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Facility Analysis For

West Campus

McHenry, Illinois

McHenry Community HS District #156

March 16, 2018

Revised:

May 9, 2018

Project No. 173055



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**
This section addresses the factors involved in any increase in building size or modification of the facilities.
- 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 2015 project costs.



Facility Analysis Prioritization McHenry Community HS District #156

PRIORITIZATION CATEGORIES

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

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| 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)**

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| 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)**

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| 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)**

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| 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.



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



Address: 4724 West Crystal Lake Road
McHenry, Illinois 60050

Contact: Marsha Potthoff

Phone: 815-385-7077

Year(s) Built: 1969, 2002

Gross Area: 293,078 S.F.

Site Area: 43.68 Acres

Parking: 635

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



West Campus McHenry Community HS District #156

Analysis

- West High School Campus is borders by Crystal Lake Avenue to the east, visitor and staff parking to the north, athletic fields to the west and student parking and green space with a creek to the south. Storm detention is located to the east and overflow goods into the creek. Serpentine wetland is located at the south end of the site. The main entrance is at the north end of the building and the athletic/events entrance is located at the south end of the building. The north and south parking lots are accessed from Crystal Lake Avenue. Lawn areas are located on the east side of the building. An access road is located on the east side of the building which ties the parking lots together and provides access to the District garage and receiving area along with access to the auto shop and other vocational spaces. There are currently two mobile classroom units located west of the building.

- The parking lot for the Administration Center is contiguous with the north school parking lot. The access drive to the east of the Administration Center does have some "alligating" and is in need of repair.

- The north and south parking lot paving has been seal coated two years ago and the paving and striping appear to be in good condition. The curbs also appear to be in good condition other than those mentioned later in the report.

- The north entrance appears to be in good condition and fully accessible.

- The bus drop off is located on the east side of the building between the building and Crystal Lake Avenue. The pavement is asphalt and there is some "alligating" occurring along with some cracks. The curb along a majority of the bus lane is in poor condition and should be replaced.

- Some areas of the sidewalk adjacent to the bus lane have settled and form a trip hazard.

- Near the south end of the bus lane an inlet has settled and broken the curb and sidewalk and a manhole has settled in the sidewalk and caused the sidewalk to crack and settle, causing a tripping hazard.

- Near the north end of the bus lane, there appears to be no tactile warning at the depressed curb.

- The lawn area to the east of the building is in poor condition and requires some minor grading and reseeding.

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West Campus McHenry Community HS District #156

Analysis

- The south entrance plaza is concrete and there are multiple cracks in the sidewalk which require repair. The curb at the west end of the separation island just south of the plaza is broken and deteriorated and needs to be replaced.
- A common occurrence on the east side of the building, consists of a gap between the building, and the sidewalk, which is not sealed. This can allow water to penetrate below the sidewalk and cause issues over time due to freeze and thaw.
- The west access drive paving is in fair condition other than heaving that has occurred at four catch basins located in the drive. The paving must be reworked around the catch basins to provide a level driving surface.
- Tennis courts are located to the west of the building. There are cracks in the asphalt and there is one large crack that runs the full width of the court. There are also areas in the asphalt where posts have been removed and the holes were patched poorly.
- A retaining wall is located near the mobiles and the concrete has deteriorated and requires repair. The sidewalk adjacent to the retaining wall has settled and cracked.
- The baseball fields are located to the east of the building and appear to be in good condition. Concrete block dugouts and a backstop are located at the field.
- Concrete side walk along the east side of the school adjacent to Crystal Lake Avenue is in good condition and tactile waring is provided at the intersection with entrance drives.
- Multiple concrete paving panels have cracked and settled at the receiving area.
- The coating on the ramp near the west retaining wall has deteriorated.
- Concrete plaza panels at the northwest stair plaza have settled and the coating on the stairs has deteriorated. Corner of the concrete plaza has broken off and exposed the railing supports.
- The control joints of the sidewalk at the base of the northwest stair have spalled and cause a tripping hazard.

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West Campus McHenry Community HS District #156

Analysis

- A dock is located on the north end of the building. The height of the guard rail is 35". There is cracking and spalled concrete in this area where the concrete has been patched previously. It appears that water from condensate from unit ventilators is penetrating cracks and then freezes and spall the concrete.
- Trim on the overhead doors of the Grounds Garage is rusted and there is some missing trim.
- Hollow metal doors and frames have rusted in the Grounds Garage.
- Mortar is in poor condition at an area of masonry infill in the Grounds Garage.
- Sealant around the windows is in poor condition in the Grounds Garage.

Issues

- 1 Remove existing asphalt, repair/compact stone base and install new asphalt at various locations.
Priority: 2 **Cost: \$3,120**
- 2 Remove existing asphalt, repair/compact stone base and install new asphalt at the north half of the south parking lot.
Priority: 2 **Cost: \$390,000**
- 3 Remove existing concrete curb, compact stone base and install new concrete curb. Patch/repair adjacent concrete sidewalk as needed.
Priority: 2 **Cost: \$6,500**
- 4 Remove existing sidewalk panel, compact stone base and install new concrete sidewalk panel(s).
Priority: 2 **Cost: \$1,300**
- 5 Remove existing inlet and install new stone base, compact base and install new inlet and concrete sidewalk panels.
Priority: 2 **Cost: \$3,900**
- 6 Remove existing concrete depressed curb and install new concrete with tactile warning panels.
Priority: 2 **Cost: \$2,600**

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West Campus McHenry Community HS District #156

Issues

- 7 Re-grade existing landscape area and install new topsoil and reseed.
Priority: 3 **Cost: \$3,900**
- 8 Remove existing concrete sidewalk panels and compact base and install new concrete panels and replace existing curb at south entrance.
Priority: 2 **Cost: \$4,500**
- 9 Fill gap with expansion joint material and install horizontal traffic sealant.
Priority: 2 **Cost: \$1,300**
- 10 Remove existing asphalt around the manholes, reset the manholes and install new stone base as required for installation of new asphalt to align with top of manholes and install new asphalt all around.
Priority: 3 **Cost: \$13,000**
- 11 Fill cracks and install new court surface over the filled cracks.
Priority: 1 **Cost: \$10,000**
- 12 Remove existing concrete sidewalk panels near the retaining wall and compact base and install new concrete panels.
Priority: 2 **Cost: \$2,600**
- 13 Remove existing concrete paving panels at the receiving area, compact base, and install new heavy-duty concrete paving.
Priority: 2 **Cost: \$11,400**
- 14 Remove existing coating on ramp near west retaining wall and prepare/repair concrete sidewalk and install new membrane if required.
Priority: 2 **Cost: \$5,200**
- 15 Remove existing concrete plaza and sidewalk panels, install new panels, repair corner of concrete plaza and install new finish on stairs.
Priority: 2 **Cost: \$5,460**
- 16 Remove existing concrete sidewalk panels at base of northwest stair, compact base and install new concrete panels.
Priority: 2 **Cost: \$1,890**

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

Issues

- 17 Install additional railing on top of existing guardrail to raise the top of the guardrail to 42" above the top of the dock. Remove existing concrete sidewalk panels, compact stone base and install new concrete panels. Redirect the condensate drain to no longer drip on concrete.
Priority: 2 **Cost: \$4,160**

- 18 Replace existing metal trim at Grounds Garage.
Priority: 3 **Cost: \$900**

- 19 Replace hollow metal doors and frames at Grounds Garage.
Priority: 2 **Cost: \$4,500**

- 20 Remove mortar and tuckpoint masonry joints at Grounds Garage.
Priority: 2 **Cost: \$1,070**

- 21 Install sealant all around windows at Grounds Garage.
Priority: 2 **Cost: \$500**

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West Campus McHenry Community HS District #156

Analysis

- The exterior walls of the original building consist of cast in place concrete columns and beams with masonry infill panels. The exterior walls of the 2002 addition to the east are masonry bearing walls. The walls of the 2002 addition, to the south, consist of precast concrete panels.

- The windows throughout the building are aluminum frame with a combination of fixed and operable sashes. There is some curtain wall in the 2002 addition along with storefront. All aluminum framing appeared to be in good condition.

- The sealant around the openings appears to be in good condition. The screens were also in good condition except for a few with some slight tears.

- The exterior doors all around the building are hollow metal, painted or aluminum. The aluminum doors appear to be in good condition. There are hollow metal doors and frames in fair to poor condition. Those in poor condition need to be replaced. There are also metal overhead doors that are in fair condition, but the frames are rusting and deteriorating and need to be repaired or replaced.

- The Sealant is deteriorating all around the perimeter of the overhead door on the west side of the original building.

- The steel lintels above all openings appeared to be in fair to good condition.

- THE FOLLOWING SPECIFIC ITEMS WILL BE ADDRESSED BY ELEVATION:

North and West Elevations

- The Sealant is deteriorating all around the perimeter of the overhead door on the west side of the original building.

- The steel lintels above all openings appeared to be in fair to good condition.

- There is prevalent crazing in the masonry infill panels in the original building. There is also signs of moisture in the walls of the original building on the west side. It appears the entire perimeter of the masonry infill panels has been sealed, including at the base of the panels and no weeps are visible. Further investigation is recommended to determine the cause of the water/moisture infiltration and a solution.

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West Campus McHenry Community HS District #156

Analysis

North and West Elevations

- There are prevalent vertical cracks in the concrete beams of the original building. Some of the cracks run horizontal into the window recesses and into the building interior. Wold | Ruck Pate reviewed this condition onsite with a structural engineer and it was determined the cracks are shrinkage cracks and not a structural concern. There is an issue with the cracks allowing water to penetrate into the building.

West Elevation

- Original building - south to north.
- Sealant deteriorating between 1969 building and 2002 addition at expansion joint which can allow water to penetrate the building.
- Cracks in the mortar joints of the small CMU enclosure.
- The original electrical vault was located in the original building. There is an overhead door at the vault and the frame is rusting and there is a hole in the head of the frame. There are also signs of water seepage into the concrete wall near the vault.
- There are cracks in the walls of the west stair which require repair. The exterior railing, steps and platform are in poor condition as well.
- There is an open joint at end of the precast wall. Water can penetrate the opening.
- There is an opening around conduit and an outlet that are not sealed. Water can penetrate the openings.

South Elevation

- The sills of the windows at the west end are back pitched and the sealant joints have opened up. Standing water can penetrate the joints.
- Loose sheet metal and deteriorated sealant at the masonry wing wall allowing water to penetrate the building.
- There are signs of possible microbial growth at the south entrance soffit.
- The Sealant is deteriorating at the south entrance soffit which can allow water to penetrate the soffit and deteriorate the panels.

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West Campus McHenry Community HS District #156

Analysis

South Elevation

- The paint is deteriorating at the south entrance columns and sealant is required at the base to inhibit rusting.

North Elevation

- There are signs of water/moisture at the head of entrance door 9. This will have to be investigated further to determine the cause and solution.

Roof

- Overall, the majority of the roofs are in good condition. Most roofs will not require replacement until 8-10 years. There are a few exceptions and those are noted in the following report.
- See attached plan for roof area locations referenced in the report below.
- Roof 1 is in good condition. The roof will require replacement in approximately 8 years.
- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite cover board over tapered polyisocyanurate insulation.
- There are cracks in the top of the concrete parapet which allow water to penetrate the wall and possibly affect the structural integrity off the wall.
- The sealant has dried out at the termination bar and the counter flashing is in poor condition in some areas.
- There are areas of ponding and the insulation was reported as being wet in those areas. The insulation value is greatly reduced when it is wet.
- Roof 2 is in good condition and there are no issues.
- The roof system is the same as Roof 1 and will require replacement in 8-10 years.
- Roof 3 is in good condition. The roof will require replacement in approximately 8 years.

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West Campus McHenry Community HS District #156

Analysis

Roof

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite cover board over polyisocyanurate insulation on a sloped deck. A lightning rod system surrounds the perimeter of this roof.
- The pitch in the pitch pocket is dried out and needs to be replaced. This is an ongoing maintenance item.
- The EIFS walls surrounding this roof have many hairline/crazed cracks and open sealant joints which require attention and repair to eliminate possible water penetration issues.
- Roof 4 is in good condition and there are no issues.
- The roof system is the same as Roof 1 and will require replacement in 8-10 years.
- Roof 5 is in poor condition. The roof will require replacement in approximately 3 years.
- The roof system is a PVC membrane on polyisocyanurate insulation on a plywood deck.
- Roof 6 is in poor condition. The roof will require replacement in approximately 3 years.
- The roof system is a PVC membrane on polyisocyanurate insulation on a plywood deck.
- Roof 7.1 is in good condition. The roof will require replacement in approximately 8 years.
- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation on a metal deck.
- Roof 7.2 is in poor condition. The roof will require replacement in approximately 2 years.
- The roof system is an EPDM membrane on polyisocyanurate insulation on plywood on a metal deck.
- Roof 8 is in good condition. The roof will require replacement in approximately 10 years.

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



West Campus McHenry Community HS District #156

Analysis

Roof

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- Roof 9 is in fair condition. The roof will require replacement in approximately 6-8 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- The parapet and corner flashing need to be repaired soon.

- Roof 10 is in good condition. The roof will require replacement in approximately 10 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- There are cracks in the top of the parapet between roof 10 and 11 which will allow water to penetrate the wall.

- There are openings in the expansion joint sealant which will allow water to penetrate the building.

- Roof 11 is in good condition. The roof will require replacement in approximately 8 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite cover board over tapered polyisocyanurate insulation.

- There are cracks in the top of the parapet between roof 10 and 11 which will allow water to penetrate the wall.

- Sealant is drying out at the perimeter termination bar and requires replacement.

- The south exhaust fan box is not secured to the curb.

- The skylight domes are crazed and require replacement.

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



West Campus McHenry Community HS District #156

Analysis

Roof

- The face brick on the chimney needs to be tuck pointed and the concrete cap needs to be cleaned and repaired. The metal cap needs to be replaced.

- ROOF 12 is in fair condition. The roof will require replacement in approximately 6-7 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- There are cracks in the top of the concrete parapet which can allow water to penetrate the building.

- Roof 13 is in poor condition. The roof will require replacement in approximately 2-3 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite cover board over tapered polyisocyanurate insulation.

- There are cracks in the top of the parapet wall between Roof 13 and 14.

- There is a small area of blistering which exposes the tar and it will deteriorate at a more accelerated rate.

- Roof 14.1 is in fair condition. The roof will require replacement in approximately 5 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite cover board over tapered polyisocyanurate insulation.

- There are cracks in the top of the parapet wall between Roof 14.1 and 16.

- There are signs of excessive ponding at the west side which can cause wet insulation conditions which will reduce the insulation value.

- Roof 14.2 is in good condition and there are no issues. The roof will require replacement in 10 years.

- The roof system is EPDM membrane over multiple layers of polyisocyanurate insulation on a sloped structural steel deck.

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West Campus McHenry Community HS District #156

Analysis

Roof

- Roof 15 roof is in good condition. The roof will require replacement in approximately 8 years.
- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.
- The EIFS walls surrounding this this roof have many hairline/crazed cracks and open sealant joints which require attention and repair to eliminate possible water penetration issues. There are damaged areas at the base of the wall in several areas.
- There are cracks in the top of the concrete parapet which can allow water to penetrate the building.
- There are rusted exhaust hoods that are deteriorating and will require replacement.
- Roof 16 roof is in good condition. The roof will require replacement in approximately 8 years.
- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.
- There are cracks in the top of the concrete parapet which can allow water to penetrate the building. Steel bracing for the precast walls is exposed and rusting.
- Roof 17 roof is in good condition. The roof will require replacement in approximately 10 years.
- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.
- There is some thin wall conduit attached to the parapet that is rusting and requires replacement.
- There are open seams in the sealant of the soffit above and the top of the soffit panels are out of alignment.

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West Campus McHenry Community HS District #156

Analysis

Roof

- Roof 18 roof is in good condition and there are no issues. The roof will require replacement in approximately 10 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- Roof 19 roof is in good condition. The roof will require replacement in approximately 8 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- There is an open joint in the fascia at the tie into the precast concrete wall which will require repair to eliminate the possibility of water infiltration.

- Roof 20 roof is in good condition. The roof will require replacement in approximately 8 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

- There is an open joint in the fascia at the tie into the precast concrete wall which will require repair to eliminate the possibility of water infiltration. Tuckpointing is recommended for the mason-ry wall above the roof.

- Roof 21 roof is in Fair condition. The roof will require replacement in approximately 7 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation. Sealant is deteriorating and requires replacement.

- Roof 22 roof is in Fair condition. The roof will require replacement in approximately 6 years.

- The roof system is a built-up tar and gravel roof over a 1/2" thick perlite overboard over multiple layers of polyisocyanurate insulation.

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West Campus McHenry Community HS District #156

Analysis

Roof

- There is blistering of the roof membrane at the corner. Rust is occurring in the soffit joints and there are open sealant joints in the flashings and face of the soffit. A roof drain strainer is missing.
- Roof 23 is in poor condition. The roof will require replacement in approximately 2 years.
- The roof system is a single ply PVC membrane on 1/2" thick gypsum board on a 2 ply built-up asphalt roof.
- There are openings in the sealant at the termination bar and asphalt material has been used for patching which is not compatible with a PVC membrane. An annual inspection should be made of the ice melt system located in the gutters to verify the system is in working order.
- Roof 24 is in poor condition. The roof will require replacement in approximately 2 years.
- The roof system is a single ply PVC membrane on 1/2" thick gypsum board on a 2 ply built-up asphalt roof.

Issues

North and West Elevations

- 1 Replace hollow metal doors and frames.
Priority: 3 **Cost: \$31,200**
- 2 Replace existing overhead door frames and install new sealant all around the openings.
Priority: 2 **Cost: \$6,500**
- 3 Scrape out and clean all cracks and install new sealant in the cracks. Apply new coat of stain on all concrete on north and west elevation of the original building.
Priority: 1 **Cost: \$45,500**
- 4 Investigate the cause for water infiltration and masonry crazing at masonry infill panels of the original building.
Priority: 1 **Cost: \$0**

West Elevation

- 1 Remove existing sealant and install new backer rod and sealant at existing expansion joint.
Priority: 1 **Cost: \$650**

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



West Campus McHenry Community HS District #156

Issues

West Elevation

- 2 Grind out the joints in the CMU enclosure and tuckpoint.
Priority: 1 **Cost: \$2,600**

- 3 Repair the frame of the electrical vault door and patch the hole in the frame. Patch the concrete wall adjacent to the vault.
Priority: 1 **Cost: \$4,550**

- 4 Fill the cracks in the side of the northwest stair. Remove any rust from the railing and prepare and paint the railing.
Priority: 1 **Cost: \$3,900**

- 5 Remove any existing sealant and install new backer rod and sealant.
Priority: 1 **Cost: \$500**

- 6 Install sealant around the opening at the conduit and outlet.
Priority: 1 **Cost: \$200**

South Elevation

- 1 Remove the existing sills and reinstall with a pitch to the exterior. Install new sealant at the perimeter.
Priority: 2 **Cost: \$1,950**

- 2 Install fasteners in the sheet metal at the masonry wing wall and install new sealant.
Priority: 2 **Cost: \$1,300**

- 3 Clean the soffit panels and sealant at the south entrance.
Priority: 2 **Cost: \$1,300**

- 4 Remove the deteriorated sealant at the south entrance and install new sealant.
Priority: 2 **Cost: \$2,600**

- 5 Remove any loose or deteriorated paint from the columns and prepare and paint.
Priority: 1 **Cost: \$3,250**

- 6 Investigate the water penetration at Door 9 and determine the cause and solution.
Priority: 1 **Cost: \$0**

Roof

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



West Campus McHenry Community HS District #156

Issues

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, and accessories. Install new sheet metal coping over existing concrete parapet.
Priority: 3 **Cost: \$543,000**

- 2 Complete tear-off of existing Roof Area 2 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.
Priority: 3 **Cost: \$20,800**

- 3 Complete tear-off of existing Roof Area 3 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.
Priority: 3 **Cost: \$177,400**

- 4 There will need to be further investigation of the EIFS covered in order to determine the correct measures necessary to address the existing conditions.
Priority: 1 **Cost: \$0**

- 5 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.
Priority: 3 **Cost: \$1,500**

- 6 Complete tear-off of existing Roof Area 5 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.
Priority: 2 **Cost: \$1,500**

- 7 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.
Priority: 2 **Cost: \$3,500**

- 8 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: 1 **Cost: \$16,800**

- 9 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: \$86,780**

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



West Campus McHenry Community HS District #156

Issues

Roof

- 10 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: \$17,000**

- 11 Complete tear-off of existing Roof Area 10 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.
Priority: 3 **Cost: \$120,400**

- 12 Complete tear-off of existing Roof Area 11 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories. Install new sheet metal coping over existing concrete parapet. Replace skylights and tuckpoint and clean chimney exterior walls.
Priority: 3 **Cost: \$703,600**

- 13 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: \$2,500**

- 14 Complete tear-off of existing Roof Area 13 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.
Priority: 2 **Cost: \$86,400**

- 15 Complete tear-off of existing Roof Area 14.1 and 14.2 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories. Install new sheet metal coping over existing concrete parapet.
Priority: 2 **Cost: \$250,800**

- 16 Complete tear-off of existing Roof Area 15 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories. Replace deteriorated HVAC exhaust units.
Priority: 3 **Cost: \$485,300**

- 17 There will need to be further investigation of the EIFS covered in order to determine the correct measures necessary to address the existing conditions.
Priority: 1 **Cost: \$0**

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



West Campus McHenry Community HS District #156

Issues

Roof

- 18 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. Install new sheet metal coping over existing concrete parapet. Prepare and paint existing steel supports.
Priority: 3 **Cost: \$68,100**
- 19 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. Replace conduit and install sealant.
Priority: 3 **Cost: \$548,300**
- 20 Complete tear-off of existing Roof Area 18 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories. Install new sheet metal coping over existing concrete parapet.
Priority: 3 **Cost: \$23,200**
- 21 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. Repair open joint in fascia.
Priority: 3 **Cost: \$69,600**
- 22 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. Tuckpoint existing masonry wall.
Priority: 3 **Cost: \$224,500**
- 23 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: \$350,000**
- 24 Complete tear-off of existing Roof Area 22 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories. Repair open sealant joints. Investigate the soffits to determine the cause for rust.
Priority: 3 **Cost: \$50,200**
- 25 Complete tear-off of existing Roof Area 23 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.
Priority: 1 **Cost: \$10,500**

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



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

Issues

Roof

26 Complete tear-off of existing Roof Area 24 down to the deck, installation of a new roof membrane and insulation and metal counterflashings, and accessories.

Priority: 1

Cost: \$152,700

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



West Campus McHenry Community HS District #156

Analysis

- Overview: McHenry West High School Campus consists of an original structure constructed in 1969. The original school is three stories. The lower level is unexcavated on the north half of the school. An addition to the original school was built in 2002, which added space on the west, south, and east sections of the original school. The 2002 additions are three stories in most areas and two stories in the southern section. The school is entered at the north end at grade level. On the south end, the entrance is on the first (lower level). The 2002 additions added classrooms, science labs, a new entrance, competition gymnasium, cafeteria/kitchen and a media center. Additions have internalized classrooms, which increased the number of learning environments lacking windows to the exterior. The current first level plan totals 107,795 SF; the second level plan totals 103,943 SF, and the third level plan totals 81,340 SF, (total SF = 293,078).

- Floors: Vinyl Composition Tile is found throughout the school in corridors, classrooms, and lab spaces. The condition varies based on the vintage of the installation. Older portions are showing signs of cupping, cracking, and joint separation. Vinyl base conditions are fair at vinyl composition tile floors. Areas constructed in 2002 have carpeting in office areas and luxury vinyl tile in corridors, reception area, and south entrance commons. Most areas are in good condition with some carpet seam issues in office areas. Classrooms are vinyl composition tile in 2002 additions. Classroom flooring appears to be translating settlement joints in the structural system evident by continuous cracks in floor tile and separation at joints.

- Ceilings: Generally the school has exposed ceiling conditions throughout, so structural concrete waffle slab and precast plank systems are in view. Piping, conduit and ductwork are exposed and painted. Many rooms have a deck-mounted acoustical panel fastened to the exposed structure to assist with improving acoustic conditions. Offices and corridors in the 2002 addition and renovations have a 2' x 4' acoustical lay-in tile system or drywall ceilings. Acoustical ceilings in the cafeteria and adjacent corridor are experiencing bowing and unevenness likely due to a lack of moisture resistance. There are also some tiles with water staining from pipe or roof leaks. Drywall soffits occur at the cafeteria and adjacent areas of the 2002 addition. Shrinkage cracks are occurring at some soffit locations.

- Walls: Walls throughout the school are concrete block with a painted finish. The appearance is generally clean. Classrooms typically have an accent wall of dark blue. In many locations, acoustical panels are fastened to classroom walls to assist in sound attenuation. These acoustic panels are fabric wrapped and in fair condition. Some panels are being used to pin papers related to class activities. Within administrative and staff areas, drywall constructed walls are prominent with a painted finish. There are many locations where concrete block walls are showing signs of step cracking, joint separation or missing block materials. This may be more recognizable due to the absence of acoustical ceilings shielding the conditions.

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



West Campus McHenry Community HS District #156

Analysis

- **Doors:** Doors throughout the school are predominantly wood with hollow metal frames. Overall conditions are fair to poor in the original portions of the school due to delaminated veneer, edge damage or compromised hardware. Areas built in 2002 are typically in good condition. Glass occurs within many classroom doors. Transom glass and sidelights are found at many doors entering rooms from corridors and into prep/support spaces surrounding classrooms. A high percentage of glass locations contain wire glass, which presents a safety concern. Because the school is fully sprinklered, closers and rated components are not required unless leading from more hazardous spaces (i.e. storage rooms) into a corridor. Damage to some doors prevented proper closing.
- **Windows:** A significant amount of classroom and office environments lack exterior windows in the facility. Where windows occur at perimeter spaces, glass is double glazed thermal systems in good condition. Window sills are typically plastic laminate with occasional moisture damage present. Laminate finishes have also been chipped or cracked at edges.
- **Student Lockers:** Full-height vented metal lockers occur in the corridors throughout the building. Conditions appear to be good with occasional rust at bottom frame members and end panels. Some lockers are pocketed into wall construction while others are attached to the wall with sloped tops and metal bases.
- **Casework:** Plastic laminate casework occurs in many classrooms and support spaces. Configurations vary, but typically a tall storage unit is present. Lower and upper cabinets can be found in staff spaces and lounge areas. Conditions are generally good with some wear at corners and occasionally the laminate sheet has peeled away on cabinet faces. In science lab environments, wood casework occurs with epoxy resin countertops. Older lab spaces within the original building have casework looking dated (epoxy tops separating, hardware missing, wood corners damaged). Labs in the 2002 addition on the east side of the building are showing general wear at wood casework.
- **Locker Rooms:** Finish conditions are fair in locker rooms. Floors are epoxy coated with occasional areas showing signs of cracking and delamination from concrete. Metal lockers are elevated on concrete pedestals and appear to be in good to fair condition. Ceilings are exposed except in toilet areas where acoustical tile and grid occur. Acoustical tiles are water stained in several locations due to leaks from above. Support spaces adjacent to locker rooms have vinyl composition tile. Transitions between floor systems are in poor condition.
- **Band Room:** The band room has acoustical lay-in ceiling, which is in fair condition with some discoloration and bowing of tiles. The carpeted areas appear dated and worn. The tiers are sealed concrete with a vinyl base - metal railings do not provide a compliant condition at the tier edges. Stair railings are also non-compliant due to height and spacing. This space is not ADA accessible.

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



West Campus McHenry Community HS District #156

Analysis

- Kitchen: Finishes consist of mylar coated ceiling tile system, quarry tile flooring and fiberglass panel wall covering. Each finish appears to be in fair to good condition.

- Gymnasiums: The main gym (south) serves as the competition gymnasium. The floor is a monolithic poured system at side courts and perimeter areas. The main court is a wood system with an aluminum transition cover at the entire court perimeter. The poured system and wood floor is in good condition, but the transition cover becomes damaged and bent easily, causing an unsafe condition for athletes. Walls are painted precast plank panels with fabric wrapped acoustical panels mounted at higher elevations. Wall conditions appear to be good. Bleacher systems are telescoping and retractable with polyethylene, molded plastic benches. The bleachers are loaded from the floor only with 25 tiers of seats. No issues apparent at the bleachers.

Issues

- 1 Replace vinyl composition tile with luxury vinyl tile in first, second, and third floor corridors (including vinyl base).
Priority: 2 **Cost: \$455,300**

- 2 Replace vinyl composition tile with luxury vinyl tile in classrooms within the 2002 addition (including vinyl base).
Priority: 3 **Cost: \$308,900**

- 3 Replace vinyl composition tile with luxury vinyl tile in classrooms occurring within the original 1969 building (including vinyl base). Neighboring prep and support spaces are included in this issue.
Priority: 2 **Cost: \$559,500**

- 4 Remove epoxy coating from locker room floors and toilet/shower areas. Replace with new epoxy floor system (includes monolithic base).
Priority: 2 **Cost: \$107,000**

- 5 Replace carpeting in administrative office areas.
Priority: 3 **Cost: \$38,600**

- 6 Replace carpeting in Band Room and adjacent stairs/offices. Includes providing carpet on concrete tiers.
Priority: 2 **Cost: \$42,850**

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



West Campus McHenry Community HS District #156

Issues

- 7 Remove and replace epoxy coating floor system at all group toilet rooms where occurs.
Priority: 2 **Cost: \$26,200**

- 8 Remove and replace acoustical ceiling tiles in the 2002 addition at the cafeteria, entrance lobby, and corridor.
Priority: 3 **Cost: \$76,400**

- 9 Replace ceiling tiles in locker room restroom areas.
Priority: 3 **Cost: \$8,300**

- 10 Repair, patch, and paint control cracks at drywall ceilings and soffits at the cafeteria and in east facing classrooms where soffits occur.
Priority: 2 **Cost: \$39,000**

- 11 Tuckpoint, patch, and restore concrete masonry walls where step cracking or settlement has occurred throughout the school. Work includes sealing or adding control joints and replacing deteriorating masonry units. Paint finished areas.
Priority: 2 **Cost: \$102,000**

- 12 Remove and replace existing wood doors and hardware at all corridor openings in the 1969 section of the school.
Priority: 2 **Cost: \$533,000**

- 13 Remove and replace existing wood doors and hardware at all corridor doors located within the 2002 additions.
Priority: 3 **Cost: \$176,800**

- 14 Remove and replace existing wood doors and hardware at doors serving support spaces and staff areas not adjacent to corridors within the 1969 building.
Priority: 2 **Cost: \$166,400**

- 15 Remove and replace vision glass at all door transoms and sidelights/borrowed lights with compliant tempered glass system where wire glass occurs.
Priority: 2 **Cost: \$136,500**

- 16 At student lockers, remove rust at bases and end panels as occurs and electrostatically paint all lockers.
Priority: 3 **Cost: \$78,000**

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



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

Issues

- 17 Replace tall storage cabinets within classrooms with tall mobile storage units.
Priority: 3 **Cost: \$58,000**

- 18 At science labs in the 1969 building, remove and replace the wood casework and epoxy resin tops with a new system. Assumes similar configuration to current layout of casework.
Priority: 2 **Cost: \$682,500**

- 19 Remove all porcelain tile at pool deck and well and replace with porcelain tile. Minor contouring and drain work is included.
Priority: 1 **Cost: \$375,400**

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



**West 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 |



West Campus McHenry Community HS District #156

Analysis

- Wire and plate glass at door vision panels throughout buildings are not compliant.
- Non-tempered plate glass in New Addition Lobby Display Cases - (5) locations and second floor (2) locations (Federal Glazing Legislation).
- Exterior doors in poor condition throughout building (185.370 m.c.i.).
- Non-compliant guardrails and balustrades and no ADA tactile warning at top of (4) stair locations.
- Non-compliant guardrails and no ADA tactile warning at edges of Band Room 114 tiered steps (175.401.c NFPA 5-2.2.b.c.).
- Non-compliant guardrails at Gymnasium Mezzanine (175.401.c NFPA 5-2.2.b.c).
- No thumbblatch on interior of Toilet Room doors [by SD156] (185.370 m.c.i.).
- Pair of doors do not swing out in the direction of egress in Media Room 278 (185.370 m)2)A).
- Large gap between top of backstage ladder and catwalk above at the stage (recommended).
- Storage Rooms on each side of Stage constructed of combustible wood - (2) locations total (recommended).
- Remove nails at top of foundation wall (recommended).
- All assembly spaces are required to have maximum occupancy posted (NFPA). Includes Lunch Room 135, Gym 136, and Auditorium 251.
- There is no mechanical ventilation provided to Metal Office 102A and Office 358 (175.543 185.457)

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



West Campus McHenry Community HS District #156

Analysis

- The existing hot water boilers are over 40 years old and replacement parts are no longer being manufactured or stocked for this unit. Failure of these units will result in loss of heating and ventilation and the inability to maintain the proper temperatures throughout the building (175.543 185.457).
- The Art Rooms 356 and 357 require exhaust to remove objectionable odors (175.562 185.460)
- The Copy Room 353C requires exhaust to remove heat and objectionable odors (175.562 185.460).
- The existing utility sink in the art room is not furnished with a solids interceptor to prevent clay and debris from entering the plumbing system (State Plumbing Code 890.530).
- Throughout the building there are areas not properly covered by emergency lighting (185.57/175.480/BOCA 1024).
- Throughout the building there are areas not properly covered by exit signs (185.37/175.480/BOCA 1023).
- Throughout the building there are missing fire alarm initiating devices [pull station, smoke detector, heat detector or duct detector] (NFPA 72, 185.580, 185.590, 175.460, 175.470).
- Throughout the building there are missing fire alarm indicating devices (visual or audio/visual) (NFPA 72, IAC 400.310).
- At areas served by fossil fuels, 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 708).
- Ground fault circuit interrupters are required within 6' of water source to protect receptacles (NFPA 70 210.8).
- Industrial arts classroom equipment must have an emergency shut off (NFPA 79 9.2.5.4.2).

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



West Campus McHenry Community HS District #156

Analysis

- Tamper resistant receptacles are required in child care facilities (NEC 406.14).

Issues

- Remove existing glass and furnish and install new tempered glazing at Lobby and Second Floor.
Priority: 2 **Cost: \$4,800**
- Remove existing doors, frames, and hardware and replace with new.
Priority: 2 **Cost: \$30,000**
- Revise/Replace handrails at four stairwells and provide tactile warning.
Priority: 2 **Cost: \$114,000**
- Remove existing guardrails at Band Room 114 and furnish and install new guardrails.
Priority: 2 **Cost: \$18,000**
- Remove existing guardrails at Gym Mezzanine and furnish and install new guardrails.
Priority: 1 **Cost: \$48,000**
- Furnish and install new thumbblatch on interior of door at toilet rooms.
Priority: 1 **Cost: \$1,200**
- Remove existing door and frame at Media Room 278. Furnish and install new door and frame swing in direction of egress.
Priority: 3 **Cost: \$9,000**
- Close gap at back of stage with partition constructed of metal stud framing and gypsum board.
Priority: 1 **Cost: \$2,400**
- At stage storage rooms, remove existing wood stud framing and plywood and replace with metal stud framing and gypsum board.
Priority: 2 **Cost: \$18,000**
- Remove existing nails from top of existing foundation wall.
Priority: 2 **Cost: \$1,800**

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



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

Issues

- 11 Furnish and install max. occupancy signage in all assembly spaces.
Priority: 1 **Cost: \$1,800**

- 12 Provide ventilation to Metal Office and Office 358 by extending ductwork from existing ventilation systems.
Priority: 2 **Cost: \$36,000**

- 13 Provide new hot water boilers.
Priority: 3 **Cost: \$576,000**

- 14 Install exhaust fan, Ductwork and Controls at Art Rooms.
Priority: 2 **Cost: \$18,000**

- 15 Install exhaust fan, Ductwork and Controls at Copy Room.
Priority: 2 **Cost: \$9,000**

- 16 Provide solids interceptor on sink drain at Art Room sink.
Priority: 2 **Cost: \$1,200**

- 17 Add new long lasting LED fixtures throughout and connect to existing electrical generator.
Priority: 2 **Cost: \$61,900**

- 18 Add new LED exit signs and connect to existing electrical generator.
Priority: 2 **Cost: \$31,700**

- 19 Install additional initiating devices and connect to existing fire alarm system.
Priority: 2 **Cost: \$4,300**

- 20 Install additional indicating devices and connect to existing fire alarm system.
Priority: 2 **Cost: \$7,900**

- 21 Furnish carbon monoxide detectors within 20 feet of any carbon monoxide emitting device. Connect detector to fire alarm system.
Priority: 1 **Cost: \$8,400**

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



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

Issues

22 Test all original electrical distribution equipment including switchgear, transformers, panelboards, circuit breakers, fused switches, conductors, grounding, etc. Service and periodic maintenance to be included.

Priority: 2 **Cost: \$93,600**

23 Install new GFCI receptacles where needed.

Priority: 2 **Cost: \$18,000**

24 Provide electrical power emergency shut off circuit to all industrial arts equipment.

Priority: 2 **Cost: \$27,000**

25 Replace receptacles with tamper resistant type at Child Care Spaces.

Priority: 1 **Cost: \$4,200**

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



West Campus McHenry Community HS District #156

Analysis

Heating and Ventilation

- Heating and cooling is provided to portions of the facility by thirty six unit ventilators, located within the space they serve. The units were installed in 2002 and are nearing the end of their useful life.

- Heating and cooling is provided to the remaining areas of the building by approximately twenty indoor air handling units, which are a mix of constant volume (CV) and variable air volume (VAV) systems. The units were installed at different times, with the most recent units installed in 2002. District Staff indicated several units (Building Core, Original Gym, Weight Room, Pool) are no longer operational, or have major component failures that limit the equipments' use. All of the units have either outlived, or are nearing the end of, their useful life.

- 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. The only exception is the Dry Toilet in the Boy's Locker Room, where there is no means of exhaust and the ceiling is showing evidence of mold/mildew.

- No exhaust system is provided at the cooking stations (6 locations) in the Foods Lab.

- The air handling units serving the Auto Shop (AS-7) and Metals Shop (AS-8) have failed outside air dampers, which limit the amount ventilation available to the space, creating poor indoor air quality. Additionally, AS-8 ductwork is installed in a manner that limits the effectiveness of air distribution in the space.

- District Staff indicated the main kitchen hood exhaust fan is erroneously interlocked with the air handling unit serving the space, in lieu of the makeup air unit.

- Heating water and chilled water are distributed throughout most of the facility by a 2-pipe system, with some areas served by a 4-pipe system. Portions of the piping network exhibit significant corrosion, primarily due to the local room environment (Pool Fan Room and Boiler Room) Consideration should be given to conducting a more in-depth analysis of the pipe condition throughout the building, with the immediate areas of concern addressed as soon as possible.

- Heating water is produced by three 8,375-mbh Whirlpower boilers located in the Boiler Room. The boiler burners were replaced in 2002 and the equipment appears to be in good working condition. The control panel for the boilers utilizes outdated technology, limiting the controllability of the system. Consideration should be given to modernizing the panel.

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



West Campus McHenry Community HS District #156

Analysis

Heating and Ventilation

- Heating water is distributed throughout the building by three Bell & Gossett pumps. The pumps appear to be in good operating condition, but operate as constant volume. Consideration should be given to adding variable frequency drives (VFD) to these pumps for reduced energy consumption.
- Chilled water is produced by two 320-ton, air-cooled chillers located on the roof. The units were installed in 2002 and are in good operating condition, but will soon be nearing their useful life expectancy. Consideration should be given to their future replacement.
- Chilled water is distributed throughout the building by two Bell & Gossett pumps. The pumps appear to be in good operating condition.
- Five change over valves are located in the Boiler Room to facilitate switching the 2-pipe distribution system between heating and chilled water. The valves regularly fail for various reasons, with two of the valves currently not functioning. Consideration should be given to replacing all of the valves.
- Several unit heaters are either undersized or not functioning, leaving several locations with minimal or no heat.
- All equipment is controlled and monitored through the building automation system (BAS).
- 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" domestic water service is located in the First Floor Boiler Room, where it is metered. A packaged booster pump system maintains building pressure, but has a failed controller and is in need of replacement. The piping connections to the system should also be modified to allow for manual bypass.
- A 4" irrigation service is located in the First Floor Boiler Room, downstream of the domestic water meter. A packaged booster pump system maintains system pressure and is in good operating condition.

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



West Campus McHenry Community HS District #156

Analysis

Plumbing

- All domestic water is softened by an aging water softener system that was in the process of repair/replacement at the time of this report.

- Domestic hot water is provided by one 3,000,000-btu water heater located in the First Floor Boiler Room. The water heater is operational, but has outlived its useful life and should be planned for replacement (Note: Staff av indicated a smaller capacity unit should be considered due to reduced shower usage). The water heater is connected to four 350-gallon hot water storage tanks located in the First Floor Laundry Room. Due to the capacity concerns noted above, only one of the tanks is currently in use. Consideration should be given to eliminating several tanks when the water heater replacement work is completed.

- Pool hot water is provided by one 1,200,000-btu water heater located in the First Floor Boiler Room. The water heater is operational, but has outlived its useful life and should be planned for replacement.

- Pool water is filtered by a sand filtration system, which staff indicate has not been properly maintained since 2011. Due to the age and condition of the equipment, consideration should be given to replace the system and upgrade to a UV light filter.

- All plumbing fixtures appear to be in good condition.

- A duplex sewage ejector pump set located in the First Floor Laundry Room receives waste from the Boiler Room floor drains. One of the pumps had recently failed and had been repaired/replaced at the time of this report.

- The commercial clothes washer located in the First Floor Laundry Room has an indirect waste into a nearby trench drain. The drain is not equipped with any means of capturing lint before entering the sanitary sewer system.

- The floor drains serving the First Floor Auto Shop are not equipped with any means of capturing flammable waste before entering the sanitary sewer system.

- The dishwashing soap dispenser for the triple sink in the Kitchen is not equipped with any means of preventing contamination of the domestic water system.

Fire Protection

- A 6" fire protection service with 30-hp fire pump is located in the First Floor Boiler Room. The entire facility is protected by a wet-pipe fire suppression system.

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



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

Issues

Heating and Ventilation

- 1 Replace pool air handling unit (AHU-11) and modify air distribution to improve indoor environment.
Priority: 1 **Cost: \$602,785**

- 2 Replace building core air handling unit (S-1).
Priority: 2 **Cost: \$195,000**

- 3 Replace auditorium air handling unit (S-4).
Priority: 2 **Cost: \$195,000**

- 4 Replace administration air handling unit (S-6).
Priority: 2 **Cost: \$78,624**

- 5 Replace original gym air handling units (S-9 and S-10).
Priority: 2 **Cost: \$157,248**

- 6 Replace weight room air handling unit (S-11).
Priority: 2 **Cost: \$78,624**

- 7 Provide exhaust system in the Boy's Locker Room Dry Toilet.
Priority: 3 **Cost: \$7,800**

- 8 Provide exhaust hoods at each Foods Lab cooking station (6 locations).
Priority: 2 **Cost: \$4,680**

- 9 Replace Auto Shop (AS-7) and Metals Shop (AS-8) air handling units.
Priority: 2 **Cost: \$64,270**

- 10 Modify Kitchen exhaust fan controls to provide interlock between fan and makeup air unit operation.
Priority: 1 **Cost: \$3,900**

- 11 Replace portions of hydronic piping network showing corrosion.
Priority: 2 **Cost: \$38,220**

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



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

Issues

Heating and Ventilation

- 12 Replace boiler control panel.
Priority: 2 **Cost: \$7,800**

- 13 Add VFDs to existing building heating water pumps.
Priority: 2 **Cost: \$16,380**

- 14 Replace two air-cooled chillers.
Priority: 2 **Cost: \$756,600**

- 15 Replace five change over control valves.
Priority: 2 **Cost: \$29,640**

- 16 Replace two unit heaters near Kitchen Coolers.
Priority: 2 **Cost: \$7,800**

- 17 Replace unit heater in Machine Shop.
Priority: 2 **Cost: \$3,900**

- 18 Replace building automation system.
Priority: 2 **Cost: \$1,828,800**

Plumbing

- 1 Replace existing domestic water packaged booster pump and modify piping to include manual bypass.
Priority: 1 **Cost: \$30,000**

- 2 Replace existing domestic water heater and reduce quantity of storage tanks.
Priority: 2 **Cost: \$39,000**

- 3 Replace existing pool water heater.
Priority: 1 **Cost: \$31,200**

- 4 Replace existing pool filter and add UV light filtration equipment.
Priority: 1 **Cost: \$284,250**

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



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

Issues

Plumbing

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|---|---|--------------|-----------------|
| 5 | Provide lint interceptor at clothes washer drain. | | |
| | Priority: 1 | Cost: | \$15,600 |
| 6 | Provide flammable waste interceptor in Auto Shop. | | |
| | Priority: 2 | Cost: | \$19,500 |
| 7 | Provide backflow preventer at triple sink in Kitchen. | | |
| | Priority: 1 | Cost: | \$2,340 |

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



West 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 and past their end of life (30 years) and should be replaced: LSHEM, LPN-1A, HPN-1A, LPSH4, LSH2, LSH3, LPS1C, LPS-1B, HPN-2B, LDP-N3, LPN-2E, HEM-NA, LEM-NA, LDP-N2, LPS-2A, LPN-3B, LPN-3C.

- There are existing transformers and disconnects that are original to the building and past their end of life (30 years) and should be replaced.

- There are two existing substations that are original to the building and past their end of life (30 years) and should be replaced.

- Panels and feeders do not have code required work clearances and are past their end of life (30 years) and should be replaced.

- The existing panels and transformer in Janitor's closets (Custodial 111, Janitor closet near Classroom 233, Custodial 272, Custodial 346 and Custodial 348) do not have code required work clearances (either blocked by door, ducts or mounted next to sinks) and are past their end of life (30 years) and should be replaced.

- The existing panels in Weight Room 325 do not have proper work clearance for height because the transformer is mounted directly above the panels and are past their end of life (30 years) and should be replaced.

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.

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



West Campus McHenry Community HS District #156

Analysis

Lighting

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

Power Items

- In the kitchen, all of the receptacles should be GFCI type.
- In the science rooms, all of the receptacles within 6 feet of any sink should be GFCI type.
- In the childcare classroom, all receptacles should be tamper proof type.
- In Shop M102, there is not an emergency off pushbutton to shut off power to all equipment.

Fire Alarm

- The fire alarm is a newer Simplex 4100 analog addressable system and is in good working order.
- There are existing smoke/fire doors that do not have smoke detectors installed to activate the existing door holders.
- There are existing fire alarm auxiliary panels that do not have smoke detectors located near them.
- There are exterior egress doors that do not have pull stations within 5 feet of the door.
- There are rooms that should have fire alarm visual or audio/visual devices.
- The boiler room should have carbon monoxide detectors.

Issues

Service and Distribution

- | | | | |
|---|--|--------------|------------------|
| 1 | Replace the existing older panels and feeders. | | |
| | Priority: 2 | Cost: | \$234,000 |
| 2 | Replace 5 transformers and 6 disconnects with new. | | |
| | Priority: 2 | Cost: | \$50,708 |

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



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

Issues

Service and Distribution

- 3 Replace 2 substations.
Priority: 2 **Cost: \$104,000**

- 4 Relocate and replace panel LPSH1 and feeder.
Priority: 3 **Cost: \$19,500**

- 5 Relocate and replace panel LPN-1B and feeder.
Priority: 3 **Cost: \$19,500**

- 6 Relocate the cabinet and replace panel LPN-2D and feeder.
Priority: 3 **Cost: \$14,300**

- 7 Relocate and replace panel LPN-2C and feeder.
Priority: 3 **Cost: \$19,500**

- 8 Relocate and replace panel HPN-2C and feeder.
Priority: 3 **Cost: \$19,500**

- 9 Provide 5 new electrical rooms, install 19 new panels and feeders, install 5 new transformers, demolish the existing panels, feeders, and transformers and intercept all existing circuits and extend to the new electrical rooms.
Priority: 3 **Cost: \$513,500**

- 10 Relocate the existing transformer and replace the two panels and feeders.
Priority: 3 **Cost: \$35,750**

Lighting

- 1 Replace or retrofit all of the T8 light fixtures with new LED fixtures.
Priority: 3 **Cost: \$3,185,000**

- 2 Add occupancy sensors into the entire building (included with LED fixture replacement).
Priority: 3 **Cost: \$0**

- 3 Add approximately 43 new exit signs into the building.
Priority: 2 **Cost: \$55,900**

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



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

Issues

Lighting

- 4 Add additional emergency power life safety lighting circuits and refeed existing lighting fixtures to the emergency power system.
Priority: 2 **Cost: \$78,000**

Power Items

- 1 Replace approximately 74 receptacles with GFCI type.
Priority: 2 **Cost: \$14,430**
- 2 Replace approximately 15 receptacles with tamper proof type.
Priority: 1 **Cost: \$3,925**
- 3 Add an EPO (emergency off pushbutton) and associated contactors in Shop M102.
Priority: 1 **Cost: \$29,250**

Fire Alarm

- 1 Add approximately 35 smoke detectors.
Priority: 2 **Cost: \$68,250**
- 2 Add approximately 61 visual or audio/visual devices.
Priority: 2 **Cost: \$118,950**
- 3 Add approximately 2 pull stations.
Priority: 2 **Cost: \$4,550**
- 4 Add 10 carbon monoxide detectors.
Priority: 1 **Cost: \$23,400**

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



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

Analysis

- Per discussion with Joe Zelek, Director of Network Technology Services, regarding East Campus, several technology related improvements were identified. The list was duplicated for West Campus. Each is listed in the Issues section with an estimated cost.

Issues

- 1 Provide a 10-gig fiber upgrade at West Campus.
Priority: 2 **Cost: \$24,000**

- 2 Provide card access at West Campus.
Priority: 2 **Cost: \$50,000**



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

| | |
|---------------------------|------------------------|
| SITE | \$477,800.00 |
| EXTERIOR | \$4,120,380.00 |
| INTERIOR | \$3,970,650.00 |
| LIFE SAFETY | \$1,146,200.00 |
| MECHANICAL SYSTEMS | \$4,498,961.00 |
| ELECTRICAL SYSTEMS | \$4,611,913.00 |
| TECHNOLOGY | \$74,000.00 |
| Total Cost | \$18,899,904.00 |



McHenry Community HS District #156 Executive Summary

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| West Campus |
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West Campus

SITE

| | | | |
|----|--|-------------|-----------|
| 1 | Remove existing asphalt, repair/compact stone base and install new asphalt at various locations. | Priority: 2 | \$3,120 |
| 2 | Remove existing asphalt, repair/compact stone base and install new asphalt at the north half of the | Priority: 2 | \$390,000 |
| 3 | Remove existing concrete curb, compact stone base and install new concrete curb. Patch/repair | Priority: 2 | \$6,500 |
| 4 | Remove existing sidewalk panel, compact stone base and install new concrete sidewalk panel(s). | Priority: 2 | \$1,300 |
| 5 | Remove existing inlet and install new stone base, compact base and install new inlet and concrete | Priority: 2 | \$3,900 |
| 6 | Remove existing concrete depressed curb and install new concrete with tactile warning panels. | Priority: 2 | \$2,600 |
| 7 | Re-grade existing landscape area and install new topsoil and reseed. | Priority: 3 | \$3,900 |
| 8 | Remove existing concrete sidewalk panels and compact base and install new concrete panels and | Priority: 2 | \$4,500 |
| 9 | Fill gap with expansion joint material and install horizontal traffic sealant. | Priority: 2 | \$1,300 |
| 10 | Remove existing asphalt around the manholes, reset the manholes and install new stone base as | Priority: 3 | \$13,000 |
| 11 | Fill cracks and install new court surface over the filled cracks. | Priority: 1 | \$10,000 |
| 12 | Remove existing concrete sidewalk panels near the retaining wall and compact base and install new | Priority: 2 | \$2,600 |
| 13 | Remove existing concrete paving panels at the receiving area, compact base, and install new heavy- | Priority: 2 | \$11,400 |
| 14 | Remove existing coating on ramp near west retaining wall and prepare/repair concrete sidewalk and | Priority: 2 | \$5,200 |
| 15 | Remove existing concrete plaza and sidewalk panels, install new panels, repair corner of concrete plaza | Priority: 2 | \$5,460 |
| 16 | Remove existing concrete sidewalk panels at base of northwest stair, compact base and install new | Priority: 2 | \$1,890 |
| 17 | Install additional railing on top of existing guardrail to raise the top of the guardrail to 42" above the | Priority: 2 | \$4,160 |
| 18 | Replace existing metal trim at Grounds Garage. | Priority: 3 | \$900 |
| 19 | Replace hollow metal doors and frames at Grounds Garage. | Priority: 2 | \$4,500 |
| 20 | Remove mortar and tuckpoint masonry joints at Grounds Garage. | Priority: 2 | \$1,070 |
| 21 | Install sealant all around windows at Grounds Garage. | Priority: 2 | \$500 |

EXTERIOR

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|---|---|-------------|----------|
| 1 | Replace hollow metal doors and frames. | Priority: 3 | \$31,200 |
| 2 | Replace existing overhead door frames and install new sealant all around the openings. | Priority: 2 | \$6,500 |
| 3 | Scrape out and clean all cracks and install new sealant in the cracks. Apply new coat of stain on all | Priority: 1 | \$45,500 |
| 4 | Investigate the cause for water infiltration and masonry crazing at masonry infill panels of the original | Priority: 1 | \$0 |

EXTERIOR

| | | | |
|---|--|-------------|---------|
| 1 | Remove existing sealant and install new backer rod and sealant at existing expansion joint. | Priority: 1 | \$650 |
| 2 | Grind out the joints in the CMU enclosure and tuckpoint. | Priority: 1 | \$2,600 |
| 3 | Repair the frame of the electrical vault door and patch the hole in the frame. Patch the concrete wall | Priority: 1 | \$4,550 |
| 4 | Fill the cracks in the side of the northwest stair. Remove any rust from the railing and prepare and paint | Priority: 1 | \$3,900 |
| 5 | Remove any existing sealant and install new backer rod and sealant. | Priority: 1 | \$500 |
| 6 | Install sealant around the opening at the conduit and outlet. | Priority: 1 | \$200 |

EXTERIOR

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|---|---|-------------|---------|
| 1 | Remove the existing sills and reinstall with a pitch to the exterior. Install new sealant at the perimeter. | Priority: 2 | \$1,950 |
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McHenry Community HS District #156 Executive Summary

West Campus

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| 2 | Install fasteners in the sheet metal at the masonry wing wall and install new sealant. | Priority: 2 | \$1,300 |
| 3 | Clean the soffit panels and sealant at the south entrance. | Priority: 2 | \$1,300 |
| 4 | Remove the deteriorated sealant at the south entrance and install new sealant. | Priority: 2 | \$2,600 |
| 5 | Remove any loose or deteriorated paint from the columns and prepare and paint. | Priority: 1 | \$3,250 |
| 6 | Investigate the water penetration at Door 9 and determine the cause and solution. | Priority: 1 | \$0 |

EXTERIOR

| | | | |
|----|---|-------------|------------------|
| 1 | Complete tear-off of existing Roof Area 1 down to the deck, installation of a new roof membrane and | Priority: 3 | \$543,000 |
| 2 | Complete tear-off of existing Roof Area 2 down to the deck, installation of a new roof membrane and | Priority: 3 | \$20,800 |
| 3 | Complete tear-off of existing Roof Area 3 down to the deck, installation of a new roof membrane and | Priority: 3 | \$177,400 |
| 4 | There will need to be further investigation of the EIFS covered in order to determine the correct | Priority: 1 | \$0 |
| 5 | Complete tear-off of existing Roof Area 4 down to the deck, installation of a new roof membrane and | Priority: 3 | \$1,500 |
| 6 | Complete tear-off of existing Roof Area 5 down to the deck, installation of a new roof membrane and | Priority: 2 | \$1,500 |
| 7 | Complete tear-off of existing Roof Area 6 down to the deck, installation of a new roof membrane and | Priority: 2 | \$3,500 |
| 8 | Complete tear-off of existing Roof Area 7 down to the deck, installation of a new roof membrane and | Priority: 1 | \$16,800 |
| 9 | Complete tear-off of existing Roof Area 8 down to the deck, installation of a new roof membrane and | Priority: 3 | \$86,780 |
| 10 | Complete tear-off of existing Roof Area 9 down to the deck, installation of a new roof membrane and | Priority: 3 | \$17,000 |
| 11 | Complete tear-off of existing Roof Area 10 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$120,400 |
| 12 | Complete tear-off of existing Roof Area 11 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$703,600 |
| 13 | Complete tear-off of existing Roof Area 12 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$2,500 |
| 14 | Complete tear-off of existing Roof Area 13 down to the deck, installation of a new roof mem-brane and | Priority: 2 | \$86,400 |
| 15 | Complete tear-off of existing Roof Area 14.1 and 14.2 down to the deck, installation of a new roof | Priority: 2 | \$250,800 |
| 16 | Complete tear-off of existing Roof Area 15 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$485,300 |
| 17 | There will need to be further investigation of the EIFS covered in order to determine the correct | Priority: 1 | \$0 |
| 18 | Complete tear-off of existing Roof Area 16 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$68,100 |
| 19 | Complete tear-off of existing Roof Area 17 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$548,300 |
| 20 | Complete tear-off of existing Roof Area 18 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$23,200 |
| 21 | Complete tear-off of existing Roof Area 19 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$69,600 |
| 22 | Complete tear-off of existing Roof Area 20 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$224,500 |
| 23 | Complete tear-off of existing Roof Area 21 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$350,000 |
| 24 | Complete tear-off of existing Roof Area 22 down to the deck, installation of a new roof mem-brane and | Priority: 3 | \$50,200 |
| 25 | Complete tear-off of existing Roof Area 23 down to the deck, installation of a new roof mem-brane and | Priority: 1 | \$10,500 |
| 26 | Complete tear-off of existing Roof Area 24 down to the deck, installation of a new roof mem-brane and | Priority: 1 | \$152,700 |

INTERIOR

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|---|---|-------------|------------------|
| 1 | Replace vinyl composition tile with luxury vinyl tile in first, second, and third floor corridors | Priority: 2 | \$455,300 |
| 2 | Replace vinyl composition tile with luxury vinyl tile in classrooms within the 2002 addition (including | Priority: 3 | \$308,900 |
| 3 | Replace vinyl composition tile with luxury vinyl tile in classrooms occurring within the original 1969 | Priority: 2 | \$559,500 |



McHenry Community HS District #156 Executive Summary

West Campus

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| 4 | Remove epoxy coating from locker room floors and toilet/shower areas. Replace with new epoxy floor | Priority: 2 | \$107,000 |
| 5 | Replace carpeting in administrative office areas. | Priority: 3 | \$38,600 |
| 6 | Replace carpeting in Band Room and adjacent stairs/offices. Includes providing carpet on concrete | Priority: 2 | \$42,850 |
| 7 | Remove and replace epoxy coating floor system at all group toilet rooms where occurs. | Priority: 2 | \$26,200 |
| 8 | Remove and replace acoustical ceiling tiles in the 2002 addition at the cafeteria, entrance lobby, and | Priority: 3 | \$76,400 |
| 9 | Replace ceiling tiles in locker room restroom areas. | Priority: 3 | \$8,300 |
| 10 | Repair, patch, and paint control cracks at drywall ceilings and soffits at the cafeteria and in east facing | Priority: 2 | \$39,000 |
| 11 | Tuckpoint, patch, and restore concrete masonry walls where step cracking or settlement has occurred | Priority: 2 | \$102,000 |
| 12 | Remove and replace existing wood doors and hardware at all corridor openings in the 1969 section of | Priority: 2 | \$533,000 |
| 13 | Remove and replace existing wood doors and hardware at all corridor doors located within the 2002 | Priority: 3 | \$176,800 |
| 14 | Remove and replace existing wood doors and hardware at doors serving support spaces and staff areas | Priority: 2 | \$166,400 |
| 15 | Remove and replace vision glass at all door transoms and sidelights/borrowed lights with compliant | Priority: 2 | \$136,500 |
| 16 | At student lockers, remove rust at bases and end panels as occurs and electrostatically paint all lockers. | Priority: 3 | \$78,000 |
| 17 | Replace tall storage cabinets within classrooms with tall mobile storage units. | Priority: 3 | \$58,000 |
| 18 | At science labs in the 1969 building, remove and replace the wood casework and epoxy resin tops with | Priority: 2 | \$682,500 |
| 19 | Remove all porcelain tile at pool deck and well and replace with porcelain tile. Minor contouring and | Priority: 1 | \$375,400 |

LIFE SAFETY

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|----|--|-------------|------------------|
| 1 | Remove existing glass and furnish and install new tempered glazing at Lobby and Second Floor. | Priority: 2 | \$4,800 |
| 2 | Remove existing doors, frames, and hardware and replace with new. | Priority: 2 | \$30,000 |
| 3 | Revise/Replace handrails at four stairwells and provide tactile warning. | Priority: 2 | \$114,000 |
| 4 | Remove existing guardrails at Band Room 114 and furnish and install new guardrails. | Priority: 2 | \$18,000 |
| 5 | Remove existing guardrails at Gym Mezzanine and furnish and install new guardrails. | Priority: 1 | \$48,000 |
| 6 | Furnish and install new thumbblatch on interior of door at toilet rooms. | Priority: 1 | \$1,200 |
| 7 | Remove existing door and frame at Media Room 278. Furnish and install new door and frame swing in | Priority: 3 | \$9,000 |
| 8 | Close gap at back of stage with partition constructed of metal stud framing and gypsum board. | Priority: 1 | \$2,400 |
| 9 | At stage storage rooms, remove existing wood stud framing and plywood and replace with metal stud | Priority: 2 | \$18,000 |
| 10 | Remove existing nails from top of existing foundation wall. | Priority: 2 | \$1,800 |
| 11 | Furnish and install max. occupancy signage in all assembly spaces. | Priority: 1 | \$1,800 |
| 12 | Provide ventilation to Metal Office and Office 358 by extending ductwork from existing ventilation | Priority: 2 | \$36,000 |
| 13 | Provide new hot water boilers. | Priority: 3 | \$576,000 |
| 14 | Install exhaust fan, Ductwork and Controls at Art Rooms. | Priority: 2 | \$18,000 |
| 15 | Install exhaust fan, Ductwork and Controls at Copy Room. | Priority: 2 | \$9,000 |
| 16 | Provide solids interceptor on sink drain at Art Room sink. | Priority: 2 | \$1,200 |
| 17 | Add new long lasting LED fixtures throughout and connect to existing electrical generator. | Priority: 2 | \$61,900 |
| 18 | Add new LED exit signs and connect to existing electrical generator. | Priority: 2 | \$31,700 |
| 19 | Install additional initiating devices and connect to existing fire alarm system. | Priority: 2 | \$4,300 |
| 20 | Install additional indicating devices and connect to existing fire alarm system. | Priority: 2 | \$7,900 |



McHenry Community HS District #156 Executive Summary

West Campus

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| 21 | Furnish carbon monoxide detectors within 20 feet of any carbon monoxide emitting device. Connect | Priority: 1 | \$8,400 |
| 22 | Test all original electrical distribution equipment including switchgear, transformers, panelboards, | Priority: 2 | \$93,600 |
| 23 | Install new GFCI receptacles where needed. | Priority: 2 | \$18,000 |
| 24 | Provide electrical power emergency shut off circuit to all industrial arts equipment. | Priority: 2 | \$27,000 |
| 25 | Replace receptacles with tamper resistant type at Child Care Spaces. | Priority: 1 | \$4,200 |

MECHANICAL SYSTEMS

| | | | |
|----|---|-------------|-------------|
| 1 | Replace pool air handling unit (AHU-11) and modify air distribution to improve indoor environment. | Priority: 1 | \$602,785 |
| 2 | Replace building core air handling unit (S-1). | Priority: 2 | \$195,000 |
| 3 | Replace auditorium air handling unit (S-4). | Priority: 2 | \$195,000 |
| 4 | Replace administration air handling unit (S-6). | Priority: 2 | \$78,624 |
| 5 | Replace original gym air handling units (S-9 and S-10). | Priority: 2 | \$157,248 |
| 6 | Replace weight room air handling unit (S-11). | Priority: 2 | \$78,624 |
| 7 | Provide exhaust system in the Boy's Locker Room Dry Toilet. | Priority: 3 | \$7,800 |
| 8 | Provide exhaust hoods at each Foods Lab cooking station (6 locations). | Priority: 2 | \$4,680 |
| 9 | Replace Auto Shop (AS-7) and Metals Shop (AS-8) air handling units. | Priority: 2 | \$64,270 |
| 10 | Modify Kitchen exhaust fan controls to provide interlock between fan and makeup air unit operation. | Priority: 1 | \$3,900 |
| 11 | Replace portions of hydronic piping network showing corrosion. | Priority: 2 | \$38,220 |
| 12 | Replace boiler control panel. | Priority: 2 | \$7,800 |
| 13 | Add VFDs to existing building heating water pumps. | Priority: 2 | \$16,380 |
| 14 | Replace two air-cooled chillers. | Priority: 2 | \$756,600 |
| 15 | Replace five change over control valves. | Priority: 2 | \$29,640 |
| 16 | Replace two unit heaters near Kitchen Coolers. | Priority: 2 | \$7,800 |
| 17 | Replace unit heater in Machine Shop. | Priority: 2 | \$3,900 |
| 18 | Replace building automation system. | Priority: 2 | \$1,828,800 |

MECHANICAL SYSTEMS

| | | | |
|---|---|-------------|-----------|
| 1 | Replace existing domestic water packaged booster pump and modify piping to include manual bypass. | Priority: 1 | \$30,000 |
| 2 | Replace existing domestic water heater and reduce quantity of storage tanks. | Priority: 2 | \$39,000 |
| 3 | Replace existing pool water heater. | Priority: 1 | \$31,200 |
| 4 | Replace existing pool filter and add UV light filtration equipment. | Priority: 1 | \$284,250 |
| 5 | Provide lint interceptor at clothes washer drain. | Priority: 1 | \$15,600 |
| 6 | Provide flammable waste interceptor in Auto Shop. | Priority: 2 | \$19,500 |
| 7 | Provide backflow preventer at triple sink in Kitchen. | Priority: 1 | \$2,340 |

ELECTRICAL SYSTEMS

| | | | |
|---|--|-------------|-----------|
| 1 | Replace the existing older panels and feeders. | Priority: 2 | \$234,000 |
| 2 | Replace 5 transformers and 6 disconnects with new. | Priority: 2 | \$50,708 |
| 3 | Replace 2 substations. | Priority: 2 | \$104,000 |
| 4 | Relocate and replace panel LPSH1 and feeder. | Priority: 3 | \$19,500 |
| 5 | Relocate and replace panel LPN-1B and feeder. | Priority: 3 | \$19,500 |



McHenry Community HS District #156 Executive Summary

West Campus

| | | | |
|----|---|-------------|------------------|
| 6 | Relocate the cabinet and replace panel LPN-2D and feeder. | Priority: 3 | \$14,300 |
| 7 | Relocate and replace panel LPN-2C and feeder. | Priority: 3 | \$19,500 |
| 8 | Relocate and replace panel HPN-2C and feeder. | Priority: 3 | \$19,500 |
| 9 | Provide 5 new electrical rooms, install 19 new panels and feeders, install 5 new transformers, demolish | Priority: 3 | \$513,500 |
| 10 | Relocate the existing transformer and replace the two panels and feeders. | Priority: 3 | \$35,750 |

ELECTRICAL SYSTEMS

| | | | |
|---|---|-------------|--------------------|
| 1 | Replace or retrofit all of the T8 light fixtures with new LED fixtures. | Priority: 3 | \$3,185,000 |
| 2 | Add occupancy sensors into the entire building (included with LED fixture replacement). | Priority: 3 | \$0 |
| 3 | Add approximately 43 new exit signs into the building. | Priority: 2 | \$55,900 |
| 4 | Add additional emergency power life safety lighting circuits and refeed existing lighting fixtures to the | Priority: 2 | \$78,000 |

ELECTRICAL SYSTEMS

| | | | |
|---|---|-------------|-----------------|
| 1 | Replace approximately 74 receptacles with GFCI type. | Priority: 2 | \$14,430 |
| 2 | Replace approximately 15 receptacles with tamper proof type. | Priority: 1 | \$3,925 |
| 3 | Add an EPO (emergency off pushbutton) and associated contactors in Shop M102. | Priority: 1 | \$29,250 |

ELECTRICAL SYSTEMS

| | | | |
|---|--|-------------|------------------|
| 1 | Add approximately 35 smoke detectors. | Priority: 2 | \$68,250 |
| 2 | Add approximately 61 visual or audio/visual devices. | Priority: 2 | \$118,950 |
| 3 | Add approximately 2 pull stations. | Priority: 2 | \$4,550 |
| 4 | Add 10 carbon monoxide detectors. | Priority: 1 | \$23,400 |

TECHNOLOGY

| | | | |
|---|--|-------------|-----------------|
| 1 | Provide a 10-gig fiber upgrade at West Campus. | Priority: 2 | \$24,000 |
| 2 | Provide card access at West Campus. | Priority: 2 | \$50,000 |



**West 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 | \$10,000 | \$450,000 | \$17,800 | \$0 | \$0 | \$0 | \$0 | \$477,800 |
| EXTERIOR | \$241,150 | \$355,850 | \$3,523,380 | \$0 | \$0 | \$0 | \$0 | \$4,120,380 |
| INTERIOR | \$375,400 | \$2,850,250 | \$745,000 | \$0 | \$0 | \$0 | \$0 | \$3,970,650 |
| ACCESSIBILITY | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| LIFE SAFETY | \$66,000 | \$495,200 | \$585,000 | \$0 | \$0 | \$0 | \$0 | \$1,146,200 |
| MECHANICAL SYSTEMS | \$970,075 | \$3,521,086 | \$7,800 | \$0 | \$0 | \$0 | \$0 | \$4,498,961 |
| ELECTRICAL SYSTEMS | \$56,575 | \$728,788 | \$3,826,550 | \$0 | \$0 | \$0 | \$0 | \$4,611,913 |
| TECHNOLOGY | \$0 | \$74,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$74,000 |
| Totals: | \$1,719,200 | \$8,475,174 | \$8,705,530 | \$0 | \$0 | \$0 | \$0 | \$18,899,904 |



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 |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|---------------------|
| West Campus | \$1,719,200 | \$8,475,174 | \$8,705,530 | \$0 | \$0 | \$0 | \$0 | \$18,899,904 |
| Totals: | \$1,719,200 | \$8,475,174 | \$8,705,530 | | | | | |

Totals By Facility Analysis Categories

| Facility: | Site | Building Exterior | Building Interior | Accessibility | Life Safety | Hazardous Materials | Mechanical Systems | Electrical Systems | Program | Technology | Totals: |
|-------------------------|------------------|--------------------|--------------------|---------------|--------------------|---------------------|--------------------|--------------------|---------|-----------------|---------------------|
| West Campus | \$477,800 | \$4,120,380 | \$3,970,650 | \$0 | \$1,146,200 | \$0 | \$4,498,961 | \$4,611,913 | \$0 | \$74,000 | \$18,899,904 |
| Category Totals: | \$477,800 | \$4,120,380 | \$3,970,650 | \$0 | \$1,146,200 | | \$4,498,961 | \$4,611,913 | | \$74,000 | |