

A. EXISTING BUILDING INVENTORY	274
B. ARCHITECTURAL FINISHES	275
C. MECHANICAL/ELECTRICAL ASSESSMENT	277
D. EXISTING DEFICIENCIES	281
E. COST ANALYSIS	294



# *Lewis & Clark* **LEWIS AND CLARK ELEMENTARY SCHOOL**

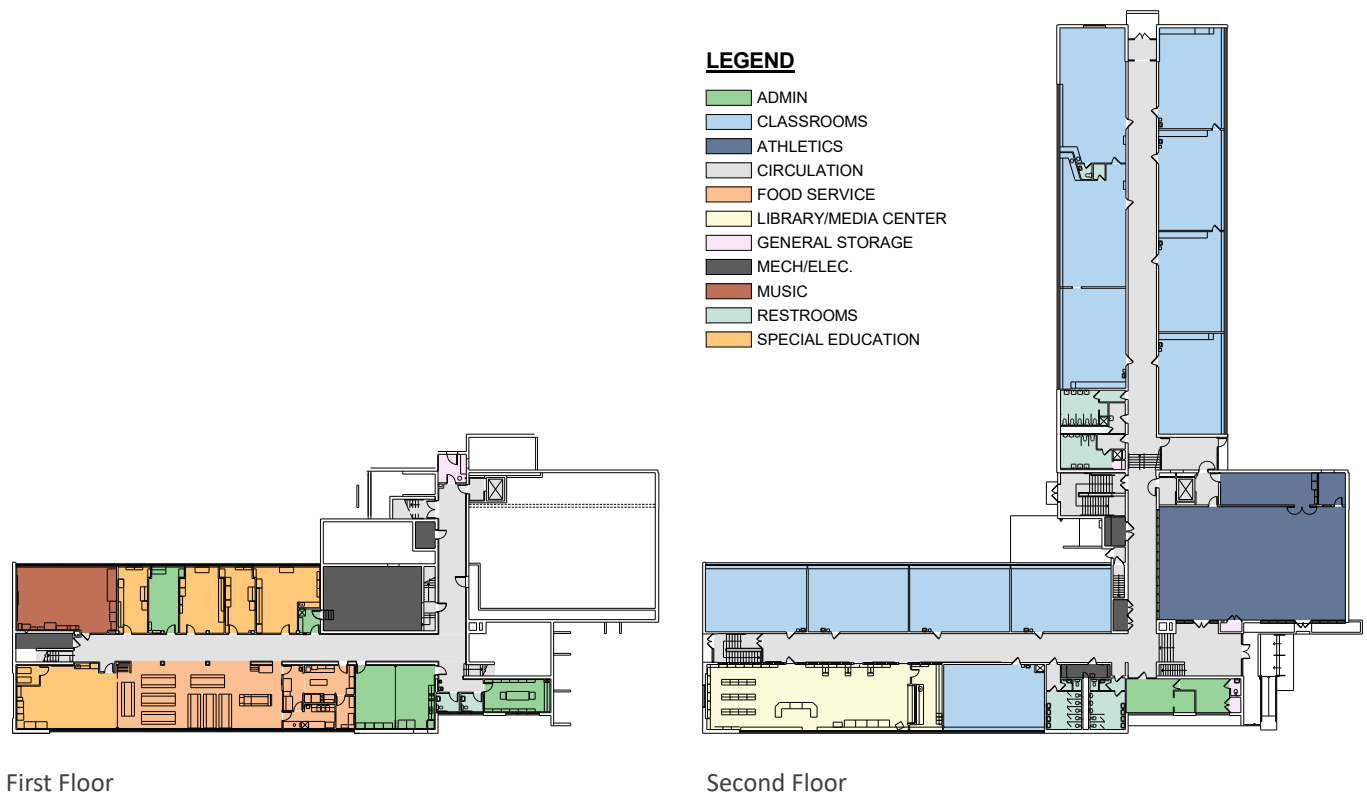


## A. EXISTING BUILDING INVENTORY

Lewis and Clark Elementary School is located at 1100 13th Avenue S, in Grand Forks. The school was built in 1952 and the addition of a north classroom wing was completed 1955. The school underwent remodeling in 1998 and a reroof in 2010.

The school is accessible from the south by 13th Avenue S, to the west by S 12th Street, and to the north by 12th Ave Street. There is a parking lot located on the west side of the school, accessible from S 12th Street.

### FLOOR PLAN



### MAIN LEVEL



## B. ARCHITECTURAL FINISHES

### SUMMARY

Lewis and Clark Elementary School opened in 1953. The school received an addition in 1955, remodel in 1998, and was reroofed in 2010. There is no air conditioning in the school and temperature regulation is an issue. Rooms above the boilers can reach up to 95° in the winter, while the toilet in the principal's office has been removed due to the reoccurring freezing of pipes. The boys' restroom leaks into the conference room below, and there are roof leaks in the office. Lack of space within the school is another concern. There are no adequate spaces for collaboration and group work, and specialists are forced to teach from a portable cart because there are not enough classrooms. Due to the lack of space, staff are working in stair and elevator landings (001). The limited number of outlets for devices is also a problem. Casework and finishes throughout the school are dated and showing signs of wear (002, 003). Not all head start classrooms have restrooms.

### SITE

There are some site concerns with parking and accessibility. Accessible parking spots are located next to a non-accessible building entrance (004). Not all entrances are accessible, and several exterior ramps and stairs lack required railings. Water leaks into the lower-level crawl space from the exterior (005). The rim board should be painted and repaired. Boards on the platform outside of Door 7 are sagging and the platform should have a railing (006, 007).

### MASONRY

The exterior brick is in decent condition. Tuckpointing is wearing (008) and there are signs of moisture at the bottom of exterior brick walls (009).

### ADDITIONAL EXTERIOR MATERIALS

The exterior of the building consists of masonry and exterior insulation and finish systems (EIFS). Caulking should be redone as it is worn and deteriorating (010). There is damage to the bottom edge of the EIFS around the perimeter (011).

### ROOF

The roof leaks into the front office. There are no other notable roof issues.

### OPENINGS

There is damage to the header above Door 5 at the exterior and paint is peeling. Many interior doors and windows in the school do not have fire glass.

### CEILINGS

There are multiple ceiling finishes in the school, including acoustical ceiling tile (ACT), painted gypsum board, and soffit panels. The ceilings appear to be in overall good condition with typical signs of wear.





## ARCHITECTURAL FINISHES CONTINUED

### WALLS

Interior walls are mainly painted masonry, painted gypsum board, tile, covered with vinyl wall covering (VWC) or have fiberglass reinforced plastic (FRP) panels. Colors appear to be outdated and uncoordinated with other finishes. Paint generally appears to be in good condition apart from minor blemishes. There is wall damage in the restroom by Room 12 and VWC damage throughout the school.

### FLOORING

Carpet has been replaced in some spaces but overall, the flooring throughout the school is dated and showing signs of wear (012, 013). The flooring is cracked by Door 1 and there are cracks in the flooring of several staircases (014, 015). There is concern with the floor structure in the library due to the load the books place upon it (016). This area was originally built to be classrooms and the current load should be examined to confirm that the structure is adequate to hold it.

### 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. The lack of cell phone service in the office and basement and bad Wi-Fi connection in the basement are other security concerns.



## 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

- Most of the plumbing piping throughout the 1955 addition is original as well as all of the underground piping. Maintenance staff reported a leak from the restroom group next to the admin area as well as a sewer drainage problem outside the building. During any new remodel, the pipe hangers and associated piping are recommended to be replaced. Recommend investigating the exterior drainage piping and potentially adding a sewage ejector or lining the pipe to help mitigate or prevent the sewer back-ups.
- 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) 250 MBH gas fired water heater with an integral storage tanks in the boiler room for the entire building. The domestic hot water heating plant was recently replaced in 2022.
- Kitchen plumbing fixtures and piping were replaced in 1997 and in appear to be good condition. 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) 2,700 MBH steam boilers. The boiler plant is being designed to be replaced as part of a 2022/2023 ESCO project and will have new hot water boilers.
- Existing steam and condensate piping throughout the building is concealed in the soffits, tunnels, walls, and above the ceilings in public areas. The majority of the existing steam and condensate piping where concealed is original to the building and needs to be replaced in order to convert to a hot water system.
- The existing multi-zone air handling unit in the lower level has a steam heating coil and serves the North side of the West addition, kitchen, conference room, paper supply room and corridor in the lower level. The gymnasium has two existing air handlers located on the mezzanine level that have steam coils. There are three ceiling suspended classroom unit ventilators in the lower level as well as throughout the classrooms on the main floor that will need to be replaced to the ESCO steam to hot water conversion.
- 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. We recommend the indoor air handling units be replaced with new variable air volume units with VFDs for fan speed modulation, chilled water or DX cooling coils, heating water coils, and DDC 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, may 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.
- Ductwork throughout the older portions of the building is at the end of its useful life and will have excessive leakage. 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 system 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 208/120V padmount transformer located on west side of building.
- Power is routed underground from the transformer to a wall-mounted CT cabinet to the east. Power is then routed through the exterior wall and into the back of the service entrance switchboard located within electrical closet.
- Peak loads on this transformer in the past 12 months was 182kW (505A), 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 1200A Cutler-Hammer Pow-R-Line C Switchboard. 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, at this time.
- 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.
- 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.

### LIGHTING CONTROL SYSTEMS

- Lighting within large majority of school was noted to be controlled via manual toggle switch. Very few areas capable of dimming operation.
- 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.
- It was stated by staff that wifi signal in the basement area was far less than satisfactory. They have tried to fix this by moving various wireless access points, but nothing seems to improve signals.
- 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, classrooms, and all “normally-occupied” areas. Several interior intercom speakers are not currently functional and some full-building announcements can not reach certain areas. There are currently intercom speakers at the exterior, but it was noted by staff that they did not work.
- IP phones are located in all classrooms for room-to-room communication.
- Centrally-controlled clock system has been upgraded to American Time system with clocks located all throughout school. All communication between clocks and central system is done via wireless communication. Clocks consist of primarily analog devices.
- 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. It was stated by staff that several classroom sound reinforcement systems did not currently work.

### 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 front and rear entrances.
- System appears to be adequate and can be easily added to by school’s IT department, as necessary.
- Fire alarm control panel is Simplex 4007ES. 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 and locations appeared to be adequate. Devices appeared to be very old.
- 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 Lewis and Clark Elementary School 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.

- Handrails on stairs do not provide the code required extensions at the top and bottom of the stairs.
- Drinking fountains throughout the building do not meet the required ratio of wheelchair accessible fountains to standing person accessible fountains (017).
- Public restrooms are not accessible (018).
- Restrooms in classrooms are not accessible (019).
- Faculty restrooms are not accessible (020, 021).
- Railing on the stairs by Door 2 is lacking an accompanying guard rail and does not meet the required code (022).
- Window in the gym does not have the required safety glass (023).
- Many doors and windows throughout the school do not have fire glass, as required by code (024, 025).
- Ramp outside of Door 1 is missing a railing as required by code (026).
- Ramp outside of Door 5 does not have a railing on both sides as required by code. The railings should extend the full length of the ramp (027).
- Various doors throughout the building have door hardware that is not accessible (028).
- Sinks in classrooms are not accessible (029).
- Several doors fail to meet required maneuvering clearances for accessibility (030).
- Stair landing is not large enough, causing doors to project farther into the landing than code permits (031).
- Door 5 is not protected with an enclosed vestibule, as required by energy code (032).



# LEWIS AND CLARK ELEMENTARY SCHOOL

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

## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



Due to the lack of space staff are working in stair and elevator landings.



Accessible parking spots are located next to a non-accessible building entrance.



Casework and finishes throughout the school are dated and showing signs of wear.





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## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



LC-ES 003

Casework and finishes throughout the school are dated and showing signs of wear.



LC-ES 005

Water leaks into the lower-level crawl space from the exterior.



LC-ES 006

Boards on the platform outside of door 7 are sagging and the platform should have a railing.





## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



LC-ES 007

Boards on the platform outside of door 7 are sagging and the platform should have a railing.



LC-ES 008

Tuckpointing is wearing.



LC-ES 009

Tuckpointing is wearing and there are signs of moisture at the bottom of exterior brick walls





## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



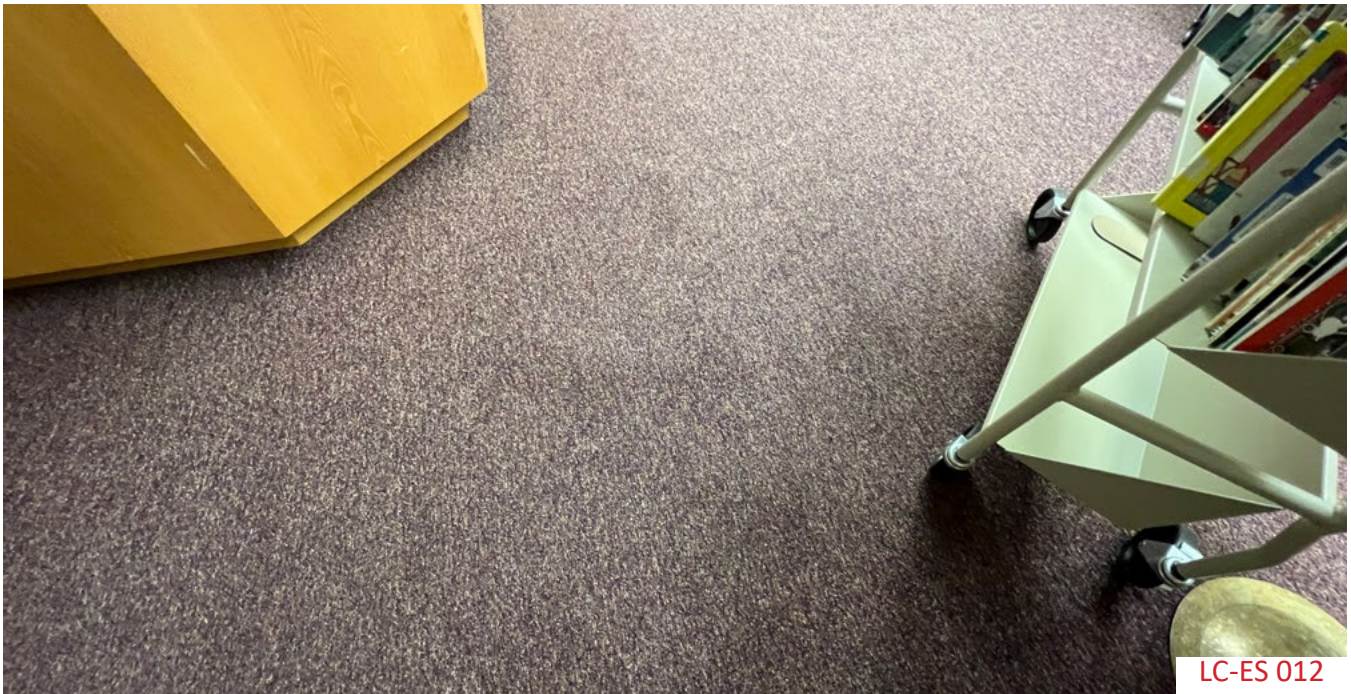
LC-ES 010

Caulking should be redone as it is worn and deteriorating.



LC-ES 011

There is damage to the bottom edge of the EIFS around the perimeter.



LC-ES 012

Carpet has been replaced in some spaces but overall, the flooring throughout the school is dated and showing signs of wear.





## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



Carpet has been replaced in some spaces but overall, the flooring throughout the school is dated and showing signs of wear.



The flooring is cracked by door 1 and there are cracks in the flooring of several staircases.



The flooring is cracked by door 1 and there are cracks in the flooring of several staircases.



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



There is concern with the floor structure in the library due to the load the books place upon it.



Public restrooms are not accessible



Restrooms in classrooms are not accessible





## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



LC-ES 020

Faculty restrooms are not accessible



LC-ES 021

Faculty restrooms are not accessible



LC-ES 022

Railing on the stairs by Door 2 is lacking an accompanying guard rail and does not meet the required code



LC-ES 024

Many doors and windows throughout the school do not have fire glass, as required by code





# LEWIS AND CLARK ELEMENTARY SCHOOL

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

## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



LC-ES 023

Window in the gym does not have the required safety glass



LC-ES 025

Many doors and windows throughout the school do not have fire glass, as required by code



LC-ES 026

Ramp outside of Door 1 is missing a railing as required by code





## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



LC-ES 027

Ramp outside of Door 5 does not have a railing on both sides as required by code. The railings should extend the full length of the ramp



LC-ES 028

Various doors throughout the building have door hardware that is not accessible



LC-ES 029

Sinks in classrooms are not accessible



LC-ES 030

Stair landing is not large enough, causing doors to project farther into the landing than code permits





# LEWIS AND CLARK ELEMENTARY SCHOOL

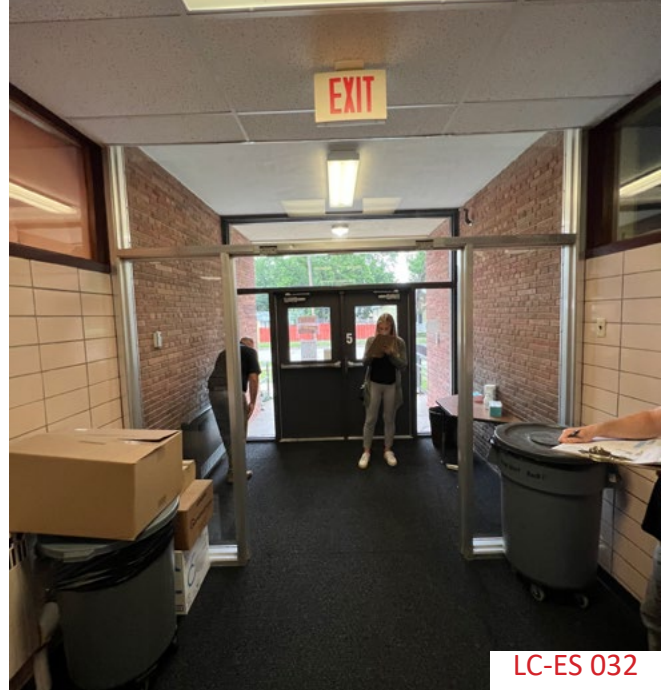
**FACILITY ASSESSMENT** EXISTING BUILDING INVENTORY ARCHITECTURAL FINISHES  
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## INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



LC-ES 031

Stair landing is not large enough, causing doors to project farther into the landing than code permits.



LC-ES 032

Door 5 should have a vestibule, per energy code requirements.



## 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	1,639 SF	1,340 SF	299
Athletics	3,169 SF	3,400 SF	-231
Circulation	7,673 SF	9,610 SF	-1,937
Classrooms	10,384 SF	11,050 SF	-666
Food Service/Caferia	1,951 SF	3,290 SF	-1,339
Library/Media Center	1,936 SF	946 SF	990
Mechanical/Electrical	1,179 SF	2,402 SF	-1,223
Music	814 SF	1,000 SF	-186
Restrooms	1,002 SF	800 SF	202
Special Education	2,100 SF	3,050 SF	-950

<b>Total Missing Square Footage</b>	<b>-5,041</b>
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## EXISTING DEFICIENCIES CONTINUED

### ADMINISTRATION/PTO COMMENTS AND FEEDBACK

#### AIR QUALITY/CONTROL ISSUES

- Rooms above the boiler room can get up to 95 degrees in the winter.

#### SECURITY/SAFETY CONCERNS

- An improved, secure entrance is needed.
- There is a lot of activity at night near the school and more lighting is needed.
- Announcement system needs to be updated.
- There is not any cell service in the basement of the school.
- There is not a flashing crosswalk sign near the school.

#### ADA ACCESSIBILITY

- Stair railings are not adequate.

#### LACKING SUPPORT SPACE

- There is not enough collaboration space.
- There is not a private space for the school nurse.

#### LEARNING/SUPPORT SPACES IN THE BASEMENT

- The cafeteria is in the basement and can get very hot and loud.
- Special education space in the basement.

#### CURRENT SPACE DOES NOT SUPPORT 21ST CENTURY LEARNING

- Electricity is not adequate and classrooms do not have enough outlets.

#### PARKING AND STUDENT DROP-OFF/PICK-UP IS NOT ADEQUATE.

### TOP PRIORITIES

1. Spaces for Collaboration
2. Address ADA Accessibility Concerns
3. Electricity Upgrades

# E. COST ANALYSIS

Lewis and Clark 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
<b>ADA and Building Code Compliance</b>									
Add handrail extensions at the top and bottom of the stairs	1	60 LF	\$153.64 / LF	\$9,218					\$9,218
Add accessible lower water fountains throughout the building	2	6 Ea.	\$21,944.54 / Ea.	\$131,667					\$131,667
Remodel public restrooms to make them accessible	3	4 Ea.	\$74,892.86 / Ea.	\$299,571				X	\$299,571
Remodel restrooms in classrooms to make them accessible	4	2 Ea.	\$37,497.11 / Ea.	\$74,994				X	\$74,994
Remodel faculty restrooms to make them accessible	5	2 Ea.	\$37,497.11 / Ea.	\$74,994				X	\$74,994
Remove and replace handrail (60 lf) and guardrails (15 lf) with on the stairs by door 2 that do not meet the required code	6	75 LF	\$199.43 / LF	\$14,957					\$14,957
New guard rail will include a separate handrail required by code.	7								
Replace glass in window in the gym with tempered glass (frame to remain)	8	16 SF	\$74.33 / SF	\$1,189					\$1,189
Replace glass throughout with fire glass as required by code in the many doors and windows throughout the school	9	600 SF	\$74.33 / SF	\$44,598					\$44,598
Add railings to ramp outside of door 1	10	80 LF	\$414.64 / LF	\$33,171					\$33,171
Add railings on both sides to ramp outside that extends the full length of the ramp	11	100 LF	\$414.64 / LF	\$41,464					\$41,464
Upgrade door hardware with ADA hardware	12	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	13	10 Ea.	\$26,939.88 / Ea.	\$269,399				X	\$269,399
Change swing on doors where the door approaches fail to meet required push/pull clearances	14	10 Ea.	\$3,561.29 / Ea.	\$35,613					\$35,613
Remove and install new stairs since the doors are too close to the stair nosing	15	1 Ea.	\$148,642.96 / Ea.	\$148,643					\$148,643
Add interior storefront to door 5 to create vestibule per energy code requirements	16	1 Ea.	\$24,348.35 / Ea.	\$24,348					\$24,348
<b>Total Code Compliance</b>		<b>35,658 SF</b>	<b>\$35.14 / SF</b>	<b>\$1,253,009</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>\$1,253,009</b>
<b>Security</b>									
Administration Office Entry (Addition and Remodel)	17	2,835 SF	\$295.34 / SF				\$837,289		\$837,289
<b>Total Security</b>		<b>2,835 SF</b>	<b>\$295.34 / SF</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$837,289</b>		<b>\$837,289</b>
<b>Addition/Remodel (Educational Adequacy)</b>									
Administration	18	SF	\$339.20 / SF				\$0		\$0
Art	19	SF	\$351.74 / SF				\$0		\$0
Athletics	20	231 SF	\$360.52 / SF				\$83,280		\$83,280
Auditorium	21	SF	\$485.35 / SF				\$0		\$0
Business Education	22	SF	\$376.82 / SF				\$0		\$0
Circulation	23	1,937 SF	\$376.83 / SF				\$729,925		\$729,925
Classrooms	24	666 SF	\$376.82 / SF				\$250,961		\$250,961
Common Spaces	25	SF	\$393.12 / SF				\$0		\$0
FACS	26	SF	\$393.12 / SF				\$0		\$0
Food Service/Cafeteria	27	1,339 SF	\$458.33 / SF				\$613,700		\$613,700
Library/Media Center	28	SF	\$395.63 / SF				\$0		\$0
Mechanical/Electrical	29	1,223 SF	\$307.85 / SF				\$376,505		\$376,505
Music	30	186 SF	\$401.90 / SF				\$74,753		\$74,753
Restrooms	31	SF	\$464.61 / SF				\$0		\$0
Science	32	SF	\$431.99 / SF				\$0		\$0

**Lewis and Clark 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
Special Education	33	950 SF	\$340.28 / SF				\$323,262		\$323,262
Technical Education	34	SF	\$381.83 / SF				\$0		\$0
Technology Education	35	SF	\$394.37 / SF				\$0		\$0
<b>Total Adequacy</b>		<b>6,532 SF</b>	<b>\$375.44 / SF</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,452,387</b>		<b>\$2,452,387</b>
<b>Capital Maintenance</b>									
<b>Interior Upgrades</b>									
Investigate and fix the water leak in the boy's restroom that leaks into the conference room below	36	1 Ea.	\$46,638.24 / Ea.	\$46,638					\$46,638
Add convenience power outlets throughout the building	37	35,658 SF	\$9.65 / SF		\$344,100				\$344,100
Add a restroom to the head start classroom	38	1 Ea.	\$37,497.11 / Ea.		\$37,497				\$37,497
Remove and replace casework that are dated and showing signs of wear (10 classrooms 20 lf base, top, and upper per class room)	39	300 LF	\$389.57 / LF			\$116,872		X	\$116,872
Paint interior walls with a matching color to other finishes in areas where colors appear to be outdated and mis coordinated with other finishes.	40	35,658 SF	\$4.35 / SF			\$155,112			\$155,112
Repair wall damage in the restroom by room 12 and VWC damage throughout the school.	41	35,658 SF	\$0.35 / SF		\$12,480				\$12,480
Replace dated carpet	42	15,000 SF	\$13.15 / SF			\$197,309			\$197,309
Repair the flooring that is cracked by door 1 and cracks in the flooring of several staircases	43	1 Ea.	\$2,675.32 / Ea.		\$2,675				\$2,675
Reinforce the structure of the floor in the library due to accommodate the load of the stacks of books	44	1,680 SF	\$262.50 / SF	\$441,000					\$441,000
<b>Interior Upgrades Subtotal</b>		<b>35,658 SF</b>	<b>\$37.96 / SF</b>						<b>\$1,353,684</b>
<b>Exterior Upgrades</b>									
Add ramp with railing to the entrance of the building near the accessible parking spots	45	300 SF	\$34.35 / SF	\$10,305					\$10,305
Install a deeper window well and free draining fill that is established below the opening to prevent water leaking into the lower-level crawl space from the exterior	46	1 Ea.	\$34,145.74 / Ea.	\$34,146					\$34,146
Paint and repair the damaged rim board	47	1 Ea.	\$7,435.25 / Ea.	\$7,435					\$7,435
Rebuild deck on the platform outside of door 7 that are sagging and add a railing	48	1 Ea.	\$24,361.84 / Ea.		\$24,362				\$24,362
Masonry tuckpointing at exterior of the building where the brick is wearing and where there are signs of moisture at the bottom	49	10,000 SF	\$18.82 / SF		\$188,222				\$188,222
Repair damage to the bottom edge of the EIFS around the perimeter	50	1 Ea.	\$3,462.24 / Ea.	\$3,462					\$3,462
Repair caulking that is worn and deteriorating	51	1 Ea.	\$8,435.65 / Ea.	\$8,436					\$8,436
Investigate and fix the roof leak in the front office.	52	1 Ea.	\$53,495.65 / Ea.	\$53,496					\$53,496
Add 10 additional parking stalls to the parking lot since it is not large enough	53	2,500 SF	\$14.84 / SF				\$37,100		\$37,100
Replace the roof when it nears the end of its useable lifetime	54	24,826 SF	\$32.60 / SF			\$809,328			\$809,328
Repair damage to the header above door 5 at the exterior and patch peeling paint	55	1 Ea.	\$2,436.76 / Ea.	\$2,437					\$2,437
<b>Exterior Upgrades Subtotal</b>		<b>35,658 SF</b>	<b>\$33.06 / SF</b>						<b>\$1,178,727</b>



**Lewis and Clark 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
<b>Electrical Upgrades</b>									
Replace branch panels throughout building that are noted to be very old that are nearing the end of their useful life	56	35,658 SF	\$3.45 / SF		\$122,979				\$122,979
Add egress lighting to doors to exterior as is required by Building Code	57	35,658 SF	\$1.75 / SF		\$62,402				\$62,402
Upgrade of all interior lighting controls throughout to digital lighting management	58	35,658 SF	\$2.51 / SF		\$89,502				\$89,502
Upgrade of all exterior lighting controls throughout to digital lighting management	59	35,658 SF	\$0.25 / SF		\$8,915				\$8,915
Improve cell service in the office and basement and bad Wi-Fi connection	60	35,658 SF	\$0.85 / SF		\$30,309				\$30,309
Update the existing intercom system with a new IP system throughout entire school.	61	35,658 SF	\$3.76 / SF		\$134,074				\$134,074
Add additional door security all exterior doors with access control and monitoring	62	35,658 SF	\$1.21 / SF	\$43,146					\$43,146
Upgrade the fire alarm system to a voice-capable system as is currently required by the North Dakota Building Code	63	35,658 SF	\$0.69 / SF	\$24,604					\$24,604
<b>Electrical Upgrades Subtotal</b>		<b>35,658 SF</b>	<b>\$14.47 / SF</b>						<b>\$515,930</b>
<b>Mechanical Upgrades</b>									
Most of the plumbing piping throughout the 1955 addition is original as well as all of the underground piping. Maintenance staff reported a leak from the restroom group next to the admin area as well as a sewer drainage problem outside the building. During any new remodel, the pipe hangers and associated piping are recommended to be replaced. Recommend investigating the exterior drainage piping and potentially adding a sewage ejector or lining the pipe to help mitigate or prevent the sewer back-ups.	64	35,658 SF	\$12.36 / SF		\$440,733				\$440,733
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.	65	35,658 SF	\$1.35 / SF		\$48,138				\$48,138
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	66	35,658 SF	\$4.35 / SF	\$155,112					\$155,112
ASSE 1070 thermostatic mixing valves should be added to public lavatories for scald protection in accordance with the uniform plumbing code.	67	35,658 SF	\$0.32 / SF	\$11,411					\$11,411
<b>Mechanical Upgrades Subtotal</b>		<b>35,658 SF</b>	<b>\$18.38 / SF</b>						<b>\$655,394</b>
<b>Total Capital Maintenance</b>		<b>35,658 SF</b>	<b>\$103.87 / SF</b>	<b>\$841,628</b>	<b>\$1,546,387</b>	<b>\$1,278,621</b>	<b>\$37,100</b>		<b>\$3,703,735</b>
<b>Total Construction Cost</b>		<b>45,025 SF</b>	<b>\$183.15 / SF</b>	<b>\$2,094,636</b>	<b>\$1,546,387</b>	<b>\$1,278,621</b>	<b>\$3,326,776</b>		<b>\$8,246,420</b>

\*\*\* All above estimated costs are total construction costs. These include general conditions, CM fees, permits, insurances, bonds, taxes

COST ANALYSIS CONTINUED

Lewis and Clark 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
<b>Contingencies &amp; Soft Costs</b>									
Design Contingency	68	5.0%		\$104,731.82	\$77,319.33	\$63,931.05	\$166,338.79		\$412,321
Construction Contingency	69	5.0%		\$104,731.82	\$77,319.33	\$63,931.05	\$166,338.79		\$412,321
Escalation	70	0.0%		\$0.00	\$0.00	\$0.00	\$0.00		\$0
A & E Fees	71	7.0%		\$146,624.54	\$108,247.06	\$89,503.47	\$232,874.31		\$577,249
FF & E	72	2.0%		\$41,892.73	\$30,927.73	\$25,572.42	\$66,535.52		\$164,928
Owner Contingency	73	1.5%		\$31,419.55	\$23,195.80	\$19,179.32	\$49,901.64		\$123,696
<b>Total Contingencies &amp; Soft Costs</b>				<b>\$429,400</b>	<b>\$317,009</b>	<b>\$262,117</b>	<b>\$681,989</b>		<b>\$1,690,516</b>
<b>Total Facility Assessment Cost Estimate</b>		<b>45,025 SF</b>	<b>\$220.70 /SF</b>	<b>\$2,524,037</b>	<b>\$1,863,396</b>	<b>\$1,540,738</b>	<b>\$4,008,765</b>		<b>\$9,936,936</b>
<b>Total Critical &amp; Educational Adequacy</b>		<b>45,025 SF</b>	<b>\$145.09 /SF</b>						<b>\$6,532,802</b>