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Facility Analysis For

East Campus

McHenry, Illinois

McHenry Community HS District #156

November 8, 2017

Revised:
May 9, 2018

Project No. 173033



Facility Analysis Categories McHenry Community HS District #156

The following report investigates current physical and programmatic conditions and deficiencies evident in McHenry Community High School District #156 buildings. The information documented in this report was gathered primarily through field observation and supplemented by evaluation of existing information and discussion with District personnel.

The facility analysis report explores conditions and deficiencies in eleven important areas, which are outlined as follows:

- **SITE**
This section describes the site and its surroundings.
- **EXTERIOR**
This section describes the exterior envelope including roofing information supplied by the District.
- **INTERIOR**
This section describes the physical condition of the interior spaces and finishes within the facility.
- **ACCESSIBILITY**
This section addresses the conformance of the facility to the intentions of accessibility requirements with focus on the following issues: accessible parking, an accessible route to the main entrance, ability to attain all levels of the facility, and access to each teaching space.
- **LIFE SAFETY**
This section explains life safety and code deficiencies as noted and as discovered during field observation.
- **HAZARDOUS MATERIALS**
This section covers the information provided by the District concerning asbestos materials present and lead in the water.
- **MECHANICAL SYSTEMS**
This section documents the existing mechanical systems and components, and their known deficiencies.
- **ELECTRICAL SYSTEMS**
This section documents the existing electrical systems and components, and their known deficiencies.
- **PROGRAM**
This section consists of facility programmatic and deficiency issues as addressed by the various facilities' Site administration and staff.
- **TECHNOLOGY**
This section documents the existing technology systems and components, and their known deficiencies. It covers only non direct instructional technology infrastructure for the various buildings.
- **EXPANDABILITY**
Not Applicable



Facility Analysis Categories McHenry Community HS District #156

Each category noted above includes a list of "analysis" statements which describes conditions or deficiencies. Following the "analysis" portion of each category is a list of "issues" which describe the action necessary to resolve mentioned conditions or deficiencies. Accompanying the "issue" is a cost, based on projected year 2017 project costs.



Facility Analysis Prioritization McHenry Community HS District #156

PRIORITIZATION CATEGORIES

- **Priority 1 (0 - 2 years)**

Life Safety Issue	As typically noted by Fire Marshal/Life Safety Officials.
Deterioration Item	Further deterioration will create higher future repair costs or will damage other areas in the building.
Health Issue	Rooms with no ventilation or items that do not meet state health code requirements and have been tagged.
Accessibility Issue	Must complete to provide access into the building, to the curriculum within the building, to access a restroom or to obtain a drink of water.
Hazardous Materials	Item posing a significant impact on building occupants.

- **Priority 2 (2 - 5 years)**

Energy Issue	Item replaced results in a payback in 10 years or less.
Deterioration Item	Material or system that currently functions but will require replacement or maintenance within 5 years.
Accessibility Issue	Modification required to meet state code guidelines.
Modernization	Modifications required to support future modernizations.
Hazardous Materials	Removal of items affected by other changes occurring in Group 2.
Health Issue	Inadequate exhaust and ventilation in lab environments and other areas lacking adequate ventilation.

- **Priority 3 (6 - 10 years)**

Energy Issue	Item replaced results in a payback in more than 10 years.
Health Issue	Non-tagged items that do not meet state health code requirements.
Deterioration Item	Material or system that currently functions but will require replacement or maintenance in 6-10 years.
Hazardous Materials	Removal of items affected by other changes occurring in Group 3.

- **Priority 4 (Would like to do within 10 years)**

Aesthetics	Item which impacts the visual environment.
Hazardous Materials	Removal of items affected by other changes occurring in Group 4.
Accessibility Issue	To meet full requirements of federal guidelines as stated in the ADA (American with Disabilities Act).

- **Priority 5 (\$500 or under)**

- **Priority N (Non-Prioritized)**

Item which is elective/aesthetic or programmatic which can be done at any time.



**East Campus
McHenry Community HS District #156**

Address: 1012 North Green Street
McHenry, Illinois 60050

Contact: Jeff Prickett

Phone: (815) 385-1145

Year(s) Built: 1924, 1955, 2003

Gross Area: 204,665 S.F.

Site Area:

Parking: 275

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- East High School Campus is bordered by North Green Street to the west (front), Waukegan Road to the north, West John Street to the south, and residential properties to the east. There is a bus drop-off lane directly east of the building. Parking lots occur east of the bus lane divided by a temporary classroom structure. Lawn areas surround the building at the front and side yards. A perimeter sidewalk also occurs adjacent to the adjacent streets.
- The bus lane is asphalt pavement with significant "alligatoring" and banded cracks. Storm water is collected at several catch basins. Water appears to drain slowly at several depressed areas of asphalt. Adjacent concrete sidewalks are in fair condition with some sections recently replaced and others due for replacement. Spherical concrete bollards serve as vehicle impact protection at the north portion of the bus lane. Painted markings are in good condition.
- Two delivery access points occur at downward concrete ramps on the east side with storm water captured by trench drains. Concrete surface is in fair condition with some cracked areas. Adjacent concrete retention walls are in poor condition with significant crumbling at the top portion and safety rail conditions deteriorating where anchored into the wall.
- Storm water catch basin south of receiving ramp has depressed soil condition preventing water near the building from draining adequately.
- Bituminous walkway along south side of the school is in poor condition. Significant cracks have allowed vegetation growth within walkway. The same conditions apply to the leg of the path, which meets the sidewalk at the southwest entrance. Adjacent landscape edging is wood and is deteriorating due to moisture exposure.
- At the south side of the school a concrete retaining wall edges the walkway and allows for lower level windows to occur with a light well. Retaining wall conditions appear to be in good condition with minor cracking. The metal rail anchored at the top is in poor condition with bent sections and rust occurring at surfaces and anchor points.
- Chain link "cages" occur at condensing units at the south side of the building. Some components are aging, damaged or missing.
- At the southwest entrance into the classroom wing, a brick masonry retaining wall flanks the steps. Step cracking is severe allowing moisture infiltration and worsening conditions.
- The perimeter sidewalk at the west edge of the property (along North Green Street) is in good to fair condition with some sections toward the north needing replacement.
- An area well occurs at the west building elevation with concrete retaining walls and a steel grate cover. Conditions appear good with minor rusting on the grate surfaces.
- Condensing unit "cages" on the west side are overgrown with unsightly weeds.
- Concrete walks leading from the perimeter walk to entrances along the west entrance are in very good condition as most were replaced in Summer 2017.

Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability
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East Campus McHenry Community HS District #156

Analysis

- The main (west) entrance to the school is in very good condition as walks, stairs and rails were replaced in Summer 2016. This entrance does not accommodate barrier free access (ADA).
- An electronic message sign (two-sided) is located at the northwest corner of the property. Masonry supporting columns appear to be in condition. Some deterioration is evident at the aluminum framing members of the sign.
- The perimeter concrete walk at the north property edge is in good condition with minor cracks and surface erosion. Several sections are damaged and require replacement.
- There is a downward sloping walkway/plaza which serves as entrance/egress from the main gymnasium at the northeast corner of the school. Storm water is captured by several trench drains before the entrance doors. The concrete retaining wall appears to be in good condition. The metal handrail at the retaining wall perimeter is beginning to rust where paint finishes have deteriorated.
- Along the east section of the school where traffic bollards occur, the concrete walk appears to be in good condition. Between the walk and the building edge, a width of bituminous pavement occurs which is in poor condition with multiple voids in the surface. The cause of the voids is not clear.
- The parking lot north of the temporary building structure consists of 21 spaces. The condition of the asphalt pavement is good.
- The parking lot south of the temporary building structure consists of 254 spaces. The condition of the asphalt pavement is fair with evidence of crack sealing across the entire lot surface. No severe damage is apparent. Painted parking space lines are faded. Sufficient ADA compliant spaces exist at the west edge.
- A plaza with picnic tables occurs on the east side between the bus lane and the building. Paver surfaces are in good condition with minor separation at joints. A retaining wall planter is also in good condition.

Issues

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|---|--|--------------|-----------------|
| 1 | Mill and repave bus lane. Improve drainage to existing catch basins. | | |
| | Priority: 3 | Cost: | \$41,750 |
| 2 | Replace damaged sections of concrete sidewalks adjacent to bus lane. | | |
| | Priority: 2 | Cost: | \$5,620 |
| 3 | Reconstruct concrete delivery ramps, retaining walls and safety rails at two locations on east side (Included in Life Safety Section). | | |
| | Priority: 2 | Cost: | \$0 |
| 4 | Regrade soil conditions adjacent to east (near receiving) catch basin to provide positive drainage conditions. | | |
| | Priority: 3 | Cost: | \$1,000 |

Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability
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East Campus McHenry Community HS District #156

Issues

- 5 Remove the south and west bituminous walkways and replace with a concrete sidewalk.
Priority: 3 **Cost: \$13,800**

- 6 Replace the metal rail at the concrete retaining wall on the south side of building.
Priority: 3 **Cost: \$2,500**

- 7 Replace damaged and missing components at condensing unit "cages".
Priority: 3 **Cost: \$800**

- 8 Reconstruct masonry retaining walls at the southwest entrance stair.
Priority: 2 **Cost: \$15,600**

- 9 Remove damaged sections of perimeter concrete walk on the west property edge (approximately 15% of length). Replace with matching concrete walk.
Priority: 3 **Cost: \$6,500**

- 10 Upgrade parking lot area south of temporary building structure. Mill 2" asphalt surface and place 2" surface course. Repaint vehicle lines and marching band practice markings.
Priority: 2 **Cost: \$203,000**

- 11 Upgrade parking lot area north of temporary building structure. Mill 2" asphalt surface and place 2" surface course. Repaint parking markings.
Priority: 2 **Cost: \$20,700**

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- Exterior walls consist of masonry bearing walls. The exterior walls are in good condition. There are a few areas that require some tuckpointing. There are some cracks in the face brick and mortar joints that have deteriorated. The areas are small and located on the plan attached.
- The windows are aluminum frame with a combination of fixed glazing and operable sashes. The frames and glazing appear to be in good condition. The sealant around the windows is in fair condition and may need to be replaced in the next 3-5 years.
- Exterior wood doors that are located on the west side of the building have received multiple coats of paint over the years. The doors and frames have deteriorated and the glazing in the doors, sidelites and transoms contain wire glass.
- There appear to be no weeps in the masonry at the base of the cavity walls or at the heads of the windows. This does not allow any water that gets trapped in the cavity to escape. It doesn't appear this has had a detrimental effect on the existing walls. In today's construction, weeps are typically installed in walls to get rid of any moisture that penetrates the cavity walls.
- Steel lintels are rusting in on the east and west elevations of the original building. The rust should be removed and then the lintels should be painted with a rust prohibitive paint. The locations can be seen on the plan.
- The paint on the concrete walls is peeling and the face brick is cracked at the two west entrances of the original building. The face brick should be repaired and tuckpointed as needed.
- The concrete sill and foundation wall along the south wall adjacent to Learning Management and 2D Art have cracks and the concrete 'wash' has deteriorated.
- The mortar joints in the decorative clay tile band, stone lintels have deteriorated. Water can penetrate the joints.
- There is an open expansion joint near the northeast entrance that will allow water to penetrate the wall. Install sealant in the joint.
- The brick 'panels' at the main entrance have open joints that can allow water to penetrate. These joints should be filled with sealant.
- No screen is installed on the open end of the roof drain overflow spout near grade level. Insects and vermin can get in the ends of the spouts.
- The seals on several insulated windows have failed on the east side of the field house.
- There are several items of concern on the north wall of the commons area.
 - Moisture appears to be penetrating and running down the face brick below the windows. This is evident from the amount of moss that can be seen on the face of the brick.
 - The sealant is drying out at the sills.
 - It appears the sheet metal window sills are back pitched.

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- The soffit of the exterior canopy at the northeast entrance shows signs of moisture. The paint is peeling. It appears there is no separation between the exterior and the conditioned space. Therefore, condensation builds up and causes moisture in the space which penetrates the soffit and causes the paint to peel.
- The masonry joints that surround the glass block in the gym are extremely deteriorated and can allow moisture to penetrate the walls. The masonry joints need to be cleaned out and sealant shall be installed in the joints.
- One portion of the building is in very poor condition. It is located on the east side of the building near graphics area. The doors, lintels and frames and roof are extremely deteriorated. It does not appear that this space is being used. It was not possible to access this area due to the dilapidated state of the enclosure.

Roof

- See attached plan for roof area locations referenced in the report below.
- Roof area 1 is in poor condition. The PVC membrane is deteriorating and in need of replacement within the next 1-2 years.
- The roof system is an overlay of two roof systems. The first system is a ballasted PVC membrane over a 1 ½ inch thick polyisocyanurate rigid insulation over a tapered black board consisting of what appears to be tar and vermiculite. Below the tapered board is the original roof which is an old coal tar pitch roof that is placed on a ½ inch fiber cover board that is secured to the existing concrete deck.
- The flashing is pulling away from the parapet and curbs throughout the roof. The overflow scuppers appear to be an excessive height above the roof which can allow excessive water build-up during heavy rains. This build-up of water can put a stress on the structure. The sealant is failing in the existing stone coping.
- Roof Area 2 is in fair to poor condition and will require replacement in the next 3-5 years.
- The roof system consists of a modified bitumen roof membrane with a granular cap. The structure is sloped. Below the roof membrane are a ½ inch thick fiber board and two layers of 1 ½ inch thick polyisocyanurate rigid insulation. The deck appears to be a tongue and groove wood deck.
- There are areas of ponding water in several location on the roof. Some open seams could be observed which could allow water to penetrate. A clay tile coping sits atop the parapet for the entire perimeter of the roof. The sealant joints of the coping are deteriorating. The overflow scuppers appear to be an excessive height above the roof which can allow excessive water build-up during heavy rains. This build-up of water can put a stress on the structure.
- Roof Area 3 is located in the light well, but in good condition. The roof will require replacement in 5-7 years.

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

Roof

- The roof system consists of a modified bitumen roof membrane with a granular cap over tapered polyisocyanurate rigid insulation on a concrete deck. The roof is in need of some minor maintenance and repairs. Fish mouths occur in the flashing which require repair. There is some vegetation on the surface of the roof which can be removed.
- Roof Area 4 is in very poor condition and requires replacement in the next 1-2 years.
- The roof system consists of a mechanically fastened PVC roof membrane installed over one layer of 1 ½ inch thick polyisocyanurate rigid insulation. The existing gypsum deck is sloped. The PVC coating is deteriorating and losing elasticity. There have been many patches installed on this roof to address leaks that have occurred over time. The membrane is also pulling away from the parapets.
- Roof Area 5 is the same system and has the same conditions as Roof Area 3.
- Roof Area 6 is similar to Roof Area 4 in condition. The roof deck appears to be wood.
- Roof Area 7 is in good condition and will require replacement in 7-10 years.
- The roof system consists of a built-up asphalt roof on a ½ inch fiber board. The polyisocyanurate rigid insulation is tapered over a minimum layer of two layers of 1 ½ inch thick rigid insulation on a metal deck. Vegetation is growing along the north wall where very little light penetrates the area. The flashings and counterflashings appear to be in good condition.
- Roof Area 8 system is similar to Area 7 in construction and condition and will require replacement in 7-10 years.
- Roof Area 9 system is similar to Area 7 in construction and condition and will require replacement in 7-10 years. The roof structure is sloped in lieu of tapered insulation.
- The parapet is covered with sheet metal on the interior side of the roof. This sheet metal is coming loose on the south and east parapet.
- Roof Area 10 and 11 system is similar to Area 8 in construction and condition and will require replacement in 7-10 years.
- Roof Area 12 is in fair to good condition and will require replacement in 5-7 years.
- The roof system consist of fully adhered EPDM membrane on a ½ inch fiber board on 1 ½ inch thick polyisocyanurate rigid insulation. The gypsum roof deck is installed on a sloped structure. Built up tapered saddles direct the water to the roof drains. The existing membrane appears to be in good condition. The seams are beginning to fail and flashings are deteriorating.
- Roof Area 13, 14, 15 is in good condition and will require replacement in 7-10 years.
- The roof system consists of a built-up asphalt roof on a ½ inch fiber board. The polyisocyanurate rigid insulation is tapered over a minimum layer of two layers of 1 ½ inch thick rigid insulation on a gypsum deck.

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

Roof

- Roof Area 16 is in good condition and will require replacement in 7-10 years.
- The roof system consists of a built-up asphalt roof on a ½ inch fiber board. The polyisocyanurate rigid insulation is tapered over a minimum layer of two layers of 1 ½ inch thick rigid insulation on a metal deck.
- There is an ongoing leak at this roof. Further investigation will be required to determine the cause of the leak. Once the cause is determined, the necessary repairs will be made.
- Roof Area 17 is in good condition and will require replacement in 7-10 years.
- The roof system consists of a built-up asphalt roof on a ½ inch fiber board. The polyisocyanurate rigid insulation is tapered over a minimum layer of two layers of 1 ½ inch thick rigid insulation on a metal deck.
- This roof is actually the canopy at the northeast entrance to the commons.
- Roof Area 18 is in very good condition. Replacement is not recommended.
- The roof system consists of a standing seam copper roof on a structural deck.
- Roof Area 19 and 20 is in very poor condition and requires replacement within 1 year.
- The roof system consists of a PC membrane on 1 1/2 inch thick polyisocyanurate rigid insulation on a metal deck.
- The membrane is deteriorating and the gutter is damaged.
- Roof Area 21 is in good condition and will require replacement in 7-10 years.
- The roof system consists of a built-up asphalt roof on a ½ inch fiber board. The polyisocyanurate rigid insulation is tapered over a minimum layer of two layers of 1 ½ inch thick rigid insulation on a metal deck.
- Roof Area 22 is in very poor condition and will be removed when this area of the building is demolished.
- The roof system consists of a very old built-up roof. The roof membrane and flashing are very deteriorated. Immediate replacement is required should the school district choose to keep this part of the building.
- McHenry School District 156 hired Weathergaurd Roofing to investigate the construction of the existing roofs. Their report is attached for reference.

Issues

- | | | | |
|---|---|--------------|-----------------|
| 1 | Tuckpoint various areas around the building. | | |
| | Priority: 2 | Cost: | \$38,000 |
| 2 | Remove rust from lintels and paint with rust prohibitive paint. | | |
| | Priority: 2 | Cost: | \$7,000 |

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Issues

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|----|--|--------------|------------------|
| 3 | Replace window sealant in 3-5 years. | | |
| | Priority: 2 | Cost: | \$100,000 |
| 4 | Replace existing doors, frames, hardware and glazing located at the west entrances (included in Life Safety Section). | | |
| | Priority: 2 | Cost: | \$0 |
| 5 | Sandblast the paint off of the concrete at the west entrances. Apply an epoxy paint to the concrete walls. | | |
| | Priority: 3 | Cost: | \$3,500 |
| 6 | Repair the concrete foundation adjacent to Learning Management and 2D Art and apply a new concrete wash where required. | | |
| | Priority: 2 | Cost: | \$6,500 |
| 7 | Rake out the existing mortar joints of the clay tile band and stone lintels and install sealant. | | |
| | Priority: 2 | Cost: | \$25,000 |
| 8 | Install sealant in open expansion and masonry joints. | | |
| | Priority: 2 | Cost: | \$1,300 |
| 9 | Install a screen over the open end of the overflow downspouts. | | |
| | Priority: 3 | Cost: | \$800 |
| 10 | Remove and reinstall existing sills with correct pitch to exterior face of wall at the exterior wall adjacent to the Commons. Install new sealant. | | |
| | Priority: 2 | Cost: | \$9,000 |
| 11 | Install a barrier between the canopy and the conditioned space. Install proper ventilation. Repair the existing soffit and paint. | | |
| | Priority: 2 | Cost: | \$19,500 |
| 12 | Rake out the existing mortar and install new sealant all around the glass block. | | |
| | Priority: 2 | Cost: | \$13,000 |
| 13 | Demolish the dilapidated portion of the building on the east side near the graphics room and repair existing walls at the area of removal. | | |
| | Priority: 2 | Cost: | \$26,000 |

Roof

- | | | | |
|---|---|--------------|------------------|
| 1 | Complete tear-off of existing Roof Area 1 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, seal existing coping joints and re-work existing scuppers. | | |
| | Priority: 1 | Cost: | \$712,000 |

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Issues

Roof

- 2 Complete tear-off of existing Roof Area 2 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, seal existing coping joints and re-work existing scuppers.
Priority: 2 **Cost: \$314,000**

- 3 Complete tear-off of existing Roof Area 3 down to the deck, installation of a new roof membrane and tapered insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$10,600**

- 4 Complete tear-off of existing Roof Area 4 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories and seal existing coping joints.
Priority: 1 **Cost: \$106,000**

- 5 Complete tear-off of existing Roof Area 5 down to the deck, installation of a new roof membrane and tapered insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$10,600**

- 6 Complete tear-off of existing Roof Area 6 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories and seal existing coping joints.
Priority: 1 **Cost: \$5,000**

- 7 Complete tear-off of existing Roof Area 7 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$124,800**

- 8 Complete tear-off of existing Roof Area 8 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$20,800**

- 9 Complete tear-off of existing Roof Area 9 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$325,000**

- 10 Complete tear-off of existing Roof Area 10 and 11 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$65,000**

- 11 Complete tear-off of existing Roof Area 12 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$208,300**

- 12 Complete tear-off of existing Roof Area 13, 14 and 15 down to the deck, installation of a new roof membrane and tapered insulation and metal counterflashings and accessories.
Priority: 3 **Cost: \$18,200**

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Issues

Roof

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|----|---|--------------|-----------------|
| 13 | Investigate existing conditions to determine cause of leak. | | |
| | Priority: 1 | Cost: | \$5,000 |
| 14 | Complete tear-off of existing Roof Area 16 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories. | | |
| | Priority: 3 | Cost: | \$39,000 |
| 15 | Complete tear-off of existing Roof Area 17 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories. | | |
| | Priority: 3 | Cost: | \$6,800 |
| 16 | Complete tear-off of existing Roof Area 19 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories. | | |
| | Priority: 1 | Cost: | \$3,000 |
| 17 | Complete tear-off of existing Roof Area 20 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories. | | |
| | Priority: 1 | Cost: | \$5,000 |
| 18 | Complete tear-off of existing Roof Area 21 down to the deck, installation of a new roof membrane and insulation and metal counterflashings and accessories. | | |
| | Priority: 3 | Cost: | \$15,000 |
| 19 | Removal of building area discussed for Roof Area 22 is addressed in the Exterior Analysis. See Exterior Issues. | | |
| | Priority: N | Cost: | \$0 |

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- Overview: McHenry East High School consists of an original structure constructed in 1924, which is still used in its entirety. The original school is four stories with part of the lower level unexcavated. An addition to the original school was built in 1955, which provided classrooms to the south in a four story addition, extending along the east façade, culminating with a gymnasium and cafeteria. In 2003, an addition, which houses an event-sized gymnasium, running track, locker rooms, and lobby space, was built to the north of the original school. The current lower level floor plan totals 74,750 SF, the first level floor plan totals 52,880 SF, the second level floor plan totals 40,075 SF and the third level floor plan totals 36,960 SF (total SF = 204,665).
- Floors: Vinyl Composition Tile is found throughout the school in classrooms, corridors, cafeteria and support spaces. In the original school building and additions prior to the 2003 expansion, the VCT floors are in good to fair condition. Joints between tiles are separating and years of waxing has discolored some areas. The vinyl and rubber base conditions are fair to poor. There are sections of base missing occasionally. At many areas, the base is cracked, marred or painted inadvertently. The carpeting conditions are good in office areas, but the appearance is dated.
- Ceilings: Most spaces throughout the school consist of 2' x 4' acoustical ceiling tile in a suspended grid. Conditions of the ceiling tiles vary. A significant amount of tiles have an aged appearance due to sagging or random moisture stains/scuffs. In circulation areas, there exists gypsum board soffits with a painted finish. These are typically in good condition. At the lower level, corridors near the locker rooms have a dated plaster ceiling with visible patches in the finish.
- Walls: Many of the walls throughout the school are concrete block with a painted finish. The appearance varies by space, but walls are generally clean. The oldest portion of the school has a plaster finish on interior walls and some interior dividing walls. There are hairline cracks occasionally and patches, but the condition is generally good. Brick walls are exposed in the lobby and circulation areas of the 2002 addition, and where the additions meet the original school building. The brick walls are in good condition.
- Doors: Doors from corridors into adjacent spaces and cross-corridor doors are typically wood. Overall conditions are fair to poor due to damaged edges, missing veneer, and compromised hardware. Glass occurs in many doors at half-height panels and full-height panels across corridors. Glass does not carry the required tempered glass labels required by code, in many cases, and some glass panels have wire glass, which presents a safety concern. Doors which occur along rated corridors and at storage and custodial rooms are required to carry a rating and self-close. Most corridor doors lacked a closer or a rating.
- Windows: Exterior openings appeared to have been upgraded to aluminum framed, double panel windows in recent years. Sealant at the perimeter was in good condition. All updated windows include screens inside with a wicket to access the window operation. Many wickets are operating poorly. Interior sills at windows consist of aluminum, wood, or masonry, depending on the vintage of the building where they occur. There is one area where single glazed windows remain. These occur at Office B309E in the Administration area. The single glazed windows should be replaced with aluminum framed double pane windows.

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- Student Lockers: Metal lockers occur in the corridors throughout the building. Within the 1955 addition, lockers are pocketed into the walls for a flush appearance. In the 1924 building, the lockers are freestanding against the wall. Lockers have been repainted and some faces have been dented. Their condition is fair to good.
- Stairwells: Stairwells in the 1924 building consist of vinyl composition tile at landings with rubber treads and risers. Walls are painted plaster in good condition. Wall handrails are wood and center rails are cast steel. The rails are mounted at 31", below the standard hand rail requirement of 34". At downward runs of the stair, there is not sufficient height or spacing of rail members. Guard rails are below the required height at the top stairwell run. The stairwells on the fourth floor in 1924 building near the projection room lack a proper landing, and the door swings encroach on the exit width.

Issues

- 1 Replace vinyl composition tile in the 1924 building corridors (including vinyl base).
Priority: 3 **Cost: \$132,800**
- 2 Replace vinyl composition tile in the 1924 building classrooms (including vinyl base).
Priority: 3 **Cost: \$63,300**
- 3 Replace vinyl composition tile in the 1955 addition corridors (including vinyl base).
Priority: 3 **Cost: \$179,900**
- 4 Replace vinyl composition tile in the 1955 addition classrooms (including vinyl base).
Priority: 3 **Cost: \$48,700**
- 5 Replace acoustical ceiling tile system in all areas of the 1924 building.
Priority: 4 **Cost: \$171,500**
- 6 Replace acoustical ceiling tile system in all areas of the 1955 building.
Priority: 4 **Cost: \$200,000**
- 7 Remove and replace existing wood doors and hardware at all corridor openings in the 1924 building (see Life Safety - Combine with Issue #1).
Priority: 3 **Cost: \$127,500**
- 8 Remove and replace existing wood doors and hardware at all corridor openings in the 1955 addition (see Life Safety - Combine with Issue #1).
Priority: 3 **Cost: \$102,900**
- 9 Remove existing corridor student lockers and replace with welded metal lockers.
Priority: 4 **Cost: \$270,000**
- 10 Prep and electrostatically paint all necessary existing corridor lockers.
Priority: 4 **Cost: \$33,800**

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



**East Campus
McHenry Community HS District #156**

Analysis

- Due to the requirement of the Health/Life Safety reporting process, compliance with Accessibility requirements (Americans with Disabilities Act) is assessed within the Life Safety Section of this report.

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- Wire and plate glass at door vision panels throughout building.
- Exterior doors in poor condition throughout building (185.370 m.c.i.).
- Non-compliant guardrailings and non-tactile warning at top of three (3) stair locations.
- Non-compliant guardrailings and non-tactile warning at edges of Band Room, C418 tiered steps (175.401c NFPA 5-2, 2.b.b.c.).
- Stained acoustical lay-in ceiling tile - four (4) miscellaneous locations throughout building - (by SD156).
- Provide ADA signage throughout building (2010 ADA standards for Accessible Design).
- ADA Access to classrooms throughout building (2011 ADA standards for Accessible Design).
- Door missing on electrical and storage rooms (185.370 m.c.i.).
- Non-compliant stage curtains.
- Second exit required out of A400 Teacher Workroom.
- Second exits required out of C220 Wood Shop and C222 Metals Shop (175.410 b), (175.410d)3.
- Wood doors with louvers throughout building.
- Hollow metal door at Storage Room B216 has louver.
- Masonry Repairs (grinding/pointing, lintel flashing, sealant).
- Kick stops are used to hold rated stairwell doors open. All stairwell doors must be rated and remain closed - (by SD156).
- All assembly spaces are required to have maximum occupancy posted (NFPA 5).
- Site concrete has deteriorated beyond its useful life.
- Provide exhaust system with hood and makeup air unit for painting area at Metal Shop C222 (175.562, 185.460).
- Provide exhaust system with hood for kiln at Art B214A (175.562, 185.460).
- There is no exhaust provided for the nurses area - which will produce objectionable odors (175.562, 185.460)
- There is no dust collection system provided for shapers in the Wood Shop C220.

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

- There are transfer openings through the wall from old mechanical systems that were removed that are open between the corridor and the space that do not maintain the fire rating of the corridor wall at Mechanical Room B211 (NFPA 90A).
- The existing mop sink has a hose connection without backflow protection (State Plumbing Code 890.1130).
- Areas not properly covered by emergency lighting (185.57/175.480/BOCA1024).
- Areas not properly covered by exit signs (185.37/175.480/BOCA1023).
- Missing fire alarm initiating device (pull station, smoke detector, heat detector or dust detector) (NFPA 72, 185.580, 185.590, 175.460, 175.470).
- School does not have functioning carbon monoxide detectors (105 ILCS 5/10-20.56).
- Much of the electrical distribution equipment is original to the facility and has not been tested for compliance. In addition, it is assumed that very little periodic maintenance has been completed (NFPA 70B).
- Ground fault circuit interrupters are required within 6' of water source to protect receptacles - (By SD156).
- Industrial arts classroom equipment must have an emergency shut off (NFPA 79 9.2.5.4.2).
- Tamper resistant receptacles are required in child care facilities - (By SD156) (NEC 406.14)
- Missing fire alarm indicating device (visual or audio/visual) (NFPA 72, IAC 400.310).

Issues

- | | | | |
|---|---|--------------|------------------|
| 1 | Replace non-compliant glass in doors with compliant tempered glass. | | |
| | Priority: 2 | Cost: | \$246,000 |
| 2 | Remove existing exterior doors, frames, and hardware and furnish and install new. | | |
| | Priority: 2 | Cost: | \$60,000 |
| 3 | Reconstruct guardrails to meet height/spacing requirements. | | |
| | Priority: 3 | Cost: | \$90,000 |
| 4 | Remove existing guardrails and furnish and install new code complying guardrails. | | |
| | Priority: 3 | Cost: | \$24,000 |
| 5 | Remove existing ceiling tile and replace with new.* | | |
| | Priority: 2 | Cost: | \$9,600 |
| 6 | Furnish and install new ADA signage throughout.* | | |
| | Priority: 3 | Cost: | \$30,000 |

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Issues

- | | | | |
|----|---|--------------|------------------|
| 7 | Furnish and install new recessed ADA access to classrooms throughout. | | |
| | Priority: 5 | Cost: | \$180,000 |
| 8 | Furnish and install new fire-rated doors at electrical and storage rooms. | | |
| | Priority: 3 | Cost: | \$90,000 |
| 9 | Replace stage curtains with fire retardant, compliant system. | | |
| | Priority: 5 | Cost: | \$90,000 |
| 10 | Provide a second exit from A400 Teacher Workroom. | | |
| | Priority: 2 | Cost: | \$24,000 |
| 11 | Furnish and install second exits out of Wood Shop C220 and Metals Shop C222. | | |
| | Priority: 2 | Cost: | \$30,000 |
| 12 | Remove and replace all doors with louvers where rated openings are required. | | |
| | Priority: 5 | Cost: | \$126,000 |
| 13 | Replace Storage Room Door B216 door with rated assembly. | | |
| | Priority: 5 | Cost: | \$4,200 |
| 14 | Perform exterior masonry repairs, including tuckpointing, lintel flashing and sealing.* (Add to Exterior Section tuckpointing costs). | | |
| | Priority: 5 | Cost: | \$120,000 |
| 15 | Remove all kick-stops. | | |
| | Priority: 2 | Cost: | \$480 |
| 16 | Furnish and install maximum occupancy signage in all assembly spaces. | | |
| | Priority: 2 | Cost: | \$1,800 |
| 17 | Remove portions of deteriorated concrete and replace with new. | | |
| | Priority: 2 | Cost: | \$90,000 |
| 18 | Install new exhaust and makeup air systems for paint booth. | | |
| | Priority: 3 | Cost: | \$42,000 |
| 19 | Install new exhaust for kiln hood. | | |
| | Priority: 3 | Cost: | \$18,000 |
| 20 | Install new exhaust fan and ductwork. | | |
| | Priority: 5 | Cost: | \$9,000 |
| 21 | Provide individual dust collection systems or expand existing system to serve the shapers. | | |
| | Priority: 3 | Cost: | \$12,000 |
| 22 | Seal wall penetration to provide rated separation of corridor wall.* | | |
| | Priority: 3 | Cost: | \$3,000 |

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



**East Campus
McHenry Community HS District #156**

Issues

- | | | | |
|----|--|--------------|-----------------|
| 23 | Provide vacuum breaker on faucet.
Priority: 2 | Cost: | \$1,800 |
| 24 | Modify existing emergency lighting.
Priority: 2 | Cost: | \$43,200 |
| 25 | Modify existing exit signage.* (Included in Electrical Systems).
Priority: 2 | Cost: | \$0 |
| 26 | Provide upgrade to fire alarm system.* (Included in Electrical Systems).
Priority: 2 | Cost: | \$0 |
| 27 | Provide new carbon monoxide detectors.
Priority: 2 | Cost: | \$600 |
| 28 | Test and provide periodic maintenance on original electrical equipment.
Priority: 3 | Cost: | \$93,600 |
| 29 | Install new GFCI receptacle at locations within 6' of water sources.
Priority: 2 | Cost: | \$18,000 |
| 30 | Provide emergency electrical shut off at Industrial Shop Classrooms.
Priority: 2 | Cost: | \$27,000 |
| 31 | Install new tamper resistant receptacles in Child Care areas.
Priority: 1 | Cost: | \$6,000 |
| 32 | Provide upgrade to fire alarm system.
Priority: 2 | Cost: | \$30,000 |

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



**East Campus
McHenry Community HS District #156**

Analysis

- Based on the information provided by District's Environmental Consultant, Phoenix Consulting Services Group, LLC, we understand there is floor tile and attached mastic suspected of containing asbestos. This condition was observed in the following rooms: B204, B205, Stairwell E, B217, C219, C221, C227, B303, B307, B308, Hallway by B308, LRC by outer wall, C325, C427, C431, Band Room (C418), B402, B403, B406, B409, B411, B412, B413, and B414. The approximate total of these floor areas is 14,600 SF.

Issues

- 1 Abate existing floor tile and mastic suspected of containing asbestos in the rooms identified.
Priority: 2 **Cost: \$84,315**

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

Heating and Ventilation

- Heating and cooling is provided to most of the facility by sixty-five (65) self-contained heat pumps, located within the space they serve. The units were installed in 2003 and are nearing the end of their useful life. Staff indicated the unit are difficult to maintain due to the unit configuration, and are extremely noisy and disruptive to students due to intermittent compressor staging.
- Heating and cooling is provided to large spaces (i.e. gyms, cafeteria, locker rooms, etc.) via indoor air handling units and packaged rooftop units. All units utilize electric heat, which can be very costly. All rooftop units were installed in 2003 and are in good condition. The air handling unit serving Home Construction was installed recently and is in excellent condition. The air handling unit serving the Locker Rooms (1924 building) is in decent operating condition, but has outlived its useful life.
- Several split system ceiling cassettes provide supplemental cooling to critical areas and are in good condition.
- Toilet Rooms and specialty spaces are provided with a means of exhaust as required by the applicable Code and appear to be in good condition.
- No exhaust system is provided in the Chemistry Storage/Prep Room.
- All equipment is controlled and monitored through the building automation system (BAS). Several BAS components have failed and are in need of replacement, which often results in challenges integrating new components with the old system architecture. Due to the age of the BAS and the potential incompatibility issues associated with component replacements; consideration should be given to replacing the entire BAS.

Plumbing

- A 6 inch domestic water service is located in the First Floor Boiler Room, where it is metered.
- Domestic hot water is provided by three (3) water heaters located in the First Floor Boiler Room.
- Domestic water is distributed throughout the building by both galvanized (1924 building and 1960 addition) and copper (2003 addition) pipes. The galvanized pipes have outlived their useful life, but Staff indicated they have not experienced any significant failures.
- All plumbing fixtures appear to be in good condition.

Fire Protection

- A 6 inch fire protection service is located in the First Floor Boiler Room, which serves the 2003 addition only. No areas of the building are protected by a fire suppression system.

Issues

Heating and Ventilation

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Issues

Heating and Ventilation

- 1 Replace sixty-five (65) heat pumps with new, similar equipment.
Priority: N **Cost: \$1,267,500**

- 2 Replace sixty-five (65) heat pumps with variable refrigerant flow (VRF) system, provide dedicated outside air units for ventilation. Replace eight (8) existing rooftop air handling units.
Priority: 2 **Cost: \$9,037,360**

- 3 Replace Locker Room (1924 building) air handling unit with energy recovery unit.
Priority: 2 **Cost: \$50,000**

- 4 Provide exhaust system for Chemistry Storage/Prep Room.
Priority: 2 **Cost: \$7,500**

- 5 Replace building automation system.
Priority: 2 **Cost: \$1,277,110**

- 6 Replace eight (8) electric roof top units with gas fired units and provide gas piping.
Priority: N **Cost: \$1,310,000**

Plumbing

- 1 Replace all galvanized domestic water piping with copper.
Priority: 2 **Cost: \$208,685**

Fire Protection

- 1 Extend fire protection coverage throughout the entire facility.
Priority: 4 **Cost: \$811,550**

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Analysis

Service and Distribution

- The electrical service and most of the distribution is 15 years old and is in good working order.
- The following panels and associated feeders are original to the building (1970) and should be replaced: 1C1, 1C2, 1C4, 1C5, 1C6, 1C7, 1C8, 1C9, 2C6, 2C16, 2C8, 2C9, 2C15, 2C13, 2C14, 2C4, 3C1, 3C2, 3C6, 3C7, 4C1, 4C2, 4C3, 4C4, 4C5, 4C6.
- The following panels are from 1991 and are approaching end of life in approximately 4 years and should be replaced: 1B1, 1B2, 2A1, 2B1, 2B2, 2B5, 2B6, 2B8, 3B6, 3B3, 3B2, 3B1, 4B1, 4B4.
- The following panels do not have code required work clearances:
 - 1B4 and 1B5 (mounted on side of stairwell)
 - 2C13 has a water heater shelf mounted in front of the panel
 - 3B3 (mounted on side of stairwell)

Interior Lighting

- The lighting is original to the building and consists of fluorescent fixtures with T8 lamps.
- There are no occupancy sensors in the building.
- There is insufficient exit sign coverage throughout the building.
- There is insufficient emergency egress lighting throughout the building.

Fire Alarm

- The fire alarm is a newer Simplex 4100 analog addressable system and is in good working order.
- There are areas that do not have smoke or heat detector coverage, that are required by code.
- There are rooms that should have fire alarm visual devices.

Exterior Lighting

- All of the exterior lighting has been replaced with LED fixtures.

Power

- In the kitchen, all of the receptacles should be GFCI type.

Issues

Service and Distribution

- 1 Replace the existing older panels and feeders.

Priority: 3

Cost: \$338,000

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandability



East Campus McHenry Community HS District #156

Issues

Service and Distribution

- | | | | | |
|---|--|--------------------|--------------|-----------------|
| 2 | Replace the existing older panels and feeders. | Priority: 3 | Cost: | \$91,000 |
| 3 | Relocate panels (1B4 and 1B5) to area that is not a stair area.* | Priority: 2 | Cost: | \$26,000 |
| 4 | Relocate panel (2C13) out of janitors closet where shelf obstructs.* | Priority: 2 | Cost: | \$13,000 |
| 5 | Relocate panel (3B3) to area that is not a stair area.* | Priority: 2 | Cost: | \$13,000 |

Interior Lighting

- | | | | | |
|---|---|--------------------|--------------|--------------------|
| 1 | Replace or retrofit all of the T8 light fixtures with new LED fixtures. | Priority: 3 | Cost: | \$2,033,800 |
| 2 | Add occupancy sensors into the entire building (included with lighting). | Priority: 3 | Cost: | \$0 |
| 3 | Add approximately 22 new exit signs into the building.* | Priority: 2 | Cost: | \$28,600 |
| 4 | Add additional emergency power life safety lighting circuits and refeed existing lighting fixtures to the emergency power system. | Priority: 2 | Cost: | \$104,000 |

Fire Alarm

- | | | | | |
|---|---|--------------------|--------------|-----------------|
| 1 | Add approximately 16 heat or smoke detectors.* | Priority: 2 | Cost: | \$31,200 |
| 2 | Add approximately 34 visual or audio/visual devices.* | Priority: 2 | Cost: | \$66,300 |

Exterior Lighting

- | | | | | |
|---|---|--------------------|--------------|------------|
| 1 | All of the exterior lighting has been replaced with LED fixtures. | Priority: N | Cost: | \$0 |
|---|---|--------------------|--------------|------------|

Power

- | | | | | |
|---|---|--------------------|--------------|------------|
| 1 | Replace all receptacles with GFCI type (included in Life Safety Section). | Priority: 2 | Cost: | \$0 |
|---|---|--------------------|--------------|------------|

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Site	Exterior	Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Expandibility



East Campus McHenry Community HS District #156

Analysis

- Per discussion with Joe Zelek, Director of Network Technology Services, several technology related improvements were identified. Each is listed in the Issues section with an estimated cost.

Issues

- | | | | |
|---|---|--------------|-----------------|
| 1 | Provide a 10-gig fiber upgrade at East Campus. | | |
| | Priority: 1 | Cost: | \$24,000 |
| 2 | Provide card access at East Campus. | | |
| | Priority: 1 | Cost: | \$50,000 |
| 3 | Replace the marquee sign at northwest corner of the site. | | |
| | Priority: 1 | Cost: | \$25,000 |



**East Campus
McHenry Community HS District #156**

SITE	\$311,270.00
EXTERIOR	\$2,243,700.00
INTERIOR	\$1,330,400.00
LIFE SAFETY	\$1,520,280.00
HAZARDOUS MATERIALS	\$84,315.00
MECHANICAL SYSTEMS	\$13,969,705.00
ELECTRICAL SYSTEMS	\$2,744,900.00
TECHNOLOGY	\$99,000.00
Total Cost	\$22,303,570.00



McHenry Community HS District #156 Executive Summary

East Campus

East Campus

SITE

1	Mill and repave bus lane. Improve drainage to existing catch basins.	Priority: 3	\$41,750
2	Replace damaged sections of concrete sidewalks adjacent to bus lane.	Priority: 2	\$5,620
3	Reconstruct concrete delivery ramps, retaining walls and safety rails at two locations on east side	Priority: 2	\$0
4	Regrade soil conditions adjacent to east (near receiving) catch basin to provide positive drainage	Priority: 3	\$1,000
5	Remove the south and west bituminous walkways and replace with a concrete sidewalk.	Priority: 3	\$13,800
6	Replace the metal rail at the concrete retaining wall on the south side of building.	Priority: 3	\$2,500
7	Replace damaged and missing components at condensing unit "cages".	Priority: 3	\$800
8	Reconstruct masonry retaining walls at the southwest entrance stair.	Priority: 2	\$15,600
9	Remove damaged sections of perimeter concrete walk on the west property edge (approximately 15%	Priority: 3	\$6,500
10	Upgrade parking lot area south of temporary building structure. Mill 2" asphalt surface and place 2"	Priority: 2	\$203,000
11	Upgrade parking lot area north of temporary building structure. Mill 2" asphalt surface and place 2"	Priority: 2	\$20,700

EXTERIOR

1	Tuckpoint various areas around the building.	Priority: 2	\$38,000
2	Remove rust from lintels and paint with rust prohibitive paint.	Priority: 2	\$7,000
3	Replace window sealant in 3-5 years.	Priority: 2	\$100,000
4	Replace existing doors, frames, hardware and glazing located at the west entrances (included in Life	Priority: 2	\$0
5	Sandblast the paint off of the concrete at the west entrances. Apply an epoxy paint to the concrete walls.	Priority: 3	\$3,500
6	Repair the concrete foundation adjacent to Learning Management and 2D Art and apply a new concrete	Priority: 2	\$6,500
7	Rake out the existing mortar joints of the clay tile band and stone lintels and install sealant.	Priority: 2	\$25,000
8	Install sealant in open expansion and masonry joints.	Priority: 2	\$1,300
9	Install a screen over the open end of the overflow downspouts.	Priority: 3	\$800
10	Remove and reinstall existing sills with correct pitch to exterior face of wall at the exterior wall	Priority: 2	\$9,000
11	Install a barrier between the canopy and the conditioned space. Install proper ventilation. Repair the	Priority: 2	\$19,500
12	Rake out the existing mortar and install new sealant all around the glass block.	Priority: 2	\$13,000
13	Demolish the dilapidated portion of the building on the east side near the graphics room and repair	Priority: 2	\$26,000

EXTERIOR

1	Complete tear-off of existing Roof Area 1 down to the deck, installation of a new roof membrane and	Priority: 1	\$712,000
2	Complete tear-off of existing Roof Area 2 down to the deck, installation of a new roof membrane and	Priority: 2	\$314,000
3	Complete tear-off of existing Roof Area 3 down to the deck, installation of a new roof membrane and	Priority: 3	\$10,600
4	Complete tear-off of existing Roof Area 4 down to the deck, installation of a new roof membrane and	Priority: 1	\$106,000
5	Complete tear-off of existing Roof Area 5 down to the deck, installation of a new roof membrane and	Priority: 3	\$10,600
6	Complete tear-off of existing Roof Area 6 down to the deck, installation of a new roof membrane and	Priority: 1	\$5,000
7	Complete tear-off of existing Roof Area 7 down to the deck, installation of a new roof membrane and	Priority: 3	\$124,800
8	Complete tear-off of existing Roof Area 8 down to the deck, installation of a new roof membrane and	Priority: 3	\$20,800
9	Complete tear-off of existing Roof Area 9 down to the deck, installation of a new roof membrane and	Priority: 3	\$325,000



McHenry Community HS District #156 Executive Summary

East Campus

10 Complete tear-off of existing Roof Area 10 and 11 down to the deck, installation of a new roof	Priority: 3	\$65,000
11 Complete tear-off of existing Roof Area 12 down to the deck, installation of a new roof membrane and	Priority: 3	\$208,300
12 Complete tear-off of existing Roof Area 13, 14 and 15 down to the deck, installation of a new roof	Priority: 3	\$18,200
13 Investigate existing conditions to determine cause of leak.	Priority: 1	\$5,000
14 Complete tear-off of existing Roof Area 16 down to the deck, installation of a new roof membrane and	Priority: 3	\$39,000
15 Complete tear-off of existing Roof Area 17 down to the deck, installation of a new roof membrane and	Priority: 3	\$6,800
16 Complete tear-off of existing Roof Area 19 down to the deck, installation of a new roof membrane and	Priority: 1	\$3,000
17 Complete tear-off of existing Roof Area 20 down to the deck, installation of a new roof membrane and	Priority: 1	\$5,000
18 Complete tear-off of existing Roof Area 21 down to the deck, installation of a new roof membrane and	Priority: 3	\$15,000
19 Removal of building area discussed for Roof Area 22 is addressed in the Exterior Analysis.	Priority: N	\$0

INTERIOR

1 Replace vinyl composition tile in the 1924 building corridors (including vinyl base).	Priority: 3	\$132,800
2 Replace vinyl composition tile in the 1924 building classrooms (including vinyl base).	Priority: 3	\$63,300
3 Replace vinyl composition tile in the 1955 addition corridors (including vinyl base).	Priority: 3	\$179,900
4 Replace vinyl composition tile in the 1955 addition classrooms (including vinyl base).	Priority: 3	\$48,700
5 Replace acoustical ceiling tile system in all areas of the 1924 building.	Priority: 4	\$171,500
6 Replace acoustical ceiling tile system in all areas of the 1955 building.	Priority: 4	\$200,000
7 Remove and replace existing wood doors and hardware at all corridor openings in the 1924 building	Priority: 3	\$127,500
8 Remove and replace existing wood doors and hardware at all corridor openings in the 1955 addition	Priority: 3	\$102,900
9 Remove existing corridor student lockers and replace with welded metal lockers.	Priority: 4	\$270,000
10 Prep and electrostatically paint all necessary existing corridor lockers.	Priority: 4	\$33,800

LIFE SAFETY

1 Replace non-compliant glass in doors with compliant tempered glass.	Priority: 2	\$246,000
2 Remove existing exterior doors, frames, and hardware and furnish and install new.	Priority: 2	\$60,000
3 Reconstruct guardrails to meet height/spacing requirements.	Priority: 3	\$90,000
4 Remove existing guardrails and furnish and install new code complying guardrails.	Priority: 3	\$24,000
5 Remove existing ceiling tile and replace with new.*	Priority: 2	\$9,600
6 Furnish and install new ADA signage throughout.*	Priority: 3	\$30,000
7 Furnish and install new recessed ADA access to classrooms throughout.	Priority: 5	\$180,000
8 Furnish and install new fire-rated doors at electrical and storage rooms.	Priority: 3	\$90,000
9 Replace stage curtains with fire retardant, compliant system.	Priority: 5	\$90,000
10 Provide a second exit from A400 Teacher Workroom.	Priority: 2	\$24,000
11 Furnish and install second exits out of Wood Shop C220 and Metals Shop C222.	Priority: 2	\$30,000
12 Remove and replace all doors with louvers where rated openings are required.	Priority: 5	\$126,000
13 Replace Storage Room Door B216 door with rated assembly.	Priority: 5	\$4,200
14 Perform exterior masonry repairs, including tuckpointing, lintel flashing and sealing.* (Add to Exterior	Priority: 5	\$120,000
15 Remove all kick-stops.	Priority: 2	\$480



McHenry Community HS District #156 Executive Summary

East Campus

16 Furnish and install maximum occupancy signage in all assembly spaces.	Priority: 2	\$1,800
17 Remove portions of deteriorated concrete and replace with new.	Priority: 2	\$90,000
18 Install new exhaust and makeup air systems for paint booth.	Priority: 3	\$42,000
19 Install new exhaust for kiln hood.	Priority: 3	\$18,000
20 Install new exhaust fan and ductwork.	Priority: 5	\$9,000
21 Provide individual dust collection systems or expand existing system to serve the shapers.	Priority: 3	\$12,000
22 Seal wall penetration to provide rated separation of corridor wall.*	Priority: 3	\$3,000
23 Provide vacuum breaker on faucet.	Priority: 2	\$1,800
24 Modify existing emergency lighting.	Priority: 2	\$43,200
25 Modify existing exit signage.* (Included in Electrical Systems).	Priority: 2	\$0
26 Provide upgrade to fire alarm system.* (Included in Electrical Systems).	Priority: 2	\$0
27 Provide new carbon monoxide detectors.	Priority: 2	\$600
28 Test and provide periodic maintenance on original electrical equipment.	Priority: 3	\$93,600
29 Install new GFCI receptacle at locations within 6' of water sources.	Priority: 2	\$18,000
30 Provide emergency electrical shut off at Industrial Shop Classrooms.	Priority: 2	\$27,000
31 Install new tamper resistant receptacles in Child Care areas.	Priority: 1	\$6,000
32 Provide upgrade to fire alarm system.	Priority: 2	\$30,000

HAZARDOUS MATERIALS

1 Abate existing floor tile and mastic suspected of containing asbestos in the rooms identified.	Priority: 2	\$84,315
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MECHANICAL SYSTEMS

1 Replace sixty-five (65) heat pumps with new, similar equipment.	Priority: N	\$1,267,500
2 Replace sixty-five (65) heat pumps with variable refrigerant flow (VRF) system, provide dedicated	Priority: 2	\$9,037,360
3 Replace Locker Room (1924 building) air handling unit with energy recovery unit.	Priority: 2	\$50,000
4 Provide exhaust system for Chemistry Storage/Prep Room.	Priority: 2	\$7,500
5 Replace building automation system.	Priority: 2	\$1,277,110
6 Replace eight (8) electric roof top units with gas fired units and provide gas piping.	Priority: N	\$1,310,000

MECHANICAL SYSTEMS

1 Replace all galvanized domestic water piping with copper.	Priority: 2	\$208,685
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MECHANICAL SYSTEMS

1 Extend fire protection coverage throughout the entire facility.	Priority: 4	\$811,550
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ELECTRICAL SYSTEMS

1 Replace the existing older panels and feeders.	Priority: 3	\$338,000
2 Replace the existing older panels and feeders.	Priority: 3	\$91,000
3 Relocate panels (1B4 and 1B5) to area that is not a stair area.*	Priority: 2	\$26,000
4 Relocate panel (2C13) out of janitors closet where shelf obstructs.*	Priority: 2	\$13,000
5 Relocate panel (3B3) to area that is not a stair area.*	Priority: 2	\$13,000

ELECTRICAL SYSTEMS

1 Replace or retrofit all of the T8 light fixtures with new LED fixtures.	Priority: 3	\$2,033,800
2 Add occupancy sensors into the entire building (included with lighting).	Priority: 3	\$0



McHenry Community HS District #156 Executive Summary

East Campus

- | | | | |
|---|---|-------------|------------------|
| 3 | Add approximately 22 new exit signs into the building.* | Priority: 2 | \$28,600 |
| 4 | Add additional emergency power life safety lighting circuits and refeed existing lighting fixtures to the | Priority: 2 | \$104,000 |

ELECTRICAL SYSTEMS

- | | | | |
|---|---|-------------|-----------------|
| 1 | Add approximately 16 heat or smoke detectors.* | Priority: 2 | \$31,200 |
| 2 | Add approximately 34 visual or audio/visual devices.* | Priority: 2 | \$66,300 |

ELECTRICAL SYSTEMS

- | | | | |
|---|---|-------------|------------|
| 1 | All of the exterior lighting has been replaced with LED fixtures. | Priority: N | \$0 |
|---|---|-------------|------------|

ELECTRICAL SYSTEMS

- | | | | |
|---|---|-------------|------------|
| 1 | Replace all receptacles with GFCI type (included in Life Safety Section). | Priority: 2 | \$0 |
|---|---|-------------|------------|

TECHNOLOGY

- | | | | |
|---|---|-------------|-----------------|
| 1 | Provide a 10-gig fiber upgrade at East Campus. | Priority: 1 | \$24,000 |
| 2 | Provide card access at East Campus. | Priority: 1 | \$50,000 |
| 3 | Replace the marquee sign at northwest corner of the site. | Priority: 1 | \$25,000 |



**East Campus
McHenry Community HS District #156
Cost Analysis By Category By Priority**

CATEGORY:	Priority 1:	Priority 2:	Priority 3:	Priority 4:	Priority 5:	Priority 6:	Not Prioritized	Total
SITE	\$0	\$244,920	\$66,350	\$0	\$0	\$0	\$0	\$311,270
EXTERIOR	\$836,000	\$559,300	\$848,400	\$0	\$0	\$0	\$0	\$2,243,700
INTERIOR	\$0	\$0	\$655,100	\$675,300	\$0	\$0	\$0	\$1,330,400
ACCESSIBILITY	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LIFE SAFETY	\$6,000	\$582,480	\$402,600	\$0	\$529,200	\$0	\$0	\$1,520,280
HAZARDOUS MATERIALS	\$0	\$84,315	\$0	\$0	\$0	\$0	\$0	\$84,315
MECHANICAL SYSTEMS	\$0	\$10,580,655	\$0	\$811,550	\$0	\$0	\$2,577,500	\$13,969,705
ELECTRICAL SYSTEMS	\$0	\$282,100	\$2,462,800	\$0	\$0	\$0	\$0	\$2,744,900
TECHNOLOGY	\$99,000	\$0	\$0	\$0	\$0	\$0	\$0	\$99,000
Totals:	\$941,000	\$12,333,770	\$4,435,250	\$1,486,850	\$529,200	\$0	\$2,577,500	\$22,303,570



McHenry Community HS District #156 Cost Analysis By Priority-All Buildings

BUILDING:	Priority 1:	Priority 2:	Priority 3:	Priority 4:	Priority 5:	Priority 6:	Not Prioritize	Total
East Campus	\$941,000	\$12,333,770	\$4,435,250	\$1,486,850	\$529,200	\$0	\$2,577,500	\$22,303,570
Totals:	\$941,000	\$12,333,770	\$4,435,250	\$1,486,850	\$529,200		\$2,577,500	

Totals By Facility Analysis Categories

Facility:	Site	Building Exterior	Building Interior	Accessibility	Life Safety	Hazardous Materials	Mechanical Systems	Electrical Systems	Program	Technology	Totals:
East Campus	\$311,270	\$2,243,700	\$1,330,400	\$0	\$1,520,280	\$84,315	\$13,969,705	\$2,744,900	\$0	\$99,000	\$22,303,570
Category Totals:	\$311,270	\$2,243,700	\$1,330,400	\$0	\$1,520,280	\$84,315	\$13,969,705	\$2,744,900		\$99,000	