) and cabinet unit heaters in the cafeteria (fair condition).

The stage is provided with a portable air conditioner ducted to a gravity vent adjacent to the unit. The installation is not up to code standards and should be removed and replaced with a split DX unit or other option that is installed as per manufacturer installation requirements.

The Administration Addition is heated and cooled via split DX heat pumps which are located on the roof of the building and piped down to their associated ceiling cassette type fan coils located in the spaces. The administration bathroom is served by a hydronic wall heater. The vestibule is heated by a ceiling mounted cabinet unit heater served off the boiler plant. All of this equipment is original to the 2018 addition and in good condition and does not require any work.

The 2018 Classroom Addition is heated primarily via the fan powered VAV boxes with supplemental heat from the cassette style fan coils located in the space served by split Heat Pumps located on the roof. The heat pumps provide all of the cooling for the space. The vestibule C101 is heated by a cabinet unit heater and the corridor is heated by fin tube radiation. This equipment is original to the 2018 addition and in good condition and does not require any work.

The primary heating source for the building are two gas fired HTP Mod Con 850LP boilers located in the boiler room. They were installed in 2017 and are in good condition and do not require replacement. The hydronic circulation pumps (both primary and secondary) are sourced from Grundfos and were installed in 2017 and are in good condition and do not require repair or replacement.

Room 103C near the kitchen is not provided with heat nor is it provided with code required ventilation air. Future work in the area should consider providing ventilation air at minimum to the room.

Bathroom 103D is heated utilizing hydronic fin tube and it is in poor but operable condition. It has corroded and should be considered for replacement.

The kitchen is heated by a hydronic unit heater hung from the ceiling. It is in fair condition and does not require replacement at this time.

The remainder of the classrooms prior to the 2018 addition are heating only and are provided with ventilation air from roof mounted ERV's. The ventilation air is heated via a hydronic duct coil before discharging via ceiling supply diffusers into each classroom. Exhaust air is entrained by the ceiling return grilles and are ducted back to the ERV. The classrooms primary heat is provided by perimeter fin tube radiation that appears to be original to the building. The fin tube is in fine condition and does not require replacement at this time. The ERV's serving these areas were replaced in 2023 per the tags on the units and are in good condition and do not require replacement. The grilles in a number of classrooms and associated bathrooms are in poor condition and should be considered for replacement.

There appear to be a number of abandoned exhaust fans and intakes located on the roof in the southeast corner of the building that should be removed and their penetrations capped to prevent future water intrusion.

The insulation on the refrigerant lines for condenser units serving the walk-ins is in poor condition and should be replaced to ensure continued efficient operation.

The library, commons, and adjacent classrooms are ventilated by RTU-3 located on the roof. The unit was replaced in 2023 per the unit nameplate and is in good condition. The spaces are only heated via forced air and perimeter fin tube served from the boiler plant. The fin tube is in fair condition and does not require replacement at this time.

Control Systems:

The building is controlled by a DDC BMS provided by Siemens and was last updated 10/14/2023 according to the information provided inside the Control Panel. The system is still current (allows for modifications) and is in good condition and does not require replacement at this time.

Electrical Systems Analysis

Electrical Service:

There are (2) services fed from pole mounted transformers and terminates at the exterior service entrance automatic transfer switch with an 800A main circuit breaker. The service runs underground to the main electrical room 800A, 208/120V, 3ph, 4w main distribution panel. The main distribution panel is in good condition with no reported issues. The school building service is entirely backed up on a standby generator.

There is a second service fed from the pole mounted transformers that serve the fire pump from an overhead secondary service drop.

Recommendations: None.

Electrical Distribution:

Most of panels have been recently upgraded and are in good condition. The panels serving classrooms are recessed in the corridors. Some of these panels don't have adequate spares/space capacity for future growth.

The main distribution panel has some spares and spaces for future circuit breakers.

Recommendations: None.

Lighting & Controls:

The lighting throughout consists mostly of recessed 2x2, 2x4, and downlights, all of which are LED. The gym has surface mounted round lensed LED fixtures as well as LED high bay fixtures with sensors.

The utility fixtures in BOH areas have been retrofitted with LED lamps.

Exterior lighting consists of building mounted wall packs which are LED.

Lighting controls consist of light fixtures with integral occupancy sensors, manually toggle switches (bi-level control) or dimmers in classrooms and toggle switches in corridors.

Recommendations: None.

Devices & Wiring:

Power receptacles and tele/data devices are mostly recessed with wiring concealed in areas with gypsum and CMU walls/ceilings. There is some surface mounted raceway, plugmold and boxes for power and tele/data outlets that are utilized in areas with CMU walls and exposed ceilings.

Power wiring consist mostly of conduit/wire and type MC cable concealed in walls/ceilings.

Recommendations: None.

Telecom/Public Address/Security:

The MDF is located next to the Tech Lab and the IDF is located next to the library. No reported issues.

Classrooms have a combination of either wall mounted projectors with whiteboards or portable smart LCD displays.

The Public Address System is a traditional analog Bogen system. No reported issues.

The clocks are stand-alone with batteries. No reported issues.

There is an intrusion alarm with motion detectors and access control at entries. There are exterior security cameras around building as well as interior cameras in common areas/corridors.

Recommendation: Upgrading the public address system to an IP based system to integrate with phone system and network.

Emergency Equipment:

There is an exterior standby diesel generator (150kW, 208/120V, 3ph) with exterior mounted automatic transfer switch and service disconnect. The transfer switch is located next to the utility riser pole and service entrance. The generator backs up the whole building service. The generator is approximately 10 years old and is in good condition.

There are thermoplastic illuminated exit signs with battery backup. Coverage appears to be adequate.

A combination of emergency battery units 'bug-eyes' and fixtures with integral battery backup are utilized throughout. Coverage appears to be adequate.

The EBU in the gym is damaged and should be replaced.

The exterior egress door at the back building vestibule is missing emergency lights.

Recommendations:

- Add emergency lighting consisting of battery units/remote heads or fixtures with integral battery backup to the listed area noted above.
- Replace gym EBU.

Fire Alarm:

The fire alarm control panel appears to be newer and in good condition. The FACP Product is Notifier NFS-320 and emergency voice evacuation system is Wheelock Safepath 4. The main FACP is addressable and is located in the main electrical room. The emergency voice evacuation panel along with the remote annunciator is located in the main entrance vestibule. The FACP transmit alarm/supervisory signals via an AES IntelliNet radio-transmitter.

There is notification coverage throughout including strobes in small rooms such as bathrooms, conference rooms and offices. There are horn/strobe devices in the classrooms and in the common areas/corridors. The café, gym, and newest addition are the only areas with speaker coverage. The notification devices in the common areas/corridors and classrooms should be speaker/strobes for voice intelligibility.

There are smoke detectors throughout the common areas/corridors and classrooms, heat detectors in mechanical rooms and kitchen, and manual pull stations at the egress doors. The detectors are in good condition and coverage is adequate.

The boiler room has a carbon monoxide detector.

Recommendations:

- Add CO detector in kitchen that contain fossil fuel burning equipment.
- Add speaker/strobe notification devices throughout remainder building.

Building Interior

The building interior was noted to be well maintained and in good condition. Notable deficiencies include the following items.

Flooring:

- Vinyl tile flooring throughout is in poor condition and nearing the end of useful service life.

Ceilings:

- Acoustic ceilings throughout the building are nearing the end of useful service life and are sagging with numerous broken and stained tiles.

Interior Doors:

- Classroom interconnecting doors are hollow and flimsy, easy to kick down, and do not lock for lock down.

Casework/Millwork:

- Classroom built-ins are worn and not ADA compliant.
- Kindergarten and Grade 1 classrooms lack cubbies.
- Sinks at Nurse's Office and Teacher's room are not ADA compliant.

Other:

- Acoustic issues were noted in the Cafeteria.
- Kindergarten Room 128 lacks an internal toilet room.
- Grade 1 classroom toilet rooms are poorly ventilated and are not ADA compliant.

PHOTOGRAPHS

Efflorescence and Mildew at Brick Veneer.

Damage at EIFS.

Damage at EIFS.

Flooring in Poor Condition.

Concrete Foundation in Poor Condition.

Brick Requiring Repointing.

Asphalt Paving in Poor Condition.

Exterior Door in Poor Condition.

Flooring in Poor Condition.

Roof Fascia Trim Requiring Repair.

View of Roof.

View of Roof.

Typical Classroom Casework.

Boiler Plant.

Secondary Loop Boiler Pumps.

Boiler Pumps.

Commercial Dishwasher.

Type I Kitchen Exhaust Hood.

Cafeteria Cabinet Unit Heater.

Gymnasium Perimeter Heating.

Portable Air Conditioning in the Stage Area.

Typical Classroom with Fin Tube Radiation and No Cooling.

Library.

Commons.

Domestic Water Service.

Domestic Water Heater.

Thermostatic Mixing Valve.

Manually Operated Fixtures in the Older Wings.

Fire Pump.

Electrical Main Distribution Panel.

Fire Service Cistern.

Fire Alarm Control Panel.

Public Address System.

Classroom Lighting.

Generator and Service Entrance ATS.

OYSTER RIVER HIGH SCHOOL

Aerial View

Main Entry

GENERAL BUILDING DATA

Address: 55 Coe Drive, Durham, NH 03824

Serving Grade Levels: 9 – 12, Preschool

Number of Students: 840

Number of Faculty and Staff: 140

Construction Date / Building Age:

	Year	Age
Original Construction	1964	60 Years
Additions and Renovations	2005	19 Years

Building Area:

	1964 Original	2005 Addition	Total
Level 1	51,754 SF	78,763 SF	130,517 SF
Level 2	16,333 SF	27,241 SF	43,574 SF
Level 3	14,562 SF	0 SF	14,562 SF
Total	82,649 SF	106,004 SF	188,653 SF

Building Footprint: 130,517 Square Feet

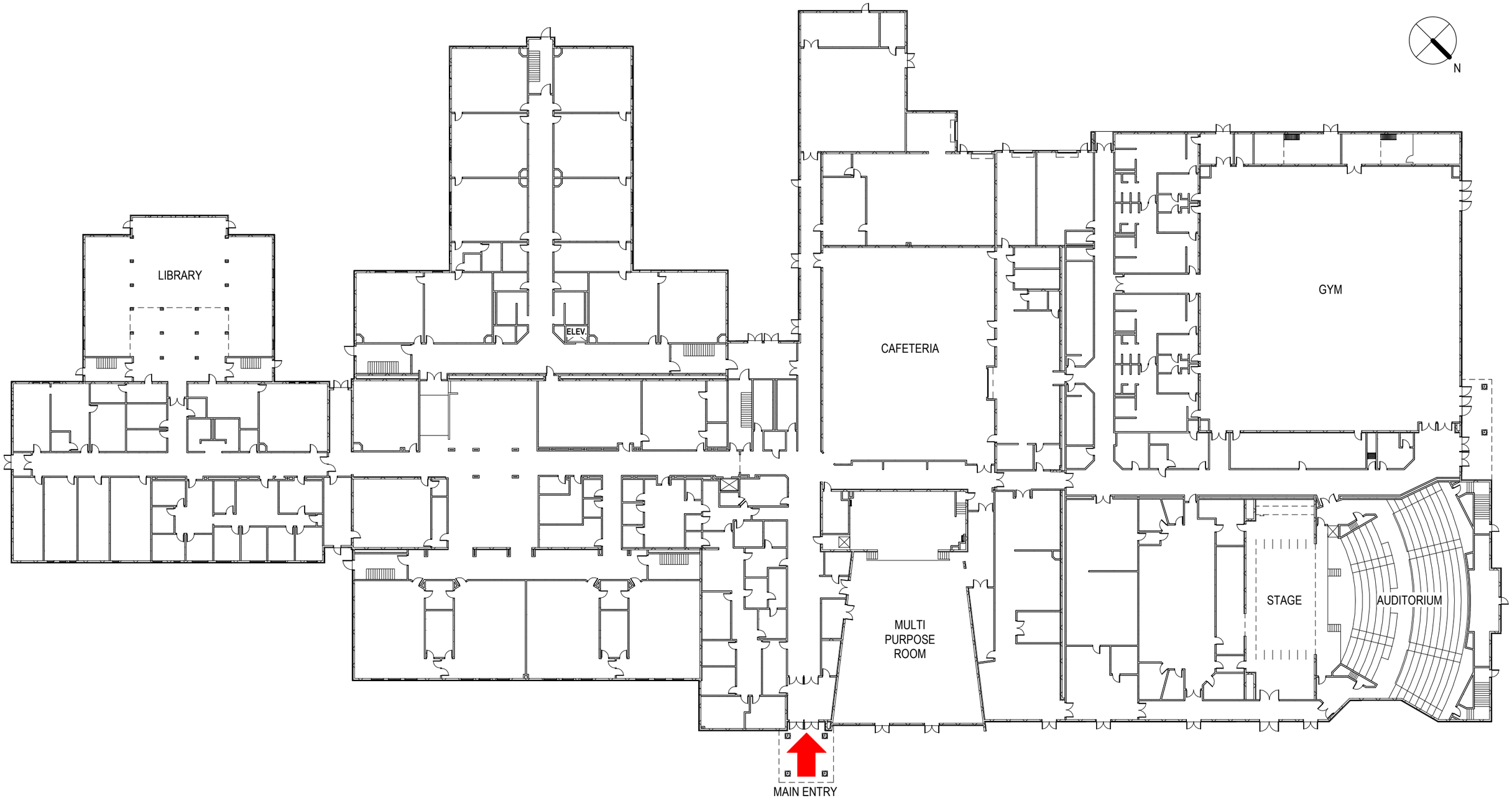
Building Area: 188,653 Gross Square Feet

Total Site Area: 42.74 Acres (including Middle School and Facilities)

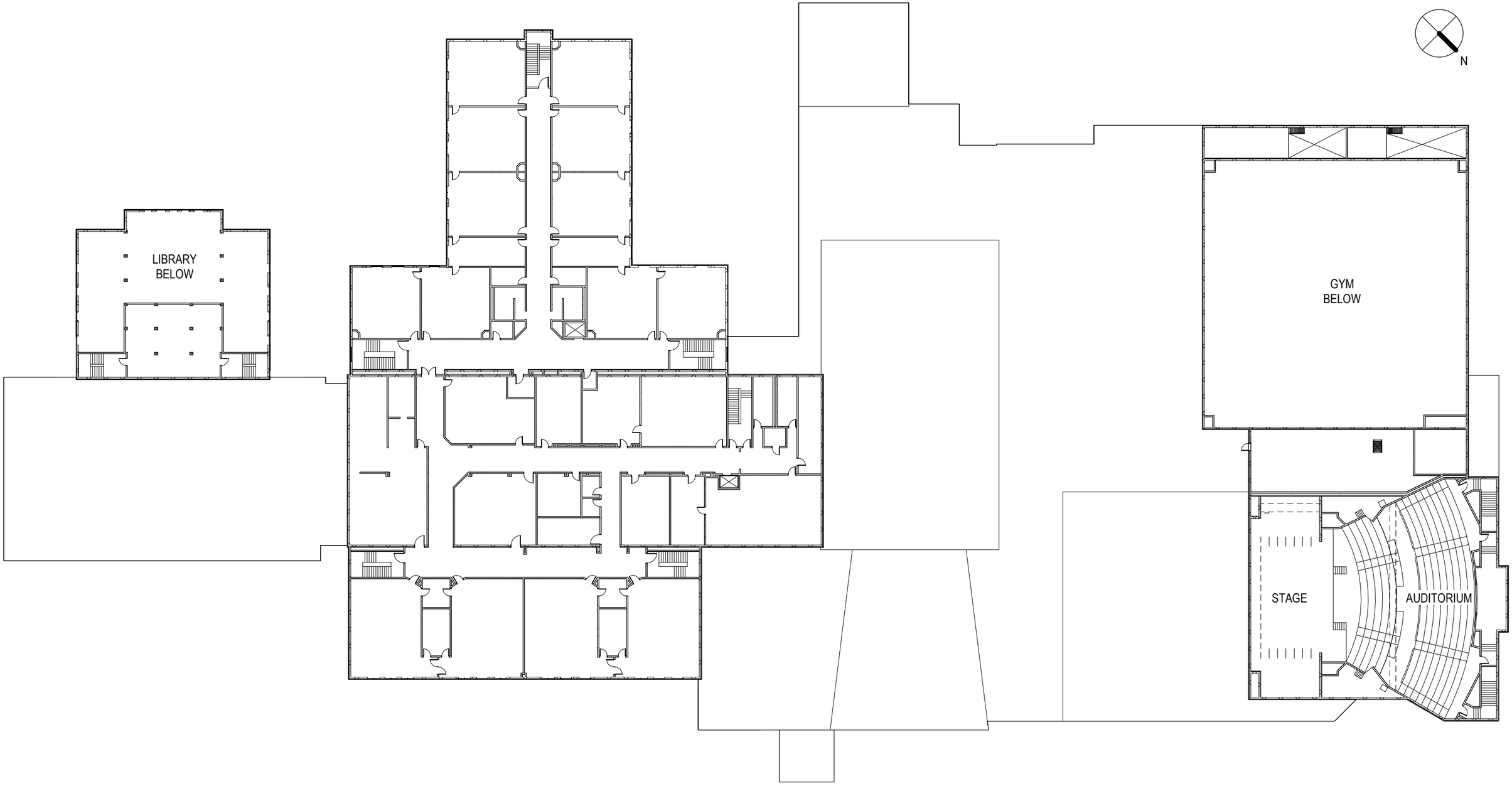
OVERVIEW

Oyster River High School, located on Coe Drive in Durham, New Hampshire, is a brick and masonry building varying in height from one-story to three-stories. The original building dates from 1964 and was substantially expanded with additions and renovation in 2005. The building features a gymnasium, multi-purpose room, and 514 seat Auditorium. The site includes the school building, three parking areas, tennis courts, baseball fields, and a turf football field with running track and bleachers. The High School shares a campus with the SAU building, facilities building, and Oyster River Middle School. In addition to serving the Oyster River community, students from Barrington also attend the High School. The District's Preschool Education Program (PEP) is also located in the high school, consisting of two classrooms and toilets as well as a dedicated preschool playground.

Overall, the building is in good condition and has been well maintained. However, due to the building's age, a number of systems and components have reached the end of their useful service life and need replacement or upgrades, including the turf field and track, asphalt paving, flooring and ceilings, roofing, and major mechanical equipment.



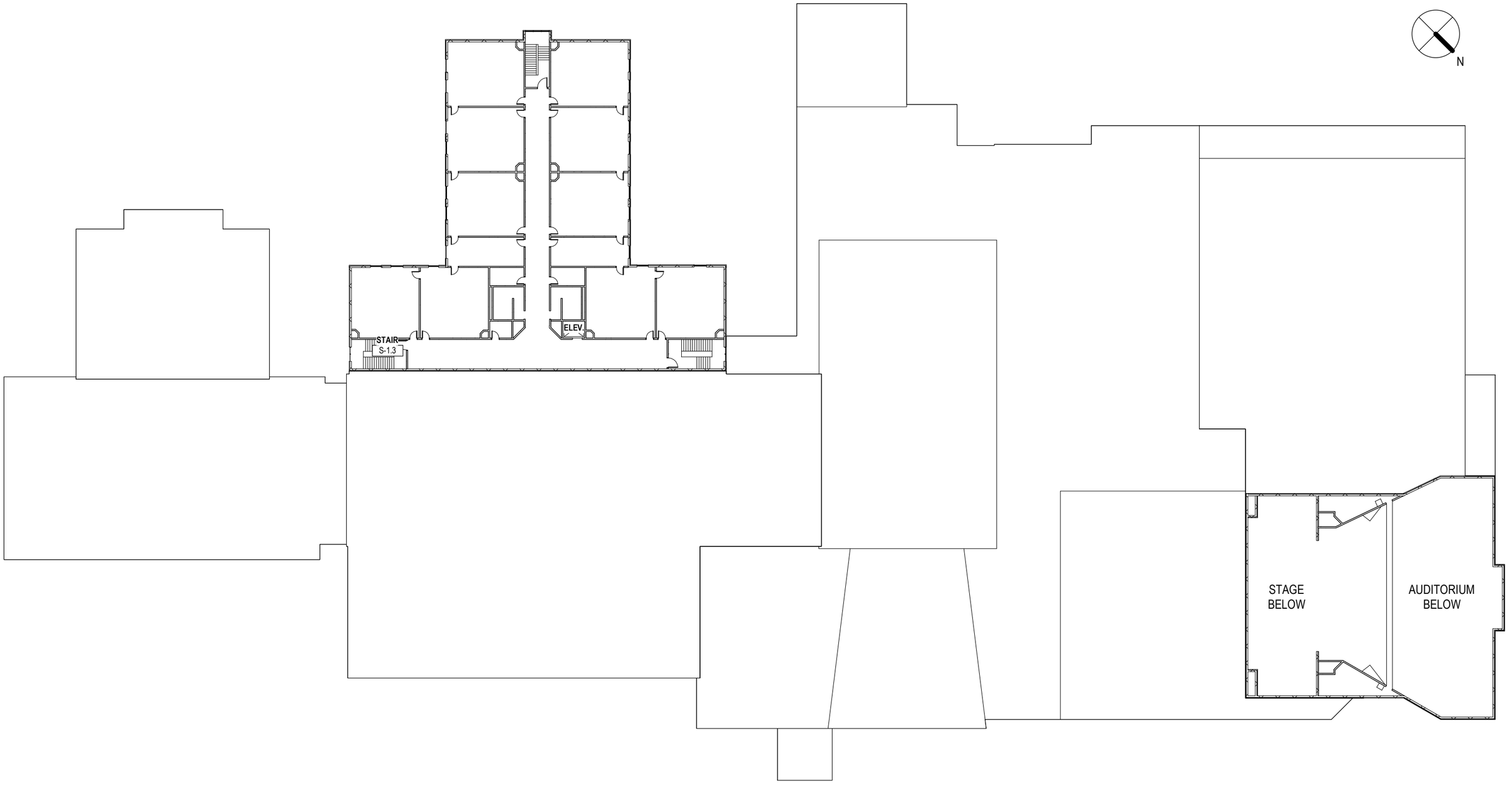
OYSTER RIVER HIGH SCHOOL - LEVEL 1 FLOOR PLAN



OYSTER RIVER
COOPERATIVE SCHOOL DISTRICT

OYSTER RIVER HIGH SCHOOL - LEVEL 2 FLOOR PLAN

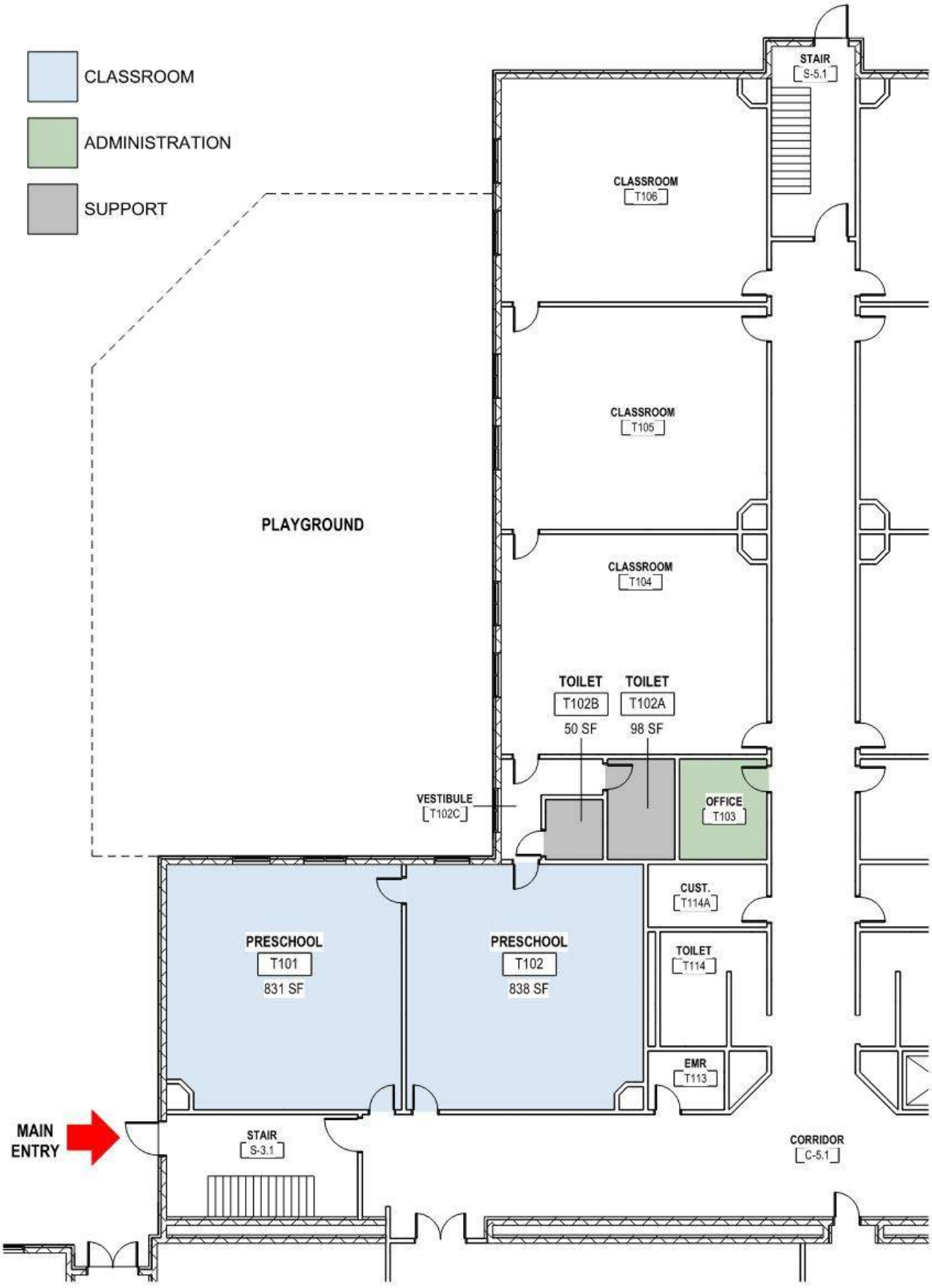
NOVO STUDIO | ARCHITECTS



OYSTER RIVER HIGH SCHOOL - LEVEL 3 FLOOR PLAN

OYSTER RIVER COOPERATIVE SCHOOL DISTRICT

NOVO STUDIO | ARCHITECTS


CLASSROOM
ADMINISTRATION
SUPPORT
STAIR
S-5.1
CLASSROOM
T106
CLASSROOM
T105
PLAYGROUND
CLASSROOM
T104
TOILET
T102B
50 SF
TOILET
T102A
98 SF
VESTIBULE
T102C
OFFICE
T103
CUST.
T114A
PRESCHOOL
T101
831 SF
PRESCHOOL
T102
838 SF
TOILET
T114
EMR
T113
MAIN
ENTRY
STAIR
S-3.1
CORRIDOR
C-5.1

DETAILED FINDINGS

Code and Accessibility Analysis

Code Analysis:

Non-Separated Mixed Uses:

Use Group E (Preschool, School)
Use Group A-3 (Gymnasium and Auditorium)
Use Group A-2 (Cafeteria)
Use Group B (Offices)

Construction Type (based on field observation):

Based on field observations, the building construction most closely resembles Type IIB construction, based on the noncombustible construction and unprotected steel frame.

Vertical Openings:

All existing vertical openings connecting the first, second, and third floors are compliant with the vertical opening section allowed for new construction. The exist stairways are properly enclosed and offer compliant discharge to the exterior.

Interior Finishes:

The existing interior finishes appeared to be compliant (typically painted CMU or drywall).

Means of Egress:

The number and arrangement of exits seemed to be sufficient for the expected number of occupants.

Fire Protection Systems:

Based on the site visit, it was observed that the building is provided with a fire alarm system, smoke alarm system, and fire extinguishers.

Accessibility Analysis:

The building generally has accessible routes to all areas. Although we did not conduct a comprehensive accessibility survey, the following deficiencies were noted:

- While some classroom toilet rooms were found to be accessible, a number were not, lacking proper clearances, grab bar accessories, and compliant door widths.
- Typically, sinks in classrooms were found to not be accessible, lacking compliant knee clearance.
- Exterior concrete steps of the kindergarten classrooms are not compliant, lacking proper handrails and inconsistent riser heights due to the grading in these areas.

Grounds Analysis

The high school enjoys a well-maintained site consisting of newly restored parking lots on the opposite side of Coe Drive and recently built tennis courts. Notable deficiencies include the following:

- The surfacing at both the turf field and running track are nearing the end of useful life and will need replacement.
- Although the parking lots across Coe Drive have recently been resealed and striped, the paving area in front of the school including the drop-off loop and parking and parking wrapping around the Auditorium need to be repaved and striped.
- Ponding occurs at the main entry and it is recommended the grading at this area be adjusted.
- Additional accessible parking should be considered closer to the playing fields.

Structural System Analysis

The original school building was primarily a two-story building except for the auditorium, gym and cafeteria spaces which were tall one-story elements. The addition in 2002 includes one three-story classroom wing. The original building floor and roof framing are primarily Tectum roof deck on open web steel joists and steel wide flange girders bearing on CMU bearing walls. Second floor slabs are 3" concrete on metal form deck. The library of the original building is a Glu-lam wood rigid frame structure with a mezzanine level on one half. The 2002 additions are similar in construction with opening web joists supporting 3" concrete floors and a steel roof deck.

Gravity Systems:

No significant issues were observed with any of the primary structural elements. Installation of solar panel arrays on the existing flat roofs is not recommended as the weight of the array will exceed the original design load for the roofs. Widespread reinforcement of the roof framing, and possibly the columns and foundations, could be required to accommodate the weight of these PV systems.

Lateral Systems:

The original building was constructed prior to code mandated considerations for Seismic design. Wind resistance appears to have been intended to be resisted by the CMU bearing and shear walls. When the 2002 additions were added some portions of the existing building were removed and replaced with part of the new addition. At the same time, the design of the new addition appears to include detailing to add bracing and reinforce portions of the original building to bring the entire building up to code in terms of lateral load resistance. However, the effectiveness of some of the details looks questionable and would probably not meet the requirements of the current building code. As a result, it's advisable to design any future additions to be structurally independent.

No signs of distress from wind or seismic forces were observed.

Exterior Envelope Analysis

The exterior consist of a mixture of brick and concrete masonry unit (CMU) veneer. The building has aluminum-framed windows in vertically oriented multi-story strips. The windows are typically glazed with insulated glazing units. The upper portion of the Cafeteria is glazed with translucent Kawall windows.

Façade Observations:

Foundation:

- No visible distress.

Finish Systems:

- CMU efflorescence was observed on the CMU along roof edge of Auditorium.
- Cafeteria wood fascia is wood and is peeling badly.

Steel Window and Door Lintels:

- No visible distress.

Windows and Doors:

- Hollow metal door frames and doors exhibited rust and corrosion near the ground.

Joint Sealants:

- Building joint sealants are generally beyond expected serviceable life and exhibit cohesive and adhesive failure.

Roofing Analysis

(from 2023 Roofing Update report prepared by Jon Mac Donald, Durapax Commercial Roofing Systems)

The existing roofing consists of EPDM (rubber) membrane that was installed in between 2004 and 2005 as part of the renovation of the building. The membrane is adhered over polyisocyanurate insulation, which in turn is fastened to a metal roof deck. The exception is the Cafeteria roof which consists of a built-up roof over fiberboard and polyisocyanurate insulation that was installed in 2002.

The overall condition of the existing roofing is fair to good. While there have been numerous roof leaks since the installation of the roof in 2004, many of these have been related to walls and flashings, including flashings around ductwork and through-wall flashing installed after construction.

Deficiencies include deterioration of the seam sealants, deterioration of field seams and flashings, and remedial repairs and patches.

Seam sealants and adhesives will deteriorate over time with exposure and thermal movement. As the sealants and caulking open up, moisture will get in and cause further deterioration.

Sealants and adhesives at flashings will undergo the same type of deterioration as those at the field seams. Membrane that becomes un-adhered and opens up at roof too penetration flashings will allow water into the substrate, resulting in roof leaks. These are repaired by caulking the joints or by patching over the lifted membrane.

Punctures and open seams in the field of the roof require patches.

One non-roofing item that should be noted is the condition of the split face concrete block. These walls appear to hold moisture and are showing indications of efflorescence. Efflorescence is the result of salts within the block migrating to the surface in a salt and water solution. As the water evaporates, the salts form a white residue on the outside of the block. This may result in loss of integrity and spalling of the block as the moisture migrates in and out the block. It is recommended that the block be reserved with a siloxane based waterproofing.

Fire Protection System Analysis

Fire Service:

The existing fire service is in good condition and does not require any repair at this time.

Automatic Sprinklers:

The automatic sprinkler system serves the entire building and is in good condition.

Plumbing Systems Analysis

Domestic Water Service:

The existing 3" domestic water service consists of two (2) reduced pressure zone assemblies and a single water meter. The service is located in the room adjacent boiler room and is in good condition and does not require replacement at this time.

Gas Service:

The gas service consists for (2) 4" low pressure gas lines from the utility. The service and regulators are in good condition.

Domestic Hot Water Heater:

The domestic hot water heater plant is recently replaced with HTP instantaneous water heaters and a 295 gallon hot water storage tank. The equipment is all recently replaced and in good condition.

Fixtures:

The fixtures in the building are overall in good condition and do not require replacement at this time.

The drinking fountains are in good condition and do not require replacement at this time.

Storm Drainage:

The roof drains are in fair condition and do not appear to need replacement at this time.

Mechanical Systems Analysis

Lab Exhaust Fans:

LEF-1 through LEF-12 are in fair condition and are operational. The exposed bolts and vibration isolators are rusted but operational. These fans are original to the building and should be considered for replacement in the next 5 years as they are nearing end of life.

Exhaust Fans:

EF-1 through EF-29 are operational and in fair condition. They are located on the roof exposed and are exhibiting the expected corrosion and rust as they are original to the building and are 20 years old. The fans are nearing their expected lifetime and replacement should be considered on a rotating basis to replace them on a schedule rather than as per an emergency as they will be more likely to fail over the next 5 years.

Kitchen Exhaust Fans:

KEF-1 and 2 are operational and in fair condition. They are located on the roof exposed and are exhibiting the expected corrosion and rust as they are original to the building and are 20 years old. The fans are nearing their expected lifetime and replacement should be considered in the next 5 years.

ACCU-6&7:

These units are operational but in poor condition as the finishes have worn off the units and they are nearing end of life. It is recommended that these units be replaced in the next 2-3 years before they fail unexpectedly.

Typical Rooftop Air Handler Unit:

All of the Rooftop AHU's and their associates ACCU's are original to the building and are nearing end of life. The majority of the units are showing corrosion and damage from exposure which is normal for units over 20 years of age. The school should start plans for systematic replacement or refurbishment of the AHU's to prevent an unexpected failure that would impact operations of the facility. It is recommended that the school plan to replace units on a schedule over the next 5 years.

There are a number of units where condensate is not draining and is pooling and sitting on the roof. In particular noticeable at units AHU-2 and AHU-14. This sitting water can result in roof leaks over time and should be corrected by extending the condensate drainage piping closer to the roof drain to prevent the pooling.

Walk-in Cooler Condensers:

The condensers are in fair condition and do not require repair or replacement at this time.

Refrigerant Piping:

There are a number of cases of deficient or missing insulation on the refrigerant piping on the roof. The insulation should be repaired or replaced where missing. The liquid and gas lines should be insulated independently for proper efficient operation.

Dust Collection System:

The dust collection system is reported as operational but it is showing significant corrosion on the structure, ductwork and motor and is nearing end of life being over 20 years old. It should be considered for replacement in the next 5 years.

Mini Split DX Heat Pumps

The majority of the mini-split heat pumps are in fair condition and do not require repair or replacement. On a number of units the wood supports used to mount the heat pumps are failing and should be replaced as soon as possible to prevent a unit falling over during a storm and causing damage to itself and the roof.

VRF Heat Pumps:

The VRF heat pumps overall are in fair to good condition and do not require repair or replacement. The oldest VRF module (not tagged) on roof area D has deficient or missing insulation on significant portions of the exposed piping run and should be repaired or replaced as soon as possible to prevent issues with low temperature operation and efficiency.

Indoor AHU's:

The interior AHU's (AHU-17 through AHU-20) are in good condition and do not require repair or replacement. They are estimated to have another 10 years of expected life.

Boiler Plant:

The original construction boilers are operational and B-1 was replaced with new HTP Modcon 850 boilers in the last 2 years. No work is required on this plant at this time.
The boiler plant is in good operable condition and does not require replacement at this time.

Electrical Rooms:

The electrical rooms did not have any cooling or exhaust to maintain a temperature below 80°F. It is recommended that the either exhaust be provided or split DX heat pumps be provided to maintain temperatures as per code.

Miscellaneous Terminal Heaters:

Cabinet unit heaters are used by entrances and in vestibules and are in good condition.

Control Systems:

The building is controlled by a DDC BMS provided by Siemens. The system is still current (allows for modifications). All of the ethernet field panels and floor level controllers are at the end of useful life and need to be replaced.

Electrical Systems Analysis

Electrical Service:

The building is fed from a pad mounted transformer and terminates in a 1200A automatic transfer switch. The automatic transfer switch ATS feeds the 2000A, 480/277V, 3ph, 4w main switchboard located in the main electrical room. The service runs underground from the pad mount transformer to the ATS in the main electrical room. The switchboard is in good condition with no reported issues. The school building service is entirely backed up on an emergency generator.

Recommendations: None.

Electrical Distribution:

Most of panels have been recently upgraded as part of the last renovation and are in good condition. The panels serving classrooms are recessed in the corridors. Most of these panels have adequate spares/space capacity for future growth.

The main switchboard has some spaces for future circuit breakers.

Recommendations: None.

Lighting & Controls:

The lighting throughout consists mostly of recessed 2x2, 2x4, and downlights, all of which are LED. The gym has surface mounted round lensed LED fixtures as well as LED high bay fixtures with sensors.

The utility fixtures in BOH areas have been retrofitted with LED lamps.

Exterior lighting consists of building mounted wall packs which are LED.

Lighting controls consist of light fixtures with integral occupancy sensors, manually toggle switches (bi-level control) or dimmers in classrooms and toggle switches in corridors.

Recommendations: None.

Devices & Wiring:

Power receptacles and tele/data devices are mostly recessed with wiring concealed in areas with gypsum and CMU walls/ceilings. There is some surface mounted raceway, plugmold and boxes for power and tele/data outlets that are utilized in areas with CMU walls and exposed ceilings.

Power wiring consist mostly of conduit/wire and type MC cable concealed in walls/ceilings.

Recommendations: None.

Telecom/Public Address/Security:

The MDF/server room is located on the 2nd fl. and there are multiple IDFs located throughout the different wings of the school. No reported issues.

Classrooms have a combination of either wall mounted projectors with whiteboards or portable smart LCD displays.

The Public Address System is a traditional analog Bogen system. Phone system is integrated with PA system. No reported issues.

The Master Clock and Bell System is Sapling which is located in the MDF/Server room. No reported issues.

There is an intrusion alarm with motion detectors and access control at entries. There are exterior security cameras around building as well as interior cameras in common areas/corridors.

Recommendation: Upgrading the public address system to an IP based system to integrate phone system and network.

Emergency Equipment:

There is an exterior emergency diesel generator (600kW, 480/277V, 3ph) with exterior mounted automatic transfer switch. The transfer switch is located next to the utility pad mount transformer. The generator backs up the whole building service and has a separate life safety distribution system. The life safety automatic transfer switch is located outside next to the generator. The generator is approximately 8 years old and is in good condition.

There is thermoplastic illuminated exit signs connected to the generator emergency system. Coverage appears to be adequate.

Select light fixtures connected to the generator emergency system are utilized throughout for emergency egress lighting.

Recommendations: None.

Fire Alarm:

The fire alarm control panel is addressable with voice evacuation and in good condition. The FACP Product is Notifier NFS-640. The main FACP is located in the fire command room near the main entrance. The emergency voice evacuation panel along with the remote annunciator is located in the main entrance vestibule. The FACP transmit alarm/supervisory signals via an AES IntelliNet radio-transmitter.

There is notification coverage throughout including strobes in small rooms such as bathrooms, conference rooms and offices. There are speaker/strobe devices in the classrooms and in the common areas/corridors.

There are smoke detectors throughout the common areas/corridors and classrooms, heat detectors in mechanical rooms and kitchen, and manual pull stations at the egress doors. The detectors are in good condition and coverage is adequate.

Recommendations: None.

Building Interior

The building interior was noted to be well maintained and in good condition. Notable deficiencies include the following items.

Flooring:

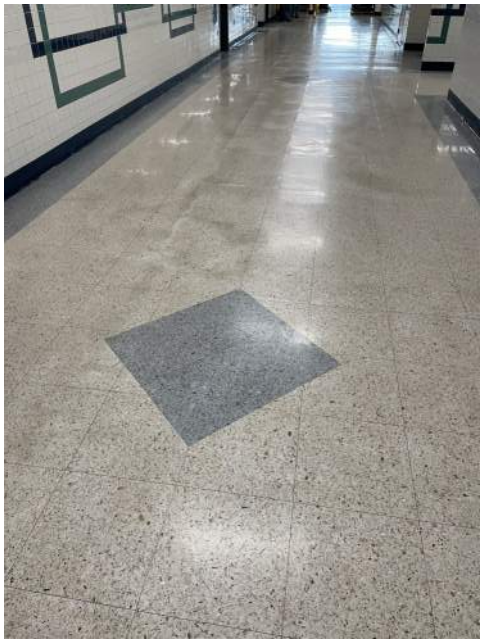
- Vinyl tile flooring throughout is nearing the end of its useful service life and exhibited cracking, especially at the main entry corridors.
- Carpeting at the Library, Music Room, Auditorium is worn and is nearing end of useful service life

Ceilings:

- Acoustic ceilings throughout the building are nearing the end of useful service life and are sagging with numerous broken and stained tiles.

PHOTOGRAPHS

Landscaping to be Trimmed Back.



Flooring in Poor Condition.

Main Entry Area Susceptible to Ponding.

Main Entry Area Susceptible to Ponding.

Efflorescence at Auditorium Roof Edge.

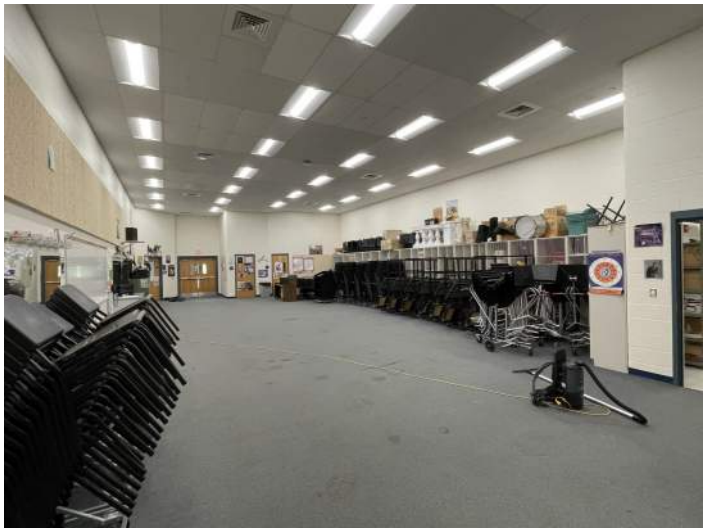
Gym Transition Strip in Poor Condition.

Exterior Door Hardware Recommended to be Replaced.

Exterior Door Corrosion.

Wood Blocking on Poor Condition.

View of Auditorium.



View of Music Room.

Sealants in Poor Condition.

View of Roof Top Ductwork.

View of Roof.

View of Roof.

AHUs 1, 2, and 3.

Condensate Pooling Adjacent to AHU-2.

Lab Exhaust Fan.

KEF-2.

ACCU-7.

ACCU in Poor Condition.

Dust Collection System.

Failing Condenser Unit Supports.

Laboratory Fume Hoods.

Corroded Fire Protection Piping in Compressor Room.

Water Service.

Instantaneous Domestic Hot Water Heaters.

Fire Service.

Main Switchboard.

Fire Alarm Control Panel.

Public Address System.

Common Area Lighting.

Generator.

Educational Space Analysis and Programming

OVERVIEW

The initial goal of the District began with resolving an urgent need for additional general classroom space at Moharimet Elementary School. The guideline for both elementary schools is to provide four general classrooms for each grade level, and Moharimet is currently lacking three classrooms in meeting this guideline.

During early discussions on how and where to add classrooms to Moharimet, additional space deficiencies were noted including instructional space for art and specialists. It was also noted that some programs were moved into a variety of less-than-ideal temporary spaces since the facilities are running out of room for general education. Anecdotal deficiencies were also noted at Mast Way, primarily how the cafeteria is currently at maximum capacity. Both schools expressed a need for improved student services spaces since students present themselves and their needs differently than in years past.

As such, it became clear that a better understanding of the delivery of elementary school education in the District was necessary to inform how the facilities should be configured and expanded responsibly to solve the immediate issues as well as other problems.

To meet the current needs and strategically determine future needs for educational space, one must understand the programmatic needs, current space challenges, and how to support leaning moving forward. As such, the decision was made to conduct a more wholistic educational program assessment of both elementary schools and the Preschool Education Program (PEP) located at the High School.

This assessment included the following:

- An existing conditions spatial program for each building was established as a starting point in the educational facility assessment (*what we have*).
- An inclusive and thorough audit was conducted of the actual space needs for both elementary schools (*what we need*).
- Identify deficient and dysfunctional spaces.
- Consideration of equity in space utilization and programming between the two elementary schools.
- Consideration of optimal connections between spaces and adjacencies to promote learning.
- Develop an educational space program that informs how existing spaces can be reconfigured and how new space can be added to meet the short-term needs and also provide the capacity for future flexibility and growth.

The outcome of the process was an educational space program for each elementary school which can be used as a tool to inform, guide, and validate expansion decisions moving forward for current and future needs.

MOHARIMET ELEMENTARY SCHOOL

The impetus for this study was the need for additional general classroom space at Moharimet. Although this assessment validates that need, specifically for three additional general classrooms, a number of other deficiencies were identified regarding the quantity, quality, and utilization of existing educational spaces. For instance, with the increasing need for specialist space and student services spaces, there is a trend of placing some programs in temporary spaces in order to maintain space for core general education classrooms and mandated services. This has resulted in the combing of multiple programs into one space with a negative impact on the delivery of learning and services.

Please note the deficiencies and the accompanying recommendations noted below are intended to not only resolve educational space program challenges specific to the population in this building, but to also bring this facility into parity with resources available at Mast Way.

The following is a summary of deficiencies and recommendations which are outlined in more detail on the following space program spreadsheet.

Space Program Deficiencies:

- Three general classrooms are lacking in providing four classrooms per grade level.
    - One classroom is being utilized as the Extended Education Room due to lack of space.
- The art room has been completely dislocated to the East Commons and the program has transitioned to a 'push-in' program using carts.
- Most of the Special Education and Student Services spaces are too small, poorly located, and are dysfunctional due to the nature of the spaces available.
- The lack of appropriately sized and located conference and meeting space is having a negative impact on the delivery of education and services. It is clear these types of spaces are necessary to support general education and student services.
- Inappropriate spaces have been converted to storage due to lack of dedicated general storage space.

Recommendations:

- Proposed new spaces include the following:
    - Three general classrooms.
    - An additional Cool Down Room.
    - Extended Education Room
    - General Storage (including storage for the music program)
    - Small Conference Room.
    - Assistant Student Services Office
    - Tutoring rooms.
    - Learning Center
    - Additional Speech Specialist space.
- It is noted that the above noted spaces can be accommodated through a mixture of new construction and the renovation of existing space.

EXISTING - MOHARIMET ELEMENTARY SCHOOL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**15,601**
114	Classroom (no toilet)	Grade 3	926	1	
115	Classroom (with toilet)	Grade 2	943	1	
117	Classroom (with toilet)	Grade 3	977	1	
118	Classroom (with toilet)	Grade 3	930	1	
119	Classroom (with toilet)	Grade 3	932	1	
120	Classroom (with toilet)	Grade 2	976	1	
123	Classroom (with toilet)	Grade 2	950	1	
124	Classroom (with toilet)	Kindergarten	969	1	
128	Classroom (with toilet)	Kindergarten	1,116	1	
130	Classroom (with toilet)	Kindergarten	1,106	1	
134	Classroom (with toilet)	Kindergarten	965	1	
137	Classroom (with toilet)	Grade 1	978	1	
138	Classroom (with toilet)	Grade 1	932	1	
139	Classroom (with toilet)	Grade 1	930	1	
140	Classroom (with toilet)	Grade 4	977	1	
143	Classroom (with toilet)	Grade 4	949	1	
144	Classroom (with toilet)	Grade 4	971	1	
			Total	**17**	
SPECIAL EDUCATION					**1,990**
104	OT/PT Classroom + ESOL		250	1	
149	Learning Center		552	1	
102	Case Manager / Para	*SPED*	212	1	
110A	Cool Down Room	Too small, bad location	65	1	
135	ERR/Extended Education Room		911	1	
			Total	**5**	
ART					**645**
	Art	*East Commons*	600	1	
114 A	kiln Room		45	1	
			Total	**2**	
MUSIC					**998**
162	Music		912	1	
163	Music Storage		86	1	
			Total	**2**	
PHYSICAL EDUCATION					**4,018**
176	Gymnasium		3,512	1	
177	Gym Storage		424	1	
173	Gym Office		82	1	
			Total	**3**	
LIBRARY					**2,738**
101	Library Learning Commons		2,496	1	
103	Maker Space		242	1	
			Total	**2**	
DINING / FOOD SERVICE					**3,216**
175	Cafeteria		1,903	1	
168	Kitchen		885	1	
168A	Walk-in		136	1	
168B	Walk-in		86	1	
170	Kitchen Storage		155	1	
168C	Lockers		26	1	
168D	Kitchen Toilet		25	1	
			Total	**7**	

DYSFUNCTIONAL - MOHARIMET ELEMENTARY SCHOOL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**15,601**
114	Classroom (no toilet)	Grade 3 (restore to art room)	926	1	
115	Classroom (with toilet)	Grade 2	943	1	
117	Classroom (with toilet)	Grade 3	977	1	
118	Classroom (with toilet)	Grade 3	930	1	
119	Classroom (with toilet)	Grade 3	932	1	
120	Classroom (with toilet)	Grade 2	976	1	
123	Classroom (with toilet)	Grade 2	950	1	
124	Classroom (with toilet)	Kindergarten	969	1	
128	Classroom (with toilet)	Kindergarten	1,116	1	
130	Classroom (with toilet)	Kindergarten	1,106	1	
134	Classroom (with toilet)	Kindergarten	965	1	
137	Classroom (with toilet)	Grade 1	978	1	
138	Classroom (with toilet)	Grade 1	932	1	
139	Classroom (with toilet)	Grade 1	930	1	
140	Classroom (with toilet)	Grade 4	977	1	
143	Classroom (with toilet)	Grade 4	949	1	
144	Classroom (with toilet)	Grade 4	971	1	
			Total	**17**	
SPECIAL EDUCATION					**1,990**
104	OT/PT Classroom + ESOL	Too small	250	1	
149	Learning Center	Too small	552	1	
102	Case Manager / Para	Too small	212	1	
110A	Cool Down Room	Too small, bad location	65	1	
135	ERR/Extended Education Room		911	1	
			Total	**5**	
ART					**971**
114	Art	Restore room 114	926	1	
114 A	kiln Room	Part of a classroom	45	1	
			Total	**2**	
MUSIC					**998**
162	Music		912	1	
163	Music Storage	Too small	86	1	
			Total	**2**	
PHYSICAL EDUCATION					**4,018**
176	Gymnasium		3,512	1	
177	Gym Storage		424	1	
173	Gym Office		82	1	
			Total	**3**	
LIBRARY					**2,738**
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103	Maker Space		242	1	
			Total	**2**	
DINING / FOOD SERVICE					**3,216**
175	Cafeteria		1,903	1	
168	Kitchen		885	1	
168A	Walk-in		136	1	
168B	Walk-in		86	1	
170	Kitchen Storage		155	1	
168C	Lockers		26	1	
168D	Kitchen Toilet		25	1	
			Total	**7**	

PROPOSED - MOHARIMET ELEMENTARY SCHOOL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**2,700**
	Classroom (with toilet)		900	1	
	Classroom (with toilet)		900	1	
	Classroom (with toilet)		900	1	
			Total	**3**	
SPECIAL EDUCATION					**1,050**
	Cool Down Room		150	1	
	ERR/Extended Education Room		900	1	
			Total	**5**	
ART					**0**
MUSIC					**200**
	Music Storage		200	1	
			Total	**1**	
PHYSICAL EDUCATION					**0**
LIBRARY					**0**
DINING / FOOD SERVICE					**0**

EXISTING - MOHARIMET ELEMENTARY SCHOOL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
NURSE					**499**
157	Nurse		448	1	
157A	Toilet		51	1	
			Total	**2**	
ADMINISTRATION					**1,838**
154	Staff Work Room		302	1	
155	Teachers Room		338	1	
155A	Teachers Room Toilet		27	1	
158	Conference		210	1	
159	Reception / Office		405	1	
160	Principal Office		191	1	
150	Counseling		173	1	
106	School Psych		192	1	
			Total	**7**	
STUDENT RESOURCES					**1,423**
110B	Student Services Office	*Admin*	157	1	
131	Reading Specialist	*Student Resources*	191	1	
133	Math Specialist	*Student Resources*	128	1	
145	Tutor	*Student Resources*	130	1	
149	Learning Center	*Student Resources*	552	1	
113	Speech		134	1	
125	Speech		131	1	
			Total	**7**	
TOILETS					**428**
166	Girls Toilet		123	1	
169	Boys Toilet		126	1	
157B	Toilet		26	1	
46	Toilet		50	1	
47	Toilet		103	1	
			Total	**5**	
CUSTODIAL & MAINTENANCE					**263**
146	Custodial		130	1	
54	Custodial		79	1	
178	Storage		54	1	
			Total	**3**	
MECHANICAL					**813**
147	IT Room		135	1	
164	Mechanical/Plumbing Room		128	1	
165	Electrical		150	1	
167	Mechanical		400	1	
			Total	**4**	
OTHER					**4,554**
121	East Commons		2,277	1	
141	West Commons		2,277	1	
			Total	**2**	
Total Building Net Floor Area (NFA)					**39,024**
Total Building Gross Floor Area (GFA)					**46,911**
Efficiency (NFA/GFA)					**83.2%**

DYSFUNCTIONAL - MOHARIMET ELEMENTARY SCHOOL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
NURSE					**499**
157	Nurse		448	1	
157A	Toilet		51	1	
			Total	**2**	
ADMINISTRATION					**1,838**
154	Staff Work Room		302	1	
155	Teachers Room		338	1	
155A	Teachers Room Toilet		27	1	
158	Conference	Used for tutors	210	1	
159	Reception / Office		405	1	
160	Principal Office		191	1	
150	Counseling		173	1	
106	School Psych		192	1	
			Total	**7**	
STUDENT RESOURCES					**1,423**
110B	Assist. Student Services Office	Bad location, too small	157	1	
131	Reading Specialist		191	1	
133	Math Specialist		128	1	
145	Tutor	Separate from other tutors	130	1	
149	Learning Center	Too small, awkward space	552	1	
113	Speech		134	1	
125	Speech		131	1	
			Total	**7**	
TOILETS					**428**
166	Girls Toilet		123	1	
169	Boys Toilet		126	1	
157B	Toilet		26	1	
46	Toilet		50	1	
47	Toilet		103	1	
			Total	**5**	
CUSTODIAL & MAINTENANCE					**263**
146	Custodial		130	1	
54	Custodial		79	1	
178	Storage		54	1	
			Total	**3**	
MECHANICAL					**813**
147	IT Room		135	1	
164	Mechanical/Plumbing Room		128	1	
165	Electrical		150	1	
167	Mechanical		400	1	
			Total	**4**	
OTHER					**4,554**
121	East Commons		2,277	1	
141	West Commons		2,277	1	
			Total	**2**	
Total Building Net Floor Area (NFA)					**39,350**
Total Building Gross Floor Area (GFA)					**46,911**
Efficiency (NFA/GFA)					**83.9%**

PROPOSED - MOHARIMET ELEMENTARY SCHOOL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
NURSE					**0**
ADMINISTRATION					**250**
	Small Conference Room		**250**	**1**	
			Total	**1**	
STUDENT RESOURCES					**1,500**
	Assist. Student Services Office		125	1	
	Tutor		125	1	
	Tutor		125	1	
	Learning Center	*Student Resources*	1,000	1	
	Speech		125	1	
			Total	**5**	
TOILETS					**0**
CUSTODIAL & MAINTENANCE					**750**
	General Storage		750	1	
			Total	**1**	
MECHANICAL					**0**
OTHER					**0**
Total Building Net Floor Area (NFA)					**6,450**
Total Building Gross Floor Area (GFA)					
Efficiency (NFA/GFA)					

MAST WAY ELEMENTARY SCHOOL

In general, the educational space program at Mast Way works well in terms of space utilization and adjacencies. However, similar to Moharimet, the increasing need for specialist space and student services spaces, there is a trend of putting some programs in temporary spaces in order to maintain space for core general education classrooms and mandated services.

The following is a summary of deficiencies and recommendations which are outlined in more detail on the following space program spreadsheet.

Space Program Deficiencies:

- Although Mast Way has twenty general classrooms that meets the guideline of four classrooms per grade level served by the building, one of those rooms (Room 109) is currently being used by the Math and Science Specialist. Next year, that room will revert to a Grade 3 classroom resulting in a lack of space for that specialist.
- The Learning Center (Room 123) does not function well as a single space and would be better served by several smaller group rooms or offices.
- The OT/PT space currently occupies the Stage off the Gym which poses challenges in terms of accessibility and acoustic separation from the Gym.
- The physical separation between the North Commons and the Library creates a barrier in the educational function of the Library and Media Center.
- With the purchase of new tables for the Cafeteria, that space now accommodates the student population of the school, but the space is now at maximum capacity allowed by the building code. Any increase in enrollment will require additional seating space in the Cafeteria.
- Both conference rooms are continuously overbooked for functions including student testing and small group specialist learning, making it difficult to use these spaces for administrative and parent meetings.
- There is a lack of administrative work space for staff resulting in less than ideal temporary work spaces being used in the main office and staff room.
- Storage space created on the Stage is difficult to access.

Recommendations:

- Removal of the wood framed stage would allow for the OT/PT space to be lowered to the main floor level of the building and therefore be more accessible.
- Limited renovation to the North Commons to create a more open visual connection and programmatic flow with the Library and exterior courtyard.
- Construction of new spaces includes the following:
    - Expansion of the Cafeteria.
    - Small classroom for the Math and Science Specialist.
    - One additional Conference and/or Testing Room.
    - General Building Storage
    - Shared office space for approximately three staff members.

MAST WAY ELEMENTARY SCHOOL - EXISTING

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**16,998**
104	Classroom (with toilet)	Grade 1	890	1	
105	Classroom (with toilet)	Grade 1	905	1	
106	Classroom (with toilet)	Grade 1	890	1	
107	Classroom (with toilet)	Grade 1	905	1	
108	Classroom	Grade 3	896	1	
114	Classroom	Grade 4	917	1	
116	Classroom	Grade 4	900	1	
117	Classroom	Grade 4	884	1	
118	Classroom	Grade 3	889	1	
120	Classroom	Grade 3	878	1	
121	Classroom	Grade 2	922	1	
122	Classroom	Grade 2	883	1	
124	Classroom	Grade 3	881	1	
126	Classroom	Grade 2	890	1	
127	Classroom	Grade 2	901	1	
128	Classroom	Kindergarten	925	1	
134	Classroom (with toilet)	Kindergarten	867	1	
136	Classroom (with toilet)	Kindergarten	884	1	
138	Classroom (with toilet)	Kindergarten	891	1	
			Total	**19**	
SPECIAL EDUCATION / STUDENT SERVICES					**5,233**
109	Math & Science Specialist		899	1	
112	Cool Down		111	1	
119	ESOL		251	1	
123	Learning Center (SPED)		920	1	
125	Tutors		677	1	
129	Speech		277	1	
131	Literacy Specialist		165	1	
133	ERR Classroom (with toilet)		990	1	
135	Cool Down		192	1	
141	OT/PT Classroom (Stage)		751	1	
			Total	**10**	
ART					**1,003**
130	Art (including closet)		931	1	
130A	Kiln		72	1	
			Total	**2**	
MUSIC					**1,161**
115	Music		1,037	1	
115A	Music Storage		124	1	
			Total	**2**	
PHYSICAL EDUCATION					**3,681**
142	Gymnasium		3,375	1	
142A	Gym Storage		306	1	
			Total	**2**	
LIBRARY					**2,955**
110	Library		1,850	1	
110A	Librarian & Digital Learning Specialist		134	1	
110C	Server		48	1	
111	North Commons (Tech Lab & Librarian)		923	1	
			Total	**4**	

MAST WAY ELEMENTARY SCHOOL - DYSFUNCTIONAL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**16,998**
104	Classroom (with toilet)	Grade 1	890	1	
105	Classroom (with toilet)	Grade 1	905	1	
106	Classroom (with toilet)	Grade 1	890	1	
107	Classroom (with toilet)	Grade 1	905	1	
108	Classroom	Grade 3	896	1	
114	Classroom	Grade 4	917	1	
116	Classroom	Grade 4	900	1	
117	Classroom	Grade 4	884	1	
118	Classroom	Grade 3 (*Grade 4 next yr*)	889	1	
120	Classroom	Grade 3	878	1	
121	Classroom	Grade 2	922	1	
122	Classroom	Grade 2	883	1	
124	Classroom	Grade 3	881	1	
126	Classroom	Grade 2	890	1	
127	Classroom	Grade 2	901	1	
128	Classroom	Kindergarten	925	1	
134	Classroom (with toilet)	Kindergarten	867	1	
136	Classroom (with toilet)	Kindergarten	884	1	
138	Classroom (with toilet)	Kindergarten	891	1	
			Total	**19**	
SPECIAL EDUCATION / STUDENT SERVICES					**5,233**
109	Math & Science Specialist	Grade 3 CR next year	899	1	
112	Cool Down		111	1	
119	ESOL		251	1	
123	Learning Center (SPED)	not good as single space	920	1	
125	Tutors		677	1	
129	Speech		277	1	
131	Literacy Specialist		165	1	
133	ERR Classroom (with toilet)		990	1	
135	Cool Down		192	1	
141	OT/PT Classroom (Stage)		751	1	
			Total	**10**	
ART					**1,003**
130	Art (including closet)		931	1	
130A	Kiln		72	1	
			Total	**2**	
MUSIC					**1,161**
115	Music		1,037	1	
115A	Music Storage		124	1	
			Total	**2**	
PHYSICAL EDUCATION					**3,681**
142	Gymnasium		3,375	1	
142A	Gym Storage		306	1	
			Total	**2**	
LIBRARY					**2,955**
110	Library		1,850	1	
110A	Office		134	1	
110C	Server		48	1	
111	North Commons (Tech Lab & Librarian)		923	1	
			Total	**4**	

MAST WAY ELEMENTARY SCHOOL - PROPOSED

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**0**
109	Classroom (Formerly Math & Science Specialist)			1	
			Total	**1**	
SPECIAL EDUCATION / STUDENT SERVICES					**500**
	Math & Science Specialist		500	1	
			Total	**1**	
ART					**0**
			Total	**0**	
MUSIC					**0**
			Total	**0**	
PHYSICAL EDUCATION					**0**
			Total	**0**	
LIBRARY					**0**
			Total	**0**	

MAST WAY ELEMENTARY SCHOOL - EXISTING

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
DINING / FOOD SERVICE					**2,609**
103	Cafeteria		1,410	1	
103A	Kitchen		642	1	
103B	Kitchen Toilet		34	1	
103C	Kitchen Office		56	1	
103D	Receiving		188	1	
103E	Walk-in Freezer & Refrigerator		171	1	
103F	Kitchen Storage		108	1	
			Total	**7**	
NURSE					**384**
140	Nurse		240	1	
140A	Toilet		62	1	
140B	Rest		82	1	
			Total	**3**	
ADMINISTRATION					**2,761**
102A	Conference		241	1	
102B	Assist. Dir. Student Services		154	1	
102C	School Psychiatrist		183	1	
110B	Meeting / Storage		174	1	
132	Staff Lounge		498	1	
137	Staff Room		197	1	
139	Counseling (includes closet)		238	1	
159	Principal Office		219	1	
160	Conference		187	1	
161	Toilet		44	1	
162	Waiting		246	1	
163	Reception / Office		380	1	
			Total	**12**	
TOILETS					**1,052**
164	Girls Toilet		159	1	
165	Boys Toilet		159	1	
143	Toilet		82	1	
154	Staff Toilet		51	1	
153	Staff Toilet		51	1	
152A	Toilet		20	1	
152	Toilet		20	1	
156	Girls Toilet		255	1	
157	Boys Toilet		255	1	
			Total	**9**	
CUSTODIAL & MAINTENANCE					**512**
142B	Storage		164	1	
141A	Storage		129	1	
146	Custodial		175	1	
155	Custodial		44	1	
			Total	**4**	
MECHANICAL					**1,094**
16	Boiler Room		414	1	
129	Server		185	1	
148	Electric		165	1	
142C	Sprinkler Pump Room		330	1	
			Total	**4**	
Total Building Net Floor Area (NFA)					**39,443**
Total Building Gross Floor Area (GFA)					**62,310**
Efficiency (NFA/GFA)					**63%**

MAST WAY ELEMENTARY SCHOOL - DYSFUNCTIONAL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
DINING / FOOD SERVICE					**2,609**
103	Cafeteria		1,410	1	
103A	Kitchen		642	1	
103B	Kitchen Toilet		34	1	
103C	Kitchen Office		56	1	
103D	Receiving		188	1	
103E	Walk-in Freezer & Refrigerator		171	1	
103F	Kitchen Storage		108	1	
			Total	**7**	
NURSE					**384**
140	Nurse		240	1	
140A	Toilet		62	1	
140B	Rest		82	1	
			Total	**3**	
ADMINISTRATION					**2,761**
102A	Conference	Also used for testing	241	1	
102B	Assist. Dir. Student Services		154	1	
102C	School Psychiatrist		183	1	
110B	Meeting / Storage		174	1	
132	Staff Lounge		498	1	
137	Staff Room	Also used for 2 para's	197	1	
139	Counseling (includes closet)		238	1	
159	Principal Office		219	1	
160	Conference	Overbooked	187	1	
161	Toilet		44	1	
162	Waiting		246	1	
163	Reception / Office	Sub-coordinator	380	1	
			Total	**12**	
TOILETS					**1,052**
164	Girls Toilet		159	1	
165	Boys Toilet		159	1	
143	Toilet		82	1	
154	Staff Toilet		51	1	
153	Staff Toilet		51	1	
152A	Toilet		20	1	
152	Toilet		20	1	
156	Girls Toilet		255	1	
157	Boys Toilet		255	1	
			Total	**9**	
CUSTODIAL & MAINTENANCE					**512**
142B	Storage		164	1	
141A	Storage (Stage)		129	1	
146	Custodial		175	1	
155	Custodial		44	1	
			Total	**4**	
MECHANICAL					**1,094**
16	Boiler Room		414	1	
129	Server		185	1	
148	Electric		165	1	
142C	Sprinkler Pump Room		330	1	
			Total	**4**	
Total Building Net Floor Area (NFA)					**39,443**
Total Building Gross Floor Area (GFA)					**62,310**
Efficiency (NFA/GFA)					**63%**

MAST WAY ELEMENTARY SCHOOL - PROPOSED

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
DINING / FOOD SERVICE					**800**
	Cafeteria Expansion		800	1	
			Total	**1**	
NURSE					**0**
			Total	**0**	
ADMINISTRATION					**400**
	Shared Office Space		150	1	
	Conference or Testing Room		250	1	
			Total	**2**	
TOILETS					**0**
			Total	**0**	
CUSTODIAL & MAINTENANCE					**120**
	General Storage		120	1	
			Total	**1**	
MECHANICAL					**0**
			Total	**0**	
Total Building Net Floor Area (NFA)					**1,820**
Total Building Gross Floor Area (GFA)					
Efficiency (NFA/GFA)					

PRESCHOOL EDUCATION PROGRAM (PEP)

The PEP occupies two general classrooms in the High School as well as toilet facilities and office space. Additionally, the program also makes use of a dedicated play area just outside its classroom space.

Space Program Deficiencies:

In reviewing PEP and its space usage and needs, the following deficiencies were noted:

- Room T101 lacks a toilet room and sink forcing students to walk through Room T102 to access those facilities and causing disruptions.
- Noise in the PEP classrooms can be disruptive to adjacent High School classrooms.
- Neither PEP classroom has doors directly to the exterior as is required by current building code.
- The following dedicated spaces are lacking:
    - Speech pathologist office.
    - OT space.
    - Behavior/Therapy Room
- The main entry to PEP is through an egress stair that serves the 3-story portion of the High School, resulting in the mixing of high school and preschool students.
- Announcements over the High School PA system can be disruptive to the program.
- Toilet rooms are used for storage due to lack of general storage.

Recommendations:

Although it was not the goal of this study to review the relocation or expansion of PEP, discussions with staff made it clear that the program generally functions well at the High School. Shared use of spaces and easy access to PEP by High School Juniors and Seniors in the Child Development course allow for rich interactions and collaborations.

The following recommendations would make significant improvements to PEP at the High School:

- Addition of a toilet room and sink to Room T101.
- Addition of a sink to Room T102.
- Develop a strategy for better acoustic separation between the PEP spaces and surrounding High School Spaces.
- Doors directly to the exterior for both classrooms.
- At minimum, one new small group room for use by speech pathologist and OT.
- Addition of general storage.

PRESCHOOL EDUCATION PROGRAM SPACE PROGRAM - EXISTING

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**1,669**
T101	Classroom	Pre-School	831	1	
T102	Classroom	Pre-School	838	1	
			Total	**2**	
ADMINISTRATION					**127**
T103	Office		127	1	
			Total	**1**	
TOILETS					**148**
T102A	Toilet		98	1	
T102B	Toilet		50	1	
			Total	**2**	
Total Program Net Floor Area (NFA)					**1,944**

PRESCHOOL EDUCATION PROGRAM SPACE PROGRAM - DYSFUNCTIONAL

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**1,669**
T101	Classroom	Pre-School	831	1	
T102	Classroom	Pre-School	838	1	
			Total	**2**	
ADMINISTRATION					**127**
T103	Office		127	1	
			Total	**1**	
TOILETS					**148**
T102A	Toilet		98	1	
T102B	Toilet		50	1	
			Total	**2**	
Total Program Net Floor Area (NFA)					**1,944**

PRESCHOOL EDUCATION PROGRAM SPACE PROGRAM - MISSING

Room No.	Room Name	Grade	Room Size (sf)	Quantity	Totals
CLASSROOMS					**100**
	General Classroom Storage		100	1	
			Total	**1**	
ADMINISTRATION					**600**
	Small Group Room		600	**1**	
			Total	**1**	
TOILETS					**50**
	Toilet		50	1	
			Total	**1**	
Total Program Net Floor Area (NFA)					**750**

OYSTER RIVER HIGH SCHOOL

Although the high school was not included in the space program assessment, a number of educational space deficiencies were noted during meetings and walkthroughs of the building.

Space Program Deficiencies:

These deficiencies include the following:

- More space is needed for band and orchestra.
- More space is needed for art.
- There is inadequate storage space throughout building.
- Inadequate space for teacher work rooms; previous work rooms have been taken over for educational spaces, primarily project rooms.
- Counseling spaces are too distant from main entry.
- Counseling needs one additional meeting room.
- The Commons on the second floor has been converted to classroom space resulting in loss of breakout space.
- Nurse's suite: too much access to confidential info and privacy due to numerous entry doors.
- Athletics fitness room is inadequate in current location.
- Locker rooms can only be accessed by walking through the gym resulting in wear to the gym floor, distraction to gym classes, and inadequate egress from lockers.
- Need more general classrooms.
- More office space needed.
- Desire for outdoor classroom space.

Recommendations:

It is recommended that an educational program assessment be conducted for the high school to review the following:

- How is space used currently
- What is the future of learning at the high school and how can the space assist with delivery of education?

Capital Plan

OVERVIEW

The Capital Plan within this section encompasses the proposed scope of work for a ten-year period starting in 2025 and ending in 2034. Based on the existing building conditions evaluations, the plan includes projects for repairs and upgrades as well as limited renovations.

The following matrix provides a comprehensive graphic understanding of all the proposed recommendations and projects and their scheduling and sequencing.

For each building, a detailed scope of work is provided, organized by each year within the ten-year plan period. Action items requiring immediate attention are identified in Year 1. Short-term action items are intended to be completed within Plan Years 2 through 5. Long Term action items are intended to be completed within Plan Years 6 through 10. More detailed information and a breakout of individual action items can be found further in this section under Capital Plan Detailed Repair Scope of Work.

This plan is intended to assist the Oyster River Cooperative School District in identifying, prioritizing, budgeting, and scheduling execution of the work over the plan period. It is anticipated that it will also facilitate strategy discussions for the best use of available funding sources.

The Capital Plan includes the following scope of work:

- Security, Health, and Safety recommendations
- Structural and Building Envelope recommendations
- Accessibility upgrades relative to basic access for all occupants to each building
- Interior and Finishes recommendations
- Mechanical, Electrical, Plumbing, and Fire Protection recommendations
- Site and Grounds recommendations

METHODOLOGY

The following is a description of the estimating methodology used to develop the Opinion of Probable Costs for individual line-item recommended actions detailed within the repair scope of work documents and further used to generate the Capital Plan.

These costs are based on preliminary construction estimates and include hard construction costs for the building and site. Hard construction costs for the building can be defined as the cost of the physical building from the foundation upwards, including all permanent building systems.

"Soft Costs" can also have significant effects on the total amount of a project's cost. Soft costs include a wide array of items which all contribute to a total school bond required to construct or renovate a building. These costs include (but are not limited to): engineering and design fees, legal and administrative fees, furnishing and equipment not part of the building systems, utility connection charges, and permitting fees. Soft costs can vary greatly from school to school depending on local requirements and also on the amount of furnishings and equipment suitable for re-use in a new or rehabilitated school. In general, these costs can range from 20-30% of construction costs.

Please note that Soft Costs are not included in the Capital Plan.

Also note that these costs are based on current year (2024) values. Given the relatively volatile market, we cannot forecast the construction inflation for the coming years with any degree of certainty. We hope that these very preliminary construction costs help you understand an order of magnitude budget as you consider options for phasing and implementation of facility upgrades. As stated above, these costs are preliminary construction values. As the solutions for each phase of the capital plan are further defined and developed, we recommend these construction values be revisited to develop a more detailed estimate relating to the scope and size of your selected capital improvements.

BASIS OF COSTS AND QUALIFICATIONS

Basis and Assumptions:

- Unit pricing for identified repair line items were established with the cost estimating consultant and factored with estimated quantities to generate opinion of probable costs.
- A Design-Bid-Build project delivery process is assumed.
- No programmatic changes are included.
- No costs for land acquisition are included.
- No costs for hazardous materials investigations or abatement are included.
- No costs for construction testing or commissioning are included.
- Costs are order of magnitude and have been developed based on approximate quantities including square footage, linear footage, or equipment capacities regarding mechanical systems.

The following are excluded from the opinion of probable costs:

- Architect-Engineering Fees.
- Overtime.
- AV Systems, loose furniture and equipment (except where noted).
- Builder's Risk Insurance.
- Owner Contingencies (except where noted)

Qualifications and Clarifications:

- Labor costs are included at local labor rates.
- The following mark-ups are used:

• General Conditions and General Requirements	14.00%
• Insurance and Bond	3.50%
• Building Permit	1.0%
• Contractor's (CM/GC) Fee	4.00%
• Design Contingency	10.00%
• Estimating Contingency	10.00%
• Construction Contingency	5.00%
Total Construction Mark-Up	**47.5%**

- The following Escalation Contingencies are used based on the time period projects are recommended to occur (Immediate, Short Term, Long Term):

• Escalation Contingency (projects 1 Year out)	4.50%
• Escalation Contingency (projects 2 to 5 Years out)	22.50%
• Escalation Contingency (projects 6 to 10 Years out)	45.00%

- It has been assumed that all long-lead items can be pre-purchased to meet schedule requirements.
- Overall construction costs shall be re-evaluated at a later date based on a defined and collective scope.

Ten Year Capital Plan

	Immediate Recommendations Year 1 Fiscal Year 2025		Short Term Recommendations Years 2 - 5 Fiscal Years 2026 - 2029		Long Term Recommendations Years 6 - 10 Fiscal Years 2030 - 2034		TOTALS
Moharimet Elementary School							
	Mechanical	$9,120	New Addition	$6,238,986	Grounds	$619,850	
	Electrical	$28,120	Grounds	$756,800	Interior	$1,780,625	
			Exterior	$209,100	Mechanical	$15,400	
			Roof	$40,000	Electrical	$290,675	
			Interior	$52,700			
			Plumbing	$49,100			
			Mechanical	$2,889,575			
			Electrical	$374,000			
	Subtotal	**$37,240**	**Subtotal**	**$10,610,261**	**Subtotal**	**$2,706,550**	**$13,354,051**
Mast Way Elementary School							
	Electrical	$2,280	New Addition	$1,033,124	Grounds	$933,625	
			Grounds	$165,000	Interior	$2,464,963	
			Exterior	$1,187,300	Fire Protection	$154,000	
			Roof	$110,000	Mechanical	$69,300	
			Interior	$260,100	Electrical	$342,650	
			Mechanical	$1,974,975			
			Electrical	$166,600			
	Subtotal	**$2,280**	**Subtotal**	**$4,897,099**	**Subtotal**	**$3,964,538**	**$8,863,917**
Oyster River High School							
	Mechanical	$33,440	Grounds	$3,531,350	Interior	$3,291,600	
			Exterior	$254,150	Mechanical	$8,855,000	
			Roof	$650,000	Electrical	$548,625	
			Interior	$539,750			
			Mechanical	$10,950,500			
	Subtotal	**$33,440**	**Subtotal**	**$15,925,750**	**Subtotal**	**$12,695,225**	**$28,654,415**
	YEAR TOTAL	**$72,960**		**$31,433,110**		**$19,366,313**	**$50,872,383**

Notes:

1. All prices presented here are Opinions of Probable Costs. Refer to Methodology and Basis of Costs earlier in this section for assumptions, exclusions, qualifications, and clarifications used to develop these costs.
2. For a more detailed breakdown of recommendations and associated costs for each building and Plan Year, refer to the Capital Plan Scope of Work for each building later in this section.

CAPITAL PLAN DETAILED SCOPE OF WORK

The following is a description of the estimating methodology used to develop the Opinion of Probable Costs for individual line item recommended actions detailed within the repair scope of work documents and further used to generate the Capital Plan.

In order to present the detailed repair scope of work for greatest ease of use, all of the individual repair action items from the existing conditions reports have been consolidated to create the following reference documents.

For each building, a detailed scope of work is provided, organized by each year within the ten-year plan period. Action items requiring immediate attention are identified in Year 1. Short-term action items are intended to be completed within Plan Years 2 through 5. Long Term action items are intended to be completed within Plan Years 6 through 10.

The buildings are organized in the same structure and order as the assessment reports within the Existing Conditions Documentation section. Sub-sections for each building (site, building interior, mechanical, etc.) are all titled for clear identification.

There is also a series of Evaluation Criteria - nine aspects for further understanding of the nature of the item and its associated effects. These allow application of additional scrutiny and understanding for deciding the disposition and importance of individual items, as well as for communicating the need to the stakeholders.

Line-item opinions of probable costs are indicated and totals for each Plan Year for each building are provided. Note that these values are based on sub-contractor trade costs and have been adjusted for construction costs, project costs, and escalation. Please refer to the Methodology and Basis of Costs presented earlier in this section for assumptions, exclusions, qualifications, and clarifications used to develop these values.

Routine MEP/FP maintenance recommendations are not included here but are under the full reports for each individual school. As these items are ongoing requirements, they have not been assigned a specific action priority and don't appear within the capital plan consolidated scopes of work.

These consolidated references provide an understanding across these buildings of the nature and relative costs of needs within each priority and for each school building.

MOHARIMET ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

* Note: All prices presented here are Opinions of Probable Costs. Refer to Methodology and Basis of Costs earlier in this section for assumptions, exclusions, qualifications, and clarifications used to develop these costs.

TOTAL GROSS AREA (sf) **46,911**

LEGEND

Condition Level	Age Factor	Action Priority
0 - Failed - Not Functional	N - New / Recent	I - Immediate (Year 1)
1 - Poor - Failure Anticipated	EOL - End of Service Life	S - Short Term (Years 2 - 5)
2 - Fair - Functions, Service Required	ESL - w/In Expected Service Life	L - Long Term (Years 6 - 10)
3 - Good - Functional & Maintained		N/A - Not Applicable
4 - Excellent - New	OB - Obsolete	

			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	DESCRIPTION AND GENERAL COMMENTS	RECOMMENDED ACTION	COND. LEVEL	AGE FACTOR	ACTION PRIORITY	HEALTH & SAFETY	CODE COMPLIANCE	ADA/ ACCESSIBILITY	EXTENDING BLDG. LIFE	OPERATING EFFICIENCY	IMPACT ON LEARN. ENV.	AESTHETICS & APPEARANCE	* OPINION OF PROBABLY COST
Immediate Repairs - Year 1 (Fiscal Year 2025)													
Mechanical	The combustion air ducts that previously served the boiler room were capped when they changed to direct combustion boilers therefore the code required combustion air is not being provided for the domestic hot water heater.	Either replace the water heater with a new sealed combustion type or provide the required openings at 12" above the floor and 12" below the ceiling as per the fuel gas code. As it is currently operating there is a chance of CO build up in the space due to the potential of pressure differentials with the outside affecting the draft of the flue hood located on the equipment that could cause flue gas to exit into the mechanical room instead of leaving through the flue. This should be remedied as soon as possible.	0	OB	I	●	●		●	●			$7,600
Mechanical	The dryer located in the mechanical room is venting into the abandoned combustion air intake which is not allowed per code as no dampers or other obstructions should be in the dryer vent ductwork.	The dryer should be vented properly to the exterior of the building in a code compliant manner.	0	OB	I	●	●		●				$1,520
Electrical	Music room exit sign is photoluminescent and non-illuminated.	Replace music room exit sign with illuminated exit sign.	0	OB	I	●	●						$760
Electrical	Classroom 130 is missing exit sign to exterior door.	Provide illuminated exit sign.	0	OB	I	●	●						$760
Electrical	Battery powered emergency lighting is missing at: Men's restroom near the cafeteria, kitchen restroom, Restrooms 111 and 112	Provide (4) emergency battery units	0	OB	I	●	●						$3,040
Electrical	The exterior egress doors around building other than the main entrance and gym are missing emergency lights.	Add (12) emergency lighting consisting of battery units/remote heads or fixtures with integral battery backup	0	OB	I	●	●						$19,000
Electrical	The teacher's room egress door is missing a fire alarm pull station.	Add (1) fire alarm pull station at teacher's room egress door.	0	OB	I	●	●						$4,560

MOHARIMET ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

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TOTAL GROSS AREA (sf) **46,911**

LEGEND

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			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	DESCRIPTION AND GENERAL COMMENTS	RECOMMENDED ACTION	COND. LEVEL	AGE FACTOR	ACTION PRIORITY	HEALTH & SAFETY	CODE COMPLIANCE	ADA/ ACCESSIBILITY	EXTENDING BLDG. LIFE	OPERATING EFFICIENCY	IMPACT ON LEARN. ENV.	AESTHETICS & APPEARANCE	* OPINION OF PROBABLY COST
Short Term Repairs - Years 2 - 5 (Fiscal Years 2026 - 2029)													
New Construction	Classroom addition and interior renovations	9,200 SF Addition	N/A	N/A	S						●		$6,238,986
Grounds	Shed is nearing the end of its useful service life.	Replace shed	1	EOL	S					●		●	$42,000
Grounds	Grading and ponding issue in front of main entry - kids need to enter through mechanical room	Replace 500 sf of concrete paving and add area drain & 40 LF of buried drainage line to rain garden	0	OB	S	●	●	●	●			●	$23,800
Grounds	Drainage issues with flooding along east elevation: drains are plugged, low area with no where to drain to	Regrade and repave drive lane (9,500 sf), provide 4 storm drain structures	0	OB	S	●	●	●	●			●	$289,000
Grounds	Parking Lot/Driveway reconstruction.	Reconstruct 90,000 sf paved area of the school, reconfiguring parking, adding lighting, adding additional parking, and restriping; includes entrance drive from Rte 155, drive to Town Hall Road, 10 new light poles & fixtures, new dumpster pad, sections of new sidewalk & curbing, loaming & seeding disturbed areas.	1	EOL	S			●	●	●		●	$385,000
Grounds	Roof and gas service are easily accessible from berm surrounding the transformer	Add 90 LF of 8-FT tall pvc coated fencing	N/A	N/A	S	●							$17,000
Exterior	Exterior sealants are failing & need to be replaced, esp at brick control joints	Remove and replace 1,000 LF exterior sealants	1	EOL	S				●			●	$13,600
Exterior	Brick veneer cracking at window headers, esp at courtyard windows	Replace (20) 6-ft loose lintels & replace 2 courses brick veneer	1	EOL	S				●			●	$47,600
Exterior	Brick repointing needed, esp at south elevation	Repoint 500 SF of brick veneer	1	ESL	S				●			●	$40,800
Exterior	Concrete foundation damage at south east corner of classroom wing	Repair 10 SF of concrete foundation	2	ESL	S				●			●	$1,700
Exterior	Moss growth on brick at main entry courtyard	Clean 1,000 SF of brick veneer	2	ESL	S				●			●	$2,550
Exterior	Some rust observed at bottom of exterior hollow metal doors and frames	Remove rust, prime and repaint hollow metal doors & frames: 13 doors	1	ESL	S				●			●	$6,800
Exterior	Concrete stairs have cracking on south (playground) elevation; uneven riser height due to previous grading adjustments; Rusted and non ADA complaint handrails at stairs at east elevation	Remove and replace 2 exterior concrete stairs and painted metal guardrails, 10' x 4' footprint with 6 steps each stair	1	EOL	S		●	●	●			●	$93,500
Exterior	At Cafeteria, spauling of CMU under window - water issue	Replace 10 LF of window sill flashing & repair/repaint 20 SF of interior CMU	1	ESL	S				●			●	$2,550

MOHARIMET ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

* Note: All prices presented here are Opinions of Probable Costs. Refer to Methodology and Basis of Costs earlier in this section for assumptions, exclusions, qualifications, and clarifications used to develop these costs.

LEGEND

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4 - Excellent - New		

TOTAL GROSS AREA (sf) **46,911**

			SEE LEGEND				EVALUATION CRITERIA							
CATEGORY	**DESCRIPTION AND GENERAL COMMENTS**	**RECOMMENDED ACTION**	**COND. LEVEL**	**AGE FACTOR**	**ACTION PRIORITY**		**HEALTH & SAFETY**	**CODE COMPLIANCE**	**ADA/ ACCESSIBILITY**	**EXTENDING BLDG. LIFE**	**OPERATING EFFICIENCY**	**IMPACT ON LEARN. ENV.**	**AESTHETICS & APPEARANCE**	*** OPINION OF PROBABLY COST**
Roof	Roof leaks over Principal's Office, solatubes, and skylights	Budget for 150 SF of roof repairs	2	ESL	S					●				$8,500
Roof	Metal roof restoration	4,046 SF of repairs to metal roofing	2	ESL	S					●				$31,500
Interior	Staff toilet rooms lack grab bars	Provide ADA grab bars at (4) single user toilet rooms	N/A	N/A	S			●						$3,400
Interior	Replace Library carpet	Replace 2,500 SF of carpeting with carpet tile	1	EOL	S					●		●	●	$49,300
Plumbing	Control systems for wells is at end of useful service life.	Replace wells control system.	1	EOL	S					●	●			$20,400
Plumbing	An internal grease trap was found to serve the heavy grease producing fixtures within the kitchen.	Provide an internal grease interceptor at the pot sink to reduce the loading on the external grease trap and reduce any potential grease accumulation in the lines out to the exterior trap.	0	OB	S			●		●	●			$18,700
Plumbing	Hot water heaters are nearing end of useful service life.	Replacement of 4 hot water heaters	1	EOL	S					●	●			$10,000
Mechanical	Kitchen Hood & Controls are nearing end of useful service life. Additionally, there is no conditioned make up air provided for the kitchen exhaust hoods as is required per current code.	Replace kitchen hood, controls and provide make-up air system.	0	OB	S					●	●			$76,500
Mechanical	1994 outside corner Classrooms are not adequately heated	Provide 25 LF of baseboard heating at each of 4 locations	N/A	N/A	S					●	●	●		$42,500
Mechanical	Desire for AC or dehumidification throughout building, or at least classroom dehumidification	Provide costs for: 1) Building AC, 2) Building dehumidification (AC has been budgeted)	N/A	N/A	S					●		●		$2,040,000
Mechanical	Hot water supply line at ceiling of gym leaks occasionally		1	EOL	S					●	●			$4,250
Mechanical	Connector Toilet room fan EF-3 above the ceiling is nearing end of service life	Replace exhaust fan	1	EOL	S					●	●	●		$2,125
Mechanical	Ventilation air, heating and cooling unit AC-1 is nearing end of life (26 years old)	Replace unit	1	EOL	S					●	●	●		$51,000
Mechanical	The kitchen is heated utilizing a cabinet unit heater which appears to be original to the construction of this addition. It is in poor condition and has reached end of life .	Replace kitchen cabinet unit heater	1	EOL	S					●	●			$5,950
Mechanical	Classroom roof top ventilation air system is original to the building and is at the end of its service life.	Replace before a major failure occurs	1	OB	S					●	●	●		$153,000
Mechanical	Library AH-3 is at the end of its service life.	Replace unit	1	EOL	S					●	●	●		$34,000

MOHARIMET ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

* Note: All prices presented here are Opinions of Probable Costs. Refer to Methodology and Basis of Costs earlier in this section for assumptions, exclusions, qualifications, and clarifications used to develop these costs.

TOTAL GROSS AREA (sf) 46,911

LEGEND		
Condition Level	**Age Factor**	**Action Priority**
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			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	**DESCRIPTION AND GENERAL COMMENTS**	**RECOMMENDED ACTION**	**COND. LEVEL**	**AGE FACTOR**	**ACTION PRIORITY**	**HEALTH & SAFETY**	**CODE COMPLIANCE**	**ADA/ ACCESSIBILITY**	**EXTENDING BLDG. LIFE**	**OPERATING EFFICIENCY**	**IMPACT ON LEARN. ENV.**	**AESTHETICS & APPEARANCE**	*** OPINION OF PROBABLY COST**
Mechanical	The Library Reading Room is provided with a split DX Heat Pump which is nearing the end of its service life	Replacement should be considered in the near future.	1	EOL	S				●	●			$8,500
Mechanical	The electrical room is not provided with an exhaust or a split DX fan coil to ensure that the space temperature remains below 80°F.	It is recommended that an exhaust fan or split DX cooling wall mounted fan coil should be provided for the electrical room.	0	N/A	S		●		●	●			$12,750
Mechanical	No redundancy on the hot water heating boiler loop.	Add second circulator pump to the hot water heating boiler loop.	N/A	N/A	S				●	●			$42,500
Mechanical	Control System: all of the field panels and floor level controllers are at end of useful life.	Replace 5 Bac Net Field Panels and 24 Floor Level Controllers	1	EOL	S				●	●			$416,500
Electrical	Most of the electrical distribution panels are 30+ years old and don't have adequate spares/space for future growth	Add and/or upgrade distribution panels for substantial renovation.	2	EOL	S				●	●			$340,000
Electrical	Circuits serving appliances in teacher's room constantly trip.	Provide (6) dedicated circuits in the teacher's room.	0	EOL	S				●	●	●		$10,200
Electrical	Outdoor PA speakers do not work well	Replace (12) exterior speakers			S				●	●	●		$13,600
Electrical	No CO detector in the kitchen containing fossil fuel burning equipment	Add (1) CO detector in kitchen	0	OB	S		●		●	●			$5,100
Electrical	Music room lacks adequate electrical outlets	Provide 10 new duplex receptacles	N/A	N/A	S				●		●		$5,100

MOHARIMET ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

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TOTAL GROSS AREA (sf) 46,911

LEGEND		
Condition Level	**Age Factor**	**Action Priority**
0 - Failed - Not Functional	N - New / Recent	I - Immediate (Year 1)
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2 - Fair - Functions, Service Required	ESL - w/In Expected Service Life	L - Long Term (Years 6 - 10)
3 - Good - Functional & Maintained		N/A - Not Applicable
4 - Excellent - New	OB - Obsolete	

			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	**DESCRIPTION AND GENERAL COMMENTS**	**RECOMMENDED ACTION**	**COND. LEVEL**	**AGE FACTOR**	**ACTION PRIORITY**	**HEALTH & SAFETY**	**CODE COMPLIANCE**	**ADA/ ACCESSIBILITY**	**EXTENDING BLDG. LIFE**	**OPERATING EFFICIENCY**	**IMPACT ON LEARN. ENV.**	**AESTHETICS & APPEARANCE**	*** OPINION OF PROBABLY COST**
Long Term Repairs - Years 6 - 10 (Fiscal Years 2030 - 2034)													
Grounds	Underground water line from pump house to building leaks.	Replace 300 LF of 2" buried water piping	2	EOL	L				●	●			$88,550
Grounds	Poor / steep grading at boiler room & kitchen entries	Regrade & repave 250 sf entry walks, add 2 area drains (250 SF)	2	EOL	L				●	●			$42,350
Grounds	Outdoor play structure is not ADA compliant	Replace play structure	2	ESL	L			●			●		$488,950
Interior	Classroom built-ins are worn (remove bubblers from sinks) and not all ADA compliant	Replace 18 total instances of 7'Long x 24"Deep x 30" Tall casework, including sink	2	EOL	L			●	●		●	●	$180,950
Interior	Sagging acoustic ceiling tiles throughout, esp at classrooms	Remove and replace 30,000 SF of ceiling grid and ceiling tiles.	1	EOL	L				●		●	●	$693,000
Interior	VCT flooring throughout is in poor condition and nearing end of useful service life	Remove 30,000 SF of VCT and replace with resilient quartz tile flooring	1	EOL	L				●		●	●	$906,675
Mechanical	There are destratification fans located high on the library ceiling which are mismatched and of unknown age.	Replacement with a pair of matching fans is recommended as they do not appear to be newly installed.	2	ESL	L				●	●	●		$15,400
Electrical	The Public Address System is a traditional analog Bogen system. Phone system is integrated with PA system but no longer functions.	Upgrading the public address system to an IP based system to integrate with phone system and network.	N/A	N/A	L			●	●	●	●		$144,375
Electrical	Develop program for security cameras and storage of footage		N/A	N/A	L	●			●	●			TBD
Electrical	Audio enhancement system throughout building		N/A	N/A	L			●	●		●		$146,300

MAST WAY ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

* Note: All prices presented here are Opinions of Probable Costs. Refer to Methodology and Basis of Costs earlier in this section for assumptions, exclusions, qualifications, and clarifications used to develop these costs.

TOTAL GROSS AREA (sf) **62,310**

LEGEND

Condition Level	Age Factor	Action Priority
0 - Failed - Not Functional	N - New / Recent	I - Immediate (Year 1)
1 - Poor - Failure Anticipated	EOL - End of Service Life	S - Short Term (Years 2 - 5)
2 - Fair - Functions, Service Required	ESL - w/In Expected Service Life	L - Long Term (Years 6 - 10)
3 - Good - Functional & Maintained	OB - Obsolete	N/A - Not Applicable
4 - Excellent - New		

			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	DESCRIPTION AND GENERAL COMMENTS	RECOMMENDED ACTION	COND. LEVEL	AGE FACTOR	ACTION PRIORITY	HEALTH & SAFETY	CODE COMPLIANCE	ADA/ ACCESSIBILITY	EXTENDING BLDG. LIFE	OPERATING EFFICIENCY	IMPACT ON LEARN. ENV.	AESTHETICS & APPEARANCE	* OPINION OF PROBABLE COST
Immediate Repairs - Year 1 (Fiscal Year 2025)													
Electrical	The EBU/Emergency Battery unit in the gym is damaged	Replace (1) EBU	0	OB	I	●	●						$760
Electrical	The exterior egress door at the back building vestibule is missing emergency lights.	Add (1) emergency lighting consisting of battery units/remote heads or fixtures with integral battery backup	0	OB	I	●	●						$1,520
Short Term Repairs - Years 2 - 5 (Fiscal Years 2026 - 2029)													
New Construction	Cafeteria Expansion	800 SF addition to existing cafeteria	N/A	ESL	S				●	●	●		$1,033,124
Grounds	Parking Lot/Driveway reconstruction	Reconstruct paved area of the school, reconfiguring parking, adding lighting, adding additional parking, and restriping; includes 5 new light poles & fixtures, sections of sidewalk & curbing, loaming & seeding disturbed areas. 35,000 SF of pavement	1	EOL	S			●	●	●		●	$165,000
Exterior	3/8" EIFS is too thin and punctures	Replace all existing EIFS with 10,000 SF of composite panel system	1	EOL	S				●	●		●	$974,100
Exterior	Paneling over high windows at back side of Gym are in poor condition	Remove existing painted wood paneling and replace with 375 SF of composite paneling	1	EOL	S				●	●		●	$42,500
Exterior	Brick repointing needed at older portions of building	Repoint 1,000 SF of brick veneer	2	ESL	S				●			●	$81,600
Exterior	Previous parging of exposed concrete foundation is failing	Repair 100 SF of concrete foundation	1	EOL	S				●			●	$1,700
Exterior	Mildew & moss growth on brick, esp on sills at older portions of building	Clean 1,500 SF of brick veneer	2	ESL	S				●			●	$3,400
Exterior	Hardened and missing exterior sealants need to be replaced	Remove and replace 1,500 LF exterior sealants	1	EOL	S				●			●	$20,400
Exterior	Exterior hollow metal doors & frames are rusting/corroded	Remove rust, prime and repaint hollow metal doors & frames: 4 doors	2	ESL	S				●			●	$2,550
Exterior	Cracking observed at brick chimney, outside corner of library, and on pier at front of building	Repair 100 SF of brick	2	ESL	S				●			●	$23,800

MAST WAY ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

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TOTAL GROSS AREA (sf) 62,310

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0 - Failed - Not Functional	N - New / Recent	I - Immediate (Year 1)
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3 - Good - Functional & Maintained	Life	N/A - Not Applicable
4 - Excellent - New	OB - Obsolete	

			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	DESCRIPTION AND GENERAL COMMENTS	RECOMMENDED ACTION	COND. LEVEL	AGE FACTOR	ACTION PRIORITY	HEALTH & SAFETY	CODE COMPLIANCE	ADA/ ACCESSIBILITY	EXTENDING BLDG. LIFE	OPERATING EFFICIENCY	IMPACT ON LEARN. ENV.	AESTHETICS & APPEARANCE	* OPINION OF PROBABLE COST
Exterior	Roof fascia at east & south sides of courtyard needs repair/repainting	Repair/repaint 200 LF wood 1x10 fascia trim	2	ESL	S				●			●	$11,050
Exterior	Fascia between piers at front of building: prep & paint, replace rotted portions	Repair/repaint 110 LF wood 1x10 fascia trim	2	ESL	S				●			●	$8,500
Exterior	Efflorescence observed at brick at Library wing of building	Recommend hiring exterior envelope consultant to review and make a recommendation	2	ESL	S				●			●	$7,500
Exterior	Door F - wood door and frame in poor condition	Replace with 6'x7' HM door and frame	1	EOL	S				●			●	$10,200
Roof	Roof restoration	Restore 17,285 SF of roof consisting of Hall, Library/AV/Class 3, Cafeteria	1	EOL	S				●				$110,000
Interior	Interior renovations to Grade 1 restrooms - non ADA compliant and exhaust systems have failed.	At Classrooms 104, 105, 106 and 107, demo existing single user toilet rooms and provide new 7'x7' single user toilet rooms with sink, toilet, and exhaust system	1	EOL	S		●	●	●		●		$136,000
Interior	Classroom interconnecting doors are hollow and flimsy, easy to kick down, do not lock for lock down	Replace 10 doors with wood veneer doors and HM frames	1	EOL	S	●			●				$56,100
Interior	Acoustic issue in Cafeteria	Replace 1,400 SF of ceiling with better performing ACT and provide 150 SF of acoustic wall panels	N/A	N/A	S						●		$68,000
Mechanical	Desire for AC or dehumidification throughout building, or at least classroom dehumidification	Provide costs for: 1) Building AC, 2) Building dehumidification	N/A	N/A	S				●	●	●		$1,791,800
Mechanical	The electrical room is not provided with exhaust or cooling. Per code a system needs to be provided to maintain the electrical room temperature below the maximum temperature set by code which is typically done via an exhaust terminal or fan or by a split DX cooling system in the space.	In future projects it is recommended that this oversite be corrected through either new equipment of rebalancing of existing ventilation units.	0	N/A	S		●		●	●			$12,750
Mechanical	Kitchen Hood & Controls are nearing end of useful service life. Additionally, there is no conditioned make up air provided for the kitchen exhaust hoods as is required per current code.	Replace kitchen hood, controls and provide make-up air system.	0	OB	S		●		●	●			$76,500
Mechanical	The stage is provided with a portable air conditioner ducted to a gravity vent adjacent to the unit. The installation is not up to code standards.	The should be removed and replaced with a split DX unit or other option that is installed as per manufacturer installation requirements.	1	OB	S		●		●	●	●		$34,000

MAST WAY ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

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LEGEND

Condition Level	Age Factor	Action Priority
0 - Failed - Not Functional	N - New / Recent	I - Immediate (Year 1)
1 - Poor - Failure Anticipated	EOL - End of Service Life	S - Short Term (Years 2 - 5)
2 - Fair - Functions, Service Required	ESL - w/In Expected Service	L - Long Term (Years 6 - 10)
3 - Good - Functional & Maintained	Life	N/A - Not Applicable
4 - Excellent - New	OB - Obsolete	

TOTAL GROSS AREA (sf) 62,310

			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	DESCRIPTION AND GENERAL COMMENTS	RECOMMENDED ACTION	COND. LEVEL	AGE FACTOR	ACTION PRIORITY	HEALTH & SAFETY	CODE COMPLIANCE	ADA/ ACCESSIBILITY	EXTENDING BLDG. LIFE	OPERATING EFFICIENCY	IMPACT ON LEARN. ENV.	AESTHETICS & APPEARANCE	* OPINION OF PROBABLE COST
Mechanical	Kitchen Office 103C is not provided with heat nor is it provided with code required ventilation air.	Provide ventilation air and heating	1	OB	S		●		●	●			$4,250
Mechanical	Bathroom 103D is heated utilizing hydronic fin tube and it is in poor but operable condition. It has corroded and should be considered for replacement.	Replace 5 LF fin tube	1	EOL	S				●	●			$6,800
Mechanical	Ceiling heating and ventilation grilles in classrooms are in poor condition	Replace 50 grilles	1	EOL	S				●	●	●		$18,700
Mechanical	There appear to be a number of abandoned exhaust fans and intakes located on the roof in the southeast corner of the building	Remove and cap roof 12 penetrations to prevent future water intrusion	1	EOL	S				●	●			$25,500
Mechanical	The insulation on the refrigerant lines for condenser units serving the walk-ins is in poor condition	Replace 75 LF to ensure continued efficient operation.	1	EOL	S				●	●			$3,400
Mechanical	Some of the domestic hot water heater pipe insulation visible in the boiler room is in poor condition	Replace 25 LF of pipe insulation	1	EOL	S				●	●			$1,275
Electrical	Speaker/strobe devices are not present in common areas/corridors and classrooms	Add (75) speaker/strobe notification devices for voice intelligibility.	0	OB	S	●	●		●	●			$161,500
Electrical	No CO detector in the kitchen	Add (1) CO detector in kitchen that contain fossil fuel burning equipment.	0	OB	S	●	●		●	●			$5,100

MAST WAY ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

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			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	**DESCRIPTION AND GENERAL COMMENTS**	**RECOMMENDED ACTION**	**COND. LEVEL**	**AGE FACTOR**	**ACTION PRIORITY**	**HEALTH & SAFETY**	**CODE COMPLIANCE**	**ADA/ ACCESSIBILITY**	**EXTENDING BLDG. LIFE**	**OPERATING EFFICIENCY**	**IMPACT ON LEARN. ENV.**	**AESTHETICS & APPEARANCE**	*** OPINION OF PROBABLE COST**
Long Term Repairs - Years 6 - 10 (Fiscal Years 2030 - 2034)													
Grounds	Outdoor play structure is not ADA compliant	Replace play structure	2	ESL	L			●			●		$317,625
Grounds	Rely on adjacent church property for parent drop-off/pick-up circulation - want to be self sufficient	Convert 11,000 SF of retention area to parking lot with underground storm water retainage structures	N/A	N/A	L				●	●			$616,000
Interior	Classroom built-ins are worn and not ADA compliant (except for newest addition)	Replace 19 total instances of 7'Long x 24"Deep x 30" Tall casework, including sink	2	EOL	L			●	●		●	●	$196,350
Interior	VCT flooring throughout is in poor condition and nearing end of useful service life	Remove 35,000 SF of VCT and replace with resilient quartz tile flooring	1	EOL	L				●		●	●	$1,058,750
Interior	Sagging acoustic ceiling tiles throughout, esp at classrooms	Remove and replace 37,500 SF of ceiling grid and ceiling tiles.	1	EOL	L				●		●	●	$870,100
Interior	Kindergarten Room 128 does not have toilet room	Convert Toilet rooms 152 and 152A to a single user toilet room serving Classroom 128	N/A	N/A	L		●	●	●	●	●		$51,013
Interior	Grade 1 and kindergarten classrooms missing cubbies in classrooms	Provide 12 LF of casework cubbies at 5 classroom locations	N/A	N/A	L			●	●		●	●	$9,625
Interior	Sinks at Nurse's Office and Teacher's Room are not ADA compliant	Remove existing casework and provide 25 LF of ADA compliant casework with including 2 sinks	2	EOL	L			●	●		●	●	$34,650
Interior	OT/PT renovation	Demo 915 SF wood stage and install new flooring and (2) 20'L x 20'H new partitions	N/A	N/A	L			●	●	●	●		$244,475
Fire Protection	Fire pump is showing signs of corrosion	Replace or refurbish fire pump	2	ELS	L	●	●		●	●			$154,000
Mechanical	The building corridors are not provided with any ventilation air per site observations or examination of existing plans. Per current code (IMC 2021) corridors should be provided with a minimum fresh air ventilation rate of 0.06 CFM/SF.	In future projects it is recommended that this oversite be corrected through either new equipment of rebalancing of existing ventilation units.	N/A	N/A	L		●		●	●	●		$48,125
Mechanical	The dishwasher is not provided with a type II hood as per current code and is only provided with an exhaust grille at the ceiling. This is not currently code compliant as it does not adequately contain the humidity from the operating dishwasher	Provide ventilation hood at dishwasher	N/A	N/A	L		●		●	●			$18,288
Mechanical	RTU-1 is within 10-feet of the roof edge	Provide 12 LF fall protection	N/A	N/A	L	●	●		●				$2,888

MAST WAY ELEMENTARY SCHOOL

Capital Plan Detailed Scope of Work

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LEGEND

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TOTAL GROSS AREA (sf) **62,310**

			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	**DESCRIPTION AND GENERAL COMMENTS**	**RECOMMENDED ACTION**	**COND. LEVEL**	**AGE FACTOR**	**ACTION PRIORITY**	**HEALTH & SAFETY**	**CODE COMPLIANCE**	**ADA/ ACCESSIBILITY**	**EXTENDING BLDG. LIFE**	**OPERATING EFFICIENCY**	**IMPACT ON LEARN. ENV.**	**AESTHETICS & APPEARANCE**	*** OPINION OF PROBABLE COST**
Electrical	The Public Address System is a traditional analog Bogen system	Upgrading the public address system to an IP based system to integrate with phone system and network.	N/A	N/A	L	●			●	●	●		$171,325
Electrical	Develop program for security cameras and storage of footage		N/A	N/A	L	●			●	●			TBD
Electrical	Audio enhancement system throughout building		N/A	N/A	L			●	●		●		$171,325

OYSTER RIVER HIGH SCHOOL

Capital Plan Detailed Scope of Work

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TOTAL GROSS AREA (sf) **189,653**

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			SEE LEGEND			EVALUATION CRITERIA							
CATEGORY	**DESCRIPTION AND GENERAL COMMENTS**	**RECOMMENDED ACTION**	**COND. LEVEL**	**AGE FACTOR**	**ACTION PRIORITY**	**HEALTH & SAFETY**	**CODE COMPLIANCE**	**ADA/ ACCESSIBILITY**	**EXTENDING BLDG. LIFE**	**OPERATING EFFICIENCY**	**IMPACT ON LEARN. ENV.**	**AESTHETICS & APPEARANCE**	*** OPINION OF PROBABLE COST**
Immediate Repairs - Year 1 (Fiscal Year 2025)													
Mechanical	On a number of mini-split heat pumps the wood supports used to mount the heat pumps are failing	Replace 100 LF wood supports as soon as possible to prevent a unit falling over during a storm and causing damage to itself and the roof.	1	OB	I	●			●	●			$25,840
Mechanical	The oldest VRF heat pump module (not tagged) on roof area D has deficient or missing insulation on significant portions of the exposed piping run.	Repair or replace insulation as soon as possible to prevent issues with low temperature operation and efficiency.	1	OB	I				●	●			$7,600
Short Term Repairs - Years 2 - 5 (Fiscal Years 2026 - 2029)													
Grounds	Turf field is nearing end of useful life at 8 years.	Replace turf field.	1	EOL	S	●			●			●	$2,000,000
Grounds	Track is nearing end of useful life.	Resurface track	1	EOL	S	●			●			●	$350,000
Grounds	Parking Lot/Driveway reconstruction	Reconstruct paved area at the at the front of school including drop-off area and parking around the auditorium.	1	EOL	S			●	●	●		●	$222,000
Grounds	Temporary netting at fields frequently blows down.	Provide permanent safety netting at ends of field. 2 total nets, 16-ft high x 120-ft long each	1	EOL	S	●			●				$61,200
Grounds	Trees too close to building along front of building.	Remove approximately 12 trees & shrubs.	N/A	N/A	S	●			●			●	$20,400
Grounds	Some ponding occurs at main entry where brick pavement meets concrete paving (near canopy columns).	Regrade approximately 150 sf of brick pavers.	2	ESL	S	●		●	●			●	$4,250
Grounds	Irrigation System	Repairs to irrigation system	2	ESL	S				●	●			$50,000
Grounds	Insufficient accessible parking to playing fields	Add 4 accessible parking spaces near batting cages	N/A	N/A	S		●	●					$73,500
Grounds	Expansion of parking - Retention Pond Phase 1		N/A	N/A	S				●	●			$500,000

OYSTER RIVER HIGH SCHOOL

Capital Plan Detailed Scope of Work

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TOTAL GROSS AREA (sf) 189,653

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CATEGORY	DESCRIPTION AND GENERAL COMMENTS	RECOMMENDED ACTION	COND. LEVEL	AGE FACTOR	ACTION PRIORITY	HEALTH & SAFETY	CODE COMPLIANCE	ADA/ ACCESSIBILITY	EXTENDING BLDG. LIFE	OPERATING EFFICIENCY	IMPACT ON LEARN. ENV.	AESTHETICS & APPEARANCE	* OPINION OF PROBABLE COST
Grounds	Add press box		N/A	N/A	S				●		●		$250,000
Exterior	CMU efflorescence was observed on the CMU along roof edge of Auditorium.	Apply preservative waterproofing coating to CMU: 15,000 SF area.	2	ESL	S				●	●		●	$153,000
Exterior	At double exterior doors, replace pulls/levers so can't be 'chained'	Replace door pull hardware on 21 sets of paired doors.	2	ESL	S	●							$25,500
Exterior	Cafeteria wood fascia is wood and is peeling badly	Replace 350 LF with new 1x12 PVC trim	1	EOL	S				●			●	$6,800
Exterior	Sealants throughout are hard and cracking (end of useful life)	Remove and replace 2,500 LF of exterior sealants	1	EOL	S				●			●	$34,000
Exterior	All exterior hollow metal doors and frames are rusting	Remove rust, prime and repaint hollow metal doors & frames: 22 single doors & 22 double doors	2	ESL	S				●			●	$27,200
Exterior	Wood blocking at heads of windows along roof edge fascia at Level 1 1-story wing with Counseling is rotted.	Temporarily remove metal roof fascia & replace wood blocking: 75 LF	1	EOL	S				●			●	$4,250
Exterior	Damaged brick low outside Room C126B	Repair/replace 10 SF brick veneer	2	ESL	S				●			●	$3,400
Roof	Roof restoration Phase 1	Restore 54,674 SF including Auditorium, Stage, Gym, MPR, Theater, Hall, Office, Entry, Lab Boiler	1	EOL	S				●				$350,000
Roof	Roof restoration Phase 2	Restore 64,765 SF including Kitchen, Shop, 2nd Floor Class A & B, 3rd Floor Class, Library	1	EOL	S				●				$300,000
Interior	Main entry corridor VCT is failing	Remove multiple layers of VCT and replace with new flooring: 1,200 SF	1	EOL	S				●			●	$37,400
Interior	Auditorium carpeting is worn and is nearing end of useful service life	Replace 6,500 SF carpeting.	1	EOL	S				●			●	$127,500
Interior	Library carpeting is worn and is nearing end of useful service life	Replace 4,800 SF of carpeting.	1	EOL	S				●			●	$93,500
Interior	Music/choral room floor - stained and worn and is nearing end of useful service life	Replace 3,000 SF of carpeting.	1	EOL	S				●			●	$59,500
Interior	Gym: large floor threshold not properly fastened - tripping hazard	Replace 12 LF of metal floor threshold.	1	EOL	S	●			●			●	$2,550
Interior	Library stairs (2 total): guardrails not code compliant height, missing wall handrails	Provide 96 LF wall mounted handrail & replace 48 LF of guardrail	1	EOL	S	●	●	●					$40,800
Interior	Provide sinks in Pre-K classrooms	At Preschool Rooms T101 and T102, provide 7 LF casework including 1 sink at each room	N/A	N/A	S		●		●		●		$51,000

OYSTER RIVER HIGH SCHOOL

Capital Plan Detailed Scope of Work

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Interior	Pre-K classroom T101 does not have a toilet room	Provide one single user toilet room, 7'x7'	N/A	N/A	S		●	●	●		●		$81,600
Interior	Pre-K classrooms missing exit doors directly to exterior	At Rooms T101 and T102, remove 1 exterior window each room and install new aluminum exterior door.	N/A	N/A	S	●	●		●		●		$45,900
Mechanical	Lab exhaust fans LEF-1 - LEF-12 are nearing end of service life	Replace in next 5 years	2	EOL	S		●		●	●	●		$132,600
Mechanical	ACCU-6 ACCU-7 are in poor condition and nearing end of service life	Replace in next 2 to 3 years	1	OB	S		●		●	●	●		$170,000
Mechanical	Units AHU-2 and AHU-14 condensate is not draining and is pooling on the roof potentially causing roof leaks	Extend the condensate drainage piping 40 LF closer to the roof drain to prevent the pooling.	2	EOL	S				●	●			$11,900
Mechanical	There are a number of cases of deficient or missing insulation on the refrigerant piping on the roof.	The insulation should be repaired or replaced where missing. The liquid and gas lines should be insulated independently for proper efficient operation. Budget for 200 LF	2	ESL	S				●	●			$25,500
Mechanical	The dust collection system is reported as operational but it is showing significant corrosion on the structure, ductwork and motor and is nearing end of life being over 20 years old.	Replace in next 5 years	2	EOL	S				●	●			$93,500
Mechanical	The electrical rooms do not have any cooling or exhaust to maintain a temperature below 80°F.	It is recommended that the either exhaust be provided or split DX heat pumps be provided to maintain temperatures as per code.	2	EOL	S				●	●			$12,750
Mechanical	Control System: all of the field panels and floor level controllers are at end of useful life.	Replace 20 Bac Net Field Panels and 160 Floor Level Controllers	1	EOL	S				●	●			$1,496,000
Mechanical	Add heat to MPR and soundproofing		N/A	N/A	S				●	●	●		$43,000
Mechanical	Kitchen hood replacements & controls		1	EOL	S				●	●			$70,000
Mechanical	Roof Exhaust Fans EF-1 through EF-29 are nearing end of service life	Replace in next 5 years	1	EOL	S				●	●	●		$246,500
Mechanical	Kitchen exhaust fans KEF-1 and 2 are nearing end of service life	Replace in next 5 years	1	EOL	S				●	●			$29,750
Mechanical	All of the Rooftop AHU's and their associated ACCU's are original to the building and are nearing end of life.	Replace over next 5 years	1	ESL	S				●	●	●		$8,500,000
Mechanical	Roof Duct Restoration - Phase 1	Stage	1	EOL	S				●	●			$12,500

OYSTER RIVER HIGH SCHOOL

Capital Plan Detailed Scope of Work

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Mechanical	Roof Duct Restoration - Phase 2	Kitchen/Shop	1	EOL	S				●	●			$48,000
Mechanical	Roof Duct Restoration - Phase 3	Hall, Office, Cafeteria	1	EOL	S				●	●			$30,000
Mechanical	Roof Duct Restoration - Phase 4	3rd Floor Class	1	EOL	S				●	●			$13,000
Mechanical	Roof Duct Restoration - Phase 5	2nd Floor Class - B	1	EOL	S				●	●			$15,500
Long Term Repairs - Years 6 - 10 (Fiscal Years 2030 - 2034)													
Interior	VCT throughout building is cracking and failing	Remove VCT flooring and replace with resilient quartz tile flooring	1	EOL	L				●			●	$150,000
Interior	Teacher's room casework and sink are not ADA compliant	Replace 20 LF of casework, including 1 new sink.	2	EOL	L		●	●	●				$23,100
Interior	Sagging acoustic ceiling tiles throughout, esp at classrooms	Remove and replace 135,000 SF of ceiling grid and ceiling tiles.	1	EOL	L				●		●	●	$3,118,500
Mechanical	Lack of AC in Gym is an issue - space is nearly unusable in spring & summer	Provide AC to the Gym (13,500 SF area, including weight room)	N/A	N/A	L				●	●	●		$1,155,000
Mechanical	Develop program to expand AC throughout the building		N/A	N/A	L				●	●	●		$7,700,000
Electrical	Wired internet access to playing fields	Provide 800 LF of fiber line bleachers at west side of running track	N/A	N/A	L				●		●		$48,125
Electrical	The Public Address System is a traditional analog Bogen system	Upgrading the public address system to an IP based system to integrate with phone system and network.	N/A	N/A	L	●			●	●	●		$500,500
Electrical	Develop program for security cameras and storage of footage		N/A	N/A	L	●			●	●			TBD

APPENDIX A

Abbreviations

ACT	Acoustic Ceiling Tile
ADA	American's with Disabilities Act
BTUH	British Thermal Units per Hour
CCTV	Closed Circuit Television Camera
CFH	Cubic Feet per Hour
CMR	Code of Massachusetts Regulations
CMU	Concrete Masonry Unit
CPT	Carpet
EIFS	Exrerior Insulation Finish System
EPDM	Ethylene propylene diene monomer
GFI	Ground Fault Interrupter
GPM	Gallons per Minute
GSF	Gross Square Feet
GWB	Gypsum Wall Board
HVAC	Heating, Ventilation, Air Conditioning
IGU	Insulated Glass Unit
IP	Internet Protocol
LCC	Lead Coated Copper
LF	Linear Feet
NFPA	National Fire Protection Association
PEP	Preschool Education Program
PIV	Post Indicator Valve
PSF	Pounds per Square Foot
SF	Square Feet
VCT	Vinyl Composition Tile

APPENDIX B

Moharimet Elementary School
Conceptual Expansion Project Budget

Construction Estimate	$5,172,710
A&E Design Budget	$378,500
Civil Engineering Budget	$107,000
Construction Testing Budget	$18,000
Furniture & Equipment Budget	$102,640
A/V & Technology Budget	$201,500
Building Permits and Fees	TBD
Owner Contingency Budget (5%)	$258,636
Total Conceptual Budget	**$6,238,986**

Moharimet Elementary School Classroom Addition
Preliminary Budget - Six Classroom Addition & Renovations
Square Footage = 9,345 new + 5,710 renovated

Bauen Corporation
PO Box 1621 Meredith, NH 03253
November 12, 2024

Activity	Value	Cost/SF	Division Total
General Conditions			$386,630
Superintendent	$210,000	$13.95	
Project Manager	$66,500	$4.42	
Jobsite Trailer	$7,050	$0.47	
Job Office Supplies	$1,750	$0.12	
Jobsite Phone	$3,500	$0.23	
Portable Toilets	$5,740	$0.38	
Safety & Security	$750	$0.05	
Warranty Work	$3,500	$0.23	
Blueprints and O&M Manuals	$1,500	$0.10	
Performance and Payment Bond	$35,595	$2.36	
Builder's Risk Insurance	$4,800	$0.32	
Temporary Fencing	$1,415	$0.09	
Dumpsters	$8,550	$0.57	
Tools and Rentals	$3,500	$0.23	
Winter Conditions and Heat	$21,000	$1.39	
Surveying and Layout	$3,200	$0.21	
Final Cleaning	$8,280	$0.55	
Demolition			$81,245
Interior Demolition	$39,745	$2.64	
Exterior Demolition	$20,000	$1.33	
Misc. cutting and patching	$21,500	$1.43	
Sitework			$290,000
General Earthwork	$280,000	$18.60	
Landscaping Allowance	$10,000	$0.66	
Concrete			$339,606
Formwork	$193,806	$12.87	
Flatwork	$129,500	$8.60	
Concrete Accessories	$16,300	$1.08	
Masonry			$169,130
CMU and Brick Veneer w/ Insulation Board	$169,130	$11.23	
Metals			$315,700
Structural Steel, Deck, & Misc. Metals	$305,400	$20.29	
Nails, fasteners, and misc. steel work	$10,300	$0.68	
Wood & Plastics			$254,172
Rough Carpentry Labor	$32,000	$2.13	
Rough Carpentry Materials	$24,800	$1.65	
Finish Carpentry Labor	$43,373	$2.88	

Finish Carpentry Materials	$31,999	$2.13	
Casework	$122,000	$8.10	
Thermal & Moisture Protection			$440,745
Foundation Insulation	$35,200	$2.34	
Wall Insulation	$15,500	$1.03	
Misc. Flashings and Metal Work	$3,200	$0.21	
Caulking and Firestopping	$15,305	$1.02	
EDPM Roofing	$243,100	$16.15	
Roof Tie-in Work	$38,000	$2.52	
Insulated Nail Base Sheathing and Furring	$9,920	$0.66	
Weather Barriers	$31,400	$2.09	
Siding	$37,120	$2.47	
EIFS Patching and Misc. Siding Tie-in	$12,000	$0.80	
Doors, Windows, and Glazing			$235,788
Doors, Frames, and Hardware	$96,850	$6.43	
Windows, installed	$102,360	$6.80	
Aluminum Storefront	$34,000	$2.26	
Misc. Access Doors	$2,578	$0.17	
Finishes			$729,389
Gypsum Board Assemblies	$351,443	$23.34	
Suspended Acoustical Ceilings	$94,084	$6.25	
Flooring	$208,144	$13.83	
Painting	$75,718	$5.03	
Specialties and Furnishings			$60,165
Signage	$5,700	$0.38	
Fire Extinguishers and Cabinets	$2,350	$0.16	
Toilet Accessories	$4,400	$0.29	
Wall Protection	$6,122	$0.41	
Markerboards and Tackboards	$28,193	$1.87	
Window Shades	$13,400	$0.89	
Mechanical			$903,847
HVAC and Plumbing	$805,905	$53.53	
Sprinkler System	$97,942	$6.51	
Electrical			$567,342
General, Fire Alarm, Fixtures	$536,900	$35.66	
Security, CCTV, Card Access	$30,442	$2.02	
CONTINGENCY	$200,000	$13.28	$200,000
Construction Subtotal	$4,973,759	$330.37	$4,973,759
CM Fee	$198,950	$13.21	
Construction EstimateTotal =	$5,172,710	$343.59	

NOTES:

Temporary electricity by owner

Estimate is based on a summer 2026 start to construction.

OVERALL PROJECT BUDGET:

Construction Estimate	$5,172,710	
Civil Engineering		TBD
A&E Budget		TBD
Testing	$18,000	
Furniture and Equipment	$102,640	
Technology and Computers	$201,500	
Building Permits and Fees		TBD
Owner Contingency		TBD
TOTAL BUDGET =	$5,494,850	

APPENDIX C

Mast Way Elementary School
Conceptual Expansion Project Budget

Construction Estimate	$910,913
A&E Design Budget	$63,365
Civil Engineering Budget	TBD
Construction Testing Budget	$3,500
Furniture & Equipment Budget	$9,800
A/V & Technology Budget	TBD
Building Permits and Fees	TBD
Owner Contingency Budget (5%)	$45,540
Total Conceptual Budget	**$1,033,124**

Mast Way School - Cafeteria Addition
23 Mast Road Lee, NH
Projected Start is Spring 2026 / 1254 SF / 18 weeks

Bauen Corporation
PO Box 1621 Meredith, NH 03253
November 12, 2024

Activity	Labor	Materials	Subs	Total	Cost/SF
General Conditions					
Superintendent	$63,000			$63,000	$48.76
Project Manager	$21,000			$21,000	$16.25
Job Office/Safety Supplies (Office in School)		$1,880		$1,880	$1.46
Jobsite Phone		$1,000		$1,000	$0.77
Portable Toilets			$2,150	$2,150	$1.66
Safety & Security		$790		$790	$0.61
Warranty Work	$3,500			$3,500	$2.71
Blueprints and O&M Manuals		$750		$750	$0.58
Performance and Payment Bond		$8,100		$8,100	$6.27
Builder's Risk		$2,400		$2,400	$1.86
Temporary Fencing			$3,960	$3,960	$3.07
Dumpsters		$150	$4,000	$4,150	$3.21
Tools and Rentals		$2,500		$2,500	$1.93
Testing Allowance			$2,500	$2,500	$1.93
Permits and Fees		$5,000		$5,000	$3.87
Demolition					
Exterior/Interior Demolition			$38,850	$38,850	$30.07
Sitework					
General Earthwork			$115,500	$115,500	$89.40
Concrete					
Footings, Walls, and Reinforcing			$30,135	$30,135	$23.32
Slab			$11,472	$11,472	$8.88
Concrete Accessories		$2,260		$2,260	$1.75
Masonry					
CMU, Brick, Rebar, & Insulation			$71,400	$71,400	$55.26
Prep. and set bearing plates	$3,255			$3,255	$2.52
Metals					
Structural Steel, Deck, & Misc. Metals			$36,550	$36,550	$28.29
Nails, fasteners, and misc. metals		$2,100		$2,100	$1.63
Wood & Plastics					
Rough Carpentry	$9,000	$5,100		$14,100	$10.91
Finish Carpentry	$4,800	$3,360		$8,160	$6.32

Thermal & Moisture Protection					
Foundation Insulation	$1,800	$6,900		$8,700	$6.73
Air Barrier			$8,400	$8,400	$6.50
Misc. Flashings and Metal Work	$600	$3,100	$2,000	$5,700	$4.41
Caulking and Firestopping	$3,000	$900		$3,900	$3.02
EDPM Roofing for addition only			$38,400	$38,400	$29.72
EIFS			$21,000	$21,000	$16.25
Doors, Windows, and Glazing					
Windows	$3,600	$22,260		$25,860	$20.02
Doors	$600	$3,600		$4,200	$3.25
Finishes					
Suspended Acoustical Ceilings			$20,500	$20,500	$6.78
Flooring			$29,500	$29,500	$9.76
Painting			$13,650	$13,650	$4.51
Mechanical					
HVAC - Add AC to entire cafeteria and kitchen			$94,500	$94,500	$73.14
Sprinkler System			$8,980	$8,980	$6.95
Electrical					
General incl. Lighting Fixtures and Fire Alarm			$59,600	$59,600	$46.13
CONTINGENCY			$60,000	$60,000	$46.44
Construction Subtotal				$859,352	$665.13
Fee				$51,561	$39.91
Total Construction Budget =				**$910,913**	$705.04

NOTES:

Use school space and electricity for field office and power

SAU staff will wash and wax new VCT and do final cleaning

Overall Project Budget:		
Testing Budget - By Owner	$3,500	
Furniture - Additional Tables and Chairs	$9,800	
Owner Contingency		TBD
Civil Engineering		TBD
A&E		TBD
Total Project Budget =	**$924,213**	

APPENDIX D

Meeting Minutes

- Review of Projects July 31, 2024
- Programming Meeting September 20, 2024
- Mast Way Cafeteria Meeting September 24, 2024
- Moharimet Programming September 24, 2024
- Moharimet Programming October 2, 2024
- Mast Way Programming October 8, 2024
- Mast Way Programming October 16, 2024
- PEP Programming October 16, 2024
- Moharimet Concept Design #1 October 22, 2024
- Moharimet Concept Design #2 October 29, 2024