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RHS RED RIVER HIGH SCHOOL

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

FACILITY ASSESSMENT

A. EXISTING BUILDING INVENTORY

Red River High School is located at 2211 17th Avenue S in Grand Forks and was built in 1967. An addition was added in 1995, to accommodate ninth grade moving into the building. This addition included new common spaces, classrooms, and a gymnasium. The Performance Hall was completed in 2013, adding an auditorium and musical support spaces to the school. There are six softball and baseball fields to the west of the school, a track with a turf infield to the southwest of the school, and numerous grass fields directly south of the school. The Eagles Arena and Blue Line Club Arena are located directly west of the track complex and houses ice hockey rinks used by the District.

The main building is accessible by S 25th Street to the west, 17th Avenue S to the north, 20th Avenue S to the south, and Knudsvig Drive that runs between the high school and the track. There are faculty parking lots to the north and east sides of the school and student parking lots to the west.



FLOOR PLANS

MAIN FLOOR

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

FLOOR PLANS



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UPPER AND LOWER OVERALL FLOOR PLAN
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FACILITY ASSESSMENT EXISTING BUILDING INVENTORY **ARCHITECTURAL FINISHES** MECH/ELEC ASSESSMENT EXISTING DEFICIENCIES COST ANALYSIS APPENDIX

B. ARCHITECTURAL FINISHES

SUMMARY

The original building of Red River High School was built in 1967 and a major addition occurred in 1995. A current issue with the school is their pool, which is not filled because the filter can no longer be welded to and cannot be repaired. The aquatics room is currently being used as storage (001). The District is hesitant to fix the entire pool system because the pool is not big enough to host meets, so if the school were to fill in the pool, a change in programming for that area would be necessary. The building is in good condition, but there is typical depreciation seen within the school and areas that need a refresh.

The original casework of the building (002) and fixtures in the library (003) are dated and replacement should be considered. Renovation is recommended for the training room (Room 603) (004) and the coaches office (005). Metal partitions near the main gym should be removed to ensure the stairwell always stays open (006). Countertops in the art classrooms have wear and tear damage. The Rider Room needs new hardware and seating as it is currently out of date (007, 008).

SITE

Large portions of the concrete work outside of the school are in poor condition. The concrete drives could use some attention, but the curb has been heavily damaged by snowplows and should be replaced or repaired (009). The concrete pads outside of Doors 9 (010), 10, and 16 (011) are cracked and/or sinking. All pads should be checked to ensure adequate conditions. The concrete pads at Doors 7 and 17 should connect to public walkways in case of an evacuation.

MASONRY

The exterior of the building is either traditional brick or limestone brick. No visible issues were seen with the exterior brick. Many of the interior walls are painted concrete masonry units (CMU). The caulking in the CMU near the music rooms appears to be lifting and should be redone (012, 013). There is cracking in the CMU wall in the locker rooms that can be seen from both sides (014, 015).

ADDITIONAL EXTERIOR MATERIALS

Exterior walls of the Performance Hall addition have siding above the brick. There is also siding on exterior walls of the stage and support spaces, where the walls rise above the surrounding roof. All siding appears to be in good condition.

ROOF

Roof repair has only been done in patches, otherwise, all of the roof is from 1995. A roof replacement needs to occur in the near future as the current roof's life expectancy is coming close. Green roof and siding near the north entrance of the school should be repainted because it is multiple shades of green.

OPENINGS

The exterior sealing of the building could use some attention to secure the barrier of the building. The weather stripping in the openings in the automotive and manufacturing/production classrooms are in poor condition and need to be redone (016). There is a large hole in the garage door in the automotive classroom (017). Many of the metal doors to the exterior are rusted badly on the bottom and should get replaced (018). The interior windows to the main office have poor sealing that need retouching (019).

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

ARCHITECTURAL FINISHES CONTINUED

CEILINGS

The acoustical ceiling tiles (ACT) are in poor condition in many areas of the building. Rusting can be seen in the grids in the health classroom and numerous spots have noticeable water damage (020, 021). There are areas of the ceiling that are damaged and have tiles falling off in the locker rooms (022) and the original auditorium. The soffits on the exterior portion of the main entrance are deteriorating (023) and the gypsum board in the vestibule is also compromised (024). All ceiling that is at risk of falling should be repaired to prevent accidents in the future. Removing and filling the skylight is recommended as it is difficult and expensive to maintain.

WALLS

The interior walls are typically painted CMU, painted gypsum board, or gypsum board covered in vinyl. The vinyl wall covering should be removed as it is peeling up throughout the school (025). The women's physical education locker room could use corner guards and other corners should be inspected to see where future damage can be prevented (026). There is a hole in the custodial closet in the 500 hall that should be repaired to stop water from entering the wall assembly. The piping and fire sprinklers in the basement walls have deteriorated the CMU walls where they are inserted (027, 028). The painted gypsum board in the individual music practice rooms (030) and outside the renovated auditorium (029) needs a general repair as it is damaged and chipping.

FLOORING

The typical flooring in Red River High School is either carpeting or various types of tiles. Much of the carpeting in the classrooms has been replaced, but the corridors still need to be redone (031, 032). All of the brown ceramic and vinyl composition tile in the building is outdated and should get replaced (033, 034). The vestibule tiles are in especially bad condition (035) and the Door 7 vestibule is missing tiles (036). The main gym floor is nearing its life expectancy, but has been very well maintained, so a new gym floor has less precedence. The tile is ripped up in numerous art and technological education classrooms because there was a chemical issue (037, 038). New baseboards and tile should be placed in this area, or the current polished concrete floors should be refined to look more finished. The running track material in the basement is lifting up in several spots and needs to be replaced (039).

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.

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



C. MECHANICAL/ELECTRICAL ASSESSMENT

FIRE PROTECTION

Fire sprinkler systems are installed throughout the basement and the performing art spaces in the building. The rest of the building does not have any fire suppression system installed. The performing arts area fire protection service has a fire pump to deliver required flow. Hose connections are provided on both sides of the stage for fire suppression.

Depending on the level of work performed in the building, sprinkler systems may need to be modified, and it would be required that sprinklers be installed in existing areas that are not currently covered.

PLUMBING

Plumbing piping throughout the building is concealed in the walls and above the ceilings in public areas. Piping that can be observed in exposed spaces appear to be in relatively good condition. School maintenance staff reported that there have not been issues with the plumbing piping leaking or the piping deteriorating to the point of causing blockage.

The restroom plumbing fixtures throughout the building are currently white vitreous china fixtures with the water closets being wall mounted manual flush valve operated toilets. Urinals and lavatories are manual operated. The sink faucets in the classrooms and break rooms are manually operated.

Domestic hot water for the building is produced by two (2) 500 MBH gas fired water heaters with integral storage tanks. Water heaters were installed in 2020 and are in good condition. Two (2) 432 gallon storage tanks of the same age are provided for additional stored hot water capacity. A thermostatic master mixing valve tempers the hot water to 130 deg F for distribution through the building.

Science rooms have CPVC piping for acid waste/vent system. Neutralization tank for the system is located in the basement. The kitchen three compartment sink has a above grade grease interceptor installed to protect the waste piping system. The auto shop did not appear to have any oil/inflammable waste traps.

Locker rooms are provided with thermostatic mixing valves to temper the hot water to the showers to limit scald potential. Shower rooms are laid out with shower heads and controls along perimeter walls with a central drain in the middle of the room. This causes bath water to pass by other bathers to reach the drain. Recommend separate drains be provided for each shower stall to meet plumbing code requirements.

Thermostatic mixing valves meeting ASSE 1070 requirements should be added to public lavatories for scald protection.

HEATING

Heating for most of the building comes from three (3) condensing Thermal Solutions AMP-4000 boilers. Boilers, heating system pumps, and mechanical room piping were installed in 2020. The performing arts wing has a

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

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED



separate boiler plant consisting of three (3) Weil McLain 750 BMH boilers and circulating pumps. The performing arts boiler plant was installed in 2011.

Existing piping throughout the building is concealed in the walls and above the ceilings in public areas. Piping that can be observed in mechanical spaces appears to be in good condition.

Perimeter hot water finned tube radiation is installed in exterior classrooms and offices for supplemental heat. Hot water cabinet unit heater and suspended unit heaters provide heat for vestibules, stairwells, mechanical rooms, and other similar spaces.

Heat exchangers are provided between the heating water and the heat pump water piping loops. Heat from the boiler plants is transferred to the heat pump loop as the heat pump loop temperature drops.

VENTILATION AND EXHAUST

The ventilation and exhaust systems in the school include various air handling units, remote duct mounted return fans, packaged rooftop units, energy recovery units, unitary heat pumps and various exhaust fans. Two (2) air handling units serving the gymnasium space are original to the building from the 1973 and two (2) air handling units serving the auto and wood shop spaces were installed in the 1960's. All rooftop air handling units throughout have been recently replaced over the past five years. Heat pumps throughout the building have all been replaced between 2020 and 2022.

Dedicated outdoor air system (DOAS) units provide proper ventilation to the unitary heat pumps throughout the building. Recently replaced air handling units are provided with code required outside airflow rates and proper controls. The four (4) original air handling units noted in the paragraph above should be replaced with new variable air volume units with VFDs for fan speed modulation, DX cooling coils, heating water coils, and DDC controls.

Existing pool area unit utilized outside air for dehumidification which limits when during the year dehumidification can take place. Air distribution for the pool does not extent into the space with supply and return grilles being located on the same wall of the pool. Without distribution through the space there is not proper distribution of the chloramine gases and there is not proper airflow across wall surfaces which can create moisture buildup. School district to verify in long term planning whether pools will be utilized within the district. If so, we recommend replacing the pool unit with new and running new distribution ductwork.

Existing wood shop has a dust collection system located outside the building that is original and at the end of its useful life. The distribution ductwork layout is efficient and in good condition. Automotive shop does not appear to have CO/ NO2 detection with required emergency exhaust. School district to determine if CTE spaces are still required in the school building and modify/update as needed.

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

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED



AIR CONDITIONING

Air conditioning in the school comes primarily from water source heat pumps with a cooling tower to reject heat from the system. The heat pump loop cooling tower and associated circulating pumps were replaced in 2016. RTUs and DOAS units have packaged DX cooling to condition ventilation air.

Existing piping throughout the building is concealed in the walls and above the ceilings in public areas. Piping that can be observed in mechanical spaces appears to be in good condition.

Two (2) gym air handling units, and two (2) auto/wood shop air handling units do not have air conditioning. Recommend that DX cooling coils and condensing units or water source heat pumps be provided for spaces that do not currently have air conditioning to meet the requirements of ASHRAE 62.1 for ventilation rates, and ASHREA Standard 55 for cooling and dehumidification.

AUTOMATIC TEMPERATURE CONTROLS

Controls throughout the building are a Direct Digital Controls (DDC) system provided by Johnson Controls Inc. (JCI), installed between 2020 and 2022 during the heat pump replacement project. Some pneumatic controls remain where original air handling units or supplemental heating devices are still in operation. It is recommended that all existing pneumatic controls be replaced with DDC systems. The DDC system should be integrated with the existing Grand Forks Public School's Building Automation System (BAS). The system would be integrated across the district to allow for single stop monitoring and controls of all buildings in the district.

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

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED



ELECTRICAL SERVICE

- Power is delivered to facility via multiple electrical services provided by Xcel Energy.
- The main electrical service is provided via 1000kVA 480/277V 3-phase padmount transformer located near southwest entrance of the building. Power is routed from the transformer through a CT cabinet that is sitting adjacent to the transformer, and then underground to the main service entrance switchboard located at the basement level. Peak loads on this transformer in the past 12 months was 566kW (682A), as provided by Xcel Energy.
- The second electrical service was installed for dedicated utility power to the fire pump in the performance hall. The service consists of a 75KVA 480/277V 3-phase padmount transformer located at the southeast corner of the performance hall.
- Both services appear to be acceptable, as is. Capacity is more than adequate.
- It was stated by the facilities team that Xcel Energy experiences the occasional loss of phase on the service. This can cause motors to overheat and cause VFD and motor starters to burn up and become unusable. Facilities stated that they have been in contact with Xcel energy about finding a solution to the issue.

STANDBY POWER

- Two emergency power generators are located on site. Both generators utilize diesel fuel and are tested on a weekly basis.
- The first was installed in 1993 and is located at the exterior adjacent to the southwest utility transformer. The generator is 480/277V 219KVA and is manufactured by Magnetek. It supplies power for various life safety loads including egress lighting, as well as a few selective mechanical loads.
- The second is located adjacent to the performance hall. The generator manufacturer is Cummins and is 480/277V 125KVA. It supplies power for various life safety loads including egress lighting.
- No improvements are suggested for either generator, at this time. Generators appear to have been maintained and tested over time to ensure efficient operation.

POWER DISTRIBUTION

- The building's main electrical service is delivered underground into a 480/277V 3-phase 2500A Siemens Type SB3 switchboard. Switchboard was updated in 1997 and is in fair condition. Power to all areas of the building, outside of the performance hall fire pump, is supplied from this main switchboard. This includes various distribution panels, motor control centers, and branch panels. Several pieces of the distribution system, including distribution and branch panels, were updated with the renovations over time.
- Several branch panels were noted to have been upgraded or added after the flood of 1997. In most cases, panels that were not replaced were noted to be original to building and past their useful life.
- With peak demand on the service within the past year being 682A, the capacity of the existing switchboard is more than adequate. At this time, there are no recommendations for improvements.
- The second building service is delivered underground into a 480/277V 3-phase 25hp fire pump that was installed with the performance hall in 2011.
- In a few instances, it was stated that power was routed from 480V panels at the interior, up to step-down transformers located on the roof, and back down to 208V panels at the interior. While this is not a direct violation of Code, it is suggested that, if these systems are ever upgraded, the step-down transformers are relocated to the interior to reduce the possibility of precipitation entering the building through penetrations made by the electrical conduit and feeder.

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

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED



• No improvements are suggested for the motor controls centers. However, it is recommended that, over time, the MCC's are replaced with distribution panel boards and external motor starters. In several cases, this has already been achieved while using motor control center buckets as disconnects only.

LIGHTING

- While several areas have been upgraded to LED light fixtures with renovations, the large majority of the building interior consists of fluorescent and incandescent lighting. Performance hall and theater area were noted to still be utilizing T12 fluorescent bulbs. Lighting was noted to be less than adequate in several areas, according to Illuminating Engineering Society (IES) recommended lighting levels.
- An upgrade of all interior lighting to energy-efficient LED lighting is suggested. This would cut lighting energy usage by 50-75%.
- Majority of exterior lighting consists of building-mounted wallpacks, recessed cans in the entrance canopies, and polemounted parking lot lighting. It was stated that lighting at the northwest student loop was far less than adequate for safety.
- An upgrade of all interior lighting to energy-efficient LED lighting is suggested. This would cut lighting energy usage by 50-75%.
- Emergency egress lighting provided via generator or 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. Various areas have been upgraded to automatic lighting controls over the years. Very few areas currently utilize 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 centrally-located photocell.
- All exterior lighting control is suggested to be tied into digital lighting management, as outline in interior lighting portion above.

COMMUNICATIONS SYSTEMS

- It was noted by faculty that the backbone cabling between data closets within school had recently been upgraded to 10Gb fiber. 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. Dedicated wireless access points within classrooms were not observed. 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. System has the capability of paging specific zones, as desired, but is used primarily for "All-Call" announcements. Recessed speakers were noted to be located all throughout circulation areas, in all classrooms, and in almost all "normally-occupied" spaces. Speakers also observed at exterior canopies.
- IP phones are located in all classrooms for room-to-room communication.

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

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED



- 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. Large majority were analog clocks with digital clocks in some public areas. It was stated that as clocks become unusable, they are replaced by simply battery-power clocks.
- 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 projectors, smartboards, and classroom sound reinforcement.

SAFETY & SECURITY SYSTEMS

- With the exception of a few select doors at the interior and exterior entrance doors, it was noted that electronic door security is present on very few doors within building.
- 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 4100ES. 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. Several devices appeared to have been updated within the past several years, while others appeared very aged. Various areas that are required to have audio/ visual notification, per International Building Code, were noted to not have any devices.
- It was stated by the facilities team that coverage of all notification devices is far less than 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.

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

D. EXISTING DEFICIENCIES

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

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance

This portion of the assessment of the current building codes required by the City of Grand Forks and the State of North Dakota. Non-compliant items within the buildings are identified and listed below.

- The school has no sprinklers aside from the Performance Hall addition.
- Door hardware on numerous doors throughout the building is not accessible (040, 041). This includes the hardware in the locker rooms and a large percentage of the support spaces that are not classrooms.
- Traditional wire glass throughout the building is no longer to code as an acceptable type of safety glass. (042)
- Sinks within classrooms and offices are not accessible. (043, 044)
- All men's and women's locker rooms are not accessible, as they do not have sufficient clearances at the entrances and do not have accessible stalls with the required turning space (045, 046).
- All men's and women's locker rooms have hand dryers that exceed height requirements. (047)
- Showers in locker rooms do not have sufficient drains as required by code to prevent wastewater from one bather passing over areas occupied by other bathers. (048)
- The restrooms in the men's and women's physical education staff offices are not accessible as they lack sufficient clearances and handrails. (049)
- All three men's locker rooms are missing a lower urinal. (050)
- Restrooms adjacent to the family and consumer science classrooms do not have sufficient clearances at the entrance for accessibility.
- Drinking fountains throughout the building do not meet the required ratio of wheelchair accessible fountains to standing person accessible fountains (051, 052).
- The restroom in the main office is not accessible. (053)
- Many restrooms in the building are not accessible. Most restrooms where a larger stall is present do not meet clearance requirements for accessibility. (054)
- There is exposed wood structure in the storage area in the physical education office that is combustible and should be covered for fire safety. (055)
- The staff lounge restroom is not accessible. (056)
- The restroom in the technological education office (Room 610) is not accessible. (057)
- The kitchen ceiling tile is not a scrubbable surface, as required by code.
- The history classroom on the second floor has divergent path and distance issues because occupants in the room must pass through multiple rooms before reaching a corridor exit.
- The doors into the I.D. classrooms (Rooms 102, 104 and 106) fail to meet required maneuvering clearances for accessibility. (058)
- Display cases throughout do not have required safety glass. (059)
- Handrails on the stairs from the original auditorium backstage to the commons do not provide the code required extensions at the top and bottom of the stairs. (060)
- The original auditorium does not have wheelchair accessibility.

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

EXISTING DEFICIENCIES CONTINUED

- The stairs in the stage scene shop do not have handrails on both sides, as required by code. (061)
- The Rider Room is missing handrails on the ramps. (062, 063)
- Eyewash stations in the automotive and manufacturing/production classrooms (Rooms 608 and 612) are not accessible. (064 (Wood Shop), 065 (Auto Shop))
- Science labs do not have accessible stations. (066)
- Platforms in the science classrooms are not accessible. (067)
- Glass within the science storage area is not safety glass, as required by code. (068)
- The stairwell into the basement is missing a separate handrail from the guardrail.

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



The aquatics room is currently being used as storage.



Renovation is recommended for the training room (Room 603) and the coaches office.



The original casework of the building and fixtures in the library are dated and replacement should be considered.

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



The original casework of the building and fixtures in the library are dated and replacement should be considered.



Renovation is recommended for the training room (Room 603) and the coaches office.

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



Metal partitions near the main gym should be removed to ensure the stairwell always stays open.



The Rider Room needs new hardware and seating as it is currently out of date.



The Rider Room needs new hardware and seating as it is currently out of date.



The concrete pads outside of doors 9, 10, and 16 are cracked and/or sinking, but all pads should be double checked to ensure adequate conditions.

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

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



The concrete drives could use some attention, but the curb especially has been heavily damaged by snowplows and should be replaced or repaired.



The concrete pads outside of doors 9, 10, and 16 are cracked and/or sinking, but all pads should be double checked to ensure adequate conditions (Door 9), (Door 16).

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





The caulking in the CMU near the music rooms appears to be lifting and should be redone.

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There is cracking in the CMU wall in the locker rooms that can be seen from both sides.



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



The weather stripping in the openings in the automotive and manufacturing/production classrooms are in poor condition and need to be redone.



There is a large hole in the garage door in the automotive classroom as well.

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



Many of the metal doors to the exterior are rusted badly on the bottom and should get replaced.



The interior windows to the main office have poor sealing that needs retouching.



Rusting can be seen in the grids in the health classroom and numerous spots have noticeable water damage.



Rusting can be seen in the grids in the health and numerous spots have noticeable water damage.

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



There are portions of ceiling that are damaged and falling off in the locker rooms and the original auditorium (Locker).



The soffits on the exterior portion of the main entrance are deteriorating and the gypsum board in the vestibule is also compromised.



The soffits on the exterior portion of the main entrance are deteriorating and the gypsum board in the vestibule is also compromised.

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



The vinyl wall covering should be removed as it is peeling up throughout the school.



The women's physical education locker room could use corner guards and other corners should be inspected to see where future damage can be prevented.



The piping and fire sprinklers in the basement walls have deteriorated the CMU walls where they are inserted.



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

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



The painted gypsum board in the individual music practice rooms and outside the renovated auditorium need a general repair as they are damaged and chipping (Outside auditorium), (Practice room).



The painted gypsum board in the individual music practice rooms and outside the renovated auditorium need a general repair as they are damaged and chipping (Outside auditorium), (Practice room).

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



Much of the carpeting in the classrooms has been replaced, but the corridors still need to be redone.



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All of the brown ceramic and vinyl composition tile in the building is outdated and should get replaced.



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



The vestibule tiles are especially in bad condition.



The vestibule tiles are especially in bad condition and the door 7 vestibule is partly missing tiles.



The tile is ripped up in numerous art and technological education classrooms because there was a chemical issue.

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



The tile is ripped up in numerous art and technological education classrooms because there was a chemical issue.



The running track material in the basement is lifting up in several spots and needs to be replaced.



Door hardware on numerous doors throughout the building is not accessible



Door hardware on numerous doors throughout the building is not accessible

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

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



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



Sinks within classrooms and offices are not accessible.



All men's and women's locker rooms are not accessible, as they do not have sufficient clearances at the entrances and do not have accessible stalls with the required turning space

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



Sinks within classrooms and offices are not accessible.



All men's and women's locker rooms are not accessible, as they do not have sufficient clearances at the entrances and do not have accessible stalls with the required turning space



The restrooms in the men's and women's physical education staff offices are not accessible as they lack sufficient clearances and handrails.

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

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS



All men's and women's locker rooms have hand dryers that exceed height requirements.



Showers in locker rooms do not have sufficient drains as required by code to prevent wastewater from one bather passing over areas occupied by other bathers.

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



All three men's locker rooms are missing a lower urinal.



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



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

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



The restroom in the main office is not accessible.



Many restrooms in the building are not accessible. Most restrooms where a larger stall is present do not meet clearance requirements for accessibility.



There is exposed wood structure in the storage area in the physical education office that is combustible and should be covered for fire safety.

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



The staff lounge restroom is not accessible.



The restroom in the technological education office (Room 610) is not accessible.



The doors into the I.D. classrooms (Rooms 102, 104 and 106) fail to meet required maneuvering clearances for accessibility.



Handrails on the stairs from the original auditorium backstage to the commons do not provide the code required extensions at the top and bottom of the stairs.

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



Display cases throughout do not have required safety glass.



The stairs in the stage scene shop do not have handrails on both sides, as required by code.

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



The Rider Room is missing handrails on the ramps.



Eyewash stations in the automotive and manufacturing/ production classrooms (Rooms 608 and 612) are not accessible.



The Rider Room is missing handrails on the ramps.

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



Eyewash stations in the automotive and manufacturing/ production classrooms are not accessible.



Science labs do not have accessible stations.



Platforms in the science classrooms are not accessible.



Glass within the science storage area is not safety glass, as required by code.

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

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	11,633 SF	9,260 SF	2,373
Art	2,930 SF	3,040 SF	-110
Athletics	58,239 SF	55,820 SF	2,419
Auditorium	37,019 SF	27,634 SF	9,385
Business Education	5,600 SF	5,800 SF	-200
Circulation	85,963 SF	100,771 SF	-14,808
Classrooms	38,147 SF	33,200 SF	4,947
FACS	6,081 SF	5,720 SF	361
Food Service/Cafeteria	15,997 SF	17,178 SF	-1,181
Library/Media Center	11,090 SF	4,908 SF	6,182
Mechanical/Electrical	9,445 SF	25,193 SF	-15,748
Music	10,802 SF	8,610 SF	2,192
Restrooms	2,877 SF	8,398 SF	-5,521
Science	16,084 SF	15,850 SF	234
Special Education	2,479 SF	2,910 SF	-431
Technical Education	12,850 SF	11,770 SF	1,080
Technology Education	2,965 SF	3,000 SF	-35

Total Missing Square Footage	-8,861
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FACILITY ASSESSMENT EXISTING BUILDING INVENTORY ARCHITECTURAL FINISHES MECH/ELEC ASSESSMENT EXISTING DEFICIENCIES COST ANALYSIS APPENDIX

EXISTING DEFICIENCIES CONTINUED

ADMINISTRATION/PTO COMMENTS AND FEEDBACK

LACK OF LEARNING AND SUPPORT SPACES

- The counseling and career services do not have enough space.
- One of the art rooms is very small.
- There are not enough places to sit in the cafeteria.
- There is a lack of storage space.
- There is not enough space for group/collaboration learning.
 - Media Center could be renovated into collaboration space.

ATHLETICS IMPROVEMENTS

- The training room is not easily accessible as students and staff have to go through a custodial closet to get there.
- Locker rooms in the pool are not being used.
- Pool is not being used.

TOP PRIORITIES

- 1. Safety and Security
- 2. Pool/Locker Room Areas
- 3. Library/Media Center Remodel

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Red River High School Grand Forks, ND 11/2/2022



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Facility Assessment Estimate										
	ltem					5 yrs Deferred	10 yrs Deferred	Educational	Synergistic with other	
Description	Number	Takeoff Qty	Total Cost,	Unit	Critical	Maint	Maint	Adequacy	needs	Total Cost
ADA and Building Code Compliance										
Upgrade door hardware with ADA hardware	1	50 E	a. \$983.6:	. / Ea.	\$49,180					\$49,18
Replace wire glass throughout the building that is no longer up to code (frame to remain)	2	9,600 SI	F \$33.65	5 / SF	\$323,040					\$323,04
Replace casework (2016 of base, top, and upper) per classroom and office and sinks in	m	75 E	a. \$26,939.88	8 / Ea.	\$2,020,491				×	\$2,020,49
classi outilis are inor accessible Remodel locker rooms to make them accessible	4	6,351 SI	F \$359.77	/ SF	\$2,284,892				×	\$2,284,89
Add accessible hand dryers in all men's and women's locker rooms.	ß			0 /	0\$					\$
Remove and replace all shower concrete and add one drain per shower head in all	9			0 /	0\$					ŝ
Make all locker room clearances accessible.	7			0 /	\$					¢
Make restrooms clearances in men's and women's physical education staff offices	∞			0 /	0\$					Ŷ
Add lowered urinal with grab bars in all three men's locker rooms.	6			0 /	0\$					Ş
Remodel public Restrooms adjacent to the family and consumer science dassroom entrances accessible.	10	2 E	a. \$74,892.86	6 / Ea.	\$149,786				×	\$149,78
Add accessible lower water fountains throughout the building	11	10 E	a. \$21,944.5 [,]	F / Ea.	\$219,445					\$219,44
Remodel restroom in the main office to make it accessible.	12	1 E	a. \$37,497.1:	. / Ea.	\$37,497				×	\$37,49
Remodel public restrooms to make them accessible	13	4 E	a. \$74,892.86	6 / Ea.	\$299,571				×	\$299,57
Add sheetrock, tape and paint to the exposed wood walls in the physical education office for fire safery.	14	1	a. \$2,685.1	2 / Ea.	\$2,685					\$2,68
Remodel the lounge restroom to make them meet accessibility standards	15	1	a. \$37,497.1:	. / Ea.	\$37,497				×	\$37,49
Remodel the restroom in the technological education office (Rm. 610) to make it accessible and add grab bars	16	1	a. \$37,497.13	. / Еа.	\$37,497				×	\$37,49
Replace kitchen ceiling tile with a scrubbable surface.	17	3,282 SI	F \$14.75	5 / SF	\$48,410					\$48,41
Add a corridor since the history classroom on the second floor has divergent path and distance issues because occupants in the room have to pass through multiple rooms before	18	960 SI	F \$65.74	t / SF	\$63,110					\$63,11
reaching a corridor exit.				_						
Change the swing of the doors into the I.D. classrooms (Rooms 102, 104 and 106) since they do not have sufficient push pull clearances	19	ш Ю	a. \$3,615.4⁄	F / Ea.	\$10,846					\$10,84
Replace the glass in the display cases throughout the school with the required tempered place.	20	10 E	a. \$4,515.86	6 / Еа.	\$45,159					\$45,15
Additional extensions on the stairs from the original auditorium backstage to the commons	21	8	F \$131.89) / LF	\$1,055					\$1,05
Add a lift to the make original auditorium accessible.	22	1	a. \$100,329.00) / Ea.	\$100,329					\$100,32
Add handrail to stairs in the stage scene shop.	23	10 LI	F \$131.89) / LF	\$1,319					\$1,31
Add missing handrails in the Rider Room on the ramps	24	50 LI	F \$131.89) / LF	\$6,594					\$6,59
Add accessible water fountain In the technical education area of the building.	25	1 E	a. \$21,944.5 [,]	F / Ea.	\$21,945					\$21,94
Add accessible eyewash stations in the automotive and manufacturing/production classrooms.	26	2 E	a. \$2,541.65	; / Ea.	\$2,083					\$5,08
Modify science labs to create an Add accessible workstation	27	10 E	a. \$14,462.5 [,]	+ / Ea.	\$144,625					\$144,62
Add a ramp to the platforms in science classrooms to make them accessible	28	60 SI	F \$61.92	: / SF	\$3,715					\$3,71
Replace glass in the science storage area with tempered glass.	29	204 SI	F \$74.33	5F / SF	\$15,163					\$15,16
Add handrail in stairwell into basement	30	40 LI	F \$199.48	1 LF	\$7,977					\$7,97
Total Code Compliance		348,899 S	F \$17.02	. / SF	\$5,936,914	\$0	\$0	\$0		\$5,936,91

Red River High School Grand Forks, ND 11/2/2022							CONS		Z
Facility Assessment Estimate									
Description	ltem Number	Takeoff Otv	Total Cost/Uni	t	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other meeds	Total Cost
Security								licens	
Administration office and secure entry remodel	31	7,012 SF	\$178.94 /	SF			\$1,254,727		\$1,254,72 [°]
Total Security		7,012 SF	\$178.94 <i> </i>	SF	0\$ 0\$	\$0	\$1,254,727		\$1,254,72
Addition/Remodel (Educational Adequacy)									
Administration	32	SF	\$339.20 /	SF			0\$		Ŷ
Art	33	110 SF	\$351.74 /	SF			\$38,691		\$38 , 69
Athletics	34	SF	\$360.52 /	SF			\$0		Ş
Auditorium	35	SF	\$485.35 /	SF			\$0		Ş
Business Education	36	200 SF	\$376.82 /	SF			\$75,364		\$75,36
Circulation	37	14,808 SF	\$376.83 /	SF			\$5,580,142		\$5,580,14
Classrooms	38	SF	\$376.82 /	SF			0\$		Ş
Common Spaces	39	SF	\$393.12 /	SF			\$0)\$
FACS	40	SF	\$393.12 <i> </i>	SF			0\$)\$
Food Service/Cafeteria	41	1,181 SF	\$458.33 /	SF			\$541,285		\$541,28
Library/Media Center	42	SF	\$395.63 /	SF			0\$		Ş
Mechanical/Electrical	43	15,748 SF	\$307.85 /	SF			\$4,848,076		\$4,848,07
Music	44	SF	\$401.90 <i>\</i>	SF			0\$		Ş
Restrooms	45	5,521 SF	\$464.61 /	SF			\$2,565,122		\$2,565,12:
Science	46	SF	\$431.99 <i>/</i>	SF			\$0)\$
Special Education	47	431 SF	\$340.28 /	SF			\$146,659		\$146,659
Technical Education	48	SF	\$381.83 /	SF			0\$)\$
Technology Education	49	\$35 SF	\$394.37 /	SF			\$13,803		\$13,80
Total Adequacy		38,034 SF	\$363.07 /	SF	\$0 \$0) \$0	\$13,809,142		\$13,809,142
Capital Maintenance									
Interior Upgrades									
Repurpose the swimming pool by infilling the pool, and fitting it into classroom space	50	11,000 SF	\$376.82 /	SF	\$4,145,009	6			\$4,145,00
Replace dated casework in the building is dated (300 If of base, top, upper)	51	900 LF	\$389.57 /	LF	\$350,616			×	\$350,61
Replace the dated folding partition in the library at there service counter	52	1 Ea.	\$18,541.25 /	Ea.	\$18,541	_			\$18,54
Renovation of the finishes is recommended for the training room (Room 603) and the coaches office (004 Training), (005 Coaches).	53	1,421 SF	\$70.45 /	SF	\$100,109	•		×	\$100,10
Remove the metal partitions near the main gym should be to ensure the stairwell always	54	1 Ea.	\$834.14 /	Ea.	\$834				\$83
stays open Replace countertops in the art classrooms that show wear and tear damage.	55	73 LF	\$241.14 /	LF \$17	,603			×	\$17,60
Replace seating in the Rider Room since is it currently out of date	56	200 Ea.	\$464.41 /	Ea.			\$92,882		\$92,88;
Replace the weather stripping in the openings in the automotive and	57	4 Ea.	\$547.98 <i> </i>	Ea. \$2	,192				\$2,19;
Repair the seal in the garage door in the automotive classroom	58	1 Ea.	\$652.41 /	Ea.	\$652				\$65
Replaced damaged ACT ceilings many areas of the building (30%)	59	104,670 SF	\$9.14 <i> </i>	SF	\$956,698	~		×	\$956,69
Repair the ceiling that are damaged and falling off in the locker rooms and the original	60	12,338 SF	\$16.54 /	SF \$204	,071			×	\$204,07
Repair the soffits on the exterior portion of the main entrance that are deteriorating and	61	1,000 SF	\$19.34 /	SF \$19	,340				\$19,34(
repair the gypsum board in the vestibule is also compromised				_					

COST ANALYSIS CONTINUED

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Red River High School Grand Forks, ND 11/2/2022



Total Cost \$189,777 \$83,736 \$15,328 \$14,314 \$34,129 \$14,274

Image Image <th< th=""><th>Model Model <th< th=""><th>Facility Assessment Estimate</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<></th></th<>	Model Model <th< th=""><th>Facility Assessment Estimate</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Facility Assessment Estimate									
International manual	Construction Constructin Construction Construction </th <th>Description</th> <th>ltem Number</th> <th>Takeoff Qty</th> <th>Total Cost/U</th> <th>uit.</th> <th>Critical</th> <th>5 yrs Deferred Maint</th> <th>10 yrs Deferred Maint</th> <th>Educational Adequacy</th> <th>Synergistic with other needs</th>	Description	ltem Number	Takeoff Qty	Total Cost/U	uit.	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs
All dualConstraintExp 2400 2400 2400 2400 2400 2400 2400 2400 All dualConstraintAll dualConstraint 2400 2400 2400 2400 2400 2400 2400 All dualConstraintConstraintConstraint 2400 2400 2400 2400 2400 2400 All dualConstraintConstraintConstraint 2400 2400 2400 2400 2400 2400 2400 ConstraintConstraintConstraintConstraint 2400 2400 2400 2400 2400 2400 2400 2400 ConstraintConstraintConstraintConstraint 2400 <td< th=""><th></th><th>temove and infill the skylight in the gymnasium is recommended because it is difficult and</th><th>62</th><th>500 SF</th><th>\$379.55</th><th>/ SF</th><th></th><th>\$189,777</th><th></th><th></th><th></th></td<>		temove and infill the skylight in the gymnasium is recommended because it is difficult and	62	500 SF	\$379.55	/ SF		\$189,777			
and diameterdiameterresonance in production on operi.d. $151, 373, 37, 1123, 33, 33, 4i.d.123, 33, 33, 4i.d.i.d.123, 33, 33, 4i.d.$		expensive to manualin. Repair the vinyl wall coverings through out the school	63	348,899 SF	\$0.24	/ SF		\$83,736			
IIII the indecidential for contracting the wall secondlyisis $134,313,1$ $123,313,1$ 1		Add corner guards and patch walls in the women's physical education locker room other	64	1 Ea.	\$15,327.85	/ Еа.	\$15,328				
		Fill hole in the custodial closet in the 500 hall to stop water from entering the wall assembly	65	1 Ea.	\$14,314.12	/ Ea.	\$14,314				
		Patch damaged to the CMU walls where the piping and fire sprinklers in the basement walls have deteriorated the CMU walls	66	1 Ea.	\$34,128.74	/ Ea.	\$34 , 129				
Bigling in the conding in the COU nonly the OID with the OID with the COU nonly the COU nonly the COU nonly the OID with OID with the OID with the OID with the OID with the OID	Bigling the calculation from multiply in the control that are barent from barch lands: Bigling calculate calculation from controls Bigling calculation Bigling calculation from controls Bigling calculation from controls <td>Patch and paint the walls in the individual music practice rooms and outside the renovated and review.</td> <td>67</td> <td>1 Ea.</td> <td>\$14,274.25</td> <td>/ Еа.</td> <td></td> <td>\$14,274</td> <td></td> <td></td> <td></td>	Patch and paint the walls in the individual music practice rooms and outside the renovated and review.	67	1 Ea.	\$14,274.25	/ Еа.		\$14,274			
Bigs the conding in the Code value in the loader construct and each from both adder 1 5 51.04.12 1 1 <th< td=""><td>Regular the cadding in the coder mone that can be seen from both sides$02$$11$$100, 120$$100, 120, 120, 120, 120, 120, 120, 120,$</td><td>Replace the caulking in the CMU near the music room</td><td>68</td><td>1 Ea.</td><td>\$5,414.24</td><td>/ Ea.</td><td>\$5,414</td><td></td><td></td><td></td><td></td></th<>	Regular the cadding in the coder mone that can be seen from both sides 02 11 $100, 120$ $100, 120, 120, 120, 120, 120, 120, 120, $	Replace the caulking in the CMU near the music room	68	1 Ea.	\$5,414.24	/ Ea.	\$5,414				
Regine a late control mean yn yno yno <td>Object of the thermoset and of compoting of the building. 20 5000 § S1000 § S10000 § S1000 § S10</td> <td>Repair the cracking in the CMU wall in the locker rooms that can be seen from both sides</td> <td>69</td> <td>1 Ea.</td> <td>\$10,412.40</td> <td>/ Ea.</td> <td>\$10,412</td> <td></td> <td></td> <td></td> <td></td>	Object of the thermoset and of compoting of the building. 20 5000 § S1000 § S10000 § S1000 § S10	Repair the cracking in the CMU wall in the locker rooms that can be seen from both sides	69	1 Ea.	\$10,412.40	/ Ea.	\$10,412				
Bigling leads and that one denoting on the building115,0005454,444/5455,0355555,0355555,0355555,035 <t< td=""><td>Image: Image: Image:<</td><td>Replace dated carpet in the corridors</td><td>70</td><td>10,000 SF</td><td>\$10.89</td><td>/ SF</td><td></td><td></td><td>\$108,900</td><td></td><td></td></t<>	Image: Image:<	Replace dated carpet in the corridors	70	10,000 SF	\$10.89	/ SF			\$108,900		
Register the metite in the venctional state down? 7.2 7.25 5.24.14 1/5 5.0.035 6.0.35	And the number of the production 22 22 bit is a state of the section 23 23 bit is a state of the section 23 bit is a state of the section<	Replace all of the brown ceramic and vinyl composition tile in the building	71	5,000 SF	\$24.14	/ SF			\$120,700		
Relate the main grun floor since it is nearing its life operation.7315.95055.21165.050.1455.335.6435All control class and technological education duscorons because three was78, 148, 748789.569.529.56	Add mow lie in the numerous at an density life spectancy731.55055.2111/55.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,9155.305,91555.305,91555.305,91555.305,91555.305,91555.305,915555.305,91555.305,915555.305,91555	Replace the tile in the vestibule at door 7	72	250 SF	\$24.14	/ SF	\$6,035				
Add new rite in the mane one at and technological education diastooms because there was748,7485,7365/ / / / / / / 5206,514Reglater the runnelit stackReglater the runnelit stack759,87755,130/ / / 55,130/ / 55,130/ / 22,1402,106,971/ / 2Reglater the runnelit stack79,8759,877/ / 55,135/ / 55,136/ / 52,146/ / 2/ / 2/ / 2/ / 2Reglater the dimaged subtract771/ / 2/ / 2/ / 2/ / 2 <td< td=""><td>Add new time rous art and technological education disacrons because there was746,749553.06,514555Readentisus759,877559,87755</td><td>Replace the main gym floor since it is nearing its life expectancy</td><td>73</td><td>15,950 SF</td><td>\$22.17</td><td>/ SF</td><td></td><td></td><td>\$353,643</td><td></td><td></td></td<>	Add new time rous art and technological education disacrons because there was746,749553.06,514555Readentisus759,877559,87755	Replace the main gym floor since it is nearing its life expectancy	73	15,950 SF	\$22.17	/ SF			\$353,643		
Replace The trunding track in the bacement7s9.8775f519.975f5f519.975f	Register for immagrated, immagr	Add new tile in the numerous art and technological education classrooms because there was	74	8,749 SF	\$23.65	/ SF	\$206,914				
Interfor UpgradesInterfor UpgradesInterfor UpgradesInterfor UpgradesInterfor UpgradesInterfor UpgradesRepting the transmert of transmert r_1 r_2	Interfor Upgrades subtoolInterfor Upgrades subtoolInterfor UpgradesInterfor UpgradesInterforInterfor UpgradesInterforInterfor UpgradesInterforIn	a chemical issue Replace the running track in the basement	75	9,877 SF	\$19.94	/ SF			\$196,971		
Refine Ungrade.Refine Ungrad	Entrior LugaradesEntrior LugaradesEn	Interior Upgrades Subtotal		348,899 SF	\$20.83	/ SF					
Exterior UpgradesExterior UpgradeExterior UpgradesExterior UpgradesEx	Extentor UpgradesExtentor UpgradesEx										
Replace the concrete drives and the admaged sidewalk that connecte drives and the admaged sidewalk that connects drives and the admaged side thereine. 79 2.000 F 317.545 /L F 323.52 355.720 355.720 355.725 35		Exterior Upgrades			,						
Repair the concrete drives and the damaged cutors771112.4.1.48.0d $1/6$.5.2.4.1.48.0d $1/6$.5.2.4.1.48.0d $1/6$.	Beginst the contreet of the standard771112.3.1.485.9.2.46111Beginst dimensations3111 </td <td>Replace the damaged sidewalk outside of the school</td> <td>76</td> <td>5,600 SF</td> <td>\$17.56</td> <td>/ SF</td> <td>\$98,322</td> <td></td> <td></td> <td></td> <td></td>	Replace the damaged sidewalk outside of the school	76	5,600 SF	\$17.56	/ SF	\$98,322				
Replace damaged stoops at doors 9, 10, and 16 that are sinking.783151, 51, 51, 5153, 51, 210535, 51, 20535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 51, 210535, 21353	Replace damaged stoops at doors 9, 10, and 15 that are sinking.783151, 51, 51, 5616559, 54559, 54559, 54Replace the root wetext stoors 7 and 17 to the public welkways in case of an execution.792,00017\$17, 5517\$35, 120535, 120535, 120Replace the root wetext stoors 7 and 17 to the public welkways in case of an execution.792,00017\$17, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 51, 5517\$35, 55, 5517\$35, 55, 5517\$35, 55, 5517\$35, 55, 5518\$35, 5517\$35, 55, 5518\$35, 55 <td>Repair the concrete drives and the damaged curbs</td> <td>77</td> <td>1 Ea.</td> <td>\$24,148.04</td> <td>/ Еа.</td> <td>\$24,148</td> <td></td> <td></td> <td></td> <td></td>	Repair the concrete drives and the damaged curbs	77	1 Ea.	\$24,148.04	/ Еа.	\$24,148				
Add sidewalk that connects doors 7 and 17 to the public walkways in case of an evacuation.792.000LF51.7553.51.20 <td>dot disclowalt that connects doors 7 and 17 to the public walkways in case of an evacuation.792,0001F5,175355,120355,120355,1203Replace the root when it nears the end of its useable lifetime80286,96455,0331/555,7735955,7735999Replace the root and soling near the north entrance of the school81348,8995530,381/553,773,3955,7735999Replace the root and soling near the north entrance of the school81348,899553,3341/553,7736999Replace the north entrance of the school81348,899553,3451/551,203,702999Renet root graded or added after the flood of 1997.82348,899553,3451/551,203,702999Renet school81348,899553,3451/551,203,702999<</td> <td>Replace damaged stoops at doors 9, 10, and 16 that are sinking</td> <td>78</td> <td>3 Ea.</td> <td>\$19,841.24</td> <td>/ Еа.</td> <td></td> <td>\$59,524</td> <td></td> <td></td> <td></td>	dot disclowalt that connects doors 7 and 17 to the public walkways in case of an evacuation.792,0001F5,175355,120355,120355,1203Replace the root when it nears the end of its useable lifetime80286,96455,0331/555,7735955,7735999Replace the root and soling near the north entrance of the school81348,8995530,381/553,773,3955,7735999Replace the root and soling near the north entrance of the school81348,899553,3341/553,7736999Replace the north entrance of the school81348,899553,3451/551,203,702999Renet root graded or added after the flood of 1997.82348,899553,3451/551,203,702999Renet school81348,899553,3451/551,203,702999<	Replace damaged stoops at doors 9, 10, and 16 that are sinking	78	3 Ea.	\$19,841.24	/ Еа.		\$59,524			
Replace the roof when it nears the end of its useable lifetime 80 286,964 5F 530.38 / 5F 8,775,359 9 9 Replace the roof and slding near the north entrance of the school 81 348,399 5F 50.17 / 5F \$59,313 \$59,313 \$59,313 \$59,313 \$59,313 \$59,313 \$59,313 \$50,3	Replace the roof when it nears the end of its useable lifetime80286,9645530.38/ 5F58,775,359699Replant the green roof and soling near the north entrance of the school81348,8995F\$0.17/ 15F958,775,359999Electrical Upgrades subtoral81348,8995F\$2.53.41/ 5F\$2.103,70259.93.13999Electrical Upgrades81348,8995F\$2.53.41/ 5F\$1.203,7029999Electrical Upgrades81348,8995F\$3.45,8995F\$2.34,51/ 5F9999Several branchpanels were noted to be original to building and past348,8995F\$3.45,8995F\$3.123,7029999Dire classification81348,8995F\$3.256/ 5F\$3.123,702999<	Add sidewalk that connects doors 7 and 17 to the public walkways in case of an evacuation.	79	2,000 LF	\$17.56	/ LF		\$35,120			
Repaint the green roof and siding near the north entrance of the school81348,3995F\$0.17/5Fm\$59,313mmReterior Upgrades subtoral248,8995F\$25.34/5F\$25.34/5F\$59,313mmmElectrical UpgradesElectrical Upgrades248,8995F\$25.34/5F\$21.03,702mmmmmElectrical UpgradesElectrical Upgrades82348,8995F\$3.45/5F\$3.103,702mmmmIn most cases, panels were noted to have been upgraded or added after the flood of 1997.82348,8995F\$3.345/5F\$1.203,702mmmmIn most cases, panels were noted to be original to building and past82348,8995F\$3.345/5F\$1.203,702mmmmIn eddition of building mounted exterior emergency egress lighting are ach and every exit83348,8995F\$2.35,736mmmmIn eddition of building mounted exterior emergency egress lighting and past84348,8995F\$2.35,7365F\$2.376,736mmmmIn eddition of building mounted exterior lighting management, as83348,8995F\$2.35,736mmmmmIn eddition of building control is throughout to digital lighting management, as83348,8995F\$2.35,736mmmmmIn eddition of building contro	Repaint the green cool and solid mear the north entrance of the school81348,8995F50.17/5F559,31355559,31355559,31355559,313550,313 <t< td=""><td>Replace the roof when it nears the end of its useable lifetime</td><td>80</td><td>286,964 SF</td><td>\$30.58</td><td>/ SF</td><td></td><td>\$8,775,359</td><td></td><td></td><td></td></t<>	Replace the roof when it nears the end of its useable lifetime	80	286,964 SF	\$30.58	/ SF		\$8,775,359			
Exterior Upgrades SubtoralExterior Upgrades SubtoralExterior Upgrades SubtoralImportSt3.5.9I FF<	Kterior Ungrades SubtralMethodMe	Repaint the green roof and siding near the north entrance of the school	81	348,899 SF	\$0.17	/ SF			\$59,313		
Electrical UpgradesElectrical Upg	Extrical DygradesSeveral branch panels were noted to have been upgraded or added after the flood of 1997.82348,8995753.45/ 5751.203,702999Several branch panels were noted to be original to building and past82348,8995753.45/ 5751.203,702999The addition of building mounted exterior emergency egress lighting at each and every exit83348,8995750.55/ 5752.65,784999Ubgrade of all lighting controls throughout to digital lighting management is suggested84348,8995752.55,7369999All exterior lighting controls suggested that the existing intercom system be updated to new IP system throughout86348,8995757.259999All exterior lighting namederent, as suggested that the existing intercom system be updated to new IP system throughout86348,8995757.2457587,22599All exterior additional door security is added to all exterior doors for the purposes of8753.76,1453.73,16999All exterior infinitional door security is added to all exterior doors for the purposes of8753.73,6599999All exterior infinitional door security is added to all exterior doors for the purposes of8734.8,3995751.246.241699All exterior infinitional door security is added to all exterior doors for the purposes of8734.8,399 <td>Exterior Upgrades Subtotal</td> <td></td> <td>348,899 SF</td> <td>\$25.94</td> <td>/ SF</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Exterior Upgrades Subtotal		348,899 SF	\$25.94	/ SF					
Electrical Upgrades Electrical Upgrades<	Electrical Upgrades Electrical Upgrades Electrical Upgrades Several branch panels were noted to have been upgraded or added after the flood of 1997. 82 348,899 57 53.45 / 5F 51.203,702 P P P Their used to accest panels that were not replaced were noted to be original to building and past 82 348,899 5F 53.45 / 5F 51.203,702 P P P The addition of building mounted exterior emergency egress lighting at each and every exit 83 348,899 5F \$50.55 / 5F \$52.6,784 P										
Several branch panels were noted to have been upgraded or added after the flood of 1997. 82 343,899 SF \$3.45 / SF \$1.203,702 B S1.203,702 B S1.203,7	Several branch panels were noted to have been upgraded or added after the flood of 1997. 82 343,899 5F \$3.45,15 \$1,203,702 91 In most cases, panels that were not replaced were noted to be original to building and past 948,899 5F \$3.45,784 91 91 The addition of building mounted exterior emergency egress lighting at each and every exit 83 343,899 5F \$0.65 / 5F \$226,784 91 91 Obor is suggested. Upgrade of all lighting mounted exterior emergency egress lighting at each and every exit 83 343,899 5F \$2.26,784 91 91 91 Obor is suggested to all lighting management, as suggested 84 348,899 5F \$2.251 / 5F \$875,736 91 91 91 All exterior lighting control is suggested to be tied into digital lighting management, as used that the existing intericon system be updated to new IP system throughout 86 348,899 5F \$0.25 / 5F \$87,5,736 91 91 16 16 16 16 16 16 16 16 16 16 16 16 16 16 16 16 16 16 16	Electrical Upgrades									
The addition of building mounted exterior emergency egress lighting at each and every exit 83 348,899 5F \$2.6,784 9 9 door is suggested. 000 is suggested. 84 348,899 5F \$2.51 7 \$75,736 9 9 Upgrade of all lighting controls throughout to digital lighting management is suggested 84 348,899 5F \$2.51 7 \$75,736 9 9 All exterior lighting control is suggested to be tied into digital lighting management, as 85 348,899 5F \$0.25 7 5F \$87,225 9 9 9 9 9 587,225 9 9 9 9 9 9 53.75 7 5 5 53.75 7 5 5 53.725 9 5 53.75 7 5 <td>The addition of building mounted exterior emergency egress lighting at each and every exit 83 348,899 5F \$0.05 7 \$226,784 9 9 9 door is suggested. B4 348,899 5F \$2.51 7 \$\$ \$\$875,736 9 9 Upgrade of all lighting controls throughout to digital lighting management is suggested 84 348,899 5F \$2.51 7 \$\$</td> <td>Several branch panels were noted to have been upgraded or added after the flood of 1997. In most cases, panels that were not replaced were noted to be original to building and past their useful life.</td> <td>82</td> <td>348,899 SF</td> <td>\$3.45</td> <td>/ SF</td> <td>\$1,203,702</td> <td></td> <td></td> <td></td> <td></td>	The addition of building mounted exterior emergency egress lighting at each and every exit 83 348,899 5F \$0.05 7 \$226,784 9 9 9 door is suggested. B4 348,899 5F \$2.51 7 \$\$ \$\$875,736 9 9 Upgrade of all lighting controls throughout to digital lighting management is suggested 84 348,899 5F \$2.51 7 \$\$	Several branch panels were noted to have been upgraded or added after the flood of 1997. In most cases, panels that were not replaced were noted to be original to building and past their useful life.	82	348,899 SF	\$3.45	/ SF	\$1,203,702				
Understand in lighting controls throughout to digital lighting management is suggested 84 348,899 5F \$2.51 \$7.5736 \$875,736 \$875,736 \$875,736 \$875,736 \$875,736 \$816,95 \$816,95 \$816,95 \$816,95 \$816,95 \$816,95 \$816,95 \$816,95 \$816,95 \$816,95 \$817,85 \$817,25 \$817,25 \$816,95 \$816,95 \$816,95 \$817,85 \$817,85 \$817,85 \$816,95 \$817,85 <td>Upgrade of all lighting controls throughout to digital lighting management is suggested 84 348,899 57 5.5.1 5 587,736 587,736 587,736 All exterior lighting control is suggested to be tied into digital lighting management, as 85 348,899 57 50.25 587,225 587,225 587,225 587,225 587,225 587,225 587,215</td> <td>The addition of building mounted exterior emergency egress lighting at each and every exit how is supported</td> <td>83</td> <td>348,899 SF</td> <td>\$0.65</td> <td>/ SF</td> <td>\$226,784</td> <td></td> <td></td> <td></td> <td></td>	Upgrade of all lighting controls throughout to digital lighting management is suggested 84 348,899 57 5.5.1 5 587,736 587,736 587,736 All exterior lighting control is suggested to be tied into digital lighting management, as 85 348,899 57 50.25 587,225 587,225 587,225 587,225 587,225 587,225 587,215	The addition of building mounted exterior emergency egress lighting at each and every exit how is supported	83	348,899 SF	\$0.65	/ SF	\$226,784				
All exterior lighting control is suggested to be tied into digital lighting management, as 85 348,899 SF \$0.25 \$57,225 S7,225 S7,225 Image: Second secon	All exterior lighting control is suggested to be tied into digital lighting management, as 85 348,899 5F \$0.25 / SF \$87,225 P P P outline in interior lighting portion above above 348,899 5F \$3.76 / SF \$1,311,860 P <td< td=""><td>Upgrade of all lighting controls throughout to digital lighting management is suggested</td><td>84</td><td>348,899 SF</td><td>\$2.51</td><td>/ SF</td><td></td><td>\$875,736</td><td></td><td></td><td></td></td<>	Upgrade of all lighting controls throughout to digital lighting management is suggested	84	348,899 SF	\$2.51	/ SF		\$875,736			
extrementation manufactors and a statements of the existing intercom system be updated to new IP system throughout 86 348,899 SF \$3.76 / SF \$1,311,860 \$1,311,860 The existing intercom system be updated to new IP system throughout 86 348,899 SF \$3.76 / SF \$1,311,860 \$1,311,860 The existing intercom system be updated to new IP system throughout 86 348,899 SF \$3.76 / SF \$3.7	it is suggested that the existing intercom system be updated to new IP system throughout 86 348,899 SF 53.76 / SF 51.311,860 61.311,810,811,811,811,811,811,811,811,811,8	All exterior lighting control is suggested to be tied into digital lighting management, as outline in interior lighting moriton shows	85	348,899 SF	\$0.25	/ SF		\$87,225			
tis suggested that additional door security is added to all exterior doors for the purposes of 87 53 Ea. \$1,246.24 / Ea. \$66,051 \$66,051	it is suggested that additional door security is added to all exterior doors for the purposes of 87 53 Ea. \$1,246.24 / Ea. \$66,051 \$66,051 access control and monitoring	exercise the existing intercom system be updated to new IP system throughout on the school	86	348,899 SF	\$3.76	/ SF		\$1,311,860			
		It is suggested that additional door security is added to all exterior doors for the purposes of access control and monitoring.	87	53 Ea.	\$1,246.24	/ Ea.	\$66,051				

\$8,775,359 \$59,313

\$9,051,786

\$98,322 \$24,148 \$59,524 \$35,120 \$1,311,860

\$66,051

\$226,784 \$875,736 \$87,225

\$1,203,702

\$196,971 **\$7,269,095**

\$353,643 \$206,914

\$6,035

\$5,414 \$10,412 \$108,900 \$120,700

COST ANALYSIS CONTINUED

Red River High School

Grand Forks, ND 11/2/2022



,028,658	\$33					SF	\$83.84 /	SF	393,945		Total Critical & Educational Adequacy
;517,603	\$22	\$18,263,885	\$1,011,630	\$21,477,315	\$14,764,773	SF	\$140.93 /	SF	393,945		Total Facility Assessment Cost Estimate
,444,903	\$9	\$3,107,134	\$172,103	\$3,653,817	\$2,511,849						Total Contingencies & Soft Costs
\$691,090		\$227,351.27	\$12,592.90	\$267,352.47	\$183,793.85				1.5%	101	Owner Contingency
\$921,454		\$303,135.03	\$16,790.53	\$356,469.96	\$245,058.47				2.0%	100	FF & E
\$3,225,089		\$1,060,972.60	\$58,766.86	\$1,247,644.87	\$857,704.63				7.0%	66	A & E Fees
\$0		\$0.00	\$0.00	\$0.00	\$0.00				0.0%	98	Escalation
\$2,303,635		\$757,837.57	\$41,976.33	\$891,174.90	\$612,646.16				5.0%	97	Construction Contingency
\$2,303,635		\$757,837.57	\$41,976.33	\$891,174.90	\$612,646.16				5.0%	96	Design Contingency
											Contingencies & Soft Costs
						kes	rances, bonds, ta	insu	fees, permits,	ditions, CM	*** All above estimated costs are total construction costs. These include general con
6,072,699	\$46	\$15,156,751	\$839,527	\$17,823,498	\$12,252,923	SF	\$116.95 /	SF	393,945		Total Construction Cost
,071,916	\$25	\$92,882	\$839,527	\$17,823,498	\$6,316,009	SF	\$71.86 <i> </i>	SF	348,899		Total Capital Maintenance
\$4,738,936						SF	\$13.58 /	SF	348,899		Mechanical Upgrades Subtotal
\$174,450				\$174,450		SF	\$0.50 //	SF	348,899	95	Controls throughout the building are a Direct Digital Controls (DDC) system provided by Johnson Controls Inc. (JCI), installed between 2020 and 2022 during the heat pump replacement project. Some pneumatic controls remain where original air handling units or supplemental heating devices are still in operation. It is recommended that all existing pneumatic controls be replaced with DDC systems.
											air conditioning. Recommend that DX cooling coils and condensing units or water source heat pumps be provided for spaces that do not currently have air conditioning to meet the requirements of ASHRAE 62.1 for ventilation rates, and ASHREA Standard 55 for cooling and debumidification.
\$19,343					\$19,343	SF	\$19,342.74 /	SF	1	93	Automotive shop does not appear to have CO/NO2 detection with required emergency exhaust.
\$26,743					\$26,743	Ea.	\$26,743.14 /	Ea.	1	92	Existing wood shop has a dust collection system located outside the building that is original and at the end of its useful life.
\$111,648				\$111,648		SF	\$0.32 /	SF	348,899	91	Thermostatic mixing valves meeting ASSE 1070 requirements should be added to public lavatories for scald protection.
\$36,179					\$36,179	Ea.	\$36,179.45 /	Ea.	1	06	The auto shop did not appear to have any oil/inflammable waste traps.
\$4,077,499					\$4,077,499	SF	\$13.05 /	SF	312,452	89	Add sprinklers to the building including a new water service line except the auditorium addition
											Mechanical Upgrades
\$4,012,098						SF	\$11.50 /	SF	348,899		Electrical Upgrades Subtotal
\$240,740				\$240,740		SF	\$0.69 /	SF	348,899	88	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
tal Cost	whergistic with other needs Tot	S Educational v Adequacy	10 yrs Deferred Maint	5 yrs Deferred Maint	Critical	it	Total Cost/Uni	×	Takeoff Qt	ltem Number	Description
											Facility Assessment Estimate
I											