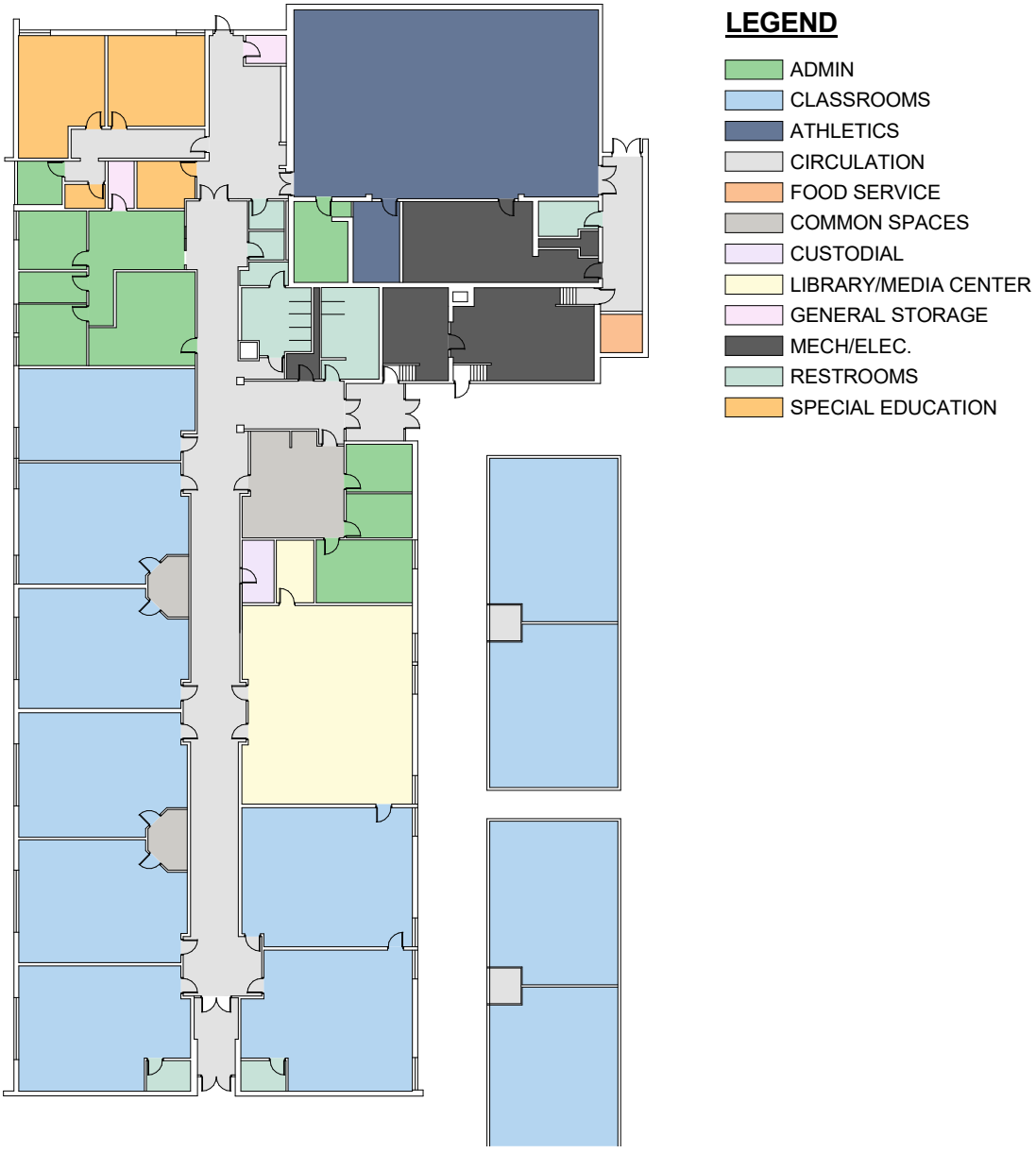
WILDER ELEMENTARY SCHOOL

A. EXISTING BUILDING INVENTORY

Wilder Elementary School is located at 1009 N 3rd St, Grand Forks, ND and was one of the earlier schools constructed in the district. It was originally built in 1952 and underwent remodeling after the 1997 flood.

Wilder E.S. is accessible by 11th Ave N to the northwest, N 4th St to the southwest, and 10th Ave N to the southeast. There is a small parking lot directly to the northwest of the building.

FLOOR PLAN



MAIN LEVEL

B. ARCHITECTURAL FINISHES

SUMMARY

Wilder Elementary School's construction was completed in 1952 with a remodel completed after the 1997 flood. The school lacks in space as larger classrooms were split into two, the gym is also used as the cafeteria, and the nurse's office is too small (001, 002). There is also a lack of storage with the mechanical room acting as a storage room (003). Many elements in the school are dated including casework, tile, and classroom carpet (004, 005, 006). There are only two main restrooms for students that lack accessible stalls.

SITE

Concrete and asphalt work around the school show cracking and are in bad condition (007). The school's parking lot is extremely small with current drop-off/pick-up not optimal (008, 009). Main entrance (Door 1) lacks security and is not ideal for accessibility (010). Two portable classrooms are located on the east side of the building (011). Ramps to the portable classrooms are in rough condition (012) as some metal paneling is coming off.

MASONRY

The exterior of the building is traditional brick. No visible issues were seen with the brick. Caulking is in bad condition and should be redone (013).

ADDITIONAL EXTERIOR MATERIALS

Other exterior materials include EIFS and wood paneling. Cracking is seen along the span of the EIFS and the caulking needs to be redone (014, 015). The wood paneling has no visible issues (016).

ROOF

The roof consists of tar and rock. It is checked yearly for any repairs that need to be done.

OPENINGS

The door openings within the school are in good condition. Wire mesh windows outside are painted shut (017). Due to the age of the windows, the sealant has shrunk and no longer runs the entire width of the glass panels (018). Staff noted that windows and doors are the biggest loss of air.

CEILINGS

The ceilings within the school are mostly comprised of Acoustical Ceiling Tile (ACT). No visible issues were seen, besides normal wear.

ARCHITECTURAL FINISHES CONTINUED

WALLS

The interior walls are either painted masonry, painted gypsum board, have vinyl wall coverings, or have tiling. There are several areas where the vinyl wall covering is releasing from the gypsum substrate (019). Portions of exterior walls are covered with vinyl covering on the interior. It is recommended the vinyl wall covering be removed from the interior surface of exterior walls, as this could potentially create a double vapor barrier and trap moisture within the walls. Current code does not permit the use of vinyl wall covering on outside walls for this reason.

FLOORING

Most of the school consists of carpet. Carpet in the hallways is newer, and the classrooms have older carpet that is worn and dated (020, 021). Portions of the carpet in the library is warping (022). Some classrooms have dated tile in front of the cabinetry (023).

SECURITY

Although security cameras are present at the doors, there is no direct visibility from the office to the main entrance. Ideally, all visitors should be directed into the office upon entry, before gaining access into the school.

CMTA

C. MECHANICAL/ELECTRICAL ASSESSMENT

FIRE PROTECTION

- Fire sprinkler system is currently installed throughout the entire building. Depending on the level of work performed in the building, sprinkler systems may need to be modified to accommodate any new work.

PLUMBING

- The kitchen was upgraded in the 1998 project and a grease interceptor was installed in accordance with the city of Grand Forks. The plumbing fixtures in the kitchen as well as the piping all appeared to be in good shape.
- All of the domestic water piping, vent piping and plumbing fixtures were replaced as part of the 1998 project and appear to be in good shape without need of replacement. Portions of the water piping below grade were replaced to accommodate the changes in 1998, otherwise the remainder are original and should still be in good working order.
- The restroom plumbing fixtures throughout the building are currently white vitreous china fixtures with the water closets. The lavatory faucets are a mix of manually operated and sensor activated. The school has been replacing the lavatory sensor faucets with manual faucets as mixing valves and/or sensors start to fail. The sink faucets in the classrooms and break rooms are manually operated.
- Domestic hot water is produced by a commercial grade PVI Conquest 399 MBH water heater which is a high quality water heater and in good working order. There is no need to replace this water heater, while continuing to provide regularly scheduled maintenance on the heater to keep it in good working order.
- ASSE 1070 thermostatic mixing valves should be added to public lavatories for scald protection in accordance with the uniform plumbing code.

HEATING

- Heating for the entire building comes from two (2) natural gas fired hot water Weil McLain model LGB-8 boilers. The capacity of each boiler is 910 MBH. The boiler plant is designed to be replaced with a condensing hot water boiler plant as part of the 2022/2023 ESCO project that is currently being bid. As part of the ESCO project, all steam and condensate piping and their associated components will be replaced with a hot water hydronic system.
- The majority of the existing hot water piping throughout will remain in place as it was newly installed as part of the 1998 project and will be extended where required for the ESCO project.
- Perimeter hot water and electric finned tube radiation is installed in some exterior offices, restrooms, and corridors for supplemental heat. Hot water and electric cabinet unit heaters and suspended unit heaters provide heat for vestibules, mechanical rooms, and other similar spaces. These existing devices will remain in place with only the control valves being replaced with new automatic temperature control valves as part of the ESCO project.

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED

CMTA

VENTILATION AND EXHAUST

- The kitchen is currently served by a grease exhaust fan, dishwasher exhaust fan and indoor AHU type makeup air unit with recirculation. These units will all be replaced as part of the ESCO project. The majority of the ductwork will remain in place and only modified to accommodate the new units.
- The gymnasium is currently served by a 5,000 CFM indoor air handling unit that will be replaced as part of the ESCO project. Ductwork within the gymnasium will remain and only the ductwork in vicinity of the AHU will be replaced as needed for installation of the new unit.
- The classrooms and office areas are all served by ducted fan coil units that are located above the ceilings. These fan coil units will all be replaced with new as part of the ESCO project. The roof hoods associated with these fan coils that provide the fresh air will be capped with using new roof mounted energy recovery units to provide fresh air from the spaces and capturing exhaust air from toilet rooms and other associated spaces as needed to balance the fresh air and exhaust airflow rates.

AIR CONDITIONING

- The office area currently has a split unit air conditioning system. The rest of the building is not currently provided with any means of air conditioning.
- The new 2022/2023 project will install an air cooled chiller with necessary piping components, chilled water cooling coils for fan coil units and chilled water coils for the indoor air handling units and roof mounted dedicated outdoor air units..
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AUTOMATIC TEMPERATURE CONTROLS

- There are not proper controls or air flow monitoring to control ventilation rates based on occupancies or to verify ASHRAE 62.1 requirements for recommended outdoor air are being met. All of the controls within the school are planned to be replaced with Direct Digital Controls (DDC) systems as part of a 2022/2023 project. The DDC systems will be integrated into the existing Grand Forks Public School's Building Automation System for central monitoring and control.

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED

ELECTRICAL SERVICE

- Electrical service is delivered to the facility by Xcel Energy via 208/120V pole-mounted transformer located on north side of building.
- Power is routed overhead from the transformer to a service mast at the roof of the school, down to the main service entrance switchboard.
- Peak loads on this transformer in the past 12 months was 67kW (182A), as provided by Xcel Energy.
- Electrical service appears to be acceptable, as is. Capacity is adequate.

STANDBY POWER

- A generator is not currently located on-site.
- No improvements are suggested for generator power. While emergency generator power is useful, it is not required.

POWER DISTRIBUTION

- The service entrance switchboard is a 208/120V 600A Square D Power Style Switchboard. Power is supplied to all areas of the building from this main switchboard. This includes various distribution panels, mechanical equipment, and branch panels.
- Service entrance switchboard is scheduled to be updated as part of mechanical systems updates taking place within the next year.
- Branch panels throughout building were noted to be in fair condition. While some appear to be nearing the end of their useful life, they are still in work order. These panels are recommended to be replaced with any renovation project.

LIGHTING

- The large majority of the building interior consists of fluorescent and incandescent lighting. Areas such as the gym have been updated to LED lighting. Lighting within hallways was noted to be very dim.
- School is currently scheduled to undergo a lighting upgrade project that will replace all non-LED lighting within school with energy-efficient LED lighting. This should cut lighting energy usage by 50-75%.
- Lighting at exterior of building has been upgraded to energy-efficient LED lighting with either new light fixtures, or new LED bulbs within existing light fixtures.
- Emergency egress lighting provided via battery back lighting. Exit signage appeared to be adequate.
- The addition of building mounted exterior emergency egress lighting at each and every exit door is suggested.
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LIGHTING CONTROL SYSTEMS

- Lighting within large majority of school was noted to be controlled via manual toggle switch. Very few areas capable of dimming control.
- Upgrade of all lighting controls throughout to digital lighting management is suggested. This includes, but is not limited to, occupancy sensors, vacancy sensors, daylight sensors, dimming controls in majority of spaces, and digital monitoring of all controls via manufacturer provided software.
- All exterior lighting is controlled via timeclock and photocell.
- All exterior lighting control is suggested to be tied into digital lighting management, as outlined in interior lighting portion above.

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED

COMMUNICATIONS SYSTEMS

- Majority of data cabling within school consists of Category 5 and 5e cabling, with all newly-installed cabling being Category 6. Several wireless access points were noted throughout building, but not in classrooms. Coverage seemed to be adequate for general use.
- Telecom service appears to be adequate and is being updated over time, internally.
- Intercom system consists of Simplex 5100 Series Building Communication System. Recessed speakers were noted to be located all throughout circulation areas and several “normally-occupied” spaces.
- IP phones are located in all classrooms for room-to-room communication.
- Centrally-controlled clock system is manufactured by Simplex with clocks located all throughout school. All communication between clocks and central system is done via hardwiring. Clocks consist of primarily digital devices. Several simple battery-powered analog clocks were noted
- It is suggested that the existing intercom system be updated to new IP system throughout entire school. This would provide the functionality to adjust the utilization and grouping of each individual speaker, as desired. This system would also include an upgraded wireless clock system. The intercom system and clock system would communicate with manufacturer provided software to set schedules, announcements, bells, etc.
- Classroom technology varied between classrooms. Technology observed consisted of digital displays, short-throw projectors, and classroom sound reinforcement.

SAFETY & SECURITY SYSTEMS

- A select few exterior entrance doors currently utilize electronic door hardware for entrance.
- It is suggested that additional door security is added to all exterior doors for the purposes of access control and monitoring.
- Security camera systems, at the interior and exterior, have been updated over time to IP-based cameras. A buzz-in system consisting of a 2-way speaker and camera is located at the school’s main entrance.
- System appears to be adequate and can be easily added to by school’s IT department, as necessary.
- Fire alarm control panel is Simplex 4005. Pull stations noted to be located at each exit of building. Fire detection noted to be adequate. Notification consists of strobes and horn/strobe devices. Frequency of notification devices was noted to be inadequate. Additional devices are required, by Code.
- It is suggested that the fire alarm system be upgraded to a voice-capable system as is currently required by the North Dakota Building Code This system would emit voice messages instructing occupants what to do in an emergency situation. This would be in lieu of a horn sounding in an emergency, as the system currently does.

D. EXISTING DEFICIENCIES

The analysis of the existing Wilder E.S. has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance
This includes evaluation of the current building codes required by the City of Grand Forks and the State of North Dakota. Non-compliant items within the building have been identified and are listed below.

- Entry hallway door needs to swing out per occupancy loads, and panic hardware is needed as well. (024)
- Drinking fountains throughout the building do not meet the required ratio of wheelchair accessible fountains to standing person accessible fountains. (025, 026)
- Traditional wire glass throughout building is no longer to code as an acceptable type of safety glass. (027, 028)
- Both girl's and boy's restrooms are not accessible. (029, 030, 031)
- Sinks in staff office, staff restroom, and music room are not accessible. (032, 033)
- Restrooms in Kindergarten classes are not accessible as they are missing grab bars. (034)
- All stairs in mechanical rooms do not have handrails on both sides, as required by code. (035, 036)
- Doors 1 and 2 are not protected with enclosed vestibules, as required by energy code. (037, 038)
- The playground is not accessible on all sides. (039)
- Portions of exterior walls are covered with vinyl wall covering on the interior side, which is not to code. (040)

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 001

The school lacks in space as larger classrooms were split into two, the gym is also used as the cafeteria, and the nurse's office is too small.

WIL-ES 002

The school lacks in space as larger classrooms were split into two, the gym is also used as the cafeteria, and the nurse's office is too small.

WIL-ES 003

There is also a lack of storage with the mechanical room acting as a storage room.

WIL-ES 004

Many elements in the school are dated including casework, tile, and classroom carpet.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 005

Many elements in the school are dated including casework, tile, and classroom carpet.

WIL-ES 006

Many elements in the school are dated including casework, tile, and classroom carpet.

WIL-ES 007

Concrete and asphalt work around the school show cracking and are in bad condition.

WIL-ES 008

The school's parking lot is small with current drop-off/pick-up not optimal.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 009

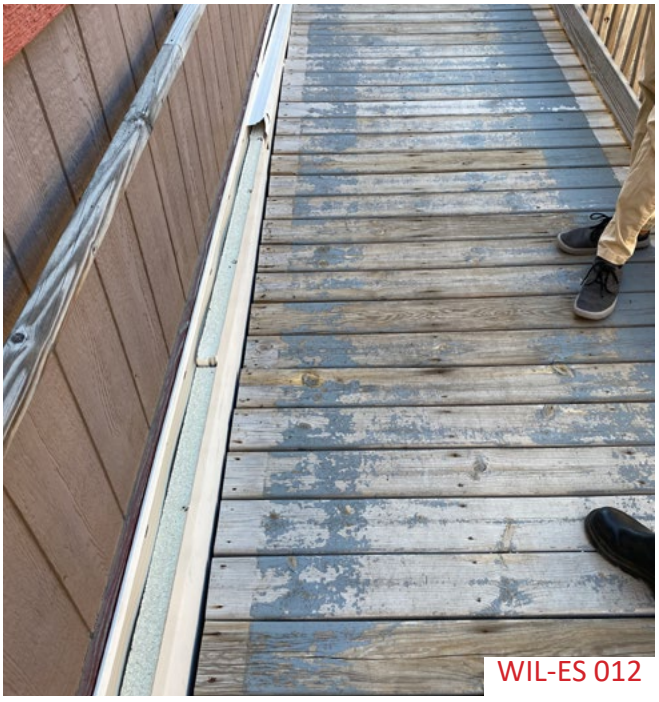
The school's parking lot is small with current drop-off/pick-up not optimal.

WIL-ES 010

Main entrance (Door 1) lacks security and is not ideal for accessibility.

WIL-ES 011

Two portable classrooms are found on the east side of the building.



WIL-ES 012

Ramps to the portable classrooms are in rough condition as some metal paneling is coming off.

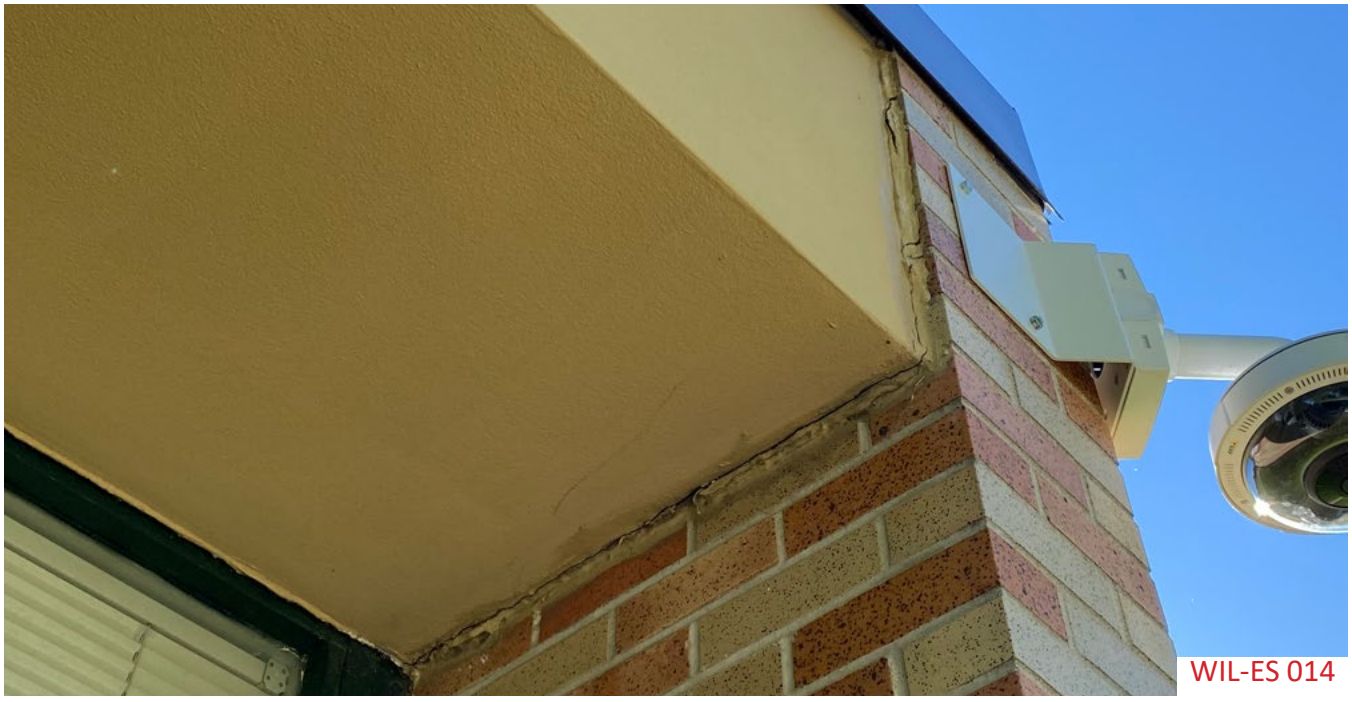
INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 013

Caulking is in bad condition and should be redone.

WIL-ES 015

Cracking was seen along the span of the EFIS along with the caulking needing to be redone.



WIL-ES 014

Cracking was seen along the span of the EFIS along with the caulking needing to be redone.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 016

The wood paneling had no visible issues.

WIL-ES 017

Wire mesh windows outside are painted shut.

WIL-ES 018

Due to the age of the windows, the sealant has shrunk and no longer runs the entire width of the glass panels.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 019

There were several areas where the vinyl wall covering is releasing from the gypsum substrate..

WIL-ES 020

New carpet was installed in the hallways but the classrooms have worn, dated carpet.

WIL-ES 021

New carpet was installed in the hallways but the classrooms have worn, dated carpet.

WIL-ES 022

Portions of the carpet in the library is warping.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 023

Some classrooms have dated tile in front of cabinetry.

WIL-ES 024

Entry hallway door needs to swing out per occupancy loads, and panic hardware is needed as well.

WIL-ES 025

Drinking fountains throughout the building do not meet the required ratio of wheelchair accessible fountains to standing person accessible fountains.

WIL-ES 026

Drinking fountains throughout the building do not meet the required ratio of wheelchair accessible fountains to standing person accessible fountains.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 027

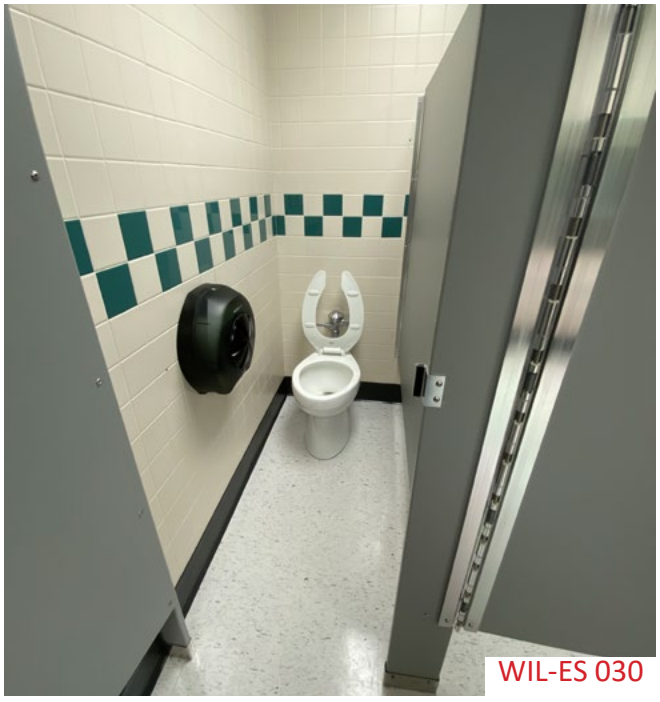
Traditional wire glass throughout building is no longer to code as an acceptable type of safety glass.

WIL-ES 028

Traditional wire glass throughout building is no longer to code as an acceptable type of safety glass.

WIL-ES 029

Both girl's and boy's restrooms are not accessible.



WIL-ES 030

Both girl's and boy's restrooms are not accessible.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 031

Both girl's and boy's restrooms are not accessible.

WIL-ES 032

Sinks in staff office, staff restroom, and music room are not accessible.

WIL-ES 033

Sinks in staff office, staff restroom, and music room are not accessible.

WIL-ES 034

Restrooms in Kindergarten classes are not accessible as they are missing grab bars.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS


WIL-ES 035

All stairs in mechanical rooms do not have handrails on both sides, as required by code.


WIL-ES 036

All stairs in mechanical rooms do not have handrails on both sides, as required by code.

WIL-ES 037

Doors 1 and 2 are not protected with enclosed vestibules, as required by energy code.


WIL-ES 038

Doors 1 and 2 are not protected with enclosed vestibules, as required by energy code.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIL-ES 039

The playground is not accessible on all sides.

WIL-ES 040

Portions of exterior walls are covered with vinyl wall covering on the interior side, which is not to code.

EXISTING DEFICIENCIES CONTINUED

EDUCATIONAL ADEQUACY

This is a review of applicable Department of Public Instruction recommendations as they relate to Grand Forks Public Schools' curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Area	Current Square Footage	DPI Recommended Square Footage	Difference
Administration	1,943 SF	2,060 SF	-117
Athletics	2,667 SF	3,300 SF	-633
Circulation	3,535 SF	7,258 SF	-3,723
Classrooms	6,227 SF	11,450 SF	-5,223
Common Spaces	614 SF	1,500 SF	-886
Food Service/Cafeteria	618 SF	2,612 SF	-1,994
Library/Media Center	1,566 SF	892 SF	674
Mechanical/Electrical	1,390 SF	1,815 SF	-425
Music	691 SF	1,000 SF	-309
Restrooms	771 SF	605 SF	166
Special Education	959 SF	1,800 SF	-841

Total Missing Square Footage	-13,311

EXISTING DEFICIENCIES CONTINUED

ADMINISTRATION/PTO COMMENTS AND FEEDBACK

LACK OF LEARNING/COLLABORATION/SUPPORT SPACES

- Space is needed for large assemblies.
- There is not enough storage space throughout the school.
- There is not enough collaborative learning spaces.
- Specialized programs do not have rooms.
- There are no sensory rooms.
- Gymnasium is used for physical education, lunch, and assemblies.
- Social worker and counselor currently share an office.

PARKING AND STUDENT DROP-OFF/PICK-UP

- The pick-up and drop-off area is not adequate, especially in the winter months.
- There is not enough parking to accommodate staff.

SECURITY/SAFETY

- There are not vestibules at every door.
- There is a need for an improved secure main entrance.
- Fire alarms are hard to hear in certain areas of the school.

TOP PRIORITIES

1. New Secure Entrance with Improved Student Drop-Off/Pick-Up
2. Additional Learning/Collaboration/Support Spaces
3. Mechanical and HVAC Upgrades

E. COST ANALYSIS

Wilder Elementary School
Grand Forks, ND
11/2/2022

CONSTRUCTION ENGINEERS

Facility Assessment

Description	Item Number	Takeoff Qty		Total Cost/Unit			Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs	Total Cost
Code Compliance												
Change swing on entry hallway doorway for occupancy loads and add panic hardware	1	1	Ea	$3,615.44	/	Ea	$3,615					$3,615
Replace water fountains within sinks that are not to code	2	1	Ea	$22,055.01	/	Ea	$22,055					$22,055
Replace wire glass throughout the building that is no longer up to code (frame to remain)	3	40	Ea	$499.29	/	Ea	$19,972					$19,972
Remodel girls and boys restrooms to make them ADA accessible	4	2	Ea	$50,964.43	/	Ea	$101,929					$101,929
Add ADA accessible sinks in staff office, staff restroom, and music room by replacing 10 lf of base, tops, and upper cabinets in each of staff office and music room	5	3	Ea	$15,340.23	/	Ea	$46,021					$46,021
Change faucet in the sinks throughout that have a water fountain within them which is no longer to code	6	5	Ea	$5,671.29	/	Ea	$28,356					$28,356
Add grab bars in the kindergarten restrooms that are missing grab bars	7	2	Ea	$478.09	/	Ea	$956					$956
Add handrails to the stairs in mechanical area	8	120	LF	$131.89	/	LF	$15,826					$15,826
Add interior vestibule to doors 1 and 2	9	2	Ea	$18,446.81	/	Ea	$36,894					$36,894
Create an ADA accessible entrance to the playground	10	1	LS	$12,602.87	/	LS	$12,603					$12,603
Replace the sheetrock (tape and paint) on the exterior walls where moisture was trapped in side	11	4,800	SF	$14.80	/	SF	$71,046					$71,046
Total Code Compliance		**22,333**	**SF**	**$16.09**	**/**	**SF**	**$359,273**	**$0**	**$0**	**$0**		**$359,273**
Security												
Secure entrance, administration office and special education relocation remodel	12	2,720	SF	$266.94	/	SF				$726,077		$726,077
Total Security		**2,720**	**SF**	**$266.94**	**/**	**SF**	**$0**	**$0**	**$0**	**$726,077**		**$726,077**
Addition/Remodel (Educational Adequacy)												
Administration	13	117	SF	$339.20	/	SF				$39,686		$39,686
Art	14		SF	$351.74	/	SF				$0		$0
Athletics	15	633	SF	$360.52	/	SF				$228,208		$228,208
Auditorium	16		SF	$485.35	/	SF				$0		$0
Business Education	17		SF	$376.82	/	SF				$0		$0
Circulation	18	3,723	SF	$376.83	/	SF				$1,402,949		$1,402,949
Classrooms	19	5,223	SF	$376.82	/	SF				$1,968,126		$1,968,126
Common Spaces	20	886	SF	$393.12	/	SF				$348,305		$348,305
FACS	21		SF	$393.12	/	SF				$0		$0
Food Service/Cafeteria	22	1,994	SF	$458.33	/	SF				$913,905		$913,905
Library/Media Center	23		SF	$395.63	/	SF				$0		$0
Mechanical/Electrical	24	425	SF	$307.85	/	SF				$130,838		$130,838
Music	25	309	SF	$401.90	/	SF				$124,187		$124,187
Restrooms	26		SF	$464.61	/	SF				$0		$0
Science	27		SF	$431.99	/	SF				$0		$0
Special Education	28	841	SF	$340.28	/	SF				$286,172		$286,172
Technical Education	29		SF	$381.83	/	SF				$0		$0

Wilder Elementary School
Grand Forks, ND
11/2/2022

CONSTRUCTION ENGINEERS

Facility Assessment

Description	Item Number	Takeoff Qty		Total Cost/Unit			Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs	Total Cost
Technology Education	30		SF	$394.37	/	SF				$0		$0
Total Adequacy		**14,151**	**SF**	**$384.59**	**/**	**SF**	**$0**	**$0**	**$0**	**$5,442,375**		**$5,442,375**
Capital Maintenance												
Interior Upgrades												
Repair the vinyl wall covering that is peeling up	31	1	Ea	$13,611.09	/	Ea		$13,611				$13,611
Replace carpet in the classrooms	32	6,905	SF	$10.67	/	SF		$73,670				$73,670
Replace the carpet in the library (exclude moving book shelves, assumed by owner)	33	1,600	SF	$13.15	/	SF		$21,046				$21,046
Replace VCT in classrooms in front of cabinetry that is outdated (labeled as tile in report)	34	432	SF	$8.67	/	SF		$3,745				$3,745
Replace aged casework in 8 classrooms	35	672	LF	$413.58	/	LF		$277,924				$277,924
Interior Upgrades Subtotal		**22,333**	**SF**	**$17.46**	**/**	**SF**						**$389,996**
Exterior Upgrades												
Mill and overlay cracking asphalt parking lot (940 SY) and replace damaged concrete (600 sf)	36	1	Ea	$52,868.98	/	Ea			$52,869			$52,869
Add a ramp at main entrance (Door 1) and address security	37	100	SF	$79.50	/	SF	$7,950					$7,950
Replace ramp decking and railing (deck structure and stairs to remain) on to the portable classrooms that are in rough condition and repair damaged flashing	38	600	SF	$109.11	/	SF			$65,464			$65,464
Replace caulking that is in bad condition on exterior traditional brick	39	11,720	SF	$13.86	/	SF		$162,476				$162,476
Caulk the cracking along the EFIS	40	1,000	LF	$2.52	/	LF	$2,521					$2,521
Unstick the windows (wire mesh) that are painted shut	41	1	Ea	$855.85	/	Ea		$856				$856
Replace the roof when it nears the end of its useable lifetime	42	22,233	SF	$34.46	/	SF			$766,149			$766,149
General maintenance of the windows as needed that appear to be leaking in the frame	43	14	Ea	$504.11	/	Ea		$7,058				$7,058
Exterior Upgrades Subtotal		**22,333**	**SF**	**$47.70**	**/**	**SF**						**$1,065,343**
Electrical Upgrades												
Replace branch panels that are at end of their useful life	44	22,333	SF	$2.94	/	SF	$65,745					$65,745
Add egress lighting to doors to exterior as is required by Building Code	45	22,333	SF	$0.19	/	SF	$4,222					$4,222
Upgrade of all interior lighting controls throughout to digital lighting management	46	22,333	SF	$1.89	/	SF		$42,219				$42,219
Upgrade of all exterior lighting controls throughout to digital lighting management	47	22,333	SF	$0.19	/	SF		$4,222				$4,222
Update the existing intercom system with a new IP system throughout entire school	48	22,333	SF	$1.89	/	SF		$42,219				$42,219
Add additional door security all exterior doors with access control and monitoring	49	22,333	SF	$0.85	/	SF	$18,904					$18,904
Upgrade the fire alarm system to a voice-capable system as is currently required by the North Dakota Building Code	50	22,333	SF	$0.69	/	SF		$15,480				$15,480
Electrical Upgrades Subtotal		**22,333**	**SF**	**$8.64**	**/**	**SF**						**$193,011**

COST ANALYSIS CONTINUED

Wilder Elementary School
Grand Forks, ND
11/2/2022

CONSTRUCTION ENGINEERS

Facility Assessment

Description	Item Number	Takeoff Qty		Total Cost/Unit			Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs	Total Cost
Mechanical Upgrades												
Modify existing sprinklers to meet NFPA standards as necessary	51	22,333	SF	$0.63	/	SF	$14,073					$14,073
The school has been replacing the lavatory sensor faucets with manual faucets as mixing valves and/or sensors start to fail. The sink faucets in the classrooms and break rooms are manually operated.	52	22,333	SF	$1.26	/	SF		$28,146				$28,146
Add ASSE 1070 thermostatic mixing valves to public lavatories for scald protection in accordance with the uniform plumbing code.	53	22,333	SF	$0.32	/	SF		$7,036				$7,036
Replace all existing pneumatic controls with a direct digital control system	54	22,333	SF	$12.05	/	SF		$269,076				$269,076
Mechanical Upgrades Subtotal		**22,333**	**SF**	**$14.25**	**/**	**SF**						**$318,331**
Total Capital Maintenance		**22,333**	**SF**	**$88.06**	**/**	**SF**	**$113,415**	**$968,784**	**$884,482**	**$0**		**$1,966,681**
Total Construction Cost		**39,204**	**SF**	**$216.67**	**/**	**SF**	**$472,688**	**$968,784**	**$884,482**	**$6,168,452**		**$8,494,405**
**** All above estimated costs are total construction costs. These include general conditions, CM fees, permits, insurances, bonds, taxes*												
Contingencies & Soft Costs												
Design Contingency	55	5.0%					$23,634.38	$48,439.18	$44,224.12	$308,422.59		$424,720
Construction Contingency	56	5.0%					$23,634.38	$48,439.18	$44,224.12	$308,422.59		$424,720
Escalation	57	0.0%					$0.00	$0.00	$0.00	$0.00		$0
A & E Fees	58	7.0%					$33,088.13	$67,814.85	$61,913.77	$431,791.63		$594,608
FF & E	59	2.0%					$9,453.75	$19,375.67	$17,689.65	$123,369.04		$169,888
Owner Contingency	60	1.5%					$7,090.31	$14,531.75	$13,267.24	$92,526.78		$127,416
Total Contingencies & Soft Costs							**$96,901**	**$198,601**	**$181,319**	**$1,264,533**		**$1,741,353**
Total Facility Assessment Cost Estimate		**39,204**	**SF**	**$261.09**	**/**	**SF**	**$569,589**	**$1,167,384**	**$1,065,801**	**$7,432,984**		**$10,235,758**
Total Critical & Educational Adequacy		**39,204**	**SF**	**$204.13**	**/**	**SF**						**$8,002,573**