

### FACILITY ASSESSMENT

# Central Intermediate School

## MAY 15, 2017





4588 Kenny Road Columbus, Ohio 43220

#### 1.1 CENTRAL INTERMEDIATE SCHOOL

151 Main Street Wadsworth, Ohio 44281

Central Intermediate School is a four-story structure totaling approximately 111,420 sf. The Original Facility was constructed in 1907. The building has had several substantial additions to the complex spanning the years 1927-1990. These include the 1927 Auditorium Wing Addition, 1961 and 1966 Classroom Area Additions, the 1973 Gymnasium Addition and the 1990 Classroom Wing Addition. The overall complex underwent extensive interior renovations in 2001 which provided improvements to many areas of the facility.

The physical construction of each of the building additions varies throughout the complex but the facility, in general, is constructed with load bearing masonry walls with supported decks and slab-on-grade construction which includes steel, concrete and wood framing. The floor construction for the 1927, 1960 circa Additions, 1973 and 1990 Additions are slab-on-grade, a steel joist system and concrete decking. The roof systems are a steel joist system. The 1907 Building is constructed with wood floor and roof deck framing.

### A. General Trades

- 1. Site Conditions
  - Asphalt Pavements -Description:

Front drive and parking area has previously had cracks filled. Some cracks are no longer filled and a few additional cracks have developed. (Fig. 1-1)





Asphalt at the aprons is damaged. (Fig. 1-2)

Figure 1-2

Rear parking area has previously had cracks filled. Some cracks are no longer filled and a few additional cracks have developed. (Fig. 1-3)



Figure 1-3

Parking area across South Lyman Street has previously had cracks filled. Some cracks are no longer filled and a moderate number of additional cracks have developed. There are a few areas where the asphalt is damaged. (Fig. 1-4)



Figure 1-4

#### Recommendations:

Cut and patch damaged asphalt and fill previously filled crack and new cracks with crack sealer and seal coat lot at the front of the building. Fill previously filled crack and new cracks with crack sealer and seal coat lot at the back of the building. Mill approximately 2" of existing asphalt at the lot across South Layman Street and apply stress absorbing membrane interlayer and 2" of asphalt. Concrete walks/aprons/islands/stairs -Description: There are approximately (35) sections of concrete sidewalks around the site that are damaged. (Fig. 1-5)



Figure 1-5



There are four large concrete walk sections along the south side of the building that are damaged. (Fig. 1-6)

Figure 1-6

There are four sections of the concrete apron at the front entrance that are damaged. Two of the concrete islands at the front parking area do not have control joints and are cracked. (Fig. 1-7)



Figure 1-7

The third island has joints but two sections are damaged. There are reinforcing bars exposed at one of the concrete stairs along the east side of the building. There are no hand railings. (Fig. 1-8)



Figure 1-8



The railing at the other concrete stair along the east side of the building is rusting. (Fig. 1-9)

Figure 1-9

Recommendations:

Replace the damaged concrete sidewalk sections, the damaged concrete apron sections and the damaged concrete at the islands. Patch the concrete stairs where the reinforcing bars are exposed and provide railings along the east side. Paint the rusty railing at the other stairs along the east side.

### Fencing –

Description:

The posts and mesh at the 8' high chain link fencing from the southeast corner of the building over to the edge of the playground is rusting and damaged and there is barbed wire along the top. (Fig. 1-10)



Figure 1-10

The posts and mesh at the 4' high chain link fencing between the walk and the back parking area is rusting and damaged. (Fig. 1-11)



Figure 1-11

The mesh is starting to rust at the 8' high chain link fence from the playground around to the south main entrance drive. The 5' high metal fencing at the front of the site is losing its paint and starting to rust. (Fig. 1-12)



Figure 1-12

Recommendations:

Replace the chain link fencing from the southeast corner of the building over to the edge of the playground and between the walk and the back parking area. Repaint the mesh from the playground around to the south main entrance. Repaint the metal railing at the front of the site. Play Equipment -

*Description:* The playground equipment is in fair condition. There is no handicapped accessible assess or equipment. The four basketball posts are rusting and the back boards and rims are worn. (Fig. 1-13)



Figure 1-13

Recommendations:

Replace some playground equipment with handicapped accessible equipment and make an accessible access. Replace the basketball posts, back boards and rims. 2. Handicapped Accessibility

*Description:* The facility is equipped with two primary parking areas with designated accessible parking spaces which are provided with a pathway to the main entries from the East and West lots. The total quantity of reserved parking spaces is adequate. A portion of the spaces are lacking appropriate signage. There are no accessible loading and unloading zones. Walkways and island crossings are not equipped with detectable warnings at all required areas. (Fig. 2-1)

The facility is equipped with three elevators which provide access to the varying floor levels within the complex. Elev 1 off the Auditorium lobby provides access to the Auditorium balcony and 1907 and 1927 2<sup>nd</sup> and 3<sup>rd</sup> floor levels. Elev 2, adjacent to the Auditorium stage, provides access for the stage level and the lower level of the 1927 Auditorium addition. Elev 3, located along the main corridor of the 1999 Addition provides access to the lower level and main floor of the 1999 Addition. Corridors are interconnected and an accessible path of travel is provided through the majority of the complex. The Main entry lobby of the 1907 Addition is only accessible to the main level of the building by stairs. (Fig. 2-2) Access to the intermediate level of the Administrative Office is provided by ramp but, the door accessing the secretarial area from the ramp is not equipped with adequate maneuvering clearances. (Fig. 2-3, 2-4) An accessible path of travel is provided to the Gymnasium of the 1973 Addition through a retro-fitted corridor through the original locker rooms. This access point appears to be locked, hindering free access to the area. (Fig. 2-5, 2-6) The main access to the lower level Gymnasium is provided by stair from the first floor. Several entry/exits are not accessible due to level change and are not equipped with directional signage. (Fig. 2-7, 2-8)

The majority of interior doors throughout the complex are equipped with lever type hardware. Accessible hardware is not provided at a few door locations. These typically include all doors at the lower level spaces below the Auditorium stage, miscellaneous closets or storage rooms and some faculty areas. (Fig. 2-9, 2-10) Entrances to most of the educational spaces and office areas are provided with the required minimum maneuvering clearances. A limited quantity of doors are not provided with adequate maneuvering floor clearance and some maneuvering clearance areas have been obstructed by furnishings or moveable equipment. (Fig. 2-11)

The large group toilet facilities and clinic toilet in the 1907 Building were renovated to provide accessible accommodations. However, the clinic toilet is lacking grab bars and a portion of accessories are located outside reach ranges. The paper towel dispensers protrude more than 4'' into the path of travel. (Fig. 2-12, 2-13, 2-14) The majority of the remaining toilet facilities and showers throughout the complex are not accessible. There are several attempts to provide accessible facilities however, modifications are incomplete or are an inappropriate application of the ADA/ANSI Guidelines. Most of the restrooms do not have required clearances at toilet fixtures. A portion of the faculty toilets have a raised threshold at the door assembly with an outwardly door swing across the riser. (Fig. 2-15, 2-16, 2-17) The complex is provided with dual height accessible drinking fountains in some areas. There are several accessible drinking fountains mounted for wheel chair access without dual accommodation for required standing access and a portion of drinking fountains are not accessible due to installation in undersized recesses. (Fig. 2-18)

Accessible signage is provided throughout the complex but a few intermittent locations are mounted outside specified height limits or installed on active door leafs. (Fig. 2-19)

The casework at classrooms does not provide knee clearance for front approach access at sinks. Base casework, counters and sinks are typically installed at an elevation of 30" above finish floor in the classroom spaces. This elevation is an acceptable range for children age 6-12 but is below the standard accessible height limitation of 34" for sink access for adults. The casework at staff and administrative spaces do not provide handicapped accessibility or accessible work stations. Base casework, counters and sinks in these areas are installed at an elevation of 36" above finish floor and exceed the accessible height limitation of 34" for sink access and obstructed reach. (Fig. 2-20, 2-21)

The existing handrails at the majority of the stair assemblies do not conform to profile requirements and are not equipped with handrail extensions. The handrail/guardrail assemblies at the 1907 Building are dangerously low and violate current code provisions. (Fig. 2-22, 2-23)

The auditorium is equipped with designated accessible and companion seating at the main floor. No provisions are provided at the balcony level which is accessible by elevator. The stage is not directly accessible from auditorium seating.

This assessment of accessibility compliance was provided for general provisions and does not include an exhaustive analysis for full compliance of all, controls, operational devices, equipment locations, receptacle and switch mechanisms reach limitations, signage character type and height limitations, surface/cross slopes or assistive listing device requirements.

*Recommendation:* Provide detectable warnings at traffic approaches, accessible parking signage and designated loading/unloading zones.

Provide accessible door hardware where lacking and modify existing door openings to provide required maneuvering clearances where inadequate. Remove owner /occupant placed furnishings and equipment obstruction within required door maneuvering clearances. (Waste baskets, file cabinets, chairs, desks, etc.)

Replace non-conforming casework inclusive of sinks to provide accessibility.

Upgrade all non-compliant restrooms and showers to fully comply with the provisions of the ADA/ANSI Guidelines.

Provide accessible handrails at non-conforming stair assemblies.

Replace non-conforming signage and upgrade accessible signage throughout the complex in conjunction with extensive renovation of the structure.



Figure 2-1



Figure 2-2



Figure 2-3



Figure 2-4



Figure 2-5



Figure 2-6



Figure 2-7



Figure 2-8



Figure 2-9



Figure 2-10



Figure 2-11



Figure 2-12



Figure 2-13



Figure 2-14



Figure 2-15



Figure 2-16



Figure 2-17



Figure 2-18


Figure 2-19



Figure 2-20



Figure 2-21



Figure 2-22



Figure 2-23

3. Exterior Walls and Soffits *Description*:

There are moderate amount of mortar joints that are missing or cracked. (Figs. 3-1, 3-2, 3-3)



Figure 3-1



Figure 3-2



Figure 3-3

There are a few areas where there is movement in the brick. (Figs. 3-4, 3-5, 3-6)



Figure 3-4



Figure 3-5



Figure 3-6



The brick is missing or damaged at a few locations. (Fig 3-7)

Figure 3-7

The terra cotta detail is cracked and damaged and many of the mortar joints are missing or cracked. (Figs. 3-8, 3-9, 3-10, 3-11)

![](_page_48_Picture_1.jpeg)

Figure 3-8

![](_page_49_Picture_0.jpeg)

Figure 3-9

![](_page_50_Picture_0.jpeg)

Figure 3-10

![](_page_51_Picture_0.jpeg)

Figure 3-11

The painted galvanized metal detail at a portion of the building is rusting. (Fig 3-12)

![](_page_52_Picture_1.jpeg)

Figure 3-12

![](_page_53_Picture_0.jpeg)

Mortar joints are missing or cracked at the stone foundation walls. (Fig. 3-13)

Figure 3-13

There are various areas where mismatched brick have been in filled or walls have been patched with mortar. (Figs. 3-14)

![](_page_54_Picture_1.jpeg)

Figure 3-14

![](_page_55_Picture_0.jpeg)

The joint sealant at the vertical expansion joints are deteriorating. (Fig. 3-15)

Figure 3-15

The soffit at one of the south entrances is water stained exposed concrete and the metal edge is unfinished. (Fig. 3-16)

![](_page_56_Picture_1.jpeg)

Figure 3-16

![](_page_57_Picture_0.jpeg)

The plaster at the soffit at the other south entrance has mostly fallen off. (Fig. 3-17)

Figure 3-17

![](_page_58_Picture_0.jpeg)

The mortar at the precast and stone roof copings is missing and cracked. (Figs 3-18, 3-19)

Figure 3-18

![](_page_59_Picture_0.jpeg)

Figure 3-19

![](_page_60_Picture_0.jpeg)

There are a few wood boards damaged at the Auditorium entrance. (Fig. 3-20)

Figure 3-20

## Recommendations:

Repoint all missing and crack brick mortar joints at brick. Saw cut brick to create vertical expansion joints at two locations. Remove brick were it has moved at two locations and replace in proper alignment. Replace damaged or missing brick. Replace damaged terra cotta and cover all with pre-finished metal. Replace painted galvanized metal detail with new pre-finished metal. Repair mortar joints at foundation walls. Replace brick where mismatched or where mortar has been installed with brick to match. Replace joint sealant at vertical expansion joints. Provide pre-finished metal soffit where concrete exposed and where plaster missing at south entrances. Cover all precast or stone copings with prefinished metal coping during roof replacement. Replace damaged wood boards at Auditorium entrance and repaint all wood trim. Power wash the entire building and apply water repellent.

4. Exterior Doors and Windows Exterior Doors -Description:

> All exterior doors and frames are pre-finished aluminum, except for one set of doors along the south side of the building that are mill finished aluminum and a hollow metal door and frame into the mechanical area from the roof. The finish of the doors is scratched. The hollow metal frame is starting to rust. Some of the seals of the transom windows are broken. The door hardware is worn, closers are starting to fail and center mullions not functioning properly. (Figs. 4-1, 4-2, 4-3)

![](_page_61_Picture_3.jpeg)

Figure 4-1

![](_page_62_Picture_0.jpeg)

Figure 4-2

![](_page_63_Picture_0.jpeg)

Figure 4-3

## Recommendation:

Replace all doors and frames with pre-finished aluminum thermally broken frames and insulated doors. Replace all hardware.

## Exterior Windows – *Description:*

All windows are pre-finished insulation aluminum, except one small window that is wood. Most windows are operable. Some are fixed. Some of the operable windows cannot be opened due to the hardware. Replacement parts cannot be found. Some of the seals are broken and thus the windows condensate. There are insulated panels at the top and between of some windows. The steel lintels are rusting. The joint sealant between the window frame and the masonry is deteriorating. (Figs. 4-4, 4-5, 4-6, 4-7)

![](_page_64_Picture_4.jpeg)

Figure 4-4

![](_page_65_Picture_0.jpeg)

Figure 4-5

![](_page_66_Picture_0.jpeg)

Figure 4-6

![](_page_67_Picture_0.jpeg)

Figure 4-7

Recommendations:

Replace all windows with pre-finished thermally broken insulation operable and fixed windows with integral blinds. Paint steel lintels. Replace joint sealant. 5. Flooring and Base

Description: The 1907 Original Building is typical finished with wood flooring in the corridors. Classrooms have been renovated with vinyl composite flooring (VCT) installed over the original wood flooring. The VCT flooring has fine fisher cracking in many areas due to the flexibility of the underlining floor structure. (Fig. 5-1, 5-2) The wood flooring in the corridors is general in good condition with minor areas of wear. (Fig. 5-3) Base throughout this building is a high profile painted wood base. The corridor and student dining area of the 1927 Auditorium addition is terrazzo in good condition. The Auditorium is finished with terrazzo and carpeting in good condition and bare concrete. The concrete at the balcony is cracked in several areas. (Fig. 5-4, 5-5) The lower level of the auditorium addition contains a variety of floor finishes which are generally in poor condition. (Fig. 5-6, 5-7, 5-8) The music and choir classrooms have VCT in satisfactory condition. The kitchen is finished with quarry tile in satisfactory condition. The 1990 Addition classrooms and corridors are finished with VCT in satisfactory condition. The Administration Offices, the Media Center and several small group spaces are finished with carpet that appears to be of similar age. The carpet installations are soiled in some areas, show signs of wear in heavily trafficked areas and have intermittent "ripples" in a few areas. (Fig. 5-9, 5-10, 5-11) The entrance lobby at the 1907 building is finished with a walk off carpet system which is warn and deteriorated from salt deposits. (Fig. 5-12) Toilet rooms throughout the complex are finished with VCT or sheet flooring in satisfactory condition.

Resilient base was updated with flooring renovations throughout the complex and is generally in satisfactory condition with limited damaged at intermittent locations. (Fig. 5-13) The majority of stair assemblies have rubber treads in satisfactory condition. The stairs accessing the lower level of the Auditorium Addition are bare concrete with intermittent damage. The concrete stairs accessing the mechanical area are in poor condition. (Fig. 5-14, 5-15) The mechanical area is unusually finished with vinyl flooring which is in very poor condition. (Fig. 5-16) The Gymnasium has wood athletic flooring which displays signs of wear. (Fig. 5-17)

*Recommendation:* Replace all VCT flooring at the 1907 Building with a more forgiving flooring material that will better accommodate the movement of the wood subfloor. Replace and restore all finishes at the lower level of the Auditorium Addition. Replace the lobby floor finishes at the 1907 Building. Provide new rubber flooring and treads at stair to the lower level of the Auditorium Addition and repair damaged concrete surfaces. Replace the concrete stairs and remove vinyl flooring at the Mechanical Room. Refurbish or replace the gymnasium floor and continue maintenance of the wood flooring. Continue maintenance of intermittent damaged flooring. The carpeting, remaining vinyl and rubber flooring throughout the complex should be budgeted for replacement within the next five to seven years as these finishes are approaching there useful life expectancy.

![](_page_69_Picture_1.jpeg)

![](_page_69_Figure_2.jpeg)

![](_page_70_Picture_0.jpeg)

Figure 5-2

![](_page_71_Picture_0.jpeg)

Figure 5-3


Figure 5-4



Figure 5-5



Figure 5-6



Figure 5-7



Figure 5-8



Figure 5-9



Figure 5-10



Figure 5-11



Figure 5-12





Figure 5-14



Figure 5-15



Figure 5-16



Figure 5-17

6. Wall Finishes

*Description:* The majority of interior wall surfaces consist of plaster, painted brick and concrete masonry units, glazed concrete masonry or gypsum board assemblies. The plaster wall finish at the 1907 and 1927 buildings are damaged in some areas. (Fig. 6-1, 6-2) The plaster surfaces at the lower level of the 1927 Auditorium addition are damaged in many areas and are in poor condition. The exterior masonry walls at this area also display evidence of moisture infiltration in some areas. (Fig. 6-3, 6-4) The concrete masonry walls of the gymnasium display evidence of movement and "stair stepped" cracking in multiple locations. (Fig. 6-5) There are a few cracks in the masonry and mortar joints in other areas of the complex, but the remaining walls are generally in good condition. (Fig. 6-6) The wall surfaces of the double volume corridor adjacent to Student Dining display evidence of water damage extending from the translucent panel skylight system within this space. (Fig. 6-7) The gypsum wall surfaces in high traffic areas display evidence of repeated repair. (Fig. 6-8) Unprotected wall corners and column enclosures have edge damage. (Fig. 6-9) There are intermittent locations of minor damage throughout all areas of the complex requiring repair. (Fig. 6-10)

The plaster surfaces throughout the 1907 and 1927 are reported to contain asbestos and will require complete replacement with abatement work.

*Recommendation:* Repair all cracks in concrete, concrete block, and brick masonry, repair mortar joints and clean brick surfaces of efflorescence. Repair/replace all damaged surfaces at the lower level of the Auditorium addition. Repair damaged plaster and intermittent damaged surfaces throughout the complex. Provide complete replacement of plaster surfaces at the 1907 and 1927 Additions in conjunction with abatement activities. Provide new rigid sheet protection panels, corner guards and chair rail at gypsum wall surfaces receiving continual abuse. Provide corner guards at unprotected edge locations.

All painted surfaces throughout the complex should be budgeted for replacement in the next five years.



Figure 6-1



Figure 6-2



Figure 6-3



Figure 6-4



Figure 6-5



Figure 6-6



Figure 6-7



Figure 6-8



Figure 6-9



Figure 6-10

7. Ceilings

*Description:* The majority of rooms and spaces throughout the complex have a suspended  $2' \times 4'$ acoustical ceiling system. The ceiling system through-out the 1907-1973 additions is generally in good condition. The ceiling tiles are stained or display evidence of water damage in a few areas. (Fig. 7-1) The ceiling tiles at the 1990 Addition are often mismatched within room spaces throughout this addition and tiles are beginning to sag. A portion of the tiles are stained or damaged. (Fig. 7-2, 7-3) A limited area of the ceilings in the complex are painted concrete decking and exposed decks. The ceiling at the 1927 Auditorium House is acoustical plaster which has been well maintained. The ceilings at the lower level of the Auditorium Addition are plaster in fair to poor condition with damage in multiple locations. (Fig.-7-4, 7-5, 7-6, 7-7)

*Recommendation:* Provide gypsum/plaster ceiling repairs as required and paint throughout the lower level of the 1927 Auditorium Addition or replace in their entirety with new suspended acoustic. The addition of a new suspended acoustic ceiling system within this area will also require modification of the existing fire suppression system. Replace plaster ceiling surfaces at the 1907 and 1927 additions in conjunction with abatement activities. Clean exposed ceilings and paint as part of general maintenance. Replace interment damaged ceiling tile throughout the complex. Replace and upgrade ceilings at the 1990 Addition. Replace ceilings at the 1907-1973 additions, excluding the Auditorium, Student Dinning and Gymnasium in conjunction with HVAC improvements.



Figure 7-1



Figure 7-2



Figure 7-3



Figure 7-4



Figure 7-5



Figure 7-6



Figure 7-7

8. Casework & Cabinetry

*Description:* Casework throughout the Complex is plastic laminate with plastic laminate counters and overall is in good condition. Occasional pieces of casework display minor intermittent damage. A portion of the plastic laminate counters are damaged typically at counter ends and missing edge veneer. (Fig. 8-1) Continuous plastic laminate window sills are provided above the built-in book shelving/casework along the exterior walls and are heavily damaged from water infiltration or condensation in many of the classrooms at the 1907/1927 Additions. (Fig. 8-1, 8-2)

*Recommendation:* Repair and/or replace damage counter assemblies. Replace the plastic laminate window sill with solid surface materials throughout the 1907 Original Building. Replace casework exceeding accessible height limitations or where lacking accessible work stations. All casework throughout the complex should be budgeted for replacement in the next five years as these materials are approaching there useful life expectancy.



Figure 8-1



Figure 8-2


Figure 8-3

9. Visual Display Surfaces/Tackboards

*Description:* The majority of visual display surfaces throughout the complex are marker boards. Most of the assemblies are in satisfactory condition. Occasional units are damaged. (Fig. 9-1) The original chalk boards at the later building areas have been typically covered with Marker/Tackboard units or teacher display, but a few of the chalk board assemblies remain in service. (Fig. 9-2) There are interactive boards in many Classrooms.

*Recommendations:* Replace chalk boards with marker/bulletin boards and replace fatigued marker board assemblies. Replace visual display surfaces at the 1907 and 1927 Additions in conjunction with abatement activities.







Figure 9-2

10. Toilet/Shower Partitions & Accessories

*Description:* Toilet partitions at the renovated large group restrooms at the Original 1907 have solid HDPE partitions in satisfactory condition. The toilet partitions at the reaming toilet facilities and locker rooms are metal or CMU partitions in fair to poor condition. Toilet accessories at a portion of the restrooms have been mounted outside accessible reach ranges or project more than 4 inches into the path of travel. (Fig. 10-1, 10-2)

*Recommendation:* Replace all toilet partitions and accessories in conjunction with accessibility renovations these include all dated metal and CMU assemblies. Remount accessories outside reach ranges and relocate accessory protrusion hazards at the 1907 Toilet Rooms, the partitions are satisfactory. Budget for replacement of all toilet partitions as these finishes are approaching there useful life expectancy.



Figure 10-1



Figure 10-2

#### 11. Interior Doors & Hardware

Description: The majority of doors at the 1907 Original Building are the original solid wood panel door assemblies. The door surfaces have been refinished and are generally being satisfactorily maintained. The vision panels at most units did not indicate the glazing was tempered. (Fig. 11-1) The vestibule doors at the main entry are not properly undercut and rub against the floor finish. The frames are corroded from salt and water accumulations. (Fig. 11-2) The majority of the doors throughout the 1927-1960/1966 Additions were updated in 2001 with solid core wood doors in satisfactory. A portion of the doors have intermittent veneer damage or are damaged from traffic abuse. (Fig. 11-3) Vision panels were tempered. The door assemblies at the lower level of the 1927 auditorium Addition were not updated and many of the units are in poor condition. The majority of the doors at the 1973 Gymnasium Addition were hollow metal doors of various ages. The hollow metal panels are dented in some areas or are dated installations. (Fig. 11-4) The door installations at the 1990 Addition are painted solid core wood doors generally in satisfactory condition. (Fig. 11-5) Vision panels have wire glass glazing at portion of the door assemblies. (Fig. 11-6)

Recommendation: Assure the glazing at the original 1907 wood door assemblies are equipped safety glazing or consider replacing the entire door assemblies with updated units. Replace the door and frame assemblies at the 1907 vestibule storage closets. Replace and update the door assemblies including hardware at the lower level of the 1927 Auditorium Addition. Replace damaged hollow metal door assemblies at the 1973 Gymnasium Addition. Replace wire glass with tempered safety glazing and replace intermittent damaged door assemblies and hardware throughout the remaining areas of the complex. Provide solid vinyl protection panels and edge trim at high abuse locations. Budget for replacement of all door assemblies throughout the complex as these materials are approaching there useful life expectancy and to provided a unified appearance through all additions.



Figure 11-1



Figure 11-2



Figure 11-3



Figure 11-4



Figure 11-5





12. Lockers

*Description:* Lockers throughout the complex have been updated with dual tiered assemblies. The units overall are in good condition. (Fig. 12-1)

*Recommendation:* Continue maintenance and hardware repairs as needed to maintain condition. Remove/ reinstall/replace all lockers at the 1907 and 1927 additions in conjunction with abatement activities.



Figure 12-1

13. Roofing

# Description:

There currently no leaks. There have been various leaks over time. None of the roofs are under warranty. All roofs are reaching their life expectancy or have reached their life expectancy. A portion of the roofs are a modified bituminous roofing system. Some have a granular cap sheet, some have a smooth cap and some have a smooth cap sheet with an aluminum coating. (Figs. 13-1, 13-2, 13-3)



Figure 13-1



Figure 13-2



Figure 13-3

There is good slope towards drainage systems at most areas, but some areas pond water and thus the seams are deteriorating. (Fig. 13-4)



Figure 13-4



Some of the cap sheet is detached. (Fig. 13-5)

Figure 13-5

There have been areas patched. (Fig. 13-6)



Figure 13-6



Some terminations are open. (Fig. 13-7, 13-8)

Figure 13-7



Figure 13-8



The remainder of the roofs have an adhered single-ply roofing system. (Figs. 13-9, 13-10).

Figure 13-9



Figure 13-10

There is good slope towards drainage systems, but some ponding water and thus seams are deteriorating. (Fig, 13-11)



Figure 13-11

There have been patches at some locations. They are also starting to deteriorate. (Fig. 13-12)



Figure 13-12

Metal copings are very rusty. (Fig. 13-13)



Figure 13-13

Gutters and downspouts are very rusty. (Figs. 13-14, 13-15)



Figure 13-14



Figure 13-15

There is a skylight system at one location. The sealant between the framing and panels is starting to deteriorate. (Figure 13-16)

Figure 13-16

Recommendation:

All roofing systems, including insulations need to be removed to decking. Any damaged decking needs replaced and new insulations and roofing systems need installed. Saddles need to be provided to eliminate ponding areas. Metal copings need to be provided at all parapet walls. All gutter and downspouts need replaced. The skylight system needs resealed or replaced. 14. Miscellaneous

*Description:* This building has a Kitchen. The kitchen and serving equipment was noted to have been updated in 2001 but the age and condition of all equipment was not identified. (Fig. 14-1)

The Auditorium seating has been well maintained and fabric covering is generally in good condition. (Fig. 14-2)

The bleachers at the 1973 Gymnasium are wood and are in poor condition. (Fig. 5-17)

*Recommendation:* Determine which pieces of kitchen equipment have exceeded or are approaching their life expectancy or not working properly or energy efficiently and replace. Over twenty years all will need replacement. Replace wood bleacher seating at the Gymnasium and include handicapped accessible seating provisions.



Figure 14-1



Figure 14-2

15. Furniture

*Description: Description:* Furniture throughout the complex has been updated in the past and appears to be of consistent age and generally is in satisfactory condition. (Fig. 15-1)

*Recommendation:* Continue maintenance and replace damaged furniture as needed. Over twenty years all will need replaced.



Figure 15-1

16. Hazardous Materials

*Description:* The extent of asbestos and other hazardous materials was not assessed as part of this report.

*Recommendation:* Manage and maintain all remaining hazardous materials as recommended in the Enhanced Environmental Hazards Assessment.

### Wadsworth Central Intermediate School

151 Main Street Wadsworth, Ohio 44281

### FIRE SUPPRESSION

- 1. Water Service / Sprinkler Coverage
  - A. Description:
    - 1.) A 6-inch combination domestic-water / fire-suppression water service serves the building. A 6-inch fire suppression service line feeds a fire pump, downstream of a reduced-pressure-zone (RPZ) backflow preventer.



 The fire pump is a Patterson Pump Model 5x3 Mac, 500 gallons per minute (GPM) at 40 pounds per square inch gauge (PSIG), 20 horsepower (HP). There is a Grundfos jockey pump to maintain system pressure.



3.) The fire suppression is a wet-pipe system, consisting of (3) risers. System pressure is 100 PSIG and the entire building is fully suppressed



- B. Recommendation:
  - 1.) Since the fire suppression water service is located in the 1907 portion of the building, major re-work will be necessary with any renovation.

# PLUMBING TRADES

- 1. Water Service
  - A. Description:
    - 1.) A 6-inch combination domestic-water / fire-suppression water service serves the building. A 4-inch domestic water line then goes through a water meter, a reduced-pressure-zone (RPZ) backflow preventer, and a water booster pump package before serving the building.
    - 2.) The booster pump package is a SyncroFlo "Iron Heart" Model #2DD73 duplex unit with a remote pressure tank and 7-1/2 HP motors, manufactured in December 2001. The pump package and tank are in good condition; however, there is heavy corrosion at the suction piping at the pumps.





- 3.) The water distribution system reportedly has no serious issues; however, Wadsworth Municipal water is corrosive and hard on system components.
- B. Recommendation:
  - 1.) The booster pump package should be serviced and all corroded fittings and piping replaced. Di-electric couplings should be utilized when connecting dissimilar materials.
- 2. Sanitary Service
  - A. Description:
    - 1.) The condition of the service is unknown; however, there reportedly are no major issues with the sanitary system.
  - B. Recommendation:
    - 1.) Perform an interscopic inspection on any portion of the sanitary system retained for renovations to determine actual condition of the piping.
- 3. Gas Service
  - A. Description:
    - 1.) A 3-inch medium-pressure gas service connects to the public gas system at the north side of the building. A regulator and meter set along the north wall reduce the gas pressure before the service enters the Fire Pump Room. Although not confirmed, the gas distribution within the building is likely 2 PSIG.
    - 2.) Gas is distributed throughout the building, where it is further regulated down to 7-inch to 14-inch water column to serve individual or groups of appliances.
  - B. Recommendation:
    - 1.) Existing conditions require no renovation or replacement at this time; however, modifications to the HVAC systems and/or domestic hot water system will require revisions to the gas distribution piping.
- 4. Interior Storm Piping
  - A. Description:
    - 1.) The condition of the interior storm piping is unknown.
    - 2.) The roofs of the original 1907 (3-story) building, the 1927 auditorium, and the 1962/1966 classroom additions are all drained by gutters and downspouts.



- 3.) The roofs of the student dining area, the 1973 gymnasium addition, and the 1990 classroom addition have roof drains and interior storm water piping.
- B. Recommendation:
  - 1.) Perform an interscopic inspection of the underground storm piping to determine its condition.

- 5. Domestic Water Supply Piping
  - A. Description:
    - 1.) The domestic water piping is a combination of copper and galvanized piping; the overall condition was reported as good. Galvanized piping was observed in the 1927 addition, in the Lower Level locker room below the stage. We suspect that there is galvanized piping in portions of the 1907 original building.
    - 2.) Domestic hot water for the entire building, with the exception of the 1990 addition and the gymnasium locker rooms, is provided from (2) 100-gallon, A.O. Smith Model BTH 199-100, high-efficiency, condensing, gas-fired water heaters that are located in the north mechanical room. These water heaters were manufactured in January 2012 and are in very good condition. The hot water is stored at 120 degrees F. There is a domestic hot water return system, which maintains the hot water temperature throughout the building.



3.) There is a master thermostatic mixing valve (TMV), which meets the American Society of Sanitary Engineering (ASSE) 1070 Standard, serving the above domestic hot water system. Water is delivered to the building at 100 degrees F, except for the kitchen, which receives 120 degrees F. hot water.



4.) The 1990 addition is served by a Lochinvar domestic water boiler and separate storage tank. The storage tank is severely corroded and leaking. The domestic hot water is not currently available in this part of the building. There is no TMV.



- B. Recommendations:
  - 1.) Replace all galvanized domestic water piping.
  - 2.) Replace the water heating boiler and storage tank in the 1990 addition. Add an ASSE-1070 TMV to this system.

- 3.) It is highly recommended that the domestic hot water be stored at 140 degrees F. and distributed throughout the building at 120 degrees F., then tempered to 109 degrees F through point-of-use ASSE-1017 TMV at hand-washing fixtures.
- 6. Plumbing Fixtures
  - A. Description:
    - The building contains (8) large group restrooms (4 girls, 4 boys), (1) clinic toilet room with a shower, and (6) staff/single-use toilet facilities.
    - 2.) Fixtures are a combination of floor-mounted water closets, wallmounted urinals, lavatories, and electric water coolers. There are no sensor-operated flush valves or faucets.







- 3.) The overall condition of the group restroom fixtures is good.
- 4.) There are several ADA-compliant water closets, urinals, and lavatories.

5.) The electric water coolers are wall-mounted, and several are high/low units with a bottle filler.



6.) The showers in the gymnasium locker rooms and the showers in the dressing rooms below the stage do not appear to be used. The stainless steel lavatories and floor-mounted water closets below the stage are in fair condition, but very old.



- 7.) The custodial closet janitor's sinks are in good condition.
- B. Recommendations:
  - 1.) Replace plumbing electric water coolers and urinals with low-water use fixtures. Utilize sensor-operated flush valves.
  - 2.) Replace lavatories, as needed, and utilize sensor-operated faucets.

## **HVAC Trades**

- 1. Overall Description (details to follow):
  - A. The 3-story 1907/1962/1966 part of the school is served by (2) June-Aire built-up, gas-fired, air-handling units (AHUs) with direct-expansion (DX) cooling. These independent systems have dual-duct air distribution to heating and cooling mixing boxes serving individual zones. The age of these units was not determined, but we believe they were installed around 2001.
  - B. The 1990 classroom addition is served by (4) gas-fired rooftop units (RTUs). The student dining area is also served by another gas-fired RTU.
  - C. The gymnasium is served by a single-zone gas-fired RTU. There is a second RTU on the gymnasium roof, but it is reportedly abandoned.
  - D. The auditorium is served by a gas-fired RTU, and another gas-fired RTU serves the auditorium entrance lobby.
- 2. Central and Rooftop Air-Handling Units:
  - A. Description:
    - 1.) As noted above, the June-Aire AHUs serve the main 3-story portion of the building. Both of these AHUs are in fair condition. Each unit has an indirect, gas-fired, built-up hot deck, which is in fair condition. The existing dual-duct mixing boxes reportedly do not shut off the hot or cold air streams completely, making it difficult to provide uniform temperatures within the spaces.
      - a.) The unit located in the first floor mechanical room has (2) refrigerant R-22 reciprocating compressors located within the supply fan plenum. Heat dissipated by the compressors elevates the cold deck temperature. The condenser coil for this unit was not observed, but is believed to be located within the relief air plenum for the unit.





b.) The second unit, located in a built-up plenum at the second floor level adjacent to the stage, has had the DX cooling coil replaced and a new air-cooled condensing unit installed ongrade south of the stage. The condensing unit is a Carrier Model 38APD05064A, manufactured in July 2014. It is in very good condition.



- 2.) The 1990 classroom addition is served by (4) RTUs. Each has gas-fired heating and DX cooling.
  - a.) Units AC-1 and AC-2, which both serve the lower level are Trane Model YCH120, nominal 10 tons each, and manufactured in July 1991. These units and the exposed above-roof ductwork are in poor condition.





b.) Units AC-3 and AC-4, both serving the upper level, are Trane Model YSD150, nominal 12.5 tons each, and manufactured in August 2013 and February 2014, respectively. These units are in good condition.



3.) The gymnasium is served by a single-zone RTU, Carrier Model 48EJE034, nominal 30 tons, manufactured in June 2001. This unit is in fair condition, but is showing some corrosion.



4.) The student dining area is served by a single-zone RTU, Carrier Model 48TJF024, nominal 20 tons, manufactured in June 2001. This unit is in good condition.

5.) The auditorium is served by a single-zone RTU, Carrier Model 48A4E040, nominal 40 tons, manufactured in August 2014. This unit is in very good condition.



- 6.) A gas-fired RTU serves the auditorium entrance lobby. This unit was not surveyed since the roof was not readily accessible.
- B. Recommendations:
  - 1.) Replace the (2) June-Aire AHUs and the dual-duct system. We have successfully designed a similar replacement for this system at another District. A dedicated outdoor air system (DOAS) AHU with an air-cooled condensing unit was installed, utilizing the existing hot deck ductwork to distribute outdoor conditioned air to the various zones. Individual zones, e.g., classrooms, office suites, etc., were served by variable refrigerant flow (VRF) fan coils and central air-to-air heat pumps. Other energy-efficient HVAC systems could also be considered for these spaces.
  - 2.) Replace units AC-1 and AC-2 in the 1990 classroom addition. These units are over 25 years old and are in poor condition.
  - 3.) Replace the RTUs in the gymnasium and the student dining are within the next 5 years. These units are almost 16 years old.
- 3. Temperature Controls
  - A. Description:
    - 1.) The building is served by (2) separate direct-digital control (DDC) systems. There is an Automated Logic DDC panel in the first floor mechanical room, and the 1990 classroom addition is reportedly also served by the Automated Logic system. There is a Distech DDC panel in the penthouse mechanical room. This may also serve the auditorium, but that has not been confirmed.
    - 2.) The dual-duct mixing boxes have 24-volt damper operators.

- B. Recommendation:
  - 1.) The DDC systems should be upgraded into a single manufacturer's head-end equipment and software.

## **ELECTRICAL TRADES**

- 1. Power Distribution
  - A. Description:
    - 1.) The electrical service to the building is fed from the Power Company's pad-mounted transformer at the north side of the 1907 building. There are (2) separate secondary feeds to the two main distribution panels (MDPs) — switchboard HMDP1 and a newer switchboard HMDP2. Each switchboard is rated for 1,200 amperes at 480/277 volts, 3-phase, 4-wire. The specific age of the (2) switchboards was not determined; however, the system was updated in 2001, and appears to be in good condition.



2.) Power is distributed throughout the building, from 480/277-volt and 208/120 volt branch circuit panelboards located in the main electrical room, adjacent fire pump room, kitchen, stage, and corridors. A representative number of panelboards were surveyed and all were found to be in good condition.



- 3.) Service size appears to be appropriate for the current building loads; reportedly, there are no major power issues within the building.
- 4.) The building does not have a back-up emergency generator.
- B. Recommendations:
  - 1.) An emergency generator should be installed to serve the life safety systems.
  - 2.) The switchgear and newer panelboards could be retained if portions of the building are renovated. Renovation of the structure may impact conduit routing and panelboard locations through the building.

- 2. Interior Lighting
  - A. Description:
    - The school's interior lighting consists primarily of 2-foot-by-4-foot lay-in fluorescent troffers with acrylic lenses. Reportedly, there are t-8 lamps throughout, with the exception being T-12 lamps in the 2-story 1990 classroom addition. There are also some incandescent lighting fixtures interspersed in the older areas of the school.



- 2.) The gymnasium and stage are lighted with high-bay metal halide fixtures.
- 3.) The auditorium contains incandescent lighting fixtures.
- 4.) Lighting levels generally seemed adequate throughout.
- B. Recommendation:
  - 1.) Install light-emitting diode (LED) fixtures throughout. The 2-foot-by-4-foot lay-in fluorescent fixtures could be replaced on a one-for-one basis with LED fixtures.

- 3. Exterior Lighting
  - A. Description:
    - 1.) All exterior lighting is attached to the building. There are no polemounted fixtures in the parking lots. The wall-mounted fixtures have high-intensity-discharge (HID) lamps. The school has been changing to LED fixtures as the existing HID fixtures fail. A few exterior doors do not have lighting fixtures. Exterior lighting is in fair condition.



2.) The covered walkway along the west side of the auditorium has surface-mounted HID lighting fixtures.



- B. Recommendations:
  - 1.) The remaining exterior HID lighting fixtures should be replaced with LED fixtures.
  - 2.) Evaluate the need for any additional lighting in the parking lots.
  - 3.) Add an exterior lighting fixture at exit doors, as required.

- 4. Emergency, Egress, and Exit Lighting
  - A. Description:
    - 1.) Emergency lighting consists of wall-mounted and ceiling-mounted battery-pack fixtures throughout the corridors. Emergency lighting is in fair condition.



- 2.) Some exit doors do not have exterior lighting fixtures.
- 3.) Exit lighting consists of polycarbonate and steel lighting fixtures with red letters. Exit lighting is in good condition.



- B. Recommendations:
  - 1.) Current Code requires that exterior lighting fixtures at exit doors be on emergency power. Circuits should be upgraded if a generator is added.
  - 2.) Provide additional exit and emergency lighting fixtures to meet current Code requirements.

- 5. Fire Alarm System
  - A. Description:
    - 1.) The building fire alarm system, manufactured by Gamewell, was upgraded. The main fire alarm panel is located in the fire pump room with a remote annunciator in the school main entrance vestibule.
    - 2.) The system consists of manual pull stations, horn/strobe signaling devices, tamper switches for the wet-pipe fire-suppression system's valves, and system flow alarm. Most devices are installed with surface-mounted raceways. The system is in satisfactory condition.
  - B. Recommendation:
    - 1.) The fire alarm system will need to be reconfigured if building renovations proceed. Components are suitable for re-use.
- 6. Special Systems
  - A. Description:
    - 1.) Public Address (PA) Intercom System: The existing PA intercom system consists of a master station in the School Office and speakers throughout the building and on the building exterior. Details on the operation/use of the PA intercom system were not obtained, and the age and condition were not determined.



- 2.) Clock System: The master clock system is a hard-wired system with the head-end equipment located in the school office. There are analog-style clocks in classrooms, corridors, common spaces, and various other locations. The condition of the system was not determined.
- 3.) Security System: The security system consists of closed-circuit television cameras in corridors, student dining area, and common spaces, as well as exterior building-mounted cameras. There are also motion detectors in the corridors and door access control at

the main entrance. The overall condition of the security system was not determined.





- 4.)
- Technology Systems: a.) Ceiling-mounted Ceiling-mounted projectors were observed ir classrooms. Condition and age were not determined. in the
  - Interactive whiteboards were observed in the classrooms. b.) These are in good condition.



c.) A typical classroom had (4) student computer workstations. Portable laptop carts are also used to provide computers at each student desk.



- B. Recommendation:
  - 1.) All of the Special Systems should be upgraded with any building renovation.