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BEN FRANKLIN ELEMENTARY SCHOOL





A. EXISTING BUILDING INVENTORY

Ben Franklin Elementary School opened in 1961 and is located at 1016 S 20th Street in Grand Forks. In 1963, the first addition to the school was built. This addition was located on the south side of the original school and included classrooms, a multipurpose room, and a library. In 1969, a west wing was added. This addition primarily consisted of a central multipurpose room and open resource center area with open classroom areas around the perimeter. In 1987, renovations were completed to add walls and partitions to separate the open classroom areas into individual classrooms. A computer room and additional classroom were also constructed, taking the place of the former resource center area. In 1997, an environmental abatement was done due to flooding in the boiler room, tunnels, and crawl space. In 2002, remodeling and renovations took place throughout the school. An office and storage room were added to the existing multipurpose room, the janitor's closet was removed from the kitchen allowing for a longer serving counter, the restroom in the dishwashing room was removed, the main office was made larger and adjacent interior vestibule wall was removed, the athletic office was made larger, and the faculty room, several classrooms and restrooms were renovated. Windows in the kindergarten, 1st grade, and 2nd grade areas have been recently updated, while windows in the library/media center have yet to be replaced.

Ben Franklin is accessible to the south by 11th Avenue S and to the east by S 20th Street. The staff parking lot is located on the north end of the school. There is a blacktop playing area on the south end along with the student drop-off/pick-up area.



BEN FRANKLIN ELEMENTARY SCHOOL

FACILITY ASSESSMENT EXISTING BUILDING INVENTORY ARCHITECTURAL FINISHES
MECH/ELEC ASSESSMENT EXISTING DEFICIENCIES COST ANALYSIS APPENDIX

FLOOR PLAN



MAIN LEVEL



B. ARCHITECTURAL FINISHES

SUMMARY

Ben Franklin Elementary School opened in January of 1961 and has received several additions and several significant remodels since. The school is anticipating HVAC updates in 2023. Major areas of concern within the school include the lack of fire suppression, lack of air conditioning/air quality, no stoops at exterior doors, and water issues near the media center. Due to the absence of air conditioning, the cafeteria gets very hot and the use of fans adds to the already high noise level, causing distractions for classrooms nearby. Another concern is the lack of an exhaust/relief in the server room (001). Casework is dated and damaged (002) and replacement should be considered. Blinds on the doors and windows are dated and damaged and could use replacement.

SITE

The lack of stoops at exterior doors is causing significant problems. The asphalt heaves when the ground is frozen in the winter, preventing Door 6 and 12 from opening (003). Several doors have floating slabs that have made noticeable movements from their original positions (004, 005). There is also a large crack in the cement outside Door 6 (006). Another noticeable site issue is the asphalt in the parking lot. It is in poor shape and could use replacement. Several emergency exits do not have a connection to a public way (007). There are water issues happening on the south side of the building outside the library/media center (008, 009). Water pools in these areas and has leaked into the building on multiple occasions. There are also issues with the courtyard ground. The pavers have shifted, making the ground very uneven (010).

MASONRY

ICON could not recognize the presence of any weeps in most exterior brick walls. It is possible that they could be below grade (below the asphalt). The brick is cracked and pulling away at the corner near Door 11 (011). Tuckpointing is wearing at exterior corners (012).

ADDITIONAL EXTERIOR MATERIALS

The exterior of the school consists primarily of brick. Some areas have CMU (Concrete Masonry Unit) block around the top (013) and near entry vestibules (014). There is residential siding above the brick on exterior walls of the courtyard.

ROOF

There were no notable roof issues with the school. The roof has been patched over time, as needed.

OPENINGS

Windows in the media center are original to the building and are due for replacement (015). Several doors are damaged including exterior Door 5 and Classroom 22, and door frames should be repainted. The window in the boiler room is cracked.



ARCHITECTURAL FINISHES CONTINUED

CEILINGS

Ceiling tiles in the cafeteria continue to fall off and several are missing (016). The ceiling is damaged in the girls' restroom next to Room 25.

WALLS

The interior wall materials are mainly painted CMU, painted gypsum board, or gypsum board with vinyl wall covering. There is some wood paneling throughout, both painted and stained. Various walls throughout the school should be repainted (017) and vinyl wall covering should be repaired or replaced (018). There are several areas where the CMU walls are cracking (019) and caulking at the top of CMU walls should be redone (020).

FLOORING

The common type of flooring at Ben Franklin Elementary School is either carpet or various types of tiles. The carpet throughout is old and could use replacing (021, 022). The wood flooring on the stage is old and damaged.

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.



C. MECHANICAL/ELECTRICAL ASSESSMENT

FIRE PROTECTION

- The building is not currently sprinkled and will need to be sprinkled under the next major project which is planned to be the 2022/2023 project. The building is planning to bring in a new 6" water line into the mechanical room and have a vertical sprinkler riser. All sprinkler work will need to be in accordance with NFPA 13.

PLUMBING

- The toilet group outside of the main office in the East half of the original 1960 building was replaced in 2002. The faculty toilet group in the West wing of the 1963 building was replaced in 2002. The toilet fixtures should continue to be maintained and faucets, traps, etc. replaced as needed. During any remodel associated with the plumbing fixtures, the piping should be investigated and replaced where needed.
- The restroom plumbing fixtures throughout the building are currently white vitreous china fixtures with the water closets being a combination of tank type and flush valve floor mounted toilets. The lavatory faucets are mostly manually operated. The school has been replacing the lavatory sensor faucets with manual faucets as mixing valves and/or sensors start to fail all of the other Grand Forks Public Schools. The sink faucets in the classrooms and break rooms are manually operated.
- Domestic hot water is produced by one (1) AO Smith Cycleone gas fired water heater with an integral storage tanks in the boiler room for the entire building. The domestic hot water heater will be replaced with the 2022/2023 project.
- Kitchen plumbing fixtures and piping were replaced in 2002 and in appear to be good condition. The piping will need to be replaced during the next kitchen remodel to ensure there is no building up of grease. There is no grease interceptor currently installed on the waste line for the three-compartment sink and other grease producing fixtures. It is recommended and a city requirement that a grease interceptor be installed to protect the waste piping system.
- 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) steam boilers. The steam currently serves the 1960 building with a steam to hot water heat exchanger serving heating water to the 1963 building. The boiler plant is being designed to be replaced as part of a 2022/2023 project and will have new hot water boilers.
- Existing steam and condensate piping throughout the original 1963 building is concealed in the tunnels, walls, and above the ceilings in public areas. The existing steam and condensate piping in the tunnels needs to be replaced in order to convert to a hot water heating system.
- The 1960 building is currently served by classroom unit ventilators and steam radiation. The unit ventilators and radiation will be replaced as part of the 2022/2023 project to be hydronic. The 1963 building is currently served by multizone rooftop units and will be replaced with new rooftop units utilizing VAV boxes with discharge reheat coils. The 1963 building will also have the perimeter finned tube control valves replaced with new hydronic control valves. A new rooftop will be installed to replace the existing indoor air handling unit that services the gym/stage area of the original 1960 building.
- 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 are all original steam units to the building and need to be replaced for the conversion to a hot water system.



MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED



VENTILATION AND EXHAUST

- The ventilation and exhaust systems in the school include various air handling units, unit ventilators, and various exhaust fans. The indoor air handling units and exhaust fans throughout the building is original and past their useful life. Indoor Air Quality should be addressed throughout the building to meet ASHRAE 62.1 for controllable ventilation rates. Existing indoor air handling units and unit ventilators have inline starters for fan control and pneumatic controls. Indoor air handling unit for the remodeled gymnasium is currently suspended in the mezzanine. This space is limited and, due to serviceability and clearance requirements, will require new unit to be installed on the roof. Unit ventilators are designed to be replaced with induction displacement units with chilled water coils, hot water coils, and perimeter finned tube radiation to condition the classrooms and cafeteria as part of a 2022/2023 project. The induction displacement units will be paired with a rooftop dedicated outdoor air unit with VFDs for fan speed modulation, energy recovery wheel, chilled water coils, hot water coils, and DDC controls for the ventilation air.
- Any areas of the building where cooling is proposed will need to have all supply ductwork insulated to meet energy code and limit condensation formation.

AIR CONDITIONING

- Split system air conditioning systems existing in the administration area. These units are similar to a “Sanyo” with the indoor portion mounted high on a wall and the condensing units are located on the roof. The systems will be in place to supplement the new 2022/2023 HVAC replacement project where chilled beams will be installed within the space to meet ASHRAE 62.1 for ventilation rates, and ASHRAE Standard 55 for cooling and dehumidification.
- The new 2022/2023 project will installed an air cooled chiller with necessary piping components, chilled beams, induction displacement beams and replacement AHU’s with chilled water coils.

AUTOMATIC TEMPERATURE CONTROLS

- All controls throughout the building are pneumatic controls and original to the building. These pneumatic controls offer limited control capability and no ability for monitoring and alarm. 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 300KVA 208/120V padmount transformer located at north end of building.
- Power is routed from the transformer through a wall-mount CT cabinet mounted just to the south of the transformer. Power is then routed through the wall and into the main service entrance switchboard. Peak load on this transformer in the past 12 months was 105kW (292A), as provided by Xcel Energy.
- Electrical service appears to be acceptable, as is. Capacity is more than 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 building's electrical service is routed from the CT cabinet through the north exterior wall into a large wall-mounted junction box with the main electrical room. Service is then routed from the junction box to the main service entrance switchboard. The service entrance switchboard is a 208/120V 1200A Siemens Series 5. Power is supplied to all areas of the building from this main switchboard. This includes various distribution panels, mechanical equipment, and branch panels.
- No upgrades are suggested for the service entrance switchboard.
- Branch panels throughout building were noted to be in fair condition. All have been replaced within the past several years. No upgrades are suggested for the existing branch panels.

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.
- 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 pack lighting. Exit signage appeared to be adequate.
- The addition of building mounted exterior emergency egress lighting at each and every exit door is suggested.

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.
- School is currently scheduled to undergo a lighting controls upgrade project that will replace large majority of manual control with automatic control. This will improve energy savings.
- All exterior lighting is controlled via three separate timeclocks that have been installed over time.
- All exterior lighting control will be part of controls upgrade as mentioned 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. 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. Speakers were noted to be located all throughout circulation areas and classrooms.
- IP phones are located in all classrooms for room-to-room communication.
- Large majority of clocks in school are simple independent battery clocks with no communication from clock-to-clock.
- 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, smartboards, 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.
- System appears to be adequate and can be easily added to by school's IT department, as necessary.
- Fire alarm control panel is Simplex 4010. Pull stations noted to be located at each exit of building. Very minimal fire detection was noted throughout entire school. Notification consists of strobes and horn/strobe devices and locations appeared to be adequate.
- 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 Ben Franklin Elementary 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.

- Traditional wire glass throughout the building is no longer to code as an acceptable type of safety glass. (023)
- Glass in display cases and doors is not the required safety glass. (024)
- The courtyard is not accessible due to the presence of a step at each door. (025)
- Residential siding in the courtyard is not to code. (010)
- The slanted corridors in the west wing of the building do not have an adequate turn radius and the doors fail to meet required maneuvering clearances for accessibility. (026, 027)
- Boys' and girls' restrooms near the gym are not accessible. Grab bars and toilet paper dispensers exceed height limitations (028), pipes under the sinks are not protected (029), and the turning radius size is questionable.
- Boys' and girls' restrooms near the band/orchestra room are not accessible.
- The sink in the library office is not accessible.
- Drinking fountains throughout the building do not meet the required ratio of wheelchair accessible fountains to standing person accessible fountains. (030, 031)
- The restroom in the Early Childhood Development Room (Room 1) is not accessible.
- Several doors throughout the school have hardware that is not accessible. (032)
- Classroom sinks are not accessible. (033)
- Classroom restrooms are not accessible. (034, 035, 036)
- Several doors throughout the school fail to meet required maneuvering clearances for accessibility.
- The stage is not accessible. (037)
- The old teacher's lounge, which is transitioning into a special education room, does not have an accessible sink.
- There is a section of very low ceiling in the office due to the location of the cold air return. (038)
- The vestibule at Door 13 does not meet code as the number of doors is reduced from 3 at the interior vestibule wall to 2 doors at the exterior wall. (039)



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 001

Another concern is the lack of an exhaust/relief in the server room.



BF-ES 004

Several doors have floating slabs that have made noticeable movements from their original positions.



BF-ES 002

Casework is dated and damaged.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 003

The asphalt heaves when the ground is frozen in the winter, preventing doors 6 and 12 from opening.



BF-ES 005

Several doors have floating slabs that have made noticeable movements from their original positions.



BF-ES 007

Several emergency exits do not have a connection to a public way.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 006

There is also a large new crack in the cement outside door 6.



BF-ES 008

There are water issues happening on the south side of the building outside the library/media center.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 009

There are water issues happening on the south side of the building outside the library/media center.



BF-ES 011

The brick is cracked and pulling away at the corner near door 11.



BF-ES 010

Residential siding in the courtyard is not to code.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 012

Tuckpointing is wearing at exterior corners.



BF-ES 013

The exterior of the school consists primarily of brick. Some areas have CMU block around the top.



BF-ES 014

The exterior of the school consists primarily of brick. Some areas have CMU block around the top and near entry vestibules.



BF-ES 015

Windows in the media center are original to the building and are due for replacement.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 016

Ceiling tiles in the cafeteria continue to fall off and several are missing.



BF-ES 017

Various walls throughout the school should be repainted.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 018

Various walls throughout the school should be repainted and vinyl wall covering repaired or replaced.



BF-ES 020

Caulking at the top of CMU walls should be redone.



BF-ES 019

There are several areas where the CMU walls are cracking.

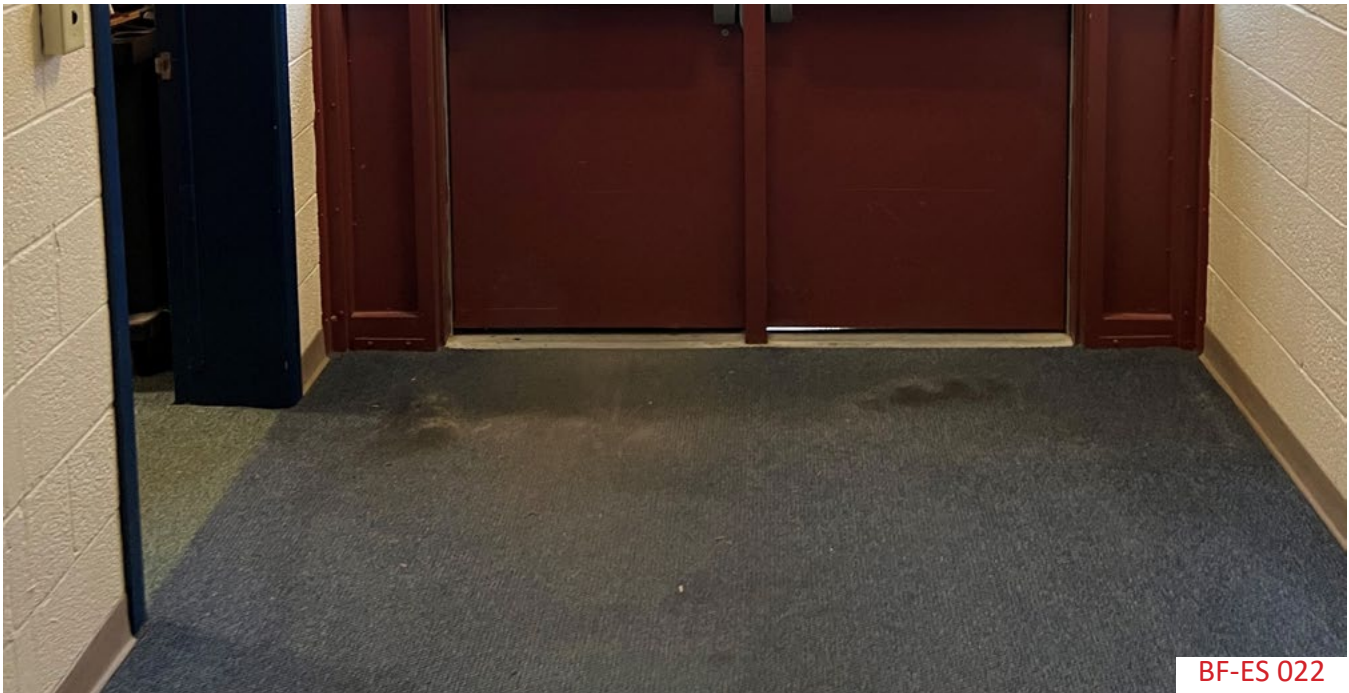


INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 021

The carpet throughout is old and could use replacing.



BF-ES 022

The carpet throughout is old and could use replacing.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



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



Glass in display cases and doors is not the required safety glass.



The courtyard is not accessible due to the presence of a step at each door.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



The slanted corridors in the west wing of the building do not have an adequate turn radius and the doors fail to meet required maneuvering clearances for accessibility.



The slanted corridors in the west wing of the building do not have an adequate turn radius and the doors fail to meet required maneuvering clearances for accessibility.



Boys' and girls' restrooms near the gym are not accessible. Grab bars and toilet paper dispensers exceed height limitations



Pipes under the sinks are not protected (029), and the turning radius size is questionable.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 030

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



BF-ES 031

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



BF-ES 032

Several doors throughout the school have hardware that is not accessible.



BF-ES 033

Classroom sinks are not accessible.



INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 034

Classroom restrooms are not accessible.



BF-ES 035

Classroom restrooms are not accessible.



BF-ES 036

Classroom restrooms are not accessible.



BF-ES 037

The stage is not accessible.

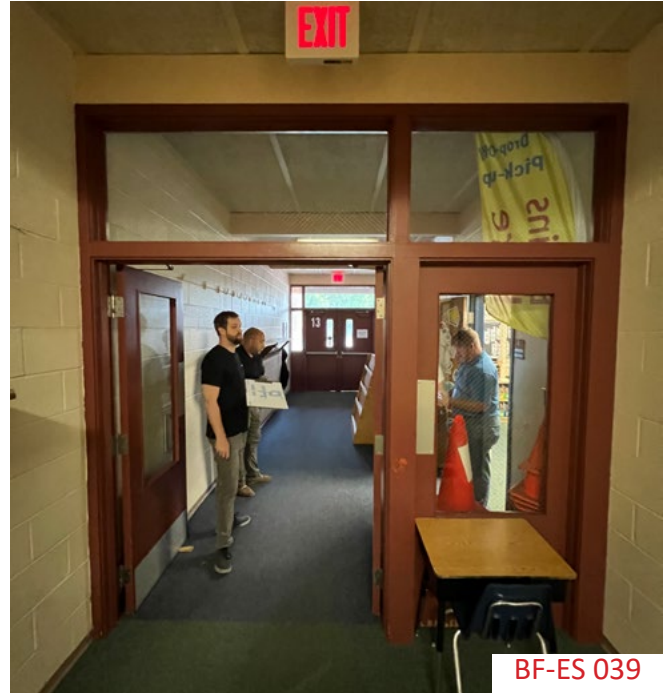


INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



BF-ES 038

There is a section of very low ceiling in the office due to the location of the cold air return.



BF-ES 039

The vestibule at Door 13 does not meet code as the number of doors is reduced from 3 at the interior vestibule wall to 2 doors at the exterior wall.



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	2,343 SF	2,200 SF	123
Athletics	3,028 SF	3,700 SF	-672
Auditorium	940 SF	2,200 SF	-1,260
Circulation	8,370	14,722 SF	-6,402
Classrooms	17,822 SF	17,000 SF	822
Common Space	1,117 SF	1,200 SF	-83
Food Service/Cafeteria	3,004 SF	4,734 SF	-1,730
Library/Media Center	2,188 SF	1,259 SF	929
Mechanical/Electrical	1,580 SF	3,680 SF	-2,100
Music	1,810 SF	2,500 SF	-690
Restrooms	1,239 SF	1,226 SF	13
Special Education	5,464 SF	6,600 SF	-1,136

Total Missing Square Footage	-12,186
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EXISTING DEFICIENCIES CONTINUED

ADMINISTRATION/PTO COMMENTS AND FEEDBACK

SECURITY

- There are no vestibules throughout the building.
- Lack of FOB doors throughout the building.
- Lack of windows near the doors.

LACK OF AIR CONTROL/AIR QUALITY

- Heat is not consistent in the winter months.
- Cafeteria gets hot.
- When it does get warm, windows in the new addition do not open.

WATER DAMAGE

LACK OF SPACE

- There are no breakout spaces.
- Gymnasium and library are small.
- There isn't space to set up for special activities.
- There is not enough space for special education.
- The staff lounge is small.
- There are not enough offices for staff.
- There are only two staff restrooms in the building.
- There is a lack of storage space.

PARKING/STUDENT DROP-OFF AND PICK-UP

- There are not enough parking spaces for staff members.
- The school has a good drop-off/pick-up system, but it can get very congested.

TOP PRIORITIES

1. Improved Security
2. Increased Learning and Support Spaces
3. Improved Air Quality/Control

E. COST ANALYSIS

Ben Franklin Elementary School
Grand Forks, ND
11/2/2022



Facility Assessment Estimate

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
ADA and Building Code Compliance									
Replace wire glass throughout the building that is no longer up to code (frame to remain)	1	1,600 SF	\$33.65 / SF	\$53,840					\$53,840
Replace the glass in the display cases throughout the school with the required tempered glass	2	4 Ea.	\$4,515.86 / Ea.	\$18,063					\$18,063
Remove some pavers in the courtyard and add a concrete ramp to make the courtyard accessible	3	100 SF	\$34.54 / SF	\$3,454					\$3,454
Remove residential siding in the courtyard and replace it with metal wall panel	4	1,344 SF	\$32.25 / SF	\$43,344					\$43,344
Remodel the slanted corridors in the West wing of the building by moving the wall adjacent to the class room to all for required push/pull clearances and adequate turn radius	5	350 SF	\$329.70 / SF	\$115,395					\$115,395
Make the boys and girls restrooms near gym accessibility by lowering the grab bars and toilet paper dispensers, protect the pipes under the sinks, and shift existing toilet for adequate turning radius	6	2 Ea.	\$7,685.34 / Ea.	\$15,371					\$15,371
Remodel boys and girls restrooms near the band/orchestra room to meet accessibility standards	7	2 Ea.	\$74,892.86 / Ea.	\$149,786				X	\$149,786
Create an accessible sink in the library office by replacing the sink and 10 lf of lower casework and top	8	1 Ea.	\$13,912.46 / Ea.	\$13,912					\$13,912
Add accessible lower water fountains throughout the building	9	8 Ea.	\$21,944.54 / Ea.	\$175,556					\$175,556
Remodel the restroom in the Early Childhood Development room (room 1) to meet accessibility standards.	10	1 Ea.	\$37,497.11 / Ea.	\$37,497				X	\$37,497
Upgrade door hardware with ADA hardware	11	50 Ea.	\$983.61 / Ea.	\$49,180					\$49,180
Replace casework (20lf of base, top, and upper) per classroom and sinks in classrooms are not accessible	12	22 Ea.	\$26,939.88 / Ea.	\$592,677					\$592,677
Remodel classroom restrooms to make them accessible	13	6 Ea.	\$37,497.11 / Ea.	\$224,983				X	\$224,983
Change swing on doors where the door approaches fail to meet required push/pull clearances	14	10 Ea.	\$35,561.29 / Ea.	\$35,613					\$35,613
Add a lift to the stage to make it accessible	15	1 Ea.	\$100,329.00 / Ea.	\$100,329					\$100,329
Add an accessible sink in the old teacher's lounge, which is transitioning into a special ed room, by replacing the sink and 20 lf of lower, top, and upper cabinets	16	1 Ea.	\$26,939.88 / Ea.	\$26,940					\$26,940
Modify the cold air return that is causing the section of very low ceiling in the office	17	1 Ea.	\$16,248.16 / Ea.	\$16,248					\$16,248
Remove and replace the interior storefront at the door 13 vestibule so the interior width of doors match the exterior doors	18	1 Ea.	\$24,348.35 / Ea.	\$24,348					\$24,348
Total Code Compliance		52,311 SF	\$32.43 / SF	\$1,696,538	\$0	\$0	\$0		\$1,696,538
Security									
Secure entrance, administration office and special education relocation remodel	19	2,800 SF	\$266.94 / SF				\$747,432		\$747,432
Total Security		2,800 SF	\$266.94 / SF	\$0	\$0	\$0	\$747,432		\$747,432
Addition/Remodel (Educational Adequacy)									
Administration	20	SF	\$339.20 / SF				\$0		\$0
Art	21	SF	\$351.74 / SF				\$0		\$0
Athletics	22	672 SF	\$360.52 / SF				\$242,268		\$242,268
Auditorium	23	1,260 SF	\$485.35 / SF				\$611,541		\$611,541
Business Education	24	SF	\$376.82 / SF				\$0		\$0
Circulation	25	14,714 SF	\$376.83 / SF				\$5,544,720		\$5,544,720

Ben Franklin Elementary School
Grand Forks, ND
11/2/2022



Facility Assessment Estimate

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
Classrooms	26	SF	\$376.82 / SF				\$0		\$0
Common Spaces	27	83 SF	\$393.12 / SF				\$32,629		\$32,629
FACS	28	SF	\$393.12 / SF				\$0		\$0
Food Service/Cafeteria	29	1,730 SF	\$458.33 / SF				\$792,906		\$792,906
Library/Media Center	30	SF	\$395.63 / SF				\$0		\$0
Mechanical/Electrical	31	2,100 SF	\$307.85 / SF				\$646,492		\$646,492
Music	32	690 SF	\$401.90 / SF				\$277,310		\$277,310
Restrooms	33	SF	\$464.61 / SF				\$0		\$0
Science	34	SF	\$431.99 / SF				\$0		\$0
Special Education	35	1,136 SF	\$340.28 / SF				\$386,554		\$386,554
Technical Education	36	SF	\$381.83 / SF				\$0		\$0
Technology Education	37	SF	\$394.37 / SF				\$0		\$0
Total Adequacy	22,385 SF		\$381.26 / SF	\$0	\$0	\$0	\$8,534,420		\$8,534,420
Capital Maintenance									
Interior Upgrades									
Add an exhaust/relief in the server room	38	1 Ea.	\$17,369.43 / Ea.	\$17,369					\$17,369
Replace dated and damaged casework (100 lf of base, top, upper)	39	300 LF	\$389.57 / LF			\$116,872			\$116,872
Replace 66 blinds on windows and 50 on doors that are dated and damaged	40	116 Ea.	\$763.12 / Ea.		\$88,522				\$88,522
Replace ACT in the cafeteria	41	2,000 SF	\$11.54 / SF	\$23,080					\$23,080
Patch damaged ceiling in the girl's restroom next to room	42	50 SF	\$11.54 / SF	\$577					\$577
Paint some walls throughout the school that should be repainted and repair vinyl wall covering	43	52,311 SF	\$0.85 / SF		\$44,464				\$44,464
Caulk the several cracks in the CMU walls and repair caulking at the top of CMU walls that should be redone	44	52,311 SF	\$0.29 / SF	\$15,170					\$15,170
Replace dated carpet throughout the school (assuming 70% of building area)	45	36,618 SF	\$13.15 / SF		\$481,667				\$481,667
Replace the wood flooring on the stage that is old and damaged	46	940 SF	\$19.69 / SF		\$18,509				\$18,509
Interior Upgrades Subtotal	52,311 SF		\$15.41 / SF						\$806,231
Exterior Upgrades									
Add stoops at exterior doors	47	6 Ea.	\$18,808.94 / Ea.	\$112,854					\$112,854
Add stoops to the exterior doors that have floating slabs	48	4 Ea.	\$18,808.94 / Ea.	\$75,236					\$75,236
Repair the large new crack in the cement outside door 6	49	200 SF	\$17.56 / SF		\$3,512				\$3,512
Mill and overlay N parking lot that is in rough shape	50	23,050 SF	\$5.08 / SF		\$117,168				\$117,168
Add sidewalks that connects the emergency exits to a public way	51	2,000 SF	\$17.56 / SF	\$35,115					\$35,115
Re grade the south side of the building outside the library/media center where there are water issues happening	52	1 Ea.	\$12,669.75 / Ea.	\$12,670					\$12,670
Re grade and landscape the areas where water pools to prevent water from being leaked into the building	53	1 Ea.	\$26,391.85 / Ea.	\$26,392					\$26,392
Remove the pavers in the courtroom and replace it with concrete	54	1,440 SF	\$28.30 / SF		\$40,758				\$40,758
Repair the brick that is cracked and pulling away at corner near door 11	55	30 SF	\$216.83 / SF	\$6,505					\$6,505
Masonry tuckpointing at exterior of the building where the brick is wearing	56	5,000 SF	\$18.82 / SF		\$94,111				\$94,111

Ben Franklin Elementary School
Grand Forks, ND
11/2/2022



Facility Assessment Estimate

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
Replace windows in the media center that are original to the building and are due for replacement	57	6 Ea.	\$3,469.32 / Ea.	\$20,816					\$20,816
Replace the several doors that are damaged including exterior door 5 and classroom 22 door, and paint existing door frames	58	10 Ea.	\$2,368.31 / Ea.		\$23,683				\$23,683
Add 22 additional parking stalls to the parking lot since it is not large enough	59	5,500 SF	\$14.84 / SF				\$81,620		\$81,620
Replace the roof when it nears the end of its useable lifetime	60	52,311 SF	\$33.58 / SF		\$1,756,603				\$1,756,603
Replace the window in the boiler room that is cracked.	61	1 Ea.	\$3,469.32 / Ea.	\$3,469					\$3,469
Exterior Upgrades Subtotal		52,311 SF	\$46.08 / SF						\$2,410,511
Electrical Upgrades									
Add egress lighting to doors to exterior as is required by Building Code	62	52,311 SF	\$1.36 / SF	\$71,143					\$71,143
Update the existing intercom system with a new IP system throughout entire school.	63	52,311 SF	\$3.76 / SF			\$196,689			\$196,689
Add additional door security all exterior doors with access control and monitoring	64	52,311 SF	\$1.21 / SF	\$63,296					\$63,296
Upgrade the fire alarm system to a voice-capable system as is currently required by the North Dakota Building Code	65	52,311 SF	\$0.69 / SF	\$36,095					\$36,095
Electrical Upgrades Subtotal		52,311 SF	\$7.02 / SF						\$367,223
Mechanical Upgrades									
During any remodel associated with the plumbing fixtures, the piping should be investigated and replaced where needed.	66	52,311 SF	\$6.85 / SF	\$358,330				X	\$358,330
The piping will need to be replaced during the next kitchen remodel to ensure there is no building up of grease. There is no grease interceptor currently installed on the waste line for the three-compartment sink and other grease producing fixtures. It is recommended and a city requirement that a grease interceptor be installed to protect the waste piping system.	67	680 SF	\$160.85 / SF	\$109,378					\$109,378
ASSE 1070 thermostatic mixing valves should be added to public lavatories for scald protection in accordance with the uniform plumbing code.	68	52,311 SF	\$0.32 / SF	\$16,740				X	\$16,740
Mechanical Upgrades Subtotal		52,311 SF	\$9.26 / SF						\$484,448
Total Capital Maintenance		52,311 SF	\$77.77 / SF	\$1,004,235	\$2,668,997	\$313,561	\$81,620		\$4,068,413
Total Construction Cost		77,496 SF	\$194.16 / SF	\$2,700,772	\$2,668,997	\$313,561	\$9,363,472		\$15,046,802
*** All above estimated costs are total construction costs. These include general conditions, CM fees, permits, insurances, bonds, taxes									
Contingencies & Soft Costs									
Design Contingency	69	5.0%		\$135,038.61	\$133,449.84	\$15,678.07	\$468,173.60		\$752,340
Construction Contingency	70	5.0%		\$135,038.61	\$133,449.84	\$15,678.07	\$468,173.60		\$752,340
Escalation	71	0.0%		\$0.00	\$0.00	\$0.00	\$0.00		\$0
A & E Fees	72	7.0%		\$189,054.05	\$186,829.78	\$21,949.30	\$655,443.03		\$1,053,276
FF & E	73	2.0%		\$54,015.44	\$53,379.94	\$6,271.23	\$187,269.44		\$300,936
Owner Contingency	74	1.5%		\$40,511.58	\$40,034.95	\$4,703.42	\$140,452.08		\$225,702
Total Contingencies & Soft Costs				\$553,658	\$547,144	\$64,280	\$1,919,512		\$3,084,594
Total Facility Assessment Cost Estimate		77,496 SF	\$233.97 / SF	\$3,254,430	\$3,216,141	\$377,841	\$11,282,984		\$18,131,397
Total Critical & Educational Adequacy		77,496 SF	\$187.59 / SF						\$14,537,414