



## Eastern Lebanon County School District

District-Wide Facilities Assessment

January 5, 2017

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January 5, 2017

David Zuilkoski, EdD, Superintendent  
Eastern Lebanon County School District  
180 ELCO Drive  
Myerstown, PA 17067

Dear Dr. Zuilkoski:

On behalf of everyone at KCBA Architects, Moore Engineering, and Corsi Associates, I would like to thank the board, administration, and faculty of the Eastern Lebanon County School District for the opportunity to undertake this district-wide facilities assessment. We hope this report will be a helpful tool to advance your district's understanding of the existing conditions of your facilities.

The ELCO team tasked KCBA with reviewing the condition of your buildings and their suitability to support your 21<sup>st</sup> century educational program. As detailed in the following pages, we found the majority of your school buildings – Fort Zeller Elementary School, Jackson Elementary School, ELCO Intermediate School, and ELCO Middle School – to be in generally good condition. In each case, some routine maintenance and modest upgrade recommendations are provided to ensure optimal long-term functionality.

In general, ELCO High School is in fair condition. While the building has been well maintained since its original construction in 1964 and renovation in 1991, many building systems are at the end of their functional life. Also, the overall makeup and configuration of spaces yields many compromises in the execution of your secondary educational program. Lastly, the building's layout does not reflect the latest security standards and protocols for a modern public school building. In light of these findings, KCBA recommends the pursuit of a renovation/expansion project at the high school to allow the building to meet your long-term needs.

Our team looks forward to continuing to collaborate with your district as you review this report and work toward identifying the best strategy for the future of your buildings.

Sincerely,

A handwritten signature in black ink that reads 'Michael Kelly'.

Michael Kelly, AIA, LEED AP  
Principal



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Eastern Lebanon County School District  
Existing Facilities Report – Fort Zeller Elementary School  
243 North Sheridan Road, Richland, PA 17087



Exterior view of building entrance



Aerial view of site



Bus/parent drop off area

**History:**

Fort Zeller Elementary School (ZES) was originally built in 1972 with a renovation completed in 2005.

The building is located on a 25 acre site in Millcreek Township.

**Building Statistics:**

Size of Building:

Building 53,500 sq. ft. (1 story building)

Grades:

The school currently educates students from Kindergarten through 2<sup>nd</sup> grade.

In September 2016, **313** students were enrolled at ZES.

**Site:**

Vehicular Circulation & Parking: The bus/parent pick-up/drop-off area is located along the front (northwest) side of the building. Bus traffic has a dedicated loop at the building entrance. Parking is located on the north face of the building.

Pedestrian Circulation: Pedestrian circulation at the entrance and the parking areas was well defined and offer safe paths of travel to and from the building.

Sidewalks and Paving: The sidewalk along the front of the school appears to be in good condition with handicap access directly across from the existing handicap accessible parking spaces. The curb at the front entrance is deteriorating at the handicap entrance. Some heave and drop was noted in several areas at the front of the building and approach.

Issues to consider:

ZES.SI.01 Repair areas of heave and drop to create level pavement.

ZES.SI.02 Repair or replace areas of deteriorating curb.

Storm Water Management: There did not appear to be any storm water basins adjacent to the school.

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Area of heave and drop with cracking



Hard play area with smaller soft play areas



Building exterior

Play Areas: Two large “soft surface” play areas with play equipment are located on the south side of the school and connected by pedestrian walkways. The equipment and the overall state of play areas appear to be in good condition (though we note that there is no fence surrounding this play area). The curb surrounding the wood chip area is not handicap accessible. Several smaller “soft surface” play areas are not accessible by sidewalk and do not allow handicap access.

There is also a large dedicated “hard surface” play area on the east side of the school. The surface finish of the play area is beginning to show signs of wear but is in good condition overall.

Issues to consider:

ZES.SI.03 Consider creating handicap accessibility to soft play area(s).

**Building Exterior:**

Facade: The exterior of the building is primarily brick with some areas of EIFS. The brick was generally in good condition, although there were areas marked by roof edge repair that should be cleaned.

Issues to consider:

ZES.EX.01 Remove roofing material from face of brick.

Fenestration: Building fenestration was in good condition. Clerestory windows were noted to be too low in relation to the roof elevation and should be monitored for possible water infiltration.

Issues to consider:

ZES.EX.02 Monitor clerestory windows for water infiltration, consider raising sill level if needed.

Roof: Roof was noted to be in good condition, it is a black EPDM.

Issues to consider:

ZES.EX.03 Consider reflective coating for future roofing.

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**Building Interior:**

Flooring: The entry is VCT and in good condition. Several roll-up walk off mats were in use in the building entry and did not appear to cause tripping issues. Hallways/library were carpeted and appeared in good condition. Hallway surrounding the central area was traffic worn and damaged at the drinking fountain. Carpet in classroom wings appeared in good condition. Classrooms are partially VCT and carpet and were in good condition. Tripping hazard was noted at the transition from cafeteria to kitchen along the primary serving line.

Issues to consider:

**ZES.BI.01 Consider replacing carpet at central area near library to a more appropriate high traffic material.**

Walls: Walls are primarily GWB finish. Portions of the interior walls are finished with a specialty speckle paint. Corner guards were used throughout to protect the GWB. Tile was used in hallway near the main restrooms.

Ceilings: ACT was primarily used throughout the building with areas of GWB ceiling. Ceilings were noted to be in good condition.

Food Service: The kitchen equipment was noted to be in need of replacement.

Issues to consider:

**ZES.BI.02 Consider replacing kitchen equipment as needed.**

Code Compliance: The building is in good condition overall but a few conditions were noted.

The approach to classrooms are undersized and do not allow for ADA pull side access.

The roof hatch gate appeared to be broken and caused an unsafe condition for access.



Transition at cafeteria to kitchen – trip hazard



Floor and wall finishes



Pull side access width does not meet code



Gate at roof hatch

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Hallway with furniture

The egress width of the corridors appeared to be obstructed by instructional furniture within the hallways.

Issues to consider:

ZES.BI.03 Create accessible entrance at classrooms.

ZES.BI.04 Repair/replace roof hatch gate.

ZES.BI.04 Verify egress width and remove furniture from hallway if required, see note regarding SGI's.

Security: The building entrance is properly secured.

**Educational:**

Classrooms: Classrooms are right sized and had proper storage and accessible sinks.

Group Instruction: No small group instruction (SGI) or large group instruction (LGI) existed within the school.

Issues to consider:

ZES.ED.01 Consider creating SGI's and an LGI to support the current curriculum.

Special Education: The building contains dedicated classrooms for autistic and special education support.

Music/Art: The building contains dedicated classrooms for music and art.

Science/Technology: The building does not contain a dedicated classroom for science. A media center was located within the library.

Issues to consider:

ZES.ED.02 Consider creating a dedicated classroom for science that can be used by all students. Creating proper storage for multiple active users of that space should be considered.

Physical Education: The building contains a dedicated gymnasium space with climbing walls and basketball courts.



Typical classroom



Gymnasium

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Office door is manual lock

**Administration:** The front office and nurses suite appeared functional and in good condition. The entrance to the building is properly secured

**Building – HVAC:**

The HVAC System consists of two types of systems that were installed during renovations in 2005. One system is a 4-pipe system with air handlers serving the large areas including the gymnasium, library, and office areas. The other system is a 2-Pipe system feeding a DX rooftop air conditioner on each classroom wing of the building. These systems were found to be in good condition.

The classrooms have a VAV box with hot water reheat for individual temperature control.



Hot water boilers

Two hot water boilers in the mechanical room serve the entire school. They were found to be in good condition except that they leak water at every shutdown and startup of the system which is causing premature corrosion.

The chiller is located outside the building and was found to be in good condition. The exterior chilled water piping insulation is deteriorating and in need of replacement.

Many thermostats in the building were found to be installed high on the wall in spaces. This location may cause comfort issues due to not measuring the temperature at the occupied level of the room. We recommend lowering the thermostats to a more desirable height.

Issues to consider:

- ZES.HVAC.01 Repair boilers to stop water leakage.
- ZES.HVAC.02 Replace exterior chilled water piping insulation.
- ZES.HVAC.03 Lower the height of thermostats.

**Building – Plumbing:**

The plumbing system was renovated in 2005 and was found to be in very good condition. The plumbing fixtures were all in very good condition and meet current codes and ADA standards.



Exterior piping insulation

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Thermostat

The domestic water, sanitary, storm and domestic water heating systems were found to be in very good condition.

Two standard efficiency water heaters provide domestic hot water to the entire school. They are not at the end of their typical life expectancy but we recommend replacing them with high efficiency water heaters in the future.

The domestic water service to the school is fed from a city water main and has a booster pump package in the mechanical room. It has been found to have not been needed under actual flow conditions in the school and has not been operated.



Domestic water heaters

All of the floor drains in the school do not have trap primers installed on them. The maintenance staff needs to pour water down each floor drain regularly to keep them from drying out. We recommend that a trap guard be inserted in each floor drain body to eliminate this issue.

The school does not have a fire sprinkler system.

Issues to consider:

**ZES.PLUM.01 Consider upgrading water heaters to high efficiency units.**

**ZES.PLUM.02 Insert trap guards into each floor drain.**

**ZES.PLUM.03 Consider installation of a fire sprinkler system.**

#### Building – Electrical:



Main electrical switchgear

The electrical service enters the building by underground secondary feeders and terminates into a Square D 1600 Amp, 277/480volt main switchboard. The switchboard is in good condition and has provision for additional breakers to be added. A 300 KVA step-down transformer is located in the electrical room to obtain 120/208volt power for receptacle and miscellaneous circuits. Most branch panels are Square D and in good condition.

The emergency generator is an Olympian 50 kW diesel unit. The generator and associated equipment are in good condition. An 80 Amp Zenith Life Safety automatic transfer switch with a normal/emergency panel is installed in the

## Eastern Lebanon County School District Existing Facilities Report – Fort Zeller Elementary School 243 North Sheridan Road, Richland, PA 17087

electrical room. A 100 Amp Zenith Non-Required Loads automatic transfer switch with a normal/emergency panel is installed in the electrical room.



IDF room

The interior building lighting consists of mostly T8 fluorescent luminaires with LED exit signs. We recommend replacing lighting with LED luminaires as required to meet the requirements of the international energy code. Replace exterior and site lighting with LED fixtures for energy savings and to reduce the frequency of maintenance. Provide automatic lighting control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)

The building has telephone and computer outlets located throughout the building. They are connected to network racks with Category 6 cabling. This building has a Lucent phone system.

The intercom system is Telecor. The master clock system has a Sapling master clock with sapling wireless secondary clocks.

The fire alarm system is a Simplex with manual pull stations and audio/visual devices. The system needs to be upgraded to a code compliant system.

The building has an access control system, intrusion detection system and cameras.

Issues to consider:

**ZES.ELEC.01 Consider upgrade of lighting fixtures and controls for energy savings and to meet current codes.**

**ZES.ELEC.02 Upgrade the fire alarm system to meet current codes.**

### Summary

Overall ZES is in good condition and several small repairs are recommended to help fine tune the building. Renovations or additions to augment the classroom experience (science classroom, SGI's, etc.) should be considered based on the needs and goals of the district.



Eastern Lebanon County School District  
Existing Facilities Report – Jackson Elementary School  
558 West Main Street, Myerstown, PA 17067



Building entry



Aerial view of site

**History:**

Jackson Elementary School (JES) was originally built in 1958 with alterations and additions completed in 1997 and 2005.

The building is located on an 11 acre site near downtown Myerstown.

**Building Statistics:**

Size of Building:

Building 38,400 sq. ft. (1 story building)

Grades:

The school currently educates students from Kindergarten through 2<sup>nd</sup> grade.

In September 2016, **249** students were enrolled at JES.

**Site:**

Vehicular Circulation & Parking: The bus pick-up/drop-off area is located along the front (north) side of the building. Buses line up "single file" in front of the building at a circular drive. The bus lane is shared with visitor parking which causes a potential crossing of paths for vehicles and pedestrians.

Student drop-off occurs on the east side of the building in a defined parking area with good pedestrian walkways. It was noted that flooding occurs at the vehicular entrance to the school.

Issues to consider:

**JES.SI.01 Consider striping a pathway from the visitor/HC parking to the entrance.**

Pedestrian Circulation: Pedestrian circulation at the entrance and the parking areas was well defined and offers safe paths of travel to and from the building.

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Bus drop off area

Sidewalks and Paving: The sidewalk along the front of the school appears to be in good condition but does not provide a flush section to allow for handicap access directly across from the existing handicap accessible parking spaces. The curb at the front entrance is deteriorating. Some heave and drop in the pavement elevation was noted at several spots.

Issues to consider:

JES.SI.02 Consider creating curb cuts for accessibility.

JES.SI.03 Consider correcting uneven surfaces.



Curb at building entry

Storm Water Management: It appears that there is some type of detention basin or collection area to the east and west of the access road from Main Street. It was noted that the roadway and parking flood in that immediate area near the eastern retention basin.

Issues to consider:

JES.SI.04 Review drainage in area of flooding and consider options to alleviate pooling of water on roadway and parking.



Flooding at parking access

Play Areas: A large “soft surface” play area with play equipment is located on the west side of the school. The equipment and the overall state of the play areas appear to be in good condition though we note there is no fence surrounding this play area. The curb surrounding the wood chip area is not handicap accessible. There is also a small “soft surface” play area and basketball hoops at the rear of the school.

There is also a large dedicated “hard surface” play area that extends from the school face to the “soft surface” play area.

Issues to consider:

JES.SI.05 Consider creating a handicap accessible soft play area.

Additional Comments: Natural gas, water, and sewer are available at the site.

Eastern Lebanon County School District  
Existing Facilities Report – Jackson Elementary School  
558 West Main Street, Myerstown, PA 17067

**Building Exterior:**



*Play area at rear of school*

Facade: The exterior of the building is primarily brick and EIFS, both systems were in good condition. The EIFS was restored in 2015. It was noted that woodpeckers are attracted to EIFS surface and will bore holes.

Issues to consider:

**JES.EX.01** Repair woodpecker holes as required, consider audible deterrent to keep birds from perimeter.

Fenestration: Exterior window systems were noted to be in good condition.

Roof: Restored coating to entire roof in 2015, Tremco 12 year treatment (reflective) warranty over black EPDM. Roof drain noted as clogged with organic debris.

Issues to consider:

**JES.EX.02** Inspect roof drains and clear debris.

**Building Interior:**

Flooring: Flooring throughout the building was in good condition. Noted potential tripping hazard at foyer walk-off mat. VCT was in good condition. Hallway carpet was in fair condition considering the use and age.

Issues to consider:

**JES.BI.01** Consider a fitted entry walk off mat to alleviate potential tripping hazard.

**JES.BI.02** Consider an alternative material that is more suitable for school hallways when replacement is needed.



*Roof drain with debris*

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Existing Facilities Report – Jackson Elementary School  
558 West Main Street, Myerstown, PA 17067



Delaminating tackable surface

Walls: Interior walls were a mixture of GWB, tile, and block depending on the location. Most wall surfaces were noted to be in good condition. Tackable wall surfaces in hallways were noted to be delaminating.

Issues to consider:

**JES.BI.03 Repair or replace tackable wall surfaces.**

Ceilings: ACT ceilings were used throughout with areas of GWB ceilings. ACT ceiling at roof access causes an awkward obstruction and unsafe condition.

Issues to consider:

**JES.BI.04 Consider modifying/removing ACT ceiling at roof access to avoid obstruction.**



ACT at roof access

Food Service: The main issue with the existing kitchen is the age of equipment. The cafeteria and kitchen is in good condition and serves double duty as an auditorium with a stage.

Issues to consider:

**JES.BI.05 Replace aging equipment as possible.**

Code Compliance: Mechanical room storage was not in compliance with clearances for equipment. Items in hallway blocked clear width of egress at doors exiting from main hallway.

Issues to consider:

**JES.BI.06 Remove items stored in mechanical rooms.**

**JES.BI.07 Remove possible hallway obstructions.**



Mechanical room near kitchen

Security: The building entrance has a secure secondary vestibule directly attached to the front office, as long as the secondary doors (hallway and gymnasium) are secure the entrance functions securely.

Issues to consider:

**JES.BI.08 Consider enhancing the secure entrance condition with visitors accessing the office rather than a secondary foyer.**

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Existing Facilities Report – Jackson Elementary School  
558 West Main Street, Myerstown, PA 17067



Egress path obstructions

**Educational:**

Classrooms: Classroom were right sized and had proper storage built in. Sinks are not handicap accessible because of the base cabinets.

Issues to consider:

**JES.ED.01 Consider modifying sinks for ADA accessibility.**

Group Instruction: Building has no Small Group Instruction or Large Group Instruction spaces.

Issues to consider:

**JES.ED.02 Consider creating SGI's and an LGI to support the current curriculum.**

Special Education: The building contains dedicated classrooms for life skills, learning support, and autistic support.

Music/Art: The building contains dedicated classrooms for music and art.

Science/Technology: There is no dedicated classroom for science. A media center was located in the library.

Issues to consider:

**JES.ED.03 Consider creating a dedicated space for science with appropriate storage that can be used by all students.**

Physical Education: The building contains a dedicated gymnasium space with climbing wall and basketball courts. Crash mat at end wall was delaminating.

Issues to consider:

**JES.ED.04 Consider repairing crash mats as required.**

Administration: The front office and nurses suite is functional and in good condition. Visitors should enter directly into the office from the foyer, although the secondary foyer is secure.

Issues to consider:

**JES.ED.05 Consider creating a more secure entrance sequence at the front office.**



Building entrance not secured through office



Music classroom



Main entrance not secure through office

Eastern Lebanon County School District  
Existing Facilities Report – Jackson Elementary School  
558 West Main Street, Myerstown, PA 17067



Hot water boilers

**Building – HVAC:**

The HVAC System consists of a 4-pipe system that was installed in 1998 as part of renovations to the school and was found to be in good condition. Air handlers serve all the areas of the school with chilled and hot water coils. Classrooms are served by a 4-pipe air handler located above the ceiling of each classroom.

Two hot water boilers in the mechanical room serve the entire school. They were found to be in good condition except that they leak water at every shutdown and startup of the system which is causing premature corrosion. The chiller is located outside the building and was found to be in good condition except the compressors have a fair amount of corrosion and are nearing the end of their life expectancy.

Issues to consider:

**JES.HVAC.01 Repair boilers to stop water leakage.**

**Building – Plumbing:**

The plumbing system was renovated in 1998 as part of building renovations and was found to be in good condition. The plumbing fixtures were in good condition but do not meet current ADA standards. Faucets and flush valves are not water saving type.

The domestic water, sanitary, and storm systems were found to be in good condition.

A single Lochinvar copper fin type water heater and a single storage tank serve the entire school. The water heater is showing its age and has regular maintenance issues. It is nearing the end of its life expectancy.

All the floor drains in the school do not have trap primers installed on them. The maintenance staff need to pour water down each floor drain regularly to keep them from drying out. We recommend that a trap guard be inserted in each floor drain body to eliminate this issue.

The school does not have a fire sprinkler system.



Domestic water heater

Eastern Lebanon County School District  
Existing Facilities Report – Jackson Elementary School  
558 West Main Street, Myerstown, PA 17067



IDF room

Issues to consider:

JES.PLUM.01 Consider upgrading plumbing fixtures to meet ADA requirements.

JES.PLUM.02 Consider installing two water heaters and two storage tanks in the future to allow for redundancy.

JES.PLUM.03 Insert trap guards into each floor drain.

JES.PLUM.04 Consider installation of a fire sprinkler system.

**Building – Electrical:**

The electrical service enters the building by underground secondary feeders and terminates into a General Electric 1200 Amp, 277/480volt main switchboard. The switchboard is in good condition and has provision for additional breakers to be added. A 300 KVA step-down transformer is located in the electrical room to obtain 120/208volt power for receptacle and miscellaneous circuits. Most branch panels are General Electric and in good condition.

The emergency generator is a Spectrum 40 kW diesel unit. The generator and associated equipment are in fair condition. A 30 Amp Zenith Life Safety automatic transfer switch with a normal/emergency panel are installed in the electrical room. A 70 Amp Zenith Non-Required Loads automatic transfer switch with a normal/emergency panel is installed in the electrical room.

The interior building lighting consists of mostly T8 fluorescent luminaires with LED exit signs. We recommend replacing lighting with LED luminaires as required to meet the requirements of the international energy code. Replace exterior and site lighting with LED fixtures for energy savings and to reduce the frequency of maintenance. Provide automatic lighting control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)

The building has telephone and computer outlets located throughout the building. They are connected to network racks with Category 5 cabling. This building has a Lucent phone system.



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The intercom system is Rauland. The master clock system has a Sapling master clock with Sapling wireless secondary clocks.

The fire alarm system is a Simplex with manual pull stations and audio/visual devices. The system needs to be upgraded to a code compliant system.

The building has an access control system, intrusion detection system and cameras.

Issues to consider:

JES.ELEC.01 Consider upgrade of lighting fixtures and controls for energy savings and to meet current codes.

JES.ELEC.02 Upgrade the fire alarm system to meet current codes.

### Summary

While Jackson Elementary School is in good condition, several minor fixes are recommended to help fine tune the building. Renovations or additions to augment the classroom experience (science classroom, SGI's, etc.) should be considered based on the needs and goals of the district.



Eastern Lebanon County School District  
Existing Facilities Report – ELCO Intermediate School  
100 Evergreen Drive, Myerstown, PA 17067

**History:**

ELCO Intermediate School (EIS) was built in 2010.

The building is located on a site adjacent to the ELCO Middle and High Schools.

**Building Statistics:**

Size of Building:

Building 94,800 sq. ft. (2 story building)

Grades:

The school currently educates students from 3<sup>rd</sup> through 5<sup>th</sup> grade.

In September 2016, **580** students were enrolled at EIS.

**Site:**

Vehicular Circulation & Parking: The bus pick-up/drop-off area is located along the front (northwest) side of the building with buses lining up "single file" in front of the building at a dedicated circular drive.

Visitor parking and student drop-off occurs on the front (northeast) side of the building in a defined parking area with good pedestrian walkways.

The vehicular circulation loops are well defined.

Pedestrian Circulation: Pedestrian circulation at the entrance and the parking areas is well defined and offers safe paths of travel to and from the building.

Sidewalks and Paving: The sidewalk along the front of the school appears to be in good condition. It was noted that the curb transition heaves significantly in the winter.

Issues to consider:

**EIS.SI.01 Observation of heaving at curb should continue to determine if it poses a safety issue for pedestrians.**



*Exterior of building*



*Aerial view of site*



*Curb at building entrances*

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Existing Facilities Report – ELCO Intermediate School  
100 Evergreen Drive, Myerstown, PA 17067



Soft and hard play areas

Storm Water Management: It appears that there is some type of detention basin or collection area to the northeast of the building between the facilities garage and Weavertown Road.

Play Areas: A large “soft surface” play area with play equipment is located on the southeast side of the school. The equipment and the overall state of the play area appears to be in good condition.

There is also a large dedicated “hard surface” play area that extends from the school face to the “soft surface” play area on the south side of the school.

**Building Exterior:**

Facade: The exterior of the building is composed primarily of jumbo brick and glazing with small portions of metal panel, all systems are in good condition.

Fenestration: The building glazing is in good condition.

Roof: The roof is new in 2010 and we did not observe any signs of water infiltration on the interior.

**Building Interior:**

Flooring: Flooring throughout the building is in good condition. The main lobby and cafeteria floor is quartz tile, the administration and facilities groups would not recommend using the material again because of maintenance issues. Main office is carpet, classrooms and hallways are mostly VCT.

Walls: Interior walls are primarily painted CMU, brick, and glazed brick. Walls are in good condition.

Ceilings: Ceilings are primarily ACT with small areas of GWB and metal panel. Ceilings are in good condition.

Food Service: It was noted that the food serving line is dimensionally tight and causes crowding during lunch. It was also noted that the cafeteria room is acoustically live (too noisy), creating a chaotic environment during lunches.



Main lobby at entrance

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Existing Facilities Report – ELCO Intermediate School  
100 Evergreen Drive, Myerstown, PA 17067



Cafeteria

Issues to consider:

EIS.BI.01 Consider adding acoustical treatments to the walls and ceiling to deaden or disperse the sound. An acoustician should be consulted.

Code Compliance: The building is in excellent condition overall, few issues were noted.

Classroom sinks did not appear to be handicap accessible.

Issues to consider:

EIS.BI.01 Consider retrofitting classroom millwork to have handicap accessible sinks.

Security: The building has a secure entrance vestibule directly linked to the front office. No security issues were noted.

**Educational:**

Classrooms: Classrooms are right sized and functioning well.

Group Instruction: Spaces for small group instruction are centrally located to the classrooms and do not have walls. It was noted that the spaces might function better with walls and the possibility of creating two smaller spaces from one large SGI was also discussed.

Issues to consider:

EIS.ED.01 Consider enclosing all or part of the SGI's to enhance the functionality of the current spaces.

Special Education: Special education is provided for in the building, there were no issues discussed.

Music/Art: It was noted that the main stage is used primarily for band as the current music room is too small to function properly for that activity.

Issues to consider:

EIS.ED.02 Consider enlarging the band room to free up the use of the stage for other activities.



Secure entrance at vestibule



Typical classroom



Typical classroom sink

Eastern Lebanon County School District  
Existing Facilities Report – ELCO Intermediate School  
100 Evergreen Drive, Myerstown, PA 17067



Stage used primarily for band

Science/Technology: A computer lab exist on the second floor and is attached to the library. No dedicated space for science was noted.

Physical Education: The dedicated gymnasium and outdoors spaces appear to support the school’s physical education needs.

Administration: There were no issues noted with the administrative suite.

**Building – HVAC:**

The HVAC system is a geothermal heat pump system that was installed in 2010. The systems were found to be in very good condition including the piping, pumps, and boiler.

The classrooms are heated and cooled with individual heat pumps in closets.

The most significant concern noted is the exhaust system at the stage. A backdraft damper was not installed at the unit and therefore whenever the unit is not operating outside air blows into the space. We recommend that a gravity backdraft damper be installed or a motorized damper tied into the existing building automatic controls.

Issues to consider:

**EIS.HVAC.01 Install a backdraft damper to the stage exhaust system.**

**Building – Plumbing:**

The plumbing system was installed in 2010 and is in very good condition. The plumbing fixtures are all in excellent condition and meet current codes and ADA standards.

The domestic water piping system is in good condition and is fed from a well and booster pumps located in an exterior vault. Water is pumped to the Middle School where it is treated and pumped back to the Intermediate School. There are low pressure problems in the school during periods of high flow. The water has been found to have excessive air in it which can cause



Geothermal manifold piping



Fire pump

Eastern Lebanon County School District  
Existing Facilities Report – ELCO Intermediate School  
100 Evergreen Drive, Myerstown, PA 17067



Domestic water heaters

corrosion in the piping. Also, there is a concern about the corrosive nature of the water that is negatively affecting the ELCO High School and Middle School. The domestic water piping is presently scheduled to have a treatment to coat the internal parts with a corrosion inhibitor.

The sanitary and storm systems and domestic water heaters were found to be in excellent condition.

The school has a complete fire sprinkler system throughout in accordance with the code, which is in excellent condition. The system includes a fire pump which is in excellent condition. The fire pump is fed from a storage tank that is filled by the well system.

**Building – Electrical:**



Main electrical switchgear

The electrical service enters the building by underground secondary feeders and terminates into a Square D 2000 Amp, 277/480volt main switchboard. The switchboard is in good condition and has provision for additional breakers to be added. There are 1 12.5KVA and 500KVA step-down transformers located in the electrical room to obtain 120/208volt power for receptacle and miscellaneous circuits. Most branch panels Square D and are in good condition.

The emergency generator is a Cummins 80 kW diesel unit. The generator and associated equipment are in good condition. A 40 Amp Cummins Life Safety automatic transfer switch with a normal/emergency panel is installed in the electrical room. A 125 Amp Cummins Non-Required Loads automatic transfer switch with a normal/emergency panel is installed in the electrical room.



Emergency transfer switches

The interior building lighting consists of mostly T5 fluorescent luminaires with LED exit signs. There is a Lehigh dimming system installed on the stage. We recommend replacing lighting with LED luminaires as required to meet the requirements of the international energy code. Replace exterior and site lighting with LED fixtures for energy savings and to reduce the frequency of maintenance. Provide automatic lighting control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)

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*Cafeteria near main entrance*

The building has telephone and computer outlets located throughout the building. They are connected to network racks with Category 6 cabling. This building has an Avaya phone system.

The intercom system is Rauland. The master clock system has a Sapling master clock with Sapling secondary clocks.

The fire alarm system is a Simplex with manual pull stations and audio/visual devices.

The building has an access control system, intrusion detection system and cameras.

Issues to consider:

**EIS.ELEC.01 Consider upgrade of lighting fixtures and controls for energy savings and to meet current codes.**

### Summary

ELCO Intermediate School is six years old and in excellent condition. Minor improvements to functional aspects of specific rooms could be addressed to further improve the building performance. Acoustical dampening of the cafeteria and consideration to enclose or define the SGI's stand out as potential improvements based on end user comments.



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Existing Facilities Report – ELCO Middle School  
60 Evergreen Drive, Myerstown, PA 17067



Exterior of building

**History:**

ELCO Middle School (EMS) was originally built in 1972 with alterations and additions completed in 2005.

The building is located on a 40 acre site adjacent to the ELCO Intermediate School on Evergreen Drive.

**Building Statistics:**

Size of Building:

Building 137,400 sq. ft. (2 story building)

Grades:

The school currently educates students from 6<sup>th</sup> to 8<sup>th</sup> grade.

In September 2016, **570** students were enrolled at EMS.

**Site:**

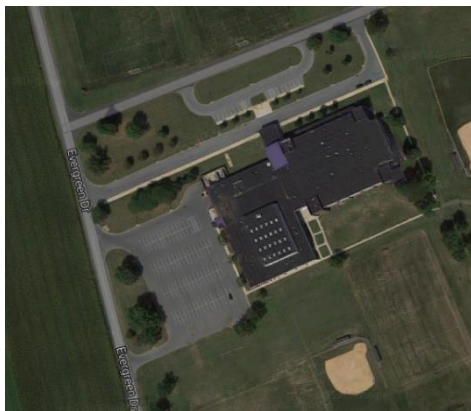
Vehicular Circulation & Parking: The bus pick-up/drop-off area is located along the front (north) side of the building with buses lining up "single file" in front of the building. The visitor parking is outboard of the bus lane, causing a potential crossing of paths for vehicles and pedestrians.

A 200-car parking lot is accessed from Evergreen Road with a small entrance, adjacent to the kitchen loading dock, on the west side of the building.

Issues to consider:

**EMS.SI.01 Consider stronger pedestrian markings in the bus lane leading from the visitor parking to the main entry.**

Pedestrian Circulation: Pedestrian circulation at the entrance and the parking areas was well defined and offers safe paths of travel to and from the building.



Aerial view of site



Bus drop off area

Eastern Lebanon County School District  
Existing Facilities Report – ELCO Middle School  
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Typical building exterior

Sidewalks and Paving: The sidewalk along the front of the school appears to be in good condition.

Storm Water Management: No storm water management was inspected during the visit although it appears the building shares the same system as the Intermediate School.

Play Areas: There are athletic fields directly adjacent to the school.

**Building Exterior:**

Facade: The exterior of the building is primarily brick with areas of EIFS. The exterior is in good condition.

Fenestration: Building fenestration is in good condition.

**Building Interior:**

Flooring: The flooring is varied by area. The main entrance is primarily tile and in good condition. The corridors and classrooms are primarily carpet which wears hard in these high traffic areas. VCT in the cafeteria is in good condition.



Building lobby

Issues to consider:

**EMS.BI.01 Consider an alternative to carpet in corridors and other high traffic areas.**

Walls: The walls are a mixture of block and GWB. Several areas of damage were noted on the GWB surfaces, some of these are finished in a specialty paint that's both difficult and expensive to repair.

Issues to consider:

**EMS.BI.02 Consider an alternative to the specialty paint in high traffic areas.**



Typical carpeted corridor and VCT cafeteria

Ceilings: Ceiling are primarily ACT, several areas of water damage were noted.

Issues to consider:

**EMS.BI.03 Replace damaged ceiling tiles.**

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*Damaged GWB with specialty paint*

Food Service: Kitchen equipment is in need of replacement.

Issues to consider:

**EMS.BI.04** Consider replacing equipment as part of maintenance or a future renovation project.

Code Compliance: Several instances of non-compliance were noted. The elevator did not appear to be ADA compliant for clearances. The control room of the forum was not ADA accessible. There was no provision for handicap seating in the forum.



*Amphitheater seating in the forum*

Issues to consider:

**EMS.BI.05** Address elevator clearances during any future renovations.

**EMS.BI.06** Consider integrating handicap seating locations in the forum.

**EMS.BI.07** Consider making the control booth handicap accessible during any future renovations.

Security: The entry vestibule is secure but there is a lack of direct vision to the vestibule from the front desk. The front desk is also lacking direct vision to the main entry hall (blocked by an egress stair).



*Typical classroom*

Issues to consider:

**EMS.BI.08** Consider enhancing visibility at the front entrance during any future renovation.

**Educational:**

Classrooms: Several classrooms were visited, some were noted to be small. About 1/3<sup>rd</sup> of the classrooms in the forum wing are interior spaces with no access to natural light.

Issues to consider:

**EMS.ED.01** Consider adding appropriately sized classrooms with access to natural light during any future renovations.



*Shared lab space between classrooms*

Group Instruction: The school does not have SGI's to balance the number of classrooms. The forum could function as an LGI although the amphitheater seating is more conducive to a lecture style lesson.

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Limited direct vision from front desk



Gymnasium with natural light



Library has no natural light

Issues to consider:

**EMS.ED.02 Consider creating SGI's to support and augment classroom instruction.**

Special Education: The school provides classrooms for emotional support, learning support, and speech and language classes. Classrooms support the program's needs.

Music/Art: Dedicated rooms for music and art exist within the building. It was noted that art rooms are slightly small for the number of students and activities.

Science/Technology: Several science classrooms and labs exist in the school and appeared in good condition, although a number of them lack natural light. Students utilize iPads on a 1to1 basis. The administration would like to add robotics and engineering based labs to the curriculum.

Physical Education: The school has a gymnasium, fitness room, outdoor playfields and lockers to support the physical education program. It was noted that the gymnasium lights were on even though there was ample natural light to have the sensors trigger them off.

Administration: The administration suite is located directly off the main entrance vestibule but has limited direct vision to the main entry space. The nurse's suite is adjacent to but not directly connected to the administration suite.

Issues to consider:

**EMS.ED.03 Consider enhancing the visibility of the administration suite and linking it directly to the nurse's suite.**

**Building – HVAC:**

The HVAC system consists of a 4-pipe cooling and heating system that is generally in good condition. Air handlers serve the majority of the building along with VAV Boxes with hot water reheat for individual room temperature control. The systems were replaced as part of renovations in 2005.

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Visible water damage at ACT ceiling

Hot water is produced by two hot water boilers which are fuel oil fired. The boilers are in good condition.

Chilled water is produced by an air-cooled chiller which was installed as part of the 2005 renovations and is in good condition. One of the four chiller compressors was recently replaced.

The piping systems including the circulation pumps and valves are generally original from the 2005 renovations and in good condition except for dielectric unions which may have been replaced due to leaking.

**Building – Plumbing:**

The plumbing system was found to be generally in good condition. The fixtures are in good condition and meet current ADA standards except for the water coolers. Current codes require both an ADA and Non-ADA water cooler be installed.



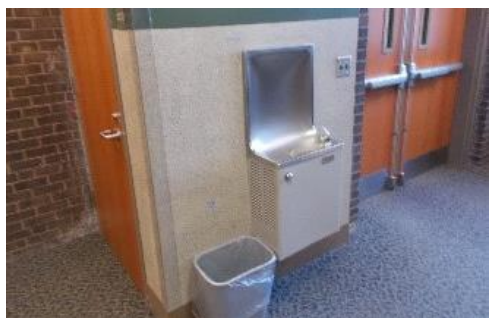
Deteriorating concrete loading dock edge

The domestic water piping systems were replaced as part of the 2005 renovations. The water service is fed from a well with a submersible pump and an exterior vault with booster pumps located at the Intermediate School. Refer to the ELCO Intermediate School report for additional information. The domestic water piping system is copper and in poor condition due to poor water quality. The majority of the issues have been reported in the hot water piping. The system has a nitrate removal system and a water softener, although the water softener is showing signs of corrosion on the piping and is leaking. The possibility of installing a new domestic water service from the public water system should be explored to help with water quality issues.



Water containment at the front office

The sanitary and storm drainage piping condition is unknown but there have not been any issues reported with it. The majority of the drainage system is likely to be original from 1972 and could be nearing the end of its typical life cycle. We recommend that if any drainage piping will remain as part of any major renovation that it be water jetted and scoped with a camera to identify any problem areas.



Water coolers not ADA compliant

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*Main electrical switchgear*

Two high efficiency storage type domestic water heaters were installed in 2005 and appear to be in good condition.

The school does not have a fire sprinkler system.

Issues to consider:

**EMS.PLUM.01** Install ADA-compliant water coolers.

**EMS.PLUM.02** We recommend that the domestic water systems undergo a complete upgrade as part of any renovation project.

**EMS.PLUM.03** Consider installation of a fire sprinkler system.

### **Building – Electrical:**

The electrical service enters the building by underground secondary feeders and terminates into a Square D 3000 Amp, 277/480volt main switchboard. The switchboard is in good condition and has provision for additional breakers to be added. There are (2) 300KVA step-down transformers located in the electrical rooms to obtain 120/208volt power for receptacle and miscellaneous circuits. Most branch panels Square D and are in good condition.

The emergency generator is a Kohler 150 kW diesel unit. The generator and associated equipment are in good condition. A 70 Amp Kohler Life Safety automatic transfer switch with a normal/emergency panel are installed in the electrical room. A 125 Amp Kohler Non-Required Loads automatic transfer switch with a normal/emergency panel is installed in the electrical room.

The interior building lighting consists of mostly T5 fluorescent luminaires with LED exit signs. There is a Lehigh dimming system installed on the stage. We recommend replacing lighting with LED luminaires as required to meet the requirements of the international energy code. Replace exterior and site lighting with LED fixtures for energy savings and to reduce the frequency of maintenance. Provide automatic lighting control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)

The building has telephone and computer outlets located throughout the building. They are connected to network racks

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with Category 6 cabling. This building has an Avaya phone system.

The intercom system is Telecor. The master clock system has a Sapling master clock with Sapling secondary clocks.

The fire alarm system is a Simplex with manual pull stations and audio/visual devices. The system needs to be upgraded to a code compliant system.

The building has an access control system, intrusion detection system and cameras.

Issues to consider:

**EMS.ELEC.01 Consider upgrade of lighting fixtures and controls for energy savings and to meet current codes.**

### Summary

ELCO Middle School is 44 years old and in good condition. Minor improvements to functional/aesthetic aspects such as carpet and paint could be undertaken to further improve the building's appearance. Educational performance issues are more structural, relating to lack of or no natural light in classrooms. Consideration to augmenting the school with support spaces (SGI's, LGI's) should also be given in future renovations. Infrastructure is generally good although we recommend replacing the domestic hot water and drainage piping in future renovations.



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Existing Facilities Report – ELCO High School  
180 Elco Drive, Myerstown, PA 17067



Exterior of building

**History:**

ELCO High School (EHS) was originally built in 1964 with alterations and additions completed in 1991.

The building is located on a 45 acre site on the ELCO campus located in Myerstown.

**Building Statistics:**

Size of Building:

Building 170,000 sq. ft. (2 story building)

Grades:

The school currently educates students from 9<sup>th</sup> through 12<sup>th</sup> grade.

In September 2016, **696** students were enrolled at EHS. That enrollment is low compared to the average of 730 students per year over the last ten years. Enrollments in the upcoming six grade levels (current 3<sup>rd</sup> through 8<sup>th</sup>) averages approximately 190 students per grade.

**Site:**

Vehicular Circulation & Parking: The bus pick-up/drop-off area and visitor parking is located on the front (north) of the building. The visitor parking is located closer to the DAO entrance than the EHS entrance, causing confusion. The bus loop is tight and difficult to navigate, it also does not provide enough room for loading/unloading. Visitors park in the bus loop, sometimes remaining until 2PM when the buses arrive.

Parking is located on the rear (south) of the building and is accessed primarily by one driveway from Weavertown Road. This lack of access causes large backups at peak hours.

Issues to consider:

**EHS.SI.01 Create a more visible and secure entrance to the building.**

**EHS.SI.02 Create a functional bus loop with visitor parking located closer to the building entry.**



Aerial view of site



Parking in rear of school

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Main entrance to high school



Bus loop at main entrance



Portion of deteriorating curb at main entrance



Typical brick and mortar deterioration

Pedestrian Circulation: Pedestrian circulation is limited to the front of the building causing pedestrians to intermingle with vehicles for most of the site.

Issues to consider:

**EHS.SI.03 Create pedestrian circulation paths to allow safer access to more of the site from various exits.**

Sidewalks and Paving: The sidewalk along the front of the school appears to be in fair condition but does not provide a flush section to allow for handicap access. The curb at the front entrance is deteriorating. Some heave and drop in the pavement elevation was noted in several areas. Sidewalks and paving were noted to be generally in bad condition and in need of repair or replacement.

Issues to consider:

**EHS.SI.04 Repair and replace sidewalks as required.**

**EHS.SI.05 Repair parking and roadways as required.**

Storm Water Management: It was noted that two water management issues exist in relation to the fields surrounding the school. The teacher's lot to the south of the school drains directly to the JV baseball field, causing it to flood. Also, terracotta drainage pipes that run under the surrounding playing fields have deteriorated and there are issues with them collapsing. Sinkholes (average of 5 per year) have been forming along the deteriorating piping.

Issues to consider:

**EHS.SI.06 Create a storm water management system to deal with runoff from the parking lot.**

**EHS.SI.07 Replace terracotta piping as required.**

Play Areas: Most of the land immediately surrounding the school is used for active play fields. The site includes a stadium with track and field, tennis courts, two baseball fields and several striped practice fields used for various activities. It was noted that the only area protected from vehicular traffic is the stadium, other areas are subjected to damage from vehicular access.

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*EIFS at main entrance*



*Typical water discharge and deterioration*



*Concrete deterioration at base*



*Typical exterior conditions*

Issues to consider:

**EHS.SI.08** Create a perimeter system that allows for limited and strategic vehicular access.

**Building Exterior:**

Facade: The exterior of the building is primarily brick with areas of EIFS. The brick is in fair condition, showing signs of surface deterioration and needs repointing and cleaning. The EIFS is in bad condition with several areas of damage noted as well as an overall need to be restored. Caulk joints are failing and require repair in several areas. Several areas of water damage were noted, the conditions were mostly caused by either poor site drainage around the base or water discharge from equipment pipes not properly discharged from the face of the building. Small portions of structural steel are exposed and subjected to rust and deterioration. The concrete base/footing was eroding at several areas and appeared to be floating above the soil in one area.

Issues to consider:

**EHS.EX.01** Repair brick as required.

**EHS.EX.02** Repair exterior concrete as required. Fill areas where concrete is floating above ground.

**EHS.EX.03** Create proper discharge pathways for water from building envelope.

**EHS.EX.04** Grade landscaping away from building.

Fenestration: The exterior glazing system was replaced in 1990 and is now over 25 years old. The system is in fair to poor condition and needs to be replaced. Several areas of failed glazing seals were noted.

Issues to consider:

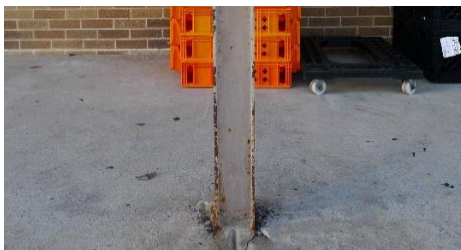
**EHS.EX.05** Replace the exterior glazing system.

Roof: The roof is EPDM (black, non-reflective). Large portions of the roof are scheduled to be restored during the 2017/2018 year. Roof flashing at double height spaces and clerestory windows was observed to be low and possible source of water infiltration. Roof edge flashing was noted to be bent and pulling away in several areas, possibly failing under consistent high winds on the site.

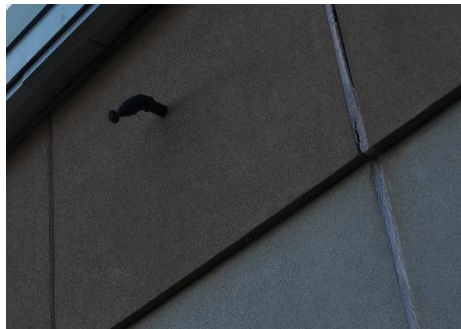
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Typical exterior conditions



Exposed structural steel



Typical EIFS condition



Seal failure on exterior glazing

Issues to consider:

**EHS.EX.06** Replace existing roof with a white reflective roof.

**Building Interior:**

Flooring: Corridors throughout the building are terrazzo, original from 1964 and in fair condition for its age. VCT is used primarily in the classrooms and is in fair condition. Carpet is used in the auditorium, library, and front office and is in fair to poor condition.

Issues to consider:

**EHS.BI.01** Restore terrazzo flooring.

**EHS.BI.02** Replace existing carpet.

**EHS.BI.03** Replace classroom flooring.

Walls: Interior walls are primarily block with glazed block to around 5'-0" and painted block above. Some areas of GWB or plaster exist. Interior walls are generally in fair condition, several areas of damage were noted, one in particular was cracking and heaving near the mechanical room.

Issues to consider:

**EHS.BI.04** Inspect area of cracked block at hallway between auditorium and mechanical room. Repair as required.

**EHS.BI.05** Repair walls as required.

Ceilings: The ceilings throughout are primarily ACT and they are in fair to poor condition. There is noticeable wear and cupping to the tiles in the hallways and classrooms. The extent of cupping suggests either end of lifespan or prolonged exposure to moisture.

Issues to consider:

**EHS.BI.06** Replace ACT ceilings with new system. Inspect exiting tiles for moisture damage.

Food Service: The cafeteria currently serves three lunches with about 230 students per sitting. Capacity is meeting the needs and the space is currently not overcrowded. Scatter serve is desired, the current line service is inefficient. It was noted that some kitchen equipment is out of date and that the kitchen

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*Kitchen equipment*

lacks proper storage. The school would like to consider a variety of spaces and types of seating to offer students choice. Please refer to the detailed report by Corsi Associates attached to this document.

Issues to consider:

**EHS.BI.07 Consider enhancing service by augmenting with scatter service.**

**EHS.BI.08 Replace outdated equipment and implement more storage within the kitchen.**

**EHS.BI.09 Consider planning for a variety of seating arrangements to create spaces comfortable for all students.**



*Roof at clerestory windows*

Code Compliance: Several areas of non-compliance were noted within the building. The current choral room has only one exit for capacity exceeding 50 occupants. Most interior doors and hardware are not ADA accessible. Approach and clearances for restrooms are not ADA accessible. Classrooms have impediments to ADA use, of particular note are the science labs.

Issues to consider:

**EHS.BI.10 Renovate or create spaces that meet capacities and offer proper egress for occupants.**

**EHS.BI.11 Provide doors and hardware that are ADA accessible.**

**EHS.BI.12 Renovate or create classroom spaces that meet ADA requirements.**



*Typical flashing height at roof*

Security: The building does not have a secure entrance. The entry foyer is located across the hall from the front office, there is minimal visibility due to distance and a heavy mullion system at the office. Entrance to the school through the DAO office is also not properly secured with access easily available to visitors. Large areas of student parking are not monitored from the rear entrance lobby.

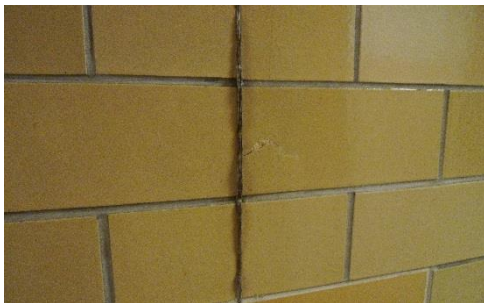
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*Roof edge flashing*



*Deteriorated block at interior*



*Crack in block near mechanical room*



*Typical classroom*

Issues to consider:

EHS.BI.13 Create a secure entrance by relocating the front office adjacent to the entry foyer; make the entrance clearly defined on the exterior.

EHS.BI.14 Create a secure entrance at the DAO by placing the connection to the high school in a secure area.

EHS.BI.15 Consider sight lines to the student parking to allow proper supervision from the building.

EHS.BI.16 Consider creating appropriate transparencies to allow for a greater visual connection to the exterior of the building.

**Educational:**

Classrooms: Classrooms are currently maxed out at 26 students or 18 students, depending on the square footage of the room. Based on utilizations of other rooms (see Group Instruction) the school should plan to add classrooms to support current needs.

Issues to consider:

EHS.ED.01 Add classrooms to support capacity issues that are requiring the use of other spaces as classrooms.

Group Instruction: Currently there is an overall lack of collaborative meeting spaces or group work rooms. The existing LGI is currently being used as two classrooms, so the school needs a dedicated LGI to serve the students. Currently the library and cafeteria are utilized for LGI functions. SGI functions currently occur in the athletics lobby or outdoors spaces.

Issues to consider:

EHS.ED.02 Provide a dedicated LGI to support student learning.

EHS.ED.03 Provide a number of SGI's to support student learning and accommodate the need for collaborative spaces outside of classrooms.

Special Education: The school currently offers emotional support and learning support classes. One of the learning support classes follows a life skills curriculum and currently utilizes a former family and consumer science classroom with a

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Auditorium floor creates difficult sight lines

refrigerator, microwave, and stove. These spaces are adequate but more space would be beneficial to students, teachers, and visiting specialists.

Issues to consider:

**EHS.ED.04 Consider creating larger spaces suited to the needs of special education programs.**

Music/Art: The band room is undersized and should accommodate 120 students with storage for instruments and uniforms. The chorus room is undersized and should be able to accommodate 200 students plus an area for choir rehearsal. The existing chorus room exceeds occupancy and does not have proper exits. Provide music rehearsal spaces and a dedicated music technology lab and classroom.

Art classrooms are undersized and there is not enough storage or usable floor space for potter's wheels. It is desirable to have computer graphics stations in the art classrooms or immediately available nearby.

Issues to consider:

**EHS.ED.05 Consider expanding or creating new band and choral rooms that meet the capacities of students involved in these activities.**

**EHS.ED.06 Create a music technology lab with dedicated classroom.**

**EHS.ED.07 Create right sized art classrooms to allow for proper clearances and storage support spaces.**



Agriculture science storage

Science/Technology: It was noted that the school would like to expand the number of course offerings in the science and agricultural science disciplines. This would require additional lab space to be added to the existing rooms or new rooms.

It was noted that the school would like to include STEM programming for all 9th grade students. In order to achieve this the existing technology education area could be made more conducive to STEM learning.

It was noted that there is a lack of science classrooms with adequate lab space. Chemical storage and disposal systems are not sufficient to support the classrooms.



Library

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TV studio

There are three dedicated computer lab/classrooms for the business and computer technology departments. There is also a computer lab in the library that can be reserved by teachers for use.

All technology education should be located in the same area and not spread apart. Square footage in the lab spaces needs to be increased to enhance student safety. Outdoor access via garage doors would be beneficial to the program.

The TV broadcasting studio should be moved closer to the technology education department to create a graphic communication area (which should also be adjacent to the performing arts wing). The new graphics lab should incorporate screen printing, large format printing, etc.

Considerations should be made to establish a barn lab for agriculture animals with proper ventilation and feed storage.

Current greenhouse is not large enough and leaks significantly. Consider adding a good science lab to the area.



Tech Ed

Issues to consider:

EHS.ED.08 Create additional lab space to support increased offerings in science and agricultural science.

EHS.ED.09 Create additional lab space or augment existing spaces to allow 9th grade students to participate in STEM programming.

EHS.ED.10 Create a plan that keeps tech ed program together in one area.

EHS.ED.11 Consider locating the TV broadcasting studio near the tech ed rooms to create a graphic communications zone.

EHS.ED.12 Consider replacing the existing greenhouse.



Band room

Library: It was noted that the library should be the hub of the school and act as a creativity center that allows students to collaborate and tinker. This space should be more usable with the potential to host lunch and learn activities and be rearranged as needed. The ability to establish classroom destinations that could host up to three groups of 25 students at one time is desired. A recording studio as part of the library program is also desired.

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Music rehearsal booths

Issues to consider:

EHS.ED.14 Consider creating a new library that is the hub of the school and supports the academic mission of a creativity center.

Physical Education: The school desires a singular athletics lobby that acts as the entrance to all athletic spaces. The athletics lobby should contain the ticket booth, concessions and public restrooms.



Gymnasium

The gymnasium has a large bi-folding door that is past its useful life and does not operate properly or safely. The gymnasium has a seating capacity of about 800 spectators which meets the desired capacity. However proper clearances from the competition zones are not sufficient putting both athletes and spectators into potentially dangerous situations.

Storage is a significant issue within the athletics area as is limited locker space. In addition, lockers cannot be locked to safely store student valuables.

The Athletics Director and Assistant Athletics Director/Trainer should be collocated and adjacent to the weight room and have the ability to access the exterior.



Gymnasium divider

The current gymnasium is not air conditioned, future facilities should be conditioned spaces. The gymnasium is also used for school dances and other high occupancy events.

Issues to consider:

EHS.ED.15 Consider creating a new gymnasium with proper clearances for today's standards and repurpose the existing gymnasium to meet other programmatic needs.

EHS.ED.16 Create an athletics lobby that acts as the main entrance for all athletic activities and is a public destination.

EHS.ED.17 Provide proper storage for athletics.

EHS.ED.18 Create a home for the athletics administration that is near the weight room.

Auditorium: Seating in the auditorium is negatively affected by the changing slope of the finished floor which dips to a low spot and then comes back up for several rows before the stage. This creates a large area of obstructed view seating. The

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Weight room

capacity of the auditorium should be maintained. There is no direct handicap access from the auditorium to the stage and there is no dedicated handicap seating. The restrooms available to the public are small for the venue size. It is desired to have dressing rooms with restrooms for theater productions. It was noted that there should be high door access from a stage workroom to the stage to allow for loading of sets.

Issues to consider:

**EHS.ED.19** Create a new auditorium experience that enhances site lines for all seats; study options for achieving this in place while maintaining the existing capacity.

**EHS.ED.20** Create handicap access to the stage from the auditorium and dedicated areas for handicap seating.

**EHS.ED.21** Augment the auditorium with dressing rooms and stage craft workrooms that have proper attributes to support a theater program.



Classroom with lab

Administration: The front office is not adjacent to the building entry creating an unsecured vestibule and allowing visitors to have direct access to the school. There is a lack of meeting space to support basic daily functions. The administration area should be collocated with the nurse and guidance suites. The nurse suite does not allow the nurse to monitor students from the office.

Issues to consider:

**EHS.ED.22** Create a secure entry directly linked to an administration suite that contains the nurse and guidance functions.



Classroom with lab

District Administration Office (DAO): The current DAO does not have space for all personnel and lacks proper meeting spaces and storage. The DAO entry creates an unsecure entry issue for the high school.

Issues to consider:

**EHS.ED.23** Expand the DAO office to accommodate all essential staff in one area with proper meeting spaces and storage/filing.



Lab space

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**Building – HVAC:**

The HVAC system consists of an aging 4-pipe cooling and heating system. Individual unit ventilators are installed in most of the classrooms. Air handlers and fan coils serve the remainder of the building. The kitchen, gymnasium, and corridors do not have air conditioning installed in them. The weight room and wrestling room are served by rooftop units that were installed in 2000.



*Chillers*

Hot water is produced by two hot water boilers which are fuel oil fired. The original boiler from the 1991 renovation is in poor condition. The other boiler has been replaced in 2012 and in good condition.

Chilled water is produced by an air cooled split condenser chiller installed as part of the 1991 renovations. One of the three chiller sections is not operable. The chiller is at the end of its typical life cycle.

The piping systems including the circulation pumps and valves are generally original to the school and at the end of their normal life cycle. Many sections of piping are in poor condition with sediment and this results in low flows to many parts of the building. Some of the piping was installed in exterior walls and causes freezing problems in the coldest part of the winter.

Outdoor air ventilation is provided through the classroom unit ventilators and through the rooftop units and air handlers. Ventilating classrooms through unit ventilators is not a modern approach and does not typically provide adequate ventilation.



*Typical classroom unit ventilator*

Issues to consider:

**EHS.HVAC.01 Due to the age and condition of the system, we recommend a complete upgrade of the HVAC system.**

**Building – Plumbing:**

The plumbing system was found to be in fair to poor condition and showing many signs of aging. The fixtures are in fair condition and do not meet current ADA standards and are not the water conserving type. We recommend that the fixtures undergo a complete upgrade as part of any renovation project.

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*Toilet room*



*Water softening system*

The domestic water piping system was replaced as part of the 1991 renovations. The water service is fed from a well with a submersible pump and an exterior vault with booster pumps. The submersible well pump was replaced in 2012. The domestic water piping system is copper and in poor condition due to poor water quality. The system has a nitrate removal system and a water softener although the water softener is old and not operational. The possibility of installing a new domestic water service from the public water system should be investigated to help with water quality issues. We recommend that the domestic water systems undergo a complete upgrade as part of any renovation project.

The sanitary and storm drainage piping is mainly original except for the renovated areas in 1991. The sanitary drainage piping is nearing the end of its typical life cycle. We recommend that if any sanitary drainage piping will remain as part of a renovation that it be water jetted and scoped with a camera to identify its condition and any problem areas. An exterior sewage lift station is installed in a courtyard. It was installed as part of the 1991 renovations and its condition is unknown but it is at the end of its typical life cycle. The storm drainage piping is terracotta and is in poor condition. We recommend that the entire storm drainage system undergo a complete replacement as part of any renovation project.

Three high efficiency storage type domestic water heaters were installed in 2009 and appear to be in good condition. No thermostatic mixing valves are installed. The water heater controls the temperature of the system which does not have precise control and does not allow for a higher storage temperature to prevent Legionella bacteria. A single standard efficiency atmospheric vent storage type domestic water heater was installed in 2013 to serve the kitchen only and appears to be in good condition. Consideration should be given in the future to install two water heaters for the kitchen hot water to provide redundancy. The water heaters are all propane fired. The propane piping appears to be in fair to good condition. The propane tanks are buried on the exterior of the building and were most likely installed along with all the propane piping in the 1991 renovation.

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*Kitchen domestic water heater*



*Emergency generator*

The school does not have a fire sprinkler system.

Issues to consider:

**EHS.PLUM.01** Due to the age and condition of the system, we recommend a complete upgrade of the plumbing system.

**Building – Electrical:**

The electrical service enters the site by underground primary feeders and terminates into a Square D HVL medium voltage switch. The one switch feeds a pad mounted transformer that feeds a Square D 3000 Amp, 277/480volt main switchboard. There is a 500KVA step-down transformer located in the electrical rooms to obtain 120/208volt power for receptacle and miscellaneous circuits. The other switch feeds the stadium transformer. All equipment is at the end of its useful life and needs to be replaced.

The emergency generator is a Cummins 80 kW natural gas unit. A 125 Amp Asco automatic transfer switch with a normal/emergency panel is installed in the electrical room. This equipment is at the end of its useful life and does not meet current code requirements.

The interior building lighting consists of mostly T8 fluorescent retrofitted luminaires with LED exit signs. There is an ETC dimming system installed on the stage. We recommend replacing lighting with LED luminaires as required to meet the requirements of the international energy code. Replace exterior and site lighting with LED fixtures for energy savings and to reduce the frequency of maintenance. Provide automatic lighting control to all areas to comply with the International Energy Conservation Code (IECC) and the International Building Code (IBC)

Telephone and computer outlets are located throughout the building. They are connected to network racks with Category 5 cabling.

This building has an Avaya phone system. All cabling should be replaced with Category 6 cabling during major renovations.

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IDF room

The intercom system is Rauland. The master clock system has a Sapling master clock with Sapling secondary clocks.

The fire alarm system is a Simplex with manual pull stations and audio/visual devices. The system needs to be upgraded to a code compliant system.

The building has an access control system, intrusion detection system and cameras.

Issues to consider:

**EHS.PLUM.01 Due to the age and condition of the system, we recommend a complete upgrade of the plumbing system. We recommend that the entire electrical system be replaced.**

### Summary

ELCO High School is over 52 years old with the last major renovation occurring 25 years ago. Much of the infrastructure, both MEP and building envelope, is in need of a full renovation/restoration.

The building entrance sequences are not secure and allow easy access to most of the facility creating an unsafe environment. Many of the public spaces are not properly sized for today's standards.

Furthermore, the building cannot support the educational goals of the district. Many of the science classrooms lack critical lab space. Also, key support spaces for student learning such as LGI's and SGI's do not currently exist. Overall, throughout the school, spaces are inadequate to meet student capacities and the demands of the district's 21<sup>st</sup> century educational program.

KCBA recommends the district pursue a renovation/expansion project to renew buildings systems, meet modern security standards, and enhance educational environments.



January 3, 2017

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Project: Eastern Lebanon County High School  
Myerstown, PA  
High-Level Evaluation Report

Dear Sir,

On December 27th, 2016, a representative from **Corsi Associates** performed an on-site walkthrough of the Eastern Lebanon County High School in Myerstown. The purpose of the walk through was to review the current foodservice set up to provide a high-level review of program efficiency, code concerns and equipment suitability for re-use.

A brief review of findings is listed below.

Seatings: (3) Lunch Periods  
Students: 810 Students  
Staff: Currently the foodservice department is self-operated.

#### **General Notes**

- Floor drains and floor troughs are currently in the space. These may need to change or be moved depending on any changes to the layout moving forward.
- There is currently a large office in the space and a small production desk in the main kitchen area by the receiving door.
- One side of the cooking hoods is currently being under used with (1) single deck convection oven on that side of the cooking battery. There is room to increase cooking production if necessary.
- The current mop closet has a washer and dryer located in the same closet area.
- There are lockers for employees and an employee bathroom in the space. The employee bathroom is not ADA.
- There are (2) hand sinks in total, (1) in the main kitchen and (1) in the dishroom. This does not meet code and additional hand sinks will be required.

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- There are (2) water softening systems, (1) for the dishmachine and (1) for the steamer. It was noted that the school deals with hard water. Going forward, the school would either look to keep the softening systems or potentially treat the water differently.
- More dunnage rack storage is required. Currently in both the walk-ins and dry storage items are not being properly stored. This is a code issue.
- The current steamer was noted as having be rebuilt several times and a constant service issue. This could be due to the hard water issues.
- Currently the cooking equipment is all electric. 480-volt service is available and the cooking equipment is being run through the utility distribution system (UDS). It was noted that LP gas service is available but not currently being used.
- It was noted that the current serving layout is not adequate and the client would like this to be changed to a scatter serve set up. Currently there are (2) straight serving lines in the rear serving area that open to a self-service area just before reaching the PoS stations.

**Finishes**

**Kitchen / Dish room / Rear Serving Area**

Quarry tile floors: *Meets code but would need to be repaired or replaced in certain spots*  
 Coved tile base: Meets code  
 Painted block walls and tiled walls: Meets code  
 Perforated acoustical ceiling tile: *Does not meet code and would need to be replaced*  
 Lensed lights: Meets code

**Dry Storage**

Quarry tile floors: Meets code  
 Coved tile base: Meets code  
 Painted block walls: Meets code  
 Exposed ceiling and hard ceiling in secondary dry store room: Meets code

**Front Serving Area**

Terrazzo flooring: Meets code  
 Coved tile base: Meets code  
 Tiled walls: Meets code  
 Perforated acoustical ceiling tile: *Does not meet code and would need to be replaced*  
 Lensed lights: Meets code

**Equipment**

Walk-in cooler / freezer assembly:

- Older but in fair shape.
- Units have the quarry tile adjacent kitchen flooring running into the assemblies.
- Units were operating to temperature during time of the walk through.

Stainless steel shelving throughout space is in good condition and can be reused.

Plastic shelving throughout space is in good condition and can be reused.

Old Metro shelving throughout space should be replaced.

All worktables are stainless steel and in good shape and can be reused.

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Food slicer in good shape and can be reused.

30-quart floor mixer in fair to good shape and can be reused.

Traulsen and Victory refrigeration and heated cabinets are in fair shape. May be reused depending on desired life expectancy requirements.

(2) Electric 40-gallon kettles are in fair shape.

Cleveland 12-gallon kettle is in fair shape.

Cleveland Ultra steamer is in poor shape and should be replaced.

Blodgett double deck convection oven is in fair to poor shape and should be replaced.

SECO engineering hoods and Utility distribution system:

- Both the hoods and UDS look to meet code and would require minimal work to bring them up to IMC 2012.
- Corsi Associates did not look above the ceiling or on the roof to determine if the duct work and fans are up to code or in good working order.

Vulcan single deck convection oven is in poor shape and should be replaced.

Southbend double deck convection oven is brand new and should be reused.

2-compartment prep sink in fair shape and can be reused.

Butcher block worktable is in poor shape and should be replaced.

(2) Servolift straight serving lines in the rear serving area in fair shape.

- These would most likely be replaced to better suit a scatter serve design.

Winston CVAP heated cabinet is in good shape, can be reused.

Cambro hot holding cabinet is in fair shape.

Stainless steel soiled dishtable with dish drop is in fair shape.

Hobart 86" conveyor dish machine with remote booster heater in fair to poor shape, look to replace.

Stainless steel clean dishtable in fair shape.

Air screen merchandiser in fair shape and can be reused.

Heated shelf merchandiser in fair shape and can be reused.

(2) milk coolers are in fair shape and can be reused.

(2) POS stations, double sided are in fair shape and can be reused.

Ice cream freezer, vendor supplied.

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Hot self-service bar and self-service salad bar fair condition with the potential for re-use.

Again, thank you for your consideration in this project. We look forward to working with your organization in the near future.

Sincerely,

*Kevin Corsi*

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