GARMANN/MILLER
ARCHITECTS•ENGINEERS

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item A	Heating System

Existing Conditions:

The existing elementary heating system central plant consists of two (2) HydroTherm KN-10 boilers. These boilers are approximately 8 years old and are in good condition. The heating system contains (2) primary pumps and (3) secondary heating water pumps that are the same age of the boilers. All pumps are constant volume and are in good condition.
The classrooms contain unit ventilators for their primary source of heat. Some classrooms are supplemented with fin tube radiators for heat. The unit ventilators are controlled via wireless thermostats that modulate a 3-way control valve to maintain room temperature. This controls upgrade was made approximately three years ago. However, dampers on the radiators are non-functional.
The administration area is served by a gas-fired rooftop unit. This unit provides both heating and cooling to the area with a single thermostat. The unit is estimated to be installed around 2001 and would be considered near end of life. The exterior walls have fin tube radiators for supplemental heat and also appear to have no control.
Cafeteria area is served by two ceiling mounted unit ventilators and fin tubed radiators along the exterior perimeter. Corridors and vestibules are heated by cabinet heaters or fin tube radiators.

Rating: Needs Repair

Recommendations:

The overall heating system is in good condition with most of it's major equipment upgraded within the last 8 years. A recent controls upgrade has improved temperature control. Repair of the radiator dampers may help improve temperature control in the spaces where they are provided.

Long term efficiency upgrades would include pressure independent control valves unit ventilators and pumps with variable frequency drives (VFDs), and upgrade/integrate controls to include a building automation system.

Short term, the administration area rooftop unit is near end of life and will need replacement.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Upgrade controls to BAS, pressure independent control valves	$2.50	SF	28,400	$71,000.00
(3) VFD pumps (**requires valve replacement above)	$9,000.00	ALLOW	1	$9,000.00
*Full replacement with cooling - see ventilation sheet				
Total Cost				$80,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Replace administration rooftop unit	$3,000.00	ALLOW	1	$3,000.00
Total Cost				$3,000.00

Facility Assessment

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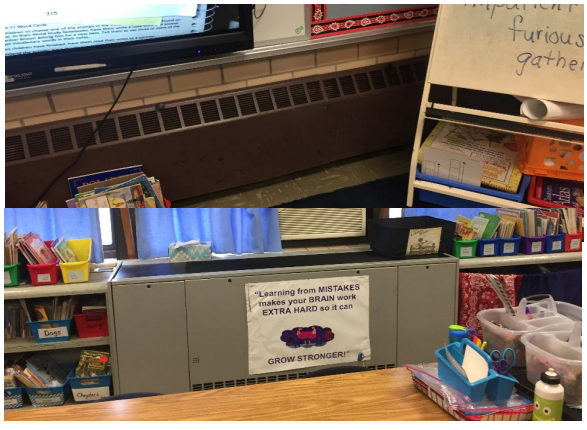
Assessment Item A	Heating System

Boiler and Boiler Controller

Trane Unit Ventilator Wireless TSTAT and Controller

Secondary Inline Heating Pumps

Office Area Packaged Rooftop Unit



Classroom Heating (Radiators and Unit Ventilators)

Corridor radiator and Cafeteria Unit Ventilator

Facility Assessment

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Assessment Item B	Roofing

Existing Conditions:

The existing roof is a 24 ga. steelox reroof panel. The drawings indicate the roof was redone is 1988. After a visual review, the roof is in good condition. The roof panels are not full length which required them to be overlapped and screwed down to the substrate. The screws go through extreme temperature changes throughout the year, and because of this, inspections on these screws should happen on a yearly basis. Vents through the roof should also be inspected each year. Several vents show severe signs of rust and should be inspected for a possible replacement. The gutters and downspouts show some damage in selective areas. They could be replaced from a visual standpoint, but the integrity of them are still in tact.

Rating: Satisfactory

Recommendations:

At this time, we don't see a need to replace the roof. Funds should be set aside for yearly inspections by a certified metal roof installer. □

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Inspections	$500.00	ALLOW	1	$500.00
Total Cost				$500.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Inspections	$500.00	ALLOW	1	$500.00
Total Cost				$500.00

Facility Assessment

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Assessment Item B	Roofing

Standing seam metal roof

Standing seam metal roof

Standing seam metal roof

Standing seam metal roof

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

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Assessment Item C	Ventilation / Air Conditioning

Existing Conditions:

Ventilation is provided by unit ventilators for the classroom and cafeteria areas, connected to exterior wall louvers. Ventilation for the office administration area is provided by the rooftop unit.

During cooling months, the classroom unit ventilators are often not operated, and no ventilation is provided. During the cooling months, window A/C units are operated to provide cooling to each classroom. Maintenance staff reports that during A/C operation they routinely trip breakers. The window units are undersized to adequately cool the space.

Exhaust for restrooms, mechanical spaces, custodial closets, and kitchen areas are provided by a combination of roof-mounted and sidewall exhaust fans. These units are in fair condition and operational.

Rating: Needs Replacement

Recommendations:

The existing building does not have central air conditioning. Right now this is being done using window A/C units. During the operation of the window A/C units, classroom ventilation is usually turned off to help maintain temperature. If air conditioning is desired by the district, a complete HVAC replacement would be recommended to ensure that ventilation code requirements are met. The exact components, system pros and cons, energy efficiency, and life cycle cost would need to be further analyzed to determine the best HVAC system moving forward. It is likely that the recently updated boilers could remain, saving costs.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Complete HVAC replacement (minus boilers) **This would also cover costs included in HEAT tab.	$28.00	SF	28,400	$795,200.00
Total Cost				$795,200.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Cost				$0.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item C	Ventilation / Air Conditioning

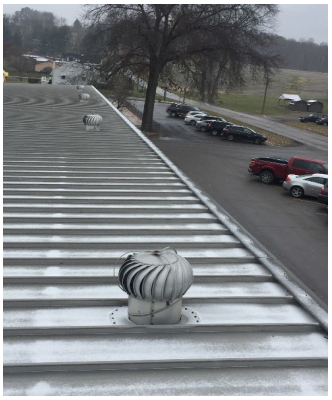
A/C units and UV outside air intake louvers

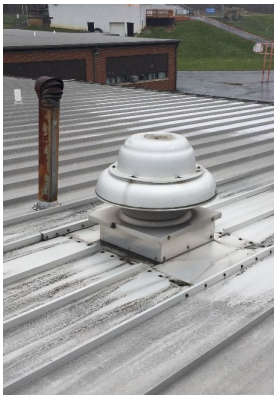
Office Area Packaged Rooftop Unit

Classroom Unit Ventilator and Window A/C unit

Type I Commercial Kitchen Hoods

Kitchen area sidewall exhaust fans





Rooftop exhaust fans

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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NON-OSFC

Assessment Item D	Electrical Systems

Existing Conditions:

The existing electrical service enters the building from a pole mounted utility transformer via overhead lines. The service is a 600 amp, 120/240 volt, single phase service. This enters a main switchboard with a main switch (600 amp), and distribution circuit breakers that serve branch panels and equipment throughout the building. The switchboard is a Westinghouse brand that is original to the building. The original branch panels are still in place. There were additional branch panels added in late 1990s to serve computer loads. Circuits and receptacles were installed in classrooms for these computer loads. Most classrooms have two original receptacles, with additional receptacles added with surface raceway. Window air conditioners have been installed in many classrooms.

Rating: Needs Replacement

Recommendations:

The electrical system is adequate for the building as it is used today. However, as air conditioner loads are added to the system the maintenance staff continues to experience issues with circuit breakers tripping and loading problems. If the HVAC system is upgraded to provide the Code required ventilation air and full building air conditioning, the electrical system would need to be upgraded and service size increased. At the time of upgrade we would also recommend installing an emergency generator. The emergency generator would serve all life safety items such as egress/exit lighting and fire alarm, but would also backup technology equipment, freezers/coolers, and other select equipment.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Upgrade electrical system and add emergency generator	$16.23	SF	28,400	$460,932.00
Total Cost				$460,932.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Cost				$0.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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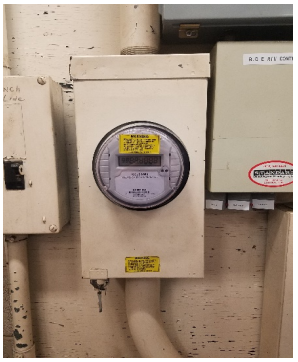
Assessment Item D	Electrical Systems

Pole Mounted Utility Transformer

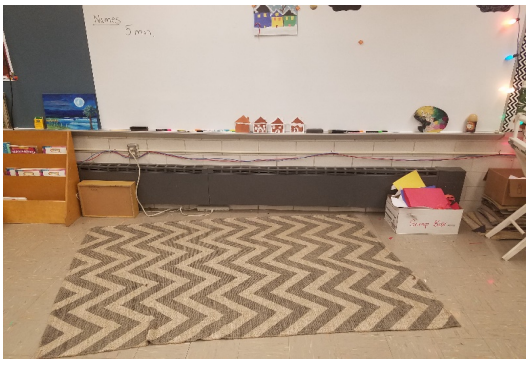


Electric Meter

Main Electric Switchboard

Original Branch Panel

Branch Panel Added for Computer Loads



Typical Classroom with Receptacles Added

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item E	Plumbing and Fixtures

Existing Conditions:

Dated and mismatched fixtures throughout. Few water coolers have recently been updated and include bottle fillers. Classrooms sinks are dated and in fair conditions. It doesn't appear that most fixtures meet ADA compliance. All lavatories with exposed drain/supply piping do not have trap/supply lavatory guards required by code.

Rating: Needs Repair

Recommendations:

Plumbing fixtures are dated but functional. Recommendation would be to repair/replace fixtures as needed. Confirm that ADA requirements are met and replace as needed.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Cost				$0.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Allowance for potential ADA upgrades	$12,000.00	ALLOW	1	$12,000.00
Total Cost				$12,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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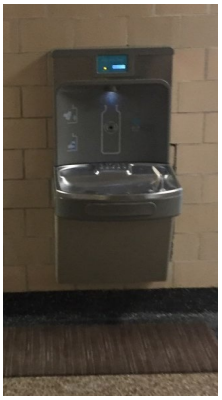
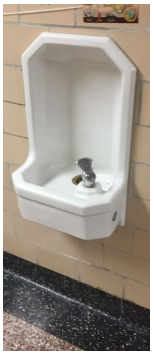
Assessment Item E	Plumbing and Fixtures

Natural Gas Meter/Regulator Station



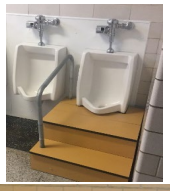


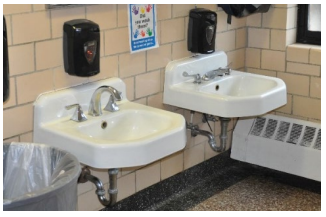
Various Drinking Water Coolers/Fountains

Classroom sink w/ bubbler

Kitchen 3-bowl sink

Various types of water closets and flush valves





Various urinals/flush valve types. Various lavatory/faucets.

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item F	Windows

Existing Conditions:

The windows at the elementary school are in fair to poor condition. There are visual signs of delamination, seals going bad and efflorescence. Caulking around the windows is cracking and needs to be replaced. The windows are double pane but are not thermally broken. The interior sills are glazed block and in good condition. The exterior sills are chipped, cracked and in poor condition throughout much of the building.

Rating: Needs Replacement

Recommendations:

Replace all windows at the elementary school. This replacement will allow for energy efficiency and a visual enhancement. Replace exterior sills during the window replacement would be recommended but not required. □

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full window replacement	$95,000.00	ALLOW	1	$95,000.00
Total Cost				$95,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full window replacement	$95,000.00	ALLOW	1	$95,000.00
Total Cost				$95,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item F	Windows

Aged aluminum frame window

Window and sill damage

Window and air conditioner

Glass seals damaged

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item G	Structure: Foundations

Existing Conditions:

The existing structure is comprised of two main generations of construction: 1955 & 1962.
The existing foundations were not directly accessible to view. However, according to the 1955 construction drawings, they consist of conventional spread footings.
Some cracking of the interior masonry walls was found (see tab "H WALL") that is likely the result of typical differential foundation settlement.
We did not observe any other significant signs of distress in the superstructure that may have been caused by building's foundations.

Rating: Satisfactory

Recommendations:

Nothing at this time

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
No work required				
Total Cost				$0.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
No work required				
Total Cost				$0.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item G	Structure: Foundations

Door sill damage

Door sill damage

Maintain drainage away from foundation

Maintain drainage away from foundation

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item H	Structure: Walls and Chimneys

Existing Conditions:

The existing structure is comprised of two main generations of construction: 1955 & 1962.
The perimeter walls are comprised of an interior masonry wythe, and an exterior brick veneer wythe. The wythes appear to have been built non-integral (i.e. without headers). The interior structural bearing walls are concrete masonry. Walls are mostly devoid of vertical control and/or expansion joints.
Some minor cracking of the interior masonry was observed; predominantly where interior masonry partition walls intersect the exterior walls. This is likely the result of differential settlement between the non-loadbearing interior partitions and the exterior loadbearing walls. The occurrences of these cracks are more frequent in the 1962 building than in the 1955 portion.
Cracking of the exterior brick construction was noted above window corners in several locations around the outside of the building. There are no vertical expansion joints in the brick construction. The cracking is likely the result of typical brick expansion.
Masonry cracking and shifting was found in the northeast corner of the Teachers Lounge. The location of this crack corresponds to a short jog in the exterior wall at the end of a long, uninterrupted run.
Veneer support lintels appeared to be in reasonable condition.

Rating: Needs Repair

Recommendations:

Typical vertical cracks in the interior masonry construction may be routed-out and filled with a flexible sealant (caulk) as desired for aesthetics.
Isolated cracking of the exterior veneer should be routed-out and tuckpointed with mortar to minimize water intrusion.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Interior crack repair	$3,000.00	ALLOW	1	$3,000.00
Exterior crack repair	$3,000.00	ALLOW	1	$3,000.00
Total Cost				$6,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Interior crack repair	$3,000.00	ALLOW	1	$3,000.00
Exterior crack repair	$3,000.00	ALLOW	1	$3,000.00
Total Cost				$6,000.00

Facility Assessment

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Assessment Item H	Structure: Walls and Chimneys

Provide tuckpointing at all window lintels

Provide tuckpointing on face brick

Tuckpoint interior CMU walls and paint

Tuckpoint interior CMU walls and paint

Facility Assessment

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Assessment Item I	Structure: Floors and Roofs

Existing Conditions:

The existing structure is comprised of two main generations of construction: 1955 & 1962.
Most of the existing roofs were concealed from view by ceilings. Where visible, the roof structure for both generations of construction consists of a poured gypsum and bulb tee decking supported by open-web steel joists. This is consistent with the existing construction drawings.
Where visible, the roof structure appeared to be in satisfactory condition.
According to existing drawings, the roof was overframed in 1998 with a pitched framing system. This system was Inaccessible to view during our assessment.

Rating: Satisfactory

Recommendations:

Nothing at this time

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
No work required at roof structure				
Floor repair at door openings	$25.00		100	$2,500.00
Total Cost				$2,500.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
No work required				
Floor repair at door openings	$25.00		100	$2,500.00
Total Cost				$2,500.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item I	Structure: Floors and Roofs

Floor damage

Floor damage

Facility Assessment

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Assessment Item J	General Finishes

Existing Conditions:

The finishes throughout the elementary is a mix of many different materials. The corridor and toilet rooms are terrazzo flooring, and while being old, show no signs of needing updated. Classrooms are filled with 9x9 floor tile which is asbestos containing. The floors are in fair to poor condition. The student dining and kitchen are also full of the 9x9 tile and in poor condition. Office spaces are carpet and show some signs of wear. The walls for the majority are glazed tile and concrete masonry. Glazed tile, not unlike terrazzo, has a very long life and currently shows no signs of needing replaced. The concrete masonry is similar, however, there are signs of cracking that could be updated. The structural integrity can be reviewed in section H. The acoustical ceilings throughout are a mix of good and bad. A full lighting replacement is being requested so as a result all new ceilings would be recommended. Casework throughout the classrooms is in poor condition. Interior doors are in fair condition but do not have ADA hardware. Lockers are also a mix of good and bad. Toilet partitions are in fair to poor condition and are not ADA compliant. A full renovation would require these to be updated as shown in section O.

Rating: Needs Replacement

Recommendations:

Our recommendation is to upgrade the general finishes throughout the building. With this upgrade we recommend interviewing the staff to see if additional casework storage is needed. It appears there is a lack of that type of storage. Because all the hardware needs to be replaced, our recommendation is to replace all the doors as they are starting to see their cycle.□

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full building general finishes upgrade	$17.00	SF	28,400	$482,800.00
Replace interior doors	$82,000.00	ALLOW	1	$82,000.00
Total Cost				$564,800.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full building general finishes upgrade	$15.90	SF	28,400	$451,560.00
Replace interior doors	$75,000.00	ALLOW	1	$75,000.00
Total Cost				$526,560.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

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Assessment Item J	General Finishes

Remove 9X9 floor tile

Replace casework/plumbing

Replace door and hardware

Replace toilet partitions

New ceiling and lights

Replace plumbing fixtures

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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Assessment Item K	Interior Lighting

Existing Conditions:

The primary light source used in lighting throughout the building is T8 fluorescent lighting. The original building is mostly 2'x4', recessed light troffers in the classrooms. The classrooms in the addition utilize three rows of surface mounted light fixtures. 2'x4' recessed troffers are also used in the offices and corridors. The cafeteria utilizes surface mounted fixtures. The lighting levels are good throughout the building.

Rating: Needs Replacement

Recommendations:

The lighting levels are good in the building. However, for energy savings, we would recommend changing all lighting to LED type. In addition, we would recommend more lighting controls through dimmers, occupancy sensors, and daylight harvesting sensors to maximize the energy savings.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Change all lighting to LED and provide new controls	$5.00	SF	28,400	$142,000.00
Total Cost				$142,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Change all lighting to LED and provide new controls	$5.00	SF	28,400	$142,000.00
Total Cost				$142,000.00

Facility Assessment

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Assessment Item K	Interior Lighting

Typical Original Classroom Lighting

Addition Classroom Lighting

Gang Restroom Lighting

Corridor Lighting

Cafeteria Lighting

Kitchen Lighting

Facility Assessment

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Assessment Item L	Security Systems

Existing Conditions:

There are security cameras throughout the interior and exterior of the building. Cameras are located in the interior corridors and wall mounted on the exterior. There are monitors for viewing the cameras in the office area. The main entrance has an electrically controlled door and there is a video intercom for controlled entry into the building. The building also has select exterior doors with access control via fob readers. There is exterior lighting located in key areas.

Rating: Needs Repair

Recommendations:

Overall the security of the building is good. We would recommend changing out the exterior lighting to LED mainly for the energy savings. We would also recommend adding some additional exterior lighting for better overall illumination on the exterior. It would help the security of the building to create an entry to the office from the vestibule. This would provide additional control on accessing the interior corridors and classrooms. This would require some preliminary design to determine a budget cost.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Change exterior lighting to LED	$1,750.00	QTY	12	$21,000.00
Provide additional exterior LED lighting	$1,750.00	QTY	6	$10,500.00
Create an entrance to office from vestibule at main entry				
Total Cost				$31,500.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Change exterior lighting to LED	$1,750.00	QTY	12	$21,000.00
Provide additional exterior LED lighting	$1,750.00	QTY	6	$10,500.00
Create an entrance to office from vestibule at main entry				
Total Cost				$31,500.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

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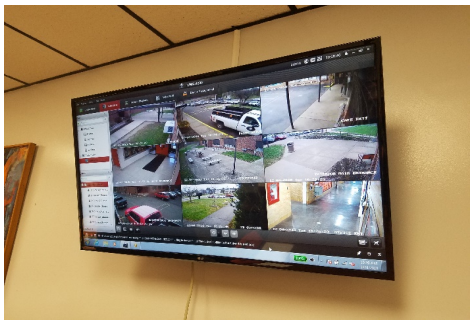
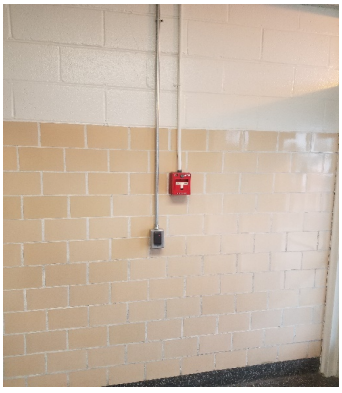
Assessment Item L	Security Systems



Security Camera Monitor in Office

Security Camera at Exit

Video Intercom at Entrance



Fob Reader at Entrance

Entrance Canopy Lighting

Exterior Camera

Facility Assessment

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Assessment Item M	Emergency / Egress Lighting

Existing Conditions:

Emergency/egress lighting is provided via wall mounted battery packs with lamp heads throughout the corridors. Illuminated exit signs are installed at exit doors. There is no emergency lighting in gang restrooms. There is no backup egress lighting on the exterior of the building at exit egress.

Rating: Needs Repair

Recommendations:

In general the emergency/egress lighting is adequate and the 90 minute batteries are a valid option for backup. We would recommend adding the Code required exterior egress lighting at exit doors. In addition, some areas of the building could use additional battery pack egress lighting in corridors and gang restrooms.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Cost				$0.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Provide egress lighting with 90 min battery at exterior of exits	$1,000.00	QTY	9	$9,000.00
Provide additional egress battery packs in building	$1,000.00	QTY	8	$8,000.00
Total Cost				$17,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item M	Emergency / Egress Lighting

Typical Exit Sign

Wall Mounted Battery Pack in Corridor

Gang Restroom, No Emergency Lighting

Exterior Door, No Emergency Lighting

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item N	Fire Alarm

Existing Conditions:

There is a fire alarm system in the building. The main panel is located in the office area, and it is a Simplex 4001 system. This is a four zone system. There are pull stations near exit doors. Horns are located in the corridors. There are no visual notification devices, and there are no notification devices in the classrooms.

Rating: Needs Replacement

Recommendations:

Current Code requires visual notification devices to be located throughout the building. Notification devices should be added in all classrooms to comply with ADA and Fire Code requirements. Also, the current Code requires voice evacuation capabilities through the fire alarm system. This will require a complete replacement of the system.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Replace fire alarm system to comply with current Code	$1.75	SF	28,400	$49,700.00
Total Cost				$49,700.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Replace fire alarm system to comply with current Code	$1.75	SF	28,400	$49,700.00
Total Cost				$49,700.00

Facility Assessment

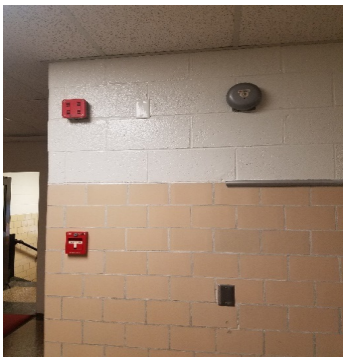
Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item N: Fire Alarm

Main Fire Alarm Panel



Pull Station and Horn in Corridor

Typical Classroom, No Fire Alarm Device

Pull Station and Horn at Exit Door

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item O	Handicap Accessibility

Existing Conditions:

The first space we reviewed was the toilet facilities and they lack in ADA compliance from the toilet stalls, urinals and sinks. Doors throughout the building are not equipped with lever handles which is required to meet ADA compliance. ADA signage is not installed. ADA door assists are not installed at the main entrance or other highly used entrances such as the kitchen and door leading to the middle school.

Rating: Needs Repair

Recommendations:

If a major renovation is done to the facility, these items above would need to be updated to meet ADA.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
ADA toilet room upgrade	$4,000.00	QTY	4	$16,000.00
ADA signage	$0.25	SF	28,400	$7,100.00
ADA door assist	$8,000.00	QTY	2	$16,000.00
ADA door hardware	$20,500.00	ALLOW	1	$20,500.00
Total Cost				$59,600.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
ADA toilet room upgrade	$3,800.00	QTY	4	$15,200.00
ADA signage	$0.20	SF	28,400	$5,680.00
ADA door assist	$7,500.00	QTY	2	$15,000.00
ADA door hardware	$18,000.00	ALLOW	1	$18,000.00
Total Cost				$53,880.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

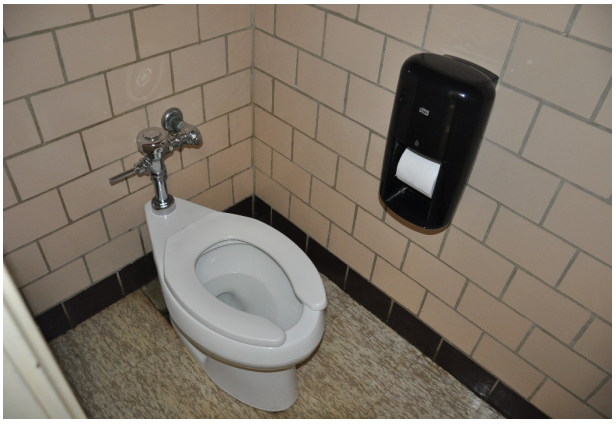
Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item O	Handicap Accessibility

Add electronic openers

Steps and hand rail

Non ADA compliant door set back



Non ADA compliant restrooms

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item P	Site Condition

Existing Conditions:

-Majority of the asphalt and concrete is in disrepair – needs replaced.
-Several walks exceed allowable slope for ADA accessible code.
-There is some parking that backs straight out into a town street – not a safe condition to back out into traffic.
-Handicap Accessible parking not striped per ADA code requirements.
-The parent-drop lane does not appear to be an adequate length for the volume of students being dropped off. There is also only a curb side drop-off lane with no through lane (not enough room for a 2nd lane) – this could cause congestion at the drop-off. Parking also abuts the drop-off lane and could be a safety hazard for students being dropped off and staff trying to access parking.
-The drop-off lane has a steep grade back down to street level – this could be a safety hazard in certain weather conditions. This also contributes to driver blind spots – safety hazard especially at peak drop-off and pick up times.
-There is no apparent defined bus pickup/drop-off parking and/or traffic pattern visible to the eye.
-Students must cross a major access drive for deliveries to get to the play equipment (this requires a pipe gate to be shut during recess)
-Main asphalt play area is amongst the dumpster/mechanical pad/delivery area – not an ideal location when deliveries, trash pick-up happens and the overall health, safety and welfare of the kids.
-Play asphalt area (basketball hoops) are directly adjacent to building walls/windows – distraction for kids in classrooms and errant basketballs hitting the buildings and windows.
-The playground mulch is rutted up in spots (especially under the swings) and could be a safety hazard (tripping). Install play mulch in these areas and potentially swing mats under the swings. The whole playground could use a light coating.
-Near the doors for the deliveries grade slopes down to the doors via a small ramp, however, at the bottom of this there is no drain to catch stormwater – grade is as such that it slopes away from the building to a central location but there is nothing to catch this water in that central location.
-Doors into the building at the central courtyard have an inch or 2 lip that is not ADA accessible. This needs to be replaced to be flush with door FFE.
-District wide it appears like there is adequate safety signage as a person is approaching town/the school zones. There is a flashing light/school ahead sign as a person is approaching town from the North. Various other 'school crossing signs and school zone' signs are apparent as a person is entering the school zone.
-Bus lot pavement is in disrepair and it appears like the at grade access to the fuel tanks is damaged – this may be a safety/biohazard if it can't adequately close. Not sure the exact construction but there should be a storm drain near the fuel dispenser that captures any runoff. That runoff shall be run through an interceptor prior to running to the rest of the system. There shall also be an emergency shutoff valve for any major spills that closes the gate valve to the remaining storm system.
-There's a cracked downspout boot in the playground area (near the basketball assemblies)

Rating: Needs Repair

Recommendations:

Concrete stoops to doors need to be re-poured so they are flush with finish floor elevation/drain away from building @ a 2% max slope. Replace stair railing not to code. Stripe and sign handicap accessible spots per code. Replace heaving/cracking pavement (tripping hazard). Provide handicap accessible parking per the code requirements (signed and striped central aisle). Install a dedicated dumpster pad and enclosure. Install play mulch in low areas, top dress the whole playground and possibly look into installing swing mats underneath the swings. Replace Bus Lot Pavement and ensure and install safety items mentioned above for the fuel system. In the long term could potentially look into relocating the play equipment so students don't have to cross the drive to get to it. This would allow the parking lot to the East of the current playground to expand and rid the parking along the road (where cars back out into traffic on the street)

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Asphalt Replacement (not including drop-off drive and parking backing onto street)	$225,000.00	ALLOW	1	$225,000.00
Relocate Playground (includes new play mulch/edging)	$40,000.00	ALLOW	1	$40,000.00
Remove Parking along street - relocate/add additional bays to lot near playground	$60,000.00	ALLOW	1	$60,000.00
Hard Surface Playground paint and basketball assembly relocate	$20,000.00	ALLOW	1	$20,000.00
Unforeseen Conditions	$50,000.00	ALLOW	1	$50,000.00
Total Cost				$395,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Handicap Accessible Parking Signage and Striping	$1,000.00	ALLOW	1	$1,000.00
Storm/Minor Grading Upgrades	$25,000.00	ALLOW	1	$25,000.00
Dumpster Pad/Enclosure	$5,000.00	ALLOW	1	$5,000.00
Concrete Replacement	$2,500.00	ALLOW	1	$2,500.00
Asphalt Replacement (20% of asphalt on-site at ES)	$50,000.00	ALLOW	1	$50,000.00
Bus Lot Upgrades (Fuel System Safety Items Only)	$30,000.00	ALLOW	1	$30,000.00
Replace Stair Railing	$5,000.00	ALLOW	1	$5,000.00
Unforeseen Conditions	$25,000.00	ALLOW	1	$25,000.00
Total Cost				$143,500.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item P	Site Condition

Kids have to cross this drive to access the playground

Parking backing out into drop-off lane/no thru lane

Mulch levels low/rutted up in playground

Asphalt in disrepair

Concrete does not meet flush with building doors

ADA parking not to code

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item Q	Sewage System

Existing Conditions:

The building sanitary consists of cast iron piping original to building. Maintenance reported no substantial issues to date.

In the kitchen area, no grease interceptor was observed.

Rating: Needs Repair

Recommendations:

Life expectancy for cast iron sanitary piping in commercial buildings is approximately 30-50 years and the sanitary system would be considered near end of life. It would be recommended to scope existing sanitary lines to properly evaluate the existing conditions of the sanitary pipe. Findings from the study would help determine whether localized repair or complete replacement is needed.

It is recommended that a grease interceptor be installed to protect downstream public/private sewer. This is required by code.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Cost				$0.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Install grease interceptor for kitchen	$6,000.00	ALLOW	1	$6,000.00
Cost to scope sanitary lines.	$1,000.00	ALLOW	1	$1,000.00
Total Cost				$7,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item Q	Sewage System

No grease interceptor observed outside kitchen area

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item R	Water Supply

Existing Conditions:

The existing incoming water main is a 2" galvanized line. No backflow prevention device was observed. It appears that most of the building's water supply remains galvanized piping, however it was observed that where repairs have been made, copper piping has been used. Maintenance reported "slow flow" issues in various areas of the building.

A water softener was observed and appears in fair condition. The softener appears to service only the hot water system. The domestic hot water tank is a 75-gallon commercial gas-fired water heater. The water heater is approximately 12 years old and is in fair condition.

Rating: Needs Replacement

Recommendations:

Provide reduced backflow prevention device as required by code. Replace all galvanized pipe to improve flow issues. Due to a fire suppression system being required by code in a renovation, a fire pump may be required. This, along with the incoming service size and pressure will need further investigation prior to putting a final cost to the suppression system.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Replace galvanized piping	$10,000.00	ALLOW	1	$10,000.00
Install fire pump to support suppression system	$50,000.00	ALLOW	1	$50,000.00
Total Cost				$60,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Install backflow preventer	$2,500.00	QTY	1	$2,500.00
Install fire pump to support suppression system	$50,000.00	ALLOW	1	$50,000.00
Total Cost				$52,500.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

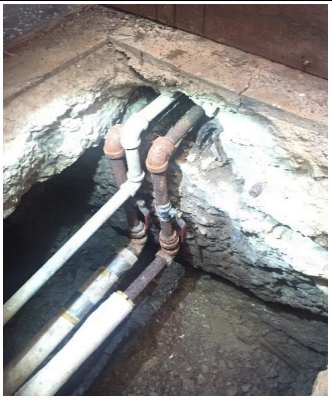
Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item R	Water Supply

Incoming Water Main

Water Meter

Water Softener



Galvanized Piping in crawlspace

Existing custodial closet/restroom chase

Existing water heater

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item S	Exterior Doors

Existing Conditions:

The exterior doors, frames and thresholds around the perimeter of the building are in poor condition with the exception of 2 locations where it appears they were recently replaced. The majority of the hardware on the existing doors are not code compliant. This will be addressed in section O.

Rating: Needs Replacement

Recommendations:

Replace all doors around the perimeter so they are energy efficient and code compliant. If it is decided to replace the doors to match the 2 that were recently done, you could eliminate them from the cost.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full exterior door replacement (per leaf)	$1,500.00	QTY	19	$28,500.00
	$0.00	[Select]		$0.00
	$0.00	[Select]		$0.00
Total Cost				$28,500.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full exterior door replacement (per leaf)	$1,300.00	QTY	19	$24,700.00
	$0.00	[Select]		$0.00
	$0.00	[Select]		$0.00
Total Cost				$24,700.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item S	Exterior Doors

Replace main entry doors and hardware

Side entry doors

Rusting door frame

Metal door and frame damage

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item T	Hazardous Material

Existing Conditions:

There are signs of hazardous material such as the 9x9 tile in many of the classrooms. A full assessment should be done by an asbestos consultant.

Rating: Needs Repair

Recommendations:

Get an updated asbestos assessment. That cost is included below.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Total Cost				$0.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Abatement assessment	$10,000.00	ALLOW	1	$10,000.00
Total Cost				$10,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item T	Hazardous Material

9x9 tile

9x9 tile

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item U	Life Safety

Existing Conditions:

Emergency lighting backup requirements are provided via battery packs. There is no emergency generator for this facility. The battery packs satisfy the emergency backup Code requirements. There is no suppression system currently installed. There is no secured entrance at this time. The elementary school office is adjacent to the entrance so this could be done without a lot of disruption. Until the planning of that is complete, it's difficult to put a dollar amount to that project.

Rating: Satisfactory

Recommendations:

If the electrical system is upgraded, we would recommend adding an emergency generator to the electrical system. The cost for this is included in the long term cost shown under the electrical system Item D. A full renovation would require a fire suppression system be installed. Provide a plan to secure the entrance.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Fire suppression	$4.25	SF	28,400	$120,700.00
Total Cost				$120,700.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Fire suppression	$3.75	SF	28,400	$106,500.00
Total Cost				$106,500.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item U	Life Safety

Main entrance

Main entrance

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item V	Loose Furnishings

Existing Conditions:

The existing furniture in the elementary school building is similar to the other schools with a mix of good and bad. As with the others, It appears several areas were updated with new in the recent years, but other rooms look very dated. Furniture is an area that doesn't have any ADA issues attached to it nor does it have any code related items. Furniture comes down to the cosmetic look of it but more importantly in this day and age, the flexibility of it. Of course if a chair or table has a safety issue that should be addressed immediately. A full renovation doesn't require a full upgrade to furniture like a toilet room so this can be spread out over many years.

Rating: Needs Replacement

Recommendations:

Our recommendation is to create a replacement plan where each year a portion is updated. However, if a full renovation is decided, that may be the best time to do an entire upgrade. For the purpose of this assessment I will do near term as a replacement plan and long term as a full upgrade. We understand that through an inventory process.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Full replacement of loose furnishings	$6.25	SF	28,400	$177,500.00
Total Cost				$177,500.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Replacement plan (yearly for 5 years)	$30,000.00	ALLOW	1	$30,000.00
Total Cost				$30,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item V	Loose Furnishings

Classroom Table and Chairs

Classroom Table and Chairs

Classroom Table and Chairs

Teacher Desk

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item W	Technology

Existing Conditions:

The main technology rack is located in a storage area near the Superintendent's office. There is Cat 5 and Cat 6 copper cable distributed throughout the building. There is also fiber to every classroom. The fiber was added as part of the Schoolnet program and has never been used. The network switches are a variety of Cisco brand switches. There is APC UPS backup at the rack. Most classrooms have a projector display. There are three classrooms that have an interactive monitor display. The phone system is a Nortel system. There are no phones in the classrooms. There is a public address system throughout the building. There are public address wall speakers in the classrooms, but there are no call-in switches in the classrooms. There are some issues with the public address system not allowing individualized room calling. There is no automated clock system in the building. There are manual clocks throughout. The 2nd grade level has mobile device carts and 1 to 1 device per student. The district has been purchasing additional carts/devices to get a district wide 1 to 1. There is good wireless access point coverage for the building.

Rating: Needs Repair

Recommendations:

The technology in the building is serving the needs of the district. There seems to be a good plan in place to upgrade over time. We would recommend installing phones in all classrooms. This is as much a safety/security issue as it is a convenience. Along with the phones, we would recommend an upgraded public address system with call-in switches in each classroom. We would also recommend the district consider an automated clock system for consistency through the building. For the long term, we are including the typical cost we see for a complete technology replacement. As technology continually advances, these systems will eventually be replaced and upgraded.

Long Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Complete technology upgrade	$15.00	SF	28,400	$426,000.00
Total Cost				$426,000.00

Near Term Cost Assessment

Item Description	Cost	Unit	Quantity	Unit Cost
Upgrade phone system with phones in all classrooms	$30,000.00	ALLOW	1	$30,000.00
Automated GPS clocks throughout	$15,000.00	ALLOW	1	$15,000.00
Public Address System	$32,000.00	ALLOW	1	$32,000.00
Total Cost				$77,000.00

Facility Assessment

Building Name: Lucas Elementary School (K-5)

School District: Lucas Local School District

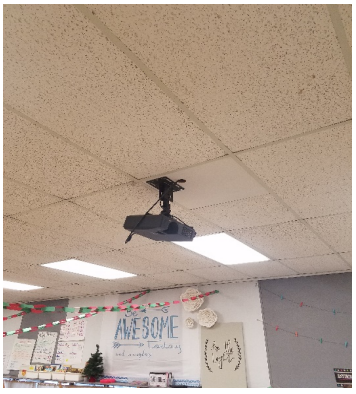
Red = Code Requirement Item
Yellow = Safety Concern Item
Green = Energy Efficiency Item
Blue = Security Concern Item

Assessment Item W	Technology

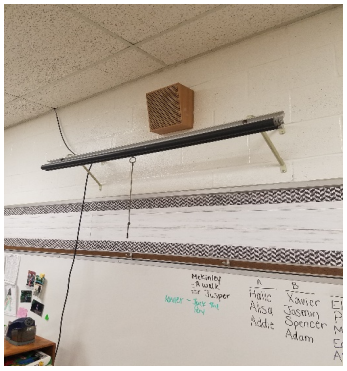
Main Technology Rack

Public Address System

Interactive Monitor in Classroom



Projector in Classroom



Classroom Public Address Wall Speaker

Mobile Device Charging Cart

GARMANN/MILLER
ARCHITECTS•ENGINEERS

Facility Assessment Summary

Building Name	Lucas Elementary School (K-5)	County	Richland
School District	Lucas Local School District	Township	Monroe
Address	84 Lucas North Road	Acreage	
	Lucas, Ohio 44843		

Building History

	Year	Floors	Square Feet	Accessible (Y/N)
Original Building	1955	1	19,000	n
Addition 1	1962	1	9,400	n

Assessment Summary

	Assessment Item	Rating	Long Term Cost Assessment	Near Term Cost Assessment
A	Heating System	Needs Repair	$80,000.00	$3,000.00
B	Roofing	Satisfactory	$500.00	$500.00
C	Ventilation / Air Conditioning	Needs Replacement	$795,200.00	$0.00
D	Electrical Systems	Needs Replacement	$460,932.00	$0.00
E	Plumbing and Fixtures	Needs Repair	$0.00	$12,000.00
F	Windows	Needs Replacement	$95,000.00	$95,000.00
G	Structure: Foundations	Satisfactory	$0.00	$0.00
H	Structure: Walls and Chimneys	Needs Repair	$6,000.00	$6,000.00
I	Structure: Floors and Roofs	Satisfactory	$2,500.00	$2,500.00
J	General Finishes	Needs Replacement	$564,800.00	$526,560.00
K	Interior Lighting	Needs Replacement	$142,000.00	$142,000.00
L	Security System	Needs Repair	$31,500.00	$31,500.00
M	Emergency / Egress Lighting	Needs Repair	$0.00	$17,000.00
N	Fire Alarm	Needs Replacement	$49,700.00	$49,700.00
O	Handicap Accessibility	Needs Repair	$59,600.00	$53,880.00
P	Site Condition	Needs Repair	$395,000.00	$143,500.00
Q	Sewage System	Needs Repair	$0.00	$7,000.00
R	Water Supply	Needs Replacement	$60,000.00	$52,500.00
S	Exterior Doors	Needs Replacement	$28,500.00	$24,700.00
T	Hazardous Material	Not Applicable	$0.00	$10,000.00
U	Life Safety	Satisfactory	$120,700.00	$106,500.00
V	Loose Furnishings	Needs Replacement	$177,500.00	$30,000.00
W	Technology	Needs Repair	$426,000.00	$77,000.00
X	Construction / Contingency	Not Applicable	$853,944.52	$339,786.38
Total			**$4,349,376.52**	**$1,730,626.38**