Bedichek Middle School Site Summary

| Address | 6800 Bill Hughes Road |
|---------------------------------------|-----------------------|
| | Austin, Texas 78745 |
| Number of Permanent Campus Facilities | 3 |
| Original Year of Construction | 1972 |
| Total Campus Building Area (combined) | 133,942 SF |



Introduction

Bedichek Middle School is located at 6800 Bill Hughes Road in Austin, Texas. It is comprised of three buildings. The main building (BLDG-054A) houses administration, classrooms, the library, the theater, and the cafeteria. The structure (BLDG-054B) to the west houses the physical education facilities, the band hall, an orchestra space, and support areas. A stand-alone building (BLDG-054C) on the southeast corner of the campus houses classrooms. BLDG-054A and a substantial portion of BLDG-054B were constructed in 1972, while BLDG-054C was constructed in 1997. BLDG-054A is configured with a substantial amount of the circulation between areas of the school accomplished via unconditioned corridors that are enclosed with the exception of the area adjacent to the interior court yard. All buildings are connected via covered walkways. In BLDG-054A, the ADMIN areas, the 190 wing, and the library have been recently remodeled. An addition to the library was in progress along with replacement of window systems in the 200, 150, and 190 wings. In BLDG-054B a new band hall and weight room additions are present but missing from some of the documentation along with reconfigurations that took place in the original band area.



Main School Building - BLDG-054A

| Building Purpose | Administration, Classrooms, Cafeteria |
|--------------------------|---------------------------------------|
| Building Area | 91,826 SF |
| Inspection Date | August 10, 2016 |
| Inspection Conditions | 99°F - Sunny |
| Facility Condition Index | |



System Deficiency Overview

The following table provides a summary of the systems and their respective conditions found by each discipline.

| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------|------------------|---|----------------------------|
| Exterior | Exterior Walls | The exterior walls are primarily brick with exposed concrete and steel structural elements. Exposed steel is found primarily at window systems and canopies. The exterior walls were observed to be in average condition. Rusting steel columns were observed at the cafeteria and window system on the west side of corridor C6. An open joint between a concrete column and the roofing system was observed outside the same C6 corridor and a cracked concrete column was observed on the south side of the building. Walls were stained from uncontrolled run-off from the roof due to a lack of gutters or gutters being bypassed. In the vein water control, an abandoned pond was observed between BLDG-054A and BLDG-054C. | Average |
| | Exterior Windows | Windows are a combination of older single—glazed, aluminum, single-hung window units; older aluminum storefront type systems; and newly installed single—glazed, aluminum, single-hung window units. Approximately one quarter of the window units are recently replaced or are in the process of being replaced. The exterior windows were observed to be in average condition. There were jambs observed without sealant. The larger window installations at the cafeteria and the west exit of corridor C6 had failing sealants in the window system and at the joint between other building | Average |



| System | Subsystem | Condition and Deficiency Overview | System |
|---------|--|--|------------------|
| | | | Condition Rating |
| | | elements in the window system. In the 130 wing a spandrel panel in the window system was observed to be rusting. It was reported that the windows leak. | |
| | Exterior Doors | Exterior doors are hollow metal doors set in hollow metal frames. Door systems typically include glazing in the doors; sidelights, and transoms. Some mechanical rooms have louvers set in the metal doors. A rolling door/security grill is located outside of the kitchen area. The exterior doors were observed to be in average condition. All doors exhibited finish damage in the form of aged chalky finish, peeling paint, or physical damage. Two doors were missing. Two locations had rust on the frame or louver. Panic hardware was observed as being damaged in two locations. A roll-up door covers an exit way, creating a hazard when the building is occupied. Some glass panes appear to have been replaced with acrylic glazing. | Average |
| Roofing | Roofing systems include two versions of a modified bitumen installation, older EPDM (ethylene propylene diene terpolymer) type roofing, built-up construction, a cast in place concrete roof, and two types of metal roofing. The two types of modified bitumen include an installation with the typical granule-coated cap sheet and another with a foil-backed membrane coating the cap sheet. The metal roofing includes a low sloped folded/box corrugation installed on canopies covering walkways on the east side and in the courtyard and a standard corrugated metal panel on the west side installed on a steep slope system. The modified bitumen roofs with the foil-backed covering were observed to be in poor condition (sections A10 through A13). The District reported that this product is part of a warranty claim that is being pursued with the manufacturer of the product. On this product a large blister, ripping of the foil-backed covering, ponding, adhesion issues, and damage to the system were noted. The modified bitumen with the granule-coated cap sheet was observed to be in average condition (sections A05 and A16). Older repairs, ponding, aged roofing sealant, peeling, and trees touching the membrane were observed on this portion. The EPDM type system on the canopies covering the entrances on the east side of the building appeared to be aged (sections A08 and A09). Gutters for these sections were rusted through. The low slope metal roofing was observed to be in average condition (section A18). The portion on the east side of the building connecting to BLDG-054C appeared rusted. The concrete roof was observed to be in good condition (sections A01 through A04). The built-up roof section was observed to be in average condition (sections A01 through A04). The built-up roof section was observed to be in average condition (sections A14). Roof areas A06, A07, and A17 did not exist. It was observed that the gutter and downspout systems may be undersized. Leaking was reported in the cafeteria and administration area. Damaged ceiling | | Average |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|--------------------------|----------------------|--|----------------------------|
| Interior Construction | Interior Walls | Interior wall systems are typically painted concrete masonry units (CMU) and gypsum board wall assemblies. Operable partitions are installed in the kitchen. In rooms 101 and 102 a partition is used to subdivide each room. The wall systems were observed to be in good condition. The new partition in rooms 101 and 102 was constructed to bisect the wall-mounted HVAC (heating, ventilation, and air conditioning) unit and any lighting in the suspended ceiling system. The millwork paneling installed above the stage in the theater appeared to be detaching from the wall. The operable partitions in the kitchen were noted to be rusting and had failed gaskets. Cracks in the CMU wall systems were noted in rooms 256 and 257, with the crack in 257 being horizontal and slightly offset. The field house room adjacent to the main mechanical room was observed as possibly not compliant for occupancy due to deficiencies in occupant load and exiting and fresh air circulation. Toilet partitions in one restroom were significantly rusted. | Good |
| | Interior Doors | Interior doors are solid core with wood veneer door slabs set in hollow metal frames. Most of the hollow metal frames are a welded type, while a limited number are slip on sectional frames. There are a limited number of hollow metal doors inside the facility. The interior doors were observed to be in poor condition. The doors appeared to be original to the facility. Damage observed was primarily to the veneer applied to the solid wood core, but issues with rubbing at jambs and non-functional hardware were encountered as well. | Poor |
| | Interior Specialties | Half-height metal lockers are wall-mounted in the covered exterior corridors or in the basement field house. In addition, lab case work in an older section of the building is constructed of composite wood products with metal supplementary support and lab chemical-resistant tops. The lockers were observed to be in average condition. The finish on the lockers was observed to be aged and chalky. The lab case work in rooms 130, 131, and 133 was observed to be in poor condition. Conditions observed included veneer damage and substantive wear and tear. The lab case work in room 151 had water staining. | Average |



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| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------------------|------------------------|--|----------------------------|
| Stairs | Exterior Stairs | In most cases, exterior stairs are cast in place concrete with square tube metal railings coated in a paint finish system. These stairs have integral anti-slip nosing pieces. Railings within the covered walkway have steel lower sections with an aluminum handrail mounted on top or aluminum handrail in a wall-mounted configuration. One set of stairs is constructed of CMU set on sloping grade with a metal pipe railing. The exterior stairs were observed to be in average condition. All anti-slip nosing pieces were reported as worn to the point of not providing any resistance. These nosing pieces were observed to be damaged and worn throughout the facility. All railings were reported as failing and requested to be replaced. In many locations the aluminum handrail was noted as having sections missing. In one case the railing was missing altogether. At some exterior exits the railings were observed to have handrails that do not meet current code or accessibility requirements. The stair system constructed of CMU was noted as having uneven treads. | Average |
| | Interior Stairs | Interior stairs are located in the 140 wing of the building and at the two stages. The stairs are cast in place concrete with wall-mounted, aluminum handrails. The interior stairs were observed to be in average condition. The railings were observed to be missing sections or damaged. Anti-slip nosing pieces were observed to be worn and ineffective. In the 140 wing it appeared that an exit way was being used as an office space, possibly creating a hazard in the facility. It was reported that there is not an accessible route to room 1410FC due to risers and stairs. It was observed that there is no accessible route to the choir room (141) and its support spaces. The wood structure at the stage does not have railings. | Average |
| Interior Finishes | Interior Wall Finishes | Interior wall finishes are primarily paint systems or vinyl wall covering over gypsum board partitions, cast in place concrete, or CMU. The restrooms and the kitchen include a mixture of painted gypsum board and ceramic tile. A limited number of rooms and areas have wood paneling. Many of the finish systems are aged or original to the building. The interior wall finishes were observed to be in good condition. Deficiencies noted with the vinyl wall covering in the 200 wing included physical damage and adhesion | Good |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|--------|-------------------------|---|----------------------------|
| | | loss with the substrate. Paint systems were either damaged or failing. Concrete surfaces in particular were observed as having paint condition issues. At the cafeteria the acoustic wood paneling around the stage was observed to be separating from the substrate. Other wood paneling had ghosting from previously installed products. It was not clear whether this wood paneling meets a Class A fire rating as may be required by this building or whether that was applicable at the time of construction. In room 154 raw gypsum board was visible where millwork was removed. | |
| | Interior Floor Finishes | Interior floor finishes include vinyl composite tile (VCT), strip wood flooring at the stages, quarry tile in the kitchen, and carpet. The floor finishes in the building were observed to be in average condition. The VCT in the building was reported as lifting and haphazardly replaced. This appeared to be in keeping with the District's practice of replacing missing tiles with the color on hand rather than attempting to match the adjacent tiles. The campus staff requested that all VCT be replaced. Condition issues for the VCT included lifting, physical damage, and cracking. Substrate condition issues were noted. The VCT in the 200 wing had the largest percentage of deficiencies. The VCT in room 141 on the risers was also noted as lifting and the pattern of the lifting and wear suggested moisture underneath and movement of the structure supporting the floors. The removal of millwork or furniture uncovered damage to the VCT in the form of staining or dirt encased in wax build-up. The wood flooring systems on the two stages appeared to be in poor condition. The urethane coatings were observed as peeling and damaged. Carpet observed in the facility appeared to be newer and was in good condition. | Average |



| System | Subsystem | Condition and Deficiency Overview | System |
|-----------|--------------------------------|--|---------|
| | Interior Ceiling Finishes | The ceiling systems are a 2'x4' suspended ceiling system with limited amounts of gypsum board ceilings as accents. The interior ceiling finishes were observed to be in poor condition. Areas of recent remodeling were in good or excellent condition but this was in a limited area. Ceiling tiles were observed with water damage, physical damage, improper installation, humidity damage, and aging. These conditions appeared in the 100, 130, 140, 150, and 200 wings along with the cafeteria area. Ceiling grid and HVAC system register systems were observed with rust. The tiles with issues observed were in all areas of the building except for the administration areas, the 190 wing, and the library. In room 154 | Poor |
| Conveying | No inspection certificate | camouflage netting was observed attached to the ceiling grid. vator that serves two floors. e was found, but the elevator appeared to be in good | Good |
| Plumbing | condition. Plumbing Fixtures | The building has public restrooms for males and females, students, and separate staff restrooms throughout the facility. These restrooms have vitreous china hand sinks in counters with manual faucets, along with vitreous china, floor- and wall-mount toilets with manual flushing mechanisms, and vitreous china, wall-hung urinals in the male restrooms with manual flushing mechanisms. Service sinks are located in the janitorial closets, and water coolers are located throughout the facility, typically near the public restrooms. The restroom with entrances from the exterior had plumbing fixtures observed to be in average condition as the fixtures were aged. Several water closets and urinals within the male and female restrooms were found to have deficient flush valves. | Average |
| | Domestic Water Distribution | Plumbing fixtures are serviced with domestic cold water. There are two gas water heaters in the kitchen mechanical room. The system was observed to be in average condition. | Average |
| | Other Plumbing | The roof drains are equipped with metal grate covers to prevent debris from entering the drainage system. The roof drains appeared to be in good condition. The floor drain in the basement mechanical room was not draining at the time of observation. | Good |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|---------------------|---|---|----------------------------|
| Mechanical/ HVAC | The major mechanical equipment consists of indoor chilled/hot water single zone AHUs (air handling units), an air cooled chiller, and gas fired heating water boilers. In addition, there are two outside air units (OAUs) that are roof mounted. All AHUs are either located in mechanical closets or on the roof. The mechanical closets are located along the outside border of the courtyard. The cooling tower is a built-up tower of metal and wood. With the exception of AHU-5, the AHUs located in mechanical closets exceed their typical design service life by more than 10 years. AHUs located on the roof were recently replaced and were observed to be in excellent condition. The diffusers in the classroom areas were observed to be in average condition. The diffusers and grilles in the restrooms from the courtyard are highly corroded and some have been removed from service. The chillers are approaching the end of their typical design service life. The chillers do not appear to have had any heavy maintenance performed. Chilled water and heating water pumps appeared to have been well maintained but were approaching the end of their typical design service life. The condenser water pumps had several leaks and appeared to have had heavy and continual maintenance. The boilers have exceeded their typical design service life but appeared to have been well maintained. The cooling tower was degrading and showed signs of excessive use. There are three mini-split systems in the area of room 130. An apparent remodel has put a wall in the middle of two of the units. The system is rated as poor due to the large quantity of equipment approaching or | | Poor |
| Fire Protection | in excess of their typical Fire Alarm | The building has a fire alarm system that consists of alarm and signaling devices such as horns, strobes, horn and strobe combination devices, pull stations, and detectors. The fire alarm system is controlled by a Silent Knight control panel. The fire alarm system appeared to be in good condition. Staff reported that the fire alarm did not work in the office and required frequent maintenance. | Good |
| | Fire Protection/ Suppression | The building does not have a fire suppression system. The building is protected by portable fire extinguishers placed throughout the facility. All observed portable fire extinguishers had inspection tags dated within the last year as required. | N/A |
| Electrical | Electrical Distribution | The electrical service enters the building from the 277/480-volt 2000-amp main switchboard MSB located on the exterior near the service transformer. The service then feeds a 2000-amp distribution switchboard MSB1 in the MAINELEC room that distributes service to branch panelboards and step-down transformers, which are located in various electrical rooms throughout the building. The building does not have a lightning protection system. | Average |

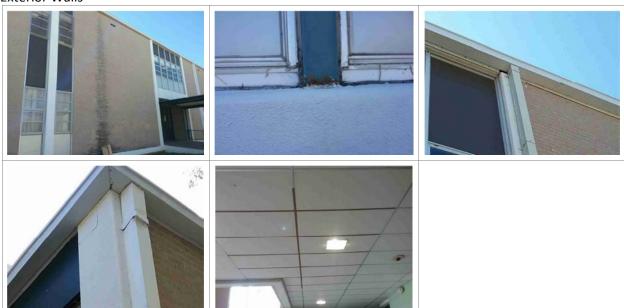


| System | Subsystem | Condition and Deficiency Overview | System |
|--------|------------------|---|------------------|
| | | | Condition Rating |
| | | The electrical distribution equipment appeared to be in | |
| | | average condition. The cover for panelboard "A" in the | |
| | | "MAINELEC" was lying on the floor below the | |
| | | panelboard. The AISD Service Center staff reported that | |
| | | various conduits were separated, creating grounding | |
| | | problems and reported their overall concern with the | |
| | | safety of the building due to the age of equipment, condition of wiring, and patch jobs completed in the past. Staff reported that panelboards located in KITOCRM, STAGE, ELECT130, CC100, and AHU5 | |
| | | mechanical room no longer have spare capacity to | |
| | | accommodate future loads. | |
| | Lighting | The building exterior lighting consists of incandescent | Average |
| | Lighting | downlights and wall mounted HID (high intensity | Average |
| | | discharge) light fixtures located along the entire | |
| | | perimeter as well as pole mounted. The interior lighting | |
| | | consists of 2'x4' fluorescent recessed troffers controlled | |
| | | by occupancy sensors. | |
| | | The AISD Service Center staff reported that the power pack contact points for the occupancy sensors appeared to be melting and were inadequate. The campus staff reported inadequate pole lighting in the northeast and southwest area of the south parking lot. Staff reported that the canopy lights between BLD-054A and BLDG-054C were no longer working. In offices 101 and 102, lights were above a newly constructed wall. In the kitchen restroom, the globe was hanging from its light fixture. The interior and exterior lighting appeared to be in average condition. There were exit signs in the building and appeared to be in good working condition. | |
| | Communications & | There is a security system including surveillance | Good |
| | Security | cameras, card readers, and motion detectors in the building. There is a public address system and tele/data system in the building. | |
| | | The systems appeared to be in good condition. Staff reported that camera resolution at this facility was inadequate. | |



Exterior System Deficiency Examples

Exterior Walls



Exterior Windows



Exterior Doors







Roofing Deficiency Examples





Interior Construction Deficiency Examples

Interior Walls



Interior Doors



Interior Specialties











Stairs Deficiency Examples

Exterior Stairs









Interior Stairs



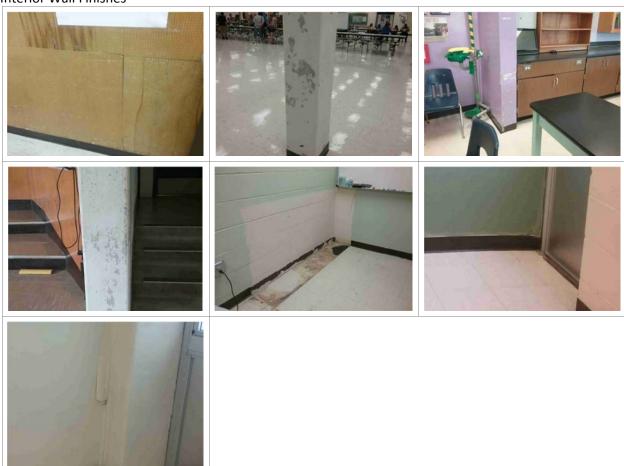






Interior Finishes Deficiency Examples

Interior Wall Finishes



Interior Floor Finishes







Interior Ceiling Finishes





Plumbing System Deficiency Examples

Domestic Water Distribution







Mechanical/HVAC System Deficiency Examples



















Electrical System Deficiency Examples

Lighting







Communications & Security





Stand-Alone Gymnasium – BLDG-054B

| Building Purpose | Gymnasiums, Band, and Orchestra spaces |
|--------------------------|--|
| Building Area | 32,207 SF |
| Inspection Date | August 10, 2016 |
| Inspection Conditions | 99°F - Sunny |
| Facility Condition Index | |



System Deficiency Overview

The following table provides a summary of the conditions and deficiencies found by each discipline.

| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------|------------------|---|----------------------------|
| Exterior | Exterior Walls | Exterior walls are primarily brick with exposed concrete and steel structural elements. Exposed steel is primarily used in canopies covering walk ways. The exterior walls were observed to be in average condition. Deficiencies noted relate to the uncontrolled run-off of water from the roofing systems as a result of failure or omission, holes at grade leading under the building, and damage to brick work from graffiti removal. Uncontrolled run-off from the roof was noted as having damaged the suspended ceiling tile soffit system on the south side of the building. Gymnasium equipment supports and attachments on the exterior were observed as rusting. In the big gymnasium, the exterior wall appeared to have moisture issues as evidenced by the damage to the paint system and mineral buildup on the inside surface of the exterior wall. This takes the form of minerals leaching out of the grout and damage to the paint systems. | Average |
| | Exterior Windows | System not present. | N/A |



| System | Subsystem | Condition and Deficiency Overview | System |
|--------------------------|--|--|------------------|
| | | | Condition Rating |
| | Exterior Doors | Exterior doors are hollow metal doors set in hollow metal frames. There is acrylic glazing installed in some doors, sidelights, or transoms. The exterior doors were observed to be in average condition. The paint systems on the doors were noted as being aged and chalky. Some doors were observed as sagging in their frames, did not appear to affect the functioning of the doors. | Average |
| Roofing | | e two versions of a modified bitumen installation, PVC st in place concrete roof, and two types of metal roofing. | Poor |
| | The two types of modified coated cap sheet and and The metal roofing include corrugated metal panel of The roof system was obtained backed covering B15). The District reporter pursued with the manufacture backed covering, ponding noted. The modified bit be in average conditions roofing sealant, and darthe upper roof sections and B03). Ponding, ripple on these surfaces. The (sections B04 and B11) toward the building and | d bitumen include an installation with the typical granule- other with a foil-backed membrane coating the cap sheet. des standing seam metal panel systems and a standard on the west side installed on a steep slope system. served to be in poor condition. Leaks are reported in the d) and in the small gymnasium. The modified bitumen with is in poor condition (sections B05, B06, B08, B14, and ed that this product is part of a warranty claim that is being acturer of the product. On this product ripping of the foil- ing, adhesion issues, and damage to the system were umen with the granule-coated cap sheet was observed to (sections B02 and B12). Older repairs, ponding, aged mage were all observed on these sections. The PVC on was observed to be in average condition. (Sections B01 es in the cap sheet, and previous repairs were observed e concrete roof was observed to be in good condition the trun-off from the roof was observed to be directed appeared to be staining the building. The steep sloped and to be in good condition (sections B13 and B16). | |
| Interior Construction | Interior Walls | Interior wall systems are typically painted CMU and gypsum board wall assemblies. The interior wall construction was observed to be in good condition. One deficiency observed in room 415 was a large hole cut in the wall system to access a rain water leader. | Good |
| | Interior Doors | Interior doors are solid core with wood veneer door slabs set in hollow metal frames. There are a limited number of hollow metal doors inside the facility. The interior doors were observed to be in good condition. Double door configurations did not close all of the way due to sagging on the door panels in the frames. The door in room 404 was observed rubbing the floor and damaging the VCT. | Good |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------------------|----------------------------------|---|----------------------------|
| | Interior Specialties | Metal lockers are in the locker rooms. The metal lockers were observed to be in excellent condition. | Excellent |
| Stairs | Exterior Stairs Interior Stairs | All exterior stairs are comprised of cast in place concrete with metal pipe railings. The exterior stairs were observed to be in average condition as a result of the failing railing finish. Railings were noted as having peeling and damaged paint | Average N/A |
| Interior Finishes | Interior Wall Finishes | Interior wall finishes are paint over gypsum board partitions or CMU. The restrooms include a mixture of painted gypsum board and ceramic tile. The interior wall finishes were observed to be in good condition in part due to the areas that have been remodeled or updated recently. The large gymnasium was observed as having two condition issues with the paint systems. The wall area above the bleachers on the north side was noted as having damaged paint likely from students picking at the wall finish. At other walls in the large gymnasium, the paint system at grout joints was observed to be falling and minerals were building up underneath the holes in the paint or under the paint itself. | Good |
| | Interior Floor Finishes | Interior floor finishes include VCT, strip wood flooring at the gymnasiums, and ceramic tile in the restrooms and locker rooms. The interior floor finishes were observed to be in good condition. The VCT appeared to be newer but exhibited damage at the door that rubs on the floor in room 404 and in corridor C2. The wood flooring in the gymnasium was observed to be in poor condition. This assessment is the result of an inability to repair the main gymnasium were damage has occurred due to the presence of ACM (asbestos containing material) underneath and the condition of the urethane finish in the small gym. | Good |



| System | Subsystem | Condition and Deficiency Overview | System |
|-------------|--|---|------------------|
| | | | Condition Rating |
| | Interior Ceiling Finishes | Ceiling systems are a 2'x4' suspended ceiling system with limited amounts of gypsum board ceilings in restrooms or as accents. The gymnasiums include exposed structural systems and building elements. In one of the music areas wood fiber panels are installed. The ceiling finishes were observed to be in good condition. The two deficiencies noted were limited to the potential for future damage in room 404 as a result of roof leaks and a missing ceiling tile in corridor C16. | Good |
| Conveying | System not present. | | N/A |
| Plumbing | Plumbing Fixtures | The building has individual restrooms for males and females, students, and separate staff restrooms located in the main hall of the facility. These restrooms have vitreous china hand sinks in counters with manual faucets, along with vitreous china, floor- and wall-mount toilets with manual flushing mechanisms, and vitreous china, wall-hung urinals in the male restrooms with manual flushing mechanisms. There is a service sink in the janitorial closet, and a water cooler in the main corridor. There are also male and female locker rooms. The restroom fixtures appeared to be in good condition. The showers in the locker rooms appeared to have corrosion on the shower heads and the drains. Due to the condition of the showers the system is rated as average. | Average |
| | Domestic Water Distribution | The building is served from the main building. There is a domestic water boiler with separate storage tank and circulation pump in the basement mechanical room. The storage tank is insulated with no visible signs of leaks. The boiler appeared to be aged and in average condition. Piping at the storage tank was heavily corroded. | Average |
| | Other Plumbing | The roof drains are equipped with metal grate covers to prevent debris from entering the drainage system. The roof drains appeared to be in good condition. | Good |
| Mechanical/ | The major mechanical e | equipment consists of one boiler with pump, several roof- | Average |
| HVAC | mounted chilled water air handlers, and several DX roof top units. Chilled water is provided from the central plant in the main building. The chilled water AHUs were new and in excellent condition. The DX RTUs were observed to be in average condition and approaching the end of their typical design service life. The diffusers and grilles in the facility were observed to be in good condition. RTU-2 is approaching the end of its typical design service life. The boiler and heating water pump were approaching the end of their typical design | | 3 |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|-----------------|---|---|----------------------------|
| | service life. The system was rated as average due to the conditions of the RTUs and the boiler. | | |
| Fire Protection | Fire Alarm | The building has a fire alarm system that consists of alarm and signaling devices such as horn and strobe combination devices, pull stations, and smoke detectors. The fire alarm system is controlled by a Silent Knight control panel. The fire alarm system appeared to be in good condition. | Good |
| | Fire Protection/ Suppression | The building is not protected by an automatic fire suppression system. The building is protected by portable fire extinguishers placed throughout the facility. The fire extinguishers were observed to be in good condition. | N/A |
| Electrical | Electrical Distribution | The electrical service distributes through two 277/480-volt, 400-amp distribution panelboards DP3 in ELECRM400 and DP4 in MECHRMAHU9 that distribute service to branch panelboards and step-down transformers, which are located in various electrical rooms throughout the building. The building does not have a lightning protection system. The electrical distribution equipment appeared to be in good condition, although staff reported that the distribution panel DP4 is old and no longer has spare capacity to accommodate future loads. | Good |
| | Lighting | The building exterior lighting consists of wall mounted HID light fixtures located along the entire perimeter. The interior lighting consists of 2'x4' fluorescent recessed troffer light fixtures. The gym lighting consists of suspended fluorescent high bay light fixtures. The lighting for the building appeared to be in good condition. | Good |
| | Communications & Security | There is a security system including surveillance cameras, card readers, and motion detectors in the building. There is a public address system and tele/data system in the building. The systems appeared to be in good condition. | Good |



Exterior System Deficiency Examples

Exterior Walls









Exterior Doors



Roofing Deficiency Examples

















Interior Construction Deficiency Examples

Interior Walls



Interior Doors







Stairs Deficiency Examples

Exterior Stairs



Interior Finishes Deficiency Examples

Interior Wall Finishes





Interior Floor Finishes







Interior Ceiling Finishes







Plumbing System Deficiency Examples

Domestic Water Distribution





Mechanical/HVAC System Deficiency Examples







Stand-Alone Classroom Building – BLDG-054C

| Building Purpose | Stand-Alone Classrooms |
|--------------------------|------------------------|
| Building Area | 9,909 SF |
| Inspection Date | August 10, 2016 |
| Inspection Conditions | 99°F - Sunny |
| Facility Condition Index | |



System Deficiency Overview

The following table provides a summary of the conditions and deficiencies found by each discipline.

| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------|---|---|----------------------------|
| Exterior | Exterior Walls | Exterior walls are primarily brick with CMU and metal panel accents and exposed steel. Exposed steel is at the canopy covering the walkway between buildings. The exterior walls were observed to be in good condition. The only deficiencies observed involved uncontrolled run-off from the roof systems and the resultant staining on the masonry. | Good |
| | Exterior Windows | Windows are single-glazed aluminum, single-hung window units with metal panel transoms and bottom panels. The window systems were observed to be in average condition. The interior window sills displayed substantive degradation likely due to water infiltration or condensation formed on the window systems during the winter months. | Average |
| | Exterior Doors | Exterior doors are hollow metal doors set in hollow metal frames. Typically these units contain window units. Some mechanical rooms have louvers set in the metal doors. The exterior doors were observed to be in good condition. The finish systems on the doors, frames, and louvers appeared aged and weathered. Rust was noted on the transom panel of the electrical room. | Good |
| Roofing | The roofing system is modified bitumen with granule-coated cap sheet. A rain water collection barrel is installed on the west side of the building. | | Average |



| System | Subsystem | Condition and Deficiency Overview | System |
|--------------------------|---|---|------------------|
| | | | Condition Rating |
| | The roof was observed to gravel stop observed fr were noted related to fa rainwater collection systems. | | |
| Interior Construction | Interior Walls | Interior wall systems are limited to gypsum board wall assemblies and CMU construction. The interior wall construction was observed to be in good condition. Two condition concerns were noted that are tangential to the walls themselves: In the male restroom, a clean-out cover plate was bent down exposing the interior of the CMU wall. The metal support leg for the countertop in the same restroom was missing an end panel and was rusting. | Good |
| | Interior Doors | Interior doors are solid core wood veneer door slabs set in hollow metal frames. All classroom doors have windows. The interior doors were observed to be in good condition with only minor surface finish issues. | Good |
| | Interior Specialties | Metal lockers are installed in the corridor. These are in the form of double stacked half-height units. The lockers were observed to be in good condition. The surface finish of the lockers was a little aged and had wear and tear. One unit was noted as not having its hardware. | Good |
| Stairs | Exterior Stairs | System not present. | N/A |
| | Interior Stairs | System not present. | N/A |
| Interior Finishes | Interior Wall Finishes | Interior wall finishes are paint systems over gypsum board partitions or CMU. The restrooms include a mixture of painted gypsum board and ceramic tile. The interior wall finishes were observed to be in good condition. The outside corners of the gypsum board wall finishes were consistently worn in corridor C8. In one classroom, holes were noted in the gypsum board wall system from the removal of previously installed elements. | Good |
| | Interior Floor Finishes | Interior floor finishes include VCT and ceramic tile in the restrooms. The floor finishes were observed to be in good condition. Two condition issues were noted with the VCT. In corridor C8 some tiles were noted as cracking and in classroom 302 a few tiles were noted as stained. | Good |



| System | Subsystem | Condition and Deficiency Overview | System |
|-----------------|--|---|------------------|
| | | | Condition Rating |
| | Interior Ceiling Finishes | Ceiling systems are a 2'x4' suspended ceiling system with limited amounts of gypsum board ceilings in restrooms. | Good |
| | | The ceiling finish systems were observed to be in good condition. Two instances of water-damaged ceiling tiles were noted. One instance of poor installation or humidity damage was observed. | |
| Conveying | System not present. | | N/A |
| Plumbing | Plumbing Fixtures | The building has one restroom for male students and one restroom for female students and an isolated restroom for staff. There is a janitorial closet located between the two student restrooms. The restrooms have vitreous china hand sinks in counters with manual faucets, along with vitreous china wall-mounted toilets with manual flushing mechanisms. The restroom plumbing fixtures were observed to be in good condition. | Good |
| | Domestic Water Distribution | Plumbing fixtures are serviced with domestic cold water from the main building. There is a water heater in MECHRM5. The water heater was observed to be in good condition with no apparent deficiencies. | Good |
| | Other Plumbing | System not present. | N/A |
| Mechanical/ | The major mechanical equipment consists of indoor vertical fan coil units served | | Average |
| HVAC | by and OAU located in M | | J |
| | The OAU appeared to be in average condition. The unit was approaching the end it typical design service life. The fan coil units were observed to be in average condition. Each of the mechanical closets exhibited evidence of water leaks. | | |
| Fire Protection | Fire Alarm | The building has a fire alarm system that consists of alarm and signaling devices such as horn and strobe combination devices, pull stations, and smoke detectors. The fire alarm system is controlled by a Silent Knight control panel. The fire alarm system appeared to be in good condition. | Good |
| | Fire Protection/ Suppression | The building does not have a fire suppression system. The building is protected by portable fire extinguishers placed within the facility. All observed portable fire extinguishers had inspection tags dated within the last year as required. | N/A |
| Electrical | Electrical Distribution | The electrical service distributes through a 200-amp, 480-volt safety switch on the building exterior. In ELEC300 the service is stepped down through a 75kva | Good |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|--------|---------------------------|--|----------------------------|
| | | transformer which feeds three 120/208-volt panelboards. The building does not have a lightning protection system. The electrical distribution equipment appeared to be in good condition, although staff reported that a panelboard in ELEC300 is old and no longer has spare capacity to accommodate future loads. | |
| | Lighting | The building exterior lighting consists of wall mounted HID light fixtures located along the entire perimeter. The interior lighting consists of 2'x4' fluorescent recessed troffer light fixtures. The lighting for the building appeared to be in good condition. | Good |
| | Communications & Security | There is a security system including surveillance cameras, card readers, and motion detectors in the building. There is a public address system and tele/data system in the building. The systems appeared to be in good condition. | Good |



Exterior System Deficiency Examples

Exterior Walls





Exterior Windows





Exterior Doors



Roofing Deficiency Examples







Interior Construction Deficiency Examples

Interior Walls





Interior Specialties





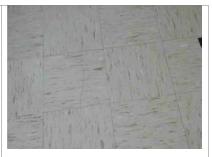
Interior Finish Deficiency Examples

Interior Wall Finishes



Interior Floor Finishes







Conveying System Deficiency Examples



Mechanical/HVAC System Deficiency Examples





Bedichek Middle School Campus Summary of Recommendations

This document is based on current conditions observed during fieldwork and provides recommendations for corrective actions by each discipline. The following recommendations provide a summary of the findings.

Campus Recommendations

Exterior

Replace acrylic panels with glass glazing.

Roofing

- 1. Water test areas where the walls are water stained for roof or gutter system leaks.
- 2. Review warranty claim status for roof areas A10 through A13 and roof areas B05, B06, B14, and B15. If no warranty claim is possible, replace roofing system.

Plumbing

- 1. Continue preventive maintenance on aged plumbing fixtures and plan for replacement in the future as fixtures continue to age.
- 2. Repair or replace any damaged or missing piping insulation as needed.
- 3. Clean and flush out all of the roof and interior floor drainage piping.

Mechanical/HVAC

- Adjust HVAC controls or other equipment, such as dehumidifiers, installed to assist the HVAC equipment in mitigating the humidity observed in all facilities. If any of the HVAC equipment is planned to be replaced, such as any of the AHUs or package units, replace with an updated asset that includes an integral dehumidification that will assist with humidity issues.
- Address any rust or corrosion observed to the equipment, its associated piping, or any other sub-asset in all facilities by cleaning, repainting, and/or repairing by any other means to prevent further deterioration.
- 3. Repair or replace any damaged or missing piping insulation as needed.
- 4. Address any equipment at all of the campus facilities that were noted with excessive noise/vibration by repairing the motor, changing the belt, or any other means to promote efficiency.
- 5. Repair any observed leaks to prevent water damage to the asset, its piping, support beams, or any other subassets. Once leaks are addressed in all facilities, repair or replace any water-damaged components as needed.
- 6. Repair or replace any fin assemblies of HVAC equipment that shows extensive wear and tear. Consider adding a protective fence around any of the units on the exterior ground level that could be vandalized or damaged by students/civilians, particularly at the weight room/shop facility.
- Plan and track for equipment that uses R-22 refrigerant in all facilities. The refrigerant is being phased out of manufacturing and construction use in the near future, and thus will make all equipment obsolete.
- Conduct routine preventative maintenance by cleaning ductwork to promote efficient and clean air flows to all of the facilities' spaces.
- 9. Install air curtains at the entry doors/vestibules as needed.
- 10. Further investigate the return grilles and corridor HVAC balancing. Note that if air curtains are to be installed this study should be conducted after the installation.
- 11. Create a test and balance as well as a commissioning plan for any newly replaced equipment including their support systems such as chilled water or heating water as well.



Fire Protection

- 1. Continue annual inspections of the fire protection system (at the main school) and the portable fire extinguishers (at all facilities).
- 2. Consider installing and providing fire protection to the school campus.

Electrical Distribution

1. Replace panelboards that no longer have spare capacity to accommodate future loads.

Lighting

1. Review the exterior lighting levels and repair/replace as needed to ensure security and safety.

Communications & Security

Repair security cameras inside and outside of buildings where necessary for proper resolution.

Main School Building (BLDG-054A) Recommendations

Exterior

- 1. Fill in pond located between BLDG-054A and BLDG-054C.
- 2. Repair concrete column at room 110B.
- 3. Close gap at building envelope outside of corridor C6.
- 4. Repair or replace steel columns at cage and corridor C6.
- 5. Strip and repaint exposed steel columns at canopies.
- Survey windows to determine whether windows missing sealant in the 190 wing were newly installed or require installation of backer rod and sealant.
- 7. Replace sealant at two-story window systems at the cafeteria and the west exit to corridor C6.
- 8. Replace rusted spandrel panel in the 130 wing.
- 9. Strip and refinish all exterior doors.
- 10. Install missing doors at the boy's and girl's restrooms.
- 11. Repair damaged hardware at two west exits from building that book end the 140 wing.
- 12. Remove roll-up door at the kitchen. If additional security is required in this area, provide appropriate enclosure that includes emergency exiting capabilities.

Roofing

- 1. Repair damaged and aged areas on roof sections A05 and A16.
- 2. Repair gutters at sections A08 and A09. Replace single ply membrane.
- 3. Replace rusting metal panel sections at section A18.
- 4. Repair or replace built-up roof system at section A14.
- Review gutter and downspout capacities.

Interior Construction

- 1. Reconfigure the construction in 101 and 102 so that lighting and HVAC is not bisected.
- Re-install the paneling at THESTAGE.
- 3. Investigate and evaluate the cracking in the CMU in 256 and 257. Repair wall system.
- 4. Replace operable partitions at the kitchen.
- 5. Review the FLDHOUSE and its current use/occupancy for code compliance.
- 6. Survey doors for damaged veneer and non-functional hardware. Repair or replace as required.
- Replace doors at THESTAGE, 106, KITLOCRM, KITRR, 112, 154, and 141. Do not reinstall throw bolt on 141 due to the exiting hazard created by its presence.
- 8. Install missing closer at MFRR142.



- 9. Rehang the door at 112OFC.
- 10. Evaluate riser system in room 141 for water infiltration underneath and creep of structural elements.
- 11. Replace rusting toilet partitions.
- 12. Refinish lockers.

Stairs

- 1. Replace metal railings at interior and exterior stairs.
- 2. Replace anti-slip metal nosing pieces at interior and exterior stairs.
- 3. Reinstall amphitheater steps with a base that will not erode and create uneven treads and risers.
- 4. Replace wood structure at steps to THESTAGE as necessary.
- 5. Evaluate the need for an accessible route to room 141 and its support spaces.
- Remove office functions from exit way in the 140 wings.

Interior Finishes

- Refurbish the entire 200 wing of the building. Replace all ceiling tiles, wall finish systems, floor finish systems, doors, and hardware.
- 2. Complete wall finish in room 154 where millwork was removed.
- 3. Remove wood paneling in classrooms that present a fire risk.
- 4. Replace or reinstall wood paneling at the stage in the cafeteria.
- 5. Replace floor finishes in room 141 and adjacent spaces.
- 6. Refinish THESTAGE and STAGE.
- 7. Replace the suspended ceiling system in the 100, 130, 140, 150, and 200 wing along with the cafeteria area.
- 8. Evaluate the source of water-damaged tiles and repair prior to replacement.
- 9. Repair damaged ceiling grid and replace damaged tile at the covered walkway.
- 10. Install humidity resistant tiles in restrooms or install gypsum board ceiling.

Plumbing

1. Create a replacement plan for flush valves.

Mechanical/HVAC

- 1. Create an equipment succession plan for the equipment identified as either past or approaching the end of its typical design service life.
- 2. Consult with qualified vendor/engineer to assess all diffusers and grilles for replacement.
- 3. Rework HVAC associated with the mini-split systems in room 130.

Fire Protection

 Test and assess the fire alarm system in the office and repair or replace as necessary for a complete and working system.

Electrical

- 1. Repair or replace the canopy lights between BLD-054A and BLDG-054C.
- 2. Repair or replace the power packs for the occupancy sensors. Ensure the sensors and equipment are capable of controlling the lighting level currents.
- 3. Rearrange the light fixtures in offices 101 and 102 to coordinate with the new walls and better distribute the lighting.
- 4. Repair or replace the light fixture in the kitchen restroom.
- 5. Reinstall the cover on panelboard "A" in the "MAINELEC" room.
- 6. Repair various conduits that are separated, creating grounding problems.



Gymnasium (BLDG-054B) Recommendations

Exterior

- 1. Close holes around foundation and maintain grade.
- 2. Investigate less damaging methods for graffiti removal.
- Review gymnasium equipment structural supports extending through the exterior wall. Coat with appropriate rust inhibiting finish system.
- 4. Review envelop construction and condition on the south and west walls of the BIGGYM. Investigate possible moisture transpiration through interior CMU wall.
- 5. Where doors are sagging in frames, replace knuckle type hinges with continuous geared hinges.
- 6. Replace exterior soffit ceiling tile damaged by leaks.
- 7. Refinish exterior doors.

Roofing

- 1. Review roofing and correct ponding, aging, and damage condition issues.
- 2. Capture run-off from sections B04 and B11 and direct it away from the building.

Interior Construction

- 1. Repair hole in the wall in room 415.
- At double door units, replace five knuckle hinges with continuous geared hinge systems.

Stairs

1. Repaint stair railings.

Interior Finishes

- 1. Diagnose moisture issues in the BIGGYM. Repaint the BIGGYM.
- 2. Replace VCT where damaged by door at room 404.
- 3. Repair VCT in corridor C2.
- 4. Refinish the wood floor in the SMALLGYM.
- 5. Replace wood floor in BIGGYM and remove all ACM to allow regular repair and maintenance of the wood flooring system in the future.
- 6. Replace the ceiling tile in corridor C16.
- 7. Repaint the big gymnasium after moisture issue is resolved.

Plumbing

- 1. Create a replacement plan for the domestic water boiler.
- 2. Consult a qualified inspector to inspect the hot water storage tank.
- Repair/replace corroded piping.

Mechanical/HVAC

- 1. Create a plan to replace the boiler and heating water pump.
- 2. Create a succession plan for RTUs as they are approaching the end of typical design service life.

Electrical Distribution

1. Replace the distribution panel DP4 as it is old and no longer has capacity for future loads.

Stand-Alone Classroom (BLDG-054C) Recommendations

Exterior

1. Diagnose source of staining on exterior walls and repair. Clean stains off of the masonry.



- 2. Water test windows to determine source of water infiltration and repair.
- 3. Strip and refinish exterior doors.
- 4. Replace rusted elements of the exterior door at ELEC300.

Roofing

- 1. Replace aged elements of the roofing system.
- 2. Water test roof to determine source of leakage. Repair as required.
- Install rain water collection system correctly with right sized connections to downspout and overflow.

Interior Construction

- 1. Replace clean-out cover plate.
- 2. Replace metal support leg at counter top in BHRR300 and GHRR300 with a cantilevered system.
- 3. Repair locker with missing hardware.
- 4. Replace water damaged interior window sills at all exterior windows.

Interior Finishes

- 1. Install corner guards at outside corners in corridor C8.
- 2. Patch hole in the wall of classroom 307.
- 3. Replace cracking VCT in corridor C8.
- 4. Clean or replace VCT in classroom 302 that is stained.
- 5. Diagnose source of water for water-damaged ceiling tiles and repair in corridor C8 outside of MECKRM2 and inside FWKRM200. Replace ceiling tiles.
- 6. Reinstall ceiling tiles in room 301; review for humidity damage.

Mechanical/HVAC

1. Consult with qualified contractor to determine water leak source.

Electrical Distribution

1. Assess the electrical panelboards in BLDG-054C, electrical room ELEC300 for wear and ensure they have sufficient electrical capacities.



CRAWL SPACE – Bedichek MS – Main School Building (BLDG-054A)

| Building Purpose | Administrative, Classrooms, Library, and Cafeteria |
|-----------------------|---|
| Inspection Date | September 14, 2016, Afternoon |
| Inspection Conditions | 86° - Cloudy & Dry |

Crawl Space System Deficiency Overview

The following table provides a summary of the systems and their respective conditions found by each discipline.

| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|--|--|---|-------------------------|
| Soil, Drainage, Ventilation & Access | Soil Below Building, Site Drainage in Crawl Space | The soil in the crawl space was damp around the perimeter of the crawl space, indicating water was likely infiltrating into the crawl space from the exterior of the building (and courtyard). The crawl space was graded to slope from the east side of the building towards the mechanical room entrance to a drainage basin located on the west side of the building. The basin appeared in good condition. Standing water (~0.5" deep) was observed on the west side of the crawl space. Source of water is unclear. Soil/Drainage deficiencies: Damp soil Standing water Water infiltration around perimeter | Average |
| | Soil Retainers | Concrete soil retainers were generally in good condition. Limited soil intrusion was observed under one perimeter beam. An 8" gap between two retainers was seen on the east side of the building. Soil retainer deficiencies. Minor soil intrusion Gap between retainers | Good |
| | Areaways/Ventilation | Ventilation is supplied through multiple areaways, side vents, and a fan blowing air into the crawl space on the west side. Condensation was observed on the concrete framing and on pipes, which indicates that ventilation may not be adequate. Areaways observed had some light debris in the grating and some of the grates were beginning to rust, but otherwise appeared in good condition. Areaway/ventilation deficiencies: | Average |



| | Condensation on framing & pipes, ventilation is likely inadequate Areaway grating was rusting Debris in areaway grates | |
|--|--|--|
| Access Hatches | Access to the crawl space is provided by a door located in the mechanical room. There is also an access hatch in the courtyard. The steel frame on the courtyard access hatch is rusted and fractured. | Average |
| | Access hatch deficiencies: • Rusted and fractured steel frame | |
| Exposed Columns & Tops of Foundations | Carton sonotube forms were left in place around most of the columns in the crawl space and the condition of the concrete could not be observed. The columns that were exposed appeared in good condition. | Average |
| | Pier/Column deficiencies: • Mushrooming concrete at top of pier | |
| Exposed Faces of Perimeter Walls / Beams | Cast-in-place suspended perimeter beams were approximately 4-5 feet deep. All observed beams appeared in good condition. No significant deficiencies observed. | Good |
| Exposed Portions of Interior Floor Beams Above | Cast-in-place suspended interior floor beams are supported by perimeter beams and columns. Floor beams were generally in good condition. Minor surface defects were observed in isolated locations. | Good |
| | Beam deficiencies: • Minor surface defects | |
| Underside of Suspended Floor Slabs Above | The floor slab consisted of precast deck channels spanning between floor beams. Severe longitudinal cracking and spalling along the bottom of the channel joists with significantly corroded reinforcement were observed. Exposed reinforcement due to low concrete cover was observed on the east side of the building. | Poor |
| | Slab deficiencies: Severe longitudinal cracking & spalling in bottoms of channel joists with exposed and heavily corroded joist bottom bars; structural capacity of channels is likely reduced Spalls & exposed/rusted rebar on underside of deck | |
| | Exposed Columns & Tops of Foundations Exposed Faces of Perimeter Walls / Beams Exposed Portions of Interior Floor Beams Above | inadequate Arcaway grating was rusting Debris in areaway grates Access to the crawl space is provided by a door located in the mechanical room. There is also an access hatch in the courtyard. The steel frame on the courtyard access hatch is rusted and fractured. Access hatch deficiencies: Rusted and fractured steel frame Exposed Columns & Carton sonotube forms were left in place around most of the columns in the crawl space and the condition of the concrete could not be observed. The columns that were exposed appeared in good condition. Pier/Column deficiencies: Mushrooming concrete at top of pier Exposed Faces of Perimeter Walls / Beams Cast-in-place suspended perimeter beams were approximately 4-5 feet deep. All observed beams appeared in good condition. No significant deficiencies observed. Exposed Portions of Interior Floor Beams Above Cast-in-place suspended interior floor beams are supported by perimeter beams and columns. Floor beams were generally in good condition. Minor surface defects were observed in isolated locations. Beam deficiencies: Minor surface defects The floor slab consisted of precast deck channels spanning between floor beams. Severe longitudinal cracking and spalling along the bottom of the channel joists with significantly corroded reinforcement were observed. Exposed reinforcement due to low concrete cover was observed on the east side of the building. Slab deficiencies: Severe longitudinal cracking & spalling in bottoms of channel joists with exposed and heavily corroded joist bottom bars; structural capacity of channels is likely reduced |



| Pipes, Ducts, | Suspended Pipes & | Many suspended pipes were located in the crawl space. | Average |
|--------------------------|-----------------------------------|---|---------|
| Equipment & Fireproofing | Hangers | Pipe insulation was generally in good condition although fallen insulation was observed in isolated locations. Moldy insulation was also observed. Some pipes are moderately corroded. Sweaty pipes were observed on the west side of the crawl space. Pipe insulation on the west side was in worse condition. | |
| | | Pipe deficiencies: Rusted pipes and pipe supports Sweating pipes Fallen, degraded, and moldy insulation | |
| | Exposed Ductwork | No exposed ductwork was present in the crawl space area observed. | N/A |
| | MEP Equipment | No MEP equipment was present in the crawl space area observed. | N/A |
| | Spray Fireproofing/ Insulation | Spray fireproofing was observed in a small area of the crawl space. Note: spray fireproofing may contain asbestos (Building B warns of asbestos). No insulation was present in the crawl space area observed. | Average |

Crawl Space Deficiency Examples

Soil, Drainage, Ventilation & Access



Standing water



Damp soil



Failed retainers, soil intrusion below perimeter beam





Gap between soil retainers



Condensation under slab



Sweating pipes



Corroded access hatch frame



Mild corrosion on areaway grate

Exposed Structure



Mushrooming concrete at top of pier



Severe longitudinal spalling and rebar corrosion at bottom of precast joists



Exposed/corroded reinforcement at precast deck soffit





Longitudinal crack, spalling, rusting rebar in precast deck soffit



Spalling on underside precast deck

Pipes, Ducts, Equipment & Fireproofing



Fallen/degraded pipe insulation



Corroded cast iron pipe

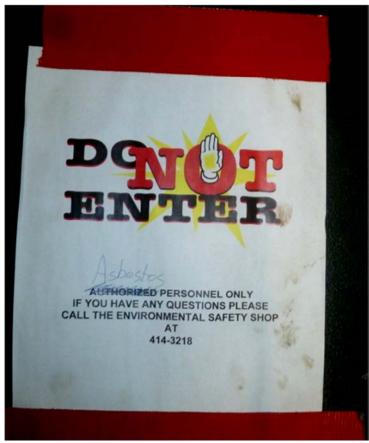


CRAWL SPACE – Bedichek MS – Stand Alone Gym (BLDG-054B)

| Building Purpose | Gymnasium |
|-----------------------|----------------------------------|
| Inspection Date | September 14, 2016, Afternoon |
| Inspection Conditions | 86° - Cloudy & Dry |

Crawl Space System Deficiency Overview

NOTES CONCERNING CRAWL SPACE OBSERVATIONS: Building B crawl space was not observed because an asbestos hazard sign was posted at the crawl space entrance.



Asbestos hazard sign



CRAWL SPACE – Bedichek MS – Stand Alone Classroom Building (BLDG-054C)

| Building Purpose | Classrooms |
|-----------------------|----------------------------------|
| Inspection Date | September 14, 2016, Afternoon |
| Inspection Conditions | 86° - Cloudy & Dry |

Crawl Space System Deficiency Overview

NOTES CONCERNING CRAWL SPACE OBSERVATIONS: Building C crawl space was not observed due to a deep drop down into the crawl space. Without a ladder in the areaway it is not safe to try to jump down to the crawl space.



Deep drop in access areaway



Bedichek MS – Campus Summary of Crawl Space Recommendations

This document is based on current conditions observed during fieldwork and provides recommendations for corrective actions by each discipline. The following recommendations provide a summary of the findings.

Building A Recommendations

Soil, Drainage, Ventilation & Access

- 1. Locate and repair source of standing water.
- 2. Investigate need for improved site drainage so water flows away from building perimeter.
- 3. Install/reset soil retainer panels at locations with soil intrusion below perimeter beam.
- 4. Investigate need for improved ventilation.
- 5. Clean rust from areaway grates and paint to prevent further corrosion.

Exposed Structure

- 1. Clean exposed/corroded reinforcement in precast deck soffit, and patch or paint to prevent further corrosion.
- 2. Perform structural analyses to determine whether the floor channel original sections have adequate structural capacity.
- 3. Repair precast channels to restore structural capacity or retrofit precast channels for additional structural capacity if needed. Repair work would consist of cleaning corroded rebar and patching spalled areas with a structural concrete repair product. Retrofitting channels would likely consist of widening channel joists and adding reinforcement to the structural section or sandwiching with epoxied and bolted steel plates.

Pipes, Ducts, Equipment & Fireproofing

- 1. Replace fallen insulation
- 2. Replace significantly corroded pipes; clean and protect pipes with moderate corrosion.

Building B Recommendations

Soil, Drainage, Ventilation & Access

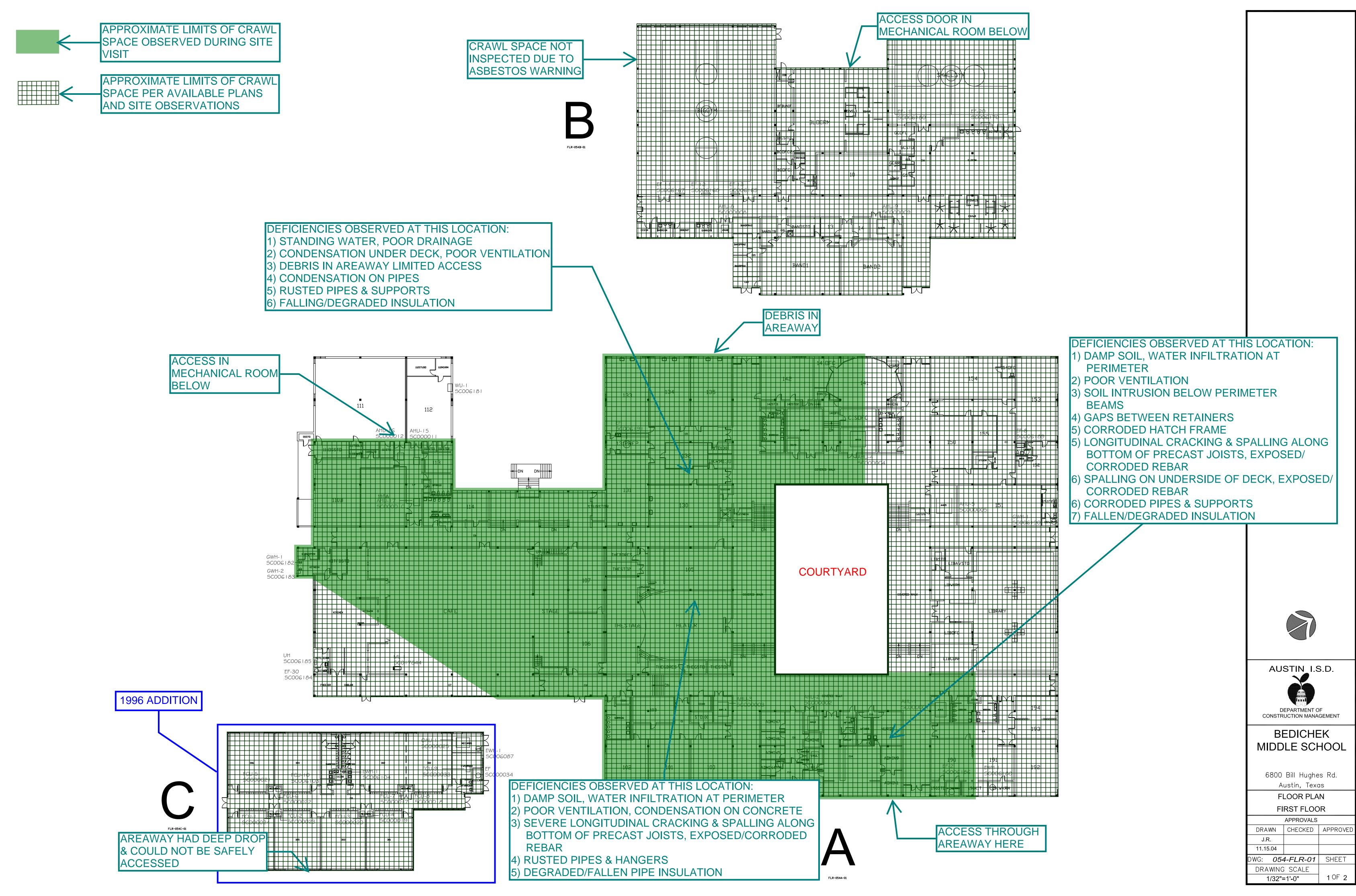
1. Remove asbestos so crawl space can be safely accessed.

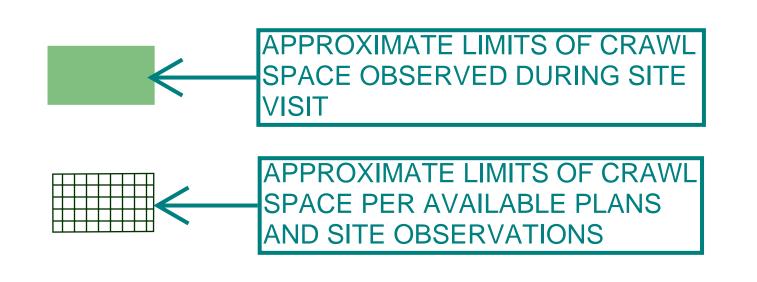
Building C Recommendations

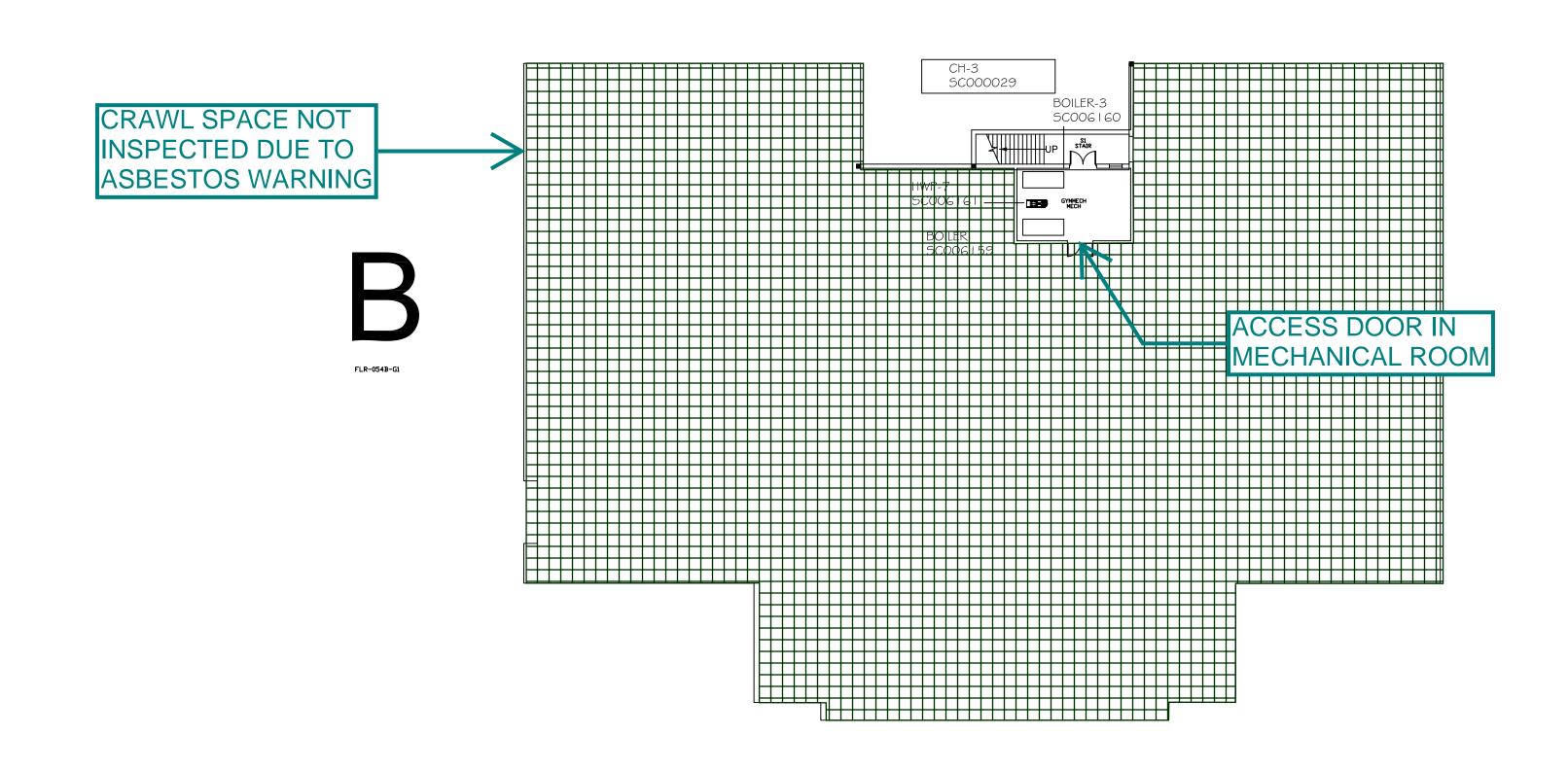
Soil, Drainage, Ventilation & Access

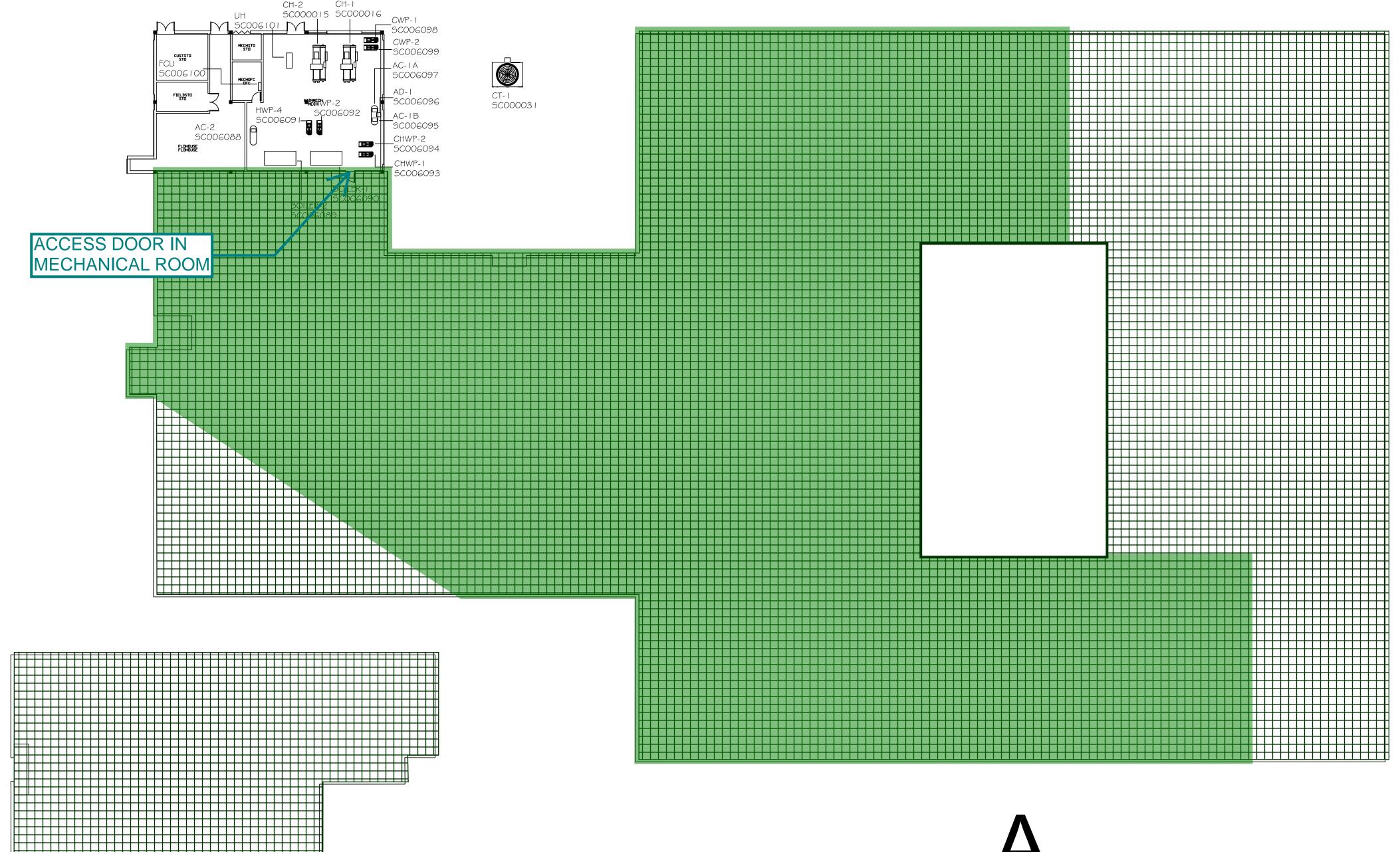
1. Install ladder rungs into areaway concrete wall so crawl space can be safely accessed.

















BEDICHEK MIDDLE SCHOOL

6800 Bill Hughes Rd. Austin, Texas FLOOR PLAN **GROUND FLOOR**

| DRAWN | CHECKED | APPROVED |
|------------------|----------|----------|
| J.R | | |
| 11.10.04 | | |
| DWG: 05 4 | 1-FLR-G1 | SHEET |
| DRAWING | SCALE | |
| 1/32"=1'-0" | | 1 OF 1 |

Bedichek Middle School Site Summary

Site/Civil Assessment

| Address | 6800 Bill Hughes Road, Austin, TX 78745 |
|---------------------------------------|---|
| Number of Permanent Campus Facilities | 3 |
| Original Year of Construction | 1972 |
| Total Campus Area | 23 acres |
| Data Collection Method | Desktop, Site Visit |
| Site Visit/Assessor | 01/26/2017 / J. Kunz |



Introduction

Bedichek Middle School is located at 6800 Bill Hughes Road in Austin, Texas. It is comprised of three buildings. The main building (BLDG-054A) houses administration, classrooms, the library, the theater, and the cafeteria. The structure (BLDG-054B) to the west houses the physical education facilities, the band hall, an orchestra space, and support areas. A stand-alone building (BLDG-054C) on the southeast corner of the campus houses classrooms.

Development Information

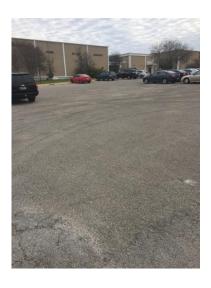
| Watershed | Williamson & South Boggy Creek |
|-----------------------------|--------------------------------|
| Total Impervious Cover | 28% |
| Allowable Impervious Cover | 80% |
| Barton Spring Recharge Zone | No |

Data from" AISD District Wide Impervious Cover Simplified 12-1-16" spreadsheet, Prepared by Fayez Kazi/Civilitude, on December 1, 2016.



Parking and Drives

| Parking and Drives | Configuration | Size (SF) |
|--------------------------------------|---------------|-----------|
| P1, East | 18 CB 1 HC | 3,500 |
| P2, East | 1 CB 1 HC | 700 |
| P3, West | 98 CB 4 HC | 45,500 |
| R1, East Bus Pick up and drop off | 11 CB 0 HC | 20,100 |
| R2, West | 0 CB | 10,800 |
| Loading Dock | - | 1,300 |



HC – Accessible Parking, CB – Combined Parking

System Deficiency Overview

The following table provides a summary of the systems and their respective conditions found by each discipline. Refer to the AISD_FCA_Bedichek_MS_Site_Civil_ Exhibit for additional information.

| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------------------|--|--|---|
| Site Improvements | Roadways R1, East, Bus Pick up and drop off R2, West | There are two roadways on campus. Roadway one, R1, is located on the east side of the building and is used for bus pick up and drop off. Roadway two, R2, is located on the west side of the building and is used to service the back side of the campus. Both roadways are asphalt drives. R1 is in poor condition with longitudinal and alligator cracking throughout the entire road. There are patches throughout the center of the road also showing wear and need maintenance. There is severe cracking on both driveways for this roadway. R1 has parking on the side of the street. This roadway is in need of a bus only sign as teachers currently stand outside with signs during pick up and drop off time. R2 is in good condition showing early stages of aging. Roadway Deficiencies: Longitudinal and alligator cracking Wear on patches Needing bus only sign | R1 Poor R2 Good Overall: Average |



| System | Subsystem | Condition and Deficiency Overview | System |
|--------|--|--|-------------------------------------|
| | | | Condition Rating |
| | Parking Lots P1, East P2, East P3, West | There are three parking lots on campus. Parking lot one, P1, and Parking lot two, P2, are located on the east side (front) of campus. Parking lot three, P3, is located on the west side of campus. All the parking lots are asphalt. P1 was difficult to assess since cars were covering this entire area. The lot was observed to be in average condition and has one handicap spot. P2 is in poor condition and also only has one handicap spot. P2 has room for 3 spaces but currently is only using one spot as a handicap. The other two spaces have been painted over and have severe cracking. P3 is in poor condition with severe alligator cracking throughout the entire lot. There is also a large pot hole in the lot. This lot needs patching and repair and is in need of structural overlay. There are also damaged curbs needing repair. | P1 Average P2 Poor P3 Poor Overall: |
| | | Parking Lot Deficiencies: Longitudinal and alligator cracking Pothole Damaged curbs | |
| | Pedestrian Paving | There are several sidewalks throughout the facilities. Several areas of sidewalk have broken, heaving or sunken areas. There are multiple areas of aged wooden bridges that need to be removed and replaced with metal. The sidewalk near the portables has sediment build up and landscaping piling over it. The sidewalk leading toward the tennis courts from the portables has severe erosion and needs repair. Pedestrian Paving Deficiencies: Broken, heaving and sunken Wooden bridges Sediment pile up Erosion | Average |
| | Site Development | The chain link fence along the north side of the campus has several areas needing repair. The fence on the south side of campus needs new locks and repairs because it was observed to be rusted and bent. The detention pond has a fence around it, however, it doesn't latch. The fence around the detention pond needs to be repaired so it actually latches. The fence in the back side (north) of campus near the green space is open with no lock. There is also an exposed pipe in the front of campus that needs to be covered. Site Development Deficiencies: Damaged fence Fencing needing latch Need new locks on fence Exposed pipe | Average |



| System | Subsystem | Condition and Deficiency Overview | System |
|--------|---------------|---|---------------------|
| | | | Condition Rating |
| | Site Drainage | The majority of downspouts on campus don't tie into the underdrain, resulting in erosion around the building. There are also areas in which the ground is sloped toward the building that needs to be regraded so that water doesn't seep into the building. There are several areas with broken or incorrectly placed splash blocks. The flume near the tennis courts is flooding and needs adjustment. Several pest holes were found around the building edges that need to be filled. On the south side of campus, there is a rain barrel collection system that has broken pipe connections, causing it to not work properly. Site Drainage Deficiencies: Downspouts don't tie to underdrain Pest holes Poor rain barrel collection Damaged or incorrectly placed splash blocks Flume needs adjustment | Average |
| | Courtyards | There are three main courtyards on campus. Courtyard one, CY1, is located on the north side of campus. Courtyard two, CY2, is located on west side of campus. Courtyard three, CY3, is located on the east side of campus. CY1 needs to be cleared of all debris. There is a waterfall that has not been well maintained. The inlet needs to be readjusted so proper drainage can occur. There are also downspouts in this area that don't tie to the underdrain. CY2 has several benches and picnic tables that have severe rust and graffiti. These picnic tables and benches need to be removed and replaced. This courtyard has six downspouts that don't tie to the underdrain. The splash blocks are placed incorrectly, causing erosion in this area. CY3 is on the east side of campus. There is overgrown landscaping in this area that needs to be maintained. The walking path is not well maintained and needs to be established and cleared of all debris. The inlet needs to be unclogged and uncovered Courtyard Deficiencies: Downspouts don't connect to underdrain Erosion around building Overgrown vegetation Debris needs to be cleared Remove and replace picnic tables Unmaintained walking path | Average |



| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|----------------|---------------------------------------|---|-------------------------------|
| | Landscaping | There were a few areas with overgrown landscaping and damaged landscaping retaining walls. There are areas where portables and debris have been removed, leaving behind damaged grass that needs resodding. | Good |
| | | Landscaping Deficiencies: | |
| | | Overgrown landscaping Damaged retaining walls | |
| | | Damaged retaining wallsDamaged grass | |
| Site Utilities | Water Supply | The irrigation pipe near the track/field is exposed and needs to be covered. Areas need new irrigation covers and repairs. | Average |
| | | Water Supply Deficiencies: | |
| | | Exposed irrigation pipe | |
| | | Damaged irrigation covers | |
| | Sanitary Sewer | There is a manhole near the basketball courts and a manhole in the open green space that need to be backfilled. In the center open walking area of campus, the clean-outs are damaged and the cap needs repair. | Average |
| | | No Fiberglas Grease Sampling Enclosure was found. | |
| | | Sanitary Sewer Deficiencies: | |
| | | - Backfill Manhole | |
| | | Repair Cleanouts and caps | |
| | | No Fiberglass Grease Sampling Enclosure on site | |
| | Storm Sewer | No deficiencies of the storm sewer were observed during this site visit. | Excellent |
| | Detention Pond | The detention pond is in good condition. The fence around the detention pond needs repair. | Good |
| | | Detention Pond Deficiencies: | |
| | | Repair fence around pond | |
| | Other Site Mechanical Utilities | A concrete pad is needed under and in front of the dumpsters near the loading dock. | Average |
| | | Other Site Mechanical Utilities: | |
| | | Concrete pad under dumpsters | |



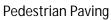
<u>Site Improvement Deficiency Examples</u>

Roadways



Parking Lots







Site Development



Site Drainage











Clear of debris



Downspouts do not tie to underdrain

Landscaping



Overgrown Landscaping



Damaged retaining wall



Regrading needed

Site Utilities



Exposed irrigation pipe



Manhole needing backfill



Irrigation cover broken



Play Fields

Areas presented in table are approximate.

| Playfields | Count | Size (SF) |
|----------------------|-------|-----------|
| Basketball Courts | 1 | 4,000 |
| Tennis Courts | 2 | 11,700 |
| Soccer/Multi-Purpose | 1 | 100,800 |
| Baseball Field | - | - |
| Bleacher Seating | - | - |
| Track | 1 | 400 M |
| Green Space | 1 | 417,000 |
| Football Field | - | - |
| Playscapes | - | - |

| System | Subsystem | Condition and Deficiency Overview | System Condition Rating |
|------------|------------------------|---|----------------------------|
| Playfields | Tennis Courts | The tennis courts have longitudinal cracking throughout the entire surface and needs to be resurfaced. The back wall is aged and damaged. The flume on the backside of the tennis courts is ponding and needs maintenance. Tennis Court Deficiencies: Longitudinal cracking on surface Aged and damaged back wall Ponding flume | Average |
| | Track | The track is in good condition. | Good |
| | Soccer Field/ Football | The soccer field has several clogged inlets. The entire field has poorly maintained grass and needs to be resodded. The sand pits for the long jumps need to be cleaned out and refilled. | Poor |
| | | Soccer/Football Field Deficiencies: | |
| | | Clogged inlets | |
| | | Poor grass. Needs resoddedLow sand pits | |
| | Green Space | The green space shows signs of water ponding and is in need of resodding. The irrigation pipe running through this | Average |



| | area needs to be Green Space De Water pond Resodding Irrigation pi | ficiencies: | |
|------------|--|--|---------|
| Basketball | to be resurfaced. need replacing. Playground Defic Court needs | court is aged and damaged. The court needs The hoops are also aged and rusted and ciencies: s resurfacing d replace basketball hoops | Average |

Playfield Deficiency Examples

Tennis Courts





Soccer Field / Football



Green space



Basketball Court





Summary of Recommendations

This document is based on information provided by staff during interview, site visit and additional desktop measurements using Google Earth. This document provides recommendations for corrective actions. The following recommendations provide a summary of the findings.

Site/Civil Recommendations

Roadways

- 1. R1 needs structural overlay. Patch and repair prior to major overlay.
- 2. Add bus only sign to R1.
- 3. Maintain R2 with routine crack filling.

Parking Lots

- 1. P2 needs patching and repair. P2 also needs updated paint
- 2. P3 needs structural overlay. Patch and repair prior to major overlay
- 3. Pothole in P3 needs to be repaired
- 4. Repair damage curbs

Pedestrian Paving

- 1. Repair or replace pedestrian paving that is broken, heaving or sunken
- 2. Replace wooden bridges with metal plate
- 3. Remove and repair areas of sediment pile up
- 4. Repair areas with erosion under sidewalk

Site Development

- 1. Repair damaged areas of property fence
- 2. Add latch to the fencing around the detention pond
- 3. Cover exposed pipe
- New locks needed for fence

Site Drainage

- 1. Tie downspouts to the underdrain
- 2. Fill pest holes
- 3. Repair rain barrel collection system
- 4. Repair and replace damaged splash blocks

Courtyard

- 1. Tie downspouts to underdrain
- 2. Repair areas of erosion around the building
- 3. Trim or remove overgrown landscaping
- 4. Clear areas of debris
- 5. Remove and replace picnic tables
- 6. Maintain walking path

Landscape

- 1. Trim or remove overgrown landscaping
- 2. Repair or replace damaged landscaping retaining walls
- 3. Re-sod areas of damaged grass



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Site Utilities, Water/Sanitary

- 1. Cover exposed irrigation pipe
- 2. Repair irrigation caps
- 3. Install a fiberglass sampling enclosure
- 4. Back fill around manholes
- 5. Repair cleanouts and caps

Storm Sewer

NA

Other Site Mechanical Utilities

1. Add concrete pad under and in front of dumpster.

Tennis Courts

- 1. Resurface the tennis court
- 2. Repair flume on the outside of the courts

Soccer/Football Field

- 1. Unclog inlets
- 2. Clean sandpits and refill
- 3. Resod the grass area

Greenspace

- 1. Regrade to avoid ponding
- 2. Resod all the green space

Basketball Courts

- 1. Resurface the basketball court
- 2. Replace basketball hoops





6800 Bill Hughes Rd