Kocurek Elementary School Site Summary

Address	9800 Curlew Drive Austin, TX 78748
Number of Permanent Campus Facilities	2
Original Year of Construction	1986
Total Campus Building Area (combined)	78,704 SF

Introduction

The Kocurek Elementary School campus is located at 9800 Curlew Drive in Austin, Texas. The original building was built in 1986 (Main School Building – BLDG-172A), and a detached classroom building was constructed in 1998 (Stand-Alone Classroom Building – BLDG-172B). Circulation between buildings is by way of a covered sidewalk. During the assessment, there was construction involving remodeling of the stage in the Cafeteria, restrooms, Nurses office, and the Life Skills room. The areas under construction were reviewed, making allowances for the work underway.

Main School Building – BLDG-172A

Building Purpose	Administrative, Classrooms, Cafeteria, and Gymnasium
Building Area	68,202 SF
Inspection Date	July 26, 2016
Inspection Conditions	Raining and hot
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	Exterior walls are primarily comprised of brick with metal panels above roof lines. Issues observed included water damage as a result of uncontrolled flow of water from the roofing system. Metal panels appeared to have sealant added to the system. In some cases, that sealant was bubbling out at the joints. Graffiti was observed on the upper metal panels of the gymnasium at the roof. In other areas, the canopy/soffit was damaged. One exterior column by the gymnasium was damaged from water infiltration, resulting in rusting rebar expansion.	Average
	Exterior Windows	The exterior windows are a mixture of aluminum single-hung and hollow metal window systems. Units and sealants appeared to be in good condition. There was some minor finish degradation, and a number of units have had their glass glazing replaced with acrylic glazing that may cloud over with time. In one section at the front entrance, where the windows were less protected, there was rusting at the sills of the hollow metal window units. An open gap was observed in one window unit, and gaskets were seen to be coming out of another.	Good
	Exterior Doors	Exterior doors are hollow metal doors set in hollow metal frames. Typically, these units contain vision lites. Some	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		mechanical rooms have louvers set in the metal doors. A large number of windows appear to be acrylic in the door units with side lights. Courtyard doors are generally acrylic. Courtyard doors have frosted over with age or were damaged. Individual issues included rusting and minor damage to doors and hardware.	
Roofing	The facility has two main types of roofing systems, low slope modified bitumen and steep sloped metal panels. All roofs are serviced by a gutter system or a collector head and downspout system. The roofing systems appear to function as intended based on the lack of widespread damage to the interior ceiling finish systems. In addition, the pitches on the modified bitumen roofs appeared generous. The metal roofs are all steep sloped limiting the amount of water that could physically remain on the roof. Some downspouts appeared clogged, and others appeared undersized. Some gutters appeared to have been bypassed as seen outside the 200-wing. This was evidenced by the erosion present under the the line of gutter and the dirt stains on the exterior wall. In other locations the gutter was being bypassed between the end of the gutter and an adjacent wall due to the lack of flashing directing the runoff. A significant number of balls were on the gymnasium and cafeteria roofs. The one scupper and collector head servicing the roof at the gymnasium were large enough that volleyballs passed through into the collector head. Two volleyballs and a tennis ball were observed in the collector head and removed. At some point, deflated balls will clog that portion of the system. Smaller balls may have already lodged at a reduction in the downspout. At roof areas A07 and A12, the overflow rainwater leaders lacked protection against objects such as baseballs and tennis balls entering the pipe. Nine balls were removed from the roof areas of A12 and A13.		Average
Interior Construction	Interior Walls	Interior wall systems are limited to gypsum board wall assemblies and CMU (concrete masonry unit). Deficiencies included cracking at CMU wall systems, acoustic treatment delamination in the Cafe, holes in the CMU system at a clean-out, and an exposed expansion joint. It was reported that the operable partition is has finish issues and is failing.	Good
	Interior Doors	Doors inside the building are solid core doors clad in laminate and set in hollow metal frames. The laminate system on the doors was showing significant wear and tear, resulting in many doors with missing laminate in part or in whole. The missing laminate appeared to be limited to pieces on the front	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		and back faces or along the edges. None of the doors assessed had ADA (Americans with Disabilities Act) compliant hardware. One missing closer was noted on a rated door, and one door had shifted in its frame enough that it would not close.	
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	All exterior stairs are comprised of cast-in-place concrete with metal railings. Observed issues included rusting at railings where they connect with the concrete and degradation of the concrete stair by the gymnasium.	Average
	Interior Stairs	Interior stairs are limited to those required to access the stage. These wooden stairs were observed to be in good condition.	Good
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. Wall finishes within the building appeared to be in poor condition. A significant number of the classrooms and common areas required painting. During the assessment, the entire 400-wing, half of the 300-wing, all but four rooms in the 200-wing, and the kitchen were noted as needing paint. Many of the finish systems adjacent to classroom doors and windows were damaged to the point that metal corner beads were clearly visible. In male restrooms, the areas behind the toilets were limited to a painted block wall, which limits the ability to clean these areas. In common areas, damage was noted at coat racks mounted to the gypsum board wall system.	Poor
	Interior Floor Finishes	Interior floor finishes include VCT (vinyl composite tile), carpet, strip wood flooring at the stage, quarry tile in the kitchen, and an interlocking plastic tile system in the gymnasium. Flooring issues observed were limited to cove base damage or adhesion and damaged carpet.	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Interior Ceiling Finishes	Ceiling systems consist of 2x4 suspended acoustical tiles with limited amounts of gypsum board ceilings in restrooms or as accents. Within the building, a limited number of water-damaged tiles were likely related to roof leaks. A large number of ceiling tiles were damaged, stained, or out of alignment relating to the HVAC (heating, ventilating, and air conditioning) equipment contained between the ceiling and roof structure. There were some number of water stained tiles that must be related to water infiltration in the building envelope. There were a limited number of issues with the paint system or water damage with the finished gypsum board in restrooms.	Average
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The building has public restrooms for men, women, and students and separate staff restrooms located throughout the facility. These restrooms generally have vitreous china hand sinks in counters with manual faucets, along with vitreous china, floor-mount/wall toilets with manual flushing mechanisms, and vitreous china, wall-hung urinals in the male restrooms with manual flushing mechanisms. There are service sinks in the janitorial closets, and water coolers located throughout the facility, typically near the public restrooms. The restroom plumbing fixtures were observed to be in average condition as the fixtures were typically aged but still operational.	Average
	Domestic Water Distribution	All of the plumbing fixtures are serviced with domestic cold water. A gas water heater adjacent to the kitchen services the kitchen. The water heaters near the kitchen spaces were observed to be in serviceable condition with no identified or reported deficiencies. EWHs (electric water heaters) in the stand-alone classroom buildings serve janitorial closets and were observed to be in good condition. The plumbing distribution equipment 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.	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		The roof drains were observed to be in good condition. It was noted in the interview that the grease trap clogs frequently and has been a persistent maintenance issue. Also noted within the interview is the sanitary loop around the exterior of the building. The loop is thin wall PVC and breaks regularly.	
Mechanical HVAC	The major mechanical equipment consists of indoor multi-positional WSHP (water source heat pumps). The loop water temperature is controlled by a cooling tower located adjacent to the main mechanical room as well as a boiler located in the main mechanical room. Three HRUs (heat recovery units) located on the roof provide outside air to the building. Most WSHPs were located above the ceiling and were not observable. It was reported that all WSHP units located above the ceiling were replaced within the last two years. Three WSHP units located on the mezzanine serve the kitchen, cafeteria, and gymnasium. These units were not replaced and showed their age. They were leaking water on the floor. The HRUs were original and were past their service date. The cooling tower was observed to have significant rust and build up on the tower intake as well as leakage in the water basin onto the ground around the tower. The boiler serving the water loop had been replaced within the last ten years. It was reported that the boiler was oversized and short cycled. This created accelerated wear on the boiler internal heat exchanger, causing it to prematurely wear and age. There are reported issues within the music room HVAC. Due to the items above pertaining to the cooling tower, HRUs and the boiler, the system was rated as average.		Average
Fire Protection	Fire Alarm	The building has a fire alarm system that consists of alarm and signaling devices such as horns/ annunciators, strobes, horn/strobe combos, pull stations, and detectors. The fire alarm system is controlled by the Silent Knight control panel. The fire alarm system appeared to be in good condition, although the Interview Notes reported that the fire alarm controller was constantly beeping.	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

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Electrical	Electrical Distribution	The electrical service enters the building from the 277/480-volt 1600-amp main switchboard “MSB” located on the exterior near the service transformer. The service also feeds another 1600-amp switchboard “MDP” in the ELECTRICAL MDP room that distributes service to branch transformers, panelboards, and equipment located in various electrical rooms throughout the building. The exterior switchboard “MSB” was missing a locking handle on one door, leaving main switches accessible to the public. The interior electrical distribution equipment appeared to be in good condition, although the Interview Notes stated the building had no main switchgear. The building does not have a lightning protection system.	Average
	Lighting	The building's exterior lighting consists of incandescent downlights and HID (high-intensity discharge) pole light fixtures that are located along the entire perimeter. The interior lighting consists primarily of T8 fluorescent light fixtures. The interior lighting appeared to be in good condition and well maintained. Exit signs in the building appeared to be in good condition. It was reported that the playground area had insufficient lighting and the exterior lights are old and failing, and in poor condition.	Good
	Communications & Security	The security system in the building includes surveillance cameras. There is a public address system and telecommunications system in the building. The security camera viewing areas were reported in the Interview Notes as inadequate in landscaping and canopies with poor lighting affecting viewing. These systems appeared to be in good condition.	Good

Exterior System Deficiency Examples

Exterior Walls



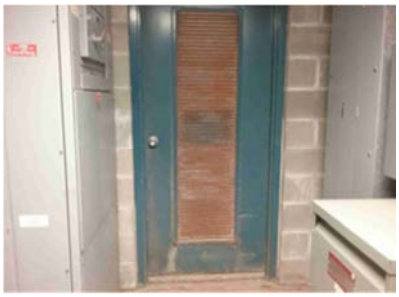


Exterior Windows



Exterior Doors





Roofing Deficiency Examples





Interior Construction Deficiency Examples

Interior Walls




Interior 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

Electrical System Deficiency Examples

Electrical Distribution

Stand-Alone Classroom Building – BLDG-172B

Building Purpose	Classrooms
Building Area	10,502 SF
Inspection Date	July 26, 2016
Inspection Conditions	Raining and hot
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	The exterior walls are modular brick. Issues with the facade system were limited to failed sealant at joints between brick panels and discoloration related to uncontrolled runoff from the roof. In one location, the exposed shelf angle supporting brick had rust developing on it.	Good
	Exterior Windows	Exterior windows are aluminum framing with single-pane glazing. No deficiencies were noted.	Good
	Exterior Doors	Exterior doors are hollow metal doors set in hollow metal frames. Typically, these units contain windows. Deficiencies noted included mismatched hardware and minor rust due to finish system failure.	Average
Roofing	The roofing is metal with perforations at the eaves and no gutter system. The roof area was inaccessible do to the lack of a ladder, and it was raining. From a review of the interior, it appeared that the roof was leaking in a limited number of locations. These appeared to be at the ridge and EF (exhaust fan) penetrations in the roof system. The lack of a gutter system allows water to erode the grade around the building and the splashing action deposits dirt and moisture on to the exterior walls.		Average
Interior	Interior Walls	Interior walls are comprised of painted CMU in the corridors augmented with gypsum board partitions	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Construction		between classrooms or service areas. No deficiencies were observed.	
	Interior Doors	Interior doors are solid core wood veneer door slabs set in hollow metal frames. In one instance, it was observed that the door could not open all the way because it dragged on the floor.	Good
	Interior Specialties	System not present.	N/A
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 wall finishes appeared to be in average condition, but the laminate-clad millwork was observed to be in poor condition.	Average
	Interior Floor Finishes	Interior floor finishes include VCT and sheet vinyl in the faculty restroom. The VCT was observed to be in good condition, but the sheet vinyl was not. The small area of vinyl was comprised of three different pieces, and the adhesive at the joints was failing due to water intrusion from cleaning.	Good
	Interior Ceiling Finishes	Ceiling systems consist of 2x4 suspended acoustical tiles with limited amounts of gypsum board ceilings in restrooms or as accents. Damage to the suspended ceiling tiles was limited to staining from water intrusion. A evaluation of the underside of the roof from the mezzanine suggested that this issue was the result of roof leaks.	Average
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The building has restrooms for students in each classroom, and separate staff restrooms located in the corridor. These restrooms generally have vitreous china hand sinks in counters with manual faucets, along with vitreous china, wall toilets with manual flushing mechanisms, and vitreous china, wall-hung urinals in the	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		male restrooms with manual flushing mechanisms. There are service sinks in the janitorial closets, and water coolers located throughout the facility. The restroom plumbing fixtures were observed to be in good condition as the fixtures were typically aged but still operational.	
	Domestic Water Distribution	All of the plumbing fixtures are serviced with domestic cold water from the central distribution system. There is one EWH to serve the janitorial closet. The plumbing distribution equipment was observed to be in good condition.	Good
	Other Plumbing	There were no roof drains to be observed; the building has a scupper system.	N/A
Mechanical HVAC	The major mechanical equipment consists of indoor multi-positional WSHP. The loop water temperature is serviced from the main mechanical room. All of the WSHP units for this building are located on the mezzanine above the corridor. The outside air for the building is provided through an HRU that is located on the mezzanine as well. These units were original to the building and were approaching the end of their typical design service lives.		Average
Fire Protection	Fire Alarm	The building has a fire alarm system that consists of alarm and signaling devices such as horns/ annunciators, strobes, horn/strobe combos, pull stations, and detectors. The fire alarm system is controlled by the Silent Knight control panel. The fire alarm system appeared to be in good condition.	Good
	Fire Protection/ Suppression	The rest of the building is protected by portable fire extinguishers placed throughout the facility. The building does not have a fire suppression system. All observed portable fire extinguishers had inspection tags dated within the last year as required.	N/A
Electrical	Electrical Distribution	The electrical service consists of two transformers in the mezzanine stepping down power from 480 volts to 120/208 volts. One 120/208-volt panel is located in the mezzanine and two in electrical room ELEC600. The electrical distribution equipment appeared to be in good condition. The building does not have a lightning protection system.	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Lighting	The building exterior lighting consists of downlights and HID light fixtures that are located along the entire perimeter. The interior lighting consists of T8 fluorescent light fixtures in the back and pendant fixtures throughout the front and seating areas. The lighting for the building appeared to be in good condition.	Good
	Communications & Security	There is a security system including surveillance cameras in the building. This system appeared to be in good condition.	Good

Exterior System Deficiency Examples

Exterior Walls

Exterior Doors

Roofing Deficiency Examples

Interior Construction Deficiency Examples

Interior Doors

Interior Finish Deficiency Examples

Interior Floor Finishes

Interior Wall Finishes

Interior Ceiling Finishes

Kocurek Elementary 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

Plumbing

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

Mechanical/HVAC

1. 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 the AHUs or package units, replace it with an updated asset that includes an integral dehumidification wheel that will assist with humidity issues.
2. Address any rust or corrosion observed on the equipment, its associated piping, or any other sub-asset in all facilities by cleaning, repainting, or repairing to prevent further deterioration.
3. Repair or replace any damaged or missing piping insulation as needed at all facilities.
4. Address any equipment at all 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 sub-assets. 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 show 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.
7. Plan for and track 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.
8. Ensure routine preventive maintenance is conducted for 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. Facility staff reported that the lack of air curtains at entries is an issue, particularly at the main school and gymnasium facility.
10. Further investigate the return grilles and corridor HVAC balancing. Facility staff reported that the corridor spaces throughout the main school and gymnasium facilities were poorly conditioned and stated that the lack of return air grilles could be the source of the problem. Note that if air curtains are to be installed, this study should be conducted after their installation.
11. Create a test and balance, as well as a commissioning plan, for any newly replaced equipment, including support systems such as chilled water or heating water. New equipment may have different performance compared to the old.

Fire Protection

1. Continue annual inspections of the portable fire extinguishers.
2. Consider installing and providing fire protection to the school campus.

Electrical

1. Review the exterior lighting levels and repair/replace as needed to ensure security and safety.
2. Provide egress lighting where required for all buildings.
3. Provide security cameras inside and outside of buildings where necessary for proper coverage. Notes

Main School Building Recommendations

Exterior

1. Investigate the metal panel facade system for leakage and sealant issue observed during assessment.
2. Repair the canopies on the east side of the building. and soffit on the west side of the building .
3. Remove graffiti from wall panels, review surface finish, and repair as needed to avoid rust development.
4. Replace the structural column at the gymnasium. The column could be repaired, but this is likely to result in additional maintenance and repair.
5. Replace acrylic glazing panels with glass.
6. Repair damaged hardware.
7. Repair or replace rusting window units.
8. Repair the gap in the aluminum window system.
9. Repair the gaskets in the window in the art room.

Stairs

1. Repair exterior stairs with damage to the concrete system.
2. Repair the rusting handrail system and remove depressions around bottoms of supports that collect water.

Roofing

1. Further investigate the sizing of gutters and volume capacity of downspouts.
2. Clean, unclog, and repair entire gutter system.
3. Install protection at scupper and collector head of roof A13.

Interior Construction

1. Survey interior doors for damage to laminate and assess option of replacing doors with wood veneer.
2. Remove or relocate security grill mounted across building expansion joint.
3. Replace operable partition between cafeteria and gymnasium.

Interior Finishes

1. Repaint classrooms as noted.
2. Evaluate finishes around interior classroom doors and windows. Repair finish systems as required. Install corner guards or a durable material at all classroom doors and windows to limit future maintenance.
3. Install a washable surface behind toilets in male restrooms in classrooms.
4. Install a durable surface behind the common area coat racks.
5. Replace carpet at MUSICART.
6. Evaluate all HVAC units contained in ceiling spaces for sweating and/or leaking.
7. Repair sagging suspended ceiling systems as noted.
8. Repair the finish system of ceilings in small restrooms.

Plumbing

1. Create a replacement plan for water fountains.
2. Create a plan to upgrade water closets, urinals, their respective flush valves, and lavatory faucets to more efficient and code-compliant fixtures.

Mechanical/HVAC

1. Plan to replace the aged roof top units, as well as any equipment that utilizes R-22.
2. Create a replacement plan for existing EFs.

Electrical

1. Repair the locking handle for main switchboard “MSB” to secure and lock the enclosure.
2. Inspect all exterior light fixtures to ensure they are working properly and provide adequate coverage.

Stand-Alone Classroom Building Recommendations

Exterior

1. Remove damaged sealant at brick panel joints and install new.
2. Replace mismatched hardware.
3. Remove rust and repair door finish system.
4. Remove rust and repair shelf angle finish system.

Roofing

1. Investigate roof leaks and repair.
2. Install a gutter system to limit erosion around the building and direct water away from the building.

Interior Construction

1. Repair the door that cannot be opened entirely.

Interior Finishes

1. Review millwork and determine the extent of repair required.
2. Replace flooring in the faculty restroom.
3. Diagnose water intrusion and replace ceiling tiles.

CRAWL SPACE – Kocurek ES – Main School Building (BLDG-172A)

Building Purpose	Administrative, Classrooms, Gym, and Cafeteria
Inspection Date	August 18, 2016
Inspection Conditions	80° - Cloudy with Light Rainfall (Morning)

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	Soil below building was generally dry. However, damp soil was observed around building perimeter and courtyard perimeter. Source of water appears to be rain water seeping in from exterior of building. Some areas were wet due to leaking pipes. Soil/Drainage deficiencies: • Water infiltration at perimeter • Wet soil under leaking pipes	Average
	Soil Retainers & Carton Forms	Soil retainers appear to have not been used. Details in the historical plans show 8" fiberboard void forms below beams but no soil retainers are specified. The beams appeared to have been cast on the void forms; forms were not visible and it is assumed they had deteriorated over time (as expected).	N/A
	Areaways/Ventilation	No areaways were observed. Ventilation is provided by very few openings in the grade beams near the north side of the building. Condensation was observed on pipes and underside of floor framing. Areaway/ventilation deficiencies: • Condensation and damp conditions indicate potentially inadequate ventilation	Average

	Access Hatches	Access hatch was located in the mechanical room. Boxes of items were stored on top of the hatch. We moved these to enter the crawl space and then returned them after closing the hatch. Access hatch deficiencies: • Items stacked on top of hatch; hatch was not easily accessible	Good
Exposed Structure	Columns & Exposed Tops of Foundations (Piers or Footings)	Exposed tops of piers were observed around the perimeter of the building and at a few interior piers. No deficiencies were observed. Square concrete columns were observed above the interior piers. No deficiencies were observed.	Good
	Inside Faces of Perimeter Walls / Beams	Perimeter beams are cast-in-place concrete. Beams are detailed to be suspended above 8" voids with no soil retainers. However, since no soil retainers were installed it appears that soil has migrated into the void space so now bottom of beam is in direct contact with the expansion soils. It also appears that carton forms collapsed during casting operations in some places. Bottom of grade beams had some minor honeycombing. Grade beam deficiencies: • Expansive soil is in contact with underside of perimeter beam in some areas and may subject beams to uplift loads not accounted for in design • Minor honeycombing near bottom of beams	Average
	Exposed Faces of Suspended Floor Beams Above	Interior suspended floor beams were in good condition. No deficiencies were observed.	Good
	Underside of Suspended Floor Slabs Above	Cast-in-place pan joists serve as the floor slab. Joists were in good condition. Moderate honeycombing and spalling was observed at the bottom of the webs. Exposed, corroded rebar was seen in isolated locations. Floor Slab deficiencies: • Moderate honeycombing/spalling • Exposed, corroded rebar in isolated locations	Average

Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes	Pipe was mostly cast iron. Some PVC and aluminum or steel pipe was observed. Pipe deficiencies: • Cracked cast iron pipe near south side of building • Cast iron pipe touching ground (should be suspended) • Leaks in cast iron pipe • Corrosion on cast iron pipes • Corrosion on pipe hangers	Average
	Exposed Ductwork	N/A – No exposed ductwork was present in the crawl space area observed.	N/A
	MEP Equipment	N/A – No MEP equipment was present in the crawl space area observed.	N/A
	Spray Fireproofing/ Insulation	N/A – No spray fireproofing or insulation was present in the crawl space area observed.	N/A

Crawl Space Deficiency Examples

Soil, Drainage, Ventilation & Access

Water infiltration at building perimeter

Wet soil under leaking pipe

Condensation on underside of slab indicates poor ventilation

Exposed Structure

Honeycombing/spalling/rusted reinforcement at bottom of perimeter beam

Honeycombing/spalling/corroded reinforcement at pan joist

Soil in contact with bottom of perimeter beam

Pipes, Ducts, Equipment & Fireproofing

Corrosion in cast iron pipes

Cracked cast iron pipe

Rusted pipe & hangers

Leaking cast iron pipe

CRAWL SPACE – Kocurek ES – Stand Alone Classroom (BLDG-172B)

Building Purpose	Classrooms
Inspection Date	August 18, 2016
Inspection Conditions	80° - Cloudy with Light Rainfall (Morning)

Crawl Space System Deficiency Overview

NOTES CONCERNING CRAWL SPACE OBSERVATIONS: The crawlspace was extremely muddy and puddles were present. We could not maneuver in the crawlspace without sinking into saturated mud, so all observations were made from the access point. It should also be noted that structural plans were not available for this building.

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	Soil below this building was very wet and muddy. Source of water appears to be rain water seeping in from perimeter of building and through the areaways. Soil/Drainage deficiencies: • Saturated soil, no drainage	Poor
	Soil Retainers & Carton Forms	Concrete soil retainer panels were present in crawl space. A few broken retainers were observed near access hatch. Soil retainer deficiencies: • Few broken soil retainers	Good
	Areaways/Ventilation	Areaways were located in multiple locations around the building. All observed areaways appeared in good condition, although water appeared to be entering the crawl space at some locations. Areaway/ventilation deficiencies: • Areaway curb height may be insufficient to keep ground out from infiltrating into crawl space	Average
	Access Hatches	The access hatch was located in the custodian closet. Items were on the hatch which had to be moved to open it. No deficiencies were observed.	Good

Exposed Structure	Columns & Exposed Tops of Foundations (Piers or Footings)	Tops of round piers could not be seen. Due to the mud, we could not observe the interior columns closely. No deficiencies were observed.	Good
	Inside Faces of Perimeter Walls / Beams	Cast-in-place perimeter suspended beams appeared in generally good condition. No deficiencies were observed.	Good
	Exposed Faces of Suspended Floor Beams Above	Cast-in-place suspended floor beams were in good condition. No deficiencies were observed.	Good
	Underside of Suspended Floor Slabs Above	Structural plans were not available for this building, but floor slabs appeared to be precast panels. All panels were in good condition. No deficiencies were observed.	Good
Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes	Pipe deficiencies: • Minor rusting was observed in cast iron pipes • Minor rusting in hangers	Good
	Exposed Ductwork	N/A – No ductwork was present in the crawl space area observed.	N/A
	MEP Equipment	N/A – No MEP equipment was present in the crawl space area observed.	N/A
	Spray Fireproofing/ Insulation	N/A – No spray fireproofing or insulation was present in the crawl space area observed.	N/A

Crawl space Deficiency Examples

Soil, Drainage, Ventilation & Access

Broken soil retainers

Saturated soil / Standing water

Areaways appear to be one source of water infiltration

Pipes, Ducts, Equipment & Fireproofing

 Minor rusting in cast iron pipe and rusted hangers		

Kocurek ES 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.

Main School Building Recommendations

Soil, Drainage, Ventilation & Access

1. Investigate source of water infiltration and mitigate
2. Investigate need for adequate ventilation
3. Soil bearing directly against underside of beams could cause future structural distress – consider installation of soil retaining panels around building perimeter to restore & protect voids under perimeter beams

Exposed Structure

1. Repair honeycombing/spalling in slabs, joists and beams

Pipes, Ducts, Equipment & Fireproofing

1. Replace cracked cast iron pipe
2. Replace heavily corroded pipes and hangers
3. Repair leaking pipes

Stand Alone Classroom Building Recommendations

Soil, Drainage, Ventilation & Access

1. Investigate source of water infiltration and improve drainage to keep soil dry
2. Investigate need for ventilation
3. Replace damaged or missing soil retainers

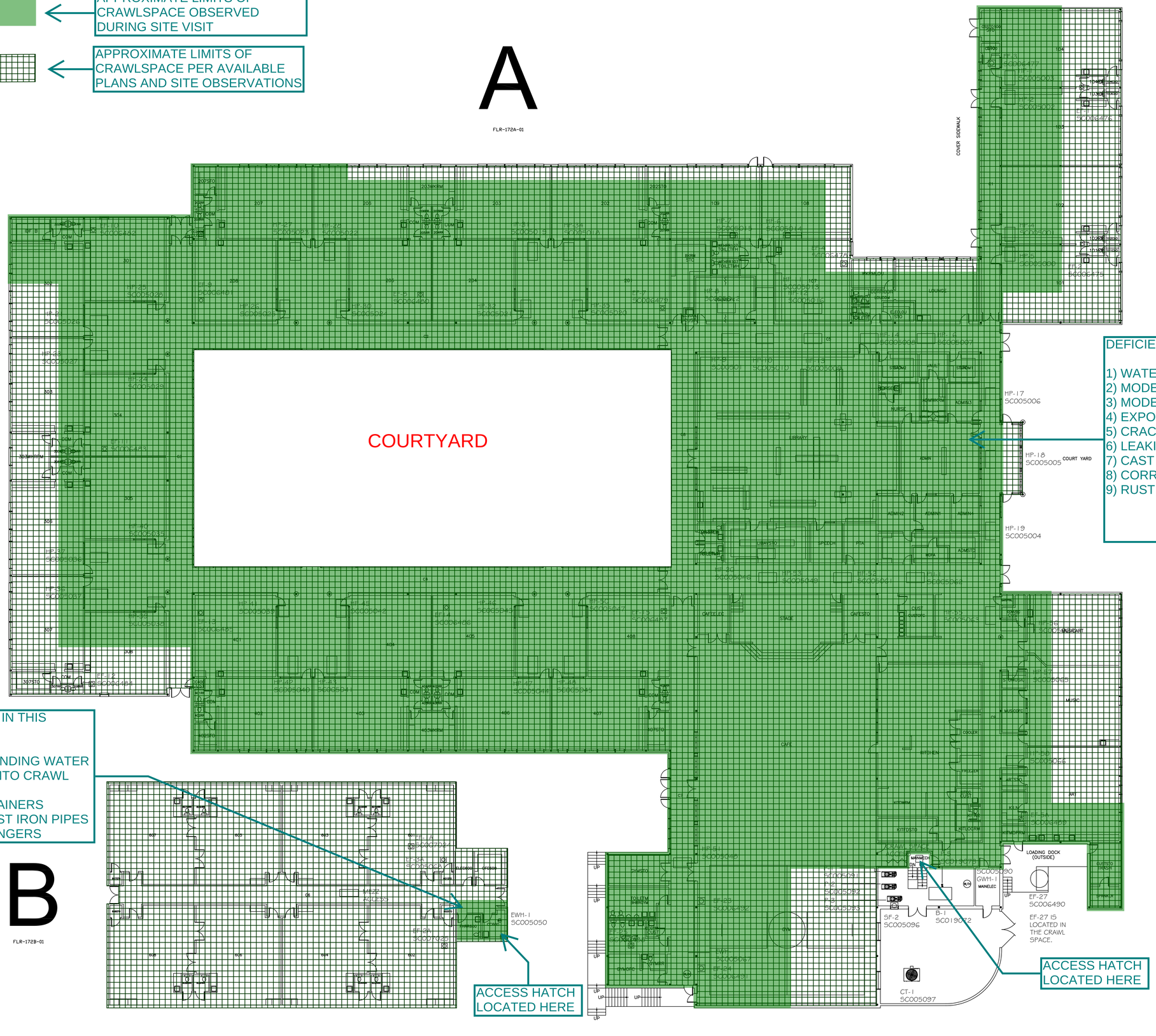
DRAFT

APPROXIMATE LIMITS OF CRAWLSPACE OBSERVED DURING SITE VISIT

APPROXIMATE LIMITS OF CRAWLSPACE PER AVAILABLE PLANS AND SITE OBSERVATIONS

A

FLR-172A-01



DEFICIENCIES OBSERVED IN THIS LOCATION:

1) WATER INFILTRATION
2) MODERATE HONEYCOMBING ON BEAMS
3) MODERATE HONEYCOMBING ON JOISTS
4) EXPOSED/CORRODED REBAR IN JOISTS
5) CRACKED CAST IRON PIPE
6) LEAKING PIPES
7) CAST IRON PIPE TOUCHING GROUND
8) CORROSION ON CAST IRON PIPES
9) RUST ON PIPE HANGERS

DEFICIENCIES OBSERVED IN THIS LOCATION:

1) SATURATED SOIL & STANDING WATER PREVENTED ACCESS INTO CRAWL SPACE
2) FEW BROKEN SOIL RETAINERS
3) MINOR RUSTING ON CAST IRON PIPES
4) MINOR RUSTING ON HANGERS

B

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NORTH

AUSTIN I.S.D.

DEPARTMENT OF CONSTRUCTION MANAGEMENT

KOCUREK ELEMENTARY SCHOOL

9800 Curlew Dr.
Austin, Texas

FLOOR PLAN

FIRST FLOOR

APPROVALS		
DRAWN	CHECKED	APPROVED
J.R.		
10/01/09		

DWG: 172-FLR-01	SHEET
DRAWING SCALE	
1/16"=1'-0"	1 OF 1