

Hope - Page Public Schools Facilities Assessment Summary

February 20, 2019



EngTech is a Multi-Discipline E/A Firm



Integrated Disciplines

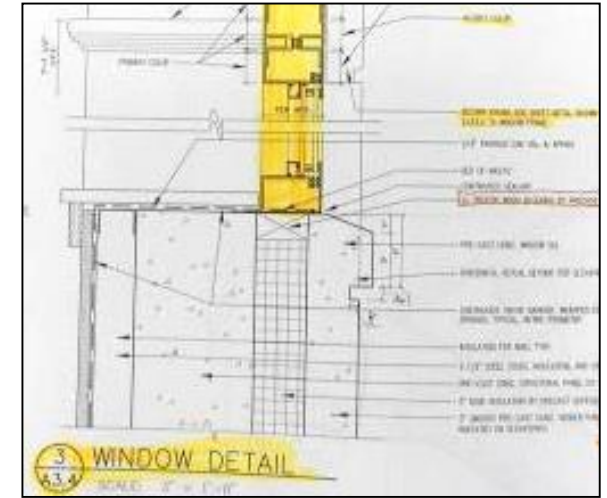
- Architecture
- Structural Engineering
- Architectural Engineering
- Mechanical Engineering
- Electrical Engineering
- Forensics

Professional Services

- Building Assessments
- Energy Studies
- Master Planning
- Community Engagement
- Referendum Assistance
- Construction Drawings/Bid Sets
- Construction Administration



Forensic Experience



Class B School Experience

Rural School Clients

- Strasburg..... 122 Students
- Montpelier..... 102 Students
- Glen Ullin.....129 Students
- Drake-Anamoose..165 Students
- **Hope-Page.....170 Students**
- Mott-Regent 209 Students
- Edgeley..... 244 Students
- Beach..... 266 Students
- Parshall..... 277 Students
- LaMoure..... 299 Students
- TGU..... 330 Students
- Garrison..... 347 Students
- Kidder County.....351 Students
- DLB Lakers..... 645 Students



Tonight's Discussion

- Assessment – What did we look at?
- Positive Takeaways
- Deficient Items Observed
- Building Condition / Building Systems
- Next Steps
- Questions / Discussion



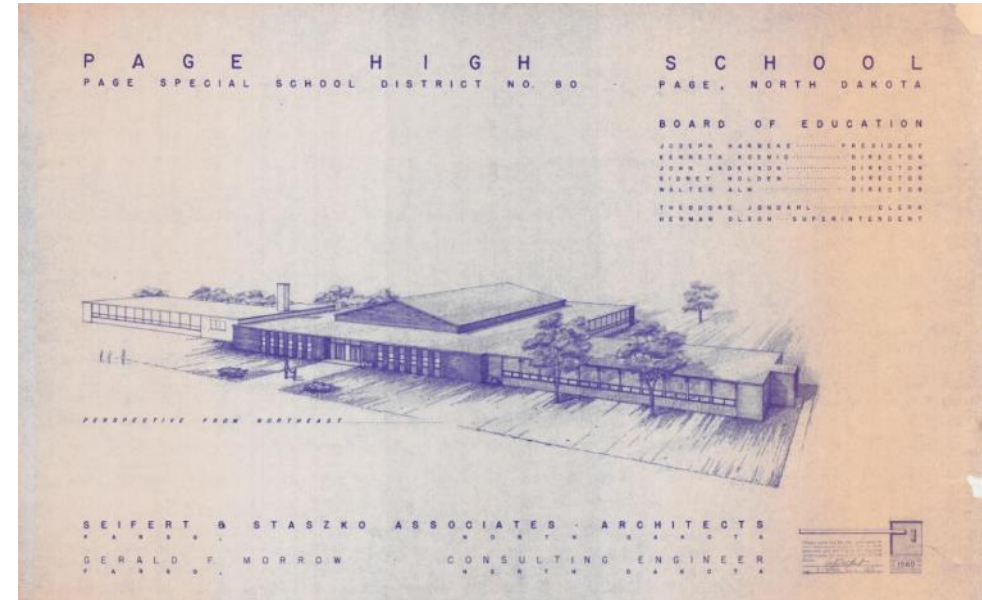
Why do the assessment?

- ✓ Determine Expected Useful Life of Systems
- ✓ Determine Expected Useful Life of a Facility
- ✓ Prevent Costly Emergency Repairs = Save Money
- ✓ Level Resources/Expenses
- ✓ Prioritize for Funding
- ✓ Identify Issues to be considered w/Educational Needs



Information Gathering

- Researched Historical Records
 - ✓ Square Footages/Ages of Facilities
 - ✓ Work Recently Done
 - ✓ Fire Marshal Reports*
 - ❑ Asbestos Reports
- Field Work
 - ✓ Toured Facilities
 - ✓ Photos of Existing Conditions
 - ❑ Roofing Report
- Conversations
 - ✓ Superintendent – Brad Callendar
 - ✓ Elementary Principal – Heidi Kingston
 - ✓ High School Principal – Angie Zerface
 - ✓ Facility Personnel – Mike Kingston & Steve Huscka
 - ✓ IT Coordinator – Brent Jacobson
 - ✓ Various staff conversations



Positive Takeaways

- Architectural / Site
 - Buildings are in average overall condition
 - Maintained well
 - Efficient layout
 - Good visual control
 - Secure main entrance door*
 - Building envelope*
 - No structural issues
 - Hope Science / FACS
- Mechanical
 - Doing the best to keep things going
- Electrical
 - Adequate electrical capacity (Hope)
 - IT Network – Good Coverage
 - Surveillance – Good Coverage
 - Fire Alarm – Good Coverage*

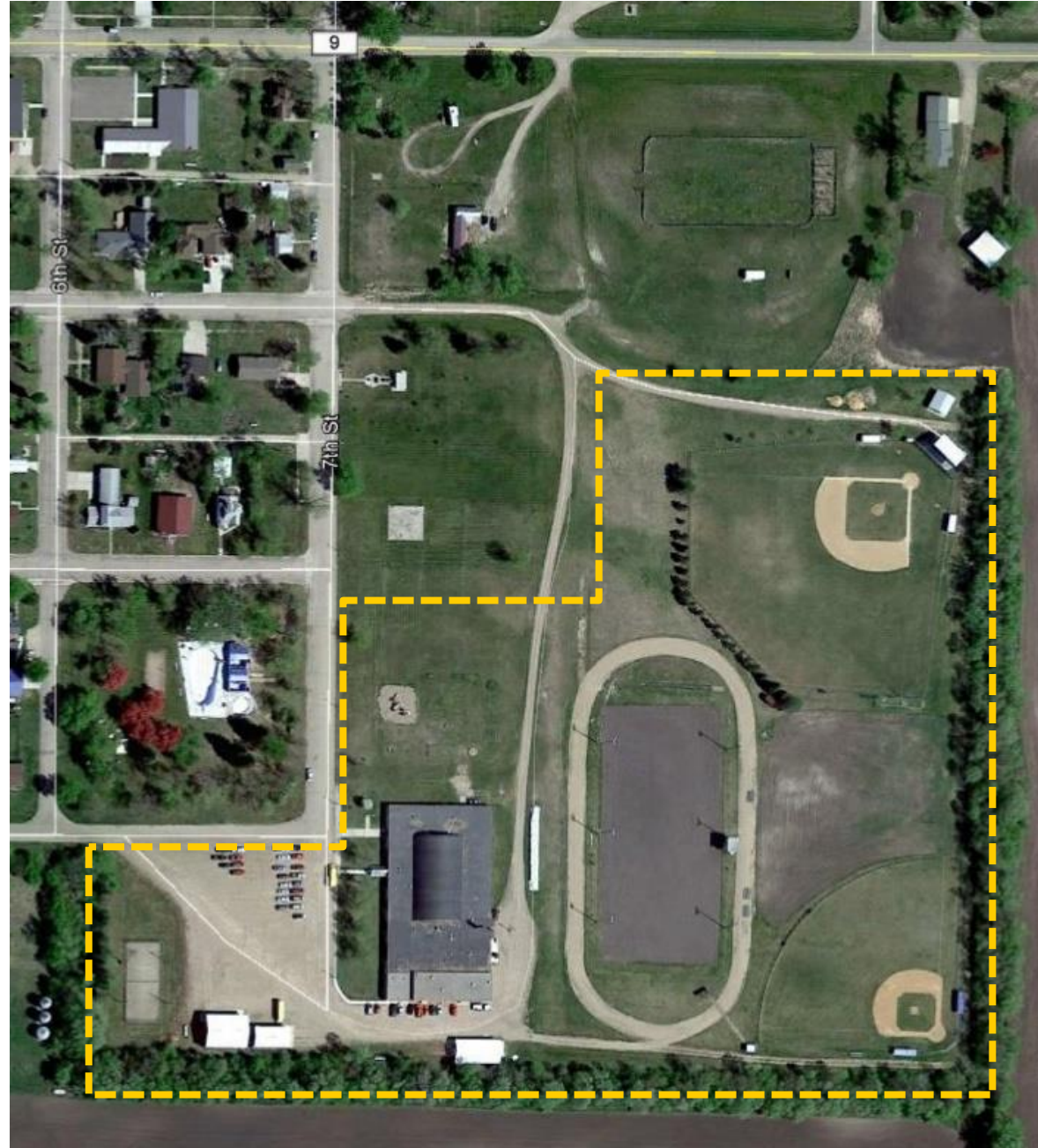


Hope Facility – High School

- 1961 Original Building (34,991 SF)
- 1980 Addition (5,936 SF)
- Greenhouse
- Total SF – 41,128
- 69 Students



Hope – District Owned Property



Assessment Categories

- Architectural
 - Site (circulation, paving, drainage)
 - Envelope (exterior, windows)
 - Roof (type, age, condition)
 - Finishes (flooring, walls, ceilings)
 - Code Compliance (life safety, accessibility “ADA”)
 - Hazardous Materials
 - Safety / Security
- Mechanical / Plumbing
 - HVAC (boilers, AHUs, piping, ductwork, terminal units, controls)
 - Plumbing piping, fixtures
 - Design, Code issues, etc.
- Electrical
 - Electrical service
 - Power distribution (panels, breakers, etc.)
 - Lighting
 - Information Technology
 - Master Clock
 - Access Systems
 - Fire Alarm System



Hope – Site Conditions



Site parking, drive, sidewalks



Deteriorated sidewalk



Parking is not ADA compliant



Step at Stoop, Condenser on blocks



Hope – Roof/Envelope



EPDM & Ballast



Stucco Above Doors



Cracks



Deteriorated Sealant



Missing Sealant



Hope – Exterior Doors/Windows



Newer Entrance Doors



Original HM Frame / Door



Newer Windows

Hope – Interior Finishes



Ceilings

2x4 Ceiling Grid and Tile
2x2 Ceiling Grid and Tile
Metal Ceiling Tile
Exposed Structure

Hard Flooring

4+ types of VCT
4+ types of VAT
Ceramic Tile
2 types of Epoxy
Sealed Concrete

Carpet

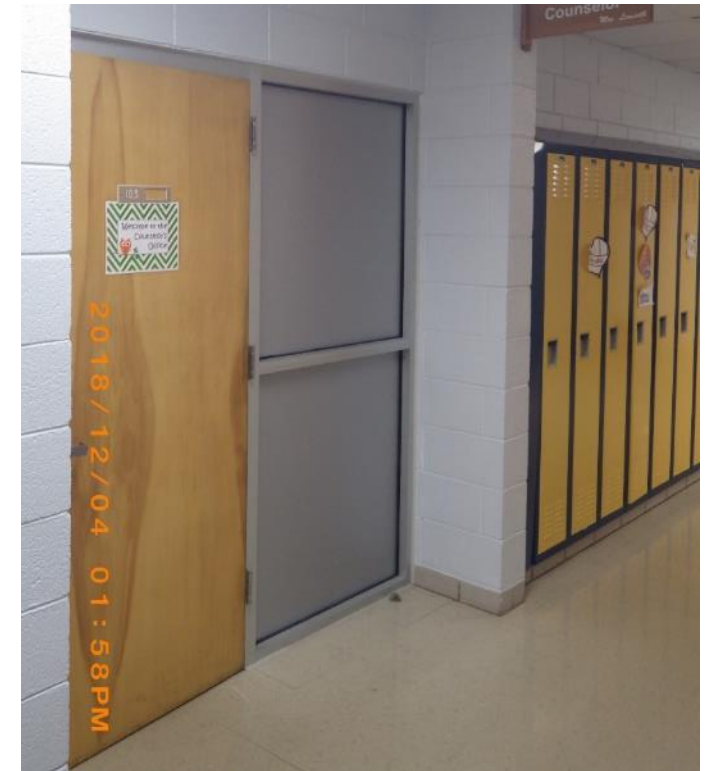
13+ types
Broadloom & Squares



Hope – Interior Finishes



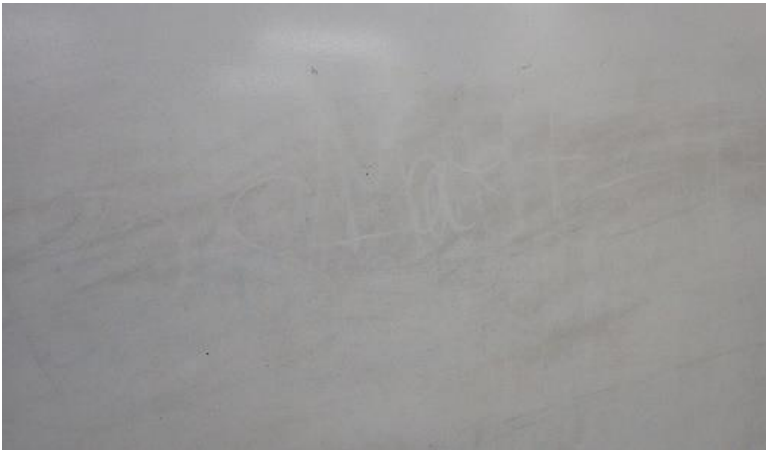
Classroom Casework (Select rooms)



Frames / Original Wood Doors



Hope – FF&E



Markerboards



Classroom Furniture

Hope – Restrooms / Locker Rooms



Typical Restroom



Typical Locker Room



Hope – Potential Code Issues



Limited Fire Suppression System



Wood Framed Walls Not Allowed



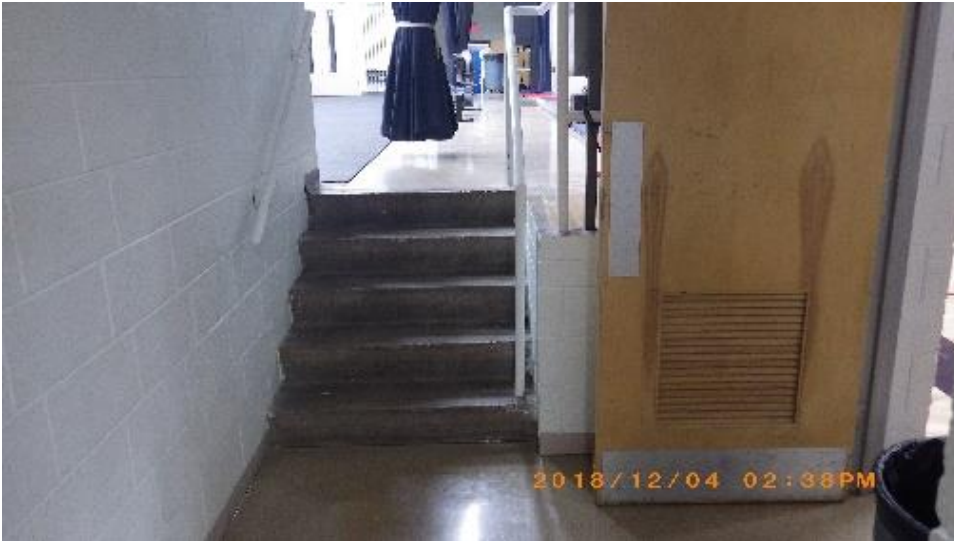
Lack of Panic Hardware



Restricted Corridor Width



Hope – Accessibility Issues



Stage Access



Clear Floor Area / Grab Bar / Etc.



Room Signage



Door Widths / Clearances



Hope – Hazardous Materials



Pipe Insulation / Elbows



Vinyl Asbestos Tile



Adhesives



Vinyl Asbestos Tile



Hope – Safety / Security



Signage & video-intercom at main entry



Office location is not ideal



Video Surveillance



Hope – Mechanical/Plumbing



HVAC Controls



Heating Water Boilers



Electric boiler



Piping in tunnel with missing insulation



Hope – Mechanical/Plumbing



Classroom Ventilation Air Opening Covered



Cabinet Ventilator with Built-in Shelving



Shop sink with no plumbing drain pipe.



Wood blocking supporting toilet.



Hope – Electrical



Electrical Service (mostly original)



Lighting – 4-bulb T8 fluorescent troffers



Electrical Service



Fire Alarm (new, but obsolete)



Hope – Special Systems



Access Control



Master Clock (issues, being replaced)



Intercom / PA
(original speakers, limited phones)



Data Network

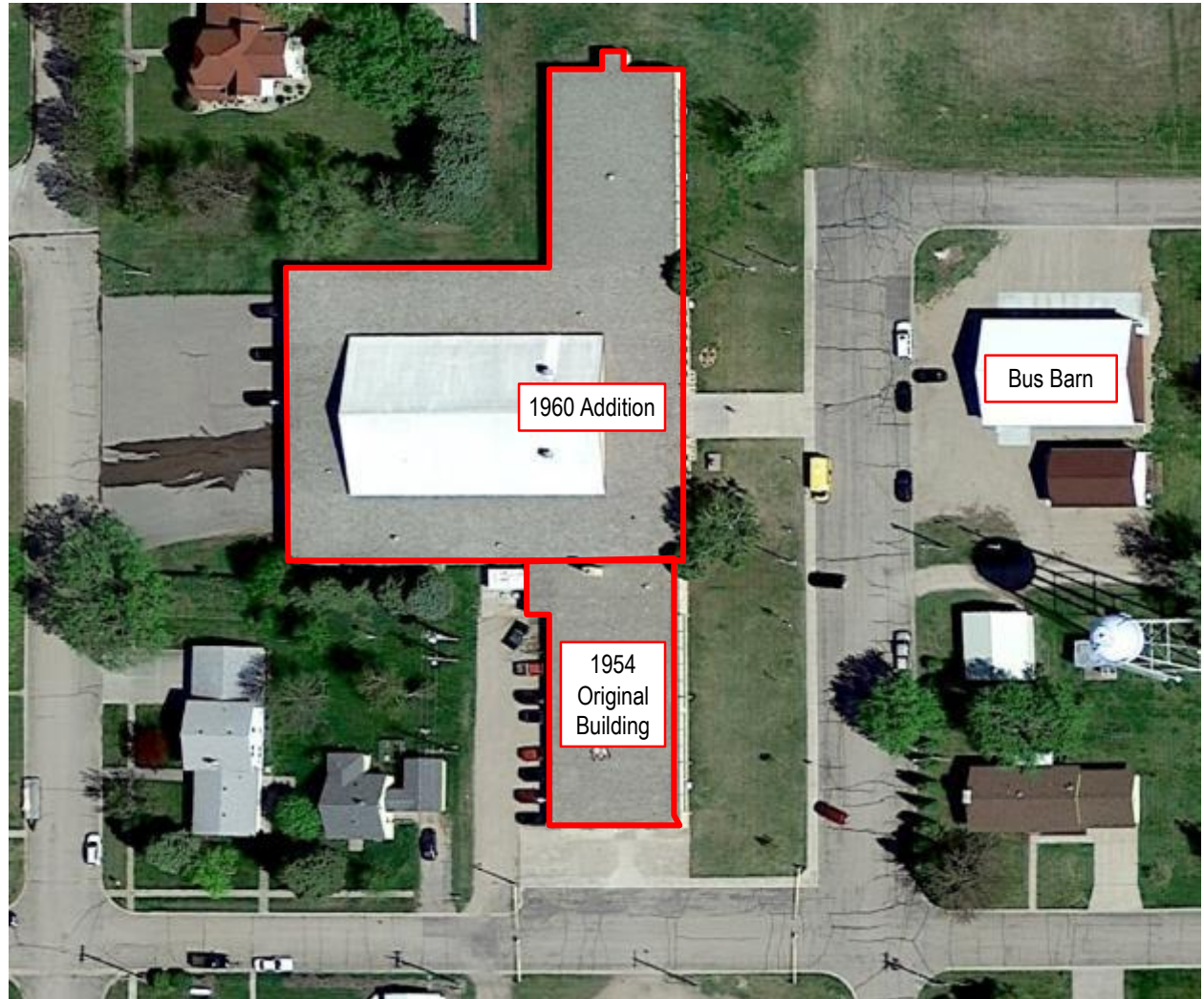


Questions about Hope Facility?

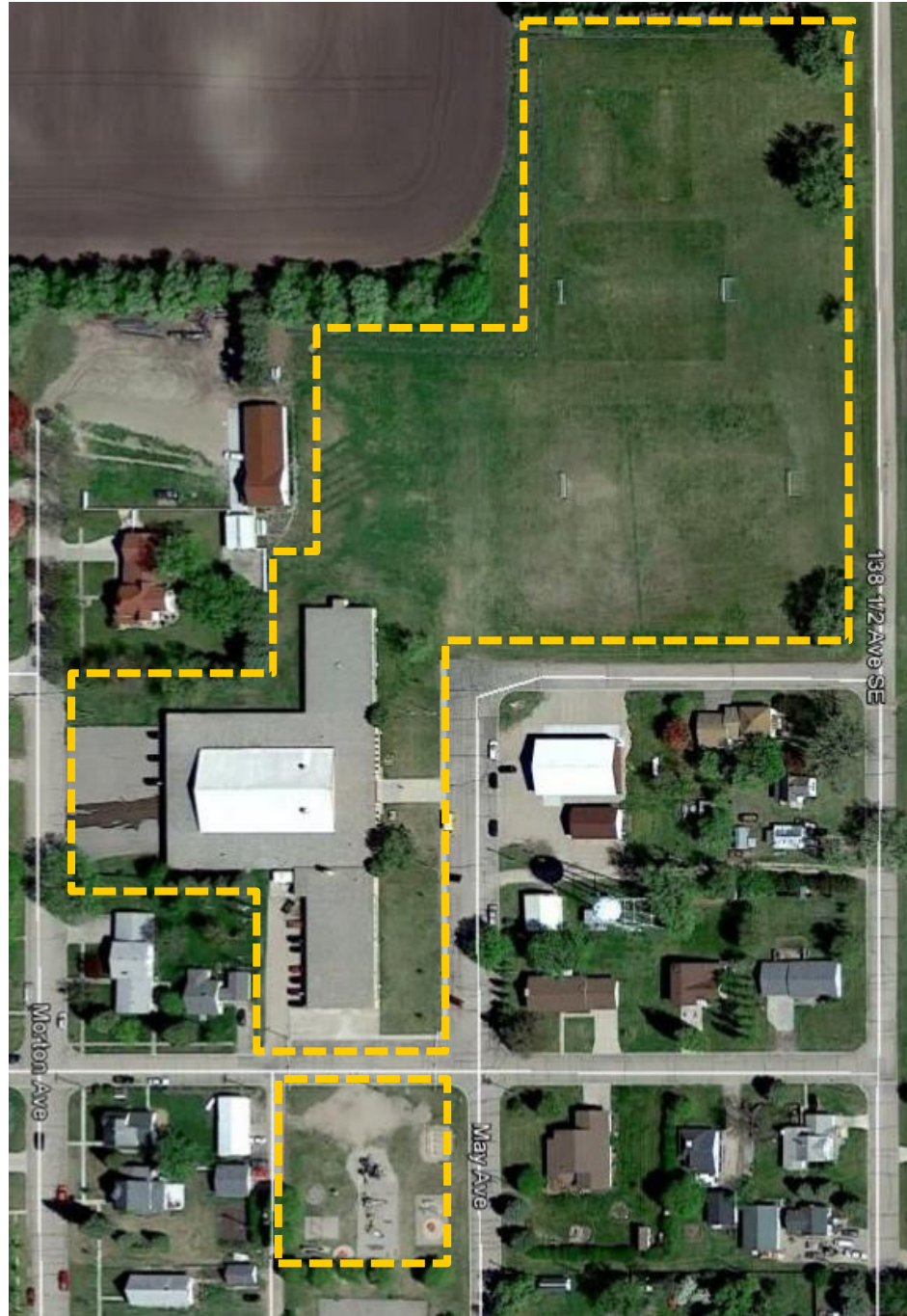


Page Facility - Elementary

- 1954 Original Building (8,406 SF)
- 1980 Addition (33,574 SF)
- Total SF – 41,980
- 88 Students - K-6
- 13 Students - PK



Page – District Owned Property



Page - Site Conditions



Site parking, drive, sidewalks



Sidewalk



Parking is not ADA compliant



Playground



Page – Roof/Envelope



Ballasted EPDM



Fully Adhered Singly Ply (PVC)



Paint Issues



Sealant



Page – Exterior Doors/Windows



Newer Aluminum Entrances



Rusted Hinges



Condensation / Frost



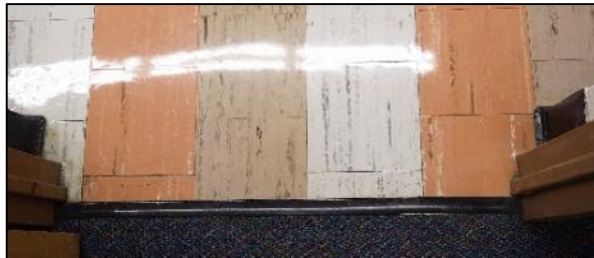
Rotted Window Sashes

Page – Interior Finishes



Ceilings

T&G Wood Deck
2'x4' Acoustic Ceiling Tile
12"x12" Acoustic Ceiling Tile
12"x12" Metal Ceiling Tile



Hard Flooring

6+ types of VCT
6+ types of VAT
Ceramic Tile
Epoxy
Sealed Concrete



Carpet

11+ types
Broadloom & Squares



Page – Interior Finishes



Classroom Casework (1954 Building)



Kindergarten Room



Classroom Casework (1954 Building)
(Along exterior wall)



Classroom Casework (1960 Addition)
(Only along exterior wall)





Tables and Chairs



Flexibility



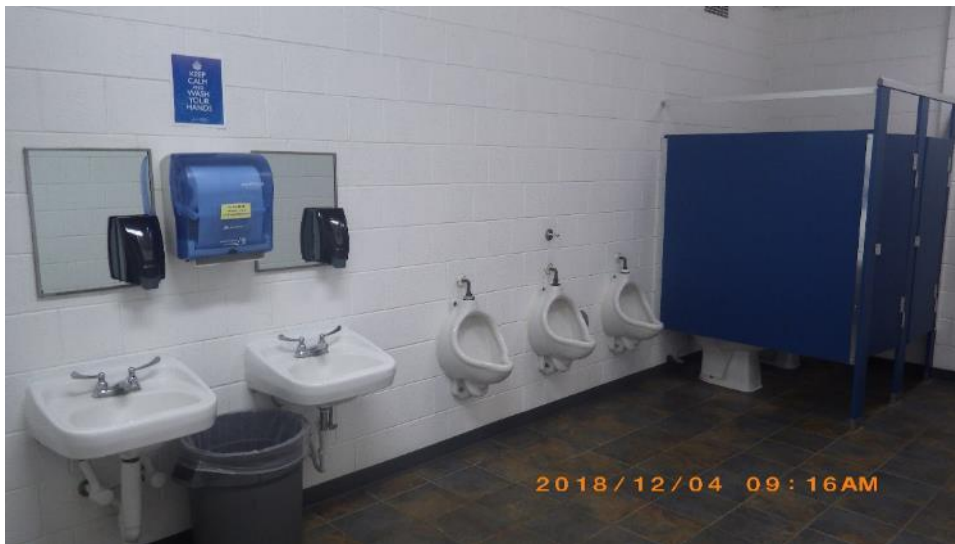
Page – Restrooms / Locker Rooms



Typical Restroom



Typical Locker Room



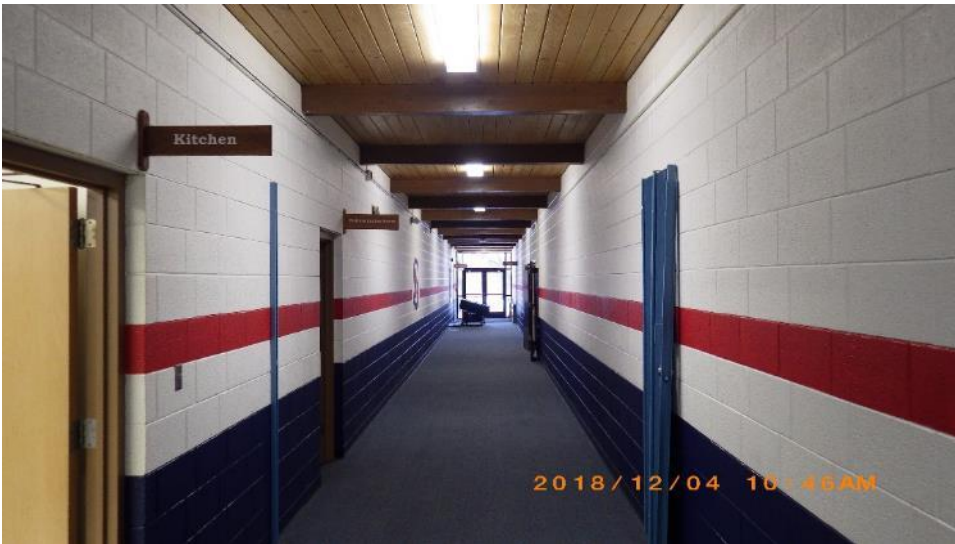
Page – Potential Code Issues



No Fire Suppression System



Wood Framed Walls Not Allowed



Gates in Corridors



Restricted Corridor Width /
Combustibles (No lockers)



Page – Accessibility Issues



Stage Access



Lack of ADA Parking



Room Signage



Door Widths / Clearances



Page – Hazardous Materials



Pipe Insulation / Elbows



Vinyl Asbestos Tile



Adhesives



Sink Coatings



Page – Safety / Security



Signage & video-intercom at main entry



Video Surveillance



Lack of Secure Entrance;
Inexpensive solution exists
because of Office location.



Page – Mechanical/Plumbing



HVAC Controls



Steam Boiler



Electric Boiler



Piping with missing insulation.



Page – Mechanical/Plumbing



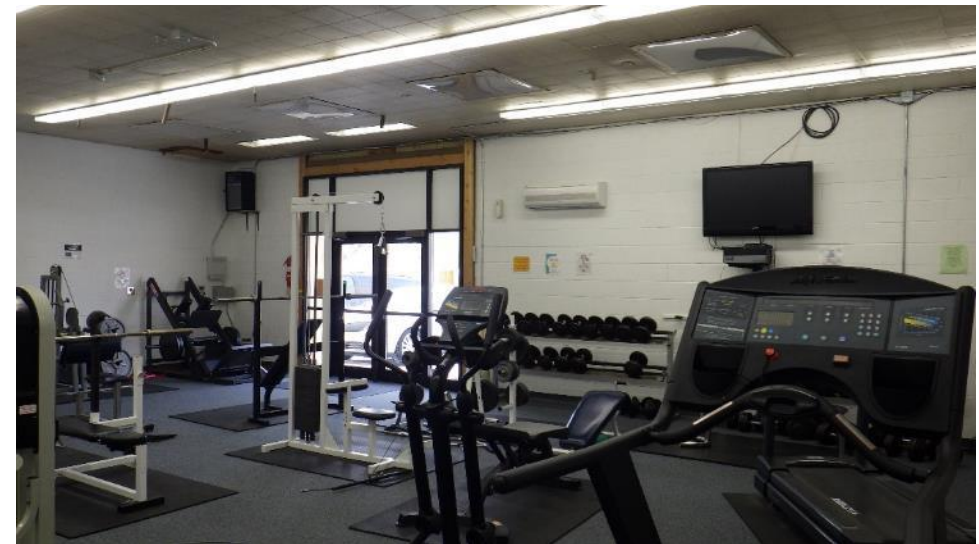
Classroom Ventilation Air Opening Covered



Cabinet Ventilator with Built-in Shelving



AC Unit Improperly Supported.



No Ventilation Air in Workout Room



Page – Electrical



Electrical Service (mostly original)



Lighting – Suspended T8 fluorescents



Electrical Service



Fire Alarm (new, but obsolete)



Page – Special Systems



Access Control



Master Clock (issues, being replaced)



Intercom / PA
(original speakers, limited phones)



Data Network



Questions about Page Facility?



Site / Architectural Recommendations

Hope

- Provide ADA complaint accessible parking
- Repair/replace deteriorated concrete walks.
- Perform minor grading around building.
- Provide code compliant roof access hatch and ladder.
- Tuckpoint deteriorated mortar / brick masonry.
- Roof maintenance / replacement.
- Remove/replace joint sealants at exterior.
- Replace majority of flooring throughout building.
- Replace suspended ATC grid and ceilings tiles throughout.
- Paint walls.
- Replace casework in classrooms.
- Replace visual display boards in classrooms.
- Replace original wood doors
- Repaint HM doors/frames.
- Remodel restrooms and locker rooms
- Review extent of kitchen equipment.
- Provide new room signage / wayfinding signage.
- Add interior vestibule doors.
- Asbestos abatement throughout the building.
- Address building code deficiencies.
- Safe, Secure Entrance through office.
- **Paint exterior hollow metal doors and frames.**
- **New classroom furniture.**
- **Repair cracking at exterior plaster soffit. Paint.**
- **Add protective covering at greenhouse CMU foundation.**
- **Address grading issues at parking lot.**
 - **Consider paving part of parking lot to address multiple issues (circulation, drainage, ADA).**

Page

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- Provide new room signage / wayfinding signage.
- Add interior vestibule doors.
- Asbestos abatement throughout the building.
- Address building code deficiencies.
- Safe, Secure Entrance through office.
- **Paint exterior steel lintels.**
- **Consider relocating playground to north side of building.**
 - **This could allow for staff parking on the south side of the building and a bus lane.**



Mechanical / Plumbing Recommendations

Hope

- Install HVAC system incorporating water source heat pumps with geothermal heating and cooling.
 - Remove fuel oil fired boilers and all associated piping.
 - Remove electric boiler and all associated piping.
 - Remove heat exchanger and all associated piping.
 - Replace Cabinet Unit Ventilators with water source heat pumps.
 - Replacing HVAC piping in tunnels.
 - Include a four-pipe HVAC piping system to accommodate both heating and cooling.
- Replace unit heaters in corridors and vestibules.
- Install Direct Digital Controls on any existing and new HVAC equipment.
- Remove all pneumatic controls.
- Provide proper ventilation air as required to areas which currently do not have ventilation.
- Install a chemical water treatment for HVAC heating water system.
- Replace all corroded plumbing piping, valving, deteriorated insulation and valving.
- Restroom Renovation
 - Replace sinks, toilets, urinals.
 - Install low-flow flush valves on toilets and urinals.
 - Replace plumbing piping and insulation.
- Gym - Replace HVAC units

Page

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 - Replace sinks, toilets, urinals.
 - Install low-flow flush valves on toilets and urinals.
 - Replace plumbing piping and insulation.
- Gym - Replace HVAC units
- **Weight Room - Provide code required ventilation.**



Electrical Recommendations

Hope

- Replace the electrical service entrance equipment with new 2000A main switch board to feed existing equipment downstream.
 - Replace electrical panels original to 1961 building.
 - Provide additional outlets to reduce reliance on extension cords and power strips.
 - Upgrade all fluorescent lighting to LED fixtures.
 - Include lighting controls, dimmers, and zone controls.
 - Install occupancy sensor to increase energy efficiency.
 - Add additional telephones to classrooms/occupied spaces.
 - Install cable tray for routing of data cabling.
 - Consider installing access control card throughout.
 - Consider adding audio enhancement equipment to all classrooms.
-
- Replace “rocker” switches with standard wall switches.
 - Provide dedicated room for data equipment or provide equipment with secured boxes for protection.
 - Replace exterior service equipment and weather head into building.

Page

- Replace the electrical service entrance equipment with new 1000A main switch board to feed existing equipment downstream.
 - Replace circuit breaker panels more than 30 years old.
 - Provide additional outlets to reduce reliance on extension cords and power strips.
 - Upgrade all fluorescent lighting to LED fixtures.
 - Include lighting controls, dimmers, and zone controls.
 - Install occupancy sensor to increase energy efficiency.
 - Add additional telephones to classrooms/occupied spaces.
 - Consider adding cable tray for routing of all data cabling.
 - Consider installing access control card readers throughout.
 - Consider adding audio enhancement equipment to all classrooms.*
-
- Install additional emergency lighting fixtures.
 - Reinstall Telecom headend equipment in secured space with temperature controls.
 - Install new functional stage lighting to eliminate use of cloth insulated wire.



Project Priorities

- **Address Critical Issues – Priority Levels 1 (0-2 yrs)**
 - Life Safety
 - Building Security
 - High Risk of Emergency Repair/Prevent Secondary Damage
- **Address End of Useful Life Issues – Priority Level 2 (3-5 yrs)**
 - Code Recommendations
 - Energy Efficiency Projects
 - End of Useful Life Items
- **Address Long Term Items – Priority Level 3 (6-10 yrs)**
 - Normal Wear and Tear – Ongoing
 - End of Useful Life Items
- Priorities should be discussed/revised



- **Critical Issues – 0-2 yrs**

- Mechanical
 - Replace entire system (All Recommendations)
 - Address casework & flooring as required
- Electrical
 - Replace Distribution/Breaker Panels
 - Replace Exterior Service Equipment
 - Add / Replace Receptacles/Switches
 - Add / Replace Phones and PA System
 - Dedicated Data Room
- Exterior Envelope
 - Sealant, Tuckpointing, Painting, Grading, Roof Leaks
- Accessibility
 - Parking, Room Signage*
- Secure Entrance
 - Vestibule Doors
- Roof /Asbestos Assessment

- **Critical Issues – 0-2 yrs**

- Mechanical
 - Replace entire system (All Recommendations)
 - Address casework & flooring as required
- Electrical
 - Replace Distribution/Breaker Panels
 - Replace Exterior Service Equipment
 - Add / Replace Receptacles/Switches
 - Add / Replace Phones and PA System
 - Dedicated Data Room
 - Replace Stage Wiring / Lighting
 - Additional Emergency Lighting
- Exterior Envelope
 - Sealant, Tuckpointing, Painting, Grading, Roof Leaks
 - Windows
- Accessibility
 - Parking, Room Signage*
- Secure Entrance
 - Vestibule Doors
- Roof /Asbestos Assessment



- **End of Useful Life Issues – (3-5 yrs)**

- Plumbing Replacement
- Electrical
 - LED Lighting/Occupancy Sensors
 - Cable Tray
 - Access Control Throughout Building (Replace doors)
 - Audio Enhancement
- Site Improvements
 - Parking Lot Improvements
 - Sidewalk
- Accessibility
 - Restrooms
 - Other remaining items
- Furniture

- **Long Term Items – 6-10 yrs**

- Roof Replacement
 - Add Access Hatch/Ladder
- Interior Finishes
 - Replace Misc. Kitchen Equipment
 - Replace Flooring, Ceilings, Paint
 - Replace Casework where needed
 - Asbestos Abatement*
 - Replace Markerboards

- **End of Useful Life Issues – (3-5 yrs)**

- Plumbing Replacement
- Electrical
 - LED Lighting/Occupancy Sensors
 - Cable Tray
 - Access Control Throughout Building (Replace doors)
 - Audio Enhancement
- Site Improvements
 - Sidewalk
 - Relocate / Replace Playground
 - Address Site Circulation
- Accessibility
 - Restrooms
 - Other remaining items

- **Long Term Items – 6-10 yrs**

- Roof Replacement
 - Add Access Hatch/Ladder
- Interior Finishes
 - Replace Misc. Kitchen Equipment
 - Replace Flooring, Ceilings, Paint
 - Replace Casework where needed
 - Asbestos Abatement*
 - Replace Markerboards



Thank You!



Planning Process

- ✓ 10 Year Capital Maintenance Plan
- Citizen's Committee / Public Engagement
- ☐ Educational Adequacy
- ☐ Community Listening > Focus Groups
- ☐ Analyze Funding/Tax Impact
- ☐ Align Design w/Budget
- ☐ Board Recommendation > "Handshake"
- ☐ Public > "What do *you* think?"
- ☐ School Board Decision
- ☐ Voter Approval / Educate Public
- ☐ Successful Project

