MEMORANDUM

To:	Kathleen Piatelli	Date:	3/13/2014
From:	Daniel Ruiz	Project No.:	14010
Project:	Middleborough High School		
Re:	Assistance for Future Facilities Assessment RFP		
Distribution:	(MF)		

At the request of the Middleborough School Department an SMMA assessment team of architects and engineers evaluated the condition of the Middleborough High School totaling 132,955 gross square feet. The District is interested in putting out a Request for Qualification (RFQ) to hire a firm to conduct a full and complete facilities assessment. SMMA was hired to provide a preliminary overview of the High School facility and to provide the District context information which would be helpful towards submitting an RFP to the public for a full-scope Facilities Assessment anticipated to be scheduled in the near future.

This memorandum outlines the results of three principal tasks: review of the existing conditions documents and reports, conducting a site visit to the building, and document findings of the review and visit. Site visits were conducted on February 21, 2014 and March 3, 2014 and included non-destructive, visual only evaluations of the High School. The site visit also included discussions about the facility with Middleborough maintenance personnel including the District's Director of Facilities and the Head Custodian for the High School. While no specific Facilities Assessment has been executed in many years, there are several documents which SMMA reviewed which helped to inform our efforts. These documents included; a "Report of the Visiting Committee" dated April 7-10, 2013 developed by the New England Association of Schools & Colleges (NEASC) as well as a follow up letter dated December 19, 2013. These documents outline the reasons why NEASC continues to place the school on a warning status. Other documents included the "Middleborough High School Pedestrian Bridge Report of Structural Feasibility Study" dated April 1, 2013 as well as a June 2007 "Long Range School Facilities Planning" report developed by the New England School Development Council.

The results of our review, discussions and observations are contained in this memorandum.

Observation Team

SMMA provided the following staff to conduct the visual inspections:

- Architect
- Civil/Site engineer
- Structural engineer
- Mechanical engineer (for Heating, ventilating, and air-conditioning (HVAC) plumbing and fire protection
- Electrical engineer

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Building Systems Evaluated

The SMMA team evaluated the following building systems and attributes:

- Program Evaluation (as was reported to us)
- Site Attributes
- Structural
- Exterior Envelope
- Interior Finishes
- Plumbing System
- Heating & Ventilating Systems
- Electrical Systems
- Provisions for Accessibility

Overview

In general, this survey reveals that, while the District and its Facilities Maintenance staff have made great efforts to maintain the building, working to implement repairs quickly and adhering to regularly scheduled upkeep tasks, the building and its systems are well beyond their useful life. Despite best efforts we understand and observed that the District's ability to address the identified deficiencies of a building of this age and condition far exceed any reasonable and typical operational budgets.

Buildings are subject to extremes of climate and use and require constant investment in maintenance and repair to remain in good condition. Every building component has a life expectancy: flat membrane roofs can be expected to last for twenty to twenty five years before they need to be replaced while boilers generally have a life expectancy of forty to fifty years. When viewed as a system, most buildings have a life expectancy of forty to sixty years or, in other words, on average need complete replacement every fifty years. Middleborough High School's building systems and elements are beyond their useful life warranting a significant renovation or replacement of the building.

Building Data

Middleborough High School is a three story concrete frame structure which was constructed in 1971. The building is rectangular in plan without any wings or appendages. The building is organized around a central interior spine that contains the core common spaces including the auditorium, library and administrative areas on the main level (2nd floor) and the auditorium, gymnasium and cafeteria on the lower level (1st floor). On each side of this central spine are two parallel corridors which generally run east/west. Most of the classrooms are located off these two spines along the perimeter, though there are also a number of interior classrooms as well on the 1st and 3rd floors most notably the science laboratories on the 3rd floor.

There have been no additions or any notable renovations to the building since it was first constructed except a complete roof replacement in 2004 as well as replacement of seventy-five percent (75%) of the windows which was executed in 2003. Otherwise, all systems, mechanical, electrical, etc are original to the building.

Middleborough High School serves 793 students in grades 9-12 and lacks a sufficient number of appropriate classrooms for the enrolled population. The District has had to create additional classrooms out spaces not originally intended for classroom use and many classrooms do not meet current MSBA program standards. This includes the

science laboratories which lacks properly working gas and water service. Proper ventilation in these interior rooms are also a concern. Additionally, use of the Gymnasium is compromised by the lack of alternative physical education spaces. Presently, the weight training program shares a portion of the gymnasium and periodically the equipment must be temporarily relocated for public events and then later returned.

Accessibility throughout the building and grounds is limited. This is discussed in further detail below.

MAAB/ ADA Accessibility

The main entrance to the school is accessible, however, other entries are not on an accessible route and meet minimal accessibility standards. Some doors along the Means of Egress for the building open onto stepped pads which lack the necessary ramps. Other accessibility issues include:

- Elevator size does not meet current accessibility standards.
- Except for the recent renovation of two toilet rooms, all toilet facilities are original, and do not meet current accessibility standards.
- Interior, corridor–wide ramps exist throughout the school which has no proper guards.
- Auditorium is not accessible by a code compliant ramp.
- No accessible work stations or Fume Hoods in Science labs.
- Most door hardware and casework in the building do not meet current accessibility standards.
- Most classroom doors do not have adequate pull side clearance and are therefore non compliant with MAAB requirements.
- Most toilet rooms and plumbing fixtures are not compliant with MAAB regulations for fixture heights and other dimensional clearance requirements.

Site

Middleborough High School is a 132,955 square foot, 3-story concrete framed 1970s vintage building situated on 40 acre parcel off Route 28. To the north and east there are residential neighborhoods and a retail development to the west. To the south, just beyond an adjacent property is Interstate 495. The site features a surface parking lot to the east with approximately 230 parking spaces. To the west is another surface parking lot with an additional 150 space used primarily for student parking. Another dozen parking spaces, including two (2) handicap spaces are located in close proximity to the main building entry. The site also includes a circumferential road which provides access to almost the entire building for emergency services. There is only a single access drive into the site off of Route 28 which has been identified as a concern of the local police and fire department.

South of the building are play fields which includes one full sized football/ soccer field bounded by a running track which is in poor condition. Adjacent are four overlapping baseball/ softball fields and six tennis courts as well as whose surfaces are in poor condition.

Bituminous concrete in parking areas are in fair condition although there are some areas which have severe pavement cracking such as at the edge of the exit drive and walkway. There is also severe cracking at entrance plaza concrete. Additionally, there is water infiltration into building in the area of the main entrance plaza. The entrance bridge wall veneer has collapsed. Handicap ramp at the west end of the building does not have

handrails and is not to code. Parking areas and drives are not adequately lighted which causes a safety concern.

Stormwater collects along building access which is a hazard to pedestrians particularly through the winter months with freezing and thawing. There is poor drainage along south ring drive. Concrete curb at the east parking area is deteriorating.

Building Envelope

Walls are 42 years old and are masonry and pre-stressed concrete. Efflorescence (white staining) is present at the exterior brick walls in many locations, indicating moisture within the walls. Many areas have become porous and moisture penetrates them through to the interior. Grout and brick have deteriorated beyond simple repointing. Lichens and moss are growing in some areas where brick and grout do not dry out sufficiently. Infiltration through the walls has caused significant flooding in the kitchen area to the point that a downspout has been jury-rigged over the serving line to funnel the water into a corner sink so that no water is spilling on students or staff. The moisture has also penetrated the walls of the gymnasium allowing rain water to get under the flooring causing buckling and bubbling which creates a safety concern. Due to the porous conditions of the walls, classrooms on the third floor will often experience flooding. There is concern with the constant wetting and dampness of interior walls that there may be mold within the wall assemblies.

Of the 25% of the windows that have not been replaced many are severely rusted to the point where one can see through the rusted frame. Air and wind driven rain penetrate the building. The original windows are single pane steel frame that is not thermally broken and contributes significantly to energy losses and operating costs. Many of the newer insulated glazing units have been damaged, the seals are broken and windows permanently fogged. The concrete bridge structure at the entrance way has exposed re-bars with crumbling concrete on the top and bottom sides. Below the bridge the ground slopes down towards the building and this area is also a source of water leaking into the building. An engineering firm was hired to assess the integrity of the entry bridge structure and to estimate the cost of repair. A copy of the report is enclosed for your reference.

The roof was replaced in 2004. Prior to this there were serious leaks into the building which damaged ceiling tiles and may have resulted in areas with mold. While the Loading Dock has a raised platform it is connected back to the loading dock entry by a steep ramp which is impractical and limits its use.

Building Interior

All floors are concrete covered with VCT or carpet, the front entrance has a vinyl poured floor, stairwells and other door entrances have ceramic tiles. The playing surface of the gym floor is a vinyl product glued over the concrete floor. The perimeter of the gym floor has the same vinyl product glued over the existing gym floor. This has caused a buckling effect and has created a safety hazard. Blisters are over 1-inch high and present a significant tripping hazard. Two stairwells and landings have been covered with a Nora Rubber product, the stairs are encapsulated and the landings were abated. Concrete flooring in the locker rooms is spalling, and deteriorating and the resulting porosity is a health hazard.

The ceiling tiles are original and were the first form of suspended ceiling on the market. As a result the tiles are obsolete. We have begun to change out the frames and tiles with a more current suspension ceiling system. Many

of the remaining tiles are broken and pieces are falling on occupied areas. Some ceilings are painted concrete with acoustic diffusion product installed between bays.

Interior classrooms have no windows and poor air circulation (fresh air) thus a detriment to learning and health.

The elevator is not large enough to accommodate a stretcher and therefore unusable in emergency response situations.

Handrails and guards at all stair and protective railing locations do not meet code requirements and present a fall hazard.

Ramp to auditorium lower level seating does not meet accessibility requirements.

Water damage is evident in many ceiling areas of the building. Due to leaks which have stained the ceiling, the area above should be investigated to determine if there is mold contamination or growth.

Casework in administrative areas is in fair condition. Science lab stations are in fair condition. However, casework does not provide any accessible sinks or work stations in compliance with MAAB/ADA guidelines.

The auditorium has hard reflective acoustic finishes which have been well maintained, but are dated. The seating is original, but has been reupholstered. The stage is shallow in depth limiting the type of performances possible. Further, accessible seating is limited to informal seating at the front of the seating area.

Flooring – tiles are popping off

Structural Systems

The building consists of three levels which are framed with a one way concrete joist system supported on reinforced concrete beams and columns. The first floor level and auditorium were constructed with slab-on-grade concrete. Interior walls are composed of stack bond CMU walls. The overall condition of the structural elements in the building is good and sound; however, minor cracking exist in the CMU walls throughout the building. Most of these cracks observed do not affect the integrity of the structure and can be assumed to be caused by temperature changes or drying shrinkage. On the second floor, as step pattern of cracking may be evidence of differential bearing load or settlement.

The brick veneer on the exterior walls are quite porous, causing wind-blown rain to infiltrate the wall, leaving stains on both sides of the wall. Bricks are spalling and are chipped on the block wall veneer in the exterior. The exterior walls and windows were power-washed about two years ago. However, the wash aggravated the situation and caused even more water to penetrate because mortar between the blocks was washed off. On the third floor in particular, there is evidence of wind-blown water penetration due to porous brick veneer. This includes flaky paint, damp spot and even cracking in the CMU walls at the underside and near the edge of concrete beams. Mold growth in these areas and in the wall cavities are of particular concern.

While the one-way concrete joist system throughout the building appears to be in good condition, the undersides of the concrete joist systems, as well as the acoustic panels, in some classrooms on the third level has rusted stains caused by water leakage before the roofing was replaced about 10 years ago. The condition does not appear to be degrading any further.

One item of particular concern focuses on the Entrance Bridge. The bridge is constructed of concrete beams and slab, with cast-in bricks installed on the side and bearing on top of the concrete beam. Moisture has infiltrated on the underside of the bridge; there is rebar and stirrup corrosion. The District hired Steere Engineering who developed an assessment report dated April 1, 2013. Within that report the firm identified that the corrosion of the rebar in the concrete was caused by the high contamination of chloride remained after the application of ice melting salts. Severe disjoining and crumbling of bricks exist at both sides of the entrance way. We suspect that bricks were casted prior to the backfill of the soil on the high end of the slope. Water that seeps into the soil may penetrate into the bricks, causing them to swell and bend outward.

Mechanical Systems

The Building was built in 1971 and most of the HVAC equipment is original (42+ years old). The building's heat source consists of two Cleaver Brooks, gas fired, fire-tube hot water boilers built in 1970. The system includes five (5) individual HW zone pumps; one redundant pump piped to zones 1-3 and one redundant pump piped to zones 4 & 5. All seven pumps run even though the redundant pumps are isolated by manual valves.

The system suffers from various problems due to their age and use. In some cases on-going maintenance and repair is no longer possible due to a lack of replacement parts. In the Boiler Room the combustion air/ ventilation high opening damper is frozen in an approximately 20% open position and appears to be beyond repair. Likewise, the low combustion air damper is wide open and is also frozen in this position. The Low opening is ducted to approximately 24-inches above the floor which is a code violation as it is supposed to be within 12-inches of the floor.

The mechanical system controls are pneumatic and are only in fair condition. Tubing was blown down a few years ago and while the local thermostats do work in many rooms, there are several others which do not.

In the classrooms the primary room heating & ventilating is via original Herman Nelson Unit Ventilators (UVs) supplemented by base board finned radiation. These Unit ventilators are built into matching millwork. Fin radiation is behind millwork and air enters through slotted kick plates and exits through a slotted grille. Externally the UVs are in fair condition considering their age (42 years), however, the pneumatic controls are suspect. Some rooms are overly hot, while others always remain cold and the outside air dampers are no longer functioning. Some of the teacher control room temperature by adding/removing books used to cover (block) the Unit Ventilator discharge grille. Typically, there are two or more coil freeze-ups per winter. Additionally, several of the overhead UV's heating elements have failed and been removed or valved off. Fan motors tend to be loud, with bearings worn out and requiring replacement.

In the core areas of the building the library and some special purpose areas have old McQuay, rooftop H&V units. The Speech & theater workshop and Alternative Learning classroom are the old metals and wood shops and have 1971 vintage ceiling mounted H&V units much too large for the current applications. Most of these units are again old and in questionable condition. The Auditorium has a Rooftop air handling unit that provides heating cooling and ventilation. The unit is approximately 10 years old. Heating is via a hot water coil and cooling via a self contained DX coil/condenser. The return air is drawn under the stage which is in violation of modern fire codes. Further, at some point the wooden louver face to the stage has had an acoustical backing applied which would restrict air flow.

There are several floor return grilles at the rear of the stage that are completely clogged with debris.

The Kitchen exhaust hood is functional and used regularly however the make-up air H&V unit has evidently never worked, and the hoods draw an excessive negative pressure when in use. A pair of horizontal unit heaters provides all the necessary heat to the kitchen. The nursing office has been subdivided into multiple rooms, lobby, office, rest area, exam room, etc. However, the only room with ventilation is the lobby which has the sole UV. The wall fin extends into each exterior room.

The Home Economics classroom has two pairs of back to back residential stoves. Each stove has a residential hood with a local exhaust fan that positively pressurizes the duct. These hoods are not designed for an extensive run and likely do not have the exit velocity to carry grease all the way to the exterior.

Plumbing/ Fire Protection Systems

The Water Service is comprised of a 4-inch pipe which comes in from street and is later reduced to 3-inches downstream of the meter. The street pressure is reported to be 120psi. Gas Service enters the building in locked cage with a 2-inch high pressure line which later expands to approximately 6 inches downstream of the meter/PRV. The building has no sprinkler system.

The Domestic hot water service consists of two Lochinvar 645 MBH DHW boilers which are original to the building. Replacement parts are no longer available and maintenance staff has had to scavenge from one of the units to keep the second operational. There are two newer Rudd 120 gallon storage tanks. The B&G circulating pump was replaced about the same time as the storage tanks. Insulation on the piping taken off at the time of the tank replacement was never replaced. Scaling and copper-oxide stains around many of the sweated joints indicate small leaks.

Toilet rooms have original fixtures. There are no Low flow valves or faucets. One boys and one girls room near the Cafeteria have been made handicap accessible. All other toilet rooms in the building are not accessible.

Lab and Art room sinks no longer drain properly. In one art room the drain pipe was removed and replaced. The walls were so coated with paints and other art materials so as to effectively block it. Bubblers as well as other sinks and toilets have all been known to back up. Each laboratory classroom has an eyewash station about half are portable bottle systems. Only two classrooms have Emergency showers. They lack floor drains. There is no specialized acid waste piping or acid neutralizer in any of the science rooms. Gas cocks at lab oratory stations, one central shut off valve near the door or demonstration/teaching station.

In the central Kitchen there is no automatic dishwasher – pot sink and prep sinks. There is a Grease trap in the floor under the pot sink. The main cooking areas are served by an Ansul system in the hoods.

Several roof drains set above the roof itself creating puddles

Electrical Systems

The electrical systems are original to the respective construction of the facility. The main electrical service bolted pressure switch is rated for 1600 Amp at 277/480V 3ph 4W. It is integral to the main switchgear with a 277/480V distribution section and an integral 300 kVA substation transformer providing power to the 120/208V 3ph 4W distribution section. The higher voltage serves boilers, pumps, lights and roof top units; the lower voltage serves everything else. The electrical service is provided by Middleborough Municipal Gas & Electric Company via an exterior pad mounted oil filled transformer located adjacent to the loading dock (no label on the transformer but likely between 300 and 500 kVA in capacity).

Items of concern include the Emergency Lighting system. The existing emergency life safety lighting power distribution system is not separated from stand-by power or normal power distribution. The life safety panels reside in the same room as the main switchgear and in other electrical rooms with normal power. The life safety egress loads are sourced from the same panels as is the stand-by power loads. The egress lighting is accomplished with selected, normal off, distributed light fixtures; since they are normally off they may fail when powered or it may be unknown if any are burnt out and require replacement. All the existing exit signs have at least been replaced with LED units that have internal integral battery backup. The exterior areas of the egress doors have not been properly addressed with egress lighting coverage which could lead to a situation of concern during an emergency mass egress event. The stand-by power system is not configured or designed as a life safety system. The current system is inadequate and requires a full replacement.

The building is not protected by fire protection sprinkler system so the fire alarm system is critical to the safe operation of the building. However, the fire alarm detection system is a zoned system and does not meet current fire detection/protection codes. The system was partially replaced in the 1990's (20 years old) and manufactured by FSI. The system has a master box at the front door, however, appears to communicate alarm conditions to the fire department though telephone lines (communicator box is located in the main switchgear room).

The control panel is located in the main electrical room directly across from the main switchgear; a fault in the switchgear room could incapacitate the entire fire alarm system. The fire alarm system does not have remote control at the point of entry for the fire department; the lobby mounted annunciator provides inadequate information about the alarm condition and location; information taped to wall explains where each zone serves in the building. The system lacks the technical capabilities needed for properly protecting and integrating with today's building systems (e.g. elevator recall, door hold back).

The majority of the fire detection is covered by heat and smoke detectors. The elevator does not have a fire alarm recall system in place. The fire doors do not have door hold back/release devices. The auditorium stage does not have a fire curtain. The notification devices do not all appear to be speaker/strobe units; the FACP has a MIC with an amplifier system however it is unclear as to where the sound is produced in the building (perhaps paging speaker system). The stage area of the auditorium is not protected by heat or smoke detectors. The manual pull neither station heights do not meet ADA height requirements nor does the layout of these devices appear satisfy code required coverage. A full system replacement is required. The current system is inadequate.

The main switchgear is being used for storage and for housing the gym maintenance lift; as a result NEC required clearances are currently not being met.

The original Square D switchboard is original to the building and therefore over 40 years old. The power distribution is provided from several distribution and branch panels wired back to one of these main switchboard distribution sections. The panels are located throughout the facility located in mechanical rooms, teacher lab preparation room or shop rooms; the panels in the shop rooms are unlocked and accessible to the students. Nearly all of the panels observed are original to the building. The typical useful life expectancy of electrical systems is 20 years; therefore all the electrical systems are at least 20 years beyond their expected useful life of 20 years. The concerns with exceeding useful life of systems is primarily safe and proper operation as originally designed, alignment to current more advanced electrical and life safety codes, the availability of replacement parts, and associated repair costs for increased maintenance cycle.

All of the island lab benches (with sinks) in the science labs and some of the art room clean up areas have power receptacles lacking the required GFCI protection. The physics lab has overhead retractable power cord drops lacking twist-lock receptacles/plugs for their respective lab bench connection. The current system is unable to

support the facility effectively or efficiently. The system capacity and configuration is inadequate for supporting the school academic programs, technology needs and mechanical systems; most schools of this size (with full cooling system) have electrical services with approx. 1800 kVA (2000 Amp at 277/480V, 3ph., 4W) of total capacity and approx. 900 kVA of it applied to classroom and misc. loads at 120/208V, 3ph., 4W.

The Emergency Generator system is set up as a 115 kW stand-by power system; other high schools of similar size have generators with a capacity between 250 and 300 kW). It is not configured as a life safety power system. The life safety and stand-by loads are not separated. The life safety power distribution system does not reside in dedicated (2) rated electrical rooms. The emergency generator is located in the boiler room adjacent to the heating system boilers; a catastrophic failure of the adjacent boiler could incapacitate the emergency life safety power distribution source and therefore the egress lighting would not be available. The capacity of this system is well below what would be needed to support the stand-by and life safety loads for the building. The current system is unable to support the facility safely, effectively or efficiently. The system capacity and configuration is inadequate for supporting the necessary school stand-by loads, life safety loads and mechanical system loads.

Security Cameras – Most of the egress locations are monitored by a CCTV system; known locations are the cafeteria exterior entrance, the bus pick up area, the gym exterior entrance. The staff does have full view of the front entry from the central office. There are a few remaining exit/entry doors to the building, the loading dock and the drama room entrance that lack CCTV monitoring means. Very few locations are monitored by a security system. While the staff does have full view of the front entry from the central office, most of the remaining exit/entry doors to the building and the loading dock lack security system monitoring means.

Many of the interior lighting manual controls outside of offices or classrooms, in common areas are keyed type (remaining on unless shut off by maintenance staff. Refer to Priority 5 for additional information on lighting level, design and energy deficiencies.

Extension cords and plug strips are used consistently in classrooms and other academic support spaces to bring power to the bench lab and technology equipment. The power distribution system does not have surge suppression devices incorporated into the distribution system therefore plug strips are being used where protection is needed for technology equipment. The auditorium requires use of extension cords to bring power to stage edge mounted equipment since the recessed power panels are full or debris and not safe to use.

Each classroom has a ground mounted device panel with wall phones for communication to central office, master clock, thermostat, and light switches. All the components appear to be original to the building (except handsets and thermostat have been replaced.

With respects to the Lighting systems, the facility primarily uses linear fluorescent fixtures or various configurations (recessed, pendent, surface); the gym utilizes linear HO fluorescent lamps as light sources. In general lighting levels throughout the facility are inconsistent (light areas then dark areas), inefficient application (incandescent lamps in coves outside auditorium), poor color rending quality and have inadequate foot-candle levels. There remain fluorescent T-12 lamps in several locations in the facility. There are a variety of light fixture types utilized in the building; some fixtures replacements have been misapplied leading to inefficient use of light output or lack of proper light distribution within area addressed (e.g. HID wall pack installed in stairwells). The building's normal and emergency lighting system require a full upgraded; very limited partial upgrades have occurred as part of the maintenance process. However, the existing ceiling structures and current power distribution system makes upgrading the existing lighting system upgrade extremely challenging.

Exterior lighting is limited to high output building mounted HID flood light fixtures (two on either end of the building). Parking lot edges, rear building drive path, front building drive path, site driveway entry and pedestrian walk paths are not sufficiently illuminated. As a result of the inadequate exterior lighting control and coverage there is significant safety and security concerns for staff and students exiting the building and grounds later in the day.

Conclusions: Determining Priorities

As this memorandum outlines, most critical building systems within Middleborough High School are well past their useful life. In some cases, several systems or elements within the building could be resolved by repair and/ or replacement. However, several notable deficiencies create immediate health, safety and welfare concerns for the students and staff. Additionally, some of these same deficiencies have had impacts to the School's accreditation as is indicated in the NEASC Report.

Items of highest priority include:

- Interior classrooms are unhealthy and detrimental to learning.
- MAAB/ ADA Accessibility Compliance
- HVAC Systems which have exceed their useful life or have failed altogether
- Electrical Systems which have exceed their useful life including a non-code compliant Fire Alarm system
- The Fire Protection System is located in the same room as the main electrical room which is not code compliant and of a significant concern
- The existing electrical service size is inadequate for the current educational program
- The exterior areas of the egress doors have not been properly addressed with egress lighting coverage which could lead to situation of concern during an emergency mass egress event.
- Emergency Generator is not configured as a life safety power system. A full system replacement is required. The current system is inadequate.
- The heights of the manual pull station do not meet ADA height requirements nor does the layout of these devices appear to satisfy code required coverage.
- all the electrical systems are at least 20 years beyond their expected useful life
- Extension cords and plug strips are used consistently in classrooms and other academic support spaces to bring power to the technology equipment.
- It is likely that mold/ mildew exists in concealed spaces in the area of the kitchen given the evidence of water infiltration.
- Blisters/ bubbles in the Gymnasium over 1-inch high are tripping safety hazard
- Asbestos floor tiles and/or mastic. Asbestos is also suspected at above ceiling piping
- There are dark and unsafe areas along the outside perimeter of the building
- Electrical system distribution is antiquated and beyond its useful life
- The current emergency generator does not meet code. The generator is interior and not located in a rated enclosure, additionally; the stand-by and life safety services are not isolated from each other.
- Emergency lighting systems are not properly isolated from other electrical services
- The electrical distribution lacks code required surge protections

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- Electrical outlets at the islands within the Science labs lack code required GFCI receptacles
- The main electrical panel on the auditorium stage is being serviced with an extension cord from another location
- Various locations continue to be served by incandescent lighting
- Many locations continue to be served by T-12 lamps
- Ventilation systems are beyond their useful life.
- Nearly all (30+) egress/ exit points are unmonitored

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