



WASHINGTON
TOWNSHIP SCHOOLS

Secondary School Master Plan

PLANNING for our FUTURE

01/31/2020

Prepared by:



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SECONDARY SCHOOL FACILITY CONDITION ASSESSMENTS

- a. **Existing Conditions – Assessment Summaries by Building**
- b. **Existing Conditions – Photo Documentation by Building**
- c. **Existing Conditions – Building Systems Narratives**

EXISTING CONDITIONS ASSESSMENT SUMMARIES



North Central High School

Northview Middle School

J. Everett Light Career Center

Hilltop Developmental Preschool

H. Dean Community Education Center

District Maintenance / Warehouse / Police Department

District Transportation Facility / Maintenance Garage

SUMMARY OF EXISTING CONDITIONS

Secondary Schools Existing Condition Assessment

Note that this scoring summary does not include the Athletic & Site Assessment Scoring which is a seperated document

KEY	
A	100-90%
B	89-80%
C	79-70%
D	69-60%
F	59-0%

Facility Name	Facility Condition Score	Year Built & Year of Last Major Renovation
Hilltop Developmental Preschool	40.1%	1976, 2005
District Maintenance / Warehouse / Police Department	40.9%	1978
J. Everett Light Career Center	45.4%	1970
District Transportation Facility / Maintenance Garage	52.6%	2002
North Central High School	54.9%	1963, 1994
Northview Middle School	55.4%	1956
Community and Education Center	61.8%	1999



North Central High School									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019								
Last Revised:	September 3, 2019	Overall Suitability Score	54.9%						
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
	Walls			2.5			2.5	4	
	Doors			2			2	4	
	Roof				3		3	4	Installed 2010. Warranty - 2035
							7.5	12	
B. Building Interior									
<u>A- Administration, Special Education, World Language</u>									
	Ceilings			2.7			2.7	4	
	Walls			2.2			2.2	4	
	Floors		1.5				1.5	4	
	Casework/ Shelving			2.2			2.2	4	
	Doors and Frames			2.5			2.5	4	
	Door Hardware		1.2				1.2	4	
	Finishes		1.8				1.8	4	
	Markerboards & Tackboards			2.3			2.3	4	
	Signage	0.1					0.1	4	
	Windows			2.9			2.9	4	
							19.5	40	
<u>B- Administration, Math, World Language, Cafeteria, Auditorium</u>									
	Ceilings			2.7			2.7	4	
	Walls			2.2			2.2	4	
	Floors		1.8				1.8	4	
	Casework/ Shelving			2.1			2.1	4	
	Doors and Frames			2.1			2.1	4	
	Door Hardware		1.9				1.9	4	
	Finishes			2.1			2.1	4	
	Markerboards & Tackboards			2.7			2.7	4	
	Signage	0					0	4	
	Windows			2.5			2.5	4	
							20.0	40	
<u>C- English</u>									
	Ceilings			2.9			2.9	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Walls				2.1			2.1	4	
Floors			1.5				1.5	4	
Casework/ Shelving			2				2	4	
Doors and Frames			1.9				1.9	4	
Door Hardware		0.9					0.9	4	
Finishes				2.1			2.1	4	
Markerboards & Tackboards			2				2	4	
Signage		0					0	4	
Windows				2.8			2.8	4	
							18.2	40	
<u>D- English, Performing Arts, Computers, Science, Physical Education</u>									
Ceilings				2.5			2.5	4	
Walls				2.2			2.2	4	
Floors			1.6				1.6	4	
Casework/ Shelving				2.8			2.8	4	
Doors and Frames				2.5			2.5	4	
Door Hardware			1.5				1.5	4	
Finishes			1.7				1.7	4	
Markerboards & Tackboards				2			2	4	
Signage		0.1					0.1	4	
							16.9	36	
<u>E- Performing Arts</u>									
Ceilings				2.7			2.7	4	
Walls				2.8			2.8	4	
Floors				2.3			2.3	4	
Casework/ Shelving					3.1		3.1	4	
Doors and Frames			1.7				1.7	4	
Door Hardware			1.9				1.9	4	
Finishes			1.7				1.7	4	
Markerboards & Tackboards				2.5			2.5	4	
Signage		0					0	4	
Windows					3		3	4	
							21.8	40	
<u>F- Performing Arts</u>									
Ceilings			1.6				1.6	4	
Walls					3		3	4	
Floors			1.9				1.9	4	
Casework/ Shelving			1				1	4	
Doors and Frames				2			2	4	
Door Hardware				2.2			2.2	4	
Finishes			1.6				1.6	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Markerboards & Tackboards					3		3	4	
Signage		0					0	4	
							16.2	36	
G- Student Commons, Student Center, Performance Classroom									
Ceilings					3		3	4	
Walls				2			2	4	
Floors						4	4	4	
Finishes				2			2	4	
							11	16	
H- Social Studies, Art									
Ceilings				2.5			2.5	4	
Walls			1.9				1.9	4	
Floors			1.6				1.6	4	
Casework/ Shelving			1.9				1.9	4	
Doors and Frames				2.6			2.6	4	
Door Hardware			1				1	4	
Finishes			1.6				1.6	4	
Signage		0.3					0.3	4	
Windows				2.1			2.1	4	
Equipment					3		3	4	
							18.6	40	
J- English, World Language									
Ceilings				2.6			2.6	4	
Walls				2			2	4	
Floors			1.6				1.6	4	
Casework/ Shelving				2.1			2.1	4	
Doors and Frames			1.7				1.7	4	
Door Hardware		0.8					0.8	4	
Finishes			1.8				1.8	4	
Markerboards & Tackboards				2.1			2.1	4	
Signage		0.1					0.1	4	
Windows					3		3	4	
Equipment					3		3	4	
							20.8	44	
K- World Language, Performing Arts, Food Service Support									
Ceilings				2.8			2.8	4	
Walls				2.2			2.2	4	
Floors			1.9				1.9	4	
Casework/ Shelving				2.5			2.5	4	
Doors and Frames			1.8				1.8	4	
Door Hardware			1.8				1.8	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Finishes			1.8				1.8	4	
Markerboards & Tackboards				2.6			2.6	4	
Signage		0					0	4	
Windows				2.8			2.8	4	
							20.2	40	
L- Administration, Guidance, Math, Performing Arts									
Ceilings				2.8			2.8	4	
Walls				2.2			2.2	4	
Floors			1.8				1.8	4	
Casework/ Shelving				2.4			2.4	4	
Doors and Frames				2.2			2.2	4	
Door Hardware			1.8				1.8	4	
Finishes			1.9				1.9	4	
Markerboards & Tackboards				2.8			2.8	4	
Signage		0.1					0.1	4	
Windows					3		3	4	
							21	40	
M- Math, English, World Language, Jr ROTC, Journalism									
Ceilings				2.6			2.6	4	
Walls				2.2			2.2	4	
Floors				2			2	4	
Casework/ Shelving				2.5			2.5	4	
Doors and Frames				2			2	4	
Door Hardware		0.9					0.9	4	
Finishes				2.1			2.1	4	
Markerboards & Tackboards					3		3	4	
Signage		0.1					0.1	4	
Windows				2.3			2.3	4	
							19.7	40	
N- Science									
Ceilings				2.5			2.5	4	
Walls				2.4			2.4	4	
Floors			1.5				1.5	4	
Casework/ Shelving					3.2		3.2	4	
Doors and Frames				2.6			2.6	4	
Door Hardware			1.1				1.1	4	
Finishes			1.8				1.8	4	
Markerboards & Tackboards				2.7			2.7	4	
Signage		0.3					0.3	4	
Windows				2.9			2.9	4	
							21.1	40	

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Circulation Areas P, Q, R, S, T, U									
Ceilings					3		3	4	
Walls				2.7			2.7	4	
Floors					3		3	4	
Doors and Frames				2			2	4	
Door Hardware				2			2	4	
Finishes				2.7			2.7	4	
Signage		0.5					0.5	4	
Windows					3		3	4	
							18.9	32	
C. Foodservice									
Kitchen									
Built-in Bakery Oven		0					0	4	
Refrigerated Storage (Walk-in Coolers)			1				1	4	
Cooking Equipment				2			2	4	
Prep Equipment			1				1	4	
Dishroom									
Dish Machine					3.5		3.5	4	
Conveyor Unit			1				1	4	
Powersoak Sink					3.5		3.5	4	
Servery									
Serving Line				2			2	4	
Refrigerated Pass-Throughs			1.5				1.5	4	
							15.5	36	
D. Building Climate and Environmental Conditions									
A- Administration, Special Education, World Language									
HVAC			1				1	4	
Controls				2			2	4	
Plumbing									
Domestic Water Service				2.8			2.8	4	
Sprinkler System					3		3	4	
Domestic Hot Water System				2.8			2.8	4	
Sanitary Waste & Vent System				2.7			2.7	4	
Plumbing Fixtures			1.9				1.9	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.5			2.5	4	
Fire Alarm						4	4	4	
							24.8	40	
B- Administration, Math, World Language, Cafeteria, Auditorium									

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
HVAC			1				1	4	
Controls				2			2	4	
Plumbing									
Domestic Water Service				2.6			2.6	4	
Sprinkler System				2.2			2.2	4	
Domestic Hot Water System				2.6			2.6	4	
Sanitary Waste & Vent System				2.6			2.6	4	
Plumbing Fixtures			1.8				1.8	4	
Electrical									
Lighting			1.9				1.9	4	
Receptacles				2.8			2.8	4	
Fire Alarm						4	4	4	
							23.5	40	
<u>C- English</u>									
HVAC			1				1	4	
Controls				2			2	4	
Plumbing									N/A
Electrical									
Lighting				2			2	4	
Receptacles				2.7			2.7	4	
Fire Alarm						4	4	4	
							11.7	20	
<u>D- English, Performing Arts, Computers, Science, Physical Education</u>									
HVAC			1				1	4	
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service				2.8			2.8	4	
Sprinkler System				2.4			2.4	4	
Domestic Hot Water System				2.8			2.8	4	
Sanitary Waste & Vent System				2.9			2.9	4	
Plumbing Fixtures			1.7				1.7	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.3			2.3	4	
Fire Alarm						4	4	4	
							23.8	40	
<u>E- Performing Arts</u>									
HVAC			1				1	4	
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service					3		3	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Sprinkler System					3		3	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.6			2.6	4	
Fire Alarm						4	4	4	
							25.5	40	
F- Performing Arts									
HVAC			1				1	4	
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System					3		3	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures			1.5				1.5	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.1			2.1	4	
Fire Alarm						4	4	4	
							24.5	40	
G- Student Commons, Student Center, Performance Classroom									
HVAC			1				1	4	
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System				2			2	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures			1				1	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.3			2.3	4	
Fire Alarm						4	4	4	
							23.2	40	
H- Social Studies, Art									
HVAC			1				1	4	
Controls				2			2	4	
Plumbing									

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Domestic Water Service					3		3	4	
Sprinkler System					3		3	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System				2.8			2.8	4	
Plumbing Fixtures			1.8				1.8	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.8			2.8	4	
Fire Alarm						4	4	4	
							25.4	40	
<u>J- English, World Language</u>									
HVAC			1				1	4	
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service				2.3			2.3	4	
Sprinkler System				2.5			2.5	4	
Domestic Hot Water System				2.3			2.3	4	
Sanitary Waste & Vent System				2.3			2.3	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.9			2.9	4	
Fire Alarm						4	4	4	
							23.3	40	
<u>K- World Language, Performing Arts, Food Service Support</u>									
HVAC			1				1	4	
Controls			1.8				1.8	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System				2			2	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.5			2.5	4	
Fire Alarm						4	4	4	
							24.3	40	
<u>L- Administration, Guidance, Math, Performing Arts</u>									
HVAC			1				1	4	
Controls			1.9				1.9	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Plumbing									
Domestic Water Service				2.8			2.8	4	
Sprinkler System				2.9			2.9	4	
Domestic Hot Water System				2.8			2.8	4	
Sanitary Waste & Vent System				2.8			2.8	4	
Plumbing Fixtures				2.1			2.1	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.8			2.8	4	
Fire Alarm						4	4	4	
							25.4	40	
<u>M- Math, English, World Language, Jr ROTC, Journalism</u>									
HVAC			1				1	4	
Controls				2			2	4	
Plumbing									
Domestic Water Service				2.6			2.6	4	
Sprinkler System				2.6			2.6	4	
Domestic Hot Water System				2.6			2.6	4	
Sanitary Waste & Vent System				2.6			2.6	4	
Plumbing Fixtures			1.7				1.7	4	
Electrical									
Lighting				2.1			2.1	4	
Receptacles				2.8			2.8	4	
Fire Alarm						4	4	4	
							24.1	40	
<u>N- Science</u>									
HVAC			1				1	4	
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System					3		3	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures			1.9				1.9	4	
Electrical									
Lighting				2			2	4	
Receptacles			1				1	4	
Fire Alarm						4	4	4	
							23.8	40	
<u>Circulation Areas P, Q, R, S, T, U</u>									
HVAC			1				1	4	

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Controls			1.9				1.9	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System					3		3	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures			1.3				1.3	4	
Electrical									
Lighting				2.1			2.1	4	
Receptacles				2.8			2.8	4	
Fire Alarm						4	4	4	
							25	40	
E. Technology									
Communications Infrastructure Data Cabling				2			2	4	Data cabling throughout building is a mixture of Category 5 and 5e. Cabling throughout building is assumed to be supported only by cable hangers.
Pathways for AV Systems, EAC, SURV				2			2	4	Pathways assumed to be functional for the systems, however outdated.
Public Address System / Intercom				2			2	4	Paging system is functional and present in most areas of the building but outdated. Many areas of the building had new paging speakers installed at a later date, as evidently obvious by the faded color of some of the speakers. It is unknown if the faded older speakers are still functional in the paging system.
Video Surveillance (Security)				2			2	4	Video surveillance for the internal of the building is sufficient, with adequate coverage of all hallways. However, the system is outdated, and certain cameras had been from different install at different times through the buildings history. Only 7 cameras could be located on the exterior of the building. Given the large size of the school, more cameras should be added to properly cover all entryways for the building.
Access Control System			1				1	4	Only 5 card readers were located on the premises of the building. The only interior camera protects the reception areas from the rest of the school and classrooms. 4 exterior card readers were located on strategic vestibule entryways, leaving many entryways uncontrolled although they remained locked all day.
AV Infrastructure – Cabling, Speakers, and Terminations				2			2	4	Rating assumes that the AV system is functional in these areas. Regardless, the speakers, cabling, and terminations are outdated and discontinued.

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Category		Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
	AV Equipment – Monitors, Projectors, Audio Systems				2			2	4	AV equipment throughout the building, is outdated. Classrooms in the building mainly utilize Epson 475Wi short throw projectors, which is not the newer version that is new standard throughout the district. Other areas utilize outdated ActivBoards for their form of image projection. All classrooms utilize a form of the Front Row Lasso system for audio amplification, which has since been discontinued by the manufacturer. While functional, these systems are not the standard Teachlogic system used by the district.
	Clock System		0					0	4	Only one demo classroom utilizes an Atlas IED IP clock. Every remaining room in the building utilized a battery powered clock.
								13	32	

NCHS SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	2.6
Walls	2.2
Floors	1.7
Casework/ Shelving	2.5
Doors and Frames	2.3
Door Hardware	1.3
Finishes	1.9
Signage	0.2
Windows	2.7
Equipment	0.3
Marker boards & Tackboards	2.5
MEPT SYSTEMS	
HVAC	1.0
Controls	2.0
Domestic Water Service	2.8
Sprinkler System	2.7
Domestic Hot Water System	2.8
Sanitary Waste & Vent System	2.8
Plumbing Fixtures	1.8
Lighting	2.0
Receptacles	2.5
Fire Alarm	4.0
Communications Infrastructure Data Cabling	2.0
Pathways for AV systems, EAC, SURV	2.0
Public Address System/Intercom	2.0
Video Surveillance (Security)	2.0
Access Control System	1.0
AV Infrastructure - Cabling, Speakers, and	2.0
AV Equipment - Monitors, Projectors, Audio	2.0
Clock System	0.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5



Northview Middle School									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019								
Last Revised:	September 3, 2019	Overall Suitability Score	55.4%						
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
Walls				2			2	4	
Doors			1.5				1.5	4	
Roof					3		3	4	Installed 2011. Under Warranty- 2036
							6.5	12	
B. Building Interior									
Unit A- 1st & 2nd Floor Wing- Adult ED, Exploratory, Media Center, 7th Grade									
Ceilings				2			2	4	
Walls				2			2	4	
Floors			1				1	4	
Casework/ Shelving				2			2	4	
Doors and Frames				2			2	4	
Door Hardware		0					0	4	
Finishes			1				1	4	
Markerboards & Tackboards				2			2	4	
Signage			1				1	4	
Windows			1				1	4	
							14	40	
Unit B- 1st & 2nd Floor Wing- 6th Grade & Administration & 8th Grade									
Ceilings				2			2	4	
Walls				2			2	4	
Floors				2			2	4	
Casework/ Shelving				2			2	4	
Doors and Frames				2			2	4	
Door Hardware		0					0	4	
Finishes				2			2	4	
Markerboards & Tackboards				2			2	4	
Signage			1				1	4	
Windows		0					0	4	
							15	40	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Unit C- 1st & 2nd Floor- Center Core, Kitchen, Mechanical Space, Dining Room									
Ceilings				2			2	4	
Walls					3		3	4	
Floors						4	4	4	
Doors and Frames				2			2	4	
Door Hardware				2			2	4	
Finishes				2			2	4	
Markerboards & Tackboards				2			2	4	
Signage		0					0	4	
Windows				2			2	4	
							19	36	
Unit D- 1st Floor- Auditorium & Music									
Ceilings				2			2	4	
Walls					3		3	4	
Floors				2			2	4	
Casework/ Shelving			1				1	4	
Doors and Frames				2			2	4	
Door Hardware			1				1	4	
Finishes				2			2	4	
Markerboards & Tackboards				2			2	4	
Signage			1				1	4	
Windows				2			2	4	
Equipment			1				1	4	
							19	44	
Unit E- Athletics- Assessment in Other Document									
Unit F- True North									
Ceilings					3		3	4	
Walls						4	4	4	
Floors						4	4	4	
Casework/ Shelving						4	4	4	
Doors and Frames						4	4	4	
Door Hardware					3		3	4	
Finishes						4	4	4	
Markerboards & Tackboards						4	4	4	
Signage					3		3	4	
Windows						4	4	4	
							37	40	
Unit G- SPED									
Ceilings			1				1	4	
Walls			1				1	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Floors			1				1	4	
Casework/ Shelving			1				1	4	
Doors and Frames			1				1	4	
Door Hardware		0					0	4	
Finishes			1				1	4	
Markerboards & Tackboards			1				1	4	
Signage		0					0	4	
Windows		0					0	4	
Equipment		0					0	4	
							7	44	
Unit H- Resource									
Ceilings						4	4	4	
Walls						4	4	4	
Floors						4	4	4	
Casework/ Shelving						4	4	4	
Doors and Frames						4	4	4	
Door Hardware						4	4	4	
Finishes						4	4	4	
Markerboards & Tackboards						4	4	4	
Signage						4	4	4	
Windows						4	4	4	
							40	40	
C. Foodservice									
Kitchen									
Refrigerated Storage (Walk-in Coolers)			1				1	4	
Cooking Equipment				2			2	4	
Prep Equipment				2			2	4	
Dishroom									
Dish Machine					3		3	4	
Sinks					3		3	4	
Servery									
Serving Line					3		3	4	
Refrigerated Pass-Throughs				2			2	4	
							16	28	
D. Building Climate and Environmental Conditions									
Unit A- 1st & 2nd Floor Wing- Adult ED, Exploratory, Media Center, 7th Grade									
HVAC				2			2	4	
Controls						4	4	4	
Plumbing									
Domestic Water Service				2			2	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Sprinkler System				2			2	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures			1				1	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm			1				1	4	
							21	40	
Unit B- 1st & 2nd Floor Wing- 6th Grade & Administration & 8th Grade									
HVAC				2			2	4	
Controls						4	4	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System		0					0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles				2			2	4	
Fire Alarm			1				1	4	
							19	40	
Unit C- 1st & 2nd Floor- Center Core, Kitchen, Mechanical Space, Dining Room									
HVAC			1				1	4	
Controls						4	4	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System				2			2	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm				2			2	4	
							22	40	
Unit D- 1st Floor- Auditorium & Music									
HVAC				2			2	4	
Controls						4	4	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System			1				1	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2			2	4	
Storm Water System					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm			1				1	4	
							24	44	
Unit E- Athletics- Assessment in Other Document									
Unit F- True North									
HVAC						4	4	4	
Controls						4	4	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System				2			2	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System					3		3	4	
Plumbing Fixtures					3		3	4	
Storm Water System					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm		0					0	4	
							30	44	
Unit G- SPED									
HVAC						4	4	4	
Controls						4	4	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System									N/A
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2			2	4	
Storm Water System					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles				2			2	4	

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Fire Alarm			1				1	4	
							24	40	
Unit H- Resource									
HVAC						4	4	4	
Controls						4	4	4	
Plumbing									N/A
Electrical									
Lighting						4	4	4	
Receptacles						4	4	4	
Fire Alarm						4	4	4	
							20	20	
E. Technology									
Throughout Building									
Communications Infrastructure Data Cabling				2			2	4	Data cabling throughout building is Category 5. Cabling throughout building is supported only by cable hangers.
Pathways for AV Systems, EAC, SURV				2			2	4	Pathways assumed to be functional for the systems but outdated.
Public Address System / Intercom				2			2	4	Paging system is functional but outdated.
Video Surveillance (Security)			1				1	4	Rating assumes that all existing security camera locations are functional. At the time of visit, the building had no exterior video surveillance that could be located. Security cameras on the inside varied between 3 different brands from different installation times throughout the building's history.
Access Control System			1				1	4	Very few access control measures are currently implemented into the building. Currently there is only 1 card reader on the exterior of the building. The remaining interior card readers are all located in the "True North" section of the building.
AV Infrastructure – Cabling, Speakers, and Terminations			1				1	4	Rating assumes that the current audio system is functional in these areas. Regardless, the speakers, cabling, and terminations are outdated and discontinued.
AV Equipment – Monitors, Projectors, Audio Systems			1				1	4	AV equipment varies throughout the building, as some areas have received minor renovations throughout the years while others have not. Most classrooms utilize equipment that has since been discontinued, such as the FrontRow Lasso audio amplification system.
AV Infrastructure – Gymnasiums/Wrestling/Cafeteria/LGI			1				1	4	Rating assumes that the current audio system is functional in these areas. Regardless, the speakers, cabling, and terminations are outdated and discontinued.

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
AV Equipment – Gymnasiums/Wrestling/Cafeteria/LGI		0					0	4	AV equipment in these areas are non-existent or served by mobile carts/monitors brought in. Any equipment present is outdated and has since been discontinued by the manufacturer.
Clock System		0					0	4	There is no centralized clock system. The building currently utilizes battery operated clocks, with some rooms not having a clock.
True North and Resource (Units F & H)									
AV Infrastructure: Cabling, Speakers, and Terminations						4	4	4	The True North section of the building is in excellent condition, utilizing newer cabling, speakers, and terminations.
AV Equipment: Monitors, Projectors, Audio Systems						4	4	4	The True North section of the building is in excellent condition with newer equipment being utilized.
Access Control System						4	4	4	The True North section of the building is in excellent condition, with many newer access control system measures being implemented.
							23	52	

NORTHVIEW SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	2.0
Walls	2.2
Floors	1.8
Casework/ Shelving	2.1
Doors and Frames	2.0
Door Hardware	0.7
Finishes	1.8
Markerboards & Tackboards	2.4
Signage	1.4
Windows	1.0
Equipment	0.3
MEPT SYSTEMS	
HVAC	1.8
Controls	3.9
Domestic Water Service	1.9
Sprinkler System	0.5
Domestic Hot Water System	1.9
Sanitary Waste & Vent System	1.9
Plumbing Fixtures	1.6
Storm Water System	2.7
Natural Gas	3.0
Lighting	1.9
Receptacles	2.7
Fire Alarm	1.0
Communications Infrastructure Data Cabling	2.0
Pathways for AV Systems, EAC, SURV	2.0
Public Address System / Intercom	2.0
Video Surveillance (Security)	1.0
Access Control System	1.0
AV Infrastructure – Cabling, Speakers, and Terminations	1.0
AV Equipment – Monitors, Projectors, Audio Systems	1.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5



J. Everett Light Career Center									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019								
Last Revised:	September 16, 2019	Overall Suitability Score	45.4%						
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
	Walls			2.5			2.5	4	
	Doors		1.5				1.5	4	
	Roof				3		3	4	Installed 2011. Warranty - 2036
							7	12	
B. Building Interior									
A' Hall Administration Spaces and Health									
	Ceilings			2.4			2.4	4	
	Walls			2.4			2.4	4	
	Floors			2.4			2.4	4	
	Casework/ Shelving			2			2	4	
	Doors and Frames			2.6			2.6	4	
	Door Hardware		1.7				1.7	4	
	Finishes			2.2			2.2	4	
	Markerboards & Tackboards			2			2	4	
	Windows		1				1	4	
							18.7	36	
Area 'B' Film, Sound, Veterinary Assisting									
	Ceilings			2.8			2.8	4	
	Walls			2.5			2.5	4	
	Floors			2.4			2.4	4	
	Casework/ Shelving			2.2			2.2	4	
	Doors and Frames			2.9			2.9	4	
	Door Hardware			2.2			2.2	4	
	Finishes			2.3			2.3	4	
	Markerboards & Tackboards			2			2	4	
							19.3	32	
Area 'C' Culinary Arts, EMT, Law Enforcement									
	Ceilings				3		3	4	
	Walls			2			2	4	
	Floors			2			2	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Casework/ Shelving			1				1	4	
Doors and Frames				2			2	4	
Door Hardware				2.3			2.3	4	
Finishes				2.3			2.3	4	
							14.6	28	
Area 'D'									
Ceilings				2.9			2.9	4	
Walls				2.2			2.2	4	
Floors			1.7				1.7	4	
Casework/ Shelving			1.3				1.3	4	
Doors and Frames				2.1			2.1	4	
Door Hardware			1.8				1.8	4	
Finishes				2.1			2.1	4	
Markerboards & Tackboards				2			2	4	
Windows			1				1	4	
							17.1	36	
Area 'E' Automotive, Cosmetology									
Ceilings			1.7				1.7	4	
Walls				2.2			2.2	4	
Floors			1.7				1.7	4	
Casework/ Shelving			1.8				1.8	4	
Doors and Frames			1.9				1.9	4	
Door Hardware			1.5				1.5	4	
Finishes				2.5			2.5	4	
Markerboards & Tackboards				2.8			2.8	4	
							16.1	32	
Area 'F' Culinary Arts, Music and Sound									
Ceilings				2.5			2.5	4	
Walls				2.1			2.1	4	
Floors			1.6				1.6	4	
Casework/ Shelving				2.5			2.5	4	
Doors and Frames				2.3			2.3	4	
Door Hardware				2			2	4	
Finishes				2.1			2.1	4	
Markerboards & Tackboards				2.2			2.2	4	
Windows			1				1	4	
							18.3	36	
Area 'G' Business, Welding, Automotive									
Ceilings				2.1			2.1	4	
Walls				2.4			2.4	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Floors				2.6			2.6	4	
Casework/ Shelving			1.7				1.7	4	
Doors and Frames				2.4			2.4	4	
Door Hardware		0.9					0.9	4	
Finishes				2.4			2.4	4	
Markerboards & Tackboards				2.5			2.5	4	
							17	32	
Area 'H' PLTW, Graphic Design, Receiving									
Ceilings				2.5			2.5	4	
Walls				2.3			2.3	4	
Floors				2.4			2.4	4	
Casework/ Shelving				2.1			2.1	4	
Doors and Frames				2.6			2.6	4	
Door Hardware			1.4				1.4	4	
Finishes				2.2			2.2	4	
Markerboards & Tackboards				2			2	4	
Windows			1				1	4	
Equipment						4	4	4	
							22.5	40	
C. Building Climate and Environmental Conditions									
Area 'A' Administration Spaces and Health									
HVAC			1				1	4	
Controls			1.2				1.2	4	
Plumbing									
Domestic Water Service			1.9				1.9	4	
Sprinkler System		0					0	4	
Domestic Hot Water System			1.9				1.9	4	
Sanitary Waste & Vent System			1.9				1.9	4	
Plumbing Fixtures				2.3			2.3	4	
Electrical									
Lighting			1.9				1.9	4	
Receptacles				2.4			2.4	4	
Fire Alarm		0.3					0.3	4	
							14.8	40	
Area 'B' Film, Sound, Veterinary Assisting									
HVAC			1				1	4	
Controls			1.2				1.2	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System		0					0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Plumbing Fixtures				2.5			2.5	4	
Electrical									
Lighting				2.1			2.1	4	
Receptacles					3		3	4	
Fire Alarm		0.6					0.6	4	
							16.4	40	
Area 'C' Culinary Arts, EMT, Law Enforcement									
HVAC			1				1	4	
Controls			1				1	4	
Plumbing									
Domestic Water Service			1.7				1.7	4	
Sprinkler System		0					0	4	
Domestic Hot Water System			1.7				1.7	4	
Sanitary Waste & Vent System			1.7				1.7	4	
Plumbing Fixtures			1.5				1.5	4	
Storm Water System				2			2	4	
Natural Gas System					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles			1				1	4	
Fire Alarm		0					0	4	
							16.6	48	
Area 'D'									
HVAC			1				1	4	
Controls			1.2				1.2	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System		0					0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2.6			2.6	4	
Natural Gas System					3		3	4	
Electrical									
Lighting				2.1			2.1	4	
Receptacles				2.8			2.8	4	
Fire Alarm		0					0	4	
							18.7	44	
Area 'E' Automotive, Cosmetology									
HVAC			1				1	4	
Controls			1.2				1.2	4	
Plumbing									
Domestic Water Service				2			2	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Sprinkler System		0					0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2.3			2.3	4	
Storm Water System				2			2	4	
Compressed Air System					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles				2.5			2.5	4	
Fire Alarm		0.3					0.3	4	
							20.3	48	
Area 'F' Culinary Arts, Music and Sound									
HVAC			1				1	4	
Controls			1.4				1.4	4	
Plumbing									
Domestic Water Service			1.7				1.7	4	
Sprinkler System		0					0	4	
Domestic Hot Water System			1.7				1.7	4	
Sanitary Waste & Vent System			1.8				1.8	4	
Plumbing Fixtures				2.2			2.2	4	
Storm Water System				2			2	4	
Natural Gas System					3		3	4	
Electrical									
Lighting			1.8				1.8	4	
Receptacles					3		3	4	
Fire Alarm		0					0	4	
							19.6	48	
Area 'G' Business, Welding, Automotive									
HVAC			1				1	4	
Controls			1.1				1.1	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System		0					0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2.3			2.3	4	
Storm Water System				2			2	4	
Compressed Air System					3		3	4	
Natural Gas System					3		3	4	
Electrical									

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Lighting			1.9				1.9	4	
Receptacles				2.3			2.3	4	
Fire Alarm		0.4					0.4	4	
							23	52	
Area 'H' PLTW, Graphic Design, Receiving									
HVAC			1				1	4	
Controls			1.2				1.2	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System		0					0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2.1			2.1	4	
Storm Water System				2			2	4	
Electrical									
Lighting			1.7				1.7	4	
Receptacles					3		3	4	
Fire Alarm		0.5					0.5	4	
							17.5	44	
D. Technology									
Communications Infrastructure Data Cabling				2			2	4	Data cabling throughout the building is a mixture of Category 5 and 5e. Cabling throughout building is assumed to be supported only by cable hangers.
Pathways for AV systems, EAC, SURV				2			2	4	Pathways assumed to be functional for the systems, however outdated.
Public Address System/Intercom				2			2	4	Paging system is functional and present in most areas of the building but outdated. In some of the workshop areas, a new PA system had been installed with a new wall mounted paging horn. However, the old unworking horn still remained.
Video Surveillance (Security)			1				1	4	Video surveillance for the internal of the building is sufficient, with adequate coverage of all hallways. However the system is outdated, and certain cameras had been from different install at different times through the buildings history. However, only one camera could be located on the external of the building, leaving several entryways unmonitored.

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Access Control System		0					0	4	Only 1 card reader could be located in the building at the time of the site visit, being located on an entryway door. This leaves several other doors that lead to the exterior of the building unprotected. The main entryway doors did incorporate some motion detector sensors as well as a door contact sensor. About 5 other random doors leading to large workshops throughout the building had door contact sensors.
AV Infrastructure - Cabling, Speakers, and Terminations				2			2	4	Rating assumes that the AV system is functional in these areas. Regardless, the speakers, cabling, and terminations are outdated and discontinued.
AV Equipment - Monitors, Projectors, Audio Systems				2			2	4	AV equipment throughout the building, is outdated. Classrooms in the building mainly utilize projectors and screens, but many of which have no audio amplification system for the instructors in the rooms. Other areas utilize outdated ActivBoards or use mobile monitor carts or projector carts for their form of audio amplification.
Clock System		0					0	4	Only one classroom utilizes an Atlas IED IP clock. Every remaining room in the building utilized a battery powered clock.
							11	32	

JEL SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	2.5
Walls	2.3
Floors	2.2
Casework/ Shelving	1.9
Doors and Frames	2.5
Door Hardware	1.7
Finishes	2.2
Windows	1.0
Equipment	2.3
Marker boards & Tackboards	2.1
MEPT SYSTEMS	
HVAC	0.9
Controls	1.2
Domestic Water Service	1.9
Sprinkler System	0.0
Domestic Hot Water System	1.9
Sanitary Waste & Vent System	1.9
Plumbing Fixtures	2.3
Storm Water System	1.8
Compressed Air System	2.3
Natural Gas System	2.4
Lighting	1.9
Receptacles	2.6
Fire Alarm	0.5
Communications Infrastructure Data Cabling	2.0
Pathways for AV systems, EAC, SURV	2.0
Public Address System/Intercom	2.0
Video Surveillance (Security)	1.0
Access Control System	0.0
AV Infrastructure - Cabling, Speakers, and	2.0
AV Equipment - Monitors, Projectors, Audio	2.0
Clock System	0.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5



Hilltop Developmental Preschool									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019								
Last Revised:	September 19, 2019	Overall Suitability Score	40.1%						
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
	Walls			2.5			2.5	4	
	Doors			2			2	4	
	Roof		1				1	4	
							5.5	12	
B. Building Interior									
<u>Classrooms</u>									
	Ceilings		1.4				1.4	4	
	Walls		1.8				1.8	4	
	Floors		1.7				1.7	4	
	Casework/ Shelving		1.8				1.8	4	
	Doors and Frames			2.1			2.1	4	
	Door Hardware			2.1			2.1	4	
	Finishes		1.8				1.8	4	
	Markerboards & Tackboards			2.3			2.3	4	
	Signage	0					0	4	
	Windows			2.4			2.4	4	
							17.4	40	
<u>Athletics</u>									
	Ceilings			2.3			2.3	4	
	Walls			2.5			2.5	4	
	Floors		1.9				1.9	4	
	Casework/ Shelving		1.8				1.8	4	
	Doors and Frames			2.2			2.2	4	
	Door Hardware			2			2	4	
	Finishes			2.2			2.2	4	
	Markerboards & Tackboards			2.3			2.3	4	
	Signage	0					0	4	
	Windows			2			2	4	
	Equipment			2			2	4	
							21.2	44	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Multi-Purpose Area									
Ceilings				2			2	4	
Walls				2.4			2.4	4	
Floors			1.9				1.9	4	
Casework/ Shelving			1.8				1.8	4	
Doors and Frames				2.1			2.1	4	
Door Hardware				2.2			2.2	4	
Finishes				2.2			2.2	4	
Markerboards & Tackboards				2			2	4	
Signage		0					0	4	
Windows				2			2	4	
							18.6	40	
Administration and Support									
Ceilings			1.6				1.6	4	
Walls				2.2			2.2	4	
Floors				2.2			2.2	4	
Casework/ Shelving				2.3			2.3	4	
Doors and Frames				2.4			2.4	4	
Door Hardware				2.2			2.2	4	
Finishes				2.3			2.3	4	
Markerboards & Tackboards				2.7			2.7	4	
Signage		0					0	4	
							17.9	36	
Circulation Spaces									
Ceilings			1.6				1.6	4	
Walls				2.7			2.7	4	
Floors				2.4			2.4	4	
Casework/ Shelving				2			2	4	
Doors and Frames				2.4			2.4	4	
Door Hardware					3		3	4	
Finishes				2.2			2.2	4	
Markerboards & Tackboards					3		3	4	
Signage		0					0	4	
Windows				2			2	4	
							21.3	40	
C. Building Climate and Environmental Conditions									
Classrooms									
HVAC			1				1	4	
Controls		0.9					0.9	4	
Plumbing									
Domestic Water Service			1.3				1.3	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Sprinkler System		0					0	4	
Domestic Hot Water System			1.3				1.3	4	
Sanitary Waste & Vent System			1.3				1.3	4	
Plumbing Fixtures			1.7				1.7	4	
Electrical									
Lighting			1.6				1.6	4	
Receptacles				2.8			2.8	4	
Fire Alarm		0.9					0.9	4	
							12.8	40	
<u>Athletics</u>									
HVAC			1				1	4	
Controls			1				1	4	
Plumbing									
Domestic Water Service			1				1	4	
Sprinkler System			1				1	4	
Domestic Hot Water System			1				1	4	
Sanitary Waste & Vent System			1				1	4	
Plumbing Fixtures			1.4				1.4	4	
Natural Gas System				2			2	4	
Electrical									
Lighting			1.4				1.4	4	
Receptacles					3		3	4	
Fire Alarm		0.5					0.5	4	
							14.3	44	
<u>Multi-Purpose Area</u>									
HVAC			1				1	4	
Controls			1				1	4	
Plumbing									
Domestic Water Service			1				1	4	
Sprinkler System		0					0	4	
Domestic Hot Water System			1				1	4	
Sanitary Waste & Vent System			1				1	4	
Plumbing Fixtures			1.7				1.7	4	
Natural Gas System				2			2	4	
Electrical									
Lighting			1.3				1.3	4	
Receptacles					3		3	4	
Fire Alarm		0.5					0.5	4	
							13.5	44	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Administration and Support									
HVAC			1				1	4	
Controls	0.7						0.7	4	
Plumbing									
Domestic Water Service			1.2				1.2	4	
Sprinkler System	0						0	4	
Domestic Hot Water System			1.2				1.2	4	
Sanitary Waste & Vent System			1.2				1.2	4	
Plumbing Fixtures			1.4				1.4	4	
Electrical									
Lighting			1.9				1.9	4	
Receptacles				2.9			2.9	4	
Fire Alarm	0.3						0.3	4	
							11.8	40	
Circulation Spaces									
HVAC			1				1	4	
Controls			1.2				1.2	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System	0						0	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2.5			2.5	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm			1.8				1.8	4	
							17.5	40	
D. Technology									
Communications Infrastructure Data Cabling				2			2	4	Data cabling throughout building is Category 5. Cabling throughout building is supported only by cable hangers.
Pathways for AV Systems, EAC, SURV				2			2	4	Pathways assumed to be functional for the systems but outdated.
Public Address System/Intercom				2			2	4	Paging system is functional and present in most areas of the building, but outdated.
Video Surveillance (Security)	0						0	4	Only 1 security camera could be located in the building during the site visit, and it was only focused on the main entryway. This leaves several other entrances, a pool, and more vital areas unmonitored.

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Access Control System		0					0	4	Only 1 card reader could be located in the building at the time of the site visit, being located on the main entryway doors. These doors also incorporated two motion sensors. However, no other access control measures were found anywhere else in the building.
AV Infrastructure - Cabling, Speakers, Terminations			1				1	4	Rating assumes that the AV system is functional in these areas. Regardless, the speakers, cabling, and terminations are outdated and discontinued.
AV Equipment - Monitors, Projectors, Audio Systems			1				1	4	AV equipment throughout the building is very old and outdated. Classrooms in the building utilize outdated ActivBoards. There is no form of audio amplification for presenting present in any rooms.
AV Equipment - Gymnasium/Pool		0					0	4	AV equipment in these areas are nearly non-existent. Only two speakers are found in the pool room for music, while only paging speakers are found in the gymnasium.
Clock System					3		3	4	All classrooms utilize the Atlas IED clock system. However, one clock's time in a classroom was very incorrect. Clock locations did not appear anywhere else in the building outside of the classrooms.
							11	36	

HILLTOP SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	1.6
Walls	2.1
Floors	2.0
Casework/ Shelving	1.9
Doors and Frames	2.2
Door Hardware	2.2
Finishes	2.1
Windows	2.1
Equipment	
Marker boards & Tackboards	2.4
MEPT SYSTEMS	
HVAC	1.0
Controls	0.9
Domestic Water Service	1.2
Sprinkler System	0.0
Domestic Hot Water System	1.2
Sanitary Waste & Vent System	1.2
Plumbing Fixtures	1.6
Natural Gas System	1.0
Lighting	1.9
Receptacles	2.9
Fire Alarm	0.6
Communications Infrastructure Data Cabling	2.0
Pathways for AV systems, EAC, SURV	2.0
Public Address System/Intercom	2.0
Video Surveillance (Security)	0.0
Access Control System	0.0
AV Infrastructure - Cabling, Speakers, and Terminations	1.0
AV Equipment - Monitors, Projectors, Audio Systems	1.0
AV Equipment -Gymnasium/Pool	0.0
Clock System	3.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5



Community and Education Center									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019								
Last Revised:	September 5, 2019	Overall Suitability Score	61.8%						
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
	Walls			2			2	4	
	Doors				3		3	4	
	Roof				3		3	4	
							8	12	
B. Building Interior									
<u>Community Areas</u>									
	Ceilings			2.5			2.5	4	
	Walls			2.6			2.6	4	
	Floors			2.6			2.6	4	
	Casework/ Shelving			2.7			2.7	4	
	Doors and Frames			2.8			2.8	4	
	Door Hardware				3		3	4	
	Finishes				3		3	4	
	Signage			2.7			2.7	4	
	Windows				3		3	4	
	Markerboards & Tackboards				3.5		3.5	4	
							28.4	40	
<u>Adminstration Areas</u>									
	Ceilings			2.7			2.7	4	
	Walls			2.6			2.6	4	
	Floors			2.7			2.7	4	
	Casework/ Shelving			2.5			2.5	4	
	Doors and Frames			2.9			2.9	4	
	Door Hardware			2.7			2.7	4	
	Finishes			2.7			2.7	4	
	Signage	0					0	4	
	Windows				3		3	4	
	Markerboards & Tackboards				3.3		3.3	4	
							25.3	40	

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
C. Building Climate and Environmental Conditions									
Community Areas									
HVAC			1				1	4	
Controls					3		3	4	
Plumbing									
Domestic Water Service				2.8			2.8	4	
Sprinkler System					3		3	4	
Domestic Hot Water System				2.8			2.8	4	
Sanitary Waste & Vent System				2.8			2.8	4	
Plumbing Fixtures					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm				2.5			2.5	4	
							26	40	
Administration Areas									
HVAC			1				1	4	
Controls				2.8			2.8	4	
Plumbing									
Domestic Water Service					3		3	4	
Sprinkler System					3		3	4	
Domestic Hot Water System					3		3	4	
Sanitary Waste & Vent System				2.9			2.9	4	
Plumbing Fixtures				2.8			2.8	4	
Low Flow			1.5				1.5	4	
Equipment					3		3	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm			1.4				1.4	4	
							29.3	48	
D. Technology									
Communications Infrastructure Data Cabling				2			2	4	Data cabling throughout building is Category 5. Cabling throughout building is supported only by cable hangers.
Pathways for AV Systems, EAC, SURV				2			2	4	Pathways assumed to be functional for the systems but outdated.

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Public Address System/ Intercom			1				1	4	Paging system is rare throughout the building, as it only serves a few select areas. With the high volume the building receives with outside parties and the public renting out meeting spaces, a centralized PA system should be more prevalent throughout the building. Where the paging system exists, it is assumed functional but outdated.
Video Surveillance (Security)			1				1	4	Rating assumes that all existing security camera locations are functional. Exterior cameras had sufficient coverage on the parking lot but lacking at the entrances. Interior security was only present above the main reception desk covering the main entryway, but nowhere else present in the building. With the high volume the building receives without outside parties and the public renting out meeting spaces, an addition of coverage should exist in common hallways and meeting spaces throughout the building.
Access Control System				2			2	4	During our visit we located 6 card readers in the building. One was located outside of the MDF while the other IDF was unprotected. Two of the six card readers are located on exterior doors, leaving only the main entrance unprotected. However, both main hallways were protected by the access control system.
AV Infrastructure - Cabling, Speakers, and Terminations					3		3	4	Rating assumes that the current audio system is functional in these areas. The speakers, cabling, and terminations are in good condition.
AV Equipment - Monitors, Projectors, Audio Systems					3		3	4	The AV equipment varied throughout different parts of the building but is overall more up to date and presumably functional equipment. While a standard is recommended for typical rooms/spaces, the equipment currently present is in good condition.
Clock System		0					0	4	There is no centralized clock system. One room has an IP Atlas IED clock system, while other offices and meeting spaces have either battery clocks or no clocks at all.
							14	32	

CEC SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	2.7
Walls	2.6
Floors	2.7
Casework/ Shelving	2.6
Doors and Frames	2.9
Door Hardware	2.8
Finishes	2.8
Windows	2.7
Equipment	3.0
Marker boards & Tackboards	3.4
MEPT SYSTEMS	
HVAC	1.0
Controls	2.8
Domestic Water Service	2.9
Sprinkler System	3.0
Domestic Hot Water System	2.9
Sanitary Waste & Vent System	2.9
Plumbing Fixtures	2.9
Low Flow	1.5
Equipment	3.0
Lighting	2.0
Receptacles	3.0
Fire Alarm	1.6
Communications Infrastructure Data Cabling	2.0
Pathways for AV systems, EAC, SURV	2.0
Public Address System/Intercom	1.0
Video Surveillance (Security)	1.0
Access Control System	2.0
AV Infrastructure - Cabling, Speakers, and Terminations	3.0
AV Equipment - Monitors, Projectors, Audio Systems	3.0
Clock System	0.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5



District Maintenance / Warehouse / Police Department									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019								
Last Revised:	September 3, 2019	Overall Suitability Score	40.9%						
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
Walls				2			2	4	
Doors				2			2	4	
Roof		0					0	4	
							4	12	
B. Building Interior									
Warehouse and Receiving									
Ceilings									N/A - Exposed Structure
Walls				2			2	4	
Floors					3		3	4	
Casework/ Shelving									N/A
Doors and Frames					3		3	4	
Door Hardware				2.5			2.5	4	
Finishes				2.5			2.5	4	
							13	20	
Office Area									
Ceilings			1.6				1.6	4	
Walls				2.6			2.6	4	
Floors				2.4			2.4	4	
Casework/ Shelving				2.4			2.4	4	
Doors and Frames				2.5			2.5	4	
Door Hardware			1.5				1.5	4	
Finishes				2.5			2.5	4	
Markerboards & Tackboards					3		3	4	
Signage		0					0	4	
Windows					3		3	4	
Equipment			1.5				1.5		
							23	40	
Shops and Support Spaces									
Ceilings			1.1				1.1	4	
Walls			1.9				1.9	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Floors			1.9				1.9	4	
Casework/ Shelving			1.4				1.4	4	
Doors and Frames			1.8				1.8	4	
Door Hardware			1.3				1.3	4	
Finishes				2.2			2.2	4	
Markerboards & Tackboards			1.7				1.7	4	
Signage		0					0	4	
Windows		0					0	4	
Equipment		0					0	4	
							13.4	44	
C. Building Climate and Environmental Conditions									
<u>Warehouse and Receiving</u>									
HVAC			1				1	4	
Controls				2			2	4	
Plumbing									
Storm Water System				2			2	4	
Roof Drains			1				1	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm		0					0	4	
							11	28	
<u>Office Area</u>									
HVAC			1				1	4	
Controls			1.4				1.4	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System				2			2	4	
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System			1				1	4	
Plumbing Fixtures				2.2			2.2	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm		0.4					0.4	4	
							17.1	40	
<u>Shops and Support Spaces</u>									
HVAC			1				1	4	
Controls		0.8					0.8	4	
Plumbing									
Domestic Water Service				2.2			2.2	4	

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Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Sprinkler System		0					0	4	
Domestic Hot Water System				2.2			2.2	4	
Sanitary Waste & Vent System			1				1	4	
Plumbing Fixtures				2			2	4	
Storm Water System									N/A
Plumbing Equipment				2.5			2.5	4	
Roof Drains									N/A
Natural Gas System				2			2	4	
Compressed Air				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm			1.9				1.9	4	
							22.5	52	
D. Technology									
Communications Infrastructure Data Cabling			1				1	4	Data cabling throughout the building is Category 5. Cabling throughout building is supported by the frame of the room and squeezed through cracks and openings in walls/ceilings rather than safely fed through conduits and J-hooks.
Pathways for AV Systems, EAC, SURV			1				1	4	Pathways assumed to be functional for the systems but outdated. Cabling is typically exposed and squeezed through cracks and openings in the walls/ceilings rather than fitted through conduits.
Public Address System/Intercom			1				1	4	Paging system is rare throughout the building, as it only serves a few select areas. Most of the PA system utilizes outdated wall mounted paging horns.
Video Surveillance (Security)			1				1	4	Rating assumes that all existing security camera locations are functional. Exterior cameras had sufficient coverage on the parking lot but lacking on the individual garage door entrances/exits around the perimeter of the building. Interior security had clearly been updated by a more recent install, but coverage was still severely lacking throughout the entirety of the warehouse and dedicated rooms.
Access Control System		0					0	4	During our visit, no card readers could be located inside or outside of the building. However, early every door had a door contact sensor to signal if they were open or closed.
AV Infrastructure - Cabling, Speakers, and Terminations		0					0	4	Rating assumes that the current paging audio system is functional in the building. The speakers, cabling, and terminations are rare and severely outdated.

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Category		Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
	AV Equipment - Monitors, Projectors, Audio Systems		0					0	4	The AV equipment throughout the building is scarce, and where it is present it is severely outdated, such as the monitoring equipment for the security cameras.
	Clock System		0					0	4	There is no centralized clock system in the building. A few areas utilize battery operated clocks, while many do not.
								4	28	

District Maintenance / Warehouse / Police Dept. SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	1.4
Walls	2.1
Floors	2.1
Casework/ Shelving	1.8
Doors and Frames	2.1
Door Hardware	1.5
Finishes	2.3
Markerboards & Tackboards	2.5
Signage	0.0
Windows	2.3
Equipment	1.0
MEPT SYSTEMS	
HVAC	1.0
Controls	1.1
Domestic Water Service	2.1
Sprinkler System	2.0
Domestic Hot Water System	2.1
Sanitary Waste & Vent System	1.0
Plumbing Fixtures	2.1
Storm Water System	2.0
Plumbing Equipment	2.5
Roof Drains	1.0
Compressed Air System	2.0
Natural Gas System	2.0
Lighting	2.0
Receptacles	3.0
Fire Alarm	1.1
Communications Infrstructure Data Cabling	1.0
Pathways for AV systems, EAC, SURV	1.0
Public Address System/Intercom	1.0
Video Surveillance (Security)	1.0
Access Control System	0.0
AV Infrastructure - Cabling, Speakers, and Terminations	0.0
AV Equipment - Monitors, Projectors, Audio Systems	0.0
Clock System	0.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5

District Transportation Facility / Maintenance Garage									
Facilities Condition Assessment									
Existing Condition Assessment Form									
Initiated:	July 2019	Overall Suitability Score		52.6%					
Last Revised:	September 3, 2019								
Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
A. Building Exterior									
	Walls				3		3	4	
	Doors				3		3	4	
	Roof				3		3	4	
							9	12	
B. Building Interior									
<u>Office/ Administration Area</u>									
	Ceilings			2.1			2.1	4	
	Walls			2.2			2.2	4	
	Floors		1.7				1.7	4	
	Casework/ Shelving		1.7				1.7	4	
	Doors and Frames			2.9			2.9	4	
	Door Hardware			2			2	4	
	Finishes			2.3			2.3	4	
	Markerboards & Tackboards			2.5			2.5	4	
	Signage	0					0	4	
	Windows				3		3	4	
							20.4	40	
<u>Garage</u>									
	Ceilings								N/A - Exposed Structure
	Walls			2			2	4	
	Floors			2			2	4	
	Casework/ Shelving								N/A
	Doors and Frames				3		3	4	
	Door Hardware				3		3	4	
	Finishes			2			2	4	
	Equipment				3		3	4	
							15	24	
<u>Garage Support Spaces</u>									
	Ceilings								N/A - Exposed Structure
	Walls			2			2	4	
	Floors			2			2	4	

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Casework/ Shelving				2			2	4	
Overhead Doors and Frames					3		3	4	
Overhead Door Hardware					3		3	4	
Finishes				2			2	4	
Markerboards & Tackboards				2			2	4	
Equipment					3		3	4	
							19	32	
C. Building Climate and Environmental Conditions									
<u>Office/ Administration Area</u>									
HVAC				2			2	4	
Controls				2.6			2.6	4	
Plumbing									
Domestic Water Service				2.1			2.1	4	
Sprinkler System		0					0	4	
Domestic Hot Water System				2.1			2.1	4	
Sanitary Waste & Vent System			1.9				1.9	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm			1.7				1.7	4	
							19.4	40	
<u>Gargage</u>									
HVAC				2			2	4	
Controls				2			2	4	
Plumbing									
Domestic Water Service									N/A
Sprinkler System		0					0	4	
Domestic Hot Water System									N/A
Sanitary Waste & Vent System									N/A
Plumbing Fixtures									N/A
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm					3		3	4	
							12	24	
<u>Garage Support Spaces</u>									
HVAC				2			2	4	
Controls				2.3			2.3	4	
Plumbing									
Domestic Water Service				2			2	4	
Sprinkler System		0					0	4	

MSD Washington Township

Category	Rating	0 - poor	1	2	3	4 - good	Subtotal	Pos	Notes
Domestic Hot Water System				2			2	4	
Sanitary Waste & Vent System				2			2	4	
Plumbing Fixtures				2			2	4	
Electrical									
Lighting				2			2	4	
Receptacles					3		3	4	
Fire Alarm				2.3			2.3	4	
							19.6	40	
D. Technology									
Communications Infrastructure Data Cabling				2			2	4	Data cabling throughout building is Category 5. Cabling throughout building is supported by cable hangers.
Pathways for AV Systems, EAC, SURV				2			2	4	Pathways assumed to be functional for the systems but outdated.
Public Address System/ Intercom			1				1	4	Paging system is rare throughout the building, as it only serves a few select areas outside of the garage. Most of the PA system utilizes outdated wall mounted paging horns, and many offices, open areas, and hallways have no paging system.
Video Surveillance (Security)			1				1	4	Rating assumes that all existing security camera locations are functional. The only exterior camera covered the main entrance of the building, but no other cameras were found covering the several other garage doors and entry points of the building. Interior security was only present in the bus garage, leaving several hallways and the reception area uncovered.
Access Control System				2			2	4	During our visit, two card readers were located, one serving the main entrance and the other located outside the main hallway leading to the offices and garage. No door contacts or security could be located on the several garage doors in the building.
AV Infrastructure - Cabling, Speakers, and Terminations					3		3	4	Rating assumes that the current audio systems are functional in the building. The speakers, cabling, and terminations are in good condition.
AV Equipment - Monitors, Projectors, Audio Systems					3		3	4	The AV equipment throughout the building is more up to date with current technology and seems to be utilized in rooms that deem it necessary.
Clock System		0					0	4	There is no centralized clock system in the building. Only a scarce amount of battery powered clocks were found in the building.
							14	32	

District Transportation Facility / Maintenance Garage SYSTEM SUMMARIES	
ARCHITECTURAL AND INTERIORS SYSTEMS	
Ceilings	2.1
Walls	2.2
Floors	1.7
Casework/ Shelving	1.8
Doors and Frames	2.7
Door Hardware	2.1
Finishes	2.2
Windows	0.2
Equipment	3.0
Marker boards & Tackboards	2.3
MEPT SYSTEMS	
HVAC	2.0
Controls	3.0
Domestic Water Service	2.1
Sprinkler System	0.0
Domestic Hot Water System	2.1
Sanitary Waste & Vent System	1.9
Plumbing Fixtures	2.0
Natural Gas System	3.0
Equipment	2.0
Lighting	2.0
Receptacles	3.0
Fire Alarm	1.9
Communications Infrstructure Data Cabling	2.0
Pathways for AV systems, EAC, SURV	2.0
Public Address System/Intercom	1.0
Video Surveillance (Security)	1.0
Access Control System	2.0
AV Infrastructure - Cabling, Speakers, and Terminations	3.0
AV Equipment - Monitors, Projectors, Audio Systems	3.0
Clock System	0.0

Assessment	
Good (A)	Assessment Scores Range from 2.5-4
Avg (C)	Assessment Scores Range from 1.5-2.5
Poor (F)	Assessment Scores Range from 0-1.5

EXISTING CONDITIONS
PHOTO DOCUMENTATION



North Central High School



Discipline: **1 - ARCHITECTURE**

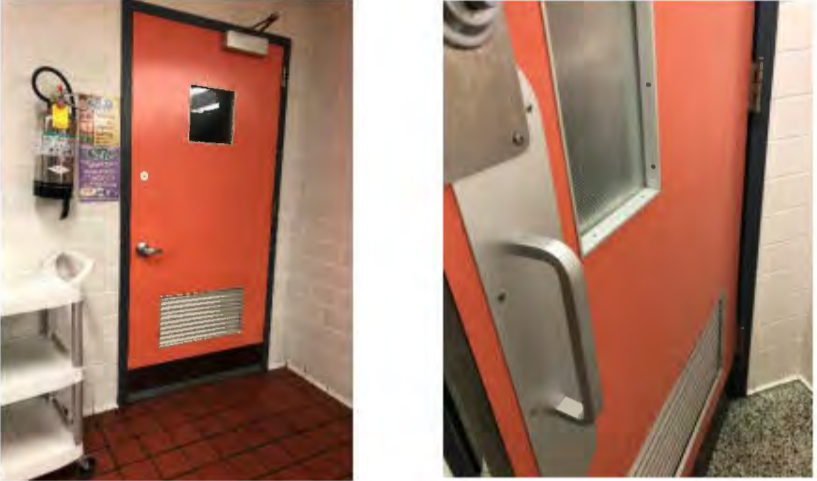



Photo #	Photo Image	Description
1		<p>Varying door types and colors and lites. Orange.</p>
2		<p>Varying door types and colors and lites. Tan.</p>
3		<p>Varying door types and colors and lites. Wood grain.</p>
4		<p>Laminate doors of varying types and colors. Edges are showing age and distress.</p>






Photo #	Photo Image	Description
5		<p>Laminate doors of varying types and colors. Woodgrain laminate on the left. Wood door on the right.</p>
6		<p>Main entry has no secure vestibule.</p>
7		<p>Cafeteria entry.</p>
8		<p>Doors of varying types and colors.</p>
9		<p>Door has damage and wear.</p>






Photo #	Photo Image	Description
10		Inadequate storage solutions.
11		Raised platform, light grid at front of room. (3 rooms) Drinking fountain, specialized equipment.
12		Specialized ceiling, bulkheads, light grid.
13		Wood floor indicates recessed slab.
14		Parque wood floor over recessed slab.



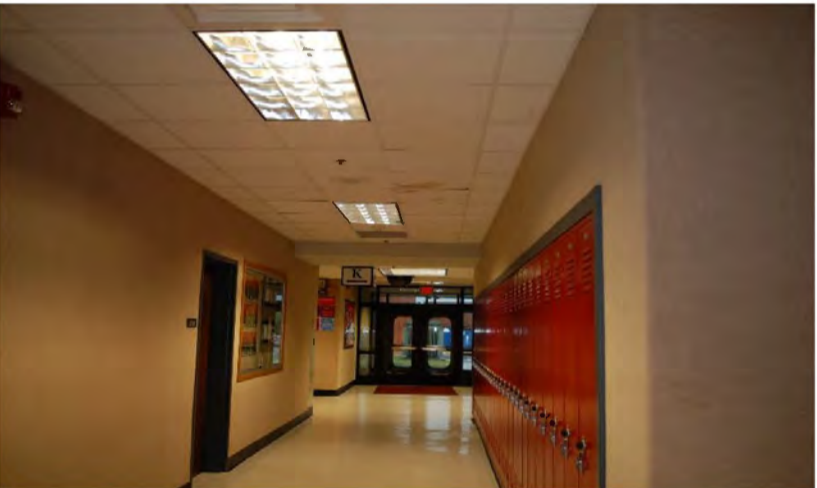

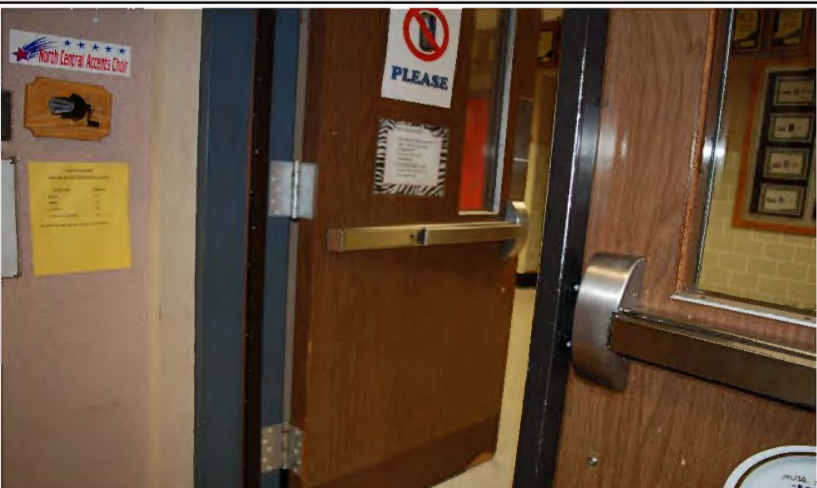
Photo #	Photo Image	Description
15		Need threshold trim at door to cover join between flooring materials.
16		Mechanical vents in corridors are damaged, typical. Note special wayfinding for stage.
17		Water damaged ceiling tiles.
18		Built-in music storage casework.
19		Hardware finish varies from hinges to exit device to center mullion.


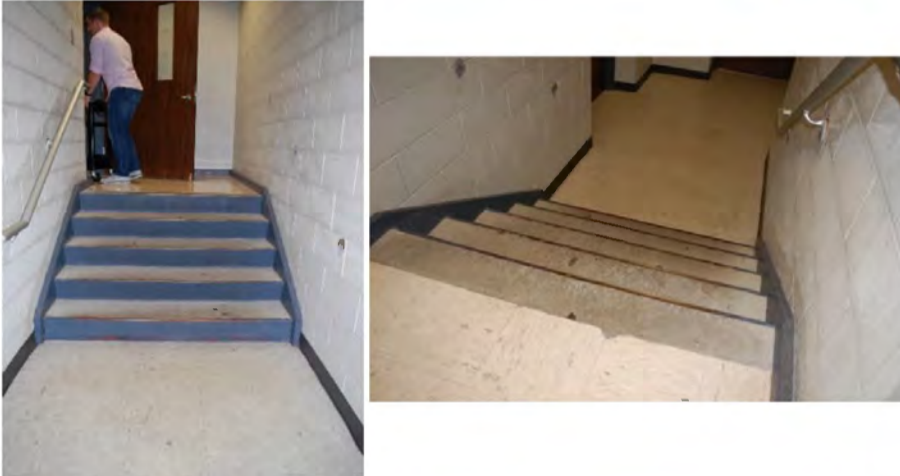



Photo #	Photo Image	Description
20		Operable partition track, no partition. Wall covering delaminating. Wood floor. Mirrors on walls, Drinking fountain.
21		Band top tiers not accessible. Transition from vct to concrete tread is bad at top landing.
22		Inaccessible band tiers. Rear door missing exit device.
23		Wall covering damage. Door & frame damage. No push plate or handle on door. Band room doors and frames damaged, missing paint.
24		Damaged ceiling tile.






Photo #	Photo Image	Description
25		Inactive ticket window. Awards mounted to wood picture rail in Corridor.
26		Damage to wall covering (acoustic wall fabric).
27		Doors have plates over location of old hardware & damaged ends. Doors are typically Laminate veneer. Some corridor doors are on magnetic hold opens.
28		Damaged ceiling tile. Worn wall coverings.
29		Corrosion on door frame. Damaged ceiling tile.





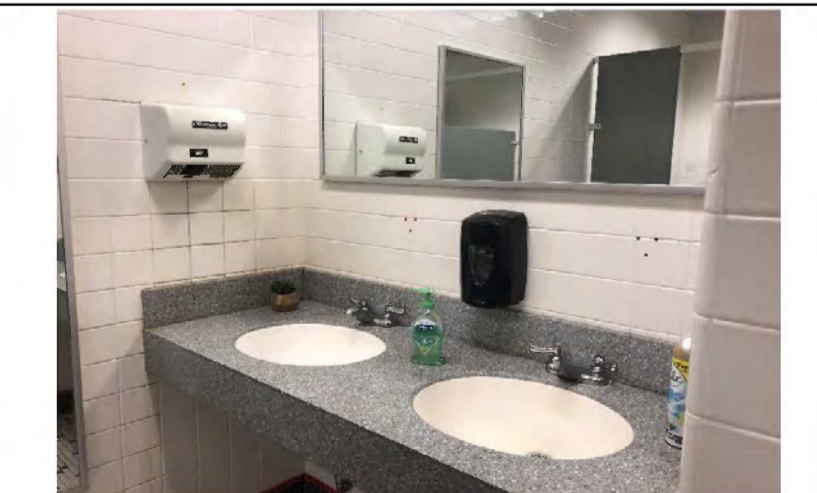
Photo #	Photo Image	Description
30		<p>Damaged, worn instrument storage.</p>
31		<p>Damaged, worn instrument storage.</p>
32		<p>Worn, delaminating wall covering. Carpet runners in poor condition. Concrete under chairs.</p>
33		<p>Small Auditorium rigging.</p>
34		<p>Holes in tile. Stained grout. Mirror mounted above accessible heights. Chipped tile.</p>


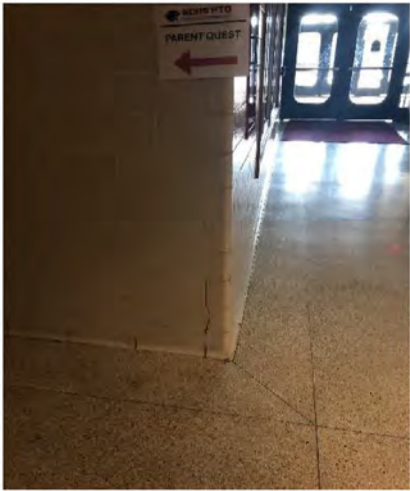



Photo #	Photo Image	Description
35	 <p>A photograph of a classroom wall. Several colorful signs are mounted on the wall at approximately chair or head height. The signs are labeled 'Technology', 'Sports', 'Religion', 'Family', and 'Arts'. The wall shows signs of wear, particularly at the height of the signs.</p>	<p>Wall covering worn at chair/head height in most classrooms.</p>
36	 <p>A photograph of a hallway floor. A corner of a wall is visible, showing a crack in the structural glazed facing tile. A sign above the door reads 'PARENT QUEST' with an arrow pointing left.</p>	<p>Cracked structural glazed facing tile at corner.</p>
37	 <p>A photograph of a kitchen sink area. The laminate counter edge is missing. A sink trap is visible, which is not protected for ADA roll-in condition. A red trash bin is under the counter.</p>	<p>Laminate counter edge missing. Sink trap not protected for ADA roll-in condition.</p>
38	 <p>A photograph of a window with horizontal blinds. The window frame has tape around the perimeter, indicating missing caulk or failed seals.</p>	<p>Window has tape around perimeter, indicating missing caulk or failed seals.</p>
39	 <p>A photograph of kitchen cabinets. The casework is worn, and a door hinge is failing.</p>	<p>Casework worn, door hinge failing.</p>



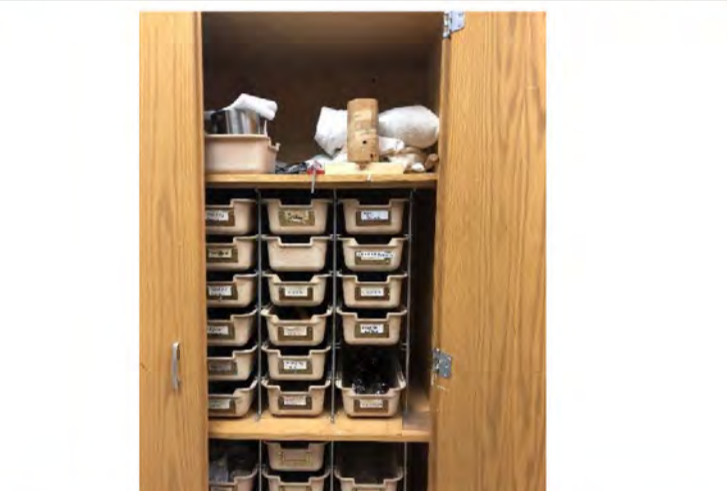


Photo #	Photo Image	Description
40		Specialized jewellery-making equipment with air.
41		Hard plumbed utility connection to casework.
42		Specialized casework accessories.
43		Computer tables & shelves not at accessible height.
44		Some classrooms have tackable walls, assuming cork under the vwc.

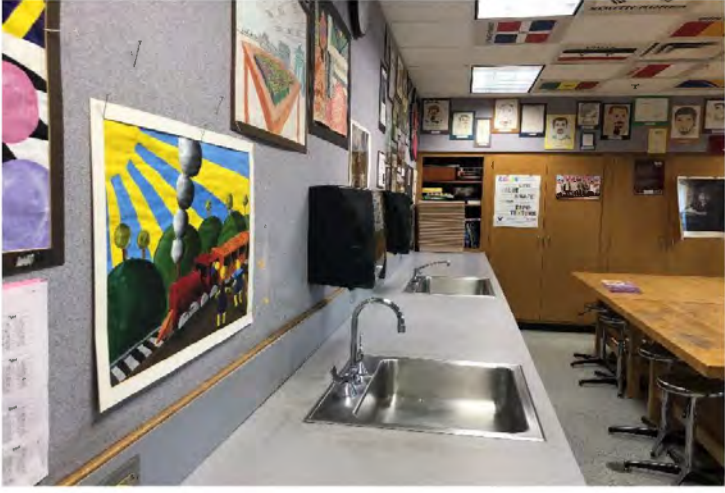




Photo #	Photo Image	Description
45		Damage/ staining on counter top.
46		No urinal screens. Cracked wall tile. Holes in tile where previous accessories were removed.
47		Accessible sink pulling away from wall.
48		Toilet partition collecting dirt/grime.
49		Crack in the Art Room floor. Design/Textile H185.






Photo #	Photo Image	Description
50		<p>Window has tape around perimeter, indicating missing caulk or failed seals.</p>
51		<p>Door has damage and wear.</p>
52		<p>Floor in the custodian closet is worn and damaged.</p>
53		<p>Sloped floor with fixed seating, no accessible seating. Tablet arms broken. Access to raised platform is not accessible.</p>
54		<p>Floor in poor condition.</p>






Photo #	Photo Image	Description
55		<p>Doors into elevator vestibule are 3'-0". This limits the size of furniture etc. that can be transported on the elevator.</p>
56		<p>Smart boards mounted over existing marker boards.</p>
57		<p>Most classrooms have bulkhead and cove light in rear of classroom. Tackable walls in classrooms.</p>
58		<p>Cove light and bulkhead example. Bulkheads wrapped in vinyl wall covering. Grid and ceiling tiles damaged in some locations.</p>
59		<p>Planetarium space is being used as custodian's shop/storage. Existing planetarium equipment remains.</p>


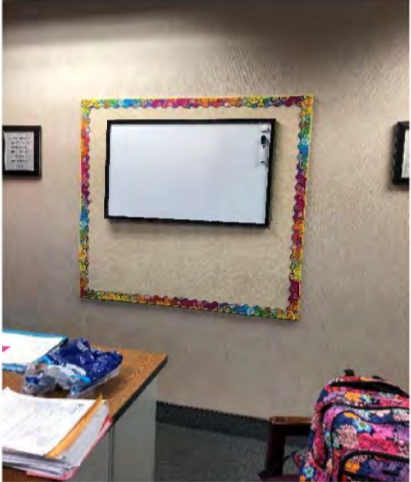


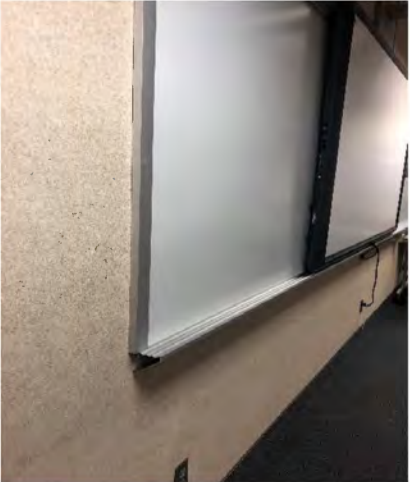
Photo #	Photo Image	Description
60		<p>Non-sealed concrete in electrical and custodial closets. Residue on floor, no wall base.</p>
61		<p>Marker board mounted over tack board.</p>
62		<p>Built-in casework.</p>
63		<p>Corridor side of door has escutcheon plate over hole. Not all classrooms can be locked from inside the classroom.</p>
64		<p>Missing trim on marker board rail.</p>

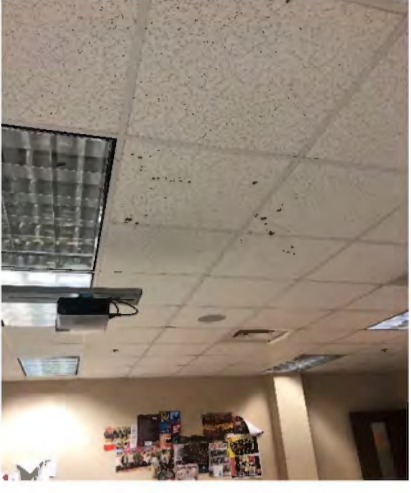




Photo #	Photo Image	Description
65		Damaged ceiling tiles. Projector mounted on ceiling.
66		Classroom vinyl wall covering showing wear around perimeter of rooms.
67		Several window screens have holes.
68		Laminate door.
69		Mismatched glass in interior storefront.


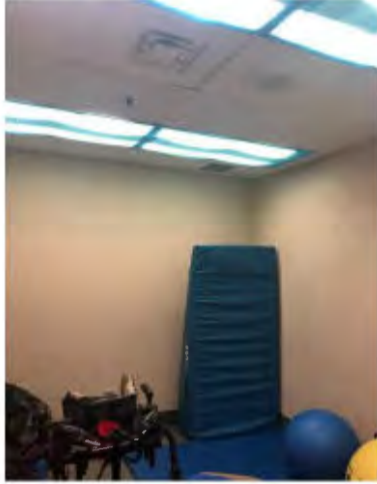


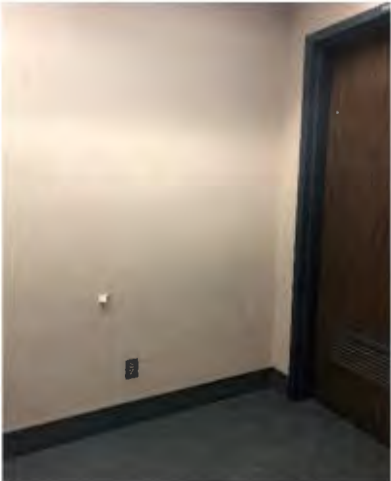
Photo #	Photo Image	Description
70		Example of damaged ceiling tile.
71		Coverings over light fixtures. Dimmable lights would be preferred.
72		Door has damage and wear.
73		Mirror over the sink is not at an accessible height.
74		Example of wall covering damage.





Photo #	Photo Image	Description
75		Need a floor material transition
76		Damage to wall.
77		Damage to lab epoxy table tops
78		Epoxy sinks have corrosion.
79		Lecture room with fixed seats is not accessible.






Photo #	Photo Image	Description
80		Casework is in worn condition.
81		Casework is in worn condition.
82		Fixed seating on non-ADA compliant slope. Several seats are broken.
83		Fixed seating on non-ADA compliant slope. Several seats are broken.
84		Specialized lighting and ceiling mounted projector in lecture lab.






Photo #	Photo Image	Description
85		Customized ceiling tiles.
86		Concrete pitting. Corrosion on doors.
87		Evidence of wall mounted board removal on wall covering.
88		Science casework handle needs reattachment (several instances of this were found).
89		Science epoxy sinks have corrosion.





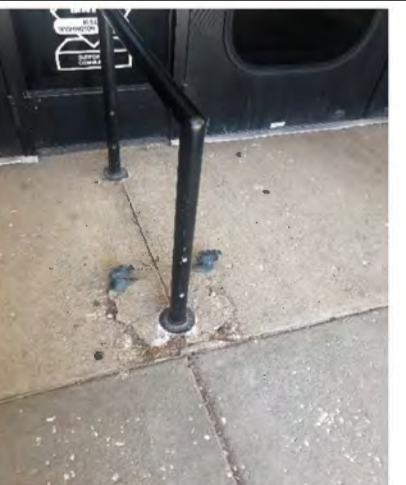
Photo #	Photo Image	Description
90		Science fixed lab tables are in poor condition.
91		Flooring transition is needed.
92		No water proof material under drinking fountains.
93		Old and dirty accordion partition.
94		Exterior concrete pitting.






Photo #	Photo Image	Description
95		Mismatched floor tile.
96		No urinal screens.
97		Damaged grille.
98		Several dissimilar finish materials coming together in one location.
99		Damaged grille.






Photo #	Photo Image	Description
100		Floor outlets in teacher prep area.
101		Railing does not meet current code.
102		Wall of Fame.
103		Guardrail does not meet current code.
104		Stair does not have a hand rail.

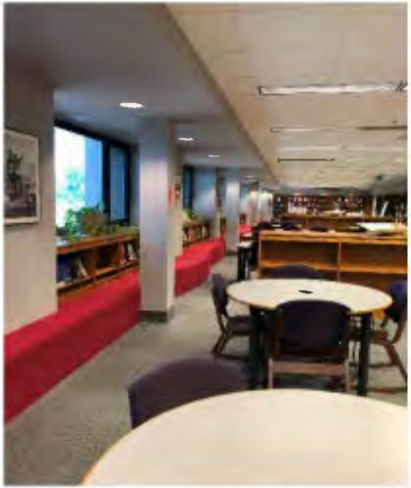


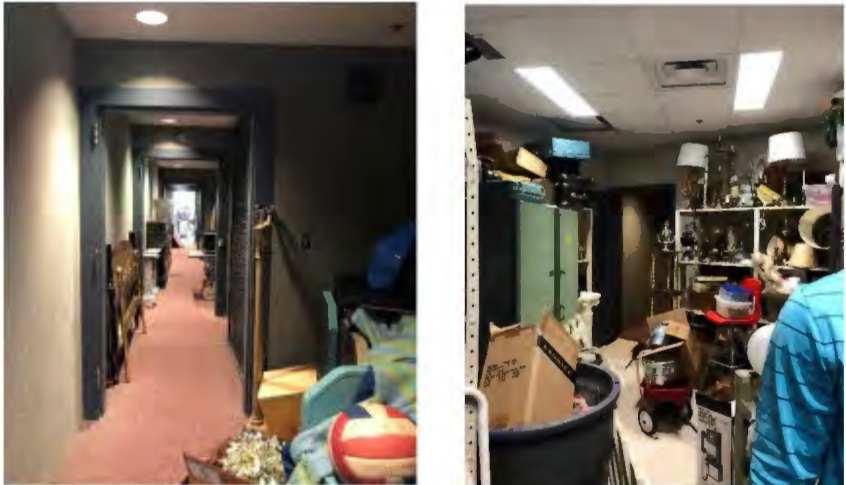

Photo #	Photo Image	Description
105		Built-in seating in the Media Center.
106		Damage to flooring. Perimeter of carpet is a different color from rest.
107		Vinyl patch does not match the rest of the wall covering.
108		Poor storage solution above Auditorium in control areas.
109		Auditorium control area is dated.





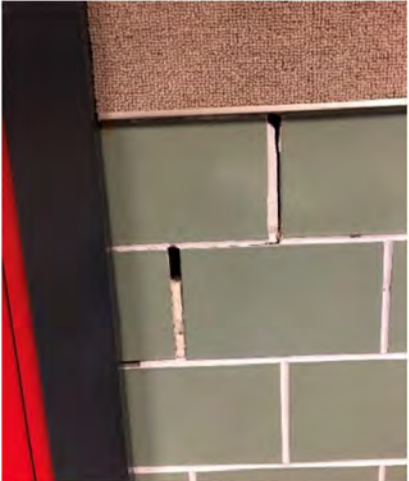
Photo #	Photo Image	Description
110		Poor storage.
111		Discolored carpet. No water proof area at water fountains.
112		Damage to corners of vinyl wall covering.
113		Tear in a wall covering.
114		Missing grout in glazed block. Looks like grout has been painted.






Photo #	Photo Image	Description
115		Stained carpet.
116		Oldest elevator has original finishes inside. Frame is rusted in cab.
117		Existing teacher wardrobe cabinet is vented, top and bottom. In some cases, water is getting in and damaging contents.
118		Some metal ceiling panels in the Cafeteria have rust.
119		Transition piece between wall and serving line equipment is missing. Tile replacement does not match.






Photo #	Photo Image	Description
120		<p>Floor transitions from quarry tile to slip resistant ceramic. Both tile & grout are hard to clean.</p>
121		<p>Serving line que not is accessible.</p>
122		<p>Patched floor tile in the kitchen and neon accent in the Cafeteria.</p>
123		<p>Round opening between Café and Senior dining.</p>
124		<p>Tile and counter tops are in poor condition in the Cafeteria.</p>




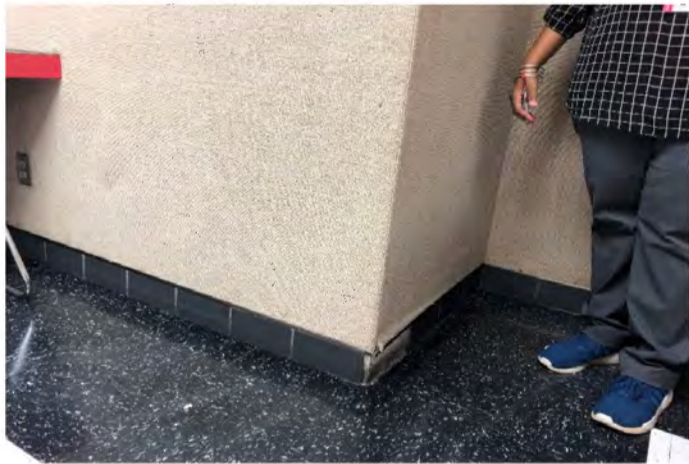

Photo #	Photo Image	Description
125		Missing ceiling tiles.
126		Ghosting on wall covering.
127		Not all security gates have a key control on both sides.
128		Cracked tile floor base.
129		Cracked terrazzo.





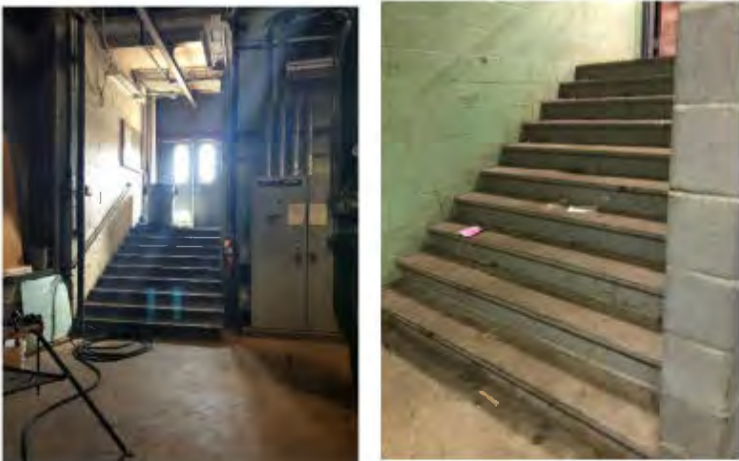
Photo #	Photo Image	Description
130		Mismatched glazed block.
131		Overhead door at Vending.
132		Mismatched wall tile. No floor finish.
133		Plywood partition wall in Custodial area. Floor cracks.
134		Stairs to boiler room, dirty, no hand rail.




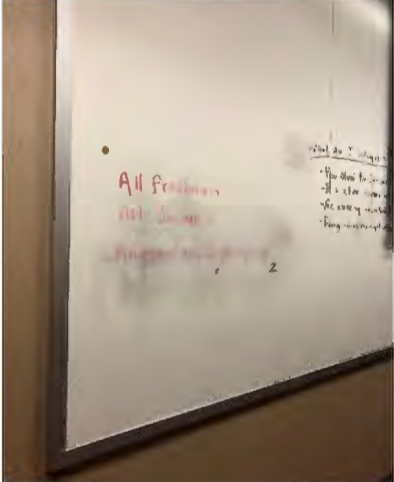

Photo #	Photo Image	Description
135		Custodial area has no floor finish and old lockers.
136		The receiving area's exterior door is not sealed. Need better exhaust for compactor.
137		Lecture room with fixed seats is not accessible.
138		Ghosting on marker wall in Lecture room.
139		Ceiling finish showing dirt from diffusers.

Photo #	Photo Image	Description
140		Auditorium aisle.
141		Broken auditorium seating.
142		Finish on chair arms is damaged.
143		Access to the stage is very narrow.
144		Pit cover is not secure. Stage front finish is inconsistent.

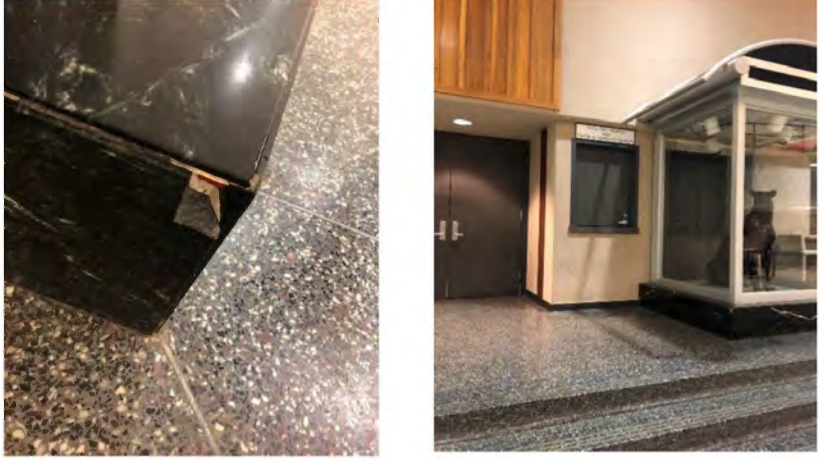



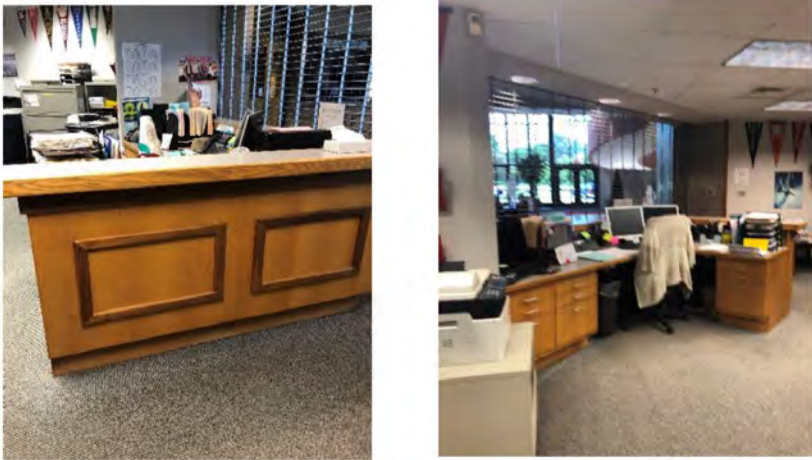
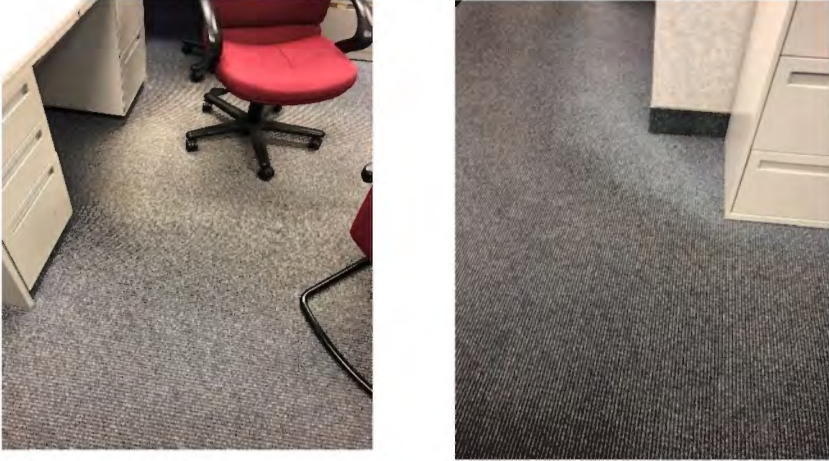
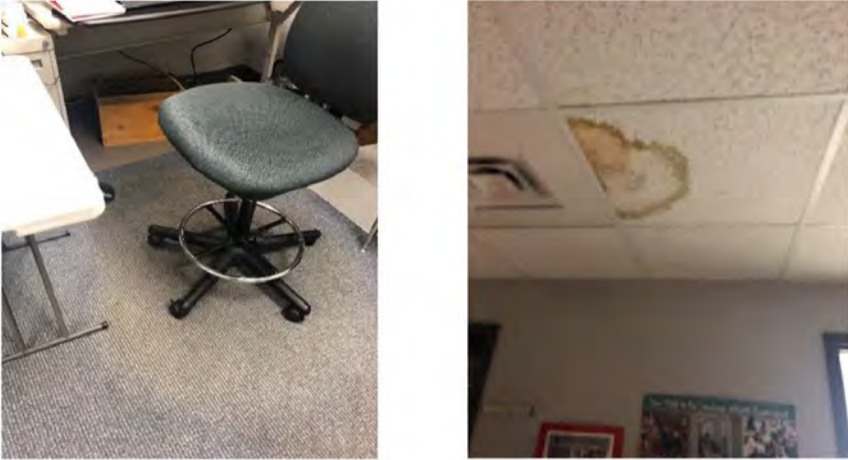

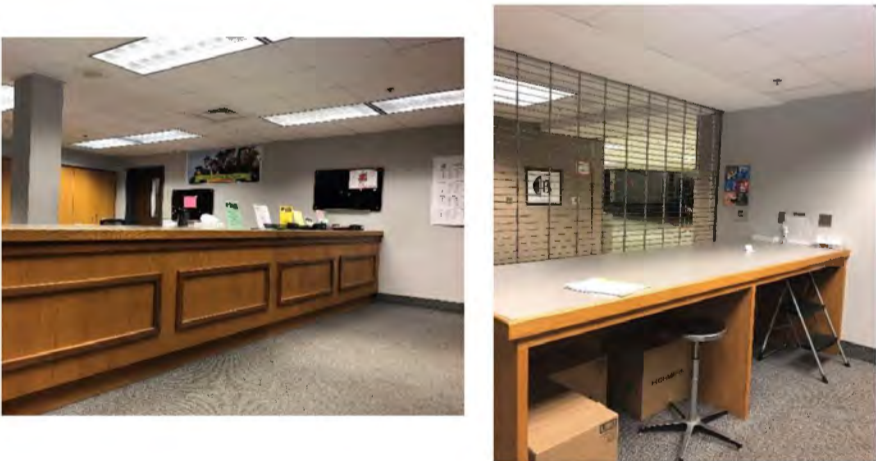
Photo #	Photo Image	Description
145		Damage to decorative marble base at Auditorium. Ticket window is not accessible.
146		Terrazzo floor art.
147		Crowded reception desk.
148		Dirty, worn floor and mop basin at Janitor's closet.
149		Reception desk and millwork detail.

Photo #	Photo Image	Description
150		Worn carpeting.
151		Worn carpeting and water stained ceiling tile.
152		Carpet used as wall finish material throughout building.
153		Office area casework.



Discipline: **2 - HVAC**

Photo #	Photo Image	Description
1		<p>(4) Existing hot water boilers that serve the entire North Central High School and JEL campus. Boilers have outlived actual life expectancy and need to be replaced with new high efficiency boilers.</p>
2		<p>(2) Existing 750 ton water cooled chillers. Installed in 2001 and are in need of being rebuilt or replaced.</p>
3		<p>Chilled water pumps, hot water pumps and condenser water pumps need to be replaced. They have outlived their life expectancies.</p>
4		<p>Existing air cooled 350 ton chiller. This chiller was installed in 1994 to add additional capacity to the building. The chiller has exceeded its life expectancy of (20) years.</p>






Photo #	Photo Image	Description
5		<p>Cooling tower will need to be rebuilt or replaced.</p>
6		<p>Typical picture of (1) of the (48) indoor air handling units. These units were installed in 1993 and have exceeded their life expectancies of 15 to 25 years.</p>
7		<p>Typical picture of (1) of the (48) indoor air handling units. These units were installed in 1993 and have exceeded their life expectancies of 15 to 25 years.</p>
8		<p>Typical picture of a cooling coil drain pan that has rusted.</p>
9		<p>Typical picture of a large belt driven AHU supply fan. The new air handling units would be direct drive providing a much more efficient fan selection.</p>

Photo #	Photo Image	Description
10		<p>Typical picture of roof mounted exhaust fans. This picture is over unit N. Building has approximately (160) roof mounted exhaust fans. The majority of these fans were installed in 1993. These fans have exceeded their life expectancies of (20) years.</p>



Discipline: **3 - PLUMBING**



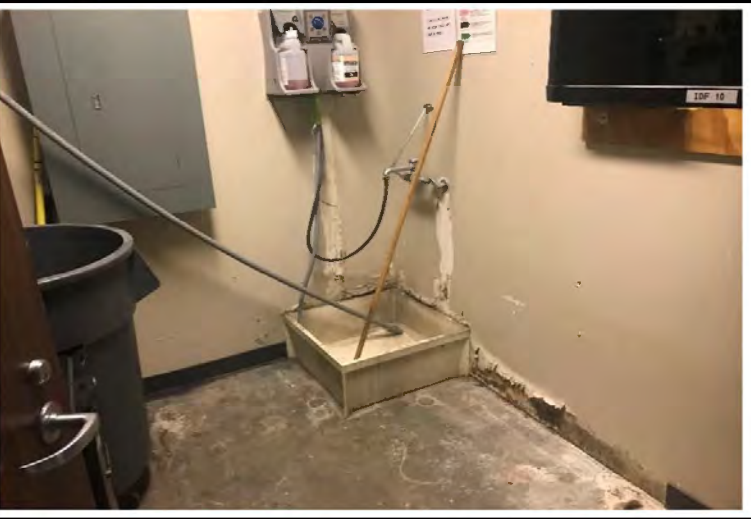

Photo #	Photo Image	Description
1		<p>Retrofit waste piping in laundry is not code compliant or properly sloped.</p>
2		<p>Art Room sink plaster-traps are no longer operational and are allowing solids to pass into the waste system. Camera scoping of underground waste system will be used to determine scope of replacement. Single point solids interceptor will be considered for each classroom or for the entire suite.</p>
3		<p>Chemical mixing is connected to mop basin faucets without check valves on the supply lines. This allows cross connection from the hot and cold water systems.</p>
4		<p>The fire protection risers are in fair condition. The sprinkler system is also in fair condition.</p>






Photo #	Photo Image	Description
5		<p>Numerous grates are missing from floor sinks in the kitchen.</p>
6		<p>Approximately 40% of the deionized water faucets within the lab classrooms are functional.</p>
7		<p>Heavy corrosion on fixtures was found.</p>
8		<p>The duplex softener system is in average condition. Based upon its age, the media will need to be changed out and valves rebuilt. We recommend replacing the softeners with a system sized to treat the entire building.</p>
9		<p>The triplex gas fired water heaters and large storage tank are in poor condition. The thermostatic mixing valve and hot water circulating pumps are concealed behind the heaters with extremely poor access. The entire domestic hot water plant needs to be replaced.</p>




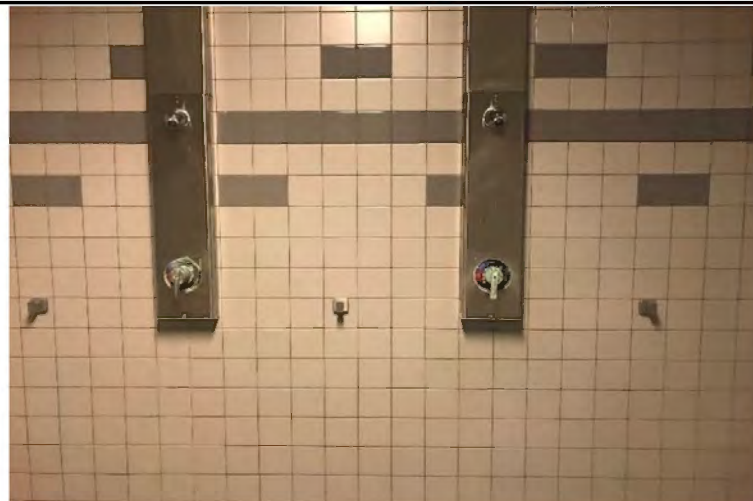






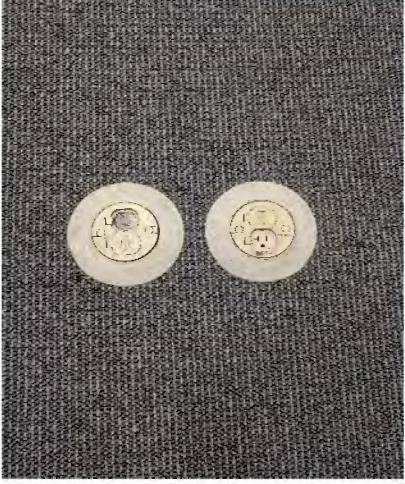
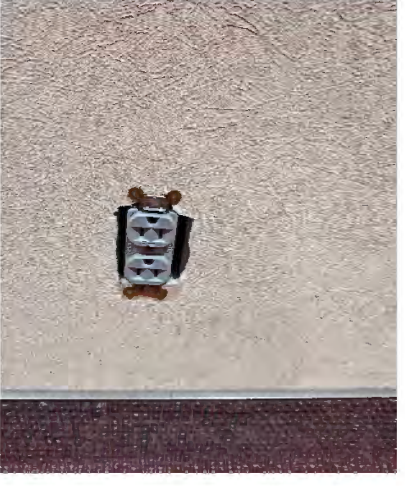

Photo #	Photo Image	Description
10		<p>Heavy corrosion due to leaks and poor water quality was found at the thermostatic mixing valve.</p>
11		<p>Heavy pitting is occurring on numerous sink drains.</p>
12		<p>More evidence of heavy water corrosion.</p>
13		<p>PE showers are in poor condition.</p>
14		<p>Domestic piping that was installed in the tunnel in 1992 is in fair condition.</p>

Photo #	Photo Image	Description
15		<p>Sanitary and domestic piping within most plumbing chases are in fair condition. A large percentage of this piping was installed in 1992. Camera scoping is planned to evaluate the original underground sanitary and storm piping.</p>
16		<p>Numerous sanitary vents through the roof have been cut off too short. Vents can become blocked during heavy snowfalls. All VTRs need to be extended to a minimum of 12" above finished roof.</p>
17		<p>Most roof areas do not have overflow roof drains as currently required by code.</p>
18		<p>The gas meter assembly is in poor condtion. At a minimum, all rust needs to be removed then painted with rust inhibitor paint.</p>



Discipline: **4 - ELECTRIC**

Photo #	Photo Image	Description
1		<p>The main service bolted pressure switches have been requested to be replaced with breakers by facilities. This requires all (4) main switchboards to be replaced in its entirety. Overall condition of supporting Distribution (1-400A Distribution board and 4-225A Panelboards require replacement) is satisfactory and does not require replacement. It is recommended to have an infrared scan to locate any loose or corroded connections.</p>
2		<p>Floor boxes with missing covers throughout building.</p>
3		<p>Missing face plate.</p>
4		<p>Evidence of arcing.</p>



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Discipline: **5 - TECHNOLOGY**

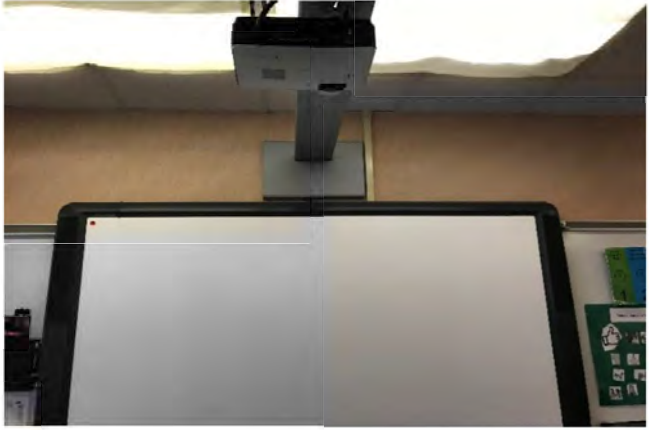




Photo #	Photo Image	Description
1		<p>Typical ActivBoard & short throw projector location. This instance was found in certain classroom types in the building.</p>
2		<p>HDMI + TRS Audio connection input. Location found in general usage classrooms.</p>
3		<p>Typical IR microphone location. This instance was found in all spaces where program audio amplification is present.</p>
4		<p>Typical Front Row Lasso system. System is present in all classrooms and is used for audio amplification for presentations.</p>
5		<p>Typical faceplate containing data. While the number of data varies depending on the room, the building used the same faceplate layout.</p>






Photo #	Photo Image	Description
6		<p>Typical program audio speaker location. This instance was found in all classrooms and is controlled by the front row lasso system.</p>
7		<p>Typical paging speaker location. This instance is present both inside rooms and in hallways. Newer paging speakers had been installed at a different time, as made obvious by some of the speakers being whiter and less light faded than others around the building.</p>
8		<p>Typical coaxial cable location. This instance was found in all classrooms and all were unused. They were used for the old announcement system, which has since been abandoned.</p>
9		<p>HDMI + Data location. This instance was present in most classroom layouts. It was clear that it had been installed during an earlier renovation of the building.</p>
10		<p>Typical short throw projector location. This instance occurs in most of the classroom layouts in the building. The common model used is the Epson 475Wi.</p>






Photo #	Photo Image	Description
11		<p>Typical Data + Video Connection location. This instance was found in certain classroom types throughout the building.</p>
12		<p>VGA, USB, & RCA connections location. Typical in music rooms in the building.</p>
13		<p>Example of a sound reinforcement system speaker in the music rooms in the building.</p>
14		<p>Typical volume control knob, located in offices and conferences alike.</p>
15		<p>Speaker cluster located in the main gymnasium.</p>






Photo #	Photo Image	Description
16		Center line array of speakers serving the auditorium/stage.
17		Paging system head-end rack, located in the MDF room.
18		Typical card reader location found inside/outside the building.
19		Type of security camera found in the building.
20		Type of security camera found in the building.






Photo #	Photo Image	Description
21		Type of security camera found outside of the building.
22		Type of security camera found in the building.
23		Type of security camera found in the building.
24		Type of security camera found in the building.
25		Example of the fire alarm control panels and security panels found in the building





Photo #	Photo Image	Description
26		MDF (IDF23) location
27		IDF 1 location
28		IDF 2 location
29		IDF 3 location




Photo #	Photo Image	Description
30		IDF 4 location
31		IDF 5 location
32		IDF 6 location




Photo #	Photo Image	Description
33		IDF 7 location
34		IDF 8 location
35		IDF 9 location




Photo #	Photo Image	Description
36		IDF 10 location
37		IDF 11 location
38		IDF 12 location





Photo #	Photo Image	Description
39		IDF 13 location
40		IDF 14 location
41		IDF 15 location
42		IDF 16 location

Photo #	Photo Image	Description
43		IDF 18 location
44		IDF 19 location
45		IDF 20 location









Photo #	Photo Image	Description
46		IDF 21 location
47		IDF 22 location
48		IDF 24 location

Photo #	Photo Image	Description
49		IDF 25 location
50		Typical Computer Lab layout. Computers are served by data on a horizontal surface raceway located under the desk.



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		<p>Above Gymnasium showing pneumatically controlled relief damper that needs DDC upgrade.</p>
2		<p>AHU-A1 control panel showing Infinet 1 controller that should be replaced.</p>
3		<p>Penthouse Q EOL panel with Infinet 1 controller that should be replaced.</p>
4		<p>Many tunnel pneumatic actuators are disconnected and allow a significant amount of air into the tunnel from the discharge of the equipment.</p>

Photo #	Photo Image	Description
5		<p>Most panels are b3 controllers and should remain.</p>
6		<p>Andover 9410 controller that needs to be replaced. This panel controls all of the hot and chilled water systems and is significantly older than most controllers in the high school.</p>
7		<p>Example graphic showing missing point link. Several graphics are missing OAT, ST, and other graphical links to other systems.</p>



Discipline: **7 - FOODSERVICE**





Photo #	Photo Image	Description
1		<p>The existing walk-in coolers are original to the school. Their configuration and the refrigeration systems are both out-of-date and inefficient. We recommend a complete reconfiguration and replacement of these units.</p>
2		<p>Selected pieces of cooking equipment will be reuseable in the new kitchen space.</p>
3		<p>Selected pieces of cooking equipment will be reuseable in the new kitchen space.</p>
4		<p>A significant amount of prep equipment is outdated and oversized for today's kitchen use.</p>










Photo #	Photo Image	Description
5		<p>These pass-thru units are inefficient and the configuration is no longer appropriate for the foodservice operation.</p>
6		<p>This is an old bake oven that will be removed and the space will be reallocated.</p>
7		<p>Depending on the need for teacher dining and where it is placed, some of this line may be reused.</p>
8		<p>The existing dishmachine will be reused. It may be relocated, but it has significant life-cycle time available.</p>
9		<p>The existing powersoak sink will be re-used. It may be re-located, but it has significant lifecycle time available.</p>

Photo #	Photo Image	Description
10		<p>The conveyor unit is underutilized and outdated. It will be removed.</p>
11		<p>While the food offerings are well done and appealing, the serving lines do not properly merchandise the food offerings and/or "entice children to eat healthier."</p>
12		<p>The servery will be rebranded.</p>
13		<p>The goal is to remove the "institutional feel" from the food program.</p>

EXISTING CONDITIONS
PHOTO DOCUMENTATION



Northview Middle School



Discipline: **1 - ARCHITECTURE**

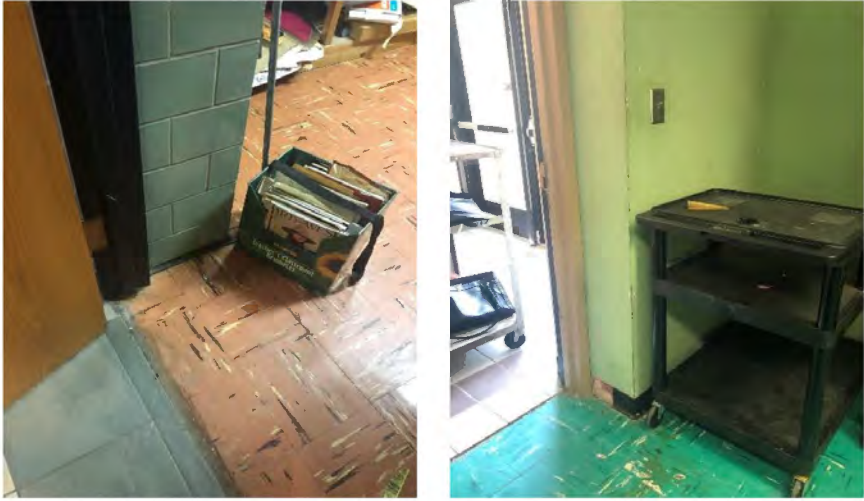
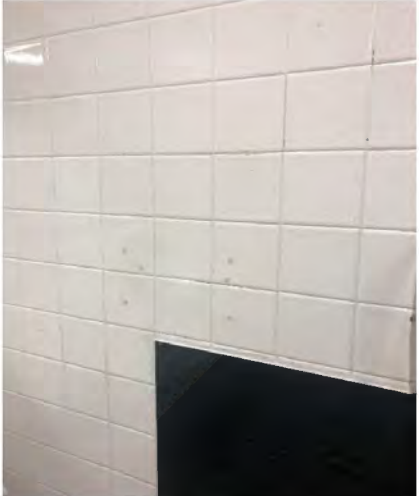

Photo #	Photo Image	Description
1		<p>Most classrooms have an abandoned mechanical grille. Most classrooms have structural glazed facing tile. Some rooms have painted the tile.</p>
2		<p>There are several areas of exiting 9"x9" floor tile.</p>
3		<p>Restroom tile damaged from prior accessory attachment. This is typical.</p>
4		<p>Damaged corners. This is typical. Vinyl wall covering with structural glazed facing tile 1/2 height.</p>





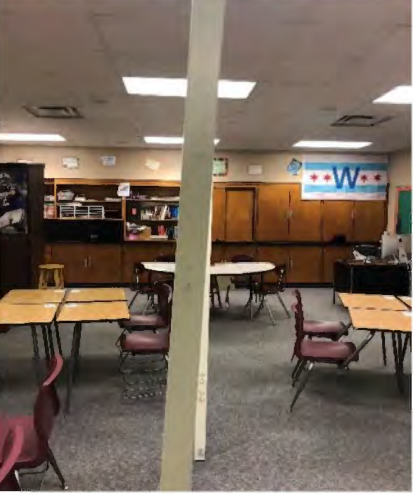
Photo #	Photo Image	Description
5		<p>Kitchen has both an elevator and dumb waiter to the Serving Line space on the 2nd floor.</p>
6		<p>Railings and guard rails do not meet current code. This is typical.</p>
7		<p>Doors in a portion of the building have knobs in lieu of lever handles.</p>
8		<p>Classroom doors are delaminating. No way to lock the door from inside the classroom. This is typical.</p>
9		<p>Power poles in some existing classrooms.</p>


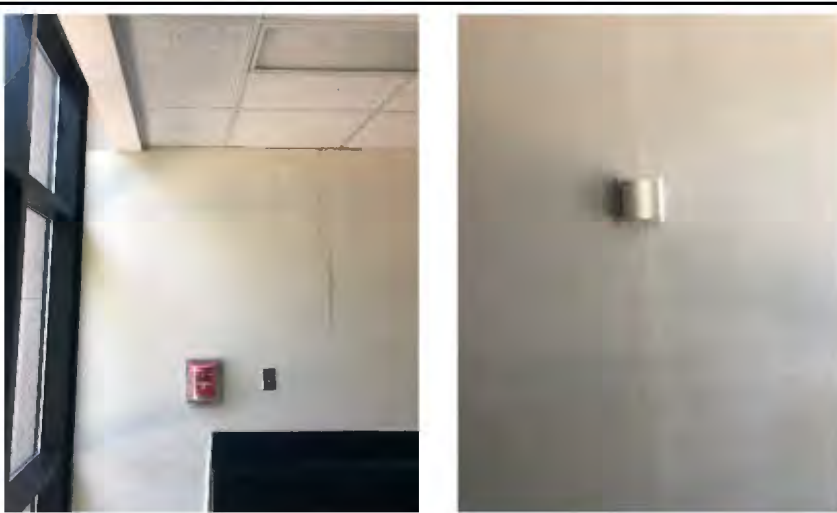
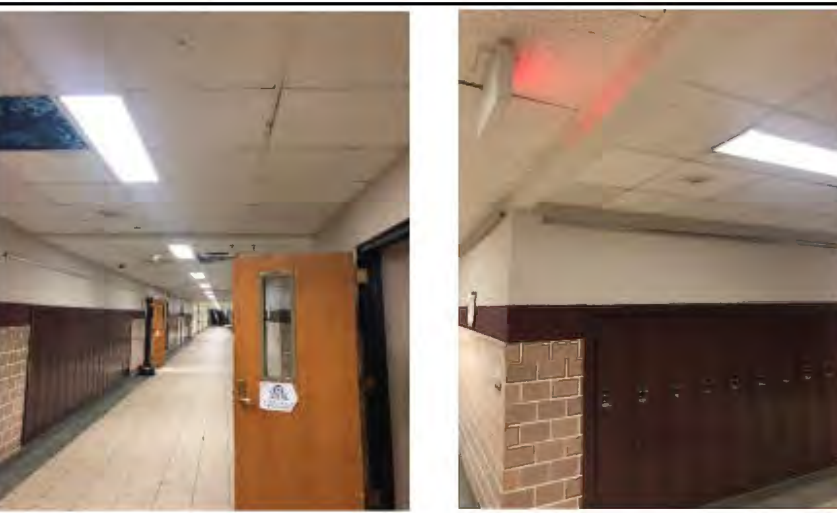
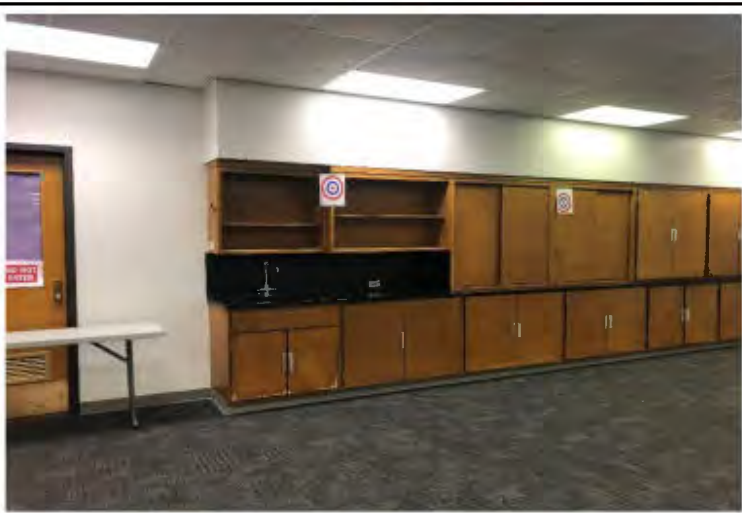

Photo #	Photo Image	Description
10		Exterior finish system is deteriorating.
11		Interior leaks & damage to wall surfaces.
12		Corridor ceiling tiles are damaged and warped. 1ft strip light in center.
13		Damaged casework.
14		Missing floor tiles.


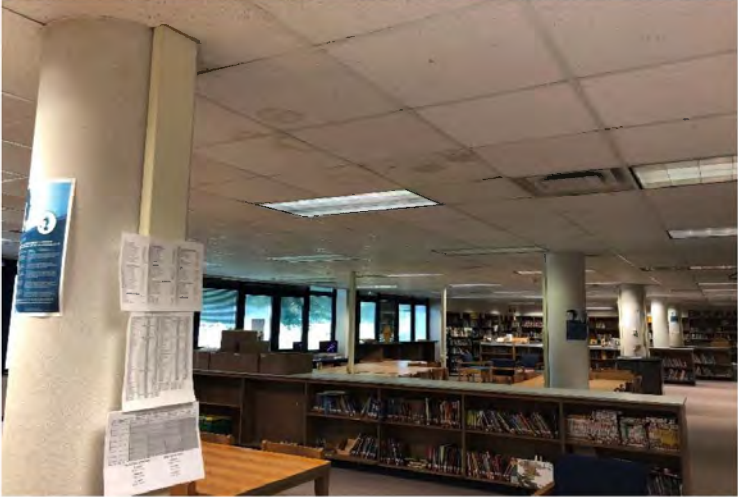



Photo #	Photo Image	Description
15		<p>Grab bars, toilet, faucet, and the mirror are not meeting current ADA. (Clinic)</p>
16		<p>Stains on the Media Center ceiling tiles.</p>
17		<p>Door hardware is not accessible. Door clearances are not accessible.</p>
18		<p>There is damage to the Media Center Workroom door.</p>
19		<p>The casework in the Media Center Office is worn.</p>

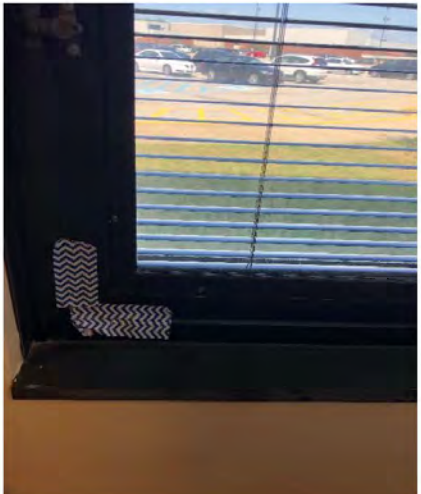

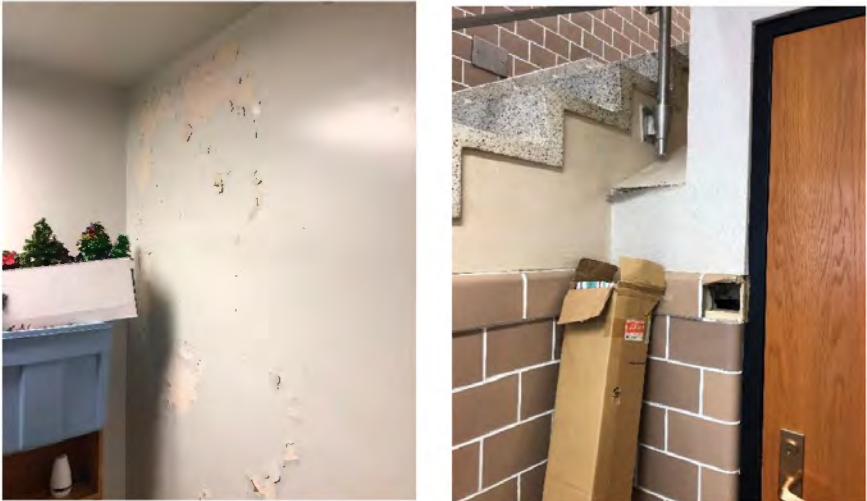

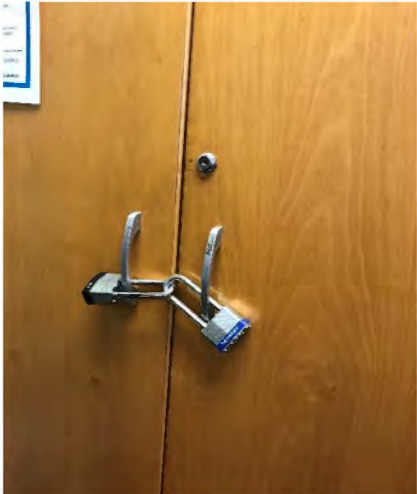
Photo #	Photo Image	Description
20		<p>Air infiltration through exterior windows. Classrooms have duct tape/ clear tape over joints in the windows. This is typical for all.</p>
21		<p>Air infiltration through exterior windows. This is typical for all.</p>
22		<p>Wall damage.</p>
23		<p>Display case doors are not lockable.</p>
24		<p>Som casework locks need to be supplemented.</p>





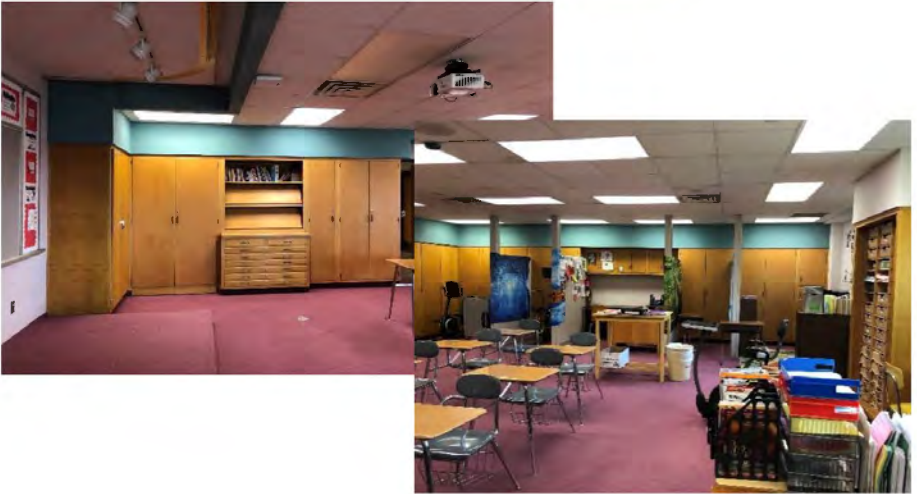
Photo #	Photo Image	Description
25		Choir risers are worn.
26		True North area is new!
27		Wall damaged, and door hardware is not accessible.
28		Drinking Fountain protrudes too far into the corridor.
29		Worn carpet and the casework is not conducive to current classroom use.






Photo #	Photo Image	Description
30		Current ADA is not met.
31		Floor is in bad shape. Missing transition and some tile. Doors have knobs instead of lever handles, so they are not accessible.
32		Exterior façade, soffit and concrete are in deteriorating condition.
33		Damage to casework.
34		Abandoned door louver/grille.


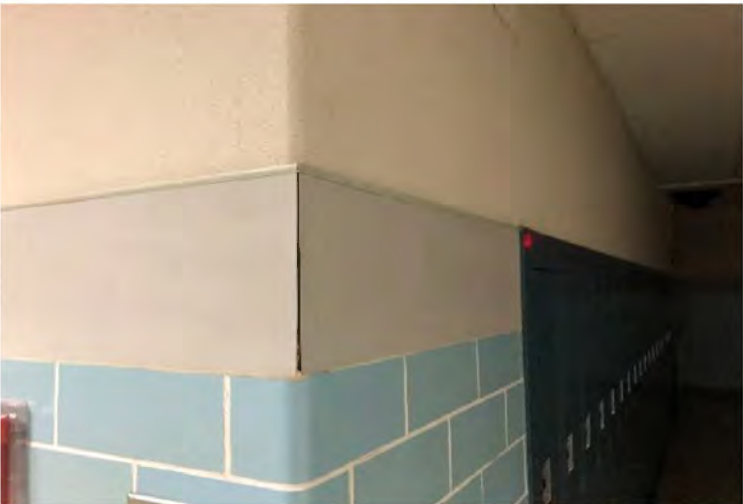



Photo #	Photo Image	Description
35		<p>The platform is not accessible. Bulkhead lights are not conducive to current classroom use. The carpet is in bad condition.</p>
36		<p>Corners of wall transition panel are delaminating. This is typical.</p>
37		<p>Damage to wall at the base. Bad transitions between materials.</p>
38		<p>Railings and guard rails do not meet current code. This is typical.</p>
39		<p>Unit vent and unit vent trim are not attached. Vestibule.</p>

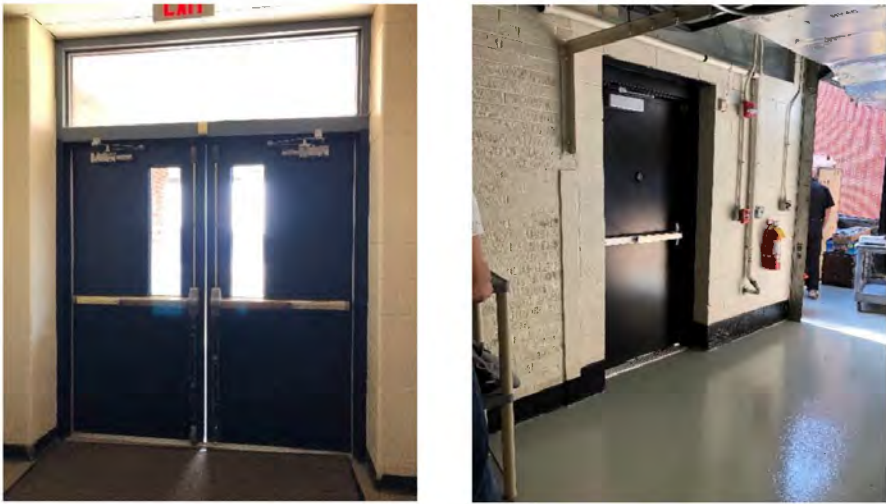




Photo #	Photo Image	Description
40		Exterior doors need new seals/ replacement to prevent air infiltration.
41		Spalled exterior concrete steps at loading dock.
42		Exposed equipment in Receiving area is unprotected.
43		Door missing hinge. Mixture of chrome and brass looking hardware throughout the school.
44		Instrument Storage casework is worn.

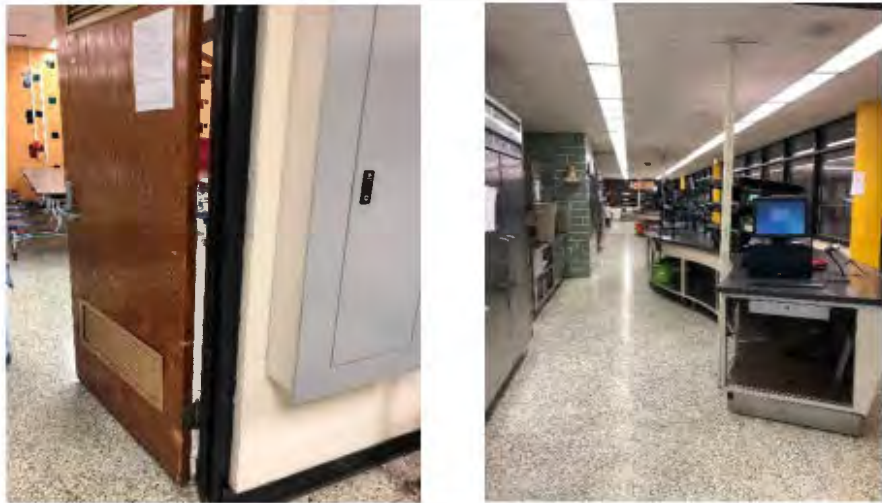




Photo #	Photo Image	Description
45		<p>Serving Line door is worn and in bad condition. Power poles in the serving line.</p>
46		<p>Cafeteria - Dish Return tray. Room also has wall guard/protection in some locations. Ceiling mounted projection screen. Window blinds are in bad condition. Lots of unique bulkheads and linear lights. Windows are transmitting a lot of heat.</p>
47		<p>Lobby guard rail does not meet current code.</p>
48		<p>Auditorium Light Booth area wall needs to be patched. 9x9 floor tile. There's an abandoned opening in the wall.</p>
49		<p>Locker Room toilet partition.</p>



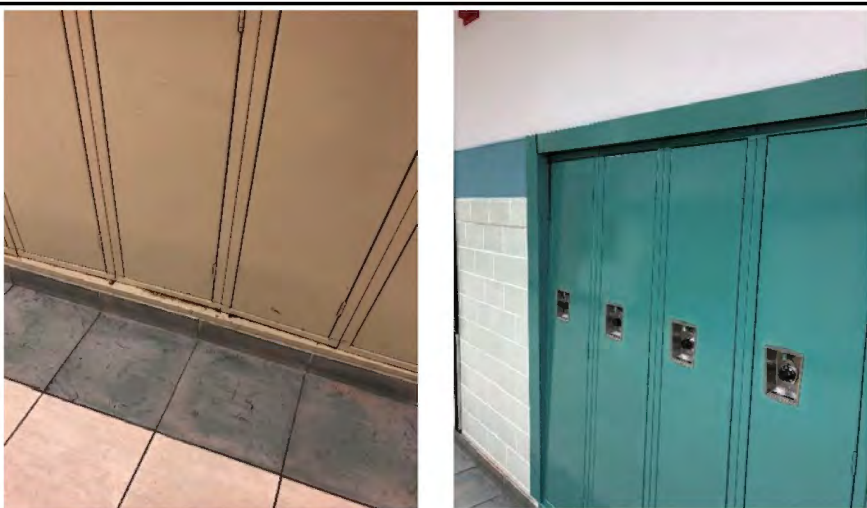
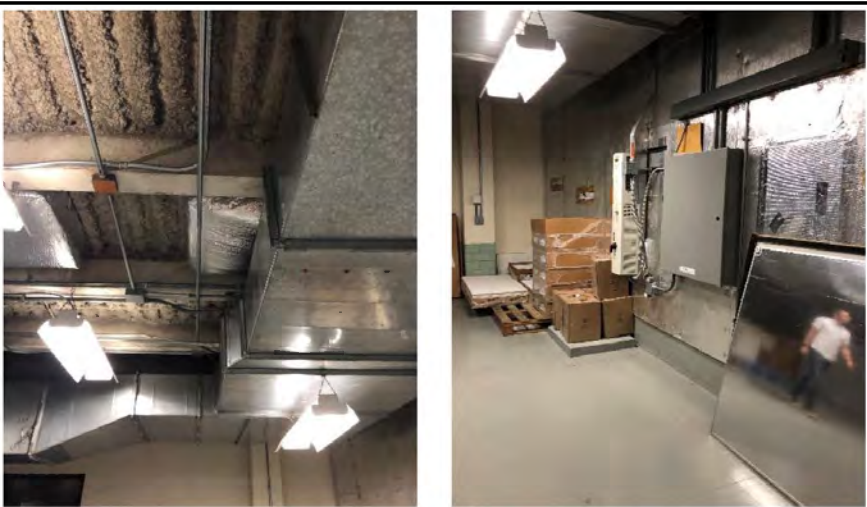

Photo #	Photo Image	Description
50		New floor in Dishwashing area.
51		Cross corridor gate. Transition from terrazzo to ceramic tile at the 2nd floor.
52		Lockers have rust at the bottom. Lockers are bowed inward in places.
53		Mechanical rooms have acoustic treatment on walls & deck.
54		Mechanical rooms have blanked out windows.

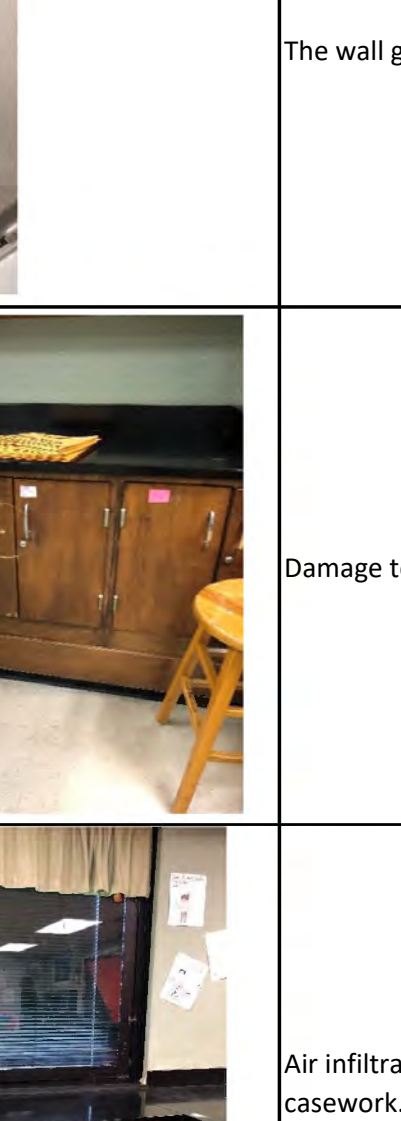

Photo #	Photo Image	Description
55		The wall gyp is damaged at stair.
56		Damage to Lab casework.
57		Air infiltration through existing windows. This is typical. Damage to Lab casework.
58		Fume hood exhaust. Water stain at the ceiling.
59		Painted epoxy counter tops. Damaged casework.


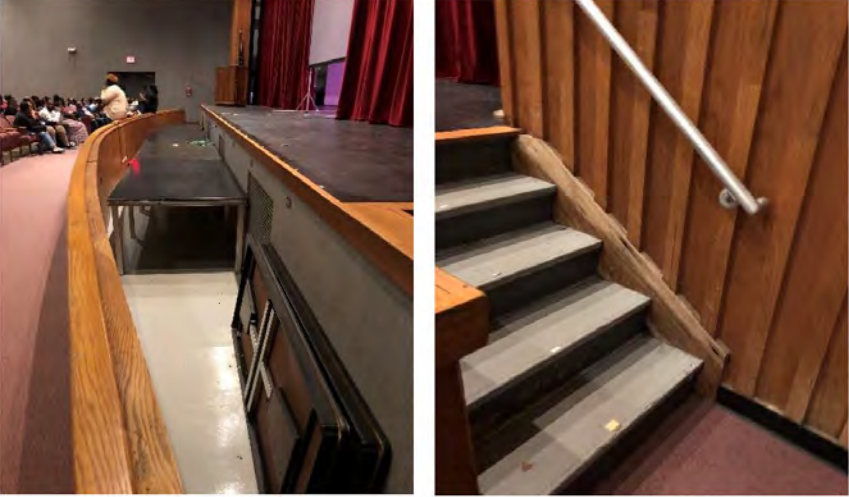



Photo #	Photo Image	Description
60		<p>Auditorium doors, lite not ADA, and worn finishes. No sound seals are on the doors.</p>
61		<p>Worn treads on the steps to the stage. The Orchestral Pit has no cover.</p>
62		<p>Steps to the stage from the back of house are inconsistent heights. The surfaces are worn.</p>
63		<p>The existing rigging system will need a theater consultant's inspection.</p>
64		<p>Stage ramp to exterior.</p>



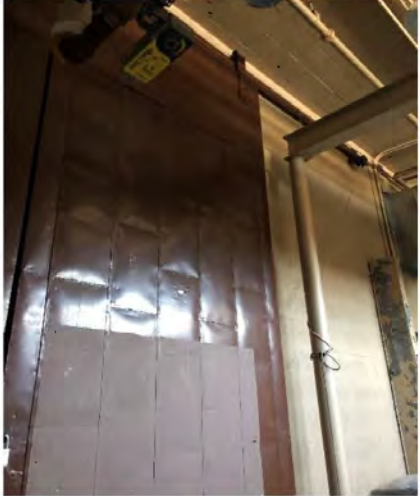





Photo #	Photo Image	Description
65		<p>Band has risers (ramps on the sides). Damage to gypsum board low walls at the ramps.</p>
66		<p>Ceiling tile damage in the Percussion Room.</p>
67		<p>Stage door to the Scene Shop is a large oversized sliding door (shop is now building storage).</p>
68		<p>Backstage Dressing Room door damage.</p>
69		<p>Lockers have rust at the bottom. They are bowed inward in places.</p>

Photo #	Photo Image	Description
70		Media Center Office has furred out detail at the wall to the Media Center.
71		Lockers have rust at the bottom. They are bowed inward in places.
72		Fabric Canopy at the Community Education Center is distressed.



Discipline: **2 - HVAC**






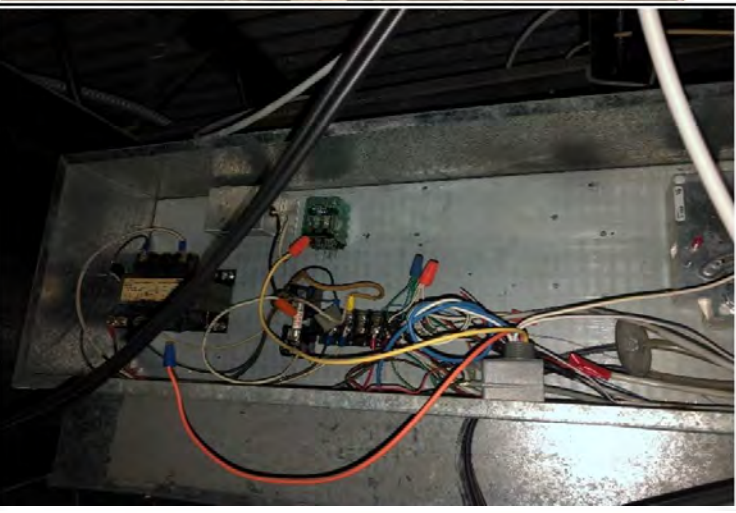
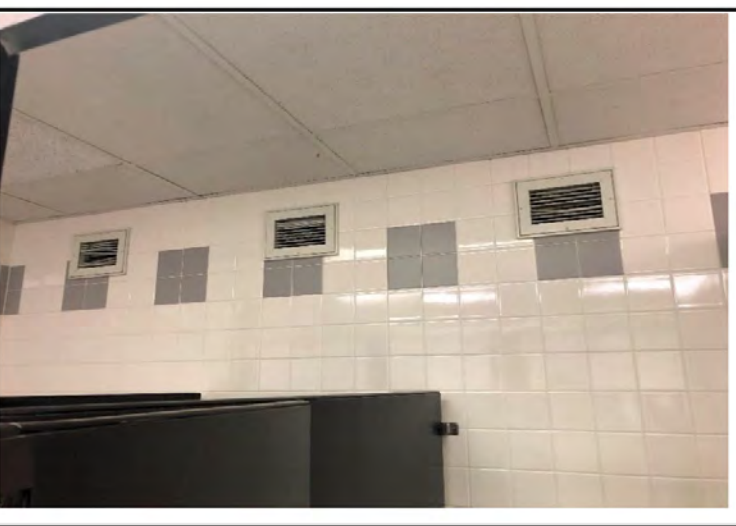
Photo #	Photo Image	Description
1A	 A photograph of a mechanical room containing several large, industrial indoor chillers. The units are white and grey, with various pipes and valves connected to them. The room has a polished floor and overhead lighting.	Indoor Chillers
1B	 A photograph of several large, industrial outdoor chillers located on a gravel-covered rooftop. The units are dark-colored and arranged in a row. The sky is blue with scattered white clouds.	Outdoor Chillers
2	 A photograph of a row of industrial boilers in a mechanical room. The units are tall, white, and cylindrical, with control panels and pipes. The room has a polished floor and overhead lighting.	Boilers
3	 A photograph of a large, dark-colored rooftop unit (RTU) on a gravel-covered rooftop. The unit is rectangular and has some graffiti on its side. A large, dark-colored vent or exhaust pipe is visible in the foreground.	Unit B Roof Top Units

Photo #	Photo Image	Description
4	 A photograph showing several large, industrial-grade metal cabinets, likely indoor air handling units, with various pipes and gauges attached to them.	Indoor Air Handling Units
5	 A close-up photograph of the interior of a fan-powered VAV box, showing a complex arrangement of electrical wires and components.	Fan Powered VAV Boxes
6	 A photograph of a wall in a room, showing several rectangular exhaust grilles mounted on a tiled surface.	Exhaust Grilles



Discipline: **3 - PLUMBING**



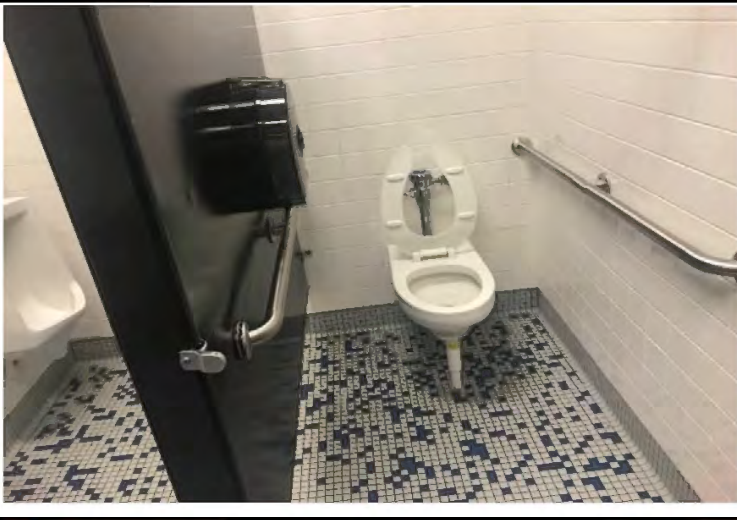

Photo #	Photo Image	Description
1		<p>Calcium buildup is common on fixtures due to hard water conditions.</p>
2		<p>Art Room sink piping is in rough condition and does not include unions to facilitate removal of solids interceptor as required for maintenance.</p>
3		<p>G131A - bariatric support added to water closet. Carrier is either failing or not designed for the weight.</p>
4		<p>Domestic piping is in reasonable condition, but the pipe insulation is showing signs of aging as it gets hard and joints separate. Once elastomeric foam insulation hardens, it loses its insulative value.</p>











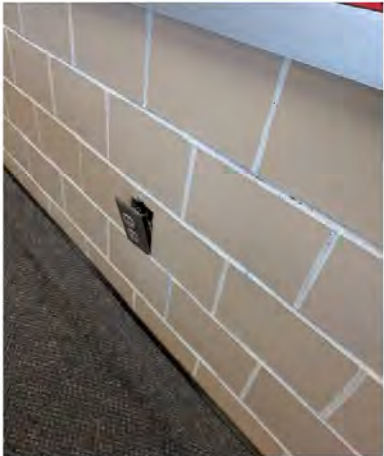
Photo #	Photo Image	Description
5		<p>Hot water return system and pumps appear to be in reasonable operating condition, however the system is not balanced. Excessive run times were observed in wing A and elsewhere in the system. Three hot water faucets were turned on at the farthest fixtures in wing A for over 20 minutes without achieving even warm water.</p>
6		<p>The three A.O. Smith Cyclone gas fired water heaters appear to be in reasonable operating condition. High maintenance issues have been reported with this style of heater by numerous clients.</p>
7		<p>Sump pumps have been installed without control panels. Control panels with remote monitoring is recommended. If and when these pumps fail, no one will know until the room is flooded.</p>
8		<p>Numerous fire protection pipe sections have been replaced due to failures. The building is partially sprinklered and will continue to have pin holes leaks and failures as the system ages.</p>
9		<p>Abandoned sprinklers found in the Auditorium Green Rooms are a code violation. If the sprinkler system is not functioning the heads and piping are required to be removed.</p>

Photo #	Photo Image	Description
10		<p>The overall storm drainage system appears to be in reasonable condition, however the roof drain domes need to be cleaned on a regular basis.</p>
11		<p>Given the close proximity to the tennis courts, it is important to keep all roof drain domes in place and secured.</p>



Discipline: **4 - ELECTRIC**

Photo #	Photo Image	Description
1		<p>The main service bolted pressure switches have been requested to be replaced with breakers by facilities. This requires the main switchboard to be replaced in its entirety. The overall condition of supporting Distribution (3 225A Panelboards require replacement) is satisfactory and does not require replacement. There are issues with short circuits at receptacles tripping the main breakers. A complete system coordination study is required to assess the problem. New breakers will be required for coordination.</p>
2		<p>Floor boxes with missing covers in LGI, Unit F.</p>
3		<p>Damaged raceway.</p>
4		<p>Damaged face plate.</p>



Discipline: **5 - TECHNOLOGY**



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Photo #	Photo Image	Description
1		<p>Typical "teacher station" location. Location present in most rooms throughout the building. From low to high, location consists of 1 network data, RCA connections, cable TV connections, and 1 voice data.</p>
2		<p>Typical call switch location. Location appears in around half of the classrooms throughout the building.</p>
3		<p>Ceiling mounted security camera location. Locations are standard throughout most of the building.</p>




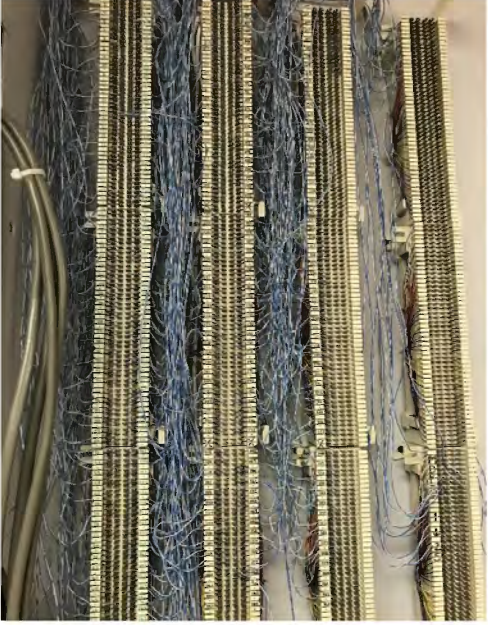
Photo #	Photo Image	Description
4		<p>Directional ceiling mounted security camera location. Locations are typical throughout the building.</p>
5		<p>Typical ceiling mounted large dome security camera location. Locations are typical throughout the building</p>
6		<p>Typical audio amplification system. Front Row Lasso is located in most classrooms throughout the building.</p>
7		<p>Terminal block location found in the bookstore storage room.</p>


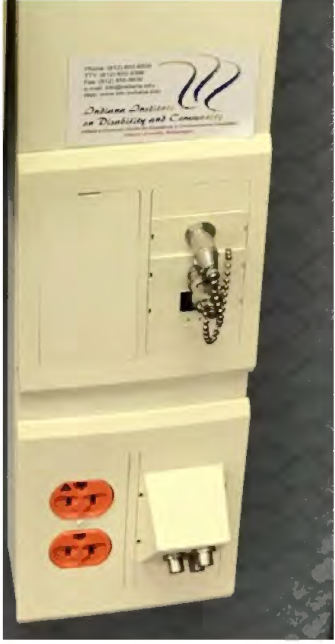


Photo #	Photo Image	Description
8		<p>Volume control location. Volume control rarely appears throughout the building.</p>
9		<p>Typical AV input location. From low to high, the location consists of an RCA input and a cable TV input. Locations are present in most rooms throughout the building.</p>
10		<p>Secondary AV input location. Location consists of a RCA and a VGR connection. Location found in about half of the classrooms, typically coupled with the older AV input location as shown in picture 9.</p>
11		<p>Standard short throw projector location. Around 1/4 of the classrooms utilize a short throw projector.</p>



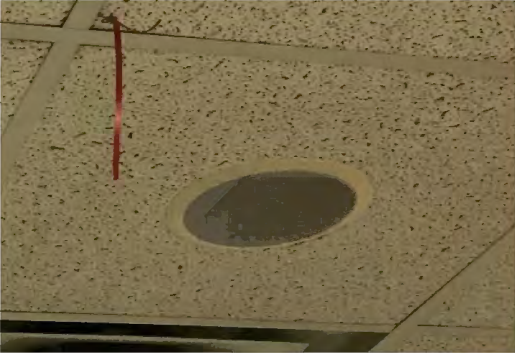


Photo #	Photo Image	Description
12		<p>Typical horizontal surface raceway location. Location runs horizontally and contains a varying amount of data. Nearly all of the data locations in the building utilize a horizontal or vertical surface raceway, meaning that the locations are not flush with the wall but project outwards in the raceway.</p>
13		<p>Ceiling mounted paging speaker location. Location found throughout the building in classrooms and hallways alike.</p>
14		<p>Ceiling mounted program audio speaker location. Speakers found in classrooms with additional sound amplification, which is more than half of the rooms.</p>
15		<p>ActivBoard location. ActivBoards are found in select rooms throughout the building, seemingly random. Around 5 locations exist in the building.</p>
16		<p>Mobile monitor cart location. Mobile monitor carts are found randomly throughout the building. About 5 locations are present in the building.</p>

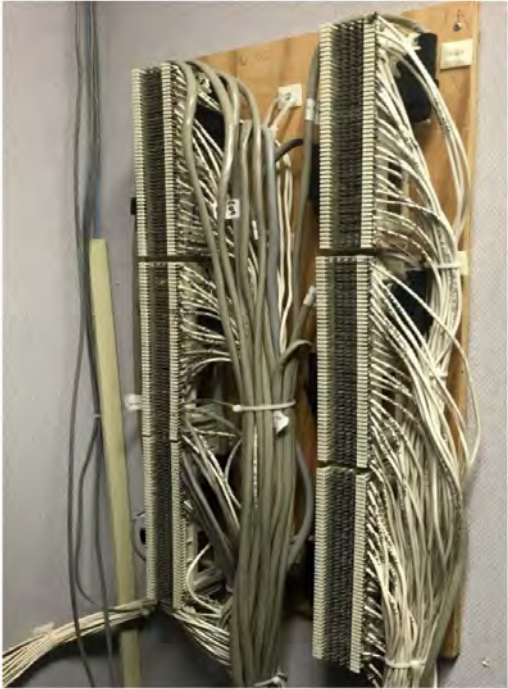





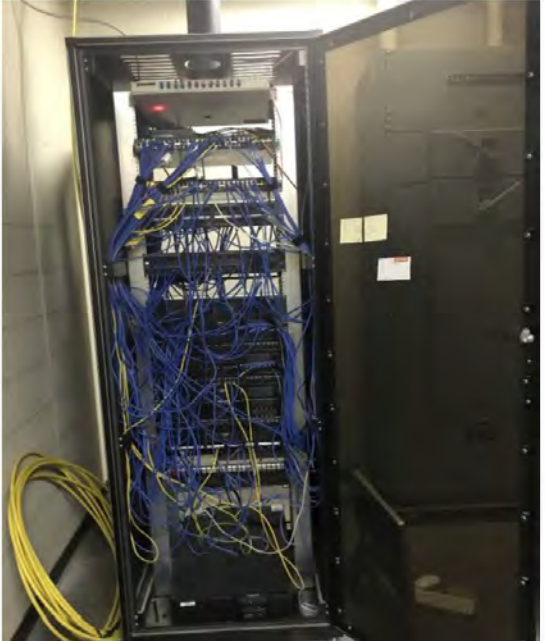




Photo #	Photo Image	Description
17		<p>Terminal board location found in Public Address B-137 along with the paging system AV rack and equipment.</p>
18		<p>Typical ceiling mounted projector location. Projector found in most classrooms throughout the building.</p>
19		<p>New data and AV input locations. Instances are common throughout the "True North" section of the building (Units F&G).</p>
20		<p>Card reader location. About 5 instances occur in the building.</p>

Photo #	Photo Image	Description
21		<p>Video intercom station location. Only instance is found outside of the reception office in the "True North" section in the building.</p>
22		<p>Video master station location. Only instance is found on the desk inside the reception area office in the "True North" section in the building.</p>
23		<p>Standard telecom cabinet. There are 7 IDFs and 1 MDF located throughout the building. Each cabinet has a varying amount of equipment and panels located inside.</p>



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		<p>Typical control panel with b3 controller that should remain. In general all controllers are b3 style and should remain.</p>
2		<p>Media Center extra fans due to hot area in Biography section.</p>
3		<p>Main entrance cabinet unit heater corner is bent outward.</p>
4		<p>Rooftop unit with door bent outward.</p>



Discipline: **7 - FOODSERVICE**










Photo #	Photo Image	Description
1		<p>Select pieces of cooking equipment will be reused.</p>
2		<p>The overall exhaust requirements will be less than the existing kitchen. Pan storage does not need to take up "hood space."</p>
3		<p>The existing refrigerated storage spaces will be replaced.</p>
4		<p>The current two floor set-up requires the use of a dumb-waiter to transfer food from the kitchen to the serving level.</p>

Photo #	Photo Image	Description
5		<p>The dishroom is located on the second floor above the kitchen. The food elevator from the kitchen to the servery moves through this space.</p>
6		<p>Service side of serving line.</p>
7		<p>The current serving lines have been in service since the 2015-16 school year. Depending on the timing of the renovation for Northview MS, the condition of the pieces, and the shape and size of the new serving area, the current serving lines may or may not be used in the renovated serving area.</p>
8		<p>Selected pieces, including the sandwich slide pictured here, will be reusable in the new servery.</p>
9		<p>Based on the straight line configuration of the Falcon Café, we believe that most of the pieces here will be reusable.</p>

EXISTING CONDITIONS
PHOTO DOCUMENTATION



J. Everett Light Career Center



Discipline: **1 - ARCHITECTURE**


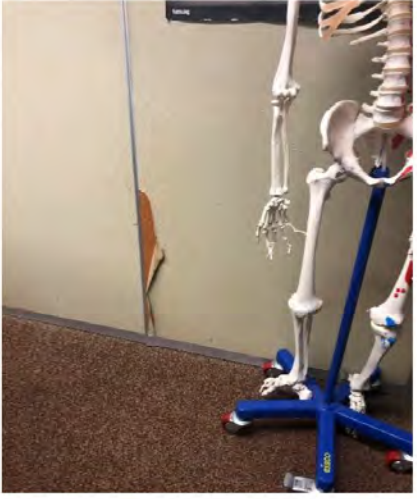


Photo #	Photo Image	Description
1		<p>Vinyl wallcovering is separating from the wall. This is typical. Windows are single glazed, non-insulated. Vented windows are hoppers.</p>
2		<p>Operable wall vinyl is separating from the wall. The operable wall appears to be fixed in a stationary position.</p>
3		<p>Laminate finish doors are in fair condition. They have louvers, wire glass in lites.</p>
4		<p>Abandoned display board.</p>




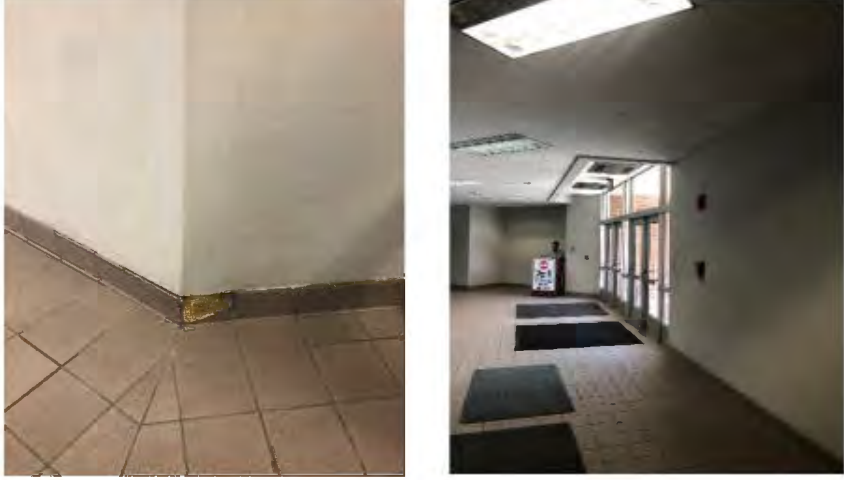
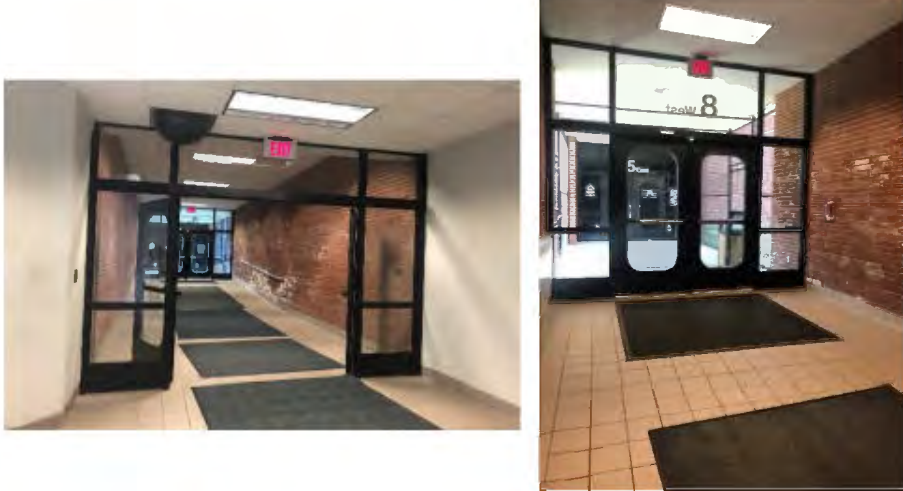
Photo #	Photo Image	Description
5		Hole(s) in wall.
6		Warped marker board.
7		Abandoned holes in walls, it's assumed a clock system was removed and the holes were not patched. This is typical.
8		Bulkhead over entry doors. Tile base is missing. Slip resistant procelain tile is holding dirt. In-set walk off mat. Dirty walls.
9		Efflorescence on brick wall indicates moisture in the wall cavity. Ceiling stains also indicate water infiltration.

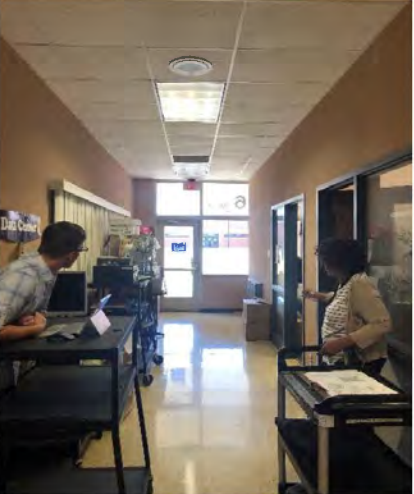




Photo #	Photo Image	Description
10		<p>Door swells in the heat and becomes extremely difficult to open.</p>
11		<p>Hollow metal door frame is rusted. Carpet was replaced with resinous floor. The adjacent office has new carpet. Occupants described water infiltration of the room and corridor when it rains.</p>
12		<p>Ceiling tiles are warped due to humidity.</p>
13		<p>Open joint, there's no caulk between the window sill and window frame.</p>
14		<p>Damaged carpet.</p>



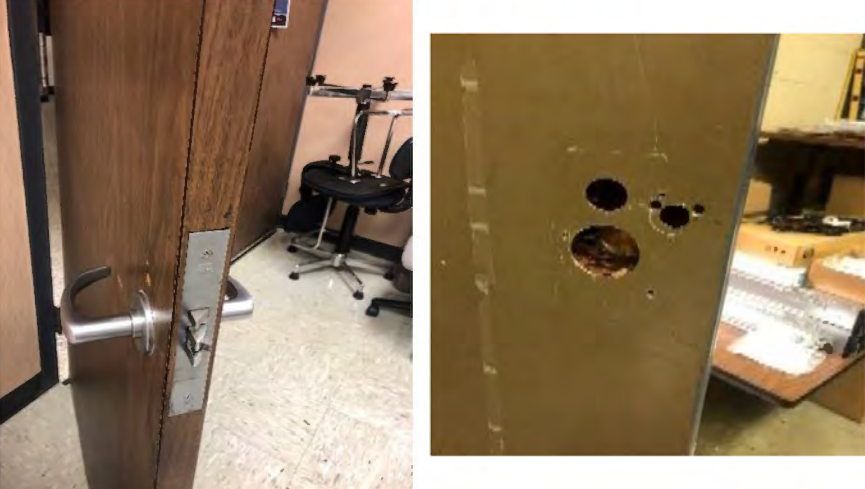


Photo #	Photo Image	Description
15		<p>Accordion partition is dirty and damaged. Ceiling tiles are stained.</p>
16		<p>Access floors with recessed slab in the Technology & Data Center.</p>
17		<p>Door hardware is inconsistent. There are abandoned holes from hardware changes.</p>
18		<p>There are some corners where walls meet that is not a smooth transition and has no caulk.</p>
19		<p>Knobs do not meet ADA.</p>






Photo #	Photo Image	Description
20		Cuts at ceiling panel where pendant lights were installed.
21		Stained carpet.
22		Saw cut in the wall that needs to be patched.
23		Sound booths are in a room over the access flooring.
24		Damaged concrete slab.






Photo #	Photo Image	Description
25		Opening in the wall was infilled with wood in lieu of CMU.
26		Damaged ceiling tiles.
27		Cracked concrete.
28		Window infills of plywood show water damage and are not sealed tight.
29		Paint is peeling from the wall. The wall is dirty. A power outlet is near the sink.

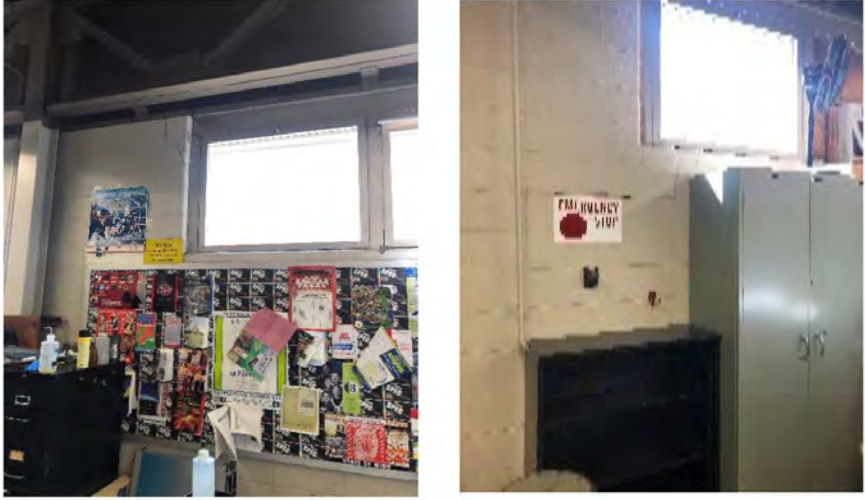
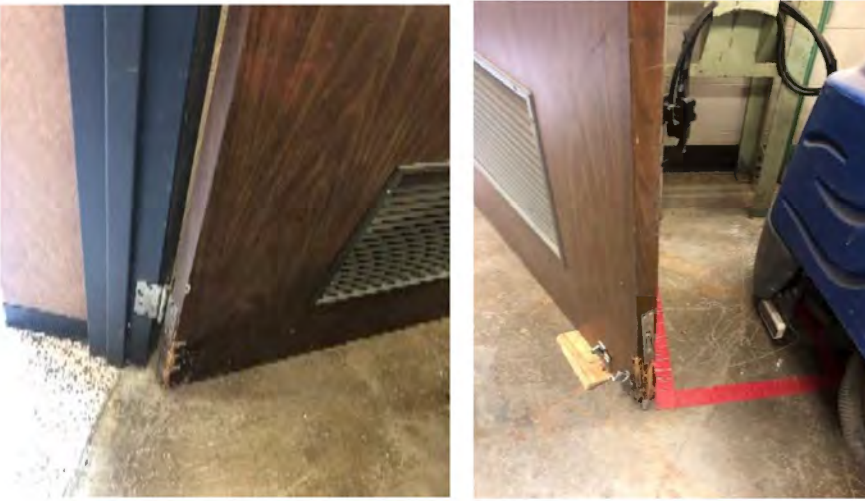



Photo #	Photo Image	Description
30		Exterior CMU wall is cracked at the window heads and sills.
31		Typical wear on doors.
32		The exterior hollow metal door is damaged and not sealed well to the exterior.
33		Cracking in CMU (accent paint follows the crack).
34		Stains on the concrete.




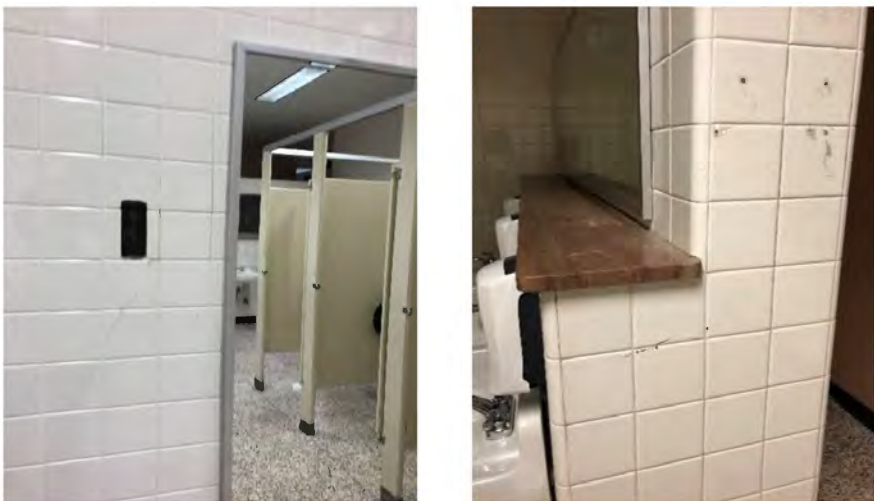

Photo #	Photo Image	Description
35		Wood framed mezzanine.
36		Abandoned partition track and jamb.
37		Damage to locker trim. Lockers are bowed in.
38		Cracked tiles.
39		No accessible seating or teaching station. Built in lights & projector screen is in the bulkhead.

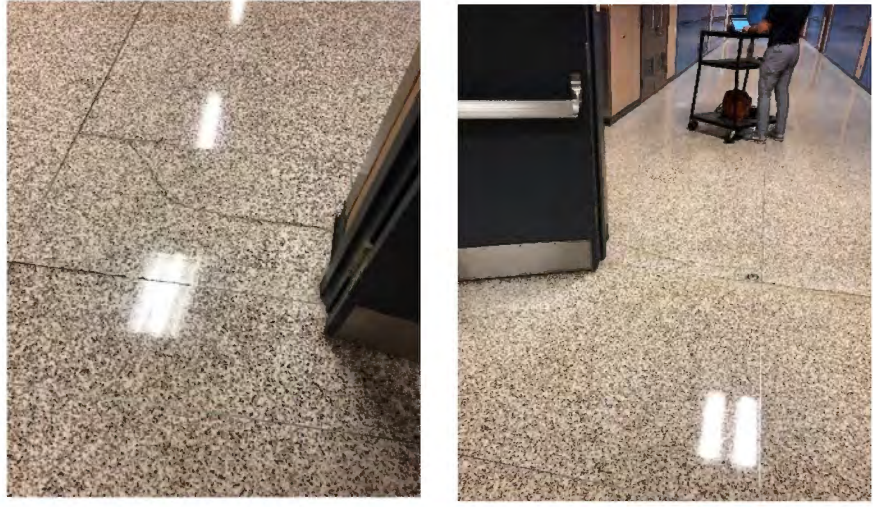



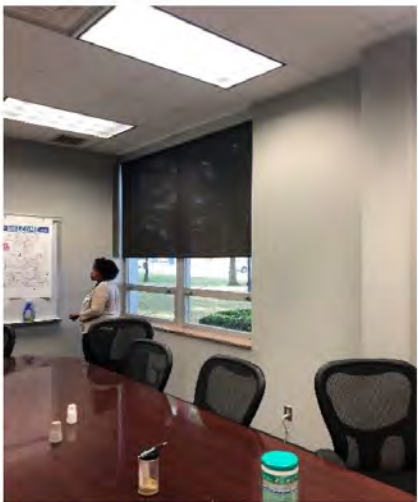
Photo #	Photo Image	Description
40		Cracked terrazzo.
41		Shelving is used as desks.
42		Mixture of cabinet and counter top styles throughout the building.
43		Wall finish is delaminating from the wall surface.
44		Several different window shade colors throughout the building.



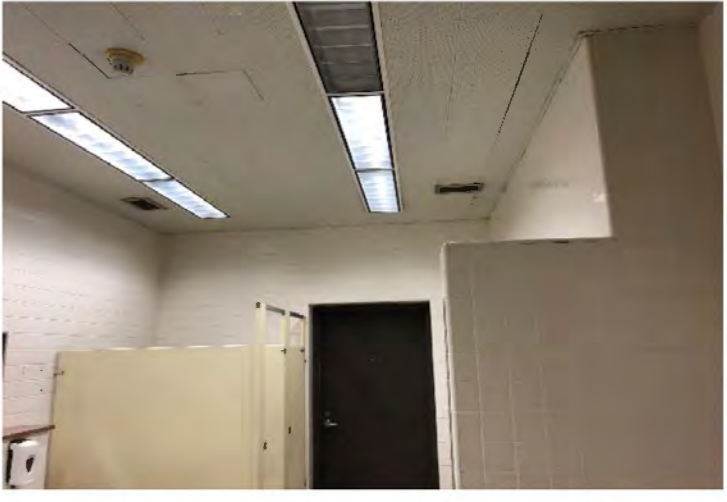


Photo #	Photo Image	Description
45		Faucet handles do not meet accessibility guidelines.
46		No 5ft accessible stall with grab bars.
47		Ceiling tiles are warped. The ceiling tiles do not appear to be washable.
48		Crack in VCT floor tile.
49		Built-in dental equipment and utilities.






Photo #	Photo Image	Description
50		Fume hoods.
51		Rust in metal cabinets.
52		Transaction window is not at an accessible height.
53		Expansion joint or access point cut into the floor.
54		Rust on door hinges.






Photo #	Photo Image	Description
55		Damage to wall and floor finishes.
56		Built-in student lab tables and study carrols not at an accessible height. Fraying finish on study carrols.
57		Work stations are not at an accessible height.
58		Damaged casework toe kick.
59		Casework is dissimilar to other casework in the building. Mixed ceiling tile types. There are no door pulls on the cabinet doors.

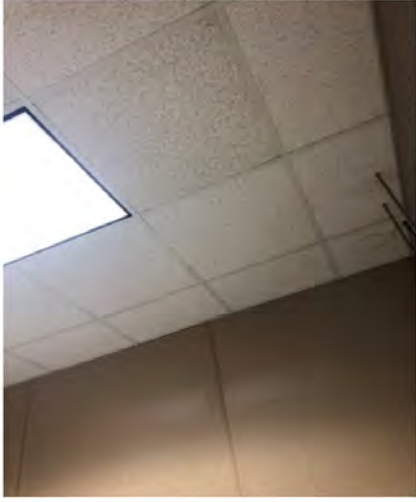
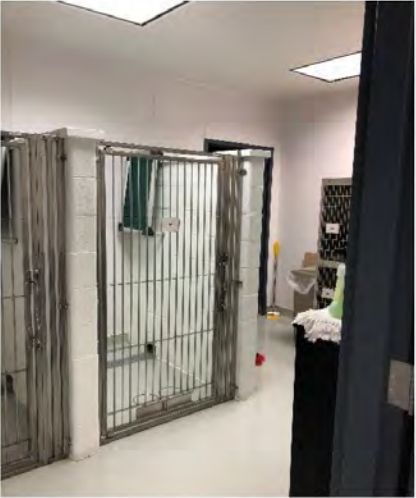

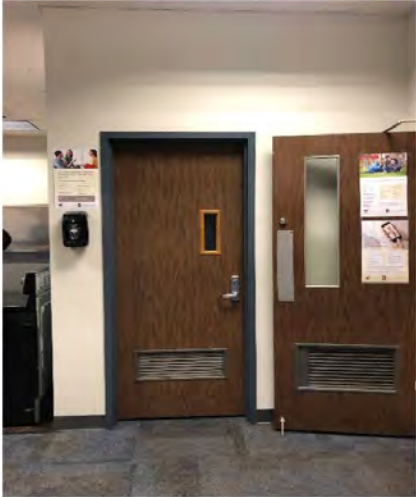

Photo #	Photo Image	Description
60		<p>Damage to ceiling tile in Vet / X-Ray Room.</p>
61		<p>Caulk damage at base of wall. Needs to be removed and reinstalled.</p>
62		<p>Technology Room is used for storage.</p>
63		<p>Window lite (on left) above the minimum of 43" above finished floor.</p>
64		<p>Casework is dissimilar to other casework in the building. There are no pulls on the drawers or doors.</p>




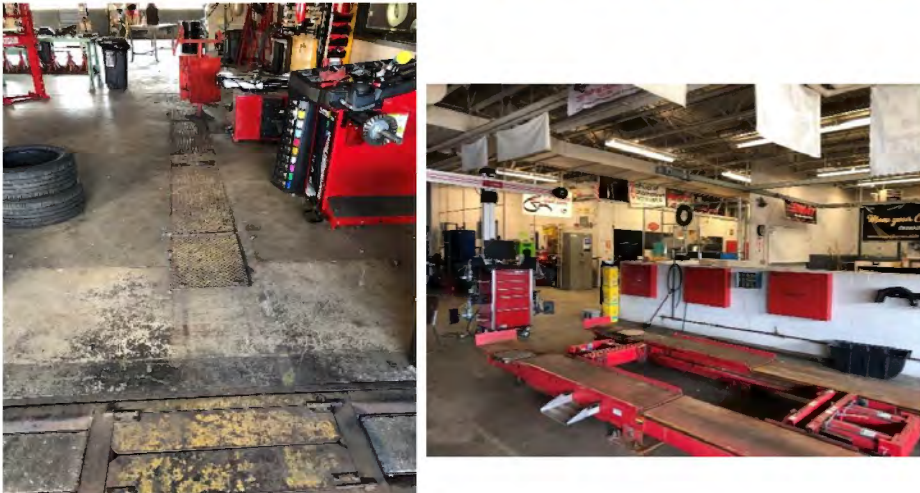

Photo #	Photo Image	Description
65		<p>Exterior metal panels are warped, fascia has oil canning. Aluminum windows are too close to grade. The caulk joints between precast panels are failing.</p>
66		<p>No weather seals at the exterior door.</p>
67		<p>Rusted door frame and damaged door.</p>
68		<p>Trenches and equipment are embedded in the concrete. There are some areas of patched concrete where equipment was removed.</p>
69		<p>Ceiling damage.</p>


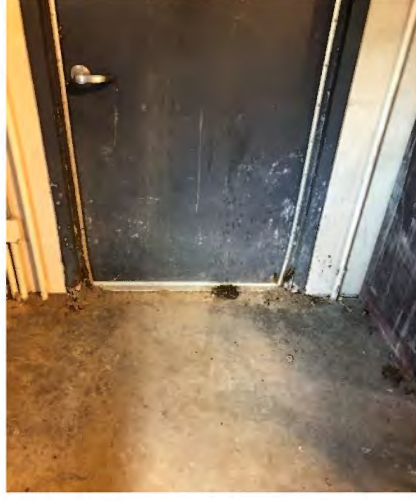
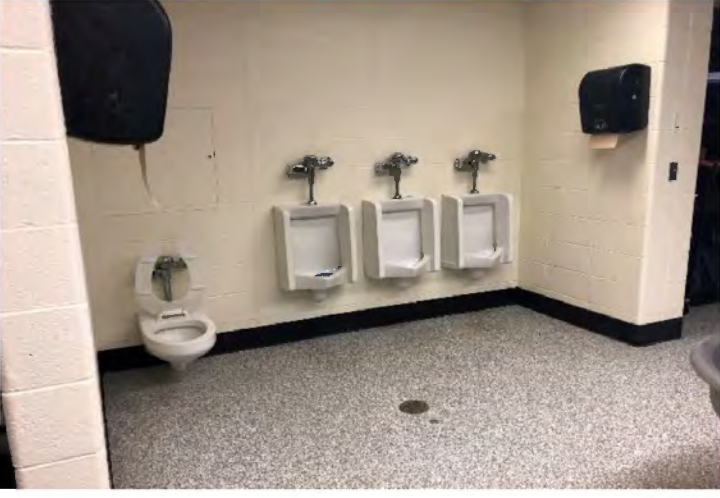


Photo #	Photo Image	Description
70		Non-insulated garage door.
71		Rust and corrosion at door.
72		No toilet partitions.
73		Missing wall base. Door finish is damaged.
74		The door is not sealed to the exterior. There is a shift in the tile pattern. The reception desk is not accessible.






Photo #	Photo Image	Description
75		Cabinet door and drawer pulls are not accessible.
76		Wall damage.
77		Built-in welding booths. Floor trenches.
78		Damaged door frame.
79		Damaged door.




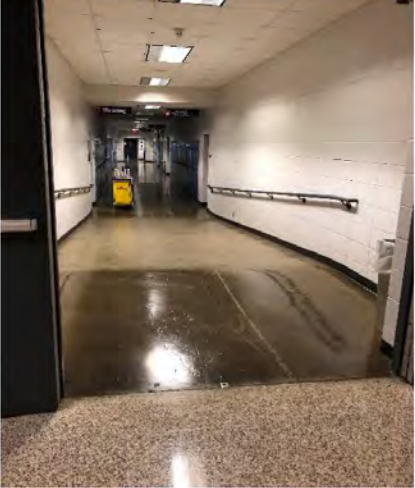





Photo #	Photo Image	Description
80		Damaged toilet partitions.
81		Damaged door.
82		There is damage to the paint finish. Paint is on the wall base.
83		There is no slip resistance on the ramp surface.
84		Steps into the room. Cracks in CMU wall.

Photo #	Photo Image	Description
85		<p>Not a 5ft accessible stall. Wall tiles are missing.</p>
86		<p>Vinyl wall covering is pulling away from the wall. Some vinyl wall covering has been painted.</p>
87		<p>Unfinished end at a window stool.</p>
88		<p>Vinyl wall covering is pulling away from the wall. Ceiling tile is missing.</p>



Discipline: **2 - HVAC**







Photo #	Photo Image	Description
1		<p>Typical 40 year old Rooftop Unit. Actual unit is RTU-A3.</p>
2		<p>Typical 40 year old Rooftop Unit. Actual unit is RTU-B4.</p>
3		<p>Typical door latches to access must units have rusted and very difficult to access the units for service.</p>
4		<p>Some of the rooftop units have had to be reroofed and caulked to prevent leaks into the unit and building.</p>

Photo #	Photo Image	Description
5		All rooftop exhaust fans need replaced. Typical picture of a fan.
6		Typical rooftop unit. This one is missing a panel allowing weather conditions inside it.
7		Typical caulking done on units to prevent leaking.



Discipline: **3 - PLUMBING**





Photo #	Photo Image	Description
1		<p>Domestic reduced pressure principal backflow preventers need to be added.</p>
2		<p>All galvanized domestic and sanitary waste piping needs to be replaced.</p>
3		<p>Numerous locations were found where plumbing fixture rough-ins have been poorly installed, leaving large openings in walls and cabinets.</p>
4		<p>All galvanized domestic and sanitary waste piping in chases needs to be replaced.</p>






Photo #	Photo Image	Description
5		<p>Exposed wall openings at plumbing fixtures allow moisture collection and encourage mold development.</p>
6		<p>Plumbing fixtures throughout shop areas are in poor condition.</p>
7		<p>Heavy corrosion and water stains were observed.</p>
8		<p>Heavy calcium buildup on faucets and plumbing fixtures were observed. Softening the entire building is recommended.</p>
9		<p>Adding exterior grease interceptor with drainage from all grease generating fixtures and drains is needed per code. Interior finished surfaces need to be filled flush and sealed to accommodate proper sanitary cleaning.</p>











Photo #	Photo Image	Description
10		<p>Any waste from disposals must be directly connected to the sanitary waste system to comply with code. The disposal waste cannot connect to the grease waste system without a solids interceptor upstream of the grease interceptor. This photo represents a few code violations.</p>
11		<p>The existing water softener is undersized and too old to be effective. Replace with a duplex system sized to soften the entire building.</p>
12		<p>The existing gas fired water heater is 10 years old and nearing the end of its life expectancy. This needs to be replaced with a high efficiency gas fired water heater and separate storage tank.</p>
13		<p>The thermostatic mixing valve located at the Electric water heater serving Cosmetology was not installed with a heat trap. As a result, temperature creep is permitted as noted in the next photo.</p>
14		<p>The TMV delivery temperature has crept up to around 150 degrees and can scald individuals.</p>

Photo #	Photo Image	Description
15		Sump pump.
16		All exterior gas piping is heavily rusted.
17		The rust from all exterior gas piping needs to be removed. The piping then needs to be painted with 1 coat of rust inhibitor and 2 coats of finish paint.
18		All sanitary vents need to be extended to a minimum of 12" above the finished roof.
19		Roof drains are reported to leak at connections to the piping system, and overflow roof drains are not provided. New roof drains & overflow drains along with above ground storm pipe replacement is recommended. Underground sanitary waste and storm drainage piping will be camera scoped to review condition and determine possible scope to replace piping. A pipe collapse was reported in 2 different areas below ground.



Discipline: **4 - ELECTRIC**

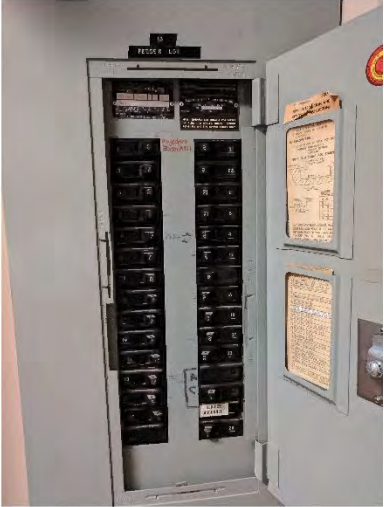

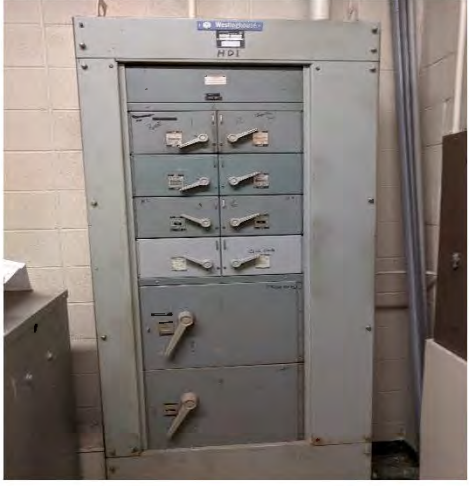




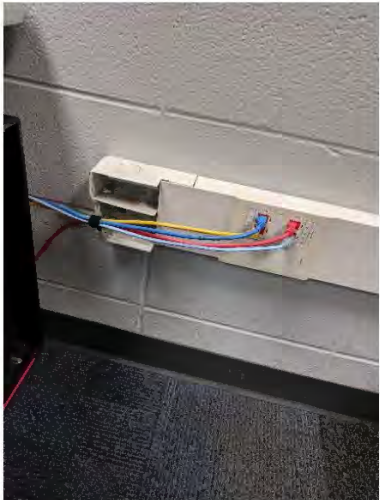

Photo #	Photo Image	Description
1		<p>(18) 225A and (4) 100A Westinghouse panelboards located throughout the building are at the end of their lives.</p>
2		<p>1200A Service rated switchboard is at its end of life.</p>
3		<p>(2) 1200A distribution boards are at the end of their lives.</p>
4		<p>(3) 600A distribution boards are at the end of their lives.</p>

Photo #	Photo Image	Description
5		<p>(1) 300KVA and (1) 225KVA transformer are at the end of their lives.</p>
6		<p>Exposed wiring in the bus duct.</p>
7		<p>Floor boxes in various rooms are at the end of their lives.</p>
8		<p>Damaged raceway in Computers G-342-A.</p>
9		<p>Damaged light fixtures in Receiving H-328.</p>



Discipline: **5 - TECHNOLOGY**





Photo #	Photo Image	Description
1		<p>Typical ActivBoard & short throw projector location. Instance is found in a few classroom throughout the building.</p>
2		<p>Typical mobile monitor cart location. Instance is found in a few classrooms throughout the building.</p>
3		<p>Typical projector cart location. Instance is found in a couple of rooms throughout the building.</p>
4		<p>Typical projector used in the building. Instance is found in most classrooms.</p>






Photo #	Photo Image	Description
5		<p>Typical projection screen found in most classrooms in the building.</p>
6		<p>Typical data voice location. While the amount of data varies based on location, nearly every room had at least one instance in the building.</p>
7		<p>AV Input containing VGA connectivity found throughout the building depending on the function of the room.</p>
8		<p>Typical call switch location. Instance is found in most offices throughout the building.</p>
9		<p>Typical volume control location. Instance is present in select offices and conference rooms in the building.</p>





Photo #	Photo Image	Description
10		<p>Typical paging speaker location. Instances occur throughout most rooms and hallways in the building.</p>
11		<p>Typical security cameras located in the interior of the building.</p>
12		<p>CSC security panel enclosures found in the building, typical by each IDF location.</p>
13		<p>CSC fire alarm control panel found in the building.</p>









Photo #	Photo Image	Description
14	 A black server rack standing in a room. The rack has several horizontal slots. One of the slots is occupied by a white device with the text 'MultiPath VALCOM' printed on it. To the left of the rack, a portion of a printer is visible. To the right, there is a table covered with a bright green cloth and a red container.	Paging system rack for the building.
15	 A rack of network equipment, likely a patch panel or switch, with a dense array of blue and yellow Ethernet cables plugged into the front. The cables are bundled and hang down from the rack.	MDF location.
16	 A server room with several black server racks. A door is visible on the right side of the room. There are fans on the wall and a clock. Cables are visible hanging from the racks.	IDF 1 (with the 2 post rack being IDF 6) location.
17	 A close-up view of a server rack. The rack is filled with various components and a large number of colorful cables (blue, red, yellow) are plugged into the front. The lighting is somewhat dim, with a bright light source at the top.	IDF 2 location.

Photo #	Photo Image	Description
18		IDF 3 location.
19		IDF 4 location.
20		IDF 5 location.
21		IDF 7 location.



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		Compressors that should be demolished and controls upgraded to DDC.
2		Most equipment being controlled needs to be replaced, including the infinet 1 controls associated with the units.
3		Pneumatically controlled multi-zone rooftop unit.
4		Café area supplemental a/c unit. RTU serving the area cannot keep the space cool in warmer weather.
5		Main network hub for the school corporation. The controls and equipment serving this space should have redundancy.

EXISTING CONDITIONS
PHOTO DOCUMENTATION



Hilltop Developmental Preschool



Discipline: **1 - ARCHITECTURE**

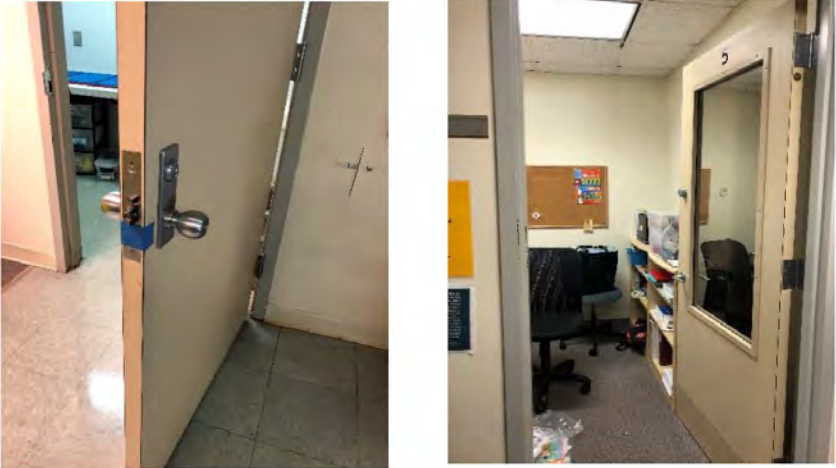



Photo #	Photo Image	Description
1		<p>Variety of laminated colors and lite styles on the doors. Some existing doorknobs, which are not accessible.</p>
2		<p>Variety of laminated colors and lite styles on the doors. Some existing doorknobs, which are not accessible.</p>
3		<p>Variety of laminated colors and lite styles on the doors. Some existing doorknobs, which are not accessible.</p>
4		<p>Variety of laminated colors and lite styles on the doors. Some existing doorknobs, which are not accessible.</p>

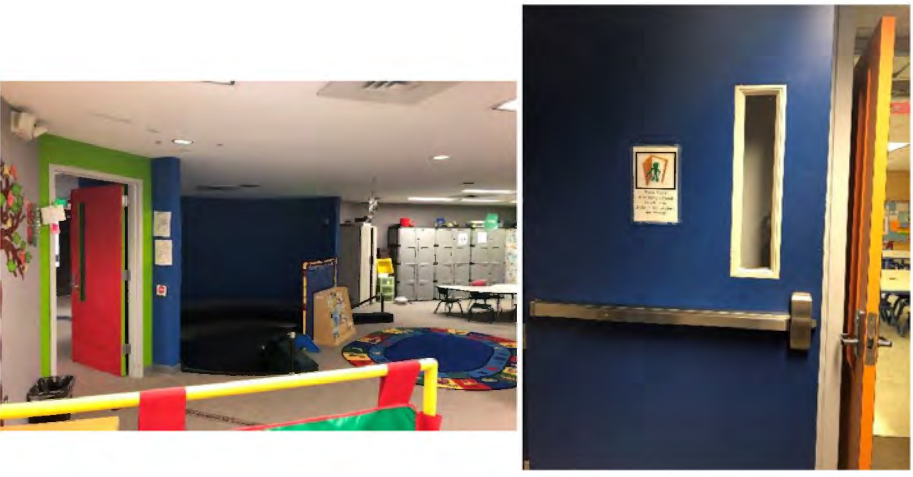

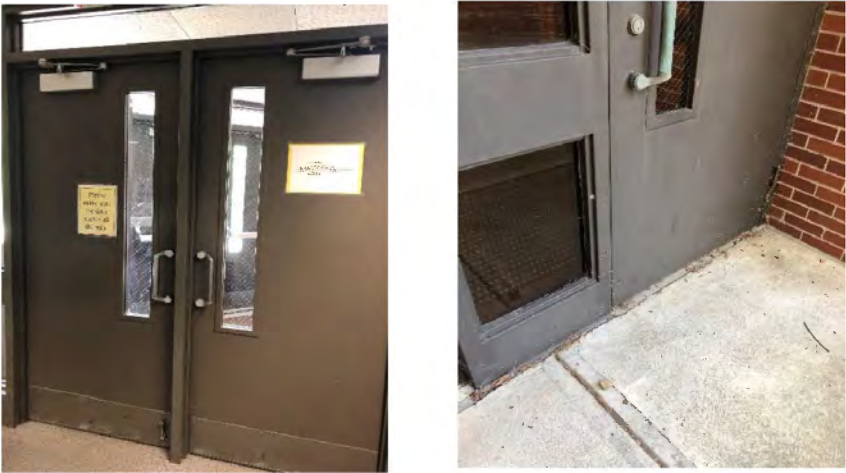


Photo #	Photo Image	Description
5		<p>Variety of laminated colors and lite styles on the doors. Some existing doorknobs, which are not accessible.</p>
6		<p>Variety of laminated colors and lite styles on the doors. Some existing doorknobs, which are not accessible.</p>
7		<p>Rust and corrosion on exterior doors.</p>
8		<p>Rust and corrosion on exterior doors. Distance between the doors in the vestibule does not meet current clearance requirements.</p>
9		<p>Rust and corrosion on exterior doors.</p>



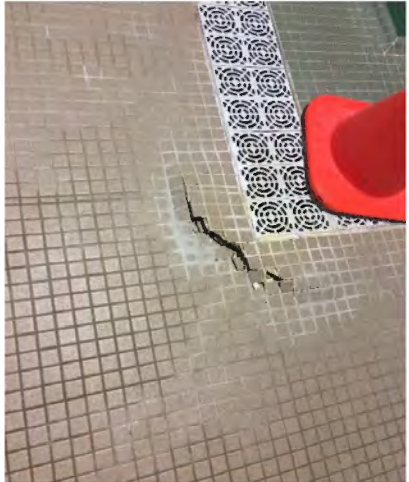
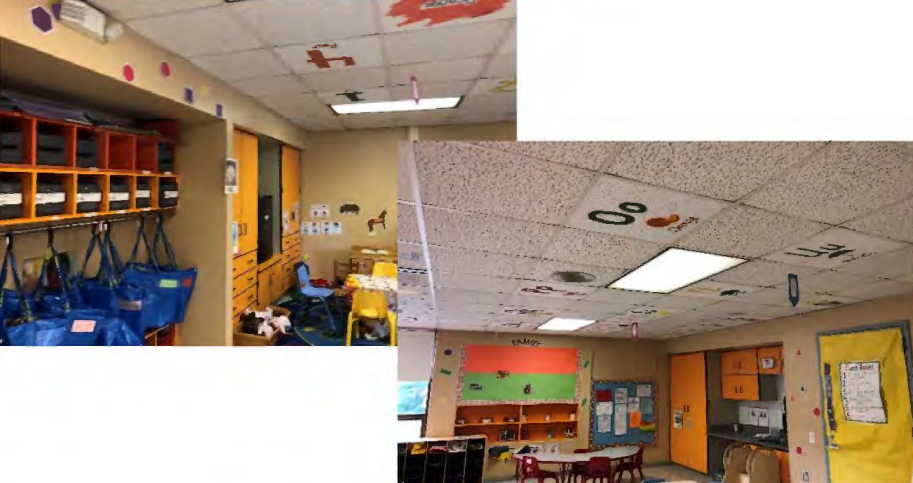
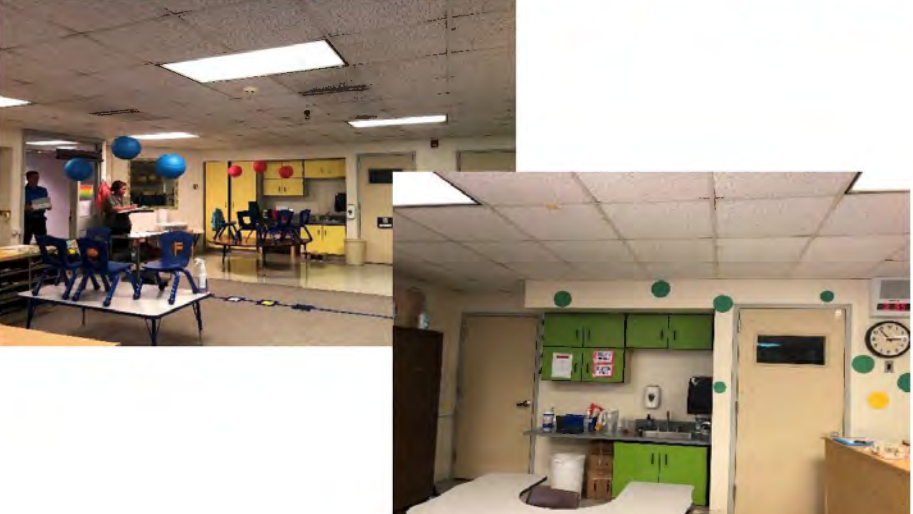
Photo #	Photo Image	Description
10		Rust and corrosion on exterior doors.
11		Rust and corrosion on exterior doors.
12		Cracking at pool tile.
13		Variety of laminated colors on the casework. The casework is specific to the preschool classrooms. Laminate and seals at the casework sinks are failing. Missing locks on the casework.
14		Variety of laminated colors on the casework. The casework is specific to the preschool classrooms. Laminate and seals at the casework sinks are failing. Missing locks on the casework.

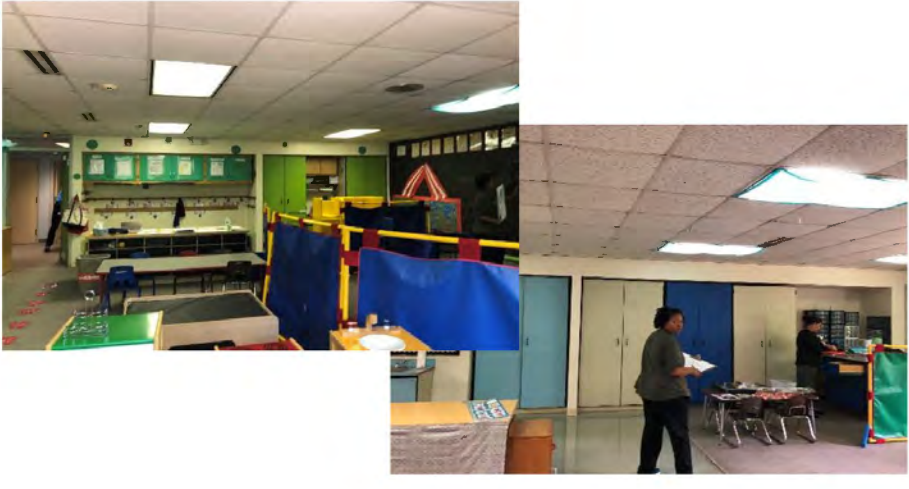




Photo #	Photo Image	Description
15		<p>Variety of laminated colors on the casework. The casework is specific to the preschool classrooms. Laminate and seals at the casework sinks are failing. Missing locks on the casework.</p>
16		<p>Variety of laminated colors on the casework. The casework is specific to the preschool classrooms. Laminate and seals at the casework sinks are failing. Missing locks on the casework.</p>
17		<p>Variety of laminated colors on the casework. The casework is specific to the preschool classrooms. Laminate and seals at the casework sinks are failing. Missing locks on the casework.</p>
18		<p>Tile and grout are worn at the drinking fountain.</p>
19		<p>Staff break room casework is not accessible.</p>



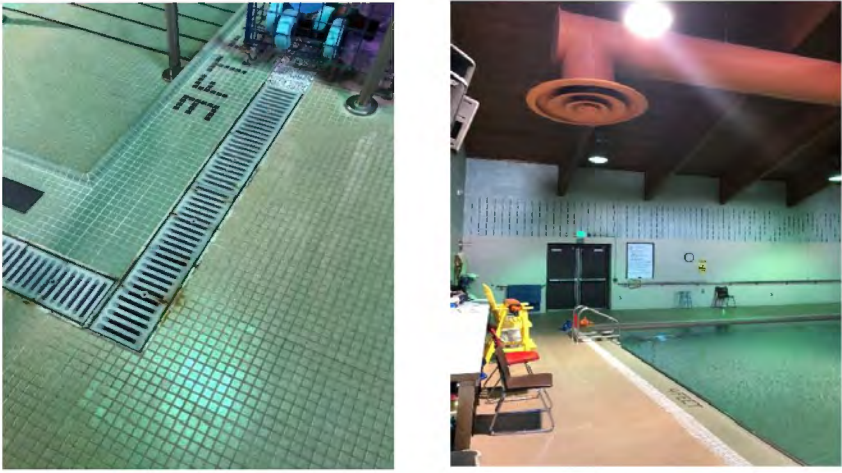
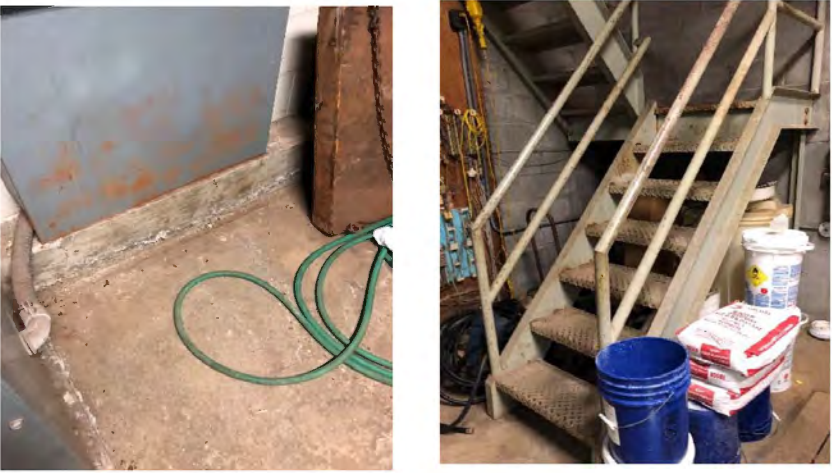
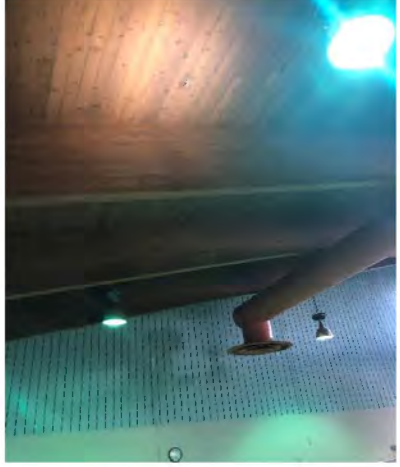
Photo #	Photo Image	Description
20		Reading pit in the classroom is not accessible.
21		Water damage to ceiling tiles.
22		Rust on all metal surfaces in the pool area.
23		Rust on all metal surfaces in the pool equipment room.
24		Condensation damage to the wood roof deck.






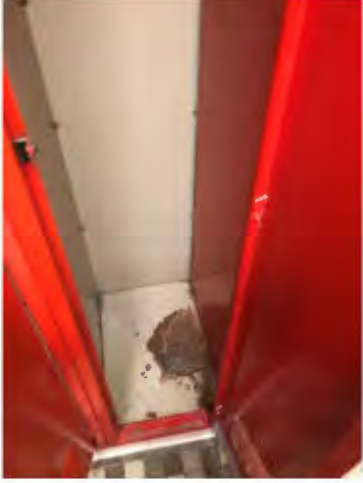






Photo #	Photo Image	Description
25		Cracking in masonry at the window sills.
26		Mismatched floor tile patches.
27		Efflorescence on the existing retaining walls.
28		The clinic has an electric sink with a water tank.
29		Floor tile is old and damaged.

Photo #	Photo Image	Description
30		Rust in bottom of lockers.
31		Accessible stalls do not have the current code required grab bars at the rear or an 18" vertical. Existing restroom layouts and clearances do not meet current code requirements.
32		Accessible stalls do not have the current code required grab bars at the rear or an 18" vertical.
33		Individual restrooms within the classrooms have preschool sized toilets.






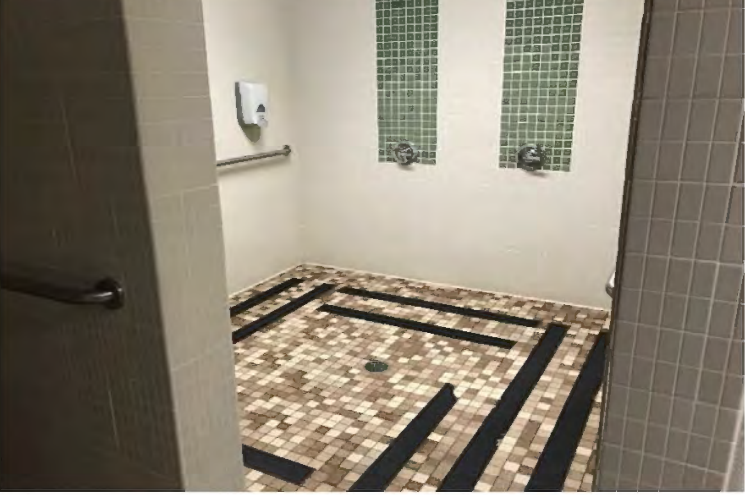
Discipline: **2 - HVAC**

Photo #	Photo Image	Description
1		Indoor Air Handling Unit.
2		Indoor Air Handling Unit.
3		Indoor Air Handling Unit.







Discipline: **3 - PLUMBING**

Photo #	Photo Image	Description
1		<p>Outdated softener system.</p>
2		<p>Outdated domestic water heater and storage tank, with compromised portions of piping and no pipe insulation.</p>
3		<p>Heavy corrosion buildup on TMV piping. There's no heat trap on the TMV.</p>
4		<p>Damaged pipe and insulation within plumbing chase caused by foot traffic.</p>

Photo #	Photo Image	Description
5		Heavy corrosion buildup on drain pipe.
6		Pool pumps are outdated and in poor condition.
7		The wall is compromised and allowing water to buildup within the cavity.
8		Common shared shower drain is not code compliant.



Discipline: **4 - ELECTRIC**

Photo #	Photo Image	Description
1		<p>(1) 400A, (2) 225A and (4) 100A Square-D panelboards located throughout the building are at the end of their lives.</p>
2		<p>600A Service rated switchboard is at its end of life.</p>
3		<p>Exposed secondary conductors.</p>
4		<p>Exposed wiring in the bus duct.</p>



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Discipline: **5 - TECHNOLOGY**



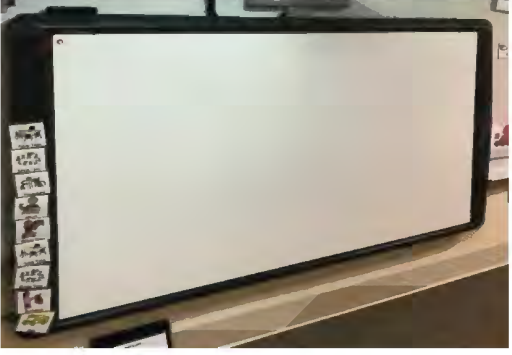


Photo #	Photo Image	Description
1		<p>Typical location of teacher stations found in classrooms. The location consists of 2 data connections, a BNC connection, a coaxial connection, and a RCA connection.</p>
2		<p>Typical Atlas IED IP clock location. Clocks found in the classrooms throughout the building.</p>
3		<p>Typical ActivBoard location found in the classrooms. ActivBoards also incorporate a short throw projector directly above the board.</p>
4		<p>Promethean short throw projector location. This instance was found in every classroom directly above an ActivBoard.</p>
5		<p>AV Input location option 1. Location is found in approximately half of the classrooms. This instance contains a BNC connection, a coaxial connection, and a RCA connection.</p>






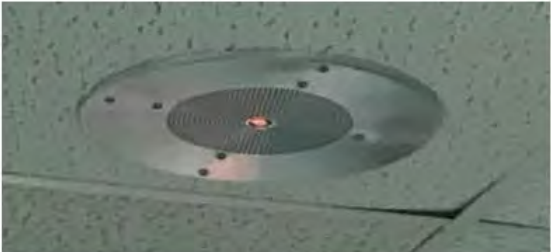
Photo #	Photo Image	Description
6		<p>AV Input location option 2. Location is found in approximately half of the classrooms. This instance contains a VGA connection and a RCA connection.</p>
7		<p>Typical horizontal surface raceway location. This instance appears in every classroom and all contain 5 data.</p>
8		<p>Typical vertical surface raceway data location. These locations appear in the building's offices. Each location contains 2 data.</p>
9		<p>Classroom call switch location.</p>
10		<p>Office call switch location.</p>
11		<p>Typical paging speaker location. These instances occur throughout most rooms and hallways in the building.</p>






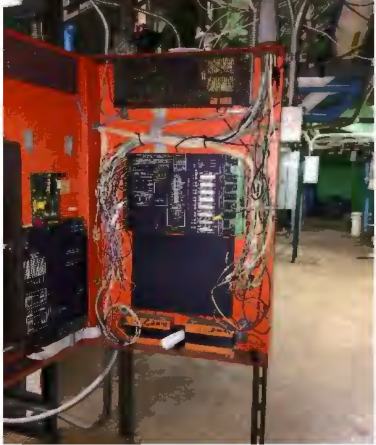




Photo #	Photo Image	Description
12		CSC security panel enclosures found in the MDF closet in the building.
13		CSC fire alarm control panel found in the book storage room in the building.
14		Wall mounted speakers located in the pool room in the building.
15		Paging and clock system rack located behind the reception desk in the main entryway.

Photo #	Photo Image	Description
16		MDF location in Hilltop Developmental Preschool.



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		<p>Outdated AC256 Controls that need to be replaced.</p>
2		<p>Compressor and unused control panel that need proper demolition and upgrade to DDC control.</p>
3		<p>Mechanical equipment needs replaced before putting new controls on the old equipment.</p>
4		<p>Hydronic Pump that needs replaced before putting new controls on the old equipment.</p>
5		<p>Most pneumatic stats have their covers removed and should be replaced with DDC thermostats.</p>





EXISTING CONDITIONS
PHOTO DOCUMENTATION



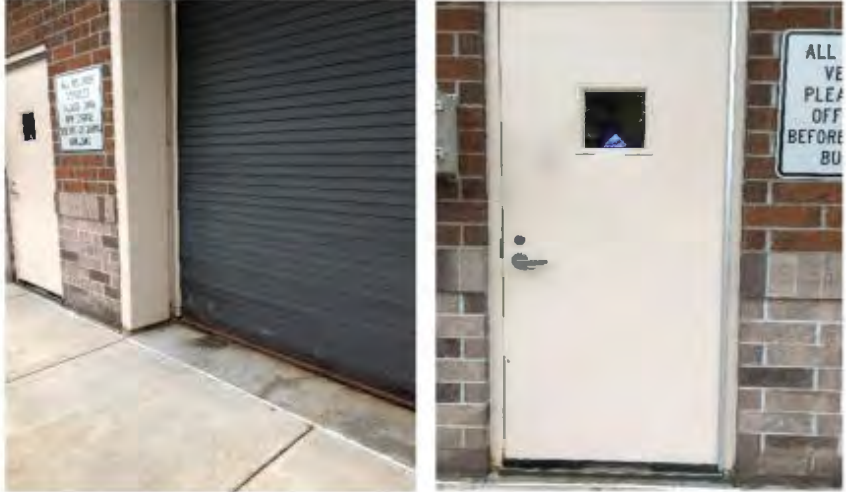




H. Dean Community Education Center



Discipline: **1 - ARCHITECTURE**

Photo #	Photo Image	Description
1		<p>Paint finish on exterior metal needs cleaned and new coatings.</p>
2		<p>The brick wall surface behind downspouts is holding water. There are no exterior door numbers.</p>
3		<p>Splash block at condensation line or old hose bib.</p>
4		<p>The downspout to boot connection is not sealed. There's rust at the adjacent hollow metal frame.</p>

Community and Education Center

Photo #	Photo Image	Description
5		<p>Rust at hollow metal frame and overhead door as well as the main door.</p>
6		<p>Pipe connections on existing wall are sealed and abandoned.</p>
7		<p>There are water issues at the downspout to gutter connection.</p>
8		<p>Large operable partitions in the Meeting Rooms don't seal tightly for sound control. The vinyl wall covering is damaged on the partitions. Some window blinds are damaged in the Meeting Room.</p>
9		<p>Damaged wood door.</p>

Community and Education Center






Photo #	Photo Image	Description
10		Residential grade kitchenette. The counter is not at an accessible height.
11		Water damage to ceiling tile.
12		Worn wall covering in the Board Room.
13		Diffuser stains on ceiling tile in the Break Room.
14		Water damage to ceiling tile.

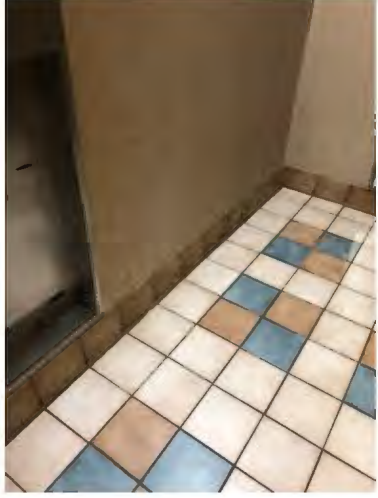




Photo #	Photo Image	Description
15		Crack in Men's Restroom floor tile, both public and staff sides.
16		Finish on hand and guard rails is wearing. This is typical.
17		The solid surface counter top is fading. This is typical on the staff side. Abandoned waste recepticals.
18		Cracks in the vinyl floor tile and a hole in the gypsum board behind the door to the janitor's closet.
19		There's build-up and wear on the mop sink. There's damage to the walls surrounding the mop sink.


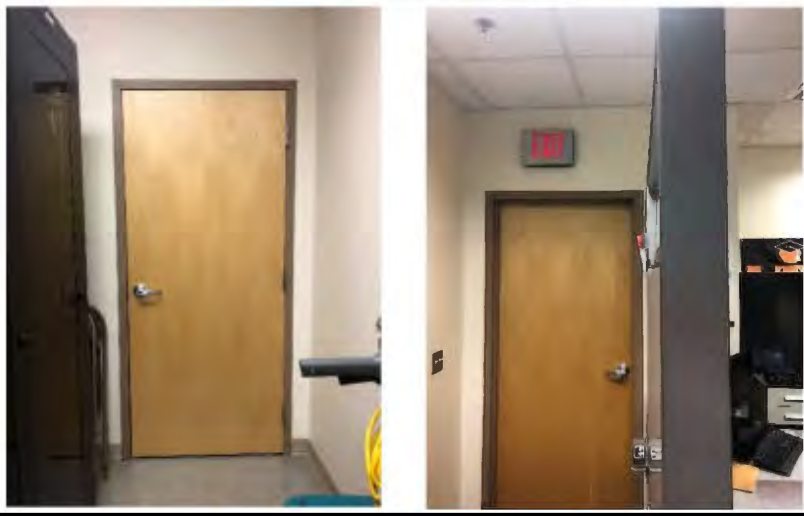



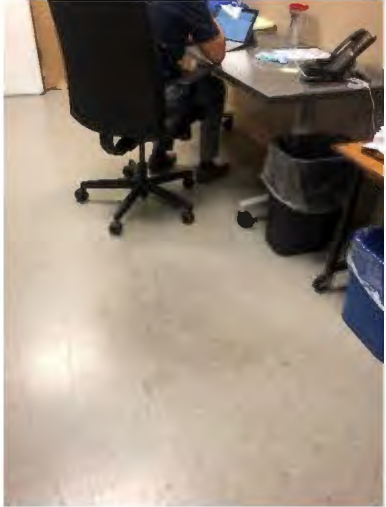
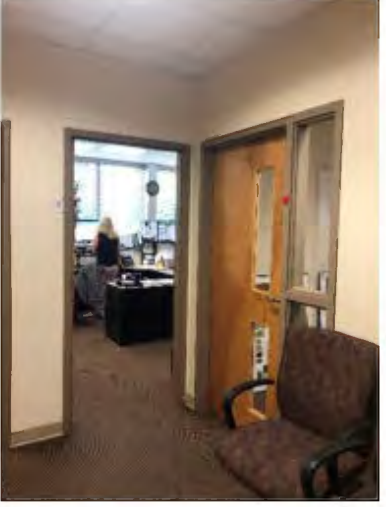

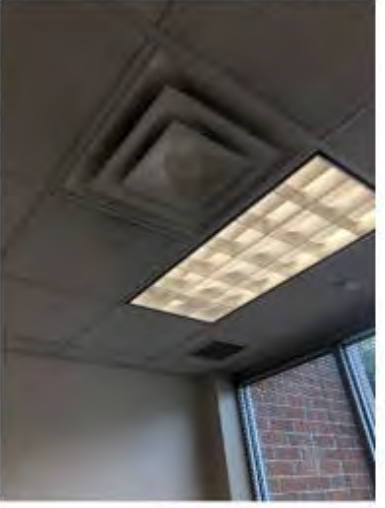
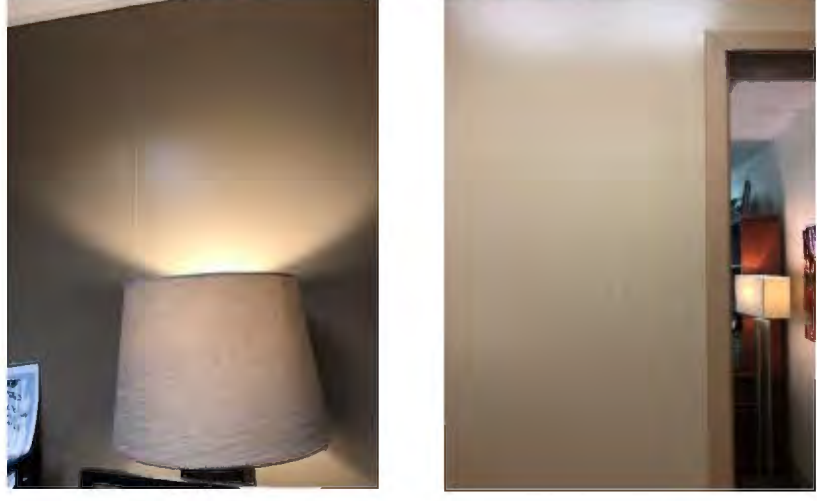


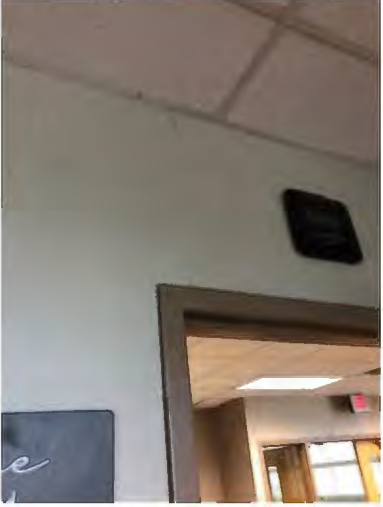

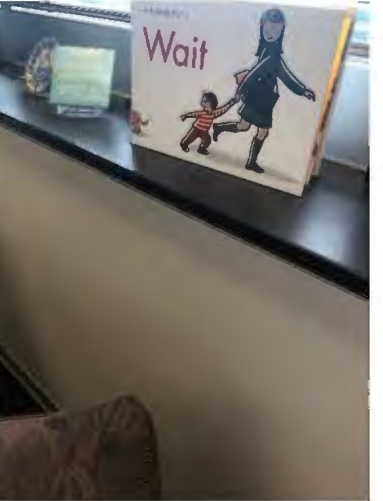
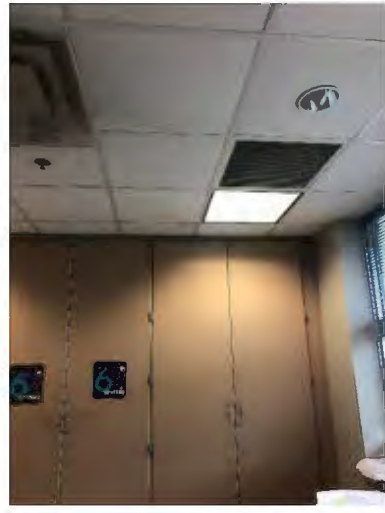


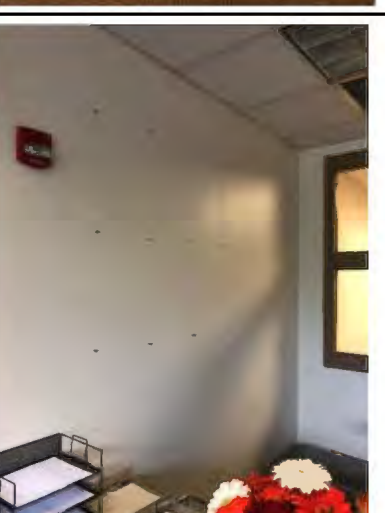

Photo #	Photo Image	Description
20		<p>Damage and corrosion under sink base in the Media Services/Technology area. It is hard to control the temperature of spaces near windows.</p>
21		<p>Clearance at door does not meet current code.</p>
22		<p>Improper location for sidelite.</p>
23		<p>Improper plate mounting/type.</p>
24		<p>There's a crack in the wall. It's hard to control the temperature in room. Operations.</p>

Photo #	Photo Image	Description
25		Worn vinyl tile flooring.
26		Improper clearance at the door to the office.
27		An area of wall that is unpainted.
28		Diffuser stains on the ceiling tile.
29		Crack in the wall.

Community and Education Center

Photo #	Photo Image	Description
30		<p>Edgebanding is delaminating from the counter top in the 2nd floor Meeting Room.</p>
31		<p>Damage to the surface of the door.</p>
32		<p>Crack in the wall.</p>
33		<p>A loose pull on casework.</p>
34		<p>Wall surface damage. This is typical in several rooms near desks.</p>

Community and Education Center

Photo #	Photo Image	Description
35		Water damage and dirt on the ceiling tiles.
36		The carpet is worn at the door threshold.
37		Damaged carpet.
38		Damaged wall.
39		Damaged ceiling tile.







Discipline: **2 - HVAC**

Photo #	Photo Image	Description
1	 A photograph of a REZNOR DOAS (Direct Outdoor Air System) unit. The unit is a large, rectangular metal cabinet with a red 'REZNOR' logo on the side. It is located in a mechanical room with other HVAC equipment visible in the background.	DOAS unit needs to be replaced.
2	 A photograph of a fluid cooler unit. It is a large, rectangular metal cabinet with a circular fan or blower on the side. The unit is located outdoors on a rooftop or elevated platform, with a brick wall and a wooden fence in the background.	Fluid cooler needs to be replaced.
3	 A photograph of electrical disconnect and control panels. The panels are mounted on a brick wall. One panel is white and the other is brown. They are connected to various pipes and conduits.	Replace disconnect and control panels for fluid cooler.

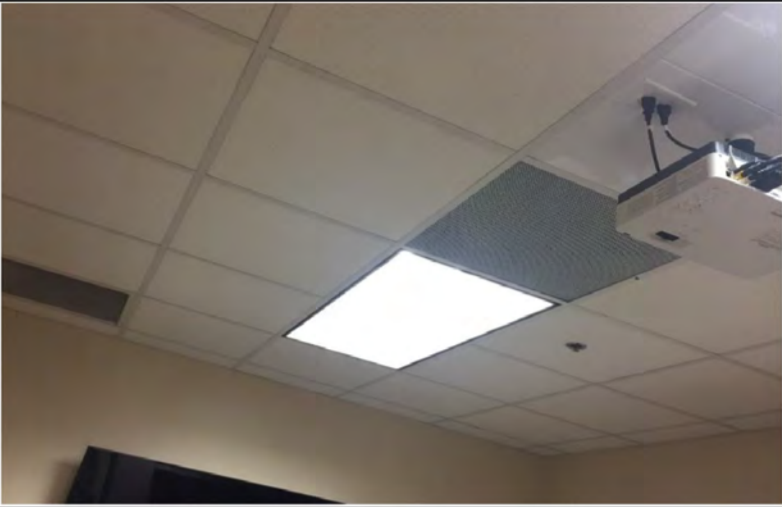
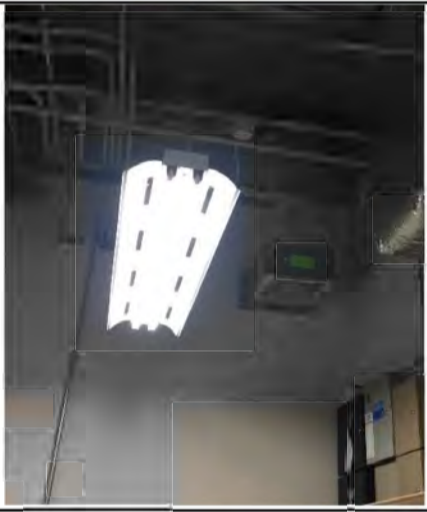


Discipline: **3 - PLUMBING**

Photo #	Photo Image	Description
1		<p>The water service entrance with pressure in excess of 110 PSI is downstream of backflow preventers. Gas fired water heater is in fair condition.</p>
2		<p>The pressure regulator on the hot water system will be removed when the master pressure regulator is installed on upcoming service.</p>
3		<p>Heavy water calcium buildup on plumbing fixtures.</p>
4		<p>Heavy calcium buildup on faucet.</p>



Discipline: **4 - ELECTRIC**

Photo #	Photo Image	Description
1	 A photograph showing a square fluorescent light fixture installed in a white ceiling grid. The fixture is illuminated, and the surrounding ceiling tiles are visible.	Fluorescent light fixtures.
2	 A photograph of a long, rectangular fluorescent light fixture in a hallway. The fixture is illuminated, and the hallway walls and ceiling are visible in the background.	Fluorescent light fixtures.



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Discipline: **5 - TECHNOLOGY**











Photo #	Photo Image	Description
1		<p>Mobile cart location. While not typical, the location appeared in a couple of meeting rooms throughout the building.</p>
2		<p>Typical ceiling mounted projector location. Projector was found in most meeting spaces.</p>
3		<p>IP Clock location. Location present in a single meeting space in the building.</p>
4		<p>Teach Logic audio system for speaker voice amplification. Found in a couple of larger meeting spaces.</p>
5		<p>Standard data location throughout the building.</p>

Photo #	Photo Image	Description
6		<p>Newer AV input location appearing randomly throughout the building.</p>
7		<p>Room scheduler location. Locations found outside all 4 large board rooms on the first level as well as a separate conference room.</p>
8		<p>Touchpad and clickshare button locations. Standard in all four board rooms on the first level.</p>
9		<p>Wall mounted projector location. Location present in all four board rooms on the first level.</p>
10		<p>New AV input locations. Found in the large board rooms. Appears to have been redone more recently than the rest of the building, as these inputs are not found in other conference rooms.</p>

Community and Education Center









Photo #	Photo Image	Description
11		<p>Standard program audio speakers. Typical in board and conference rooms where audio amplification is utilized.</p>
12		<p>Monitor location. 7 instances found only in board room D below the township officials desk.</p>
13		<p>Audio visual rack locted within Board Room D. Rack serves all four large board rooms.</p>
14		<p>MDF room telecom racks and cabinets.</p>

Photo #	Photo Image	Description
15		IDF room telecom equipment cabinet enclosure.



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		Control panel is blocked by the refrigerator.
2		Board room technology closet is without supply or exhaust air; tile removed to allow heat to escape to the plenum.
3		bCX and i2 920 controller that should remain if equipment is upgraded.

EXISTING CONDITIONS
PHOTO DOCUMENTATION



District Maintenance / Warehouse / Police Department



Discipline: **1 - ARCHITECTURE**





Photo #	Photo Image	Description
1		Dock overhead doors, bumpers and pads are in poor condition.
2		Exterior door has no clearance at the pull side of the door. The metal nosings in the steps are rusting.
3		Caulk at precast joints is failing.
4		Concrete is damaged and cracking at the exterior door.


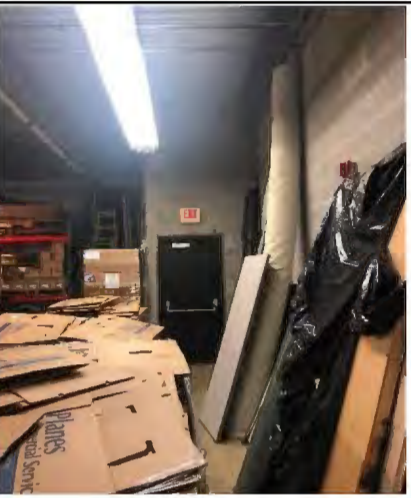

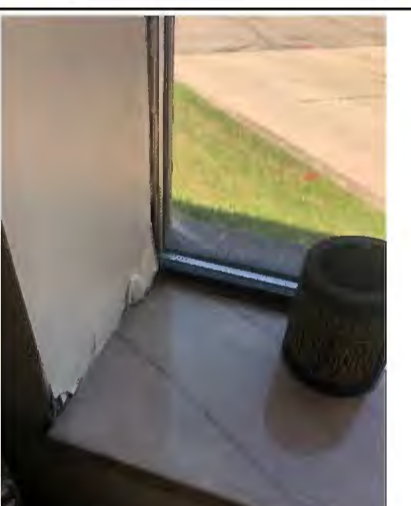










Photo #	Photo Image	Description
5		Concrete steps are pulling away from the concrete landing.
6		Exit device is hard to operate on the exit doors.
7		Clearances in hallway do not meet current code.
8		Water damage to window sill and jamb.
9		Overhead doors are rusted and corroded.

Photo #	Photo Image	Description
10		<p>The sink is well-used and worn.</p>
11		<p>Cracking in concrete slab at the column.</p>
12		<p>Water damage to the wall and column paint finish.</p>
13		<p>Rust streaks on precast concrete panels.</p>
14		<p>Partitions are different materials. Restroom stalls are not accessible. The pathway to restrooms is not accessible.</p>



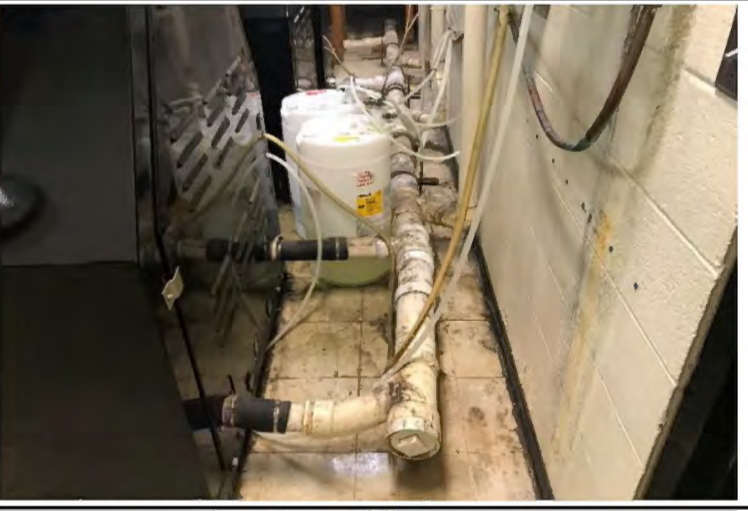



Discipline: **2 - HVAC**

Photo #	Photo Image	Description
1		Dust Collector.
2		Residential Furnace.
3		Residential Furnace.
4		Residential Furnace.


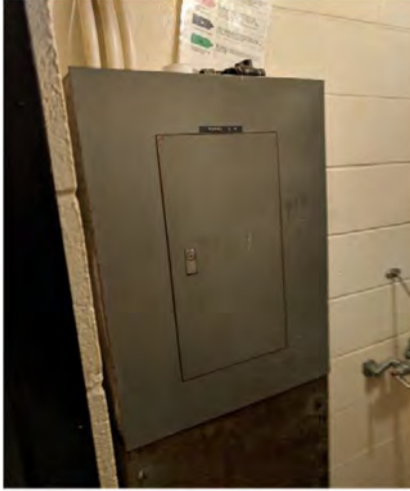



Discipline: **3 - PLUMBING**

Photo #	Photo Image	Description
1		<p>Showers with a modified outlet.</p>
2		<p>Galvanized waste piping within plumbing chase.</p>
3		<p>Commercial washer should discharge independently over trench drain.</p>
4		<p>Domestic piping should be insulated, and TMV should be piped with a heat trap.</p>



Discipline: **4 - ELECTRIC**

Photo #	Photo Image	Description
1		<p>600A Service rated switchboard is at the end of its life.</p>
2		<p>(4) 225A and (1) 100A Square-D Panelboards located throughout the building are at the end of their lives.</p>
3		<p>Notifier SFP-400B (Vintage 1995) is at the end of its life.</p>



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Discipline: **5 - TECHNOLOGY**









Photo #	Photo Image	Description
1		<p>Typical door contact sensor location. The sensor is found on nearly every door and garage door in the Operations building.</p>
2		<p>Typical wall mounted paging speaker location. Speakers were more common in the warehouse, but spread throughout random rooms as well.</p>
3		<p>Data voice location found randomly in the warehouse and typically one per room in the offices and dedicated work spaces. These instances are typically mounted on the wall, however none of the locations were flush with the wall.</p>
4		<p>Monitors used for security camera monitoring. The only other instance of a monitor in the warehouse was also of a similar type, obviously old and discontinued.</p>
5		<p>The two types of security cameras found inside the building. Cameras are from two different installs at two different times. The older cameras being on an analog system while the newer ones operate digitally.</p>

Photo #	Photo Image	Description
6		<p>MDF location in the building. MDF is mounted roughly 12 feet high, accessible by ladder and key. Water leaks from the roof onto the MDF location when it rains, so workers placed a trash bag to help protect the cabinet.</p>



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		Residential style furnaces that are not monitored via the BMS.
2		Residential style furnace that is not monitored via the BMS.

EXISTING CONDITIONS PHOTO DOCUMENTATION



District Transportation Facility / Maintenance Garage



Discipline: **1 - ARCHITECTURE**

Photo #	Photo Image	Description
1		<p>Carpet is worn and stained.</p>
2		<p>Restroom sinks are not accessible. The pathway into the restrooms is not accessible.</p>
3		<p>No seals on exterior entry doors. Corrosion on the door threshold.</p>
4		<p>Concrete is spalling on precast window sills.</p>

District Transportation Facility / Maintenance Garage






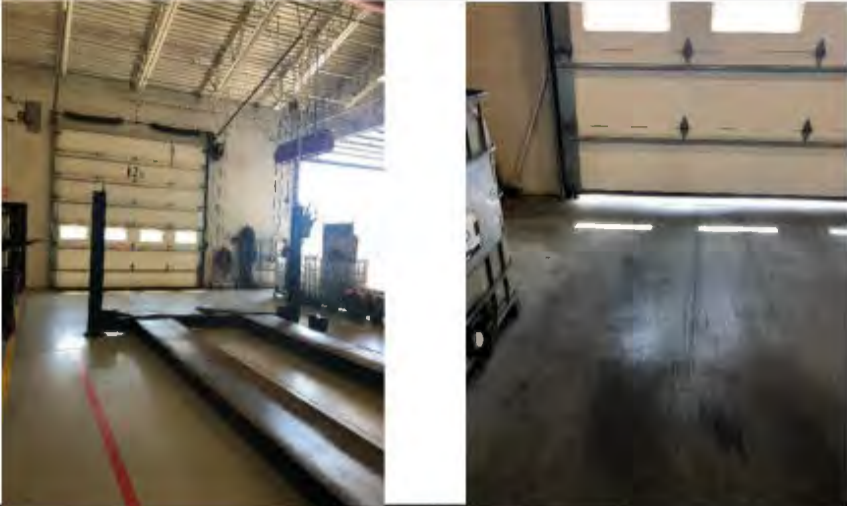







Photo #	Photo Image	Description
5		Fascia and siding need paint.
6		Clearance at doors does not meet current accessibility requirements. Clearance into offices is too narrow.
7		Caulk at window stools is failing.
8		Damaged ceiling tiles.
9		Accessible stall does not meet current code. The tile grout is stained.






Photo #	Photo Image	Description
10		<p>There are no weather seals at exterior overhead doors.</p>
11		<p>Wash bay walls need to be cleaned and protected with high performance paint.</p>
12		<p>Wash bay hollow metal doors and frames are rusted and corroded.</p>
13		<p>Large crack in the concrete floor running the full length of the mezzanine.</p>
14		<p>Cracking in the supply room concrete slab and concrete block walls of the adjacent stair.</p>

District Transportation Facility / Maintenance Garage

Photo #	Photo Image	Description
15		<p>The equipment is recessed and mounted to concrete slab.</p>
16		<p>Breakroom casework and equipment are not accessible.</p>
17		<p>The wall-covering on the operable wall is failing. Door locking mechanism is missing.</p>


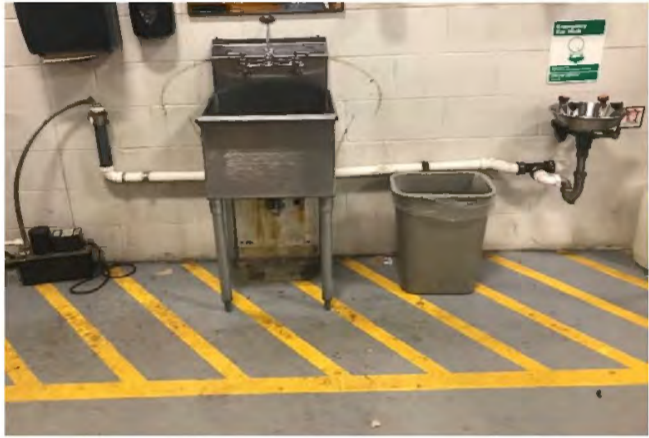

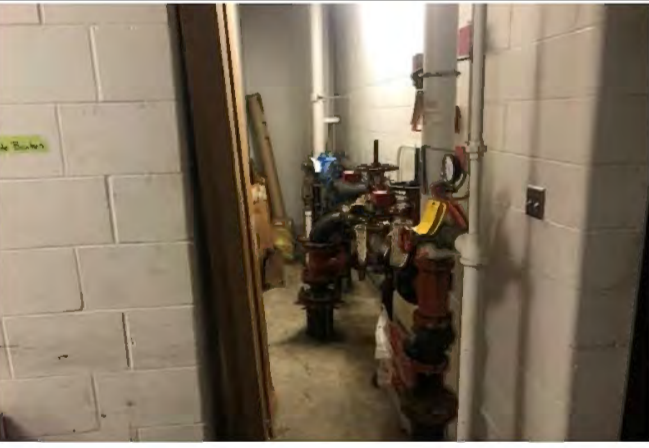



Discipline: **2 - HVAC**

Photo #	Photo Image	Description
1		Indoor Air Handling Units.
2		Indoor Air Handling Units.
3		Heating Water Pumps.
4		Condensing Unit.
5		Temperature Control Panels and VFD.


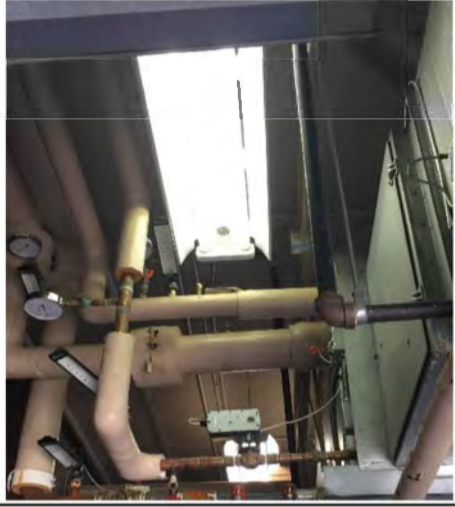


Discipline: **3 - PLUMBING**

Photo #	Photo Image	Description
1		<p>Modified plumbing fixture in gang restroom.</p>
2		<p>Modified waste piping is without a proper slope. Water is trapped within the pipe section.</p>
3		<p>The bus wash bay is in fair condition.</p>
4		<p>Water service entrance does not have appropriate clearance for backflow preventers.</p>
5		<p>Gas fired domestic water heater and TMV located above the locker area is in fair condition.</p>



Discipline: **4 - ELECTRIC**






Photo #	Photo Image	Description
1	 A photograph showing several long, rectangular fluorescent light fixtures mounted on a ceiling in a maintenance garage. The ceiling has exposed metal trusses and large black ductwork.	Fluorescent light fixtures.
2	 A photograph showing a different view of the maintenance garage, focusing on a complex network of pipes and machinery. A fluorescent light fixture is visible in the upper part of the frame, illuminating the area.	Fluorescent light fixtures.



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Discipline: **5 - TECHNOLOGY**

Photo #	Photo Image	Description
1		<p>Data voice location. Typically locations were single gang just containing data. Most instances did not incorporate the double gang faceplate with the LR Audio and Cable TV connectivity.</p>
2		<p>Ceiling mounted paging speaker location. Paging system was only incorporated in certain areas throughout the building, mainly in the bus garage.</p>
3		<p>Typical monitor found in the building. Instance was present in a couple offices as well as the workers lounge/training room.</p>
4		<p>Ceiling mounted program audio speaker found in the lounge/training room. Six of these speakers are utilized for audio reinforcement for presentations in the space.</p>
5		<p>Security camera utilized in the building. Four instances of these wall mounted cameras were located, three of which were in the bus garage.</p>

Photo #	Photo Image	Description
6		<p>CSC security panels and enclosures found in the MDF room in the building.</p>
7		<p>Projector utilized in the lounge/training room.</p>
8		<p>Projector screen utilized in the lounge/training room.</p>
9		<p>AV inputs found in the building. Typically they contained audio (usually LR) connectivity as well as VGA inputs.</p>
10		<p>Internal view of the MDF located in the MDF room adjacent to the workroom space.</p>



Discipline: **6 - CONTROLS**

Photo #	Photo Image	Description
1		The thermostat cover is removed.
2		Outdoor air damper actuator is not completely mounted on the damper shaft.

EXISTING CONDITIONS BUILDING SYSTEMS NARRATIVES



North Central High School

Northview Middle School

J. Everett Light Career Center

Hilltop Developmental Preschool

H. Dean Community Education Center

District Maintenance / Warehouse / Police Department

District Transportation Facility / Maintenance Garage

NORTH CENTRAL HIGH SCHOOL

OVERVIEW

North Central High School has a student population of approximately 3,800 students. Current projections predict that this number will grow to 4,500 in the next several years. The building was built in 1963 and the last major renovation was completed in 1994. The 946,168 SF building consists of two occupied stories, a system of underground tunnels that were originally intended to serve as a bomb shelter, and third story mechanical space.

ARCHITECTURE

Many systems are aging and in need of repair and replacement. The interior and exterior doors and windows, signage, toilet partitions, finishes, built in millwork, cabinetry, and counters are showing significant wear. Additionally, there are several functional areas that are not being used as designed. Many performing arts rooms are serving as storage space. There is significant overcrowding in the cafeteria. The building lacks a secure vestibule.

Observed Potential Improvements:

- Replace corroded sinks in Science with epoxy counter tops and sinks.
- Remove fixed lab tables & replace w/ free standing lab tables in all but chemistry.
- Replace corroded sinks in Art with new epoxy counter tops and sinks.
- Replace all classroom door hardware with security locks with occupancy indicators.
- Replace damaged laminate doors. This is approximately 50% of existing laminate doors.
- Replace vinyl wall covering in classrooms.
- Replace vinyl wall covering and acoustic wall fabric in corridors.
- Replace 100% of existing carpet.
- Replace all existing cross corridor doors & storefront with hollow metal doors on hold opens, tied into security. Most are on hold opens currently but are not tied into security.
- Add secure entry vestibule for visitors, security film on new storefront.
- Renovate three (3) sloped lecture labs for accessibility.
- Remove existing planetarium equipment to maximize storage.
- Rework storefront at elevator alcove with wider door to allow large equipment/ furniture to fit in elevator.
- Replace rusted metal accent ceiling with new metal accent ceiling in Cafeteria.
- Replace slip resistant quarry tile in kitchen and serving with epoxy resin floor
- Repair floor transitions between Cafeteria and Senior Café.
- Replace 13 pairs of doors to Auditorium with sound doors.
- Replace finishes in original elevator.
- Replace finishes in all restrooms – ceramic tile.
 - Replace toilet partitions & accessories in restrooms
 - Add a mirror at assessible height
- Review and update all asbestos management plans. Abate existing asbestos tile and additional that is uncovered.
- Replace all room signage.

- Replace approximately 10% of the window screens.
- Replace approximately 75% of the marker/tack boards.
- Replace approximately 50% of the acoustic ceiling tile.
- Replace approximately 50% of the existing VCT flooring.
- Repair/replace classroom casework. Install new doors with locks.
- Replace/ refinish wood floor in L237 & K211 & E166 and L239 Music classrooms (1 is parquet, 1 strip).
- Remove operable partition and track from Orchestra room. Repair walls & ceilings.
- Infill recessed walk-off mats at 8 entry vestibules. Replace with walk-off carpet.
- Remove demountable partitions in 11 classrooms, replace with S4iD.
- Replace Media Center stair rail w/ accessible guard and handrails.
- Replace approximately 500SF of mis-matched glazing in existing storefront.
- Replace computer tables in N289.
- Replace approximately 25% of damaged corridor lockers.
 - Paint all lockers
- Update Hall of Fame Space.
- Renovate Special Ed to have a 1500 SF Life Skills room.
- Replace computer casework in Computer labs (4 w/ 30 students each) and “Printer” Room.
- Replace reception desks at Main entry and Guidance.

MECHANICAL SYSTEMS

HVAC

The HVAC systems observed and evaluated at North Central High School include: Building Cooling Chillers, Heating Hot Water Boilers Cooling Tower, Rooftop Units, Air Handling Units, Terminal Heating Units, Fan Powered VAV Boxes, Exhaust Fans, and Temperature Controls.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- The cooling plant consist of (2) 750-ton water-cooled chillers and (1) 350-ton air cooled chiller. (1) roof mounted cooling tower, (6) chilled water pumps, (2) condenser water pumps to serve the cooling tower. The water-cooled chillers are close to exceeding their life expectancy of 20 years. The air-cooled chiller was just brought back to life to add additional chiller capacity. The cooling tower unit has been assigned a rating score of 1. Overall score for entire cooling plant system has been assigned a rating score of 1.
- The heating plant consist of (4) 8,800 MBH vintage firetube boilers and (6) base mounted hot water pumps. These were installed in various stages and have a rating score of 1. Would estimate the boilers being 40 years old. Overall score for entire heating plant system has been assigned a rating score of 1. Hot and chilled water is distributed from this building to serve JEL too.
- The building contains (48) indoor air handling units. These units are all located in fan rooms off the tunnels or in penthouses. The maintenance staff has done a good job of maintaining the indoor units, although the air handling units were installed as new in 1993. The units have exceeded their life expectancy of 15 to 25 years. The units have been assigned a rating score of 1 due to age.

- Unit A contains (2) AHUs, Unit B contains (1) AHU, Unit C contains (5) AHUs, Unit D contains (2) AHUs, Unit E contains (3) AHUs, Unit F contains (1) AHU, Unit G contains (6) AHUs, Unit H contains (2) AHUs, Unit J contains (3) AHUs, Unit K contains (6) AHUs, Unit M contains (5) AHUs, Unit N contains (2) AHUs, Unit P contains (2) AHUs, Unit Q contains (2) AHUs, Unit R contains (2) AHUs, Unit S contains (1) AHU, Unit T contains (1) AHU, Unit U contains (2) AHUs
- The building contains (120) VAV boxes. These devices were installed in 1993 and have exceeded their life expectancy of 20 years. These units have been assigned a rating score of 1 and will need replaced.
- The building contains (160) exhaust fans. These exhaust fans were installed in 1993 and have exceeded their life expectancy of 20 years. These units have been assigned a rating score of 1.
- The building contains (162) terminal heating units. These were installed in 1993 and have exceeded their life expectancy of 20 years. These units have been assigned a rating score of 1.

Observed Potential Improvements:

- Rebuild or replace the water-cooled chillers that were installed in 2001.
- Replace the air-cooled chiller with a similar style chiller with 100 tons extra capacity.
- The cooling tower unit will eventually need to be replaced due to age.
- Replace the existing vintage firetube boilers with modern high efficiency full condensing style boilers.
- The building's (48) air handling units will eventually need replaced due to age.
- Replace the building's (120) VAV boxes.
- The building's (162) terminal heating units will eventually need to be replaced due to age.

Controls

In general, HVAC controls scored an average of 2.5 (1.95 room score + 3.05 controller score).

Existing Components and Observed Potential Improvements:

- The Andover 9410 top-level controller serving the boiler and chiller plant cannot easily be replaced and should be replaced due to critical equipment served.
- The remainder of the building utilize (14) bCX4000 top-level controllers and should remain.
- AHUA1 is controlled by an Infinet 1 920 controller and should be replaced.
- The pool water controller (which is in the old demolished pool area and now a weight room) is controlled by an Infinet 1 controller and should be replaced.
- Both penthouses have EOL controllers that are Infinet 1 853 controllers and should be replaced.
- VFDs needed on a gym constant volume AHUs. Main Gym relief is non-accessible from the floor and complete damper assembly including actuator replacement is needed including roof penetrations and outdoor wiring back to controller in penthouse.
- AHU-A1, PENTN.EOL, PENTQ.EOL, and POOLWATER controllers are Andover 920, 853, and 867 series controllers. AHU-A2 and AUX.A1 are Andover i2 series controllers.
- Many front-end graphical links and un-optimized programming problems exist which requires retro-commissioning efforts.

NOTE: Andover 800 and 900 series controllers are the first version of proprietary Infinet communication and are limited to 19,200 bps. Andover i2 800 and 900 series controllers are the second vintage proprietary Infinet communication and are limited to 19,200 bps. Andover b3 controllers are native BACnet controllers limited to 76,800 bps.

NOTE: Greenbriar Andover 9200 and Foxhill Andover 9900 (neither part of this scope) have legacy top-level controllers that should be replaced. Allisonville top-level controller offline during site visit but is a bCX4040 and should remain. Andover 9200, 9400, and 9900 controllers are vintage style controllers no

longer in production. Andover bCX controllers can be BACnet or Infinet controllers including field conversion to BACnet or Infinet.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

NOTE: Current programming does not incorporate automatic standalone operation or manual off-auto-on graphical considerations. Retro-commissioning and system optimization services are recommended for most of the buildings.

PLUMBING

Existing Systems:

- The two-story structure with tunnel system was built in 1963 with upgrades in the mid-1990s.
- The insulated domestic piping within the tunnels appear to be in fair condition.
- The underground sanitary and storm systems are original and will be camera scoped to determine condition.
- Solids interceptors for Art room sinks are not functional.
- Numerous sanitary vents on the roof are cut off too short and could become blocked during heavy snow events.
- Plumbing fixtures are in average to poor condition.
- Heavy calcium buildup and stains were observed on plumbing fixtures.
- A duplex water softener is serving the domestic hot water system.
- The central domestic gas fired water heaters and large storage tank are in poor condition. The thermostatic mixing valve and hot water return circulating pumps are concealed behind the water heaters and are not accessible.
- The building is fully sprinklered with numerous service entrances, all of which are in fair condition.

Observed Potential Improvements:

- Replace plumbing fixtures in areas where remodel is considered.
- Install solids interceptor in art wing to serve sinks with associated underground waste piping.
- Replace the water softener with a system sized to soften the entire building.
- Replace domestic water heaters, storage tank, thermostatic mixing valve and hot water return circulating pumps.
- Schmidt will arrange for sewer camera scoping of underground sanitary and storm piping to determine condition.
- Extend sanitary vents on the roof to 12" above roof line.
- Modify existing gas service as needed for new equipment where remodel is considered.

ELECTRIC

Distribution

Existing Systems:

- The main electrical service consists of (4) 2500A 480Y/277V-3 ϕ -4W services. The (4) services are paired with a total of (2) main-tie-main set ups. Facilities has requested to replace the main (4)

services since they currently utilize bolted pressure switches that are very hard to open and close. Sometimes there is a chance that when opened it cannot be closed again. This is due to the switch not being exercised.

- Most panelboards match the main switch gear vintage. They appear to be in good condition. There is (1) 400A distribution board, (1) transformer and (4) 225A panelboards that are at the end of life.

Observed Potential Improvements:

- Have an infrared scan performed to locate any loose or corroded connections in the main switch gear vintage.
- Replace (1) 400A distribution board, (1) transformer and (4) 225A panelboards that are at the end of life.

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvements:

- Replace all fluorescent light fixtures with more efficient LED fixtures.
- Change lighting control to occupancy sensors.

Wiring Devices

Existing Systems:

- Receptacle density appeared to be adequate. Past renovations added receptacles via surface raceway. Most raceway is in good condition.
- Floor boxes throughout the building have missing covers.
- There are miscellaneous receptacles missing cover plates.

Observed Potential Improvements:

- Replace floor boxes with missing covers or abandon them by removing devices and patching abandoned holes.
- Replace missing cover plates on receptacles.

Fire Alarm System

Existing System:

- The fire alarm system is currently upgraded.

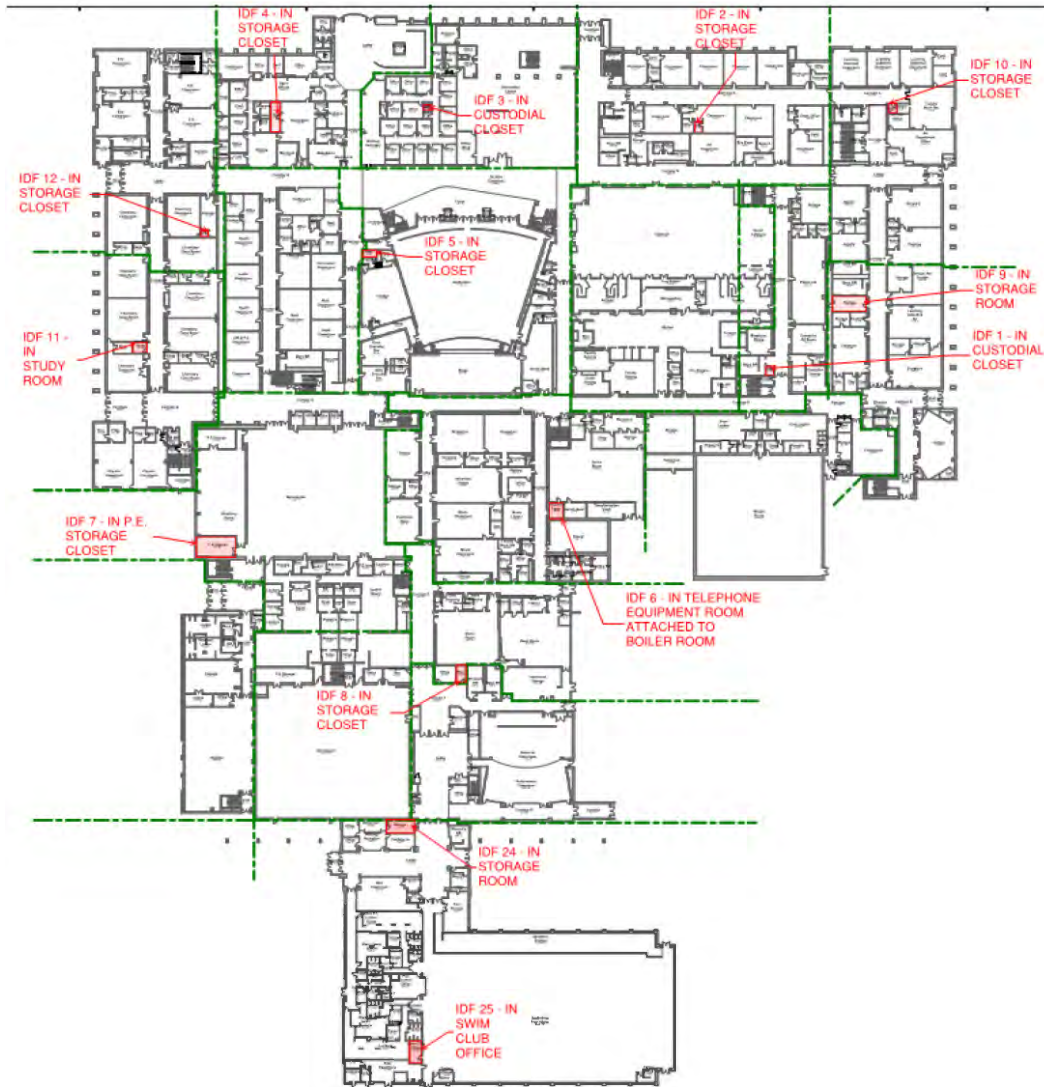
TECHNOLOGY

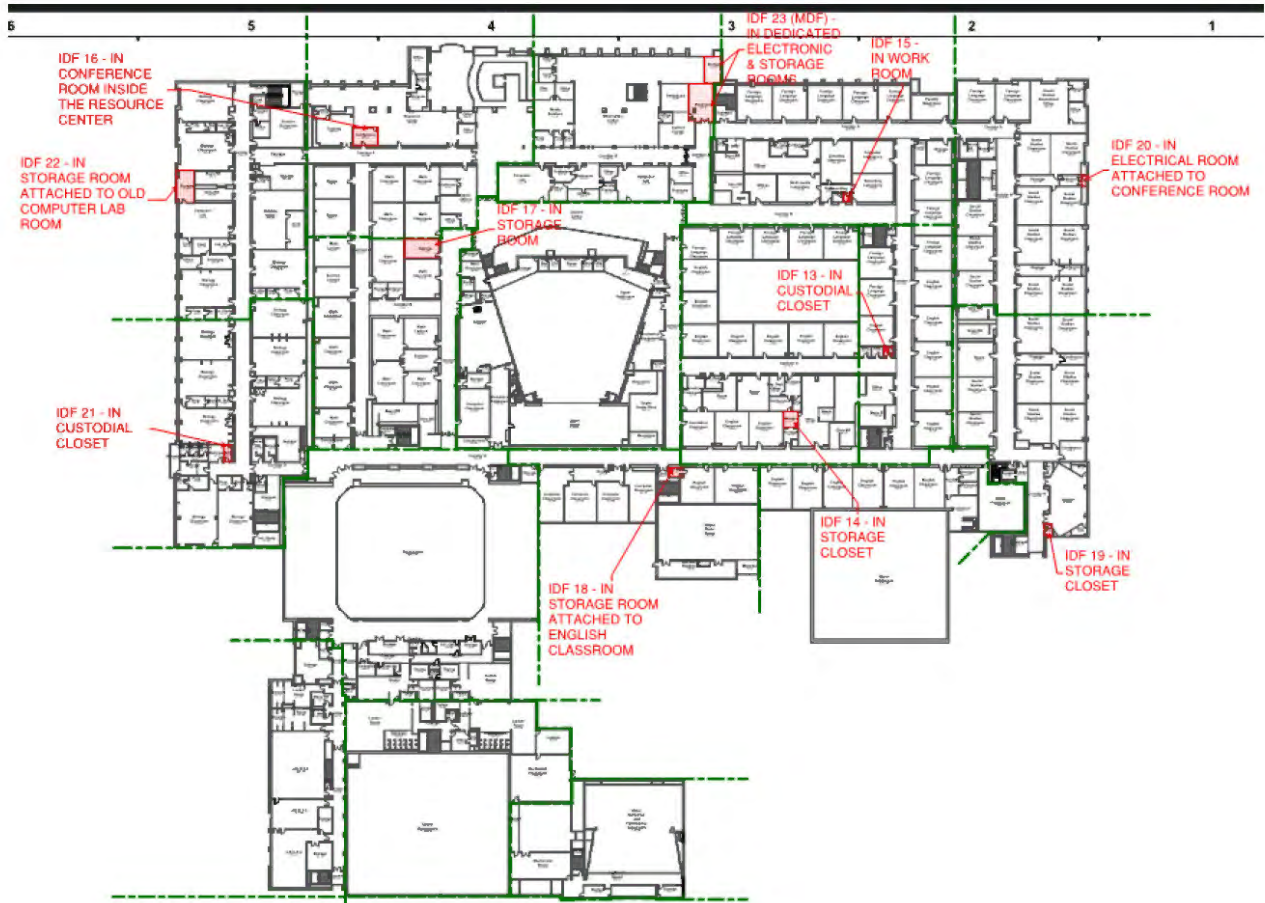
The following is a summary of the technology systems toured at North Central High School. This information was gathered from multiple site visits held in the time between August 29, 2019 and September 12, 2019.

Telecommunications and Data Infrastructure

The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed in a star topology from each telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

MDF / IDF Locations





MDF / IDF Pictures

MDF (IDF 23) – Electronic & Storage Rooms A512







The MDF is located on the 2nd floor in a dedicated electronic and storage room adjacent to the information center and the IT desk in the building. The room contained the paging system rack, several cooling systems, security panels, terminal blocks, and telecom racks. The room incorporated an ACT ceiling and had a rack completely dedicated to fiber distribution for the North Central campus. There was also a section of the room set aside for security camera viewing, although the functionality of the area was not confirmed.

IDF 1 – Custodial Closet J195A



IDF 1 is located in a custodial closet in corridor J on the 1st floor of the building. The room contains the 2-post telecom rack as well other janitorial supplies and an ACT ceiling. The IDF has approximately 75 ports that have been terminated.

IDF 2 – Storage Room A105C



IDF 2 is located on the 1st floor in a storage closet connected to a classroom. The room contains the 2-post telecom rack as well storage supplies for the classroom and an ACT ceiling. The IDF has approximately 100 ports that have been terminated.

IDF 3 – Custodial Closet L258E



IDF 3 is located on the 1st floor in a custodial closet in the office spaces near the reception area. The IDF rack is mounted to TR plywood on the wall of the room along with a single mode fiber enclosure. The room contained other janitorial supplies and an ACT ceiling. The IDF has approximately 100 ports that have been terminated.

IDF 4 – Storage Room B122B



IDF 4 is located on the 1st floor in a storage room adjacent to open office spaces near the reception desk. The IDF rack is mounted to TR plywood on the wall of the room along with a single mode fiber enclosure and other security and fire alarm panels. The room contained other general office supplies and an ACT ceiling. The IDF has approximately 110 ports that have been terminated.

IDF 5 – Storage Closet L252A



IDF 5 is located on the 1st floor in a storage closet attached to a narrow passage adjacent to the auditorium. The room only housed a wall mounted rack on TR plywood with a single mode fiber enclosure and electrical panels. The room had the ACT layout installed, but had several tiles missing from the ceiling. The IDF has approximately 30 ports that have been terminated.

IDF 6 – Unlabeled Telephone Equipment Room inside the Boiler Room



IDF 6 is located on the 1st floor in a dedicated telephone equipment room located inside the buildings main boiler room located centrally in the building. The IDF is a 2-post rack located in the back-right corner of the room. The room did not have an ACT ceiling and did not have its own separate cooling system from the boiler room. The telephone equipment room incorporated security panels and terminal blocks on TR plywood with a single mode fiber enclosure. The IDF has approximately 80 ports that have been terminated.

IDF 7 – P.E. Storage D139C



IDF 7 is located on the 1st floor in a P.E. Storage room attached to the main gymnasium. The room is used for general physical education equipment storage and does not have an ACT ceiling. The rack is wall mounted in the front-right corner of the storage room along with a single mode fiber enclosure. The IDF has approximately 50 ports that have been terminated.

IDF 8 – Storage Closet F170



IDF 8 is located on the 1st floor in a storage closet to the East of the auxiliary gymnasium. The room is used for general physical education equipment storage and included lockers as well as an ACT ceiling. The rack is wall mounted in the back-left corner of the storage closet along with a single mode fiber enclosure mounted on TR plywood. The IDF has approximately 35 ports that have been terminated.

IDF 9 – Storage Room H184



IDF 9 is located on the 1st floor in a storage room in corridor H. The room is used for general table and event storage and incorporated an ACT ceiling. The rack is wall mounted on the North wall of the storage room along with a single mode and multimode fiber enclosure mounted on TR plywood. The IDF has approximately 25 ports that have been terminated.

IDF 10 – Custodian Closet A116



IDF 10 is located on the 1st floor in a custodial closet in the Northeast corner of the building. The room contains custodial supplies and a mop sink as well as an ACT ceiling. The rack is wall mounted in the back wall of the custodial closet along with a single mode fiber enclosure mounted on TR plywood. The IDF has approximately 25 ports that have been terminated.

IDF 11 – Individual Study N287



IDF 11 is located on the 1st floor in an individual study room in corridor N in the West side of the building. The room contains cabinets and countertops as well as general science supplies in storage and an ACT ceiling. The IDF is a 2-post rack that is located adjacent to the left wall of the room along with a wall mounted single mode fiber enclosure. The IDF has approximately 80 ports that have been terminated.

IDF 12 – Electrical Room B119A



IDF 12 is located on the 1st floor in an electrical room located at the back of a storage room. The room contains electrical panels with TR plywood for mounting of the telecom equipment. The IDF itself consists of patch panels and a single mode fiber enclosure that are directly mounted to the plywood with a shelf above it housing network switches. The IDF has approximately 50 ports that have been terminated.

IDF 13 – Custodial Closet C556



IDF 13 is located on the 2nd floor in a custodial closet. The room was used for janitorial and cleaning supplies and incorporated an ACT ceiling. The IDF is mounted to TR plywood on the West wall of the room along with a single mode fiber enclosure. The IDF has approximately 50 ports that have been terminated.

IDF 14 – Storage Closet D579



IDF 14 is located on the 2nd floor in a storage room adjacent to an open office space. The room was used for general storage and incorporated an ACT ceiling. The IDF is contained in a floor standing equipment cabinet, and while it could not be opened since it required a different key that we did not have access to, it is assumed that it has approximately 50 ports that have been terminated.

IDF 15 – Storage Closet D579



IDF 15 is located on the 2nd floor in a small work room adjacent to a multimedia and recording laboratory. The room was used for general storage and incorporated an ACT ceiling. The IDF is wall mounted on TR plywood which also include a single mode fiber enclosure. While the IDF could not be reached due to the quantity of heavy items blocking it, it is assumed that it has approximately 100 ports that have been terminated.

IDF 16 – Conference Room A501



IDF 16 is located on the 2nd floor in a conference room attached to the resource center. The room incorporates a typical conference room style layout, with a long conference table, video projection, audio amplification, and an ACT ceiling. In the Southwest corner of the room behind a moveable 6-foot divisible wall is the 2-post telecom rack. Adjacent to the telecom rack is a wall mounted single mode fiber enclosure. The IDF has approximately 150 ports that have been terminated.

IDF 17 is located on the 2nd floor in Storage Room L655. We were unable to enter the room with our keys and were unable to locate anyone with the proper keys. It is assumed that the IDF is similar to the others found in the building.

IDF 18 – Unlabeled Storage Room Attached to English Classroom



IDF 18 is located on the 2nd floor in a storage room attached to an English classroom. The storage room is used solely for the IDF, which is mounted to TR plywood along with a single mode and multimode fiber enclosure on the South wall of the room. The room is fitted with an ACT ceiling layout but is missing several ceiling tiles. The IDF has approximately 150 ports that have been terminated.

IDF 19 – Storage Closer H590



IDF 19 is located on the 2nd floor in a storage closet outside of a lecture room in the Southeast corner of the building. The room is used for chair and desk storage, while incorporating the IDF and an ACT ceiling. The IDF is mounted to TR plywood on the South wall of the room along with a multimode fiber enclosure. The IDF has approximately 50 ports that have been terminated.

IDF 20 – Electrical Room H616



IDF 20 is located on the 2nd floor in an electrical closet at the back of a conference room in the Northeast section of the building. The small closet incorporates electrical panels and an ACT ceiling. The IDF is located on the North wall of the closet mounted to TR plywood along with a single mode fiber enclosure. The IDF has approximately 50 ports that have been terminated.

IDF 21 – Electrical Room H616



IDF 21 is located on the 2nd floor in a custodial room in the Southwest section of the building. The room contains several janitorial and cleaning supplies and an ACT ceiling, along with the 2-post telecom rack. The rack is located on the East wall of the room along with a single mode fiber enclosure. The IDF has approximately 75 ports that have been terminated.

IDF 22 – Storage Room Attached to a Computer Lab



IDF 22 is located on the 2nd floor in a storage room in the Northwest section of the building. The room is used for general technology equipment storage along with an ACT ceiling and the telecom equipment enclosure on the East wall. The IDF has approximately 100 ports that have been terminated.

IDF 24 – Storage Room P101C



IDF 24 is located on the 1st floor in a storage room in the Natatorium section in the South of North Central. The room is used for general storage as well as a break room for the staff. The room incorporates an ACT ceiling, security panels, fire alarm panels, and TR plywood which the IDF is mounted to. The IDF has approximately 50 ports that have been terminated.

IDF 25 – Swim Club Office P202

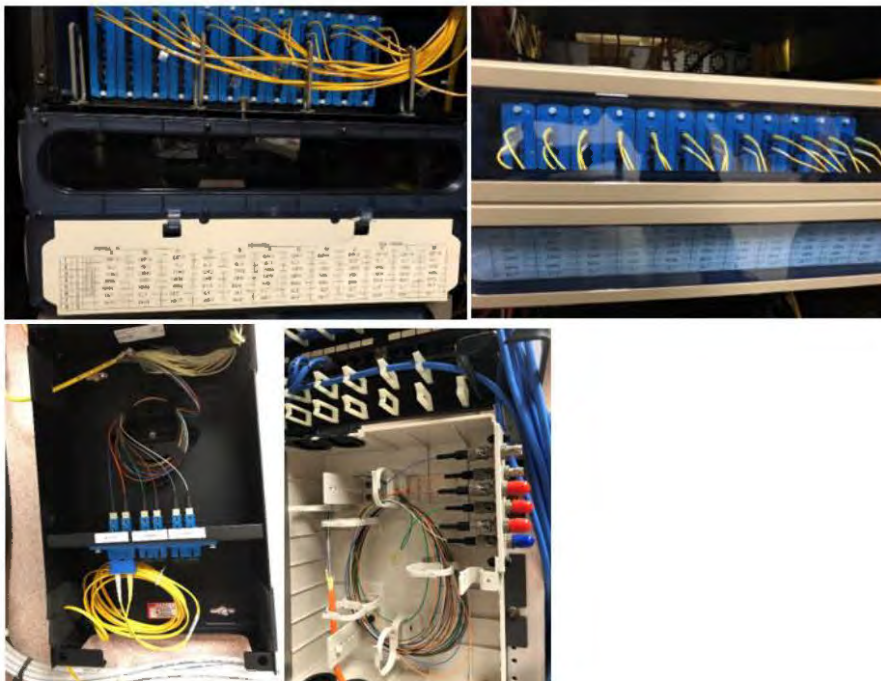


IDF 25 is located on the 1st floor in the swim club office in the Natatorium section in the South of North Central. The room is a typical office space with an ACT ceiling. The IDF is wall mounted on TR plywood about 6 inches below the ceiling. The IDF has approximately 50 ports that have been terminated.

Fiber Layout

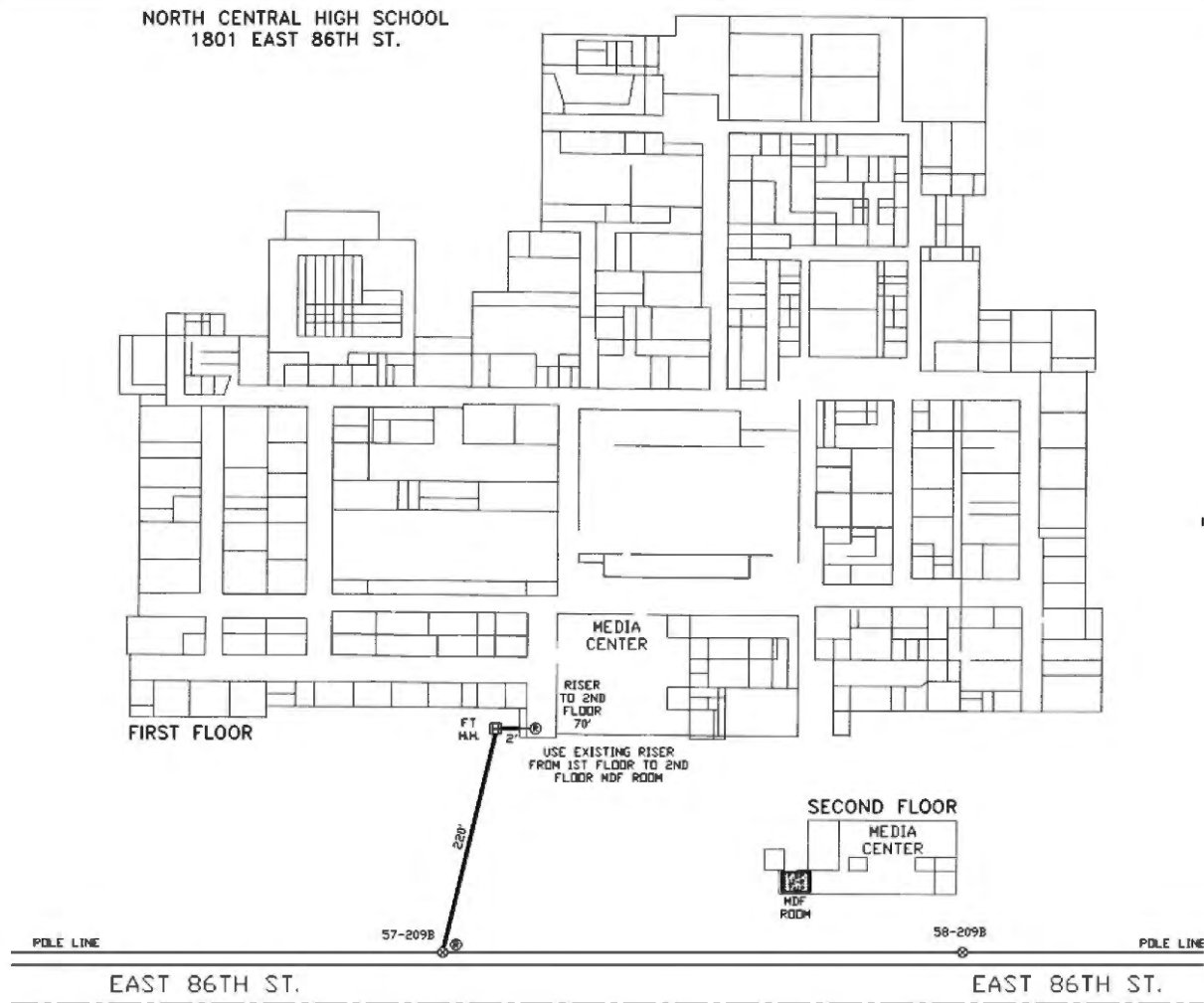
North Central acts as the fiber hub for the entire campus, sending fiber connectivity to the other buildings around North Central as well as the other 24 IDF's in the building.

- 6 Strands of SM Fiber serve IDF 1.
- 6 Strands of SM Fiber serve IDF 2. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 3.
- 6 Strands of SM Fiber serve IDF 4.
- 6 Strands of SM Fiber serve IDF 5.
- 6 Strands of SM Fiber serve IDF 6. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 7.
- 6 Strands of SM Fiber serve IDF 8.
- 6 Strands of SM Fiber serve IDF 9.
- 6 Strands of SM Fiber serve IDF 10.
- 6 Strands of SM Fiber serve IDF 11. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 12.
- 6 Strands of SM Fiber serve IDF 13.
- 6 Strands of SM Fiber serve IDF 14.
- 6 Strands of SM Fiber serve IDF 15.
- 6 Strands of SM Fiber serve IDF 16. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 17.
- 6 Strands of SM Fiber serve IDF 18. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 19. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 20.
- 6 Strands of SM Fiber serve IDF 21. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 22.
- 6 Strands of SM Fiber serve IDF 24. MM Fiber is present at the IDF but appears to be unused.
- 6 Strands of SM Fiber serve IDF 25. MM Fiber is present at the IDF but appears to be unused.



Telecommunications Entrance Services

During our walkthrough, we were unable able to locate the fiber entrance for the building. However, previous documentation states that the fiber for North Central comes from East 86th Street and enters the North end of the building. Below is documentation of the fiber entrance for the school.



Audio Visual SYSTEMS

With the large size of the building, different rooms and areas have had varying renovations throughout the years. However, each subject/wing of classrooms usually had a standard. For example, the biology rooms were all similar, but were different than all of the history classrooms and so on.

Typical General / Unlabeled Classroom

A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- One (1) ceiling paging speaker
- One (1) ceiling mounted IR microphone
- One (1) ActivBoard & short throw projector combination
- One (1) Front Row Lasso system for audio control and amplification
- Two (2) data voice locations containing one (1) data connection each

- One (1) single gang faceplate containing one (1) HDMI connection and one (1) TRS audio connection
- One (1) coaxial input and output location for old TV announcements system



Typical Chemistry / Environmental Science Classroom
 A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- Two (2) ceiling paging speakers
- One (1) ceiling mounted IR microphone
- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- One (1) data voice location containing two (2) data connections
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical Physics Classroom
 A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- Two (2) ceiling paging speakers
- One (1) ceiling mounted IR microphone
- One (1) wall mounted short throw projector

- One (1) Front Row Lasso system for audio control and amplification
- One (1) data voice location containing two (2) data connections
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) double gang faceplate containing one (1) video connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical Health Classroom

A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- One (1) ceiling paging speaker
- One (1) ceiling mounted IR microphone
- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- Two (2) data voice locations containing one (1) data connection each
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) double gang faceplate containing one (1) video connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical Biology Classroom

A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- Two (2) ceiling paging speakers
- One (1) ceiling mounted IR microphone

- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- Two (2) data voice locations containing two (2) data connections each
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical Math Classroom

A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- Two (2) ceiling paging speakers
- One (1) ceiling mounted IR microphone
- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- One (1) data voice location containing one (1) data connection
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical English / Social Studies Classroom

A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- One (1) ceiling paging speaker
- One (1) ceiling mounted IR microphone

- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- One (1) data voice location containing one (1) data connection
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) double gang faceplate containing one (1) video connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical Foreign Language Classroom

A typical chemistry classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- Five (5) ceiling paging speakers
- One (1) ceiling mounted IR microphone
- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- One (1) data voice location containing one (1) data connection
- One (1) double gang faceplate containing one (1) video connection and one (1) data connection
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system



Typical Dramatics / Music Classrooms

A typical dramatics / music classroom contained the following:

- Four (4) ceiling program audio speakers for presentations
- Two (2) ceiling paging speakers
- One (1) ceiling mounted IR microphone

- One (1) wall mounted short throw projector
- One (1) Front Row Lasso system for audio control and amplification
- One (1) data voice location containing one (1) data connection
- One (1) double gang faceplate containing one (1) RCA connection, one (1) USB connection, and one (1) VGA connection
- One (1) double gang faceplate containing one (1) HDMI connection and one (1) data connection
- One (1) coaxial input and output location for old TV announcements system
- At least two (2) wall mounted speakers for audio reinforcement amplification



Typical Office

A typical office contained the following:

- One (1) ceiling mounted paging speaker
- One (1) wall mounted volume control knob
- One (1) data location containing 2 data connections



Main Gymnasium

The main gymnasium contained the following:

- A center speaker cluster containing:
 - Four (4) program audio speakers
 - Eight (8) program audio horns
 - Four (4) paging horns



Auxiliary Gymnasium

The auxiliary gymnasium contained the following:

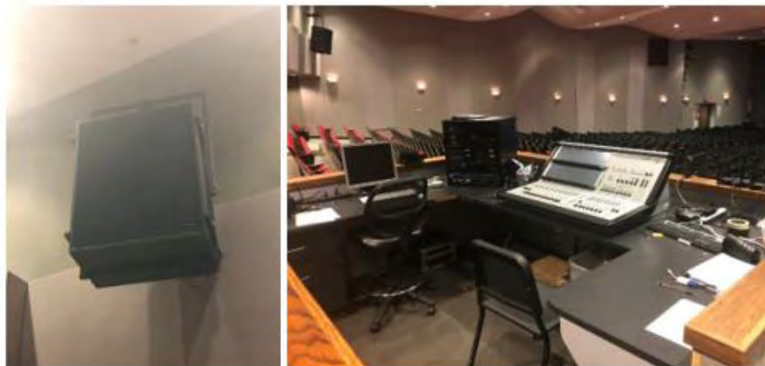
- Fifty (50) ceiling paging speakers
- No program audio or audio reinforcement system was present



Auditorium / Stage

The auditorium contained the following:

- A central line array of speakers to serve the entirety of the auditorium
 - The array is flush with the wall above the proscenium opening hiding the speakers, so count and type could not be confirmed
- Two (2) rear sound reinforcement speakers used for surround coverage
- Two (2) ceiling hung projectors
- Two (2) ceiling mounted projection screens
- Three (3) pendant mounted microphones
- Three (3) AV floor boxes containing 2 XLR microphone connections
- One (1) centrally located mixing board / audio control location





Paging System

The paging system equipment rack is housed in the MDF room on the 2nd floor of the building adjacent to the Information Center. The all call phone used to make paging announcements is located in a small room behind the receptionist desk by the main entryway of the building.



Electronic SAFETY AND Security

Electronic Access Control (EAC)

During our visit, we were able to locate 5 card readers controlling the building.

1 of these card readers were located inside, controlling hallway from the main entryway to the rest of the school.

4 of these card readers were outside of the building, placed by random vestibule entryways.

Door contact and motion sensor locations were also common at the vestibules allowing entry throughout the building.



Video Security System (VSS)

During the assessment of North Central High School, we were able to locate 74 security cameras.

46 of these cameras were found inside on the 1st floor, covering the hallways and entryways of the building.

21 of these cameras were found inside on the 1st floor, covering the hallways and entryways of the building.

7 of these cameras were found outside, covering different parts of the campus and some entryways.

It is unknown how many of the cameras are functional.



Intrusion Detection Systems

We are aware of existing systems (keypads, sensor locations, panic buttons, etc.) provided by CSC.



FOODSERVICE

The foodservice operation at North Central High School (NCHS) is in the same footprint as it was when the school was brought into service in 1963. There have, of course, been equipment changes and renovations to specific areas (servery and dishroom), but the layout of the kitchen has remained largely untouched. With the changes in cooking styles, in National School Lunch Program (NSLP) requirements, and in the expectations of the customers (the students), the foodservice program has adapted within the same footprint. Based on this information, our discussions with the Nutrition Department Leadership Team, our on-site observations, and our experience in this market Primary Education, K-12), we are recommending a complete renovation of the kitchen and servery, at North Central High School.

Current Operation, Participation, & Conditions

NCHS has a student population of approximately 3,800 students (including my freshman daughter). Approximately 46% of the student body is registered to receive their lunch free or at a greatly reduced cost. The foodservice operation at NCHS currently has a participation rate of approximately 50%. In other words, about half of the student body receives a Type A (full) lunch at NCHS. There are additional ala carte purchases made, as well.

The students currently have a twenty-five-minute window to receive and consume their food. There are five (5) lunch periods beginning at 10:14 AM and concluding at 12:43 PM. The service lines are set-up to provide healthy food options that meet NSLP standards, quickly. Students move through six “speed lines.” The current serving options are titled Pizza, Chicken Crave, Homestyle, Fiesta, Fresh Market, and Panther Favorites.

The engineering team will speak to the overall physical condition of the kitchen and serving spaces. In regard to the existing foodservice equipment package, there are select items that will be re-used in a renovation occurring in the next three to five years. Along with specific pieces of cooking equipment, we believe the current dishmachine will still have significant operational life at the time of the proposed kitchen renovation.

Design Intent

NCHS is the flagship school for the Washington Township School District. It is highly visible to the public and it provides a great opportunity for our children to receive a high-quality education in order to prepare them for post-graduate life. We believe that the food program in this facility should reflect the mission of the school and it should serve the students and community well.

The kitchen is to be operationally efficient. The current space is adequate in terms of physical size, but it is operationally outdated. It has a large, over-sized, non-functional, outdated, and now unused built-in bakery oven on one end of the kitchen. The refrigerated storage (walk-in coolers) is chopped-up and operates with water-cooled compressors that are not currently configured to operate in an efficient manner. The dishroom is located in the center of the serving lines. Therefore, the kitchen staff works around it to provide food to each of the six serving lines.

We propose that the serving spaces be re-configured to better serve this generation of students and to provide operational flexibility to serve the next generation, as well. Gen Z students are not as “mealtime” oriented as previous generations. Therefore, our service model may need to change to allow for food availability at non-traditional dayparts. It may need to provide food that has been ordered through a mobile app and is just picked up by the student as they come to lunch or through this area of the building. Our service model will need to recognize that students desire healthy and less-healthy options each day.

Cost Opinion

Based on the student population at NCHS, the number of lunch periods currently in place, and the desire to expand the seating capacity in the dining space, we believe that the foodservice operation will need to accommodate up to 600 patrons during any given lunch serving time. With this in mind and the overall square footage available for the storage, preparation, and serving functions in the foodservice program at NCHS, we believe the school district will need to spend up from \$1,300,000 to \$1,500,000 on the foodservice equipment package at North Central High School. Please note that this cost range does include the complete installation of this package. However, it does not include the extensive work that will need to be done to the area infrastructure to accommodate this foodservice equipment package.

NORTHVIEW MIDDLE SCHOOL

OVERVIEW

Northview Middle School was originally built in 1956 to serve as a high school for Washington Township. In 1963, North Central High School was built, freeing the building to become a middle school. The school currently serves sixth through eighth graders, an adult education program, and True North, Washington Township's alternative school helping at-risk students achieve graduation. The 236,209 SF building has two stories and an underground tunnel system which is unoccupied. The district's Alternative High School, True North, is located at Northview Middle School in a newly renovated space. Northview is also home to the district's Adult Education program.

ARCHITECTURE

The building still has much of the original finishes and most classrooms have structural glazed facing tile. There are several accessibility issues that are noted below that were likely code compliant when the building was constructed. Of note is the unusual cafeteria layout: the kitchen is on the first floor of the building and the dining area is on the second floor. While this was a celebrated and novel approach to foodservice in its day, it has proved to be an inefficient layout requiring difficult food logistics.

Observed Potential Improvements:

- Reconfigure grab bars, toilet, faucet, and the mirror such that they meet current ADA in the Clinic.
- Replace drinking fountain so that it does not protrude too far into the corridor.
- Replace railings and guard rails with code compliant versions.
- Replace leaky exterior windows.
- Replace exterior doors or provide new seals at each to prevent air infiltration.
- Repair or replace deteriorating exterior façade, exterior finish system, soffit, and concrete.
- Repair spalled exterior concrete steps at loading dock.
- Replace inefficient windows.
- Review ACM management plan and remove existing 9"x9" floor tile according to results.
- Reconfigure kitchen area such that it is located on the same floor as the dining area.
- Replace damaged window blinds.
- Replace areas of damaged ceiling tiles.
- Replace missing floor tiles.
- Repair or replace damage from prior accessory attachment in restroom tile.
- Repair area of damaged floor finishes and wall base.
- Replace delaminating classroom doors and other damaged doors. Provide new, ADA compliant door hardware throughout building with appropriate locking functions.
- Reconfigure door approaches and clearances to meet requirements of the ADA.
- Repair or replace damaged lockers.
- Repair or replace damaged casework including worn casework in Media Center.
- Provide locking display case doors where needed.
- Replace worn choir risers and instrument storage casework.
- Engage theater consultant to inspect existing rigging system.
- Replace auditorium doors with ADA compliant sound doors.
- Refinish worn treads on the steps to the stage.
- Provide orchestral pit cover.
- Patch auditorium light booth area wall and remove (potentially ACM) 9x9 floor tile.

- Rebuild steps to the stage from the back of house. These are not code compliant due to inconsistent heights.
- Repair damage to gypsum board low walls at band riser ramps.
- Refinish gym floors.

MECHANICAL SYSTEMS

HVAC

The HVAC systems evaluated and observed at Northview Middle School include: Building Cooling Chillers, Heating Hot Water Boilers, Rooftop Units, Air Handling Units, Terminal Heating Units, Exhaust Fan, and Temperature Controls.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- The cooling plant consists of (4) 165-ton air cooled chillers with remote evaporators and (2) end suction based mounted chilled water pumps. These were installed in 2011 and have been given a rating score of 3.
- The heating plant consist of (5) 2,000 MBH condensing modular boilers and (2) based mounted hot water pumps. These were installed in 2011 and have been assigned a rating score of 3.
- The building has (4) large roof top units. These units serve the second-floor cafeteria and student center. The (4) units were installed in 1990 and have exceeded their life expectancy of 15 years and have been given a rating score of 1.
- The building contains (26) indoor air handling units. (10) of these units are variable air units and the remaining (16) are constant volume. These air handling units were installed new in 1990 and they appear to be working with no major issues. The maintenance staff has done a good job maintaining these indoor units. They have exceeded life expectancy of 15 to 25 years and have been assigned a rating score of 2. These units will eventually need replaced due to age.
- The building contains (42) terminal heating units. These were installed in 1990 and have exceeded their life expectancy of 20 years and have been given a rating score of 1.
- The building contains (19) exhaust fans. These exhaust fans were installed in 1990 and have exceeded life expectancy of 20 years. These units have been assigned a rating score of 1.
- Facilities staff reports that the wrestling room needs to be air conditioned, and that the front office area is always cold in the winter months.

Observed Potential Improvements:

- Replace the building's (4) large roof top units. These units serve the second-floor cafeteria and student center.
- The building's (26) indoor air handling units will eventually need to be replaced due to age.
- The building's (42) terminal heating units will eventually need to be replaced due to age.
- Replace the building's (19) exhaust fans.

Controls

On average, HVAC controls at Northview scored very well at 3.95 (3.9 rooms + 4 controllers).

Existing Components and Observed Potential Improvements:

- The (2) bCX4040 and bCX4000 top-level controllers and all Andover b3 Series controllers should remain.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

NOTE: Current programming does not incorporate automatic standalone operation or manual off-auto-on graphical considerations. Retro-commissioning and system optimization services are recommended for most of the buildings.

PLUMBING

Existing Systems:

- The two-story building with underground tunnel system was remodeled in 1991 with new domestic piping. The domestic piping appears to be in fair condition, but the elastomeric insulation has hardened and no longer offers the same insulative value as when it was installed.
- The underground sanitary and storm system is original from the 1950s and will be camera scoped to determine condition.
- Heavy calcium buildup and stains were observed on plumbing fixtures.
- The three central domestic water heaters, thermostatic mixing valve and 2 circulating pumps are in fair condition. However, the hot water return system is not balanced. A runtime test was conducted at the far end of wing B for over 20 minutes and the discharge from faucets' hot water valves ran cold the entire time.
- The fire protection system is experiencing periodic leaks and pipe failures. The fire pump and piping system serve fire hose valve cabinets throughout the facility and sprinkler coverage for the central connecting lobby. If the entire building is protected by an automatic wet sprinkler system, the fire hose valves and therefore fire pump will not be required. The available water pressure is sufficient to supply a wet sprinkler system.

Observed Potential Improvements:

- Replace all hot water return balance valves.
- Balance the entire hot-water return system.
- Replace all domestic hot and cold-water piping insulation with 1" jacketed fiberglass insulation.
- Replace plumbing fixtures for any areas where remodel is considered.
- Replace the water softener with a system sized to soften the entire building.
- Schmidt will arrange for sewer camera scoping of underground sanitary and storm piping to determine condition.
- Install a new automatic wet sprinkler system for the entire building.
- Remove existing fire protection system including fire hose valve cabinets and fire pump.

ELECTRIC

Distribution

Existing Systems:

- The main service is a 2500A 480Y/277V-3 ϕ -4W with a main-tie-main set up. It is 30 years old and appears to be in good shape.
- Most panelboards match the main switch gear vintage. From their appearance they seem to be in good condition. There are (3) panelboards that are at the end of life.

Observed Potential Improvements:

- Have an infrared scan performed to locate any loose or corroded connections in the main service and main switch gear vintage.
- Replace the (3) panelboards that are at the end of life.

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvement:

- Replace all fluorescent light fixtures with more efficient LED fixtures.

Wiring Devices

Existing Systems:

- Receptacle density appeared to be adequate. Past renovations added receptacles via surface raceway. Most raceway is in good condition. It was observed that there was some damaged raceway.
- Floor boxes throughout the building have missing covers.

Observed Potential Improvements:

- Repair damaged raceway.
- Replace floor boxes with missing covers or abandon them by removing devices and patching abandoned holes.

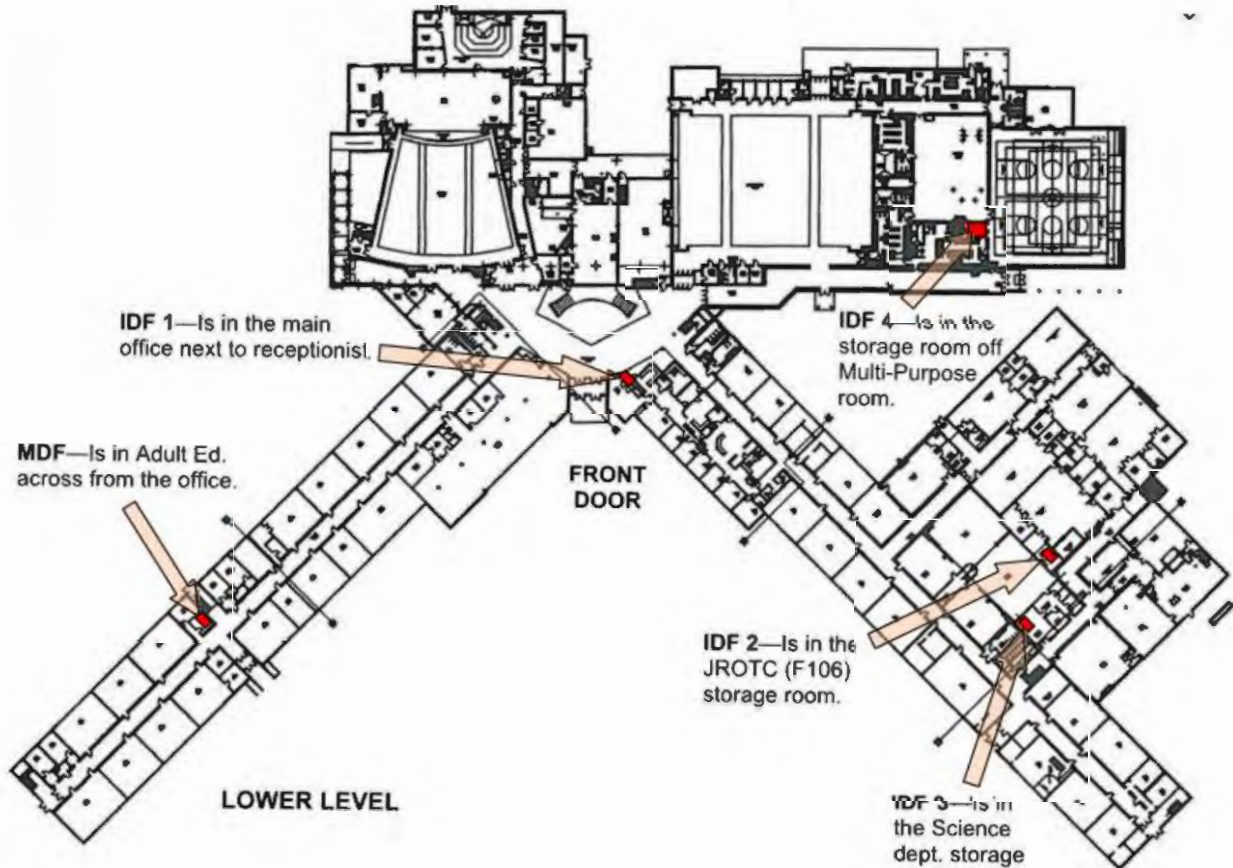
TECHNOLOGY

The following is a summary of the technology systems toured at Northview Middle School. This information was gathered from our site visits held from August 13, 2019 through August 15, 2019.

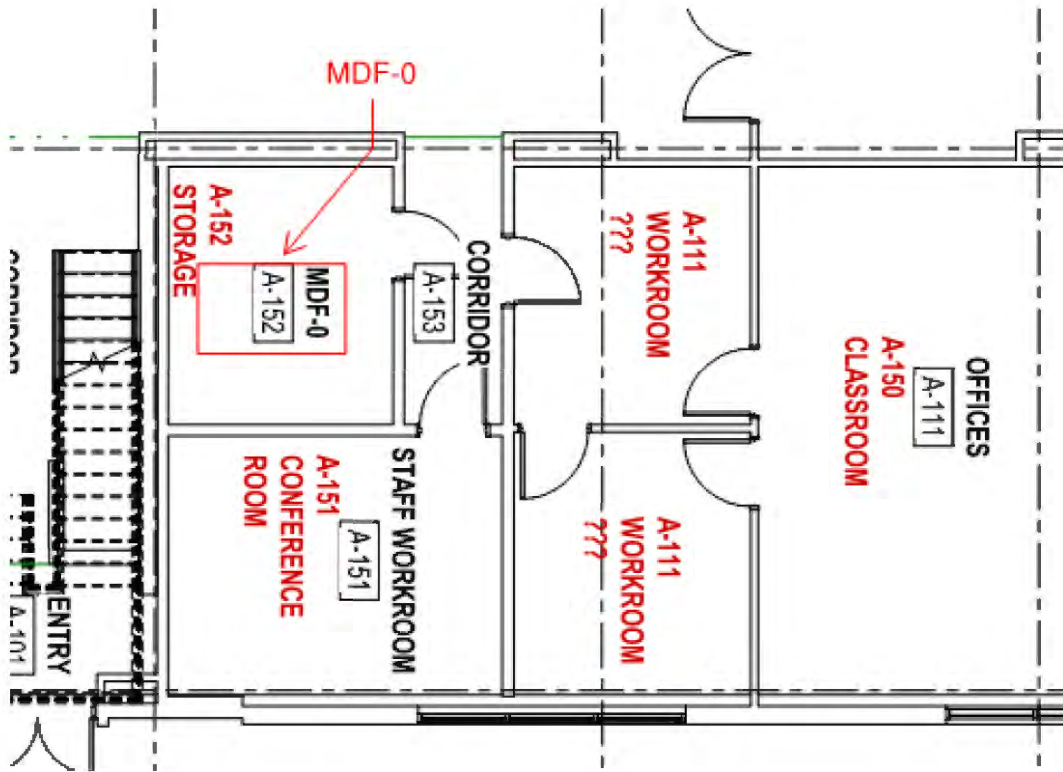
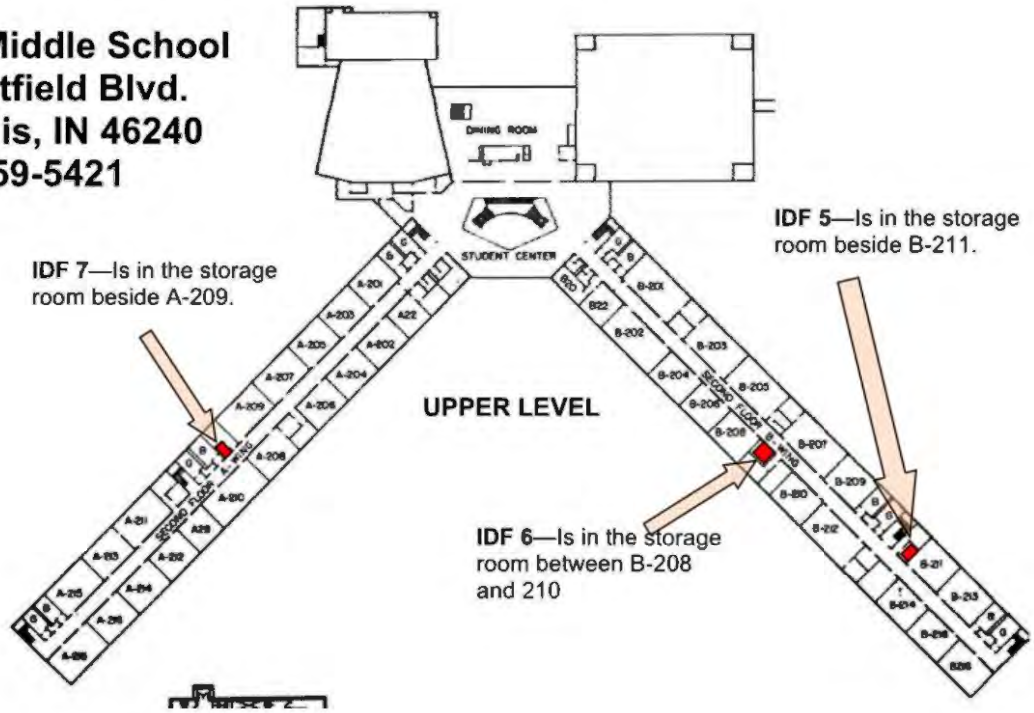
Telecommunications and Data Infrastructure

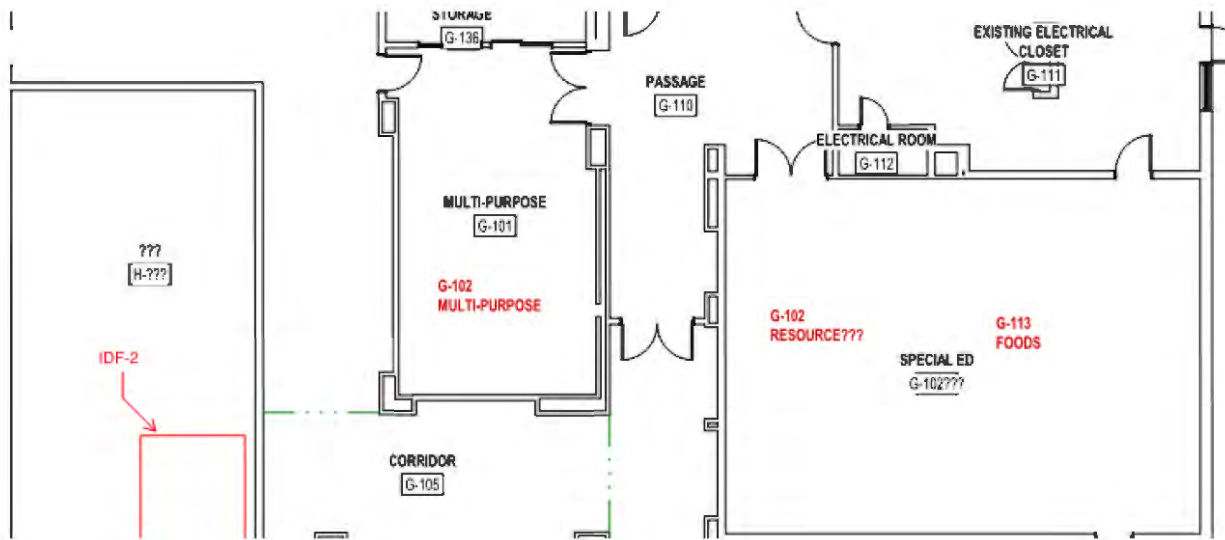
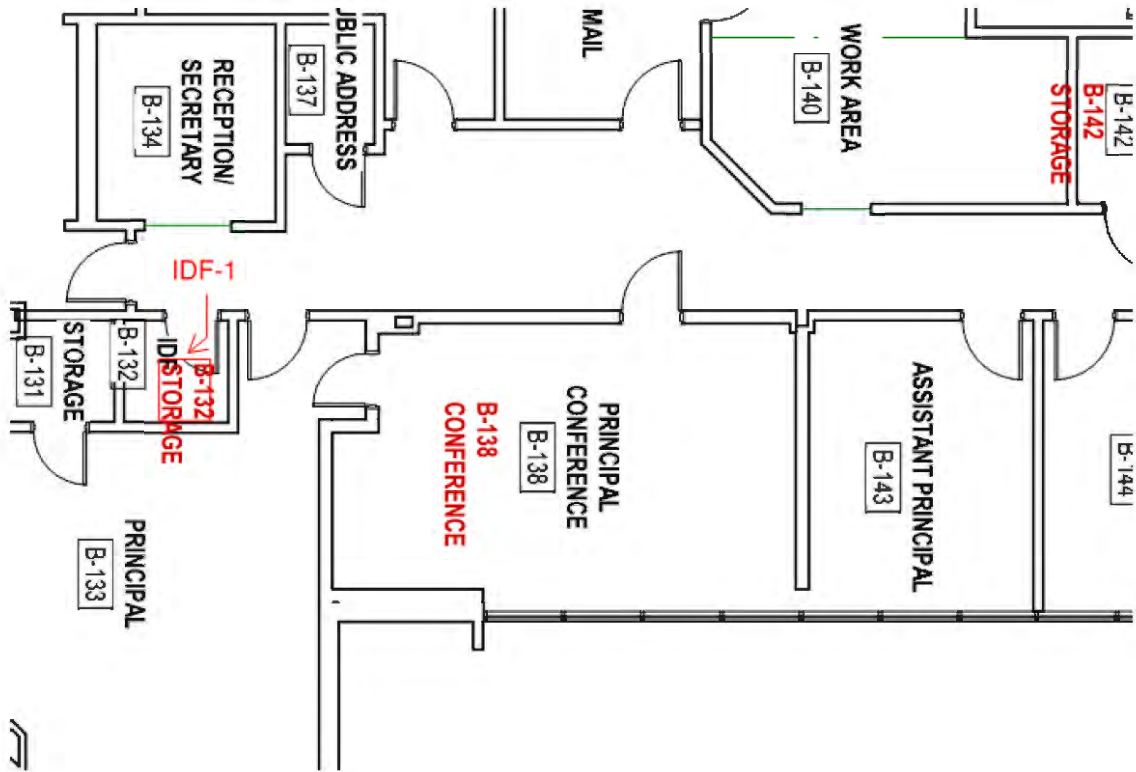
The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed in a star topology from each telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

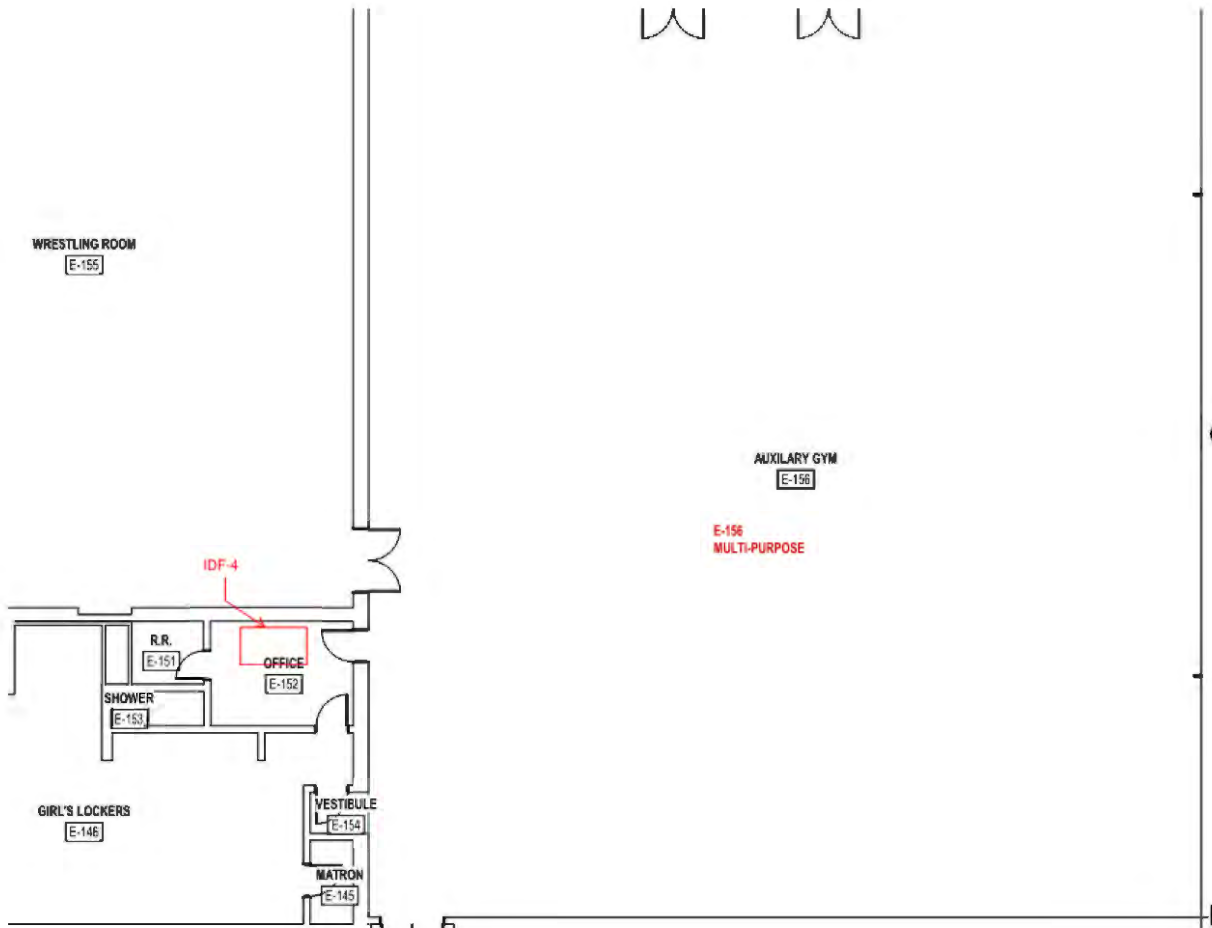
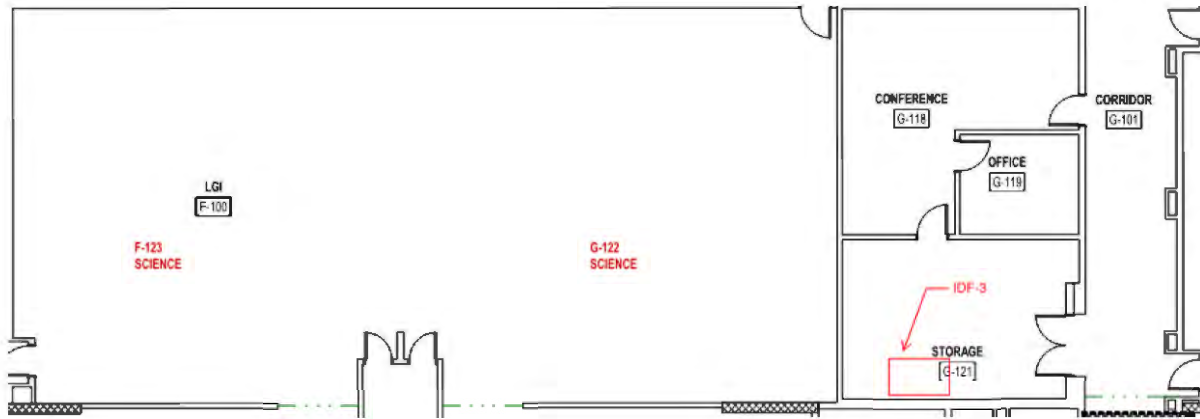
MDF / IDF Locations

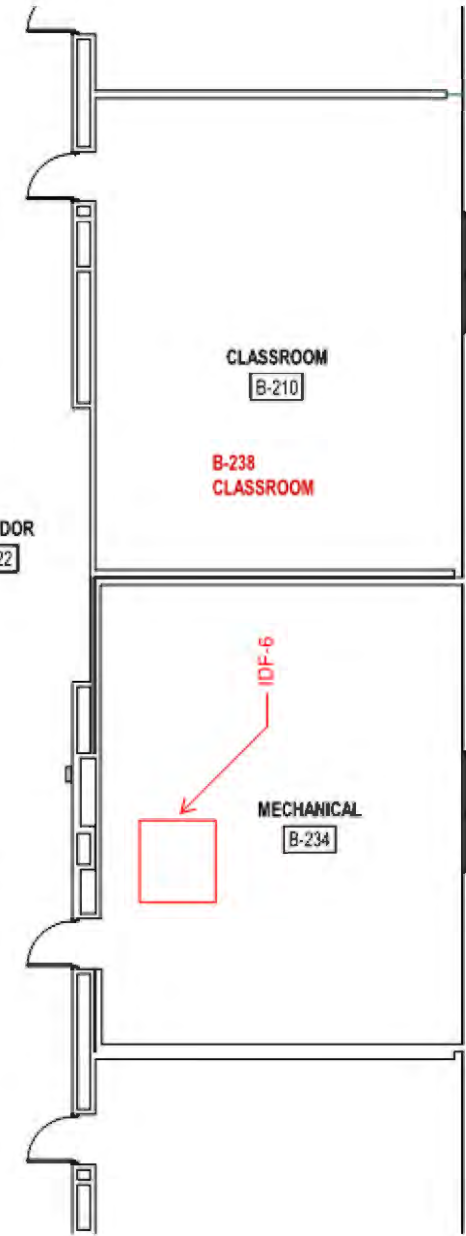
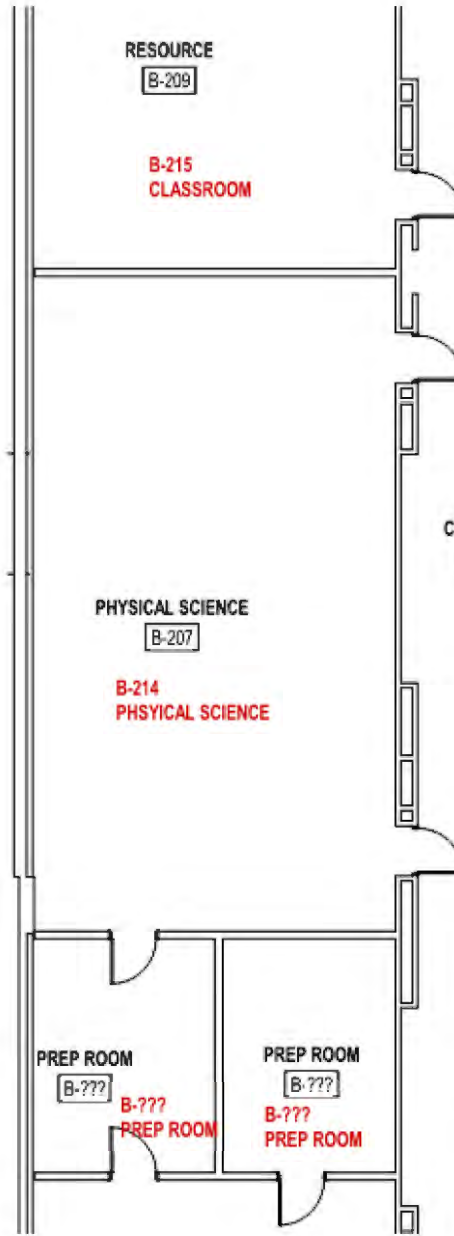
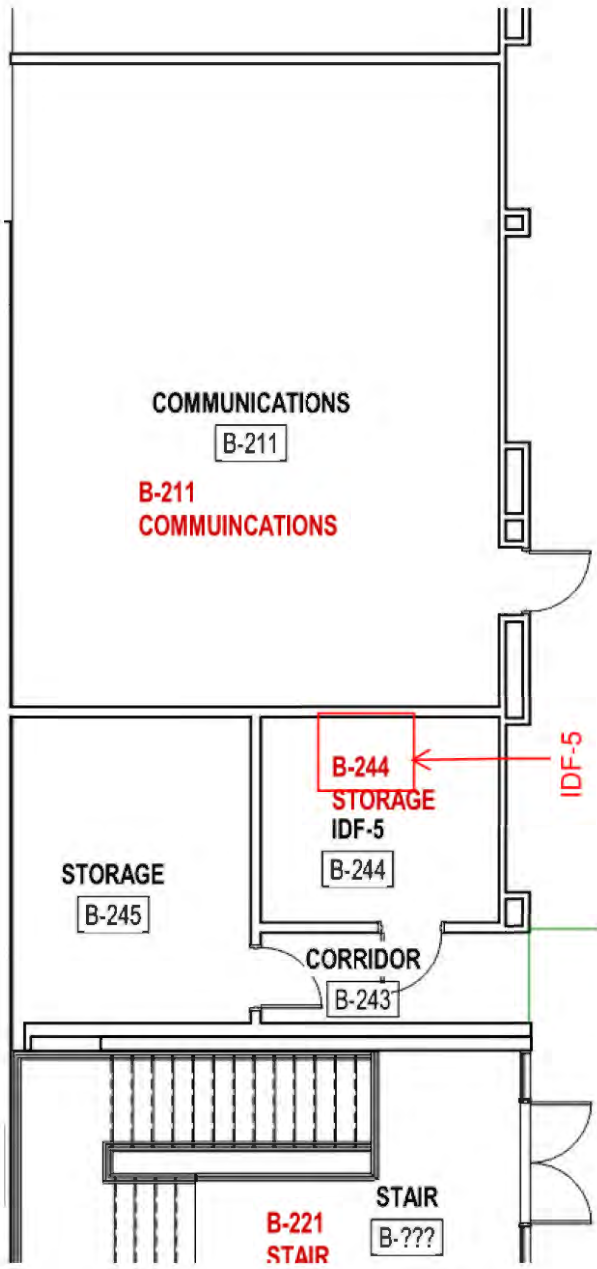


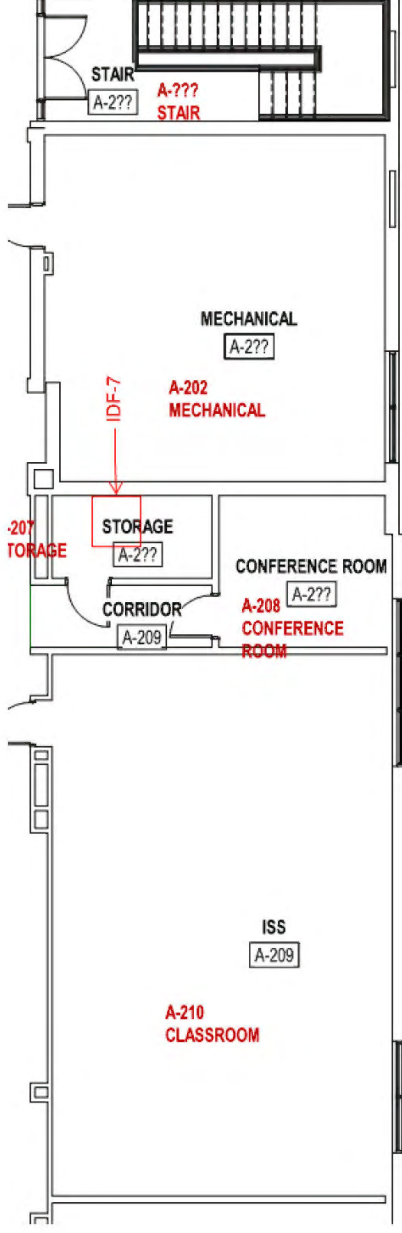
Northview Middle School
8401 Westfield Blvd.
Indianapolis, IN 46240
317-259-5421





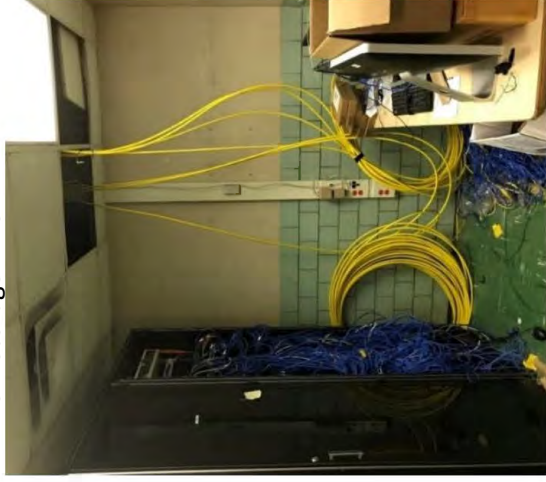






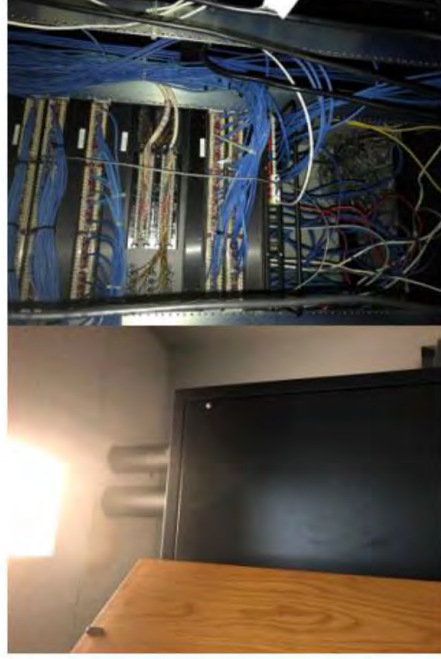
MDF / IDF Pictures

MDF-0 – Storage A-152



MDF-0 located in a storage room across from the adult education office. Room was used for general technology storage.

IDF-1 – Storage B-132



IDF-1 located in small closet next to receptionist desk. Closet is very small, not allowing door to fully open. There is no cooling vent in the room.

IDF-2 – Electrical Room Unit F / G by Corridor G-105 (H???)



IDF-2 located in an electrical room within classroom in unit G

IDF-3 – Storage G-121



IDF-3 located in “storage room” converted into a classroom in unit G.

IDF-4 – Office E-152



IDF-4 located in gym teachers office off of auxiliary gymnasium.

IDF-5 – Storage B-244



IDF-5 located in storage room on second level of the building. Room used for general storage.

IDF-6 – Mechanical B-234



IDF-6 located in large mechanical room on the second floor.

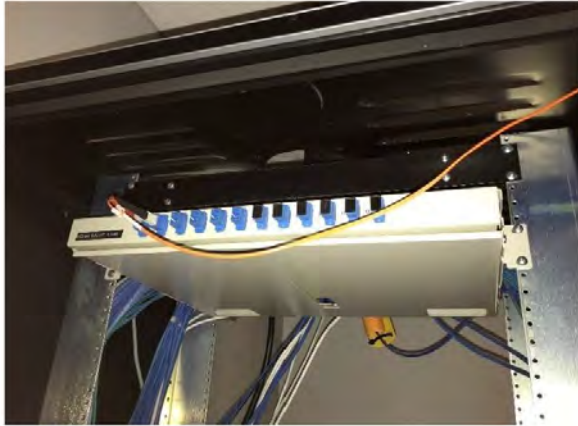
IDF-7 – Storage A-207



IDF-7 located in storage room on second level. Room used for general storage.

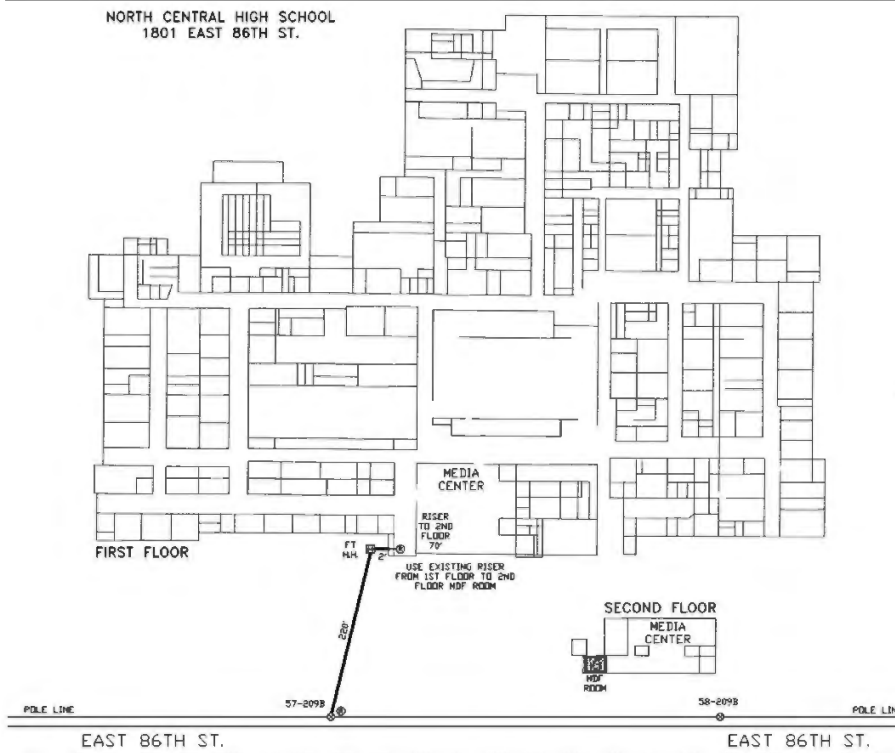
Fiber Layout

- 12 Strands of MM Fiber serve IDF-1
- 12 Strands of MM Fiber serve IDF-2
- 12 Strands of MM Fiber serve IDF-3
- 12 Strands of MM Fiber serve IDF-4
- 12 Strands of MM Fiber serve IDF-5
- 12 Strands of MM Fiber serve IDF-6
- 12 Strands of MM Fiber serve IDF-7



Telecommunications Entrance Services

During our walkthrough we were unable to locate the telecommunications or fiber entrance. However, it is known that the fiber connection for the Northview stems from the connection brought into North Central High School across the campus. Below is documentation of the fiber entrance for the campus.



Audio Visual SYSTEMS

Typical Classrooms

A Typical Classroom included the following:

- One (1) ceiling mounted projector to display video images
- One (1) projector screen
- Four (4) ceiling speakers for presentations
- One (1) ceiling PA Speaker for announcements
- One (1) ceiling IR microphone
- One (1) FrontRow Lasso system (discontinued) for a teacher microphone
- One (1) horizontal surface raceway location, typically containing five (5) data locations
- One (1) AV Input Location that contains the following inputs:
 - Cable TV
 - RCA Connections
- A Teachers Station location that contains the following inputs:
 - 1 Network Data
 - 1 Voice Network Data
 - Cable TV Connections
 - RCA Connections
- About ½ of the Classrooms included one (1) AV Input Location containing the following inputs:
 - VGA
 - Video
 - L/R Audio
 - Audio



Northview Band / Choir / Orchestra Rooms

A typical band / choir / orchestra room for Northview included the following:

- Everything included in a Typical classroom (see above)
- Pioneer SA-8500
- Two (2) MTX AAL15B



Electronic SAFETY AND Security

Electronic Access Control (EAC)

Northview currently contains 1 exterior card reader and 7 interior card readers.

Video Security System (VSS)

Northview contained a total of 55 security cameras.

28 are interior on the first level.

27 are interior on the second level.

At the time of visit, no exterior cameras could be located.

It is unknown how many cameras are functional.

Intrusion Detection Systems

We are aware of existing systems (keypad, sensor location, panic buttons, etc.) provided by CSC.



FOODSERVICE

The foodservice operation at Northview Middle School (NMS) is currently split over two floors. The kitchen is on the lower level of the building and the serving space is located directly above it. An elevator is used to transport the food and personnel from the kitchen to the serving space. Needless to say, this is a very inefficient way to serve the students and staff of NMS. The current set-up makes it difficult to maintain food quality and it requires perhaps more labor than a more efficient operation.

Based on this information, our discussions with the Nutrition Department Leadership Team, our on-site observations, and our experience in this market (Primary Education, K-12), we are recommending a complete transformation of the foodservice operation at NMS.

Population, Participation, and Proposed Service Levels

NMS has a current student population of approximately 800 students. Approximately 73% of the student body is registered to receive their lunch free or at a greatly reduced cost. The foodservice operation at NMS currently has a participation rate of approximately 50%. There are additional ala carte purchases made, as well. Similar to Eastwood Middle School and Westlane Middle School, the student population for the renovated facility is expected to be 1,050.

Design Intent

The plan for NMS is to provide a kitchen and serving space adjacent to one another on the first floor of the renovated facility. This will provide the operational efficiency required to serve the expanded student population. We anticipate working with the Nutritional Department of MSDWT to design spaces that are similar in size and space as Eastwood MS and Westlane MS.

Cost Opinion

Based on the proposed student population capacity at NMS, the number of lunch periods anticipated (3), we believe that the foodservice operation will need to accommodate up to 265 patrons during any given lunch serving time. With this in mind and the overall square footage anticipated for the storage, preparation, and serving functions in the foodservice program at NMS, we believe the school district will need to spend up from \$600,000 to \$630,000 on the foodservice equipment package at Northview Middle School. Please note that this cost range does include the complete installation of this package. However, it does not include the extensive work that will need to be done to the area infrastructure to accommodate this foodservice equipment package.

J. EVERETT LIGHT CAREER CENTER

OVERVIEW

JEL is a 170,677 SF building which was built in 1970 and has never undergone renovations. The building provides career and technical education to high school students from Hamilton, Boone, and Marion counties. The center's current student population is 1,700, with growth to 2,000 students anticipated in the near future.

ARCHITECTURE

In general, the building needs improvements to the building envelope to increase energy efficiency and occupant comfort, finish upgrades, and improvements and modifications to make the building ADA accessible. One area of the building to the northwest that houses a data room reportedly floods during rains.

Observed Potential Improvements:

- Provide consistent window shades throughout the building.
- Replace rusty metal cabinets.
- Replace broken operable wall.
- Remove abandoned display boards and replace warped marker boards.
- Repair or replace damaged lockers.
- Patch holes in walls from abandoned clock system.
- Remove plywood window infill and provide new windows.
- Infill CMU wall openings with CMU.
- Fix cracks in CMU.
- Repair damaged concrete slab.
- Fill all open joint between windowsills and window frames. Provide weather seals at all exterior door.
- Replace non-insulated garage door with insulated.
- Replace rusted door frames and damaged doors.
- Replace warped exterior metal panels.
- Re-caulk joints between precast panels.
- Replace single glazed, non-insulated windows.
- Repair crack in exterior CMU wall at the window heads and sills.
- Provide consistent casework throughout the building with accessible door pulls on all cabinets.
- Repair or replace damaged door frames.
- Replace damaged doors.
- Provide ADA accessible door hardware throughout.
- Prevent water infiltration from rain in data room and adjacent corridor. Replace finishes that have been damaged from previous water infiltration.
- Replace damaged toilet partitions.
- Replace warped and otherwise damaged ceiling tiles.
- Replace non-washable ceiling tiles with washable where required by code.
- Provide ADA accessible faucet handles.
- Provide ADA accessible stalls with grab bars.
- Provide accessible height counter at the reception desk.
- Provide slip resistant surface on the ramp.

- Provide accessible height built-in student lab tables, study carrels, workstations, seating and teaching stations.
- Replace inaccessible transaction window with one that is at an accessible height.
- Replace vinyl wall covering that is pulling away from the wall throughout building.
- Replace missing wall base.
- Replace cracked floor tile.
- Clean and replace finishes in entry vestibule.
- Repaint walls where paint is peeling from the wall or walls are dirty.
- Replace stained and damaged carpet.
- Repair stained and cracked concrete.
- Repair cracked terrazzo or remove and replace with alternative floor finish.

MECHANICAL SYSTEMS

HVAC

The HVAC systems observed and evaluated at JEL include: Building Rooftop Units, VAV Boxes, Exhaust Fans, and Temperature Controls. The entire building is served via heating hot water and chilled water from the NCHS boiler room. Piping is routed within the corridor that attaches JEL to NCHS.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- The building has (24) large roof top units with the majority of these being multi-zone units. These units serve the entire building. The (24) units were installed in the early 1980's and have exceeded their life expectancy of 15 years. These units have been assigned a rating score of 1.
- The building contains (14) VAV boxes which were installed in the 1980s. These units have exceeded their life expectancy of 20 years and have been assigned a rating score of 1.
- The building contains (42) exhaust fans which were installed in the 1980s. These units have exceeded their life expectancy of 20 years and have been assigned a rating score of 1.
- Facilities staff report that all of the rooftop units need replaced. The temperature controls serving this building are obsolete and staff cannot find parts for them anymore.

Observed Potential Improvements:

- Replace Unit A's (4) rooftop air handling units, Unit B's (4) rooftop air handling units, Unit C's (4) rooftop air handling units, Unit D's (10) rooftop air handling units, Unit E's (2) rooftop air handling units.
- The building's (14) VAV boxes will eventually need to be replaced due to age.
- The building's (42) exhaust fans will eventually need to be replaced due to age.
- Replace the building's entire Temperature Control System.

Controls

In general, HVAC controls were rated as failing / poor and received an average score of 0.575 (1.15 rooms + 0 controllers).

Existing Components and Observed Potential Improvements:

- The Andover Infinity 9200 top-level controller should be replaced.
- AHU.D2, JELCC.EOL, and Radio.TV.Office are Andover 920, 867, and 850 series controllers and should be replaced.

NOTE: Andover 800 and 900 series controllers are the first version of proprietary Inifinet communication and are limited to 19,200 bps. Andover i2 800 and 900 series controllers are the second vintage proprietary Inifinet communication and are limited to 19,200 bps. Andover b3 controllers are native BACnet controllers limited to 76,800 bps.

NOTE: Andover 9200, 9400, and 9900 controllers are vintage style controllers no longer in production. Andover bCX controllers can be BACnet or Inifinet controllers including field conversion to BACnet or Inifinet.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

NOTE: Current programming does not incorporate automatic standalone operation or manual off-auto-on graphical considerations. Retro-commissioning and system optimization services are recommended for most of the buildings.

PLUMBING

Existing Systems:

- The one-story structure was built in 1970 and has had no significant plumbing system upgrades since its construction.
- The incoming water service does not have any form of backflow prevention.
- The underground sanitary and storm system is original and will be camera scoped to determine condition. Building staff reports of pipes collapsing.
- Numerous sanitary vents on the roof are cut off too short and could be blocked during heavy snow events.
- Heavy calcium buildup and stains were observed on plumbing fixtures.
- Leaks have been reported at connections to roof drains.
- The central domestic gas-fired water heater is in average condition, but it is not sized appropriately for the building fixtures plus the culinary suite. The south shop and cosmetology classrooms are served by an electric water heater which is in fair condition. The thermostatic mixing valve at this location is not piped with a heat trap and temperature creep was observed up to 150 degrees. Scalding can occur under the current conditions.
- The building does not have any form of fire suppression system.

Observed Potential Improvements:

- Add two (2) 2" reduced pressure principal backflow preventers on the incoming service.
- Replace all domestic hot and cold-water piping.
- Insulate all domestic hot and cold-water piping with 1" jacketed fiberglass insulation.
- Replace plumbing fixtures in areas where remodel is considered.
- Replace the water softener with a system sized to soften the entire building.
- Schmidt will arrange for sewer camera scoping of underground sanitary and storm piping to determine condition.
- Anticipate replacing the entire sanitary waste and vent system.
- Add grease and solids interceptors outdoors to serve the culinary suite.
- Add a hair and lint interceptor for the cosmetology suite.

- Replace all horizontal storm piping from roof drains to vertical drops.
- Camera scoping will determine if replacement of storm vertical drops and underground piping is required.
- Install a new fire water service and automatic wet sprinkler system for the entire building.
- Modify existing gas service as need for new equipment.

ELECTRIC

Distribution

Existing Systems:

- The main service is a Westinghouse 1200A 480Y/277V-3 ϕ -4W switchboard manufactured in 1972. We recommend replacing the switchboard along with the following distribution equipment:
 - (18) 225A obsolete Westinghouse panelboards
 - (4) 100A obsolete Westinghouse panelboards
 - (2) 1200A obsolete Westinghouse distribution boards
 - (3) 600A obsolete Westinghouse distribution boards
 - Westinghouse 300KVA and (1) 225KVA transformers

Observed Potential Improvement:

- To adequately assess whether a larger service is required for a new addition, we recommend metering the main gear during summer and winter months to record the peak demand (currently the whole campus is metered together which does not allow for evaluating individual building demand).

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvements:

- Replace all fluorescent light fixtures with more efficient LED fixtures.
- Lighting control should be changed to occupancy sensors.

Wiring Devices

Existing Systems:

- Receptacle density appeared to be adequate. Past renovations added receptacles via surface raceway. Most raceway is in good condition, but some damaged raceway was observed.
- Floor boxes throughout the building have missing covers.

Observed Potential Improvements:

- Repair damaged raceway.
- Replace floor boxes with missing covers or abandon them by removing devices and patching abandoned holes.

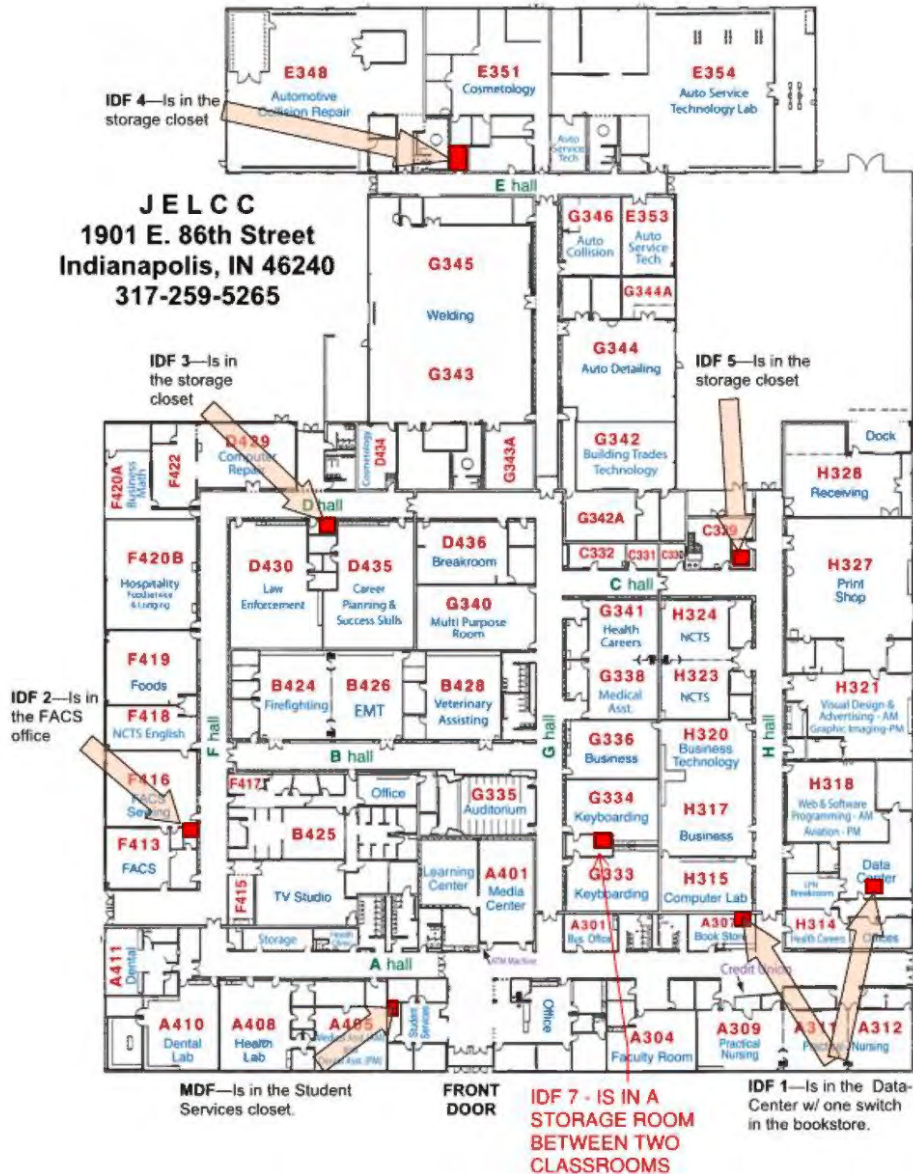
TECHNOLOGY

The following is a summary of the technology systems toured at J. Everett Light Career Center. This information was gathered from our site visit held August 22, 2019.

Telecommunications and Data Infrastructure

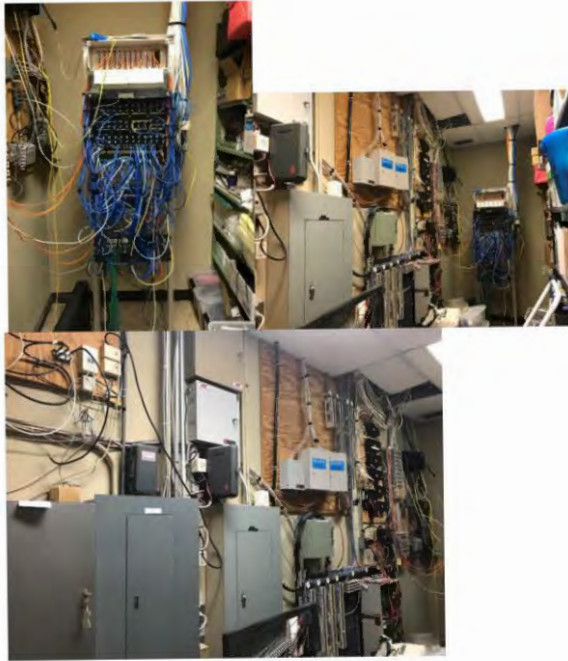
The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed in a star topology from each telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

MDF / IDF Locations



MDF / IDF Pictures

MDF 0 – Student Services Closet A400C



The MDF is located in the student services closet near the main entrance of the building. The room contained numerous electrical panels, security panels, and terminal blocks. In addition to the telecom 2-post rack, the room also had an ACT ceiling and several shelves used for general storage.

IDF 1 – Data Center



IDF 1 is located in the Data Center room. The room contains the 2-post telecom rack as well as 2 Liebert equipment racks. The 2-post telecom rack is labeled IDF 6 but has since been absorbed into IDF 1. The room is used as the hub and storage for a lot of broken or unused AV equipment. The 2 Liebert equipment racks were added at a later install time, consisting of several switches, security equipment, and a large fiber drawer that sends a fiber connection to the Community and Education Center.

IDF 2 – Storage Room Connected to the Dental Lab



IDF 2 is located in a storage closet connected to a dental lab and classroom. The room incorporates the wall mounted TR equipment enclosure in addition to electrical paneling, wooden storage cabinets, and an ACT ceiling.

IDF 3 – Storage Closet in D Hallway



IDF 3 is located in a medium sized storage closet, seemingly used for general and custodial storage. The room contained the wall mounted TR equipment cabinet, electrical and CSC security panels.

IDF 4 – Storage Closet in E Hallway E349



IDF 4 is located in a storage closet in the E Hallway outside of the Cosmetology rooms. The room is used for chemical storage and cosmetology supplies. It incorporates a wall mounted TR equipment cabinet with an open ceiling.

IDF 5 – Storage Closet in H Hallway H326



IDF 5 is located in the storage closet in H hallway across from the receiving room. The room is used for general and chemical storage. It incorporates a wall mounted TR equipment cabinet.

IDF 7 – Storage Room Between G333 and G334



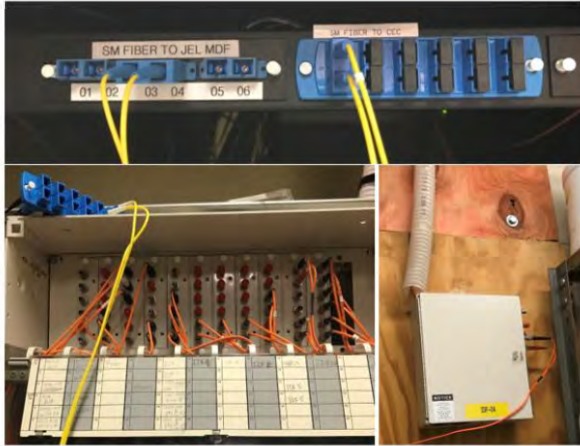
IDF 7 is located in a storage room shared by two surrounding classrooms. The room is used as a general storage / office space, as it incorporates desks, a refrigerator, and an ACT ceiling. The wall mounted TR rack in the room is labeled “IDF 7” and not IDF 6 since IDF 6 was absorbed into IDF 1 (See IDF 1 picture for details).

Fiber Layout

JEL is currently served by MultiMode fiber. However, the building is in the process of being converted over to SingleMode fiber using IDF 1 as the main fiber unit.

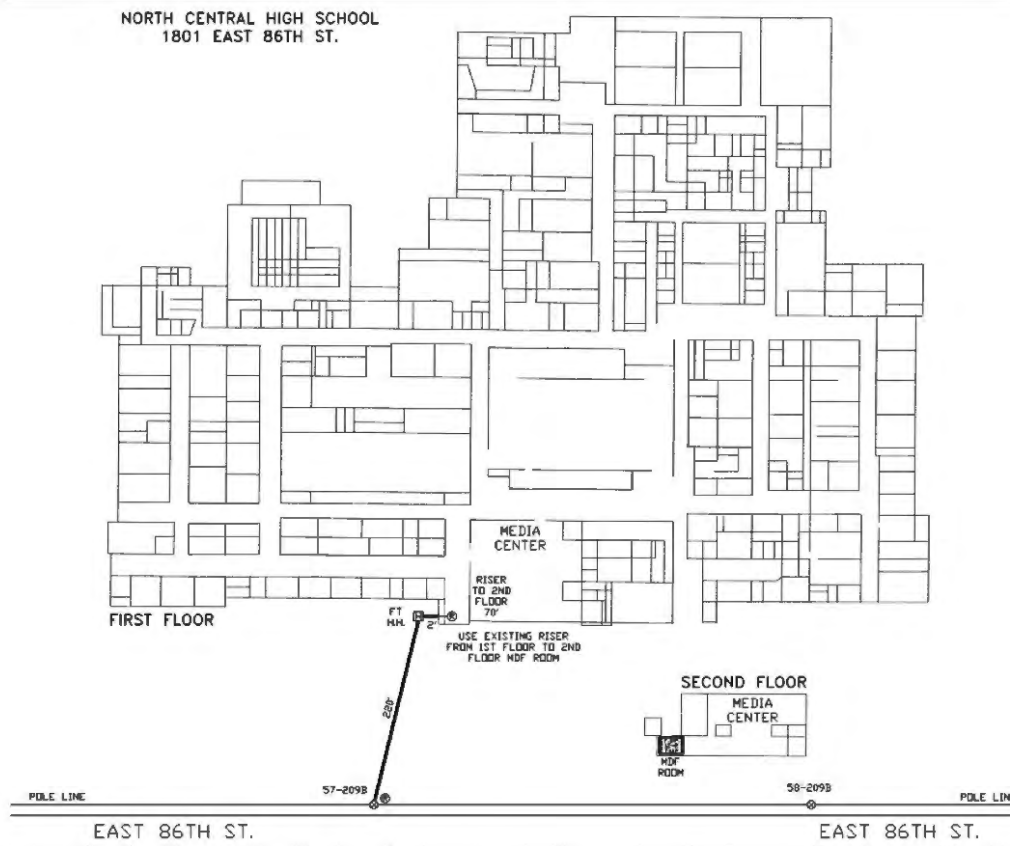
IDF 1 is in the process of becoming the main hub for the fiber in the building. It is the entrance for the SM fiber from North Central. It then sends that SM fiber to CEC and SM fiber to the MDF in JEL. JEL is still in the process of installing the SM fiber into the other IDFs throughout the building.

- 6 Strands of SM Fiber serve the IDF 1
- 6 Strands of MM Fiber serve the IDF 2
- 6 Strands of MM Fiber serve the IDF 3
- 6 Strands of MM Fiber serve the IDF 4
- 6 Strands of MM Fiber serve the IDF 5
- 6 Strands of MM Fiber serve the IDF 6 (Which is next to / absorbed in IDF 1)
- 6 Strands of MM Fiber serve the IDF 7



Telecommunications Entrance Services

During our walkthrough, we were only able to locate the single mode fiber entrance for the building, which was found in the data room with IDF1 & 6. While the multimode fiber entrance that the building currently utilizes could not be located, it is assumed to also be in the data room near the Northwest corner of the building since it is the closest to North Central. The fiber for the building stems from the connection at North Central High School. Below is documentation of the fiber entrance for the North Central campus.



Audio Visual SYSTEMS

J Everett Light Career Center consists of many career dedicated classrooms and offices.

Typical Classroom

While each classroom varied slightly depending on what career path the room was being used for, at a minimum a typical classroom contained the following:

- At least one (1) data voice location containing a varying amount of data connections
- Some form of video projection, whether is be a projector and screen, a short throw projector, or an ActivBoard with a short throw projector
- At least one (1) paging speaker, either wall or ceiling mounted depending on the room

Other various aspects of a classroom included, but not all containing the following:

- An AV Input, containing VGA and RCA connectivity
- A varying number of program audio speakers for sound reinforcement depending on the size and usage of the room
- A coaxial cable input location
- A wall phone location
- A wall mounted call switch location
- XLR inputs / connections
- Wall mounted monitor location
- A mobile monitor cart location
- A mobile projector cart location
- A ceiling mounted IR microphone



Typical Office

At a minimum, a typical office contained the following:

- One (1) ceiling mounted paging speaker
- One (1) wall mounted call switch location
- One (1) data location containing at least 2 data connections

Other various aspects of an office space included, but not all containing the following:

- A wall or ceiling mounted monitor
- A wall mounted volume control knob
- An AV input containing VGA and RCA connectivity
- Multiple data voice locations



Electronic SAFETY AND Security

Electronic Access Control (EAC)

During our visit, we were able to locate just one card reader in the building, located on an exterior door at the Southwest of the building. We did locate three motion detection sensors and a door contact sensor on the main entrance vestibule on the building, as well as door contact sensors of a few of the automotive workshop doors.

Video Security System (VSS)

During the assessment of the J. Everett Light Career Center, 20 security cameras were located. 19 of these cameras were found in the hallways and near the main entryway, sufficiently covering every accessible hallway to a student. Only one security camera could be located outside of the building at the time of visit. It is unknown how many of the cameras are functional.



Intrusion Detection Systems

We are aware of existing systems (keypads, sensor locations, panic buttons, etc.) provided by CSC.



HILLTOP DEVELOPMENTAL PRESCHOOL

OVERVIEW

Hilltop Developmental Preschool was built in 1976. The one-story building is 30,651 SF and was renovated in 2005. Hilltop provides special education services for children ages three to five who live in Washington Township, and daycare for children of Washington Township employees.

ARCHITECTURE

The building is one story brick with standing seam metal roof and original windows and doors. The building has a swimming pool and several small, padded rooms that were used as “time-out” spaces when that practice was allowed. The building needs finish upgrades, and modifications to correct non-AADA-compliant issues.

Observed Potential Improvements:

- Replace roof
- Remove padding from closet walls.
- Remove swimming pool and renovate room for group space.
- Repair cracking under windowsills.
- Renovate Locker Rooms, replace lockers
- Renovate restrooms to provide ADA clearances
- Replace finishes throughout building
- Replace rusty lockers
- Replace doors and hardware

MECHANICAL SYSTEMS

HVAC

The HVAC systems observed and evaluated at Hilltop Developmental Preschool include: Air Cooled Chiller with remote Evaporator, Air Handling Units, VAV Boxes, Exhaust Fans and Temperature Controls.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- The building has (3) Air Handling Units with two of these being single zone and serving VAV boxes. These units serve the entire building: one unit serves a small pool, one serves the gymnasium, and one serves the rest of the building’s VAV boxes. The (3) units have exceeded their life expectancy of 15 years and have been given a rating score of 1 and will need replaced ASAP.
- The building’s VAV boxes have been assigned a rating score of 1.

Observed Potential Improvements:

- Replace the building’s (3) Air Handling Units
- The building’s VAV boxes will eventually need to be replaced due to age.

Controls

In general, HVAC controls were rated as poor and were assigned an average score of 0.94 (0.87 rooms + 1 controllers).

Existing Components and Observed Potential Improvements:

- The Lochinvar boilers are in new, but the remaining mechanical equipment needs replacement before considering upgrading the controls.
- The Andover Infinity AC256 top-level controller cannot easily be repaired and is in fragile condition and should be replaced.
- AHU3 and the main plant controller are Andover 920 and 810 series controllers and should be replaced.

NOTE: Andover 800 and 900 series controllers are the first version of proprietary Inifinet communication and are limited to 19,200 bps. Andover i2 800 and 900 series controllers are the second vintage proprietary Inifinet communication and are limited to 19,200 bps. Andover b3 controllers are native BACnet controllers limited to 76,800 bps.

NOTE: Andover AC256, 9200, 9400, and 9900 controllers are vintage style controllers no longer in production. Andover bCX controllers can be BACnet or Inifinet controllers including field conversion to BACnet or Inifinet.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

NOTE: Current programming does not incorporate automatic standalone operation or manual off-auto-on graphical considerations. Retro-commissioning and system optimization services are recommended for most of the buildings.

PLUMBING

Existing Systems:

- The one-story structure was built in 1976 with no significant plumbing system upgrades.
- The incoming water service does not have any form of backflow prevention.
- The domestic system is comprised of galvanized and copper piping.
- The underground sanitary and storm system is original and will be camera scoped to determine condition. Reports of sewer backup in lockers and gang restrooms have been received. The sanitary system is comprised of cast iron and galvanized piping.
- Heavy calcium buildup and stains were observed on plumbing fixtures.
- A duplex water softener is used to treat domestic hot water.
- Pool equipment is in poor condition as is the pool.
- The central domestic gas fired water heater is in poor condition.
- The building does not have any form of fire suppression system.

Observed Potential Improvements:

- Add two (2) 2" reduced pressure principal backflow preventers on the incoming service.
- Replace all domestic hot and cold-water piping.
- Insulate all domestic hot and cold-water piping with 1" jacketed fiberglass insulation.

- Replace plumbing fixtures.
- Replace the water softener with a system sized to soften the entire building.
- Schmidt will arrange for sewer camera scoping of underground sanitary and storm piping to determine condition.
- Anticipate replacing the entire sanitary waste and vent system.
- Camera scoping will determine if replacement of storm piping is required.
- Install a new fire water service and automatic wet sprinkler system for the entire building.
- Modify existing gas service as need for new equipment.
- Remove pool piping system complete. Abandon underground pool piping.

ELECTRIC

Distribution

Existing Systems:

- The main service is a Square-D 600A 208Y/120V-3 ϕ -4W switchboard manufactured in 1978. The secondary conductors where they enter the building to the service are not installed in conduit.

Observed Potential Improvements:

- Install conduit and repull the secondary conductors.
- Replace the switchboard and the following distribution equipment:
 - (1) 400A distribution board
 - (2) 225A panelboards
 - (4) 100A panelboards

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvements:

- Replace all fluorescent light fixtures with more efficient LED fixtures.
- Change lighting controls to occupancy sensors.

Wiring Devices

Existing System:

- Receptacle density appeared to be adequate. Past renovations added receptacles via surface raceway. Most raceway is in good condition.

Fire Alarm System

Existing System:

- The current fire alarm control panel is a Honeywell Firelite MS-4. This panel is adequate for this sized building and is still being supported.
- Coverage for visual strobes and horn / strobes is lacking.

Observed Potential Improvements:

- Provide strobes for class rooms and individual offices.
- Install smoke detectors in storage rooms, janitors' closets and other areas that have little to no occupancy.

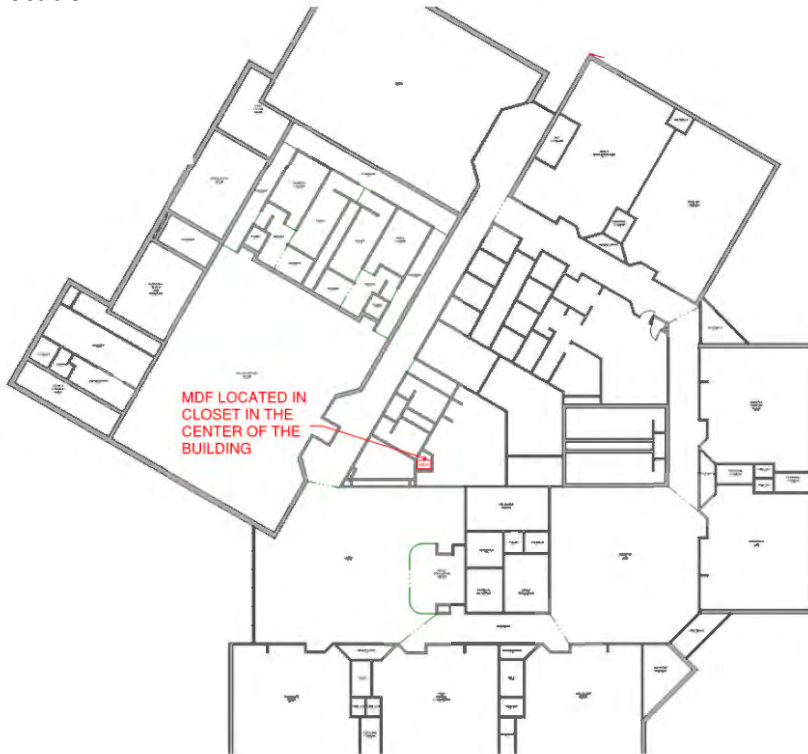
TECHNOLOGY

The following is a summary of the technology systems toured at the Hilltop Developmental Preschool. This information was gathered from our site visit held August 21, 2019.

Telecommunications and Data Infrastructure

The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed from the telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

MDF Location



MDF Room Picture

MDF – Unlabeled closet in the student lounge room



MDF is located in the student lounge area in the closet. The room itself was no larger than 4' x 5' and incorporated a low ACT ceiling. The room also housed CSC security panels for the building. A zoomed out view of the room could not be captured due to the very small size of the room in addition to the door blocking the view.

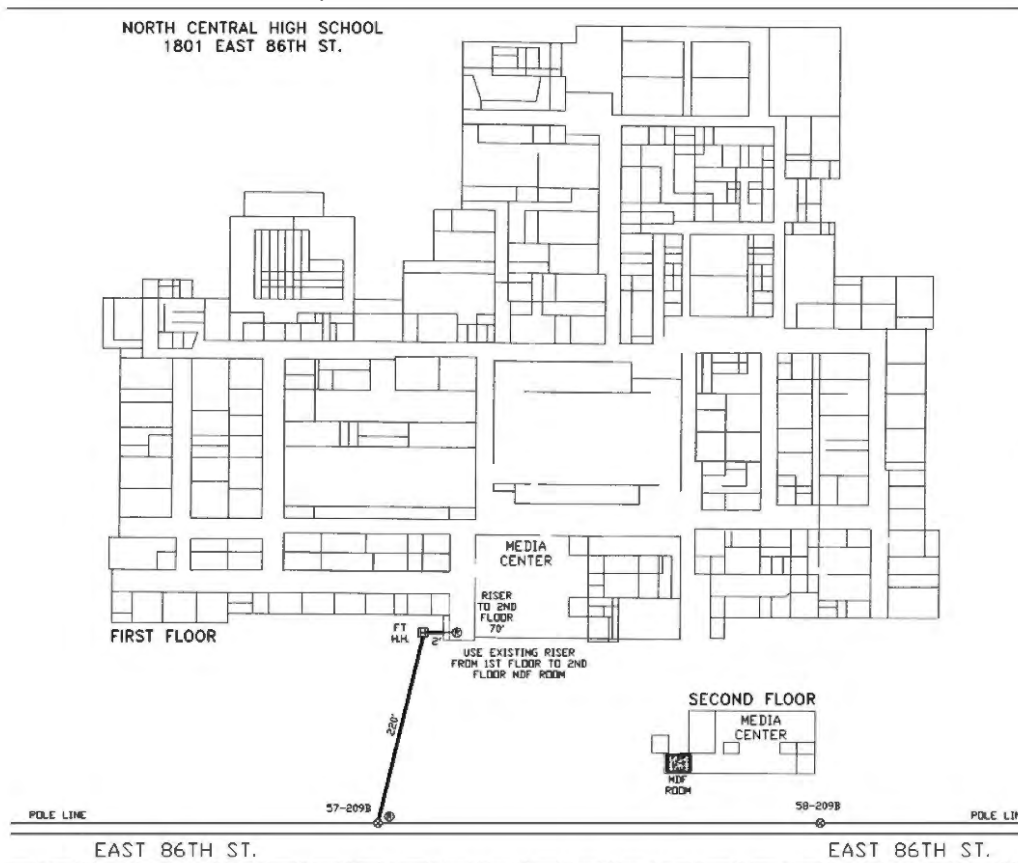
Fiber Layout

6 Strands of MM Fiber serve the MDF



Telecommunications Entrance Services

During our walkthrough we located the fiber entrance for the building to be in the pool room. This location is also confirmed from a tag on the fiber drawer in the MDF rack. This fiber for the building stems from the connection at North Central High School. Below is documentation of the fiber entrance for the North Central campus.



Audio Visual SYSTEMS

Hilltop Developmental Preschool consists mainly of typical classroom and office layouts. The school also includes individual rooms such as the gymnasium, pool room, and an open space “arena” room.

Typical Classroom

A typical classroom contained the following:

- One (1) “Teacher Station” location, consisting of 2 data connections, a BNC connection, a coaxial connection, and an RCA connection
- One (1) wall mounted call switch location
- Two (2) ceiling mounted paging speakers
- One (1) ActivBoard with a short throw projector incorporated into the system
- One (1) horizontal surface raceway location containing 5 data
- One (1) Atlas IED IP clock location
- One (1) AV Input location containing either:
 - A BNC connection, a coaxial connection, and an RCA connection, OR
 - A VGA connection and an RCA connection



Typical Office

A typical office contained the following:

- One (1) vertical surface raceway data location containing 2 data connections
- One (1) wall mounted call switch location
- One (1) ceiling mounted paging speaker



Electronic SAFETY AND Security

Electronic Access Control (EAC)

During our visit, we located just one card reader in the building, located outside of the main entrance doors. The main entryway also incorporated two motion detection sensors. However, this leaves three other entrances that were located without and form of access control or security.

Video Security System (VSS)

During the assessment of Hilltop Developmental Preschool, only one (1) security camera could be located.

This camera was located inside the main vestibule entryway, with its view of range only focused that that vestibule.

It is assumed but not known if that camera is functional.

Intrusion Detection Systems

We are aware of existing systems (keypads, sensor locations, etc.) provided by CSC.



COMMUNITY AND EDUCATION CENTER

OVERVIEW

The H. Dean Evans CEC was built in 1999 and is 50,181 SF. This building houses the operations, human resources, technology, business services, student services departments, the Superintendent, and the community meeting rooms for Washington Township schools.

ARCHITECTURE

This two-story building is in relatively good condition. The gutters and downspouts need to be replaced; rain water is currently deteriorating the exterior corners of the building. Additionally, regrading the southwest corner of the building to route rainwater any from foundations would help avoid other potential drainage problems. The building would also benefit from finish upgrades in select areas.

Observed Potential Improvements:

- Reconfigure Catering Kitchen so that it is ADA accessible.
- Repair water damage at Staff Lounge window head.
- Minor repairs to carpeting where is pulling away at seam.
- Repair worn and cracking floor areas.
- Replace snagging fabric on tack board, repaint stair railing and worn carpet on stair treads and risers in Conference Room.
- Replace cracked tile in Assistant Superintendent's office.
- Repair damaged outside corners of gypsum board at interior windows in Technology Closet.
- Repaint east columns at entry.
- Repair eroding caulk joints on south side of the building.
- Replace gutters and downspouts.
- Regrade at southwest side of building to create drainage away from the building.
- Replace rusted overhead door frames.
- Number exterior doors.
- Replace rusted hollow metal door frames.

MECHANICAL SYSTEMS

HVAC

The HVAC systems observed and evaluated at the CEC include: Dedicated Outdoor Air System (DOAS), Building Residential Style Heat Pumps, Fluid Cooler, and Temperature Controls.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- This building contains residential style heat pumps and have received a rating score of 1.
- The DOAS unit has received a rating score of 2 and is past its life expectancy.
- The building's fluid cooler received a rating score of 1 and is past its life expectancy.

Observed Potential Improvements:

- Replace the building's residential style heat pumps.

- Replace the DOAS with a new unit with a cooling coil.
- Replace the building's fluid cooler along with the disconnects and control panels.

Controls

In general, HVAC controls scored fair / good with an average rating of 2.38 (2.76 rooms + 2 controllers).

Existing Components and Observed Potential Improvements:

- There are (38) Andover 851 series heat pump controllers that should be replaced.
- The bCX9640 top-level controller should remain.
- The VFL closed circuit cooling tower planned replacement can be controlled by existing controls.
- The makeup air handler, Reznor duct heater, and plant controllers are Andover i2 series controllers and should remain.

NOTE: Andover 800 and 900 series controllers are the first version of proprietary inifinet communication and are limited to 19,200 bps. Andover i2 800 and 900 series controllers are the second vintage proprietary inifinet communication and are limited to 19,200 bps. Andover b3 controllers are native BACnet controllers limited to 76,800 bps.

NOTE: Greenbriar Andover 9200 and Foxhill Andover 9900 (neither part of this scope) have legacy top-level controllers that should be replaced. Allisonville top-level controller offline during site visit but is a bCX4040 and should remain. Andover 9200, 9400, and 9900 controllers are vintage style controllers no longer in production. Andover bCX controllers can be BACnet or Inifinet controllers including field conversion to BACnet or Inifinet.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

NOTE: Current programming does not incorporate automatic standalone operation or manual off-auto-on graphical considerations. Retro-commissioning and system optimization services are recommended for most of the buildings.

PLUMBING

Existing Systems:

- The two-story structure was built in 1999.
- The incoming water service has a backflow preventor in place.
- The domestic system is comprised primarily of insulated copper piping in fair condition.
- The incoming water pressure is in excess of 110 psi, which by code requires a pressure regulator on the entire system. A pressure regulator is installed on the domestic hot water system. Excessively high water-pressure was observed at plumbing fixtures.
- The gas fired water heater, thermostatic mixing valve and circulating pump is in fair condition. No water softening exists in the building and heavy calcium buildup was observed on plumbing fixtures.
- No reports of waste pipe blockage have been reported. No sewer scoping is planned at this time.
- Plumbing fixtures are in average condition but faucets and flushvalves are corroded.
- The building is protected by an automatic wet sprinkler system, in reasonable condition.

Observed Potential Improvements:

- Install pressure regulator on the incoming domestic water system, set to deliver 75 psi.
- Remove pressure regulator from the hot water system.
- Replace plumbing fixtures in areas where remodel is considered.
- Replace faucets and flushvalves throughout.
- Modify existing gas service as need for new HVAC equipment.
- Install water softener sized to treat the entire building.

ELECTRIC

Distribution

Existing Systems:

- The main service is an 800A 208Y/120V-3PH-4W system manufactured in 2000. The service and supporting distribution equipment are in good condition.
- Incoming power levels are unclear.

Observed Potential Improvements:

- Have an infrared scan performed to locate any loose or corroded connections in the main service and main switch gear vintage.
- Have a power quality study performed. A voltage regulator could be added to the system, but they are large and expensive.

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvement:

- Replace all fluorescent light fixtures with more efficient LED fixtures.

Wiring Devices

Existing System:

- Receptacle condition and density appeared to be adequate.

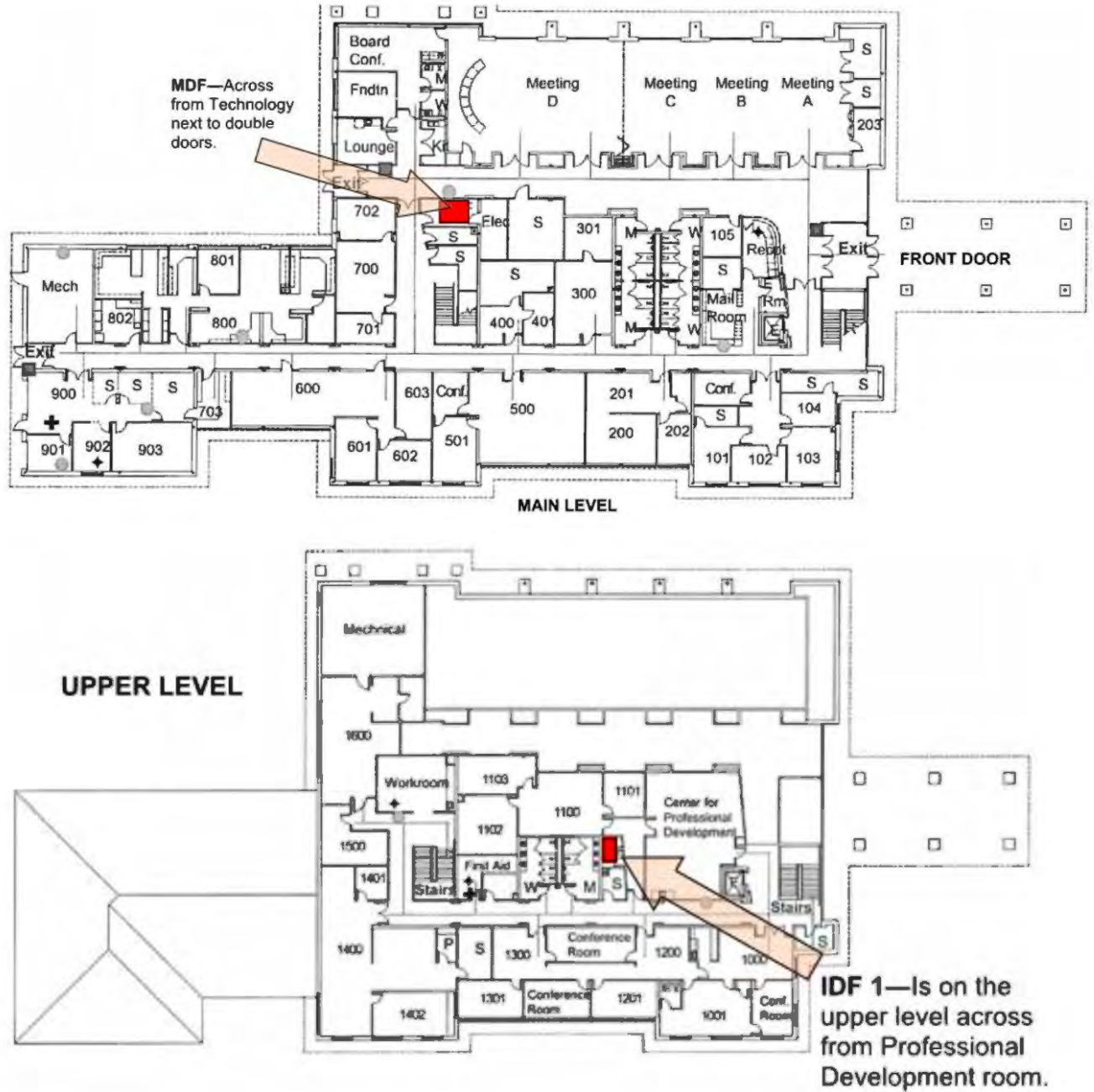
TECHNOLOGY

The following is a summary of the technology systems toured at the Community and Education Center. This information was gathered from our site visit held August 21, 2019.

Telecommunications and Data Infrastructure

The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed in a star topology from each telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

MDF / IDF Locations



MDF / IDF Pictures

MDF-0 – Room labeled “M.D.F.”



MDF-0 located in dedicated MDF room. Room incorporates an ACT ceiling and contains a couple of janitorial supplies.

IDF-1 – Room labeled “I.D.F.”



IDF-1 located in dedicated IDF room. Room incorporates an ACT ceiling and contains an AV rack for audio amplification / paging system.

Fiber Layout

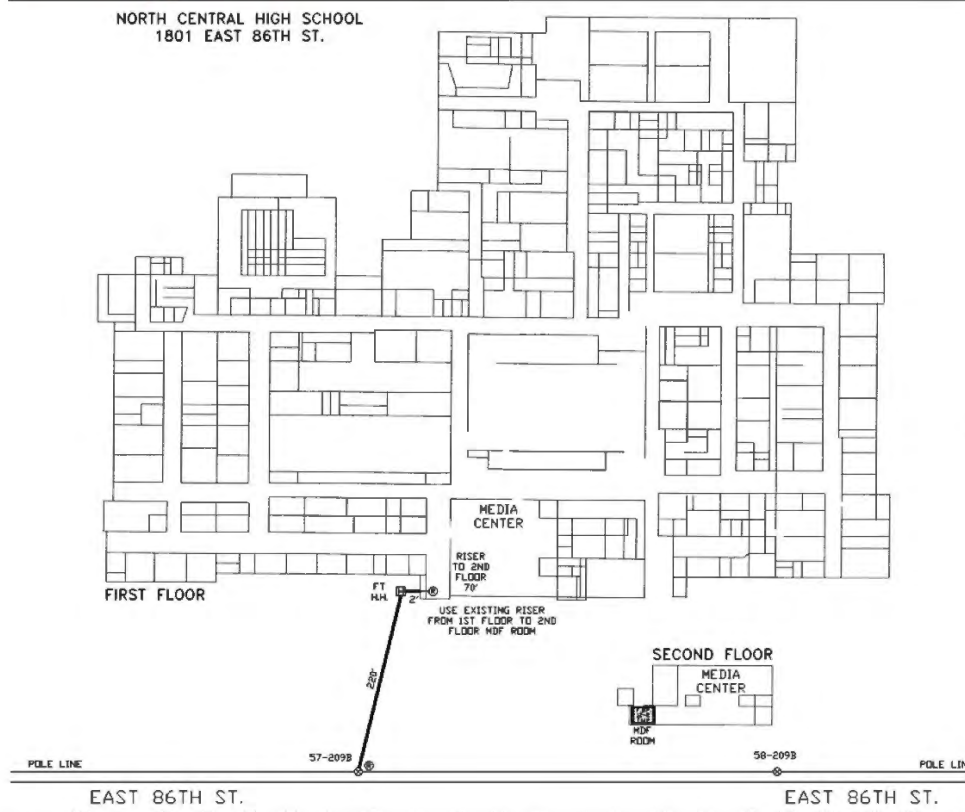
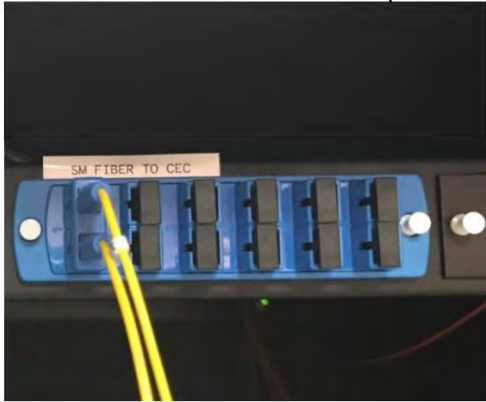
12 Strands of SM Fiber serve IDF-1



Telecommunications Entrance Services

During our walkthrough we were unable to locate the telecommunications or fiber entrance. However, it is believed that the fiber enters through the Southwest corner of the building. It is known that the fiber connection for the Community and Education Center stems from the connection brought into the J

Everett Light Career Center. The connection from JEL is brought in from North Central High School across the campus. Below is documentation of the fiber connection stemming from JEL as well as the main fiber entrance for the campus.



Audio Visual SYSTEMS

Typical Meeting Space / Conference

Each room had different levels of technology installed at different times, which made it difficult to determine a “standard” room. Most spaces were in the process of installing monitors to be used instead of projectors and projection screens. At a minimum, regardless of size, each room contained:

- A fluctuating amount of data voice locations with varying amount of data
- Some form of image viewing, whether it be a projector, monitor, or mobile monitor cart

Some various aspects of a Meeting Space / Conference included, but not all spaces contained the following:

- One (1) ceiling mounted projector to display video images
- One (1) projector screen
- Four (4) ceiling speakers for presentations
- One (1) ceiling IR microphone
- One (1) ceiling paging speaker
- One (1) AV Input Location containing the following inputs:
 - VGA
 - Video
 - L/R Audio
- One (1) Teach Logic audio system for speaker voice amplification



Typical Office

Each office had different levels of technology installed at different times depending on the size of the offices and if it was going to incorporate cubicles, which made it difficult to determine a “standard” room. At a minimum, regardless of size, each room contained:

- A fluctuating amount of data voice locations containing varying amounts of data

Some various aspects of an office included, but not all spaces contained the following:

- One (1) ceiling paging speaker
- One (1) volume control knob
- One (1) monitor location



Electronic SAFETY AND Security

Electronic Access Control (EAC)

During our visit, we were able to locate 6 card readers, all of which were on the first floor. Two of these card readers were located on exterior doors.

Video Security System (VSS)

The Community and Education Center contained a total of 6 security cameras.

1 camera was located above the main reception desk on the first level.

5 cameras located on the exterior of the building, mainly facing the parking lot on the South side of the building.

It is not known but assumed that all cameras are functional.

Intrusion Detection Systems

We are aware of existing systems (keypad, sensor location, panic buttons, etc.) provided by CSC.



DISTRICT MAINTENANCE / WAREHOUSE / POLICE DEPARTMENT

OVERVIEW

This building is 35,239 SF and was built in 1978. The one-story building has never been renovated and serves many of Washington Township's storage and receiving needs. The building also contains office space and houses the Township's drawing archives.

ARCHITECTURE

The warehouse has several accessibility issues that cannot be remedied without major reconfiguration; the widening of a hall, for example. It is also likely that the expense of the proposed repairs would exceed the cost of constructing the same space new.

Observed Potential Improvements:

- Replace roof.
- Replace dock overhead doors, bumpers and pads.
- Replace caulk at precast joints.
- Replace steps and landing at exterior door
- Replace exit device on the exit doors.
- Repair water damage to windowsill and jamb.
- Replace rusted overhead doors.
- Repair cracking in concrete slab at the column.
- Clean rust streaks on precast concrete panels.
- Replace toilet partitions.
- Retrofit restroom to create accessible stall.

MECHANICAL SYSTEMS

HVAC

The HVAC systems observed and evaluated at the district's maintenance warehouse include: Building Residential Style Split Furnaces and Exhaust Fans.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- This building contains (3) residential style split furnaces. The size of this is approximately in the 3-ton range. Two (2) of the furnace systems were not running and have exceeded their life expectancy of 10 years. These (2) units have received a rating score of 1. They are located in a mechanical closet near the break room. The other small residential split-style furnace is located in a newer interior addition near the warehouse. This unit is fairly new and has received a rating score of 3.
- The building contains (10) roof mounted exhaust fans. We were not able to observe these fans due to the failing structural integrity of the roof. These (10) units have received a rating score of 1.

- The building contains (4) gas fired unit heaters that have received a rating score of 1.

Observed Potential Improvements:

- Replace the (2) residential style split furnaces that received a rating score of 1.
- Replace the building's (10) roof mounted exhaust fans and make associated roof repairs.
- Replace the building's (4) gas fired unit heaters.

Controls

In, general the HVAC controls scored poor with an average score 0.705 (1.41 rooms + 0 controllers).

Existing Components and Observed Potential Improvements:

- Bard, American Standard Freedom 80, and Payne Fan Coil R-410a Residential style HVAC equipment and the presence of a competent operator in the building has eliminated the need for BMS integration except for possible alarms that would notify people that are away from the building.
- During renovation, a spare top-level controller should be installed with spare controllers used to monitor critical equipment to distribute email alarms and controller testing purposes.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface and is located in Joe Truitt's office and at the High School. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

PLUMBING

Existing Systems:

- The one-story structure was built in 1978. The incoming water service has a backflow preventor in place. The domestic system is comprised primarily of copper with some original galvanized piping.
- The gas fired water heater, storage tank, mixing valve and circulating pump is newer and in good condition.
- The thermostatic mixing valve was not installed with a heat trap, however concerns with scalding is lower in this facility due to the number and type of building occupants.
- The domestic piping is not insulated.
- No reports of waste or storm pipe blockage have been reported. No sewer scoping is planned at this time.
- Plumbing fixtures are in average to poor condition. The laundry facility is in poor condition with waste piping not installed appropriately for commercial equipment.
- The roof condition is poor and will likely need to be replaced.
- A simplex water softener is used to treat domestic hot water.
- The building is protected by an automatic wet sprinkler system, which is in reasonable condition.

Observed Potential Improvements:

- Insulate all domestic hot and cold-water piping with 1" jacketed fiberglass insulation.
- Replace plumbing fixtures in areas where remodel is considered.
- Modify existing gas service as need for new HVAC equipment.
- Replace roof drains and above ground storm piping.

ELECTRIC

Distribution

Existing System:

- The main service is a Square-D 600A 208Y/120V-3 ϕ -4W switchboard manufactured in 1978.

Observed Potential Improvements:

- Replace the switchboard and the following distribution equipment:
 - (4) 225A Square-D panelboards
 - (1) 100A Square-D panelboard

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvements:

- Replace all fluorescent light fixtures with more efficient LED fixtures.
- Change lighting controls to occupancy sensors.

Wiring Devices

Existing System:

- Receptacle density appears to be lacking in the office area.

Observed Potential Improvement:

- Add receptacles as requested by the owner.

Fire Alarm System

Existing System:

- The current fire alarm control panel is a Notifier SFP-400B.
- Coverage for visual strobes and horn / strobes is lacking.

Observed Potential Improvements:

- Upgrade to a new system, including replacing existing devices and adding new devices.
- Provide strobes for individual offices.
- Install smoke detectors in storage rooms, janitors' closets and other areas that have little to no occupancy.

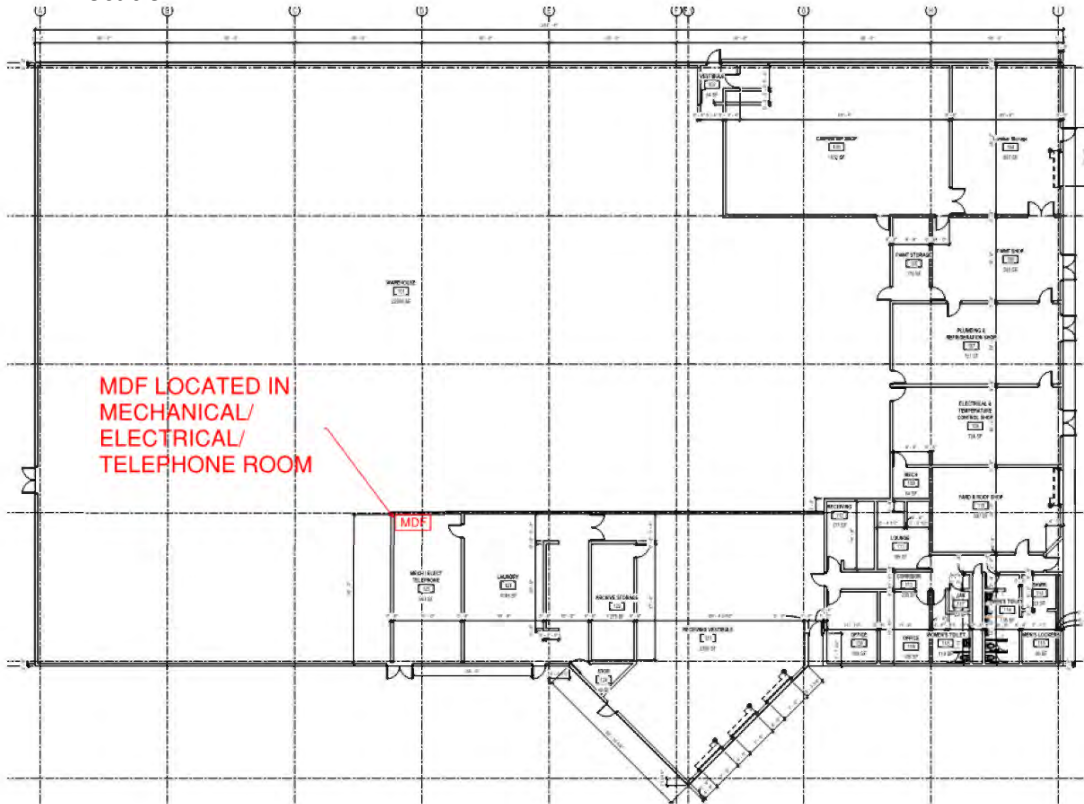
TECHNOLOGY

The following is a summary of the technology systems toured at the district's warehouse. This information was gathered from our site visit held August 21, 2019.

Telecommunications and Data Infrastructure

The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed from the telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

MDF Location



MDF Picture

MDF – Room labeled “Mechanical / Electrical / Telephone Room”



MDF located in the mechanical / electrical / telephone room. Workers moved the MDF to a higher elevation, roughly 13 feet, wall mounting for “better security.” They had also placed a plastic trash bag over the top of the rack to prevent it from getting wet due to water leaking from the ceiling on rainy days.

Fiber Layout

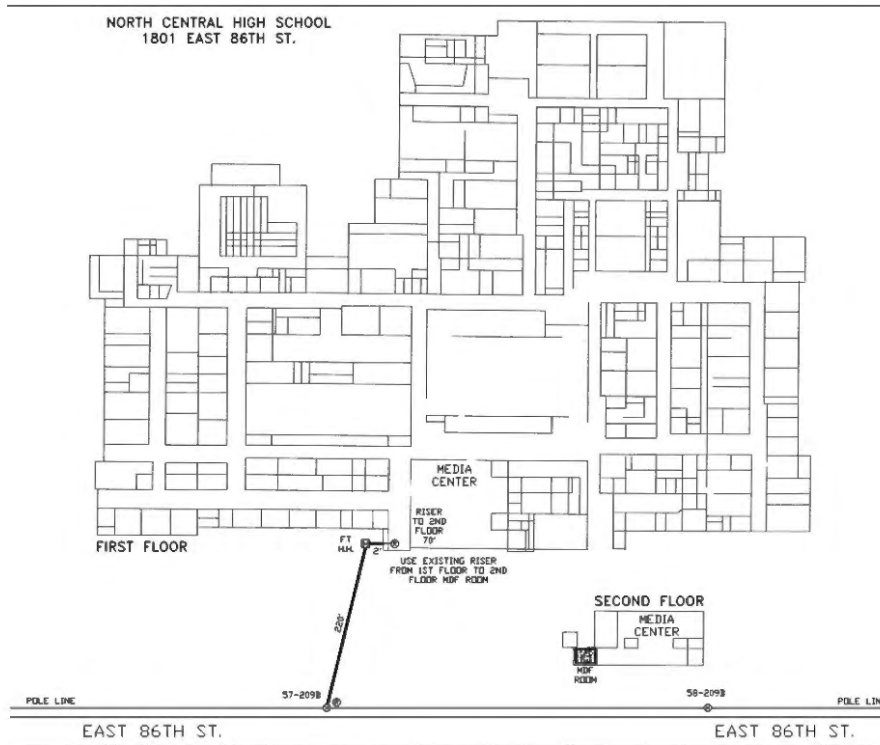
6 Strands of SM Fiber serve the MDF



Telecommunications Entrance Services

During our walkthrough we located the fiber entrance on the East side of the building by a garage door. It is known that the fiber connection for the Operations Warehouse stems from the connection brought into North Central High School across the campus. Below is documentation of the fiber entrance at the warehouse as well as for the North Central campus.





Audio Visual SYSTEMS

There are no typical rooms throughout the warehouse, as it only contained three offices, a lounge, the large warehouse space, and other various dedicated workspaces. Throughout the building, little to no audio-visual components are present. While most these elements are not present in every room / space, the various components found in the Operations building include the following:

- A fluctuating amount of data voice locations with varying amount of data
- Wall mounted paging speakers
- Two (2) monitor locations
- Cable TV input locations
- Multiple door contact sensor locations
- Wireless access point locations



Electronic SAFETY AND Security

Electronic Access Control (EAC)

During our visit, we were unable to locate any card readers throughout the building. However, door contact sensors were found on nearly every entrance and garage door.



Video Security System (VSS)



The Operations building contained a total of 9 security cameras.

The 7 interior cameras were two different types and had been installed at two different times.

2 cameras are located on the exterior of the building, both of them being located on the Northwest corner of the building overseeing the parking lot.

The person in charge of security at the Operations building stated that most of the older analog security cameras were still functional.

Intrusion Detection Systems

We are aware of existing systems (keypads, sensor locations, etc.) provided by CSC.



DISTRICT TRANSPORTATION FACILITY / MAINTENANCE GARAGE

OVERVIEW

This building is 23,323 SF and was built in 2002. The building is the service and maintenance center for Washington Township's fleet of buses and includes office and training classroom space.

ARCHITECTURE

This building has both administrative areas and bus maintenance bays.

Observed Potential Improvements:

- Paint fascia and siding.
- Replace worn and stained carpet.
- Reconfigure restrooms to provide accessible sinks and pathway into the restrooms.
- Provide seals on exterior entry doors. Replace corroded door threshold.
- Repair spalling concrete on precast windowsills.
- Replace failing window stool caulk.
- Replace damaged ceiling tiles.
- Reconfigure accessible stall to meet current code.
- Reconfigure door clearances to meet current accessibility requirements.
- Clean stained tile grout.
- Provide weather seals at exterior overhead doors.
- Clean wash bay walls and paint with high performance coating.
- Replace rusted and corroded wash bay hollow metal doors and frames.
- Repair large crack in the concrete floor running the full length of the mezzanine.
- Repair cracking in the supply room concrete slab and concrete block walls of the adjacent stair.
- Replace breakroom casework with accessible casework.
- Replace wallcovering on the operable wall. Repair failing door locking mechanism.

MECHANICAL SYSTEMS

HVAC

The HVAC systems observed and evaluated at the Bus Barn include: Building Residential Style Split Furnaces and Exhaust Fans.

* To determine life expectancy for HVAC systems, we refer to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Handbook: ASHRAE Equipment Life Expectancy Chart.*

Existing Systems:

- The building contains (2) indoor air handling units. (1) of these units is variable air unit with split condensing unit and the other (1) is constant volume unit serving the bus garage with no cooling. The air handling units were installed as new in 2003, they appear to be working with no major issues. They have not exceeded their life expectancy of 15 to 25 years. These units have been assigned a rating score of 2.
- The building contains (12) fan powered VAV boxes and have received a rating score of 2.

- The building contains (2) square inline exhaust fans and have received a rating score of 3.
- The building contains (9) hot water style unit heaters and have received a score of 2.

Controls

In general, the HVAC controls scored fair / good with an average score of 2.66 (2.31 rooms + 3 controllers).

Existing Components and Observed Potential Improvements:

- The Andover 9940 with IOU modules cannot easily be repaired and should be replaced.
- VAV.C01 is controlled by an Andover 865 controller and should be replaced.
- Infinet i2865 and i2866 are utilized for most of the VAV and FPB and should remain.

NOTE: Andover 800 and 900 series controllers are the first version of proprietary Infinet communication and are limited to 19,200 bps. Andover i2 800 and 900 series controllers are the second vintage proprietary Infinet communication and are limited to 19,200 bps. Andover b3 controllers are native BACnet controllers limited to 76,800 bps.

NOTE: Andover AC256, 9200, 9400, and 9900 controllers are vintage style controllers no longer in production. Andover bCX controllers can be BACnet or Infinet controllers including field conversion to BACnet or Infinet.

NOTE: Continuum Cyberstations version 1.93 are utilized for operator interface. No Web.Client is utilized and setpoints are generally central controlled. Ecostruxure is an available upgrade and would require new equipment at all nine surveyed buildings. It is worth noting that controls are being upgraded elsewhere in the school district. Ecostruxure workstation Pro and an enterprise server upgrade are planned at Spring Mill Elementary School. Crooked Creek and Allisonville Elementary Schools may also be upgraded to Ecostruxure controllers.

NOTE: Current programming does not incorporate automatic standalone operation or manual off-auto-on graphical considerations. Retro-commissioning and system optimization services are recommended for most of the buildings.

PLUMBING

Existing Systems:

- The one-story structure with mechanical mezzanines was built in 2002 with no significant plumbing system upgrades. The incoming water service has backflow preventors, however the clearance is not consistent with local water company standards.
- The central domestic gas fired water heater and thermostatic mixing valve is in fair condition.
- The heater is located above the shower locker area without a hot water circulated loop. Obtaining hot water at remote sinks will require running the water for a while.
- Plumbing fixtures in gang restrooms and showers are in average to poor condition.
- The building is protected with an automatic wet sprinkler system in fair condition.

Observed Potential Improvements:

- Replace plumbing fixtures in areas where remodel is considered.
- Consider adding a hot water circulated loop and pump.
- Add a water softener system sized to soften the entire building.
- Modify existing gas service as need for new equipment.

ELECTRIC

Distribution

Existing Systems:

- The main electrical service is a Cutler Hammer 800A 480Y/277V-3 ϕ -4W switchboard manufactured in 2002. The main switchboard and supporting panelboards appear to be in good condition.

Observed Potential Improvement:

- Perform an infrared scan to locate any loose or corroded connections in the switchboard and supporting panelboards.

Lighting

Existing System:

- Existing light fixtures are fluorescent.

Observed Potential Improvements:

- Replace all fluorescent light fixtures with more efficient LED fixtures.
- Change lighting controls to occupancy sensors.

Wiring Devices

Existing System:

- Receptacle density appears to be adequate for its current use.

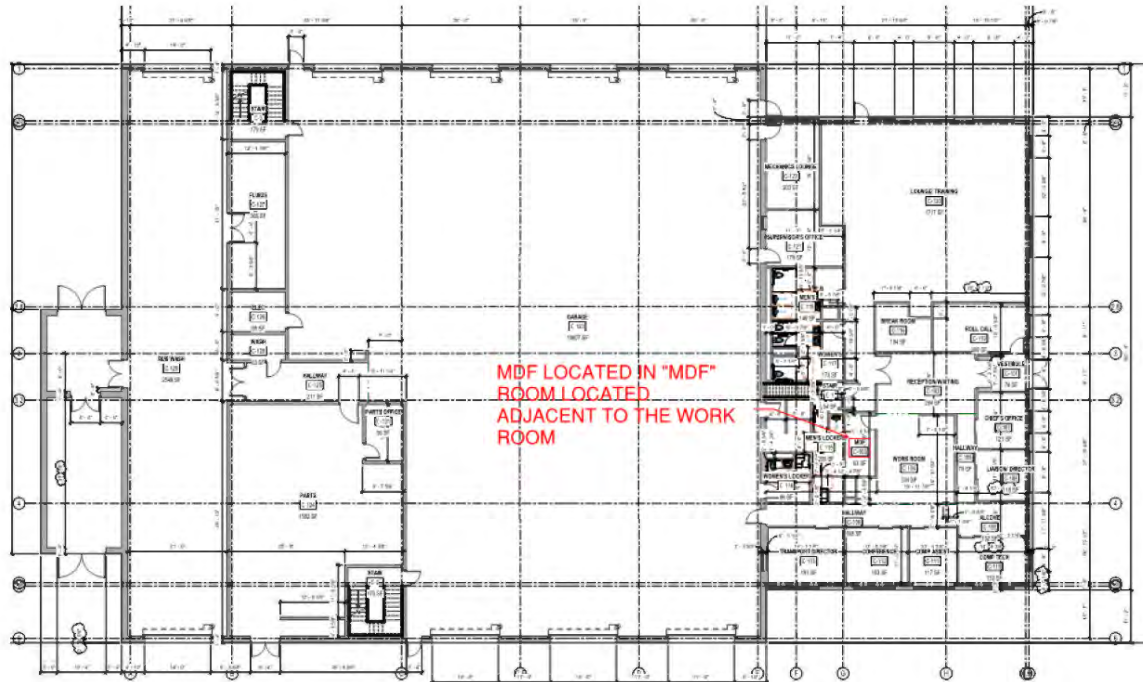
TECHNOLOGY

The following is a summary of the technology systems toured at the transportation facility. This information was gathered from our site visit on August 21, 2019.

Telecommunications and Data Infrastructure

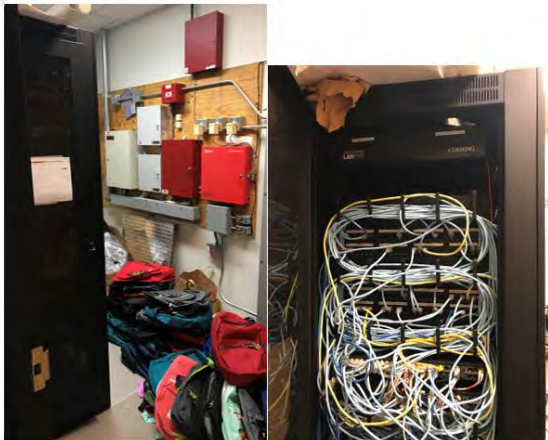
The building telecommunication systems infrastructure consisted of a mixture copper and fiber optic cabling installed from the telecommunications room (TR) to each work area location. Workstation cabling consisted of Category 5 cabling.

MDF Location



MDF Room Picture

MDF located in room labeled MDF adjacent to the work area in the building. Room incorporated the telecommunications cabinet, TR plywood with multiple security and fire alarm control panels, terminal blocks, and electrical panels. The room has an ACT ceiling and was also used as a general storage room for miscellaneous items.



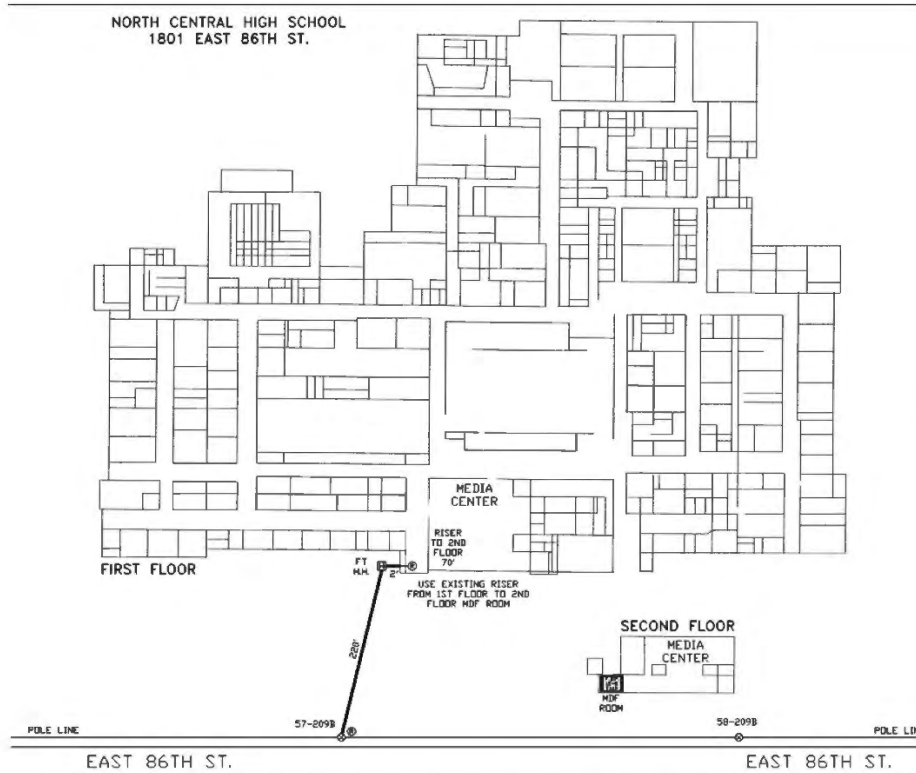
Fiber Layout

12 Strands of MM Fiber serve the MDF



Telecommunications Entrance Services

During our walkthrough we were unable to locate the fiber entrance. However, it is believed to enter in the North end of the building, which is the closest part of the building to North Central High School. It is known that the fiber connection for the Transportation & Bus Barn stems from the connection brought into North Central High School across the campus. Below is documentation of the fiber entrance at the warehouse as well as for the North Central campus



Audio Visual SYSTEMS

Outside of several offices, there are not any typical rooms throughout the area. The building consists of a few offices, a workroom, a conference, a lounge / training room, and a large garage for maintenance and cleaning of busses.

Typical Office

At a minimum, regardless of size, each office contained the following:

- At least 2 data voice locations with varying amount of data present

Other various aspects of an office space included, but not all containing the following:

- AV Input locations containing LR Audio and cable connectivity
- Volume control dial
- Ceiling mounted paging speaker
- Monitor location



Lounge / Training Room

The lounge / training room contained the following:

- One (1) Ceiling mounted projector for image display
- One (1) Ceiling mounted projection screen
- Three (3) monitor locations used for general cable television viewing
- One (1) Volume control knob
- One (1) ceiling mounted wireless access point
- Six (6) program audio speakers to sound amplification
- Multiple data voice locations containing varying amounts of data
- AV Input locations containing LR Audio and VGA connectivity



Electronic SAFETY AND Security

Electronic Access Control (EAC)

During our visit, we located two card readers in the building. One is located at the main entrance of the building, with the other located at the entrance to the main hallway leading to the rest of the building. Several garage doors are utilized in the building, none of which had door contact sensors or any form of security.

Video Security System (VSS)



The Transportation & Bus Barn building contained a total of 4 security cameras. One (1) security camera is located on the exterior of the building above the main entrance. Three (3) cameras are located in the garage area used for bus maintenance area. It is not known but assumed that the cameras are functional.

Intrusion Detection Systems

We are aware of existing systems (keypads, sensor locations, etc.) provided by CSC.

