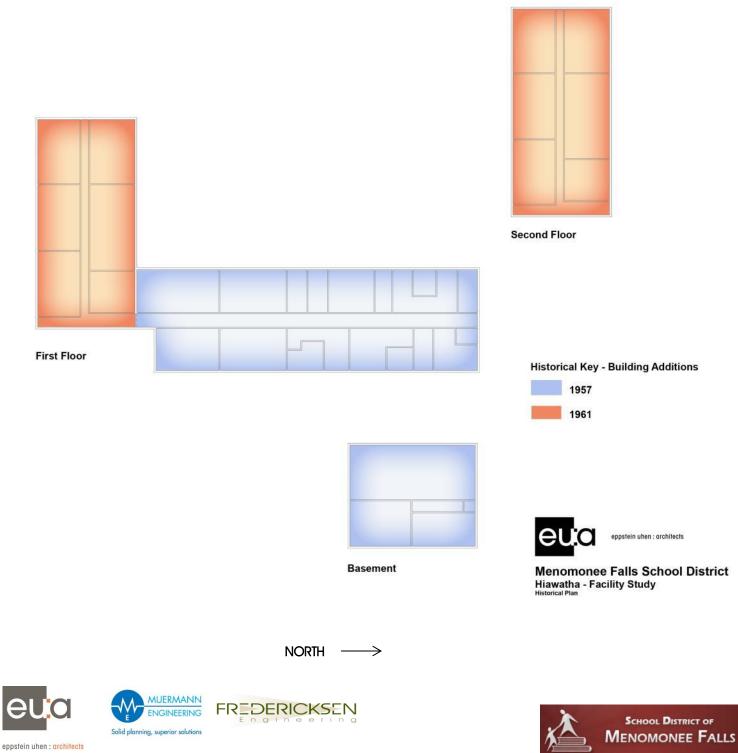
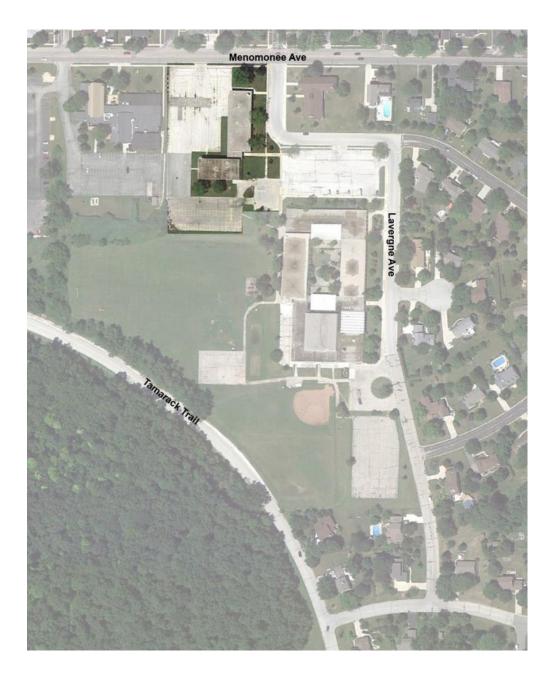
# HISTORIC PLAN, FLOOR PLANS, AERIAL PHOTOS

HISTORIC PLAN - NOT TO SCALE



SITE PLAN - NOT TO SCALE



NORTH







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# **BUILDING INSPECTION REPORT**

The assessment of site and building systems identifies the condition of categorized elements observed during inspection and graded for relative fitness by the following criteria for expected service.

**Good:** The reviewed element has been observed to have the following characteristics:

- Is between the beginning and middle of its expected service life.
- Meets optimum functional and / or performance requirements.
- Requires routine maintenance or minor repair.
- Less that 25% of the element is in substandard condition or has failed.

Fair: The reviewed element has been observed to have the following characteristics:

- Is between the middle and end of its expected service life.
- Meets minimum acceptable functional and / or performance requirements.
- Requires attention to repair beyond routine maintenance.
- 25 50% of the element is in substandard condition or has failed.

**Poor:** The reviewed element has been observed to have the following characteristics:

- Is at or has passed the end of its expected service life.
- Fails to meet functional and / or performance requirements.
- Requires excessive and constant attention, and major corrective repair.
- More that 50 percent of the element is in substandard condition or has failed.





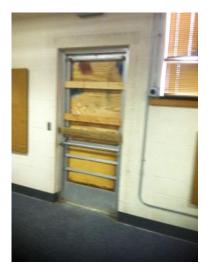








Dented and rusted steel door



# EXTERIOR ENVELOPE

#### EXTERIOR DOORS

- Expected life span 20 years for steel, 30 years for aluminum/ FRP systems
- Current Condition –Good to poor
- Around half of the exterior doors and frames are aluminum and in good condition.
  - The aluminum doors to the restrooms on the first floor and the door
    - into the cafeteria in the basement are in poor condition.
      - The glass has been broken and the doors have been boarded up.
- There are steel doors and frames in poor condition.
- All Steel exterior doors showed signs of damage. Dings, scratches and dents in steel will allow rust to begin faster and corrode easier than aluminum.
- Some steel doors have areas of rusting on the interior and exterior. The lower portion of exterior steel door and frames are prone to rust and deterioration faster than aluminum is. Steel systems are not thermally broken causing condensation to form on the interior which results in steel corrosion.

# RECOMMENDATIONS

- 1. Replace all exterior steel doors and frames with new FRP (fiber reinforced plastic) doors in aluminum frames.
  - Aluminum door and frame systems have internal gasketing less prone to abuse, will not rust or corrode, have improved screw holding power, can be welded to keep doors straight and will not require painting.
- 2. Replace all broken and boarded up aluminum doors.





Typical aluminum door and frame











Soffit



Rusted metal stair



Rusted metal railing

#### BUILDING CANOPIES / FASCIAS / SOFFITS / MISC.

- Life Expectancy same as building
- Current Condition Good
  - Building soffits are exposed precast concrete and are generally in good condition.
    - The soffits need to be painted.
    - The soffits are created from the underside of the roof structure, which create an undesired thermal issue at these locations. The structure runs from conditioned space to unconditioned space without a thermal break. This allows cold/warm temperatures to penetrate the conditioned space and reduces the efficiency of the building envelope.
- A metal fascia is provided around the building. This is generally in good condition.
- The metal stair and railings around the building are rusted.

#### RECOMMENDATIONS

- 1. Repaint all metals exposed to the elements.
- 2. Repaint soffits.





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#### GROUNDS

#### **GROUNDS / DRAINAGE**

- Concrete and asphalt were reviewed independently. See appendix for reference reports.
- The grounds do not have a play area or fields. The school would need to utilize the playing fields and playground at Thomas Jefferson.

#### RECOMMENDATION

1. None







SCHOOL DISTRICT OF MENOMONEE FALLS



Southeast stairwell water damage



Crack in concrete blocks

# INTERIOR

#### WALLS

- Expected life span 50 -100 years with periodic maintenance
- Current Condition Fair
- Most interior walls are concrete block and there are areas of damaged and or cracked blocks.
- The Southeast stairwell has signs of water infiltration causing rust damage to stair stringer.
- Paint is in poor condition.
- Drywall walls shown signs of heavy abuse.
  - Drywall walls are easier and less messy to demolish, easier to rebuild and are more flexible than concrete block. While the durability of walls are essential inside of schools given the nature of abuse they take, for future flexibility the District should consider the types of walls it plans for future spaces given the flexibility, cost and disruption of drywall versus masonry construction.
  - Drywall walls allow flexibility for changes in electrical wiring, computer wiring and plumbing more so than concrete block since the drywall can easily be cut into and the patch will blend easier and look the same as remainder of wall. Concrete block is more difficult to cut into and patch usually ending up with surface mounted electrical or plumbing when changes occur.

#### RECOMMENDATION

1. Investigate cause of water infiltration at Southeast stairwell.



#### Typical classroom walls



Typical drywall walls











Stained VCT



Hole in carpet



Chipped and missing wall base tile



Acoustical ceiling tile

# FLOOR COVERINGS

- Expected life span 20 years
- Current Condition Poor.
- Carpet Many of the areas used when the building was a district office.
   The carpet is in poor condition.
  - The carpet has areas of staining and tears, and in general is worn.
- VCT (Vinyl Composition Tile) –The VCT is in poor condition.
  - The majority of Classrooms have 9"x9" vct tiles, which are original to the building and, in poor condition.
    - 9"x9" tile have been known to contain asbestos.
    - There were many areas were the tiles were worn on the edges.
    - Damaged tiles have been repaired with non-matching tiles
- Wall base tile is in Poor condition.
  - o There are areas of chipped and damaged tiles
  - There are also rooms were the tile base was completely removed.

### RECOMMENDATIONS

- 1. Replace all carpet with either new carpet or VCT depending on function of room.
- 2. Replacing 9"x9" VCT thought the school.
- 3. Replacing wall base tile with rubber wall base.

### CEILINGS

- Expected life span 15 years
- Current Condition poor
  - The majority of classrooms have adhered ceiling tiles in poor condition.
    - There are a few areas where the glue has failed and tiles have dropped.
    - Because of the age of the adhesives used they may contain asbestos.
- Some areas used when the building was the district office have 2'x4' Acoustical lay in ceilings that are in good condition.
  - Acoustical lay in ceilings have tendency to sag over time and discolor.
  - Ceiling grid discolors as well.
- The majority of hallways have 2'X4' Acoustical lay in ceiling tile in poor condition.

### RECOMMENDATION

- 1. As adhered tiles fail, consider adding dropped lay-in ceilings.
- 2. Replace acoustical lay-in ceiling tile where damaged or water-stained.





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Typical classroom door



Typical classroom door hardware



Typical classroom cubbies

## DOORS FRAMES AND HARDWARE

0

- Expected life span 40 years with periodic maintenance
- Current Condition poor
  - The majority of doors are in Poor condition
    - Many of the doors facing veneers have tears and chips.
      - Grilles in typical classroom doors are dented and damaged.
- most door knobs are original to the building and do not meet the accessibility requierments.
- Intruder lock function is not provided.
- Metal door frames can be repaired and painted. Door chips and scratches can be sanded, filled and restrained to revive an old door. Depending on severity of door or frame damage, it may be cost effective to replace the entire door and frame.

### RECOMMENDATIONS

- 1. Replace or refinish doors in poor condition.
- 2. Paint all door frames.
- 3. Replace door hardware to be ADA compliant.

## CABINETRY, COUNTERTOPS AND LOCKERS

- Expected life span 20-25 years
- Current Condition poor
  - Typical classroom casework is in poor condition
    - Casework limited to storage shelves at windows.
    - The metal shelves have areas of rust because of water infiltration from window system.
- Corridor/classroom cubbies not present within the classroom or hallways.

### RECOMMENDATION

- 1. Provide student cubbies for storage either in the classrooms or hallway.
- 2. Replace metal storage shelving at windows.
- 3. Consider adding more casework to classrooms for teacher and student storage.













**Restroom fixtures** 



Restroom used for storage



Urinals in boy's restroom

# SPECIALTY AREAS

#### RESTROOMS

- Current Condition Poor
- Refer to ADA report for accessibility recommendations
- Finishes are worn and dated and in poor condition
  - Ceramic Floor and Wall Tile (expected life span 40 years) poor, older grout holds bacteria.
  - Areas of tile have been repaired with mismatching tiles.
- Ceiling- (expected life span 15 years)
  - The restrooms have exposed structure ceilings.
- Toilet Partitions -(expected life span 15 years) poor
   Pust is present at the base of many partition was
  - Rust is present at the base of many partition walls.
- Accessories (expected life span 8-10 years) fair
- The central restrooms on the first floor has been stripped of all fixtures and converted into a storage room

### RECOMMENDATION

- All restrooms: Remove and replace all finishes: ceilings and wall and floor tile. Replace toilet partitions with anti-graffiti plastic type. Paint all walls that are not tiled. Some restrooms may need to be reconfigured due to accessibility requirements.
- 2. Restrooms converted to storage would need to be returned to a functional restroom if building was to be operational again.
- 3. Refer to MEP reports for fixture, ventilation and lighting recommendations.













Cafeteria



Missing ceiling tiles and Mold

#### GYMNASIUM

• The building does not have a Gymnasium.

#### RECOMMENDATIONS

1. Add Gymnasium.

#### **CAFETERIA / KITCHEN**

- Current Condition poor condition
- Flooring poor condition.
  - The flooring in the cafeteria is carpet in poor condition.
  - Ceiling Tile Poor condition.
    - The ceiling is adhered ceiling tiles, and many tiles have fallen.
      Mold was present on the surface of some tiles.
  - Wall Base Poor condition
- Wall base Poor containor
  Cafeteria in not furnished.
- Kitchen equipment has been removed from the site.

### RECOMMENDATIONS

- 1. Provide Cafeteria furniture if the building is to be used for a school use.
- 2. Provide appropriate serving/cooking kitchen equipment.
- 3. Update wall base.
- 4. Paint walls.
- 5. Remove carpet and update flooring.
- 6. Remove mold on ceiling tiles.
- 7. Add lay-in ceiling.

### SECURITY / EMERGENCY

- Main entrance supervision and control is not directly secure.
- Exterior/interior camera system is not provided.
- Exterior exit door are locked and operable.
  - The building has been broken into since closing and some doors have been boarded up.
- Exterior windows lock.

### RECOMMENDATIONS

• Upgrade security to meet the use of the building.





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Steam Boilers

# HEATING VENTILATION AND AIR CONDITIONING

The following report is the result of a site visit that occurred on November 7, 2013. Site observations, construction plan review, and interviews with staff were all used in the preparation of this report.

The building was utilized as an elementary school until it was closed down in 2008. The building HVAC systems are original to the building.

### HEATING SYSTEM

#### **EXISTING DATA**

The boiler plant serves the entire building. The boiler plant consists of two steam boilers each fired with natural gas.

#### **OBSERVATIONS**

- The boiler plant is in satisfactory condition but the boilers have exceeded their expected service life of approximately 30 years.
- Insulation at most piping is of adequate thickness.
- Thermometers and gauges are present and appear to be working at all locations.
- Piping is reportedly in poor condition.

#### RECOMMENDATIONS

1. If the building is to put back on line in the school system, the boiler plant should be replaced with a high efficiency hot water boiler plant with primary-secondary variable flow pumping.

# VENTILATION AND AIR CONDITIONING SYSTEMS

#### **EXISTING DATA**

The building is ventilated by multiple system types. These systems include unit ventilators and single zone constant volume.

The classrooms are served by unit ventilators. Each unit contains a steam heating coil to maintain the room temperature setpoint.

The larger volume spaces and office areas are served by single zone constant volume air handling systems. Each air handler contains a steam heating coil to maintain room temperature setpoint.

The air conditioning in part of the building is accomplished with window air conditioning units.









#### **OBSERVATIONS**

- The unit ventilators have been well maintained but have exceeded their expected service life of 20-25 years. It is difficult to locate spare parts for units of this age.
- The air handling equipment has also been well maintained but has exceeded its expected service life of 25-30 years.

#### RECOMMENDATIONS

- 1. Replace all unit ventilators and air handling units with new equipment containing both hot water and chilled water coils.
- 2. Install a new central chilled water system consisting of a high efficiency variable speed chiller with a variable flow pumping system.

#### CONTROL SYSTEMS

#### EXISTING DATA

The temperature control system is a pneumatic system that is original to the building.

#### **OBSERVATIONS**

• The pneumatic control system has been well maintained but is outdated and in need of replacement. Pneumatic systems are obsolete by today's standards, require frequent recalibration, and qualified service technicians are becoming difficult to locate.

#### RECOMMENDATIONS

1. Replace the pneumatic control system with a new digital building automation system.











Service Panel



Branch Panel

# ELECTRICAL

The following report is the result of a site visit by John Russell of Muermann Engineering, LLC that occurred on December 13<sup>th</sup>, 2013. Site observations and interviews were used in the preparation of this report.

The original building was built in 1957. There was one (1) addition to the building in 1961.

# ELECTRICAL SERVICE

#### **OBSERVATIONS**

- The facility is fed with a 600 amp 120/240 volt single phase, 3 wire electric service. The main fused disconnect switch, CT cabinet and fused distribution panels are located in the basement mechanical room. The service age is dated to the original construction of the 1957 building.
- No surge suppression device was present on the main service gear.

#### RECOMMENDATIONS

- The main distribution panels are approximately 55 years old and are at the end of their useful lifespan. Provide new 208Y/120V three phase electric service. Provide new main electrical panel.
- 2. We do recommend all electric services be provided with surge devices.
- 3. Add phase monitoring relays to service for electrical system protection.

### **BRANCH PANELS**

#### **OBSERVATIONS**

- Most of the branch panels in the facility are old Pushmatic or ITE type.
- All the branch panels need to be replaced due to age.

#### RECOMMENDATIONS

- 1. Replace all existing branch panels.
- 2. Replace all old feeder wires.











General Lighting

# RECEPTACLES

#### OBSERVATIONS

- There were a minimal number of receptacles in most offices.
- Many receptacles had been added with wiremold surface raceway.

#### RECOMMENDATIONS

- 1. Additional receptacles can be added to existing classrooms if required.
- 2. Replace old branch circuit wiring as required.
- 3. Replace all existing receptacles.

# INTERIOR LIGHTING AND LIGHTING CONTROLS

#### **OBSERVATIONS**

- In the corridors and remodeled offices the original fluorescent fixtures have been replaced with acrylic lens 2x4 fixtures with T8 lamps. Lighting motion sensors were not present in any areas. No day lighting sensors were present.
- The offices that have not been remodeled have surface wrap fixtures with T12 lamps that are controlled by one wall switch.
- The basement has a mix of surface modular and acrylic lens 2x4 fixtures with T12 lamps.

#### RECOMMENDATIONS

1. Replace all fixtures with T12 lamps with new acrylic lens fixtures that use T8 lamps and electronic ballasts.

# EMERGENCY LIGHTING

#### **OBSERVATIONS**

- Exits lights do not have battery back-up.
- There are no battery-powered emergency lights in the corridors.

#### RECOMMENDATIONS

1. Provide light fixtures connected to new emergency generator.















Exterior Lighting



Data Rack

# OUTDOOR LIGHTING

#### OBSERVATIONS

• The majority of the outdoor lighting consists of wall-mounted quartz incandescent or high pressure sodium flood lights.

#### RECOMMENDATIONS

- 1. We would recommend replacement of all the existing exterior fixtures with new LED type to increase efficiency and lower maintenance cost.
- 2. As increased security is addressed, the district may consider adding security lighting around the perimeter of the facility.

# DATA

#### **OBSERVATIONS**

- Data cabling is provided to the office areas.
- Data cabling is CAT6.
- Cabling is routed to a main data rack. The main data rack is located in the basement.
- There is a PBX analog phone system.

#### RECOMMENDATIONS

- 1. New data drops can be added at any point. A new data rack may be required to accommodate any new rack mounted equipment.
- 2. Provide new Cisco VoIP phone system.
- 3. Provide proper telecom grounding system.

# SECURITY (CCTV/ACCESS CONTROL)

#### **OBSERVATIONS**

- There is no CCTV system in this building.
- There is no door access control system in this building.

### RECOMMENDATIONS

- 1. Add CCTV system as required.
- 2. Add district compatible door access system as required.











### FIRE ALARM SYSTEM

#### **OBSERVATIONS**

There is no fire alarm system in this building. •

#### RECOMMENDATIONS

1. Add addressable fire alarm system.

#### CLOCK/PUBLIC ADDRESS SYSTEM

#### **OBSERVATIONS**

- There is no clock system in this building. •
- There is no public address system in this building.

#### RECOMMENDATIONS

- 1. Add GPS based wireless clock system.
- 2. Add public address system as required.
- 3. Connect public address system in all buildings for mass notification.

## **EMERGENCY POWER**

#### **OBSERVATIONS**

• This building does not have a generator.

#### RECOMMENDATIONS

1. Add emergency generator for life safety systems including phone and PA system.











Water Closet



Urinals



Wash Fountains

# PLUMBING

The following report is the result of a site visit by Tim Kehoe of Muermann Engineering, LLC. that occurred on December 13<sup>th</sup>, 2013. Site observations, existing plan review, and interviews with staff were all used in the preparation of this report.

# **RESTROOM FACILITIES**

#### OBSERVATIONS

- Water closets, urinals and wall-hung lavatories are in poor condition. The majority of these fixtures are original to the building.
- Water closets and urinals are flush valve style fixtures. Urinals are operated on a timer. This style of fixture wastes a significant amount of water in a years' time.
- Lavatories are wall-hung and appear to be original to the building and are not ADA compliant. Minor modifications would be required to make these fixtures compliant.
- The main toilet room at the front entrance replaced the lavatory with Bradley wash fountain. This fixture is in good condition and appears to be operating well. It is assumed that this fixture was replaced in the last 5-7 years.
- The owner indicated a problem with the Sloan flush diaphragms valves. This may be contributed to the remaining galvanized water piping in the walls.

### RECOMMENDATIONS

1. All toilet room fixtures need to be replaced and the rooms would need to be renovated to comply with current ADA requirements.











#### School District of Menomonee Falls Facility Assessment Site and Building Inspection Summary - Hiawatha



Gas-Fired Water Heater



Electric Water Heater



Water Softener

# PLUMBING EQUIPMENT

#### **OBSERVATIONS**

- A small 40 gallon gas-fired water heater is located in the lower level mechanical room. It is unknown if this heater is operational.
- An electric water heater is located on the main floor adjacent to the toilet rooms. This water heater is in very good condition and is thought to supply hot water to the majority of the plumbing fixtures in the building.
- A small water softener is located in the lower level boiler room. This equipment provides water treatment for the boilers. The softener is in poor condition.

#### RECOMMENDATIONS

- 1. Replace both water heaters with one (1) new sealed combustion gas-fired water heater.
- 2. Replace water softener.

### FIRE SPRINKLER SYSTEM

#### OBSERVATIONS

• A fire protection system in the building was not located. It is likely that any major renovation would require the building to have a fire sprinkler system installed throughout. Further investigation with state codes and the local Fire Marshal would be required to determine if a system would be needed.

#### RECOMMENDATIONS

1. Provide interior fire sprinkler system for the building as required.



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Water Service



Sanitary Piping



Vent

# DOMESTIC WATER SUPPLY SYSTEM

#### OBSERVATIONS

- All water supply piping is galvanized piping. Copper piping is located in areas that have been repaired.
- Branch piping to fixtures remains galvanized.
- The building is supported by a 2" water service and 2" water meter. The water service and water meter appear to be properly sized for the building demand.
- Water pressure appears to be adequate throughout the building.

#### RECOMMENDATIONS

1. Galvanized water piping should be scheduled for replacement.

# SANITARY WASTE SYSTEM

#### OBSERVATIONS

- The existing sanitary waste and vent piping is a mixture of cast-iron, galvanized and schedule 40 PVC. Schedule 40 PVC waste and vent piping was used to repair piping failures.
- The owner indicated that the primary piping system is original and is in fair condition.

#### RECOMMENDATIONS

1. Continually monitor the existing sanitary sewers for problems.













Clearwater Sump

Ceiling tiles indicating water leaks

Classroom Sink

# STORM SYSTEM

#### **OBSERVATIONS**

- Piping materials for the storm system is cast iron. This piping system was also inspected and appeared to be in good condition.
- The lower level is provided with a drain tile system and Clearwater sumps. A sump pump is installed in the lower lever to discharge this storm water. The sump pumps do not have alarms or controls.
- Ceiling tiles throughout the building indicate roof leakage. It is unclear if this is the result of roof failure or piping failure. Further investigation is required.

#### RECOMMENDATIONS

- 1. Provide controls and alarms on all sump pumps.
- 2. Investigate roof leakage.

# PLUMBING FIXTURES – CLASSROOM AREAS

#### **OBSERVATIONS**

- Classroom fixtures are original to the building and are in poor condition. None of the fixtures are ADA compliant per today's requirements.
- Classroom sinks are primarily wall-hung lavatory style fixtures.
- The majority of this building is office space. Only the north wing has classrooms.

### RECOMMENDATIONS

1. All classroom fixtures should be scheduled for replacement.





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# AMERICANS WITH DISABILITIES ACT (ADA) - FACILITY COMPLIANCE REPORT

A – SITE

	ΙΤΕΜ	ADA /ANSI A117.1 REFERENCI
1.	Striped and marked accessible vehicle parking spaces are provided. However there are no striped spaces provided in a close proximity to the main entrance.	F208, 502
2.	There is no marked accessible route from the parking to the "designated" main entrance.	502.3
3.	Public sidewalk pavement around the property appears to be compliant for the most part.	302, 402, 403
4.	There is no identified accessible loading zone.	503
	COMMENDATION: Provide an accessible loading zone.	
	Provide striped and marked accessible vehicle parking spaces in a closer proximity to the main er	ntrance.
2		

3. Provide a marked accessible route from the parking to the "designated" main entrance.

#### **B - INTERIOR ACCOMODATIONS**

	ITEM	ADA
		REFERENCE
1.	Main Entrance appears to be accessible. The doors do not have a power handicapped operator. The 'pull force' required to open the door should be measured to confirm if it falls within accessibility requirements.	402, 404
2.	Classroom door hardware is not accessible.	404
RECOMMENDATION:		

- 1. Provide new classroom door hardware that meets accessibility requirements.
- 2. Confirm that 'pull force' at the entrance door is within accessibility guidelines. Adjust/replace door closer as required to meet 'pull force' requirements for accessibility.









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## C - INTERIOR STAIRS / RAMPS

	ITEM	ADA REFERENCE
1.	Stairs handrails do not comply with current extension requirements beyond the top and bottom stair risers.	505
	OMMENDATION: Replace existing handrails with accessible handrails.	





## D – ELEVATORS

	ITEM	ADA REFERENCE
1.	There are multiple levels in the building however no elevator is provided.	407
RECOMMENDATION: 1. Two elevators need to be installed. One elevator to the basement, which contains the cafeteria, and one to the second floor.		

#### **E - DRINKING FOUNTAINS**

	ITEM	ADA REFERENCE
1.	All drinking fountains are not of an accessible design.	602
	OMMENDATION: Update drinking fountains to accessible models.	



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#### F - TOILET FACILITIES

	ITEM	ADA REFERENCE
1.	No toilet rooms meet accessibility requirements.	603
	OMMENDATION: Upgrade all restrooms to meet accessibility requirements.	









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\*Data from Institutional Facilities Manager resources, ASHRE research, and School District Facility Manager client information.



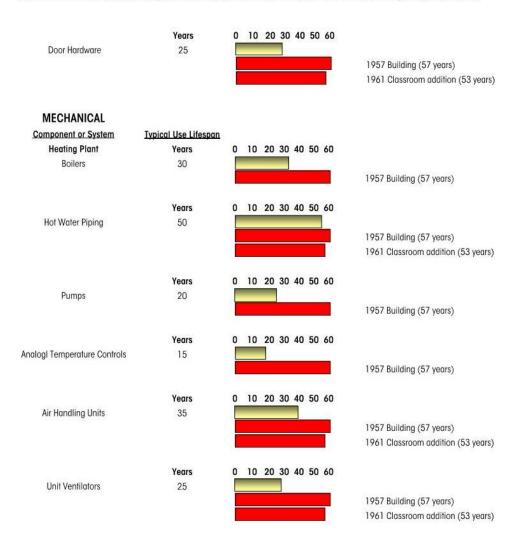




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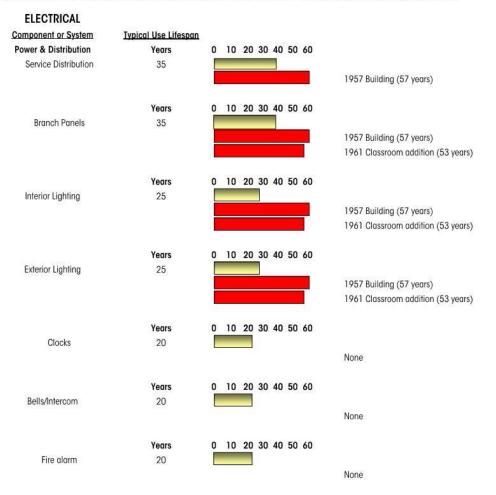


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