

Chester Elementary School | K-5

Deep River Elementary School | K-5

Valley Regional High School | 9 - 12

RSD #4 Administrative Offices

John Winthrop Middle School | 6 - 8

Essex Elementary School | K-5

John Winthrop Middle School

DRA

The John Winthrop Middle School

Grades Seven and Eight

1 Winthrop Road

Deep River, CT 06417

129,600 Square Feet total

Two floors

66.05 Acre Site

Originally Constructed: 1970 (Town of Deep River Land Records)

Overview

The John Winthrop Middle School is a two story building of approximately 129,600 square feet, set on a site of just over 60 acres. The original building was constructed in 1970, with two small additions and renovations taking place in 2003.

The site is accessed from the north, where the access drive to the site intersects with Winthrop Road and West Elm Street. Once at the building the site is fairly flat. The



Regional School District #4 Administrative offices are located on this site as well. The overall site is approximately 50% developed. There is a substantial amount of athletic field space to the south of the building. Those portions of the site that are not developed remain wooded with mature deciduous tree growth.

There is only the one entry point. The roadway appears to be about 22 feet wide and climbs a fair amount as it travels south toward the building.

There are two separate parking areas, the larger one, with 110 spaces, of which 13 abut the Regional Office, is to the east of the school. The one to the south with 61 spaces. There are handicapped designated spaces within each of the lots.

The eastern lot incorporates the private vehicle drop-off / pick-up loop. The southern lot has the bus drop-off / pick-up loop.

Access to the athletic fields is from the southern lot.

- ① Winthrop Drive
- ② Drop Off / Pick Up
- ③ ADA Compliant Parking
- ④ Main Entry to Building
- ⑤ Visitor Parking
- ⑥ Bus Drop Entry Drive
- ⑦ Staff Parking
- ⑧ Secondary Entry to Building
- ⑨ Play field
- ⑩ Loading Area



There is a hard-surface patio off of the library. Nearby is a fenced garden / growing area with a small barn for storage.

There are four baseball and softball diamonds along with at least two soccer pitches making up the athletic fields. The soccer pitches overlap the outfield areas of some of the ballfields, but it appears possible to play concurrent games.

The building is a two story structure, with the lower floor being considerably smaller than the upper level. The lower level is in two unconnected parts. There is an elevator in each of the areas. The lower level contains classrooms and related spaces. The upper level contains the gymnasium, kitchen, cafeteria, library, auditorium, main office, and classrooms.

The original 1970 building was a double loaded classroom corridor to the north side of the main floor, single loaded classroom corridor on the lower floor directly beneath.

The large volume spaces such as the gym, auditorium, and cafeteria are to the south and east of the classroom corridor.

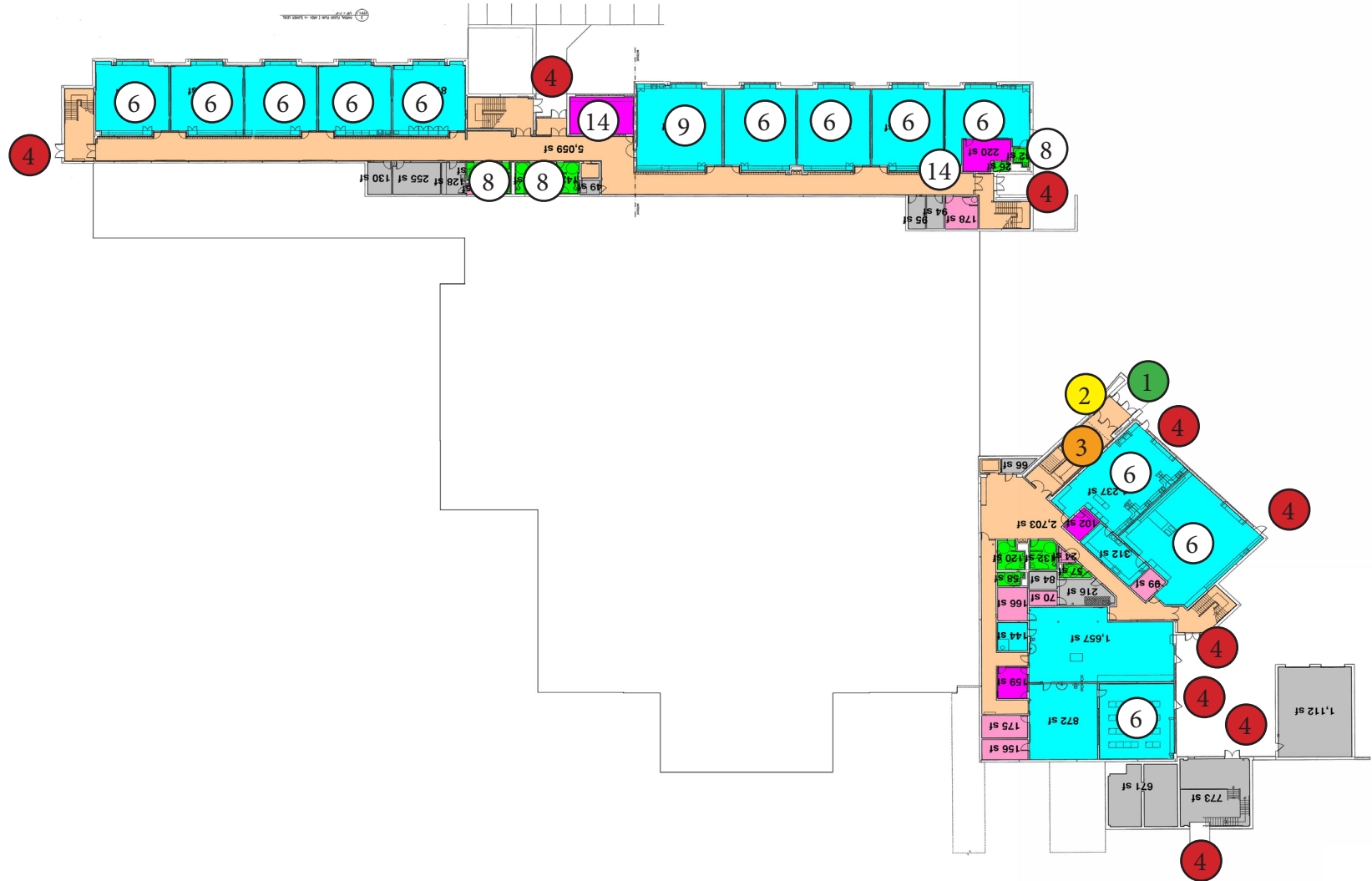
The gymnasium and auditorium are generously sized for a middle school. The library is of good size as well.

The footprint and design of the school is typical of 1970s middle and high school design, incorporating modestly sized classrooms along with well sized and equipped gyms and auditoriums to provide a range of learning opportunities and functions.

- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑥ Classrooms
- ⑧ Restrooms Teacher's
- ⑨ Art Classroom
- ⑭ Meeting Room / Office

John Winthrop Middle School

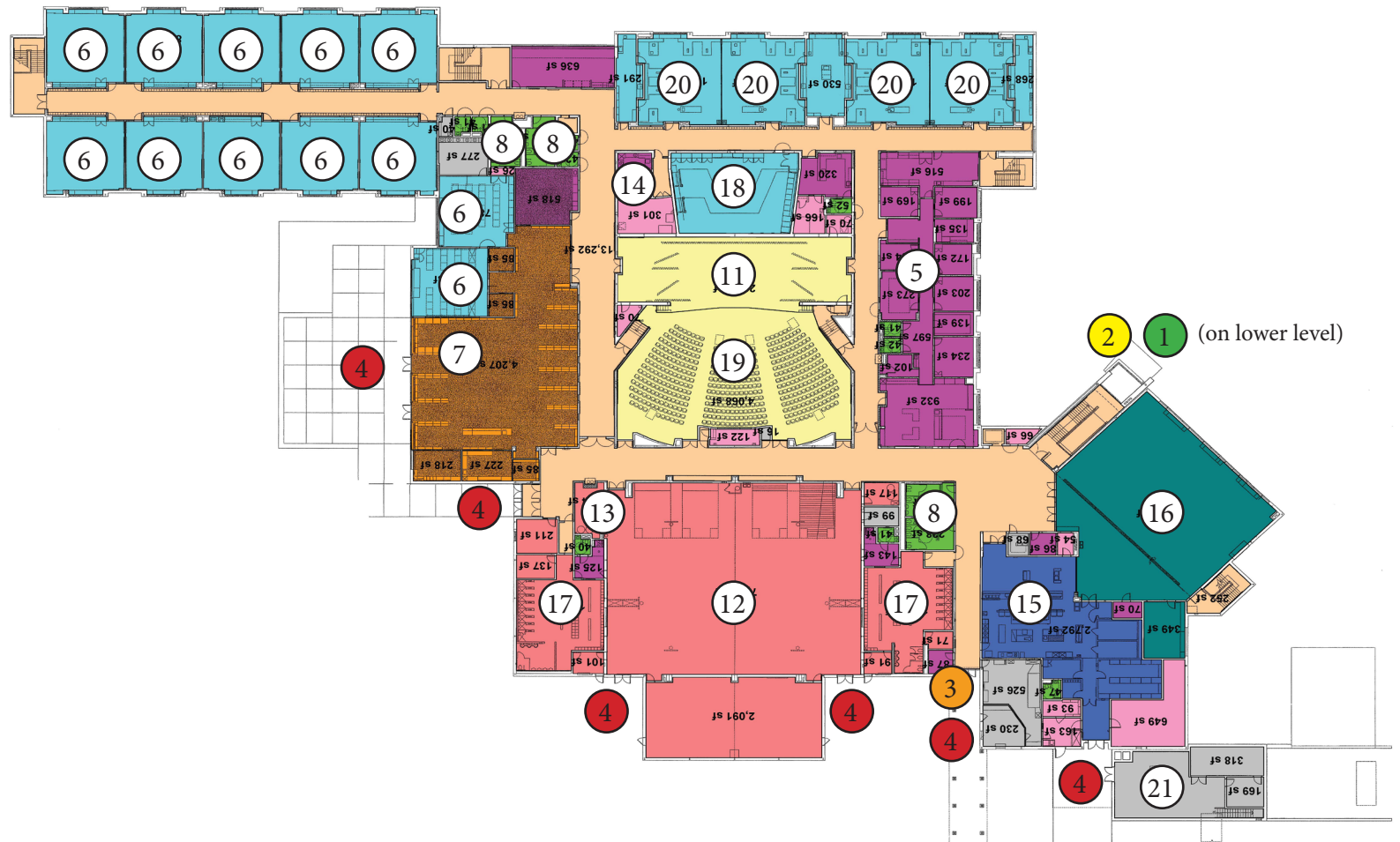
Lower Level



- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑤ Main Office
- ⑥ Classrooms
- ⑦ Library
- ⑧ Restrooms
- ⑩ Teacher's Breakroom
- ⑪ Stage
- ⑫ Gym
- ⑬ Gym Storage
- ⑭ Meeting Room / Office
- ⑮ Kitchen
- ⑯ Cafeteria
- ⑰ Locker Rooms
- ⑱ Music Room
- ⑲ Auditorium
- ⑳ Science Lab
- ㉑ Mechanical
- ㉒ Kitchen
- ㉓ Cafeteria

John Winthrop Middle School

Upper Level



The entry from the private vehicle drop is on the lower level. From this entry there is a staircase and an elevator by which the main floor level is reached.

The entry from the bus drop is through a set of doors to a corridor which runs between the locker rooms and kitchen. Through this entry one enters onto the main floor.

Neither entry point provides a secure, observable vestibule arrangement. There is no logical way in which an entry sequence could be established that would provide direct connection from the entry door to the main office. Security for the entries would rely upon a staff member being located at each of the two main entry points.

Assessment Narrative

Site

Site access and driveways throughout the site appear to be all the same age. Pavement is in fair condition throughout the site, with cracking and deterioration beginning to grow. Repaving of the site should be on track for consideration in the next 5 - 10 years.

The accessible routes are not properly constructed or marked. There are designated ADA spaces on the east and south sides of the building. These appear to be properly sized for van loading and car use. However, the required crosswalks, signs, markings, and tactile warning strips are either faded, missing, or broken, taking these spaces out of compliance. This should be addressed as a first order item. Most of the corrections are straight-forward to implement.





The curbing and sidewalks immediately the north of the building entrance are concrete. Deterioration is spreading quickly in some areas and some of the walks are becoming unsafe. Deterioration will typically accelerate once it has begun. Remedial work should be scheduled in the next two years.

Other curbing and sidewalks on site are in slightly better condition. These are broken in some places, but not as badly as to the north of the building. This curbing and sidewalks should be addressed as necessary so that it doesn't become a tripping hazard or cause damage to a vehicle.

Trees and plantings throughout the site are a mix of what appear to be recently planted fruit trees and mature native growth. All appear to be healthy and in good



condition. The recently planted fruit trees near the building could be part of a science project that would engage students in hands-on study of the trees over the years to document growth and fruit production.

The play fields to the south of the building are generally well defined and appear to have a substantial and well-established turf surface. There is a baseball diamond and backstop. There were bleachers at the nearest field. No seating was observed at the other fields. This area did not have an accessible path to any of the fields. Overall in good condition otherwise.

There is an outdoor seating area to the west, accessed through either the hallway near the library or by foot on a path around the south side of the building. There is a table with an ADA compliant seating area.

Near the outdoor seating area is a fenced garden area with a storage shed. This appears to be used as a project-based learning area. There is no accessible path to this area.

The bench in the outdoor classroom is broken.





Building - Exterior

The building is clad in brick with corrugated metal and precast exposed stone panels. The brick walls show spalling, some cracking, loss of mortar, and efflorescence. The extent of this condition in some areas is concerning and it is recommended that potential causes and resolution be investigated to assure continued structural and environmental integrity of the building.

The deterioration of the brick is especially evident on some of the building corners, the chimney, and other areas both at ground level and above the roofline. Given.

The photos on this and the facing page illustrate some of the areas observed during our assessment.

The windows throughout the building are a mix of relatively new with a greater number that appear to be original to the building. These are single glazed and in poor condition. Consideration should be given to replacing these to double glazed, energy efficient units. Given the age of the building, it should be assumed while planning and budgeting that the sealant at any original door or window will contain hazardous materials.

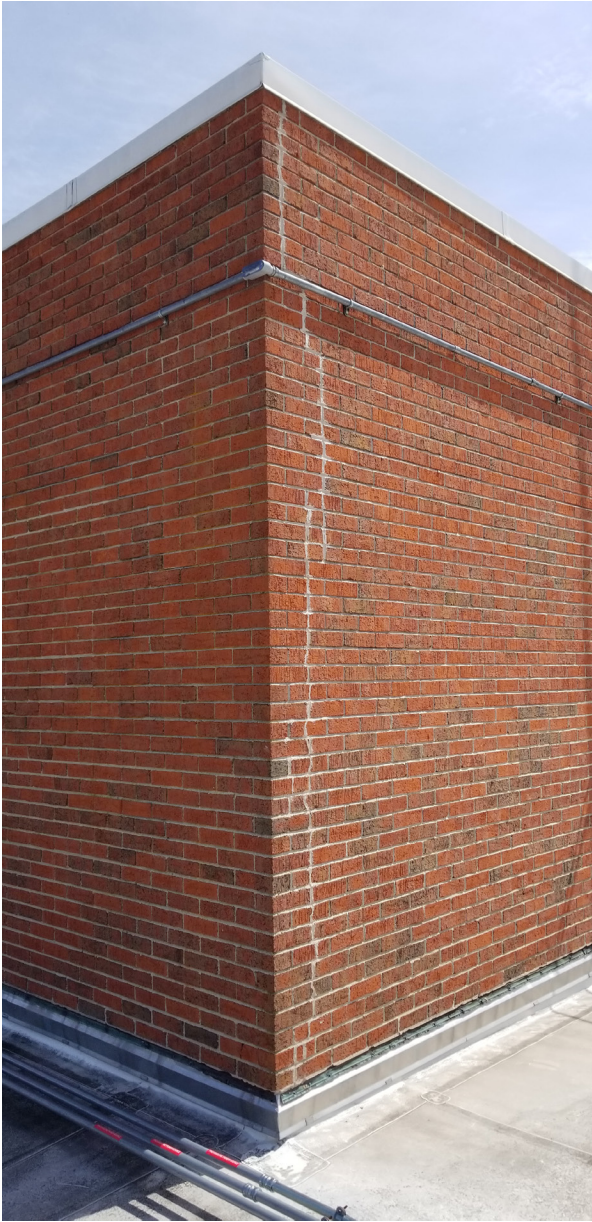
The main entry doors are aluminum with double glazed windows. These appear to have been installed as part of the 2003 renovation.

Fascias and soffit appear to be cement stucco on backer board. These are generally in fair condition. These should be checked to confirm the soundness of the installation and then cleaned and painted, or replaced if found to be deteriorated.

Some of the steel doors leading from the building are in need of paint.

The roof is epdm that was installed in 2005. This roofing system has a 20 year warranty, which will expire in 2025. There may be a





leak or point of water ingress along the north side of the roof. This shows on the interior as rot, dampness, and mold on the wall near the nurse's office. This roof should be further investigated to determine what life expectancy might be left. Roof drains need to be cleaned in various locations on the roof, and secondary scuppers are needed in many areas. It is recommended that replacement of this roof be planned for sometime in the next three to five years, unless further investigation determines it remains a sound roof and drain system.

There are PV arrays on a good portion of the roof. These appear to have been properly installed.

Photos on this and the facing page give an idea of the conditions on the roof relative to effluorescence in the brick, deterioration of the chimney caps, water ponding on the roof, and the overall condition of the roofing membrane itself.



Building - Interior

The 2003 renovation is aging well, the building interior not looking anywhere near 20 years on from completion.

Most floors in hallways and offices throughout the building have carpeted floors, walls are painted GWB, and the ceilings are acoustical tile.

Interior doors and hardware were addressed during the renovation and remain in good condition with few concerns.

The main office is remote from either of the entrances, which precludes having a safe vestibule / receiving area into which visitors must pass before gaining access to the building. With the current arrangement a visitor may call the main office from the north entry vestibule and a staff member would go down to greet them. Alternately a staff member can be stationed at the vestibule to greet and check visitors into the building.

The north vestibule was refurbished and the elevator added as part of the 2003 renovation. This area remains in good condition.

The main office has a number of individual offices. All materials are in good condition. There are a few ADA compliance items, mostly down to access spaces for office machines.

The main office is situated near the cafeteria and is bound on two sides by corridors. There are a number of windows allowing views from the office into the corridors, and vice versa. This visual connection is considered to be a positive influence on students by giving both a view of what they might be doing in the corridor and allowing them to see into the office to see the work of running the school.





The kitchen is a full-preparation operation with a good floor plan and modern equipment. There is adequate space for staff movement during preparation, serving, and cleanup.



The serving area is well-sized and arranged. There is good lighting in the room and visitor flow through the space appears to be well thought-out. There are two point of sale stations and variety of food service options appears to be offered.

The serving area is open to the dining area, which helps to create a good connection for staff and students and encourages interaction and good behavior.

The cafeteria appears to be well sized for the enrolment. The ceilings are a bit lower than desired, which can tend to increase the noise level.

There is a window-wall along the northeast wall which provides natural light into the space as well as a visual connection to the outdoors.

An area of concern is seen in the large photo on the facing page. This shows the damage caused by a persistent roof leak. Water has traveled beneath the roof membrane to an opening in the roof deck at one of the walls. Water has made its way down the wall near the door to the Nurse's office, where it has rotted the door frame and caused efflorescence of the brick.

Additional signs of water infiltration are shown in the smaller photo on the facing page. This is in one of the stair towers and appears to be caused by water penetrating the wallboard.

It is unclear if the cause of this water infiltration has been found. This is cause for concern on a number of fronts and should be addressed as quickly as possible.

The classrooms are generally in good overall condition. Materials and finishes are appropriate for the uses and the built-in cabinetry provides storage for materials and books.

The lighting is from the 2003 renovation and appears to be a combination up / downlighting fixture which will provide a uniform light throughout the room.

Furniture in the classrooms is dated and was not state of the art even when the building was renovated in 2003. Upgrading of is not necessarily a CIP consideration, but thought should be given to bringing in modern classroom furniture for students and teachers.





The gymnasium is of sufficient size for a middle school program. It is in good condition with a wood floor, folding divider, and pull-out bleacher seating.

The operation of folding partition could not be demonstrated at the time of our visit. However, staff confirmed that it does operate properly and they are familiar with the maintenance and operation required.

There is padding on the end walls and the wall across from the bleachers. This padding appears to be in good condition. This padding should be checked regularly to assure it is not torn or moved on its mountings.

Operation of the bleachers could not be demonstrated at the time of our visit. It is unclear if the bleachers have a space for wheelchair seating and a companion seat adjacent.

Lighting and ventilation within the gym appears to be adequate.

There are two large locker rooms to either side of the gym. These rooms are larger than typically seen in a middle school and are in very good condition. No ADA compliant lockers were seen in either locker room, however.

The library is large and is adjacent to two classrooms which are used as computer labs. The condition of the finishes and furniture within the library is good. The carpet shows very little wear. There are good sightlines from the circulation desk and the stacks are arranged to allow easy supervision of the space.





The auditorium is a very nice space and a positive attribute for the school. It is unusual to see a space with this level of finish and serviceability in a middle school.

Seating is in good condition with appropriate wheelchair locations throughout the seating area. The raked floor is properly sloped.

Though not a full fly, the stage area does have room for set changes, adequate space in the wings for staging, and room for off-stage movements.

The lighting is appropriate for the space and the sound system is reported to be very good as well.



**A. PLUMBING NARRATIVE:
PLUMBING UTILITIES**

1. Domestic Water: The domestic water service for the building is provided through two onsite wells which serve a large buried storage tank and vertical hydropneumatic tank located inside the building in the water room area. The incoming well water pipes are provided with a water meter and pressure reducing valve. The buried tank is assumed to be roughly 10,000 gallons and is only partially exposed in the space. The water from the storage tanks is sent throughout the building by a pair of base mounted booster pumps. The booster pumps are manufactured by Grundfos with an Armstrong control panel. The pump model are CR-15. The pumps appear to be in fair condition and operating correctly.

2. Sanitary: The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. It was indicated during the walk through that the school has its own septic system. No issues were observed.

PLUMBING FIXTURES AND SPECIALTIES

1. Existing plumbing fixtures are as follows:
- Water closets are wall mounted; with sensor operated flush valves, vitreous china.
 - Urinals are wall mounted; with sensor operated flush valves, vitreous china.
 - Lavatories in single and gang restrooms are wall mounted, vitreous china, with sensor operated faucets.
 - Drinking fountains are stainless, multi- level, with no bottle fillers.



Photo # 1: Electric water heater with mixing valves.



Photo # 2: Existing drinking fountain.



Photo # 3: Domestic hot water re-circulation pump.



Photo # 4: Existing boiler plant.



Photo # 5: Dual temp base mounted pumps.



Photo # 6: Expansion tanks for hydronic systems.



Photo # 7: Chilled water distribution piping.



Photo # 8: Water storage tank.

DOMESTIC HOT WATER SYSTEMS

1. Domestic hot water is provided by (8) electric water heaters scattered throughout the building. The water heaters range in size from 119 gallon storage models manufactured by Vanguard Commercial and Rheem/ Ruud to 82 gallon manufactured by Lochinvar. The water heaters all appear to be in fair to good condition and were observed to be operating correctly. There are dedicated hot water heaters for the mens and womens locker rooms, woodshop area, kitchen, and science room areas. Each water heater is provided with its own mixing valve and hot water re-circulation pump to ensure the fixtures are getting hot water in the required.

B. FIRE PROTECTION NARRATIVE:

1. The entire building is provided with a fire protection sprinkler system. The system utilizes a water storage tank to provide enough water for the fire pump duration run time. The fire pump is installed to ensure enough pressure is provided for the sprinkler and standpipe system. The fire pump is rated at 500 gpm @ 100 PSI and was installed by Encore Fire Protection. The fire pump is manufactured by Peerless pumps and is a centrifugal, horizontal split case type. The fire pump appears to be in fair to good condition and is up to date on the servicing. The fire protection system enters the room as a 6" pipe size before serving (3) 4" zone risers and fire department connection riser. The fire pump control panel and disconnect switch are located next to the risers and pump equipment.

C. MECHANICAL SYSTEMS NARRATIVE:

1. The building heating system is provided by (2) H.B. Smith cast iron, oil fired boilers. The boilers

are fed with No. 2 fuel oil from a 10,000 gallon buried tank located near the rear of the building. A duplex set of pumps in the mechanical room supply the oil from the tank to the boilers. The boiler model number is 28A-S/W-15 with a rating of 3330 MBH each. The boiler system appears to be operating correctly, however, the boilers are exceeding their useful life expectancy and should be replaced in the near future. Hot water is distributed throughout the building by a pair of base mounted pumps with wall mounted VFD drives. The pumps appear to be in fair condition, however they are approaching the end of their useful life. The pumps are used for both chilled and hot water distribution depending on if it is cooling or heating season.

2. Heating hot water is distributed around the building to serve unit ventilators, cabinet unit heaters and hot water coils in air handling units.

3. Ventilation, cooling and heating is provided through a mix of unit ventilators, roof mounted air handling units and indoor air handling units. There are (6) indoor air handling units with hot and chilled water coils that serve the conference rooms/ corridors, band room, Industrial Arts room, auditorium, and (2) units that serve the gymnasium. There are (4) units on the roof with hot and chilled water coils that serve the additional gym and locker room areas. Two additional units on the roof are packaged units with their own DX cooling compressors and coil and hot water coils. Classrooms are provided with unit ventilators that are either chilled water/ hot water or DX cooling/ hot water. A glycol system was added in roughly 6 years ago to help with freeze protection of the hot water system.



Photo # 9: Buried water storage tank.



Photo # 10: Domestic water booster pump system.



Photo # 11: Fire pump and sprinkler riser assembly.



Photo # 12: Existing air cooled chillers.

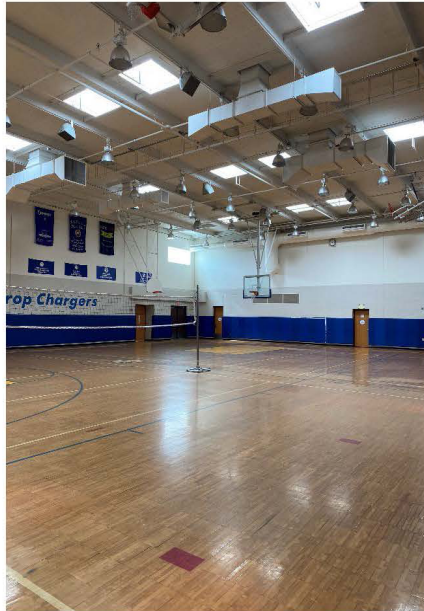


Photo # 13: Ductwork distribution in gym.



Photo # 14: Existing electric domestic water heaters.



Photo # 15: Semi recessed cabinet unit heater.



Photo # 16: Additional electric water heater in storage room.

The air handling units/ roof top units and unit ventilators vary in age, however, the units are operating past their useful life and should be upgraded/ replaced in the near future. Chilled water is provided to the air handling units, rooftop units and unit ventilators via (2) 130 ton air cooled chillers, located on grade next to the building. The chillers are manufactured by York and are model YCAS0138EB46YFA. The chillers appear to be operating correctly, however, as the rest of the air handling equipment, the chillers are exceeding their useful life and should be replaced in the near future.

4. Restroom groups are served by dedicated roof mounted exhaust fans. The fans appeared to be operating correctly, however, they appear to be getting near the end of their useful life.
5. Temperature Controls were recently updated last summer by ESC to a full BMS system.

D. ELECTRICAL SYSTEMS NARRATIVE:

1. Electric Utility Service – Power to the site comes from CL&P pole #1351, located on the northeast side of the circular drive that runs in front of the Middle School. The utility primary runs underground from this pole to a utility company owned 480Y/277volt, 3-phase, 4-wire pad mounted transformer located a few yards from the utility pole. Secondary feeders run underground from the pad mount and enter the building in the basement main electric room where the main service switchboard is located.

2. Electric Service Switchboard - The service entrance switchboard is located in the main electrical room and consists of a 480Y/277volt, 3-phase, 4-wire main switch, CT and distribution section, manufactured by Square D and rated for 2000 amperes. The metering cubicle is

arranged cold sequence with the meter mounted on the exterior of the building. The main switch section feeds a 2000A, 480Y/277V, and 3-phase, 4-wire distribution section, which contains branch circuit breakers that feed various panels and equipment at 480V located throughout the building. 480V primary/208Y/120V secondary distribution transformers feed 208/120V branch panelboards. All equipment was installed as part of additions and renovations that were done in 2005. It is in excellent condition and should serve the school for another 15-20 years.

3. Electric Panelboards—All panelboards observed are by Square D and were installed during the 2005 additions and renovations. 480/277V panels serve mechanical equipment and lighting loads throughout the school. 208/120V panels serve receptacles, small motors and various other loads. All this equipment should provide another 15-20 years of service before replacement.

4. Branch circuit wiring is in EMT/armored cable, where observed. All wiring systems installed as part of the 2005 additions and renovations appears in good to excellent condition. Wiring that exists within the older 69'-70' portions of the building should be examined for integrity. Typically, if left untouched, this older wiring can provide adequate service for many years. If modified, however, wiring insulation can become a safety concern. If future renovations are made in parts of the building where older wiring systems still exist, we recommend this wiring be replaced along with any older generation panelboards that may still be in service.

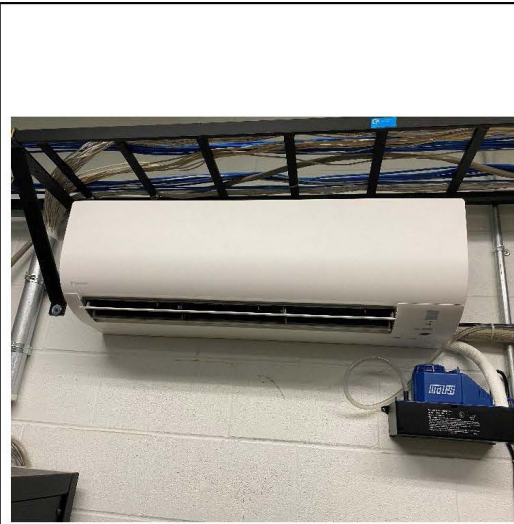


Photo # 17: AC split unit with condensate pump.



Photo # 18: Existing air handling unit.



Photo # 19: Gas fired heat pumps- installed in 2017.



Photo # 20: Typical roof mounted exhaust fans.

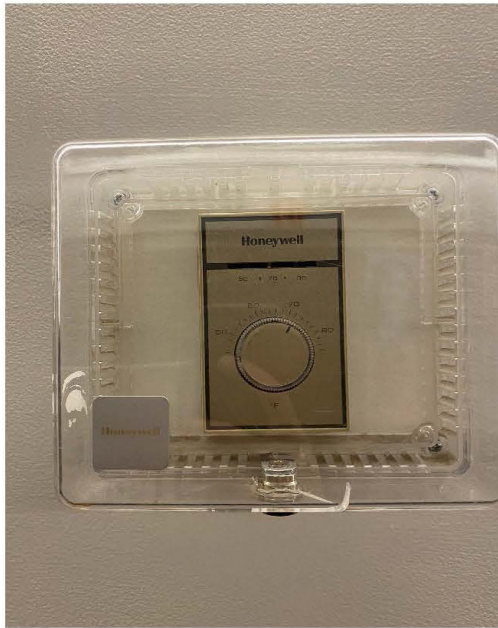


Photo # 21: Honeywell thermostat.



Photo # 22: Kitchen exhaust fan

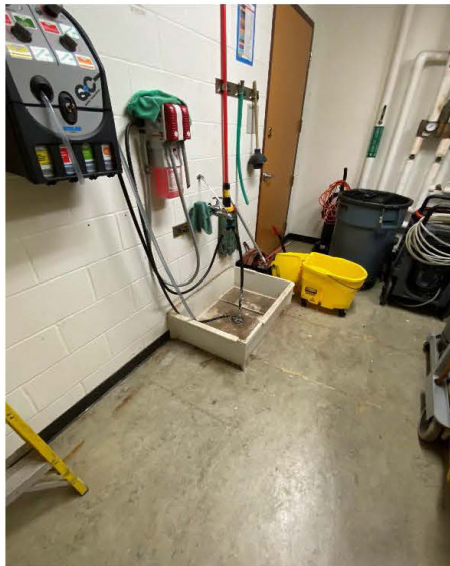


Photo # 23: Existing mop sink.



Photo # 24: Roof drain.

5. Emergency and Optional Standby Power – Emergency and Stand-by power to the building is provided by a 400kW/500kVA, 480/277V, 3-phase, 4-wire diesel-fired standby generator with sub-base fuel tank, manufactured by Caterpillar. A 600A generator mounted circuit breaker is fed from a 600A MCB, 480/277V Emergency Distribution Panel “EDP”. Panel “EDP” contains a 150A circuit breaker and a 500A circuit breaker, which feed the Life Safety and Optional Standby transfer switches, respectively. Life Safety transfer switch “ATS-LS” is wired to a 150A MCB, 480/277V Life Safety distribution panel, which feeds branch panels throughout the building for emergency lighting. The Optional Standby transfer switch, marked “600AMP ATS”, is wired to a 500A MCB, 480/277V 2-section distribution panel “ESB-1”. “ESB-1 (SECT. 1)” feeds “CP” branch panels, AHU’s, and various other pieces of mechanical equipment. “ESB-1 (SECT. 2) feeds RTU’s, well pumps, kitchen panel “KP-1” and transformer for panel “EOP”. “EOP” is a 100A, 208/120V panel that feeds various 120V and 208V mechanical equipment loads.

6. Photovoltaic System – The PV system is of the grid-connected type and does not include battery/back-up storage or secondary electrical generation devices. The system utilizes solar arrays, installed on the various roof structures and produces AC power at 480V into local services via inverters mounted on the roof. The system disconnect and meters and are located at the ground level exterior, close to the utility meter. This system appears to be functioning properly with no issues reported.

7. Interior lighting throughout the facility is a mix of LED and fluorescent technologies. Corridors are lit with either 2x2 lay-in fixtures with parabolic diffusers, or perimeter mounted linear fluorescents retrofitted with LED lamps. LED downlights are used to light vestibules. All areas are controlled by key switches and ceiling occupancy sensors. Office lighting consists primarily of 2’x2’ fluorescent direct/indirect fixtures with wall switches and occupancy sensors for control. Most classrooms use fluorescent direct/indirect pendant mounted light fixtures, controlled with wall switches and ceiling occupancy sensors. No daylighting controls were observed. Suggest replacing the remaining fluorescent troffers with new LED direct/indirect lay-in fixtures and the fluorescent pendants in classrooms with direct/indirect LED pendants for improved light quality. Low voltage wall dimmer switches along with ceiling mounted occupancy/vacancy sensors and daylighting control is recommended in all classrooms and offices to improve efficiency and meet current energy code standards.



Photo # 25: - Utility Service Pole #1351



Photo # 26: - Utility Service Pole Primary and Telecommunications with Utility Transformer



Photo # 27: - Utility Pad Mounted Transformer

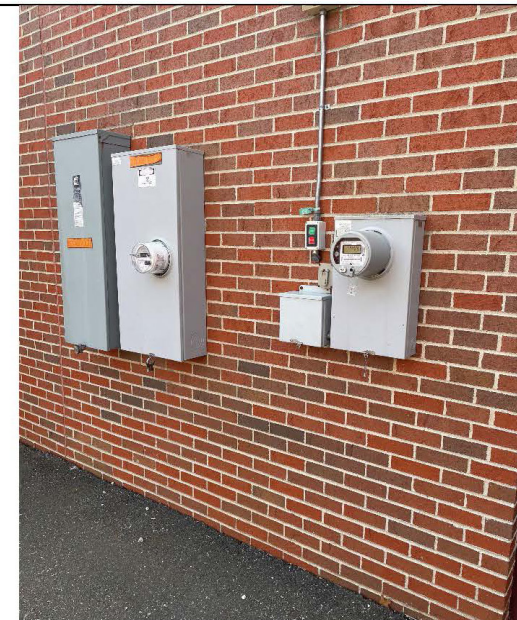


Photo # 28: - Utility Meter alongside Fire Pump Meter and Disconnect



Photo # 29: - Service Entrance Switchboard in Main Electric Room



Photo # 30: - Typical "CP" for Mechanical Equipment

8. Lighting fixtures in the gymnasium are high-bay type with LED lamps controlled by key-operated toggle switches. Light levels appeared to meet the requirements of the space. None of the gymnasium light fixtures are equipped with wire guards and some have been damaged as a result. This is an ongoing safety issue and needs to be resolved.

9. General lighting systems and control in the auditorium appear to meet the requirements of the space. The theatrical lighting dimming system is by Sensor. Theatrical lighting was not tested.

10. Pole and building mounted fixtures, controlled by timeclock and photocells light the walkways, exits and parking areas around the building. The fixtures are new LED replacements of older metal halide, high-pressure sodium or compact fluorescent technologies. Exterior/site lighting throughout the grounds appeared in good working condition.

11. Exit signs are LED and wired to the emergency system for constant illumination. Exit signage in all areas of the building appears in compliance with current codes. All signage appears to be in good condition.



Photo # 31: - Typical Electrical Closet Panels and Distribution Transformer

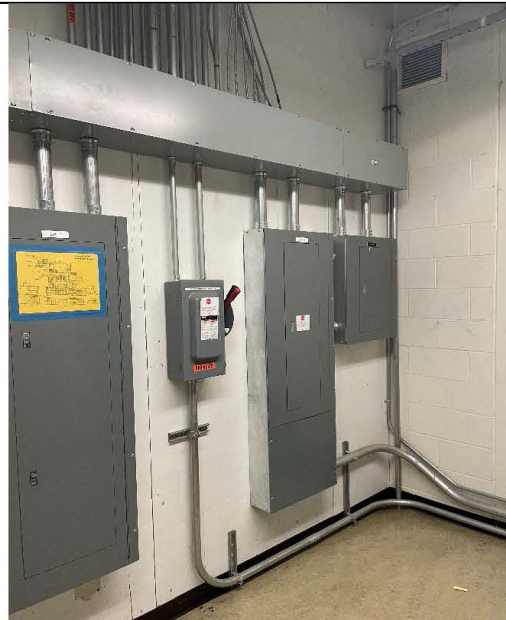


Photo # 32: - Typical Branch Panelboards – Square D (2005)

12. Fire Alarm System – The building is equipped with an Edwards EST3 addressable fire alarm system control panel with voice evacuation. The fire alarm control panel is located in the maintenance work room and contains a microphone handset to allow annunciation over the building’s speaker/horn-strobe devices. Remote annunciator panels with voice evac were observed in the main entrance vestibule and administration offices. There are also a voice evacuation panels with microphones in the gymnasium and auditorium. Fire alarm speaker/strobe coverage throughout the building appears sufficient. Locations of manual pull stations are compliant. All fire alarm devices appeared to be mounted at the correct ADA height. Monitor and control modules for duct smoke detectors were not observed.



Photo # 33: - Emergency Distribution Panel “EDP”



Photo # 34: - Automatic Transfer Switch – 150A “ATS-LS” (Life Safety)

13. The building has a sprinkler system. Smoke detectors were observed in storage areas and electrical rooms, heat detectors in mechanical rooms, tamper and flow alarm switches on standpipes. All system devices appear operational and in compliance.



Photo # 35: - Automatic Transfer Switch – 600A (Optional Standby)



Photo # 36: - Standby ATS with Distribution Panel “ESB-1” and Transformer for Panel “EOP”

14. Fire Pump – A 60HP fire pump with ATS and controller is located in the sprinkler service room. Normal side of the ATS is connected to the utility transformer secondary through a 500A fused disconnect switch. Emergency power comes from the generator via a 200A circuit breaker. The meter for this system is located on the exterior, alongside the building utility meter.



Photo # 37: - 400kW/500kVA Diesel Powered Generator with Sub-Base Fuel Tank



Photo # 38: - Solar Panels on Roof



Photo # 39: - Solar Panels on Roof



Photo # 40: - Typical Photovoltaic System Inverters on Roof

E. TECHNOLOGY SYSTEMS NARRATIVE:

1. Telecommunications services, including fiber, originate at CL&P pole #1351, located along the circular drive in front of the building. Cabling runs underground from this pole and enters the building in the main electric room, where the main telecommunications backboard is located. From this location, service cabling runs to systems racks in the Main Distribution Frame (MDF). This system serves as the main telecommunications hub for the entire school district.

2. The data communications system consists of a fiber backbone and a combination of wired outlets and wireless access points located throughout the facility. Typical classrooms contain a hardwired data drop approximate to the teacher's desk and convenience drops that vary in quantity depending on room type. Wireless Access Point devices are distributed throughout the facility – one per classroom or office suite and throughout corridors and common areas. All equipment and cabling observed appeared in good condition.

3. General telephone utilization throughout the building is VoIP provided by Valcom. This is tied in to the building paging/public address system with ceiling and wall mounted speakers located throughout the facility. Combination analogue clock/paging speakers are installed in classrooms. All systems appeared operational with no reported issues.

4. TV - The building appears to contain elements of TV infrastructure at the MDF rack. These could not be confirmed as Video IPTV streaming provisions for the building.

5. Access Control and Surveillance - The building uses an access control system consisting of card readers located at the main points of entry. Headend equipment is by KerriSystems. Surveillance cameras are located at various points around the exterior and interior of the building. The video system is networked with a dedicated HD display located in the Administration area. All systems appear to be operating properly, with no reported issues. No intrusion detection was observed.

F. MEP SYSTEMS CONCLUSION:

Plumbing systems appear to be in fair condition. Equipment such as the booster pumps and water heaters and nearing the end of their useful life and should be replaced in the near future. A majority of the distribution piping and sanitary piping is original to the building and should be replaced if a major renovation takes place.

In a building this age, we have seen many underground cast iron sanitary/storm pipes start to corrode and fail. If a renovation is contemplated, we would recommend replacement of the underground piping systems.

The fire protection system appears to be in fair condition given the age of the system. Overtime, piping can start to corrode due to water chemistry and air being trapped in the system if it is not properly pitched to drains, etc. It would be recommended that if the building was renovated, the entire fire protection service assembly (including the main service into the building) be replaced with new.

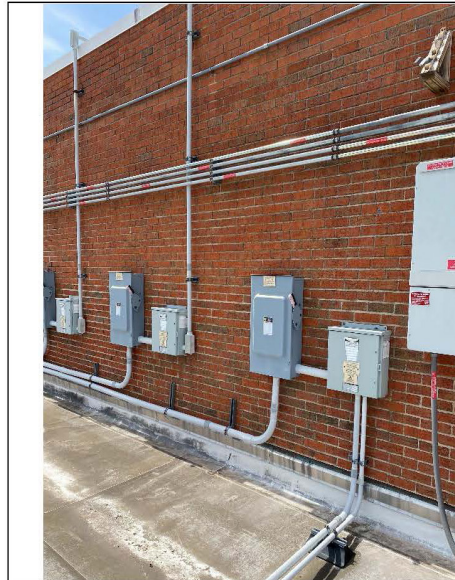


Photo # 41: - Photovoltaic System Disconnects on Roof

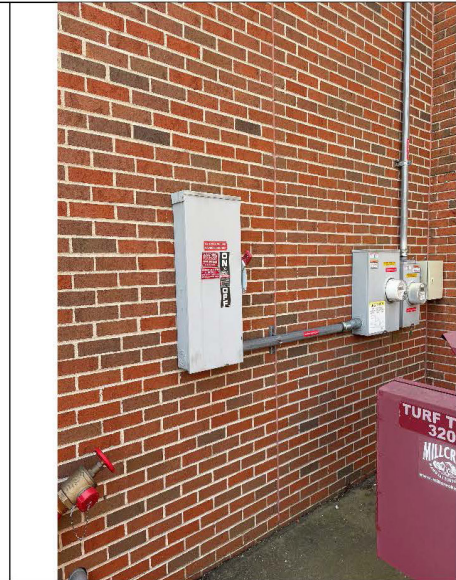


Photo # 42: - Photovoltaic System Main Disconnect and Meters



Photo # 43: - Typical Interior Vestibule Lighting

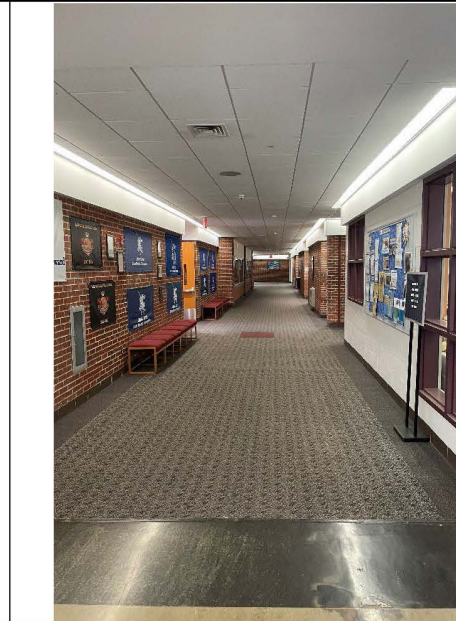


Photo # 44: - Typical Corridor Lighting

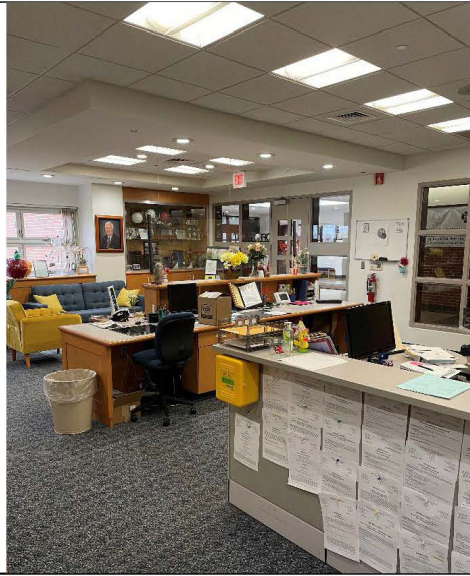


Photo # 45: - Administration Office Lighting



Photo # 46: - Typical Classroom Lighting

The boiler plant, chiller plant air handling units and unit ventilators, while all still operating as designed, these units are past their life expectancy (20-25 years) and should be replaced in the near future before a system issue causes damage or makes the building inoperable. New dedicated outdoor air units could be provided for ventilation air throughout the space while chilled and hot water could serve terminal units in classrooms for better comfort control. Any new equipment upgraded should be added to the existing building management system for monitoring of equipment.

The Main Electric Service Switchboard and distribution system were installed as part of additions and renovations that were made 2005. This equipment is in excellent condition with no reported issues and should remain in service for another 15-20 years. Branch panelboards and feeders appeared in good condition with no issues reported.

Some lighting systems in the corridors have been retrofitted with newer technology, more energy efficient LED lamps. Emergency lighting and exit signage for egress appeared to be operating properly. It is suggested that lights in the classrooms be replaced with new LED equipped fixtures and low voltage controls, for improved light quality and higher efficiency. Any remaining fluorescent fixtures in the corridors should be either retrofitted with new LED lamps, or replaced entirely with new LED designed fixtures and drivers.



Photo # 47: - Gymnasium High Bay Lights



Photo # 48 - Auditorium

The fire alarm system and ancillary devices are part of more recent improvements. All this equipment is new and in excellent operating condition. Modifications and programming enhancements can be made to this system as required, but no immediate improvements are necessary.

The data network infrastructure was upgraded recently. The VoIP phone system offers the highest level of technological advancement to date. These systems are in good condition and do not require immediate improvement, but we were informed the VoIP system will be upgraded in the near future. The wireless access point distribution appears to be adequate based on conventional industry standard spacing. No improvements are required at present.

The existing access control system is recent with no major issues reported. It is recommended that a review of desired access controlled doors and end-user operations be conducted. A full assessment by a qualified technician is recommended to verify that all devices are connected and tested for proper operation.

The existing video surveillance system is in good working condition. As an improvement, it is recommended that additional high definition cameras be added inside the school. As higher resolution cameras become available, an assessment of existing network video recorder capacity should be conducted to determine future expansion capabilities.

The paging system and speakers currently function with no issues. No improvements are required at present.

No existing panic button or silent alarm system was observed in the building. If none is present, it is recommended that the installation and implementation of such a system be considered.

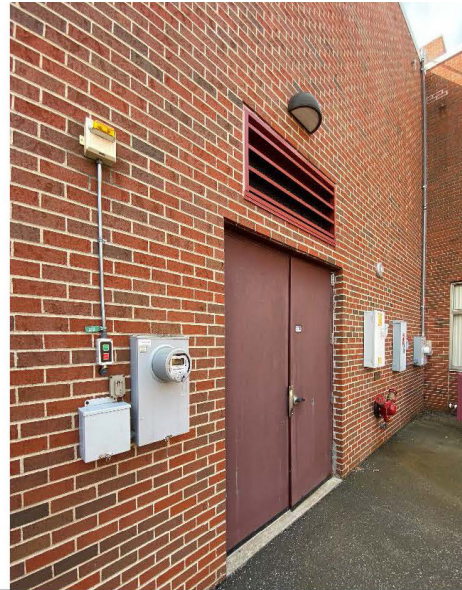


Photo # 49: - Typical Exterior Egress Light Fixture

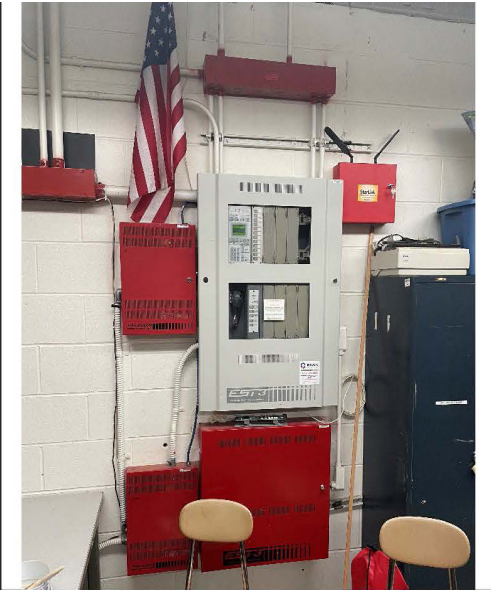


Photo # 50: - Fire Alarm System Control Panel



Photo # 51: - Fire Alarm Remote Annunciator Panel in Main Entrance Vestibule



Photo # 52: - Fire Alarm Voice Evac Panel in Auditorium



Photo # 57: - Audio System Rack



Photo # 58: - Access Control System Headend Equipment

Summation:

The building overall is in good condition. The condition of the finishes and overall quality of the building reflects the attention and care that staff expend on the tasks of maintaining a proper educational environment.

The site has some areas of concern relative to physical condition of the asphalt curbing. ADA compliance is a concern in regards to playfields. The playgrounds are in need of some attention as well.

The building exterior is showing signs of deterioration and aging of several components. Most notable of these are the aging sealant at building joints and the amount of effluorescence and brick deterioration exhibit in many locations.

The roofs are of uniform age and type. The section to the north of the auditorium raises some concern as it appears to be allowing water to ingress and leak into the hallway outside of the nurse's office.

Some doors need to be painted, and the missing trim at the two southern vestibules should be addressed.

The building interior also shows minimal signs of use and is in overall good condition. There are no areas of particular concern within the building. Continued attention to rectifying problems as they arrive and maintaining a preventive maintenance program will provide positive return on investments.

Finishes throughout the interior are generally in good condition and the building provides a good learning environment.

Projected Capital Improvement Expenditures

Projections of expenditures for capital improvements are provided to serve as a guide to help the District plan for fiscal and logistical needs for the next 20 years. As such, there is not a detailed budget developed for any of the items listed.

The projected costs are based upon current market pricing from projects of similar scope and complexity. The costs include allowances for what are commonly referred to as 'Owner's soft costs' such as professional designer fees, construction management, hazardous materials testing, etc.

It is recommended that best-practices in preparing the CIP budget would be to provide funding for, and undertake investigations and design in advance of appropriations for the actual construction; IE appropriate monies for design in FY2024 for work that would be funded and undertaken in FY2025.

This approach allows sufficient time for investigation of existing conditions and proper design, documentation, and budget estimating so that the funding request for the construction is based upon completed documents.

Finally, the costs for near-term (2025), mid-term (2030), long-term (2035), and future (2040) are inclusive of cost escalation factors. This is done to provide as realistic a projection as might be possible for work that might be undertaken years in the future.

The demarcation of particular fiscal years is intended not as a hard target for the work described, but as a milestone date by which the planning and funding discussions should be fully addressed. The immediate (2023) expenditures projected for the Essex Elementary School are to address safety concerns on the playgrounds and ADA compliance matters

For FY 2025 it is recommended that some of the plumbing and electrical issues, as well as the lack of an intrusion system and stand-by generator be addressed.

The following pages show the projected needs and costs for FYs 2030, 2035, and 2040.

The final page of this section has a bar chart showing total projected, escalated costs for each milestone Fiscal Year.

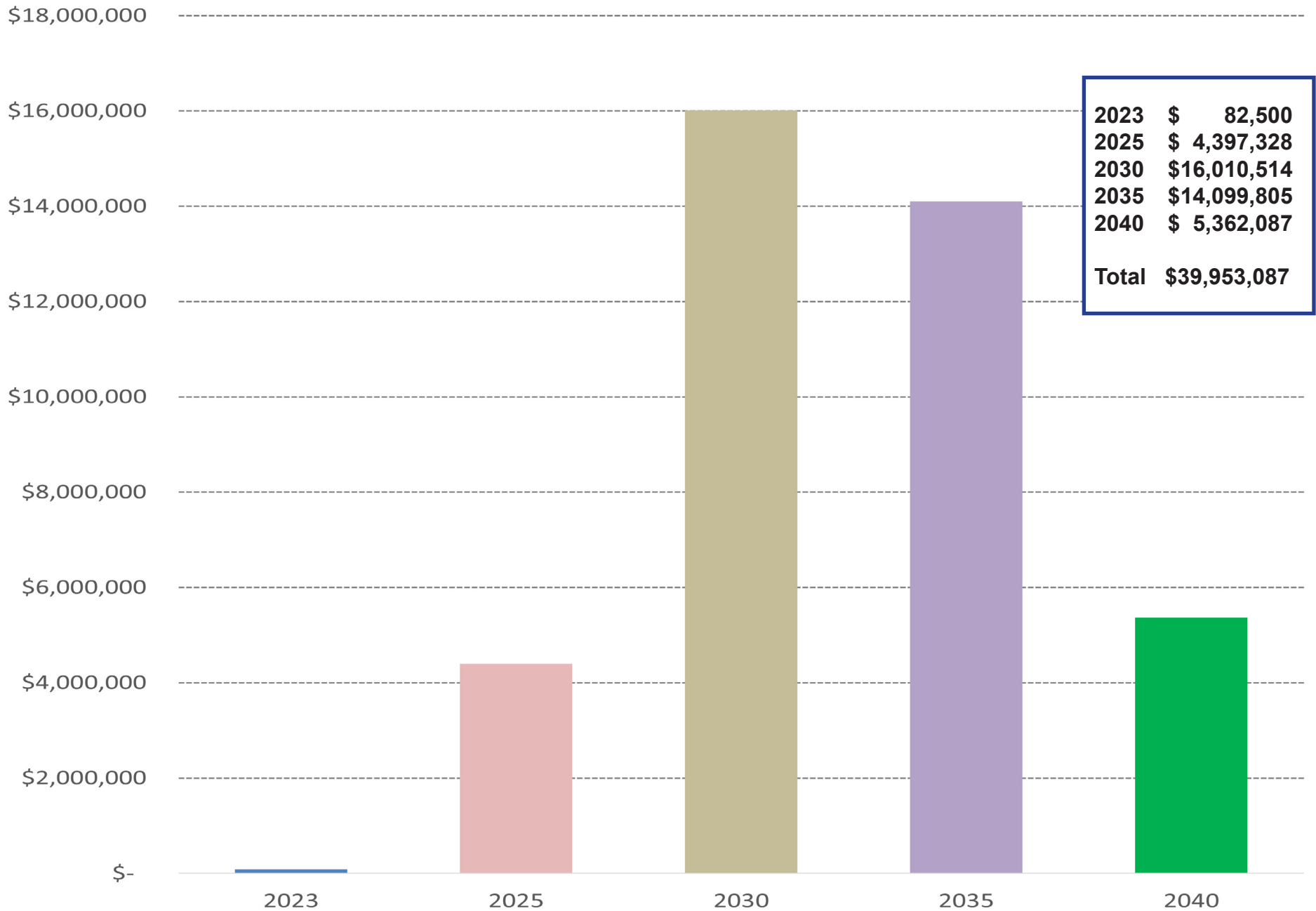
Capital Needs Survey Form									
John Winthrop Middle School							Site	66.05	Acres
October 20, 2022							Building:	129,600	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2023									
Site - Access and ADA compliance	1	1	2005	2023	1	allow	\$ 75,000.00	\$ 75,000	
2025									
Roofing - investigation and design	1	2	2005	2025	129600	sq.ft.	\$ 0.50	\$ 64,800	
Roofing - replacement	1	2	2005	2025	129600	sq.ft.	\$ 20.00	\$ 2,592,000	
Flashing - replacement	1	2	2005	2025	129600	sq.ft.	\$ 8.00	\$ 1,036,800	
Water Infiltration Conditions - replacement	1	3	2005	2025	129600	sq.ft.	\$ 0.50	\$ 64,800	

Capital Needs Survey Form									
John Winthrop Middle School							Site	66.05	Acres
October 20, 2022							Building:	129,600	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2030									
Site - Lighting									
Building Mounted Fixtures	1	3	2005	2030	20	each	\$ 3,500	\$ 70,000	
Pole Mounted Fixtures	1	3	2005	2030	12	each	\$ 3,500	\$ 42,000	
Site - Fuel Tanks									
Site - Sidewalks	1	3	2005	2030	1,200	sq.ft	\$ 15	\$ 18,000	
Masonry Walls - Exterior	1	2	1970	2030	120,000	sq.ft	\$ 6	\$ 720,000	
Pipe and Tube Railings	1	3	2005	2030	350	ln.ft	\$ 25	\$ 8,750	
Exterior Canopies	2	3	2005	2030	125	sq.ft.	\$ 300.00	\$ 37,500	
Stairs, and Stair Railings	1	3	2005	2030	350	ln.ft	\$ 25	\$ 8,750	
Windows	1	2	1970	2030	15000	sq.ft.	\$ 75.00	\$ 1,125,000	
Visual Display Surfaces - tack boards	3	3	2005	2030	75	each	\$ 400.00	\$ 30,000	
Visual Display Surfaces - white boards	3	3	2005	2030	75	each	\$ 400.00	\$ 30,000	
Toilet Compartments / Accessories	2	3	2005	2030	6	rooms	\$ 35,000	\$ 210,000	
Blinds / Shades	3	3	2005	2030	90	each	\$ 2,000	\$ 180,000	
Fire Protection Water Main	1	3	1970	2030	150	l.f.	\$ 100	\$ 15,000	
FP Backflow Device	1	3	1970	2030	1	each	\$ 25,000	\$ 25,000	
FP Water Distribution System	1	3	1970	2030	129,600	sq.ft.	\$ 12	\$ 1,555,200	
Domestic Water Main	1	2	1970	2030	1	each	\$ 30,000	\$ 30,000	
Domestic Water Distribution System	1	2	1970	2030	129,600	sq.ft.	\$ 11	\$ 1,425,600	
Plumbing Drainage System	1	2	1970	2030	129,600	sq.ft.	\$ 7	\$ 907,200	
Plumbing Fixtures / Equipment	1	2	1970	2030	129600	each	\$ 12	\$ 1,555,200	
Water Heater	1	2	1970	2030	8	each	\$ 20,000	\$ 160,000	
Oil fired furnace	1	2	1970	2030	2	each	\$ 375,000	\$ 750,000	
Exhaust Systems	3	2	1970	2030	6	each	\$ 35,000	\$ 210,000	
Control Systems	3	2	1970	2030	129,600	sq. ft.	\$ 8	\$ 1,036,800	
Heating/ Ventilation	1	2	1970	2030	129,600	sq. ft.	\$ 27	\$ 3,499,200	

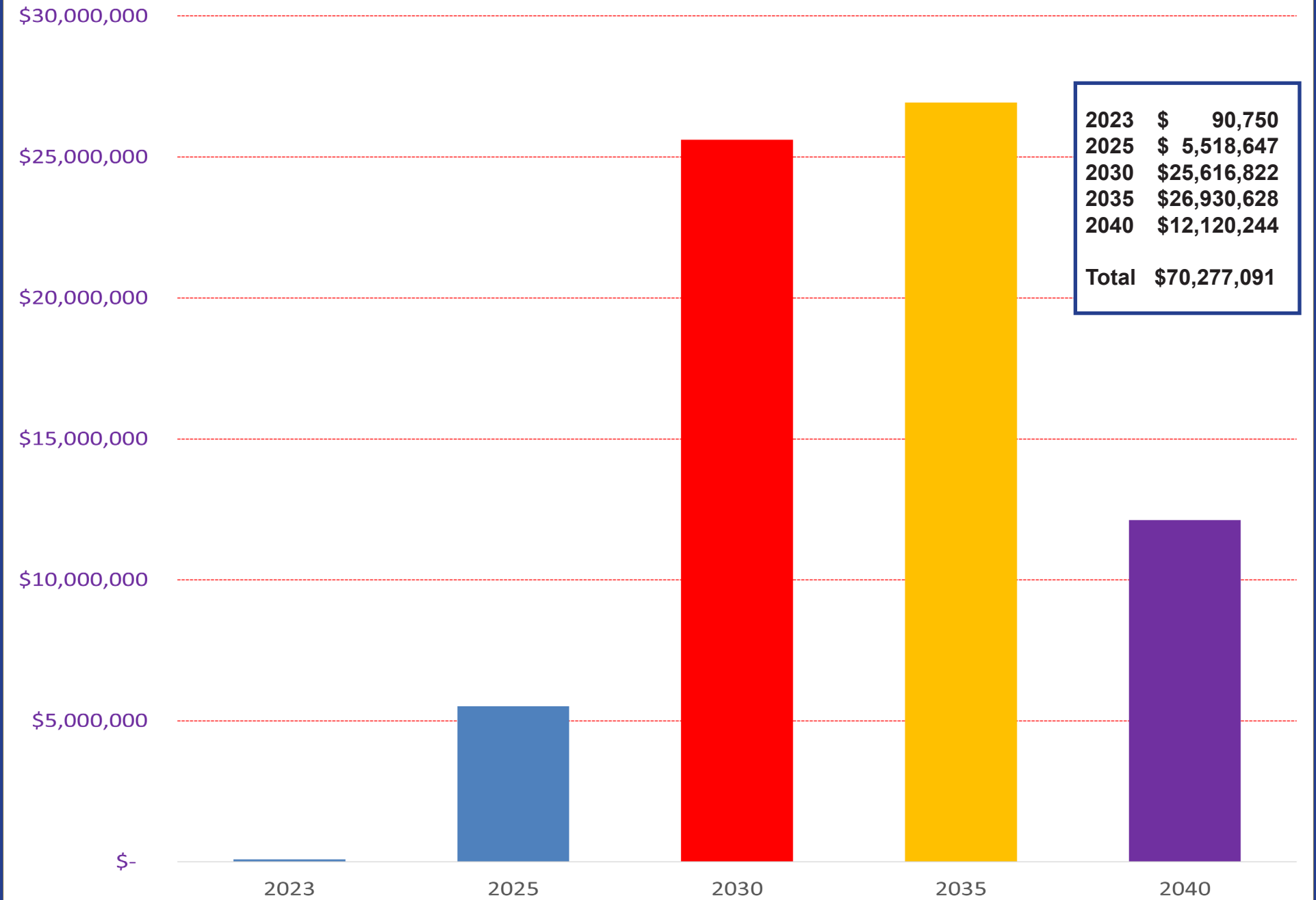
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John Winthrop Middle School						Site	66.05	Acres	
October 20, 2022						Building:	129,600	Square Feet	
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2035									
Site - Electrical	1	4	2005	2035	1	allow	\$ 100,000	\$ 100,000	
Site - Paving	1	3	2005	2035	54,000	sq.ft	\$ 6.00	\$ 324,000	
Site - Fencing	2	4	2005	2035	1000	ln.ft.	\$ 25.00	\$ 25,000	
Site - sub-surface drainage	1	3	2005	2035	1000	ln.ft.	\$ 35.00	\$ 35,000	
Exterior Platforms, Stair, and Areaways	1	3	1970	2035	1500	sq. ft.	\$ 20.00	\$ 30,000	
Concrete Floor	1	3	1970	2035	75000	sq.ft	\$ 3.00	\$ 225,000	
Masonry Walls - Interior	1	2	1970	2035	80000	sq.ft	\$ 3.00	\$ 240,000	
Finish Woodwork	2	3	2005	2035	2500	sq.ft	\$ 45.00	\$ 112,500	
Doors - Exterior	1	3	2005	2035	44	each	\$ 2,000.00	\$ 88,000	
Doors - Interior	1	3	2005	2035	135	each	\$ 2,000.00	\$ 270,000	
Doors - Finish Hardware	1	3	2005	2035	179	each	\$ 2,000.00	\$ 358,000	
Carpet	2	3	2005	2035	1,100	sq.yd.	\$ 45.00	\$ 49,500	
VCT	2	4	2005	2035	117000	sq.ft.	\$ 7	\$ 819,000	
Ceramic tile	2	4	2005	2035	3,500	sq.ft.	\$45.00	\$ 157,500	
Other finishes	2	4	2005	2035	7000	sq.ft.	\$45.00	\$ 315,000	
Paint	2	3	2005	2035	800,000	sq.ft.	\$0.50	\$ 400,000	
Other finishes	2	3	2005	2035	2,500	sq.ft.	\$4.00	\$ 10,000	
Acoustical	2	3	2005	2035	119,000	sq.ft.	\$5.00	\$ 595,000	
GWB	2	3	2005	2035	10,600	sq.ft.	\$4.00	\$ 42,400	
Carpet	2	3	2005	2035	1,100	sq.yd.	\$45.00	\$ 49,500	
VCT	2	4	2005	2035	117,000	sq.ft.	\$7.00	\$ 819,000	
Ceramic tile	2	4	2005	2035	3,500	sq.ft.	\$45.00	\$ 157,500	
Other finishes	2	4	2005	2035	7,000	sq.ft.	\$45.00	\$ 315,000	
Paint	2	3	2005	2035	800,000	sq.ft.	\$0.50	\$ 400,000	
Other finishes	2	3	2005	2035	2,500	sq.ft.	\$4.00	\$ 10,000	
Acoustical	2	3	2005	2035	119,000	sq.ft.	\$5.00	\$ 595,000	
GWB	2	3	2005	2035	10600	sq.ft.	\$ 4	\$ 42,400	
Food Service Equipment	2	5	2005	2035	1	room	\$ 550,000	\$ 550,000	
Casework	2	3	2005	2035	22	room	\$ 15,000.00	\$ 330,000	
Casework - Science Labs	2	3	2005	2035	4	room	\$ 25,000.00	\$ 100,000	
Casework - Library	2	3	2005	2035	1	room	\$ 65,000	\$ 65,000	
Security Systems	1	3	2005	2035	129,600	sq.ft.	\$5.00	\$ 648,000	
Fire Alarm Systems	1	3	2005	2035	129,600	sq.ft.	\$1.00	\$ 129,600	
Sprinkler Systems	1	3	2005	2035	129,600	sq.ft.	\$ 15.00	\$ 1,944,000	
Lightning Protection	1	3	2005	2035	129600	sq.ft.	\$ 5.00	\$ 648,000	
Clock Systems	1	3	2005	2035	129,600	sq.ft.	\$ 8.00	\$ 1,036,800	
Elevators	1	3	1970	2035	1	each	\$225,000.00	\$ 225,000	

Capital Needs Survey Form										
John Winthrop Middle School								Site	66.05	Acres
October 20, 2022								Building:	129,600	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS	
2040										
Concrete Foundation Walls	1	4	1970	2040	75000	sq.ft	\$ 1	\$ 75,000		
Electrical Service	1	4	2005	2040	1	each	\$ 15,000	\$ 15,000		
Standby Generator / ATS System	1	3	2005	2040	1	Each	\$ 55,000	\$ 55,000		
Electrical Distribution	3	4	2005	2040	129,600	allow	\$4.50	\$ 583,200		
Lighting - General	2	3	2005	2040	129,600	sq.ft.	\$10.00	\$ 1,296,000		
Emergency Lighting	1	3	2005	2040	129600	sq.ft.	\$ 2	\$ 259,200		
Communication Systems	1	1	2005	2040	129600	sq.ft.	\$ 4	\$ 453,600		
Technology Systems	2	3	2005	2040	129600	sq.ft.	\$ 4	\$ 453,600		
Fire Alarm System	1	4	2005	2040	129600	sq.ft.	\$ 4	\$ 518,400		
Security System - Intrusion	1	2	2005	2040	129600	sq.ft.	\$ 3	\$ 388,800		
Electronic Access Control System	1	4	2005	2040	129600	sq.ft.	\$ 3	\$ 388,800		
Security System - Surveillance	1	4	2005	2040	129600	sq.ft.	\$ 3	\$ 388,800		

John Winthrop Middle School - Projected CIP Without Escalation



John Winthrop Middle School Projected CIP With Escalation



APPROPRIATENESS FOR USE

The John Winthrop Middle School comprises approximately 91,400 square feet of net area and 129,600 square feet gross, yielding a 1.24 gross to net ratio. The State of Connecticut Office of School Construction Grants & Review (OSCG&R) allocates a net to gross ratio of 1.11. The inefficiency of the Winthrop MS is attributable primarily to the single loaded corridors throughout the lower level.

Following the OSCG&R guidelines, this size building would accommodate around 895 students.

The facility provides spaces and learning opportunities that are atypical of current middle schools. These include the auditorium, science labs, and large project space on the lower level.

Most of the teaching spaces in the building approach or exceed the OSCG&R guidelines as to size or amenities. Spaces designed for contemporary approaches to the lesson plans for those students with individual educational plans or special education needs are lacking.

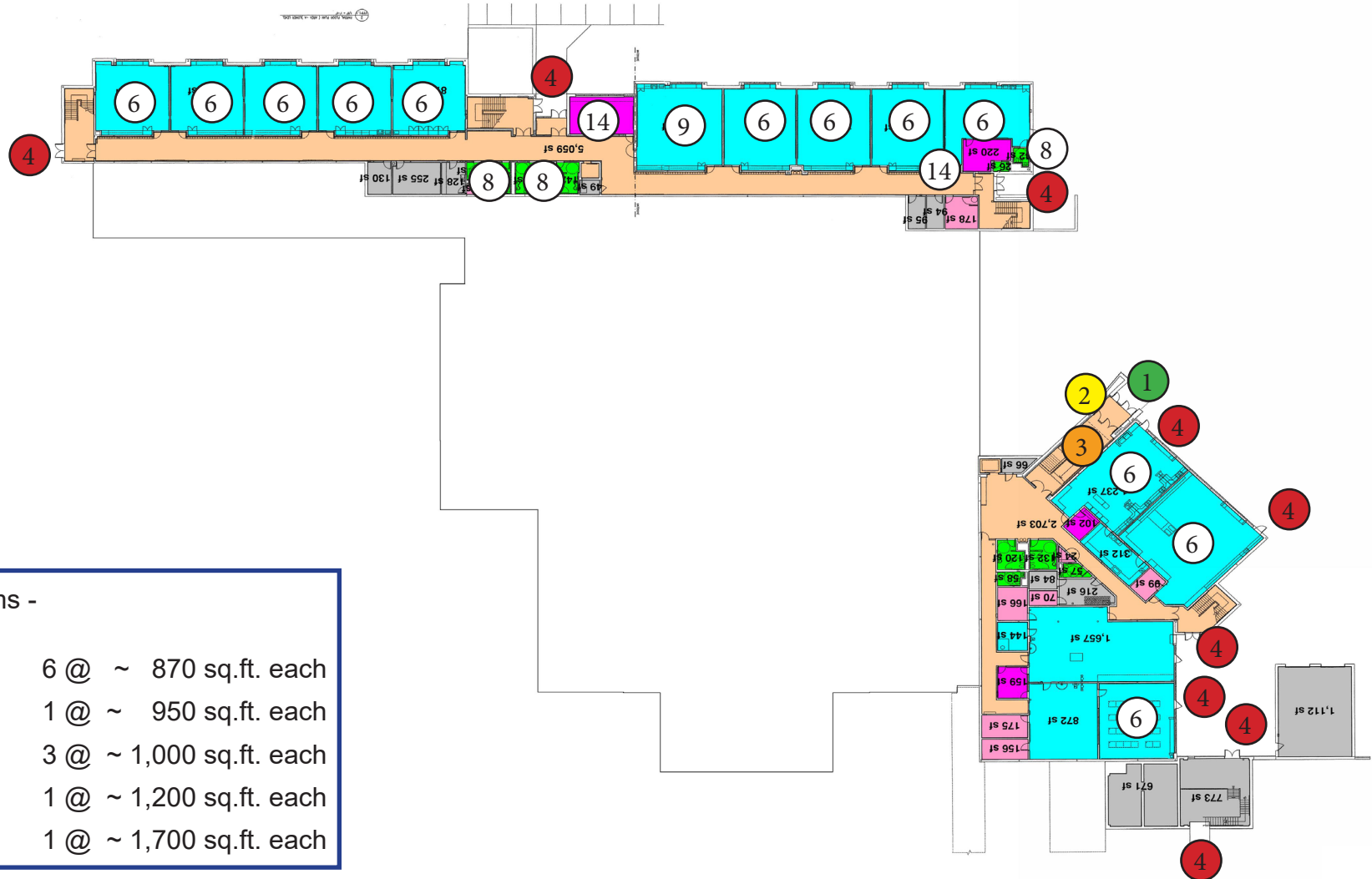
From an educational planning perspective, the building is a very good middle school plan and layout. It comprises educational spaces that most middle schools do not have at these sizes or levels of sophistication.



- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑥ Classrooms
- ⑧ Restrooms Teacher's
- ⑨ Art Classroom
- ⑭ Meeting Room / Office

John Winthrop Middle School

Lower Level



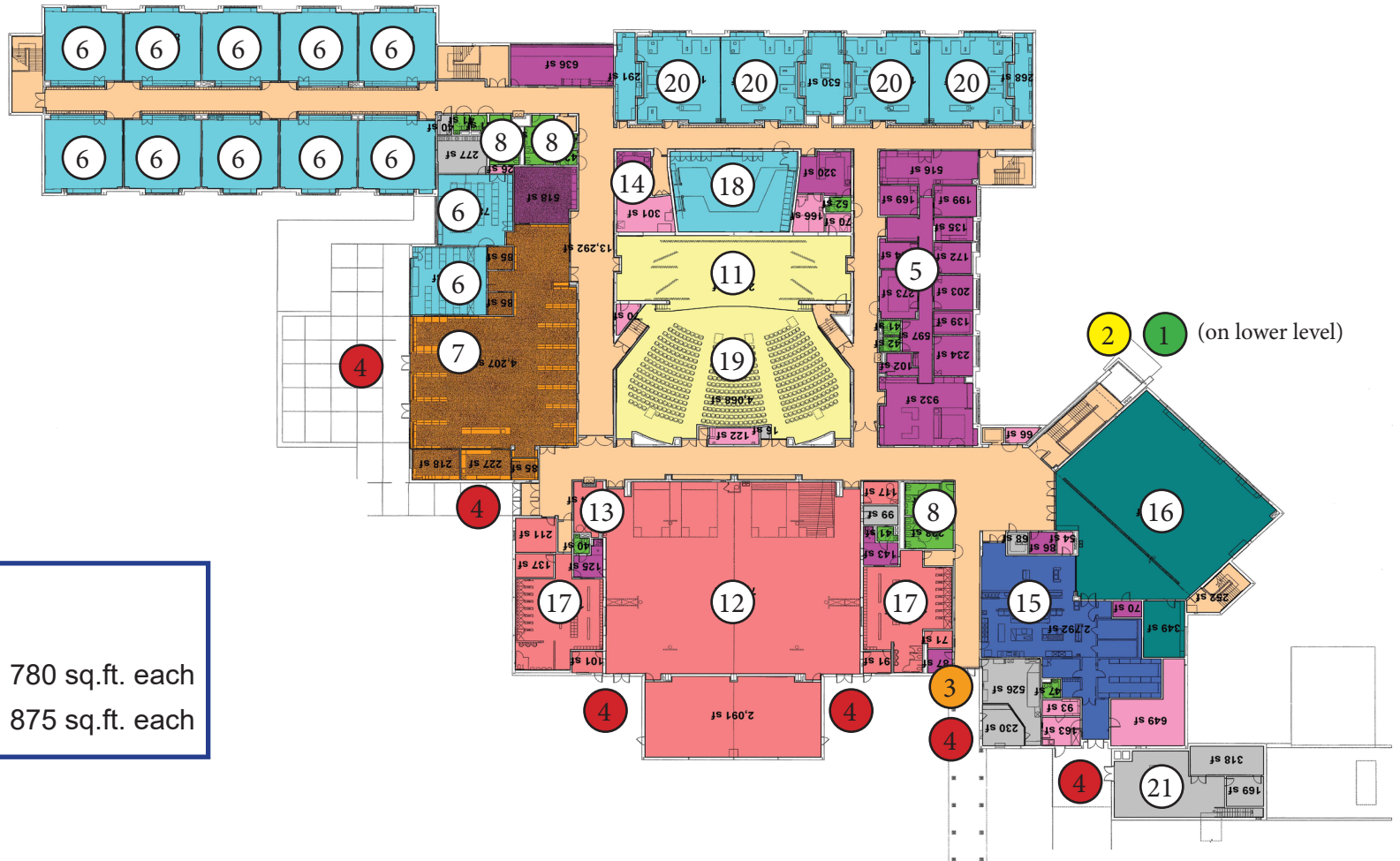
12 Classrooms -

- 6 @ ~ 870 sq.ft. each
- 1 @ ~ 950 sq.ft. each
- 3 @ ~ 1,000 sq.ft. each
- 1 @ ~ 1,200 sq.ft. each
- 1 @ ~ 1,700 sq.ft. each

- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑤ Main Office
- ⑥ Classrooms
- ⑦ Library
- ⑧ Restrooms
- ⑩ Teacher's Breakroom
- ⑪ Stage
- ⑫ Gym
- ⑬ Gym Storage
- ⑭ Meeting Room / Office
- ⑮ Kitchen
- ⑯ Cafeteria
- ⑰ Locker Rooms
- ⑱ Music Room
- ⑲ Auditorium
- ⑳ Science Lab
- ㉑ Mechanical
- ㉒ Kitchen
- ㉓ Cafeteria

John Winthrop Middle School

Upper Level



12 Classrooms -
 2 @ ~ 780 sq.ft. each
 10 @ ~ 875 sq.ft. each

Projected Enrollment

School District: RSD #4, CT

11/22/2021

Enrollment Projections by Grade*																				
Birth Year	Births*		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2016	98		2021-22	29	101	80	102	94	97	105	107	126	123	111	140	132	182	0	1500	1529
2017	82		2022-23	34	90	105	80	103	95	99	107	109	131	115	112	142	136	0	1424	1458
2018	82		2023-24	36	90	92	106	80	104	97	100	109	112	123	116	114	146	0	1389	1425
2019	80		2024-25	38	89	93	92	106	81	106	98	102	113	105	124	118	118	0	1345	1383
2020	90	(prov.)	2025-26	40	99	93	93	92	107	83	107	100	107	107	106	126	121	0	1341	1381
2021	86	(est.)	2026-27	42	95	103	94	95	93	109	84	109	104	101	108	108	130	0	1333	1375
2022	84	(est.)	2027-28	44	92	98	103	96	96	95	110	86	114	97	102	111	112	0	1312	1356
2023	84	(est.)	2028-29	46	93	95	98	104	97	97	96	112	90	107	98	104	114	0	1305	1351
2024	85	(est.)	2029-30	48	93	96	95	99	105	99	99	98	117	84	108	100	107	0	1300	1348
2025	86	(est.)	2030-31	50	95	96	96	96	100	107	101	101	102	110	85	111	103	0	1303	1353
2026	85	(est.)	2031-32	52	93	98	96	97	97	102	109	103	104	96	111	86	114	0	1306	1358

Note: Ungraded students (UNGR) often are high school students whose anticipated years of graduation are unknown, or students with special needs - UNGR not included in Grade Combinations for 7-12, 9-12, etc.

Based on an estimate of births

Based on children already born

Based on students already enrolled

*Birth data provided by Public Health Vital Records Departments in each state.

Projected Enrollment in Grade Combinations*									
Year	K-6	K-5	PK-6	K-8	PK-8	6-8	7-8	7-12	9-12
2021-22	686	579	715	935	964	356	249	814	565
2022-23	679	572	713	919	953	347	240	745	505
2023-24	669	569	705	890	926	321	221	720	499
2024-25	665	567	703	880	918	313	215	680	465
2025-26	674	567	714	881	921	314	207	667	460
2026-27	673	589	715	886	928	297	213	660	447
2027-28	690	580	734	890	934	310	200	622	422
2028-29	680	584	726	882	928	298	202	625	423
2029-30	686	587	734	901	949	314	215	614	399
2030-31	691	590	741	894	944	304	203	612	409
2031-32	692	583	744	899	951	316	207	614	407

Projected Percentage Changes			
Year	K-12	Diff.	%
2021-22	1500	0	0.0%
2022-23	1424	-76	-5.1%
2023-24	1389	-35	-2.5%
2024-25	1345	-44	-3.2%
2025-26	1341	-4	-0.3%
2026-27	1333	-8	-0.6%
2027-28	1312	-21	-1.6%
2028-29	1305	-7	-0.5%
2029-30	1300	-5	-0.4%
2030-31	1303	3	0.2%
2031-32	1306	3	0.2%
Change		-194	-12.9%

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, births, and similar factors.

Projected Enrollment in Grade Combinations*

Year	K-6	K-5	PK-6	K-8	PK-8	6-8	7-8	7-12	9-12
2021-22	686	579	715	935	964	356	219	814	565
2022-23	679	572	713	919	953	347	240	745	505
2023-24	669	569	705	890	926	321	221	720	499
2024-25	665	567	703	880	918	313	215	680	465
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2029-30	686	587	734	901	949	314	215	614	399
2030-31	691	590	741	894	944	304	203	612	409
2031-32	692	583	744	899	951	316	207	614	407

Maximum Reimbursable Gross Square Feet**36,240**

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	26,471	26,471	25
Special Education	0	0	0	
Administration	0	3,555	3,555	
Media Center	0	5,122	5,122	
Visual Arts	0	1,200	1,200	1
Music	0	1,995	1,995	2
Performing Arts / Auditorium	0	6,840	6,840	1
Life Skills/Tech/Bus Education	0	980	980	1
Physical Education	0	12,275	12,275	2
Student Dining	0	4,770	4,770	
Food Service	0	2,790	2,790	
Custodial	0	756	756	
Subtotal - Net Square Feet	0	66,754	66,754	32
Building Services	0	24,674	24,674	
Subtotal - Net SF including Building Service	0	91,428	91,428	
Construction Factor	0.11	0.11	0.42	
Total Gross SF Programmed - Funded	0	101,485	129,600	

Difference between existing building and OSCG&R Space Guidelines is 93,360 square feet

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	0	0.00	Grade 6	0	0.00
Kindergarten	0	0.00	Grade 7	109	5.01
Grade 1	0	0.00	Grade 8	131	6.03
Grade 2	0	0.00	Grade 9		0.00
Grade 3	0	0.00	Grade 10		0.00
Grade 4	0	0.00	Grade 11		0.00
Grade 5	0	0.00	Grade 12		0.00
Total Student Enrollment				240	11.04

ABOVE: Teaching space allocation matrix from Form SCG-2500, Chapter 5 of the Office of School Construction. This shows that for the highest projected enrollment over the next eight years (which for Winthrop MS is the current (2022 - 2023) school year) the State Construction Grant program would provide grant funding for construction of fifteen (12) classrooms utilizing a 25 student classroom loading.

PRECEDING PAGE: Space allocation matrix from Form SCG-2500 showing Maximum Reimbursable Gross Square Feet under OSCGR formula for a 240 student Grades 7 & 8 school is 36,240 square feet. The existing Winthrop Middle School comprises approximately 66,754 square feet of program space in a building of just over 129,600 square feet. The existing building exceeds the OSCG&R funding guideline by 17 classroom spaces and over 93,360 square feet of building.

Consideration for Future Uses

The Winthrop Middle School vastly exceeds the space guidelines for funding through an OSCG&R grant at the highest enrolment projected over the next eight years.

The existing spaces within the school are at or above the space standards the OSCG&R guidelines allocate and there are no spaces shown within the guidelines that don't already exist within the school.

The building could support an enrolment of perhaps 650 or more students within the existing floor plan, the OSCG&R guidelines state that it could accommodate 890.

The site is quite large and there are plenty of athletic and physical education opportunities with the established fields on site. The gymnasium, auditorium, library, and dining areas are all large enough to easily accommodate additional students.

There is no practical means of decreasing the size of the building except to perhaps cease using the lower level classrooms. Taking this route would burden the District with finding a renter suitable to occupy a portion of a public school while school is in session.

A different approach would be to look to increase the enrolment of the school. All three elementary schools are oversized as well, so it would appear that there is little room to move. However, the enrolment at Chester and Deep River Elementary Schools are small and projected to decrease.

A plan that moves Grade 6 from all three Elementary Schools to the Middle School could have numerous benefits:

- Elementary School cohorts decrease in size, to a projected District-wide total of 590 students in the 2030-31 school year.
- This complete cohort could be accommodated in the Essex Elementary School with some modifications.
- Alternately, the Towns and District could collectively run two elementary schools of 300 student each.
- This would create a Grade 6 - 8 cohort projected to be 347 students in the upcoming school year.
- Aligning Grade 6 with Grades 7 & 8 provides increased learning opportunities for the Grade 6 students, with access to science labs, the auditorium, and other spaces and amenities of the Winthrop Middle School.

A different approach to increasing cohort size is to combine the middle and high schools to create a middle / high school within one building. In this case the suggested move would be to move the middle school cohort to the Valley Regional High School. This would have the effect of increasing the enrolment size at Valley Regional, which would support increased curricular offerings, a wider range of extra-curricular activities, and make sports teams and club activities available to middle school students.

