Pillow Elementary School Site Summary

Address	3025 Crosscreek Drive Austin, TX 78757
Number of Permanent Campus Facilities	1
Original Year of Construction	1969
Total Campus Building Area (combined)	54,247 SF

Introduction

Pillow Elementary School campus is located at 3025 Crosscreek Drive in Austin, Texas. Pillow Elementary School was built in 1969. It is one-story and consists of administration offices, classrooms, cafeteria, library, and gymnasium (BLDG 151-A).

Meeting Log		Revision Log		
Date	**Meeting**	**Revision**	**Date**	**Summary of Content**
8/1/16	Interview	00	9/9/16	Draft Issue
8/4/16	Assessment	01	12/5/16	Added comments from CM Randall Sakai as indicated on email dated 10/28/16. See page 13.
9/26/16	Cluster Meeting (Attended)	02	1/24/17	Added comments from the CAC and Principal Brian Hill as indicated on email dated 12/5/16. See pages 3, 6, and 13-14.

Main School Building – BLDG-151A

Building Purpose	Administration offices, Classrooms, Cafeteria, and Gymnasium
Building Area	54,247 SF
Inspection Date	August 4, 2016
Inspection Conditions	100°F - Hot and 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 of the building consists of a brick façade. The building is one story built in 1969. The exterior walls were observed to be in good condition. The expansion joints at soffit of the north entrances were deteriorated.	Good
	Exterior Windows	The windows are single-paned, aluminum metal-framed inset into the brick façade. The windows appeared to be in average condition. Windows on the south side of the building were faded and discolored from the sun.	Average
	Exterior Doors	There are many double exterior metal doors with glazing throughout the building. Most doors were in average condition and working order, but were chipped and scratched. The glazing was scratched and filmed. There was also paint chipping on the interior face.	Average
Roofing	The main building roof has a modified bitumen roof system. Only roof A-10 is a single-ply roof and has been re-covered in recent years. The roof system was viewed in poor condition. With the exception of A-10, the roof system showed evidence of ponding, cracking, splitting, and bubbling. Roof A-02 had two broken skylights, repaired with duct tape, and showed cracking and loose edge flashing.		Poor
Interior Construction	Interior Walls	The interior walls are gypsum board in the classrooms, administration area, and lobby. There are CMU (concrete masonry unit) in the gymnasium and	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		cafeteria areas. The corridors are gypsum board or CMU at the top few feet and plastic laminate from the floor upward of eight feet. There are ceramic tiles on the walls of the restrooms and kitchen. There was no evidence of a trip hazard in the gymnasium floor as per the staff comments. The system appeared to be in average condition. Several laminate panels near entrances were missing.	
	Interior Doors	The interior doors are wood veneer with a lite in metal frames. Some are solid wood doors without side lites. The interior doors appeared to be in average condition. Many of the doors were worn, chipped and in need of refinishing.	Average
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	There is one staircase at the east end of the building that is concrete with metal railings. There are also exterior stairs located at the rear of the school and at the loading dock. The exterior stairs were observed to be in good condition.	Good
	Interior Stairs	System not present.	N/A
Interior Finishes	Interior Wall Finishes	The interior walls are painted gypsum board in the classrooms, administration area, and lobby. There is painted CMU in the gymnasium and cafeteria areas. The corridors are gypsum board or CMU at the top and plastic laminate from the floor upward of eight feet. The classroom wings, music room and councilor offices are wood paneled. They were all observed to be in good condition. The CAC and Principal Brian Hill believe asbestos may be in materials found in the gymnasium and in the corridor walls. Independent verification through Jason Buster, with TASB, could not be performed. These surfaces should be investigated prior to future renovations.	Good
	Interior Floor Finishes	The interior floor finishes are mainly suspected asbestos floor tile in administration offices, cafeteria, corridors, and classrooms. There is VCT (vinyl composition tile) in the 300-wing classrooms. Ceramic tile is in the restrooms and kitchen. The flooring is new carpet tiles in the library. There is a rubber sport court in the gymnasium and wood flooring on the stage. All were observed to be in good condition. The corner of the administration open area had missing tiles.	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Interior Ceiling Finishes	The interior ceilings are acoustical ceiling tile in a metal grid in the classrooms, library, and cafeteria and administration areas. There are 12x12" perforated tiles on the ceiling in the music classroom and the male and female restrooms across from the gymnasium area. There are gypsum board ceilings in the restrooms. The gymnasium has Tecktum acoustical panels in a metal grid. The ceiling systems were observed to be in average condition. The grid and nearby AC registers in the faculty restroom, gym, and main corridor were pitted with rust. There were stained ceiling tiles.	Average
Conveying	A vertical lift was not observed at this facility. However, the facility reports that there is a mobile lift, which is old and has to be hand cranked, posing problems for students with mobility issues.		Poor
Plumbing	Plumbing Fixtures	The facility contains multiple plumbing applications that service one floor level, consisting of: student restrooms, staff restrooms, janitorial closets with service sinks, and one commercial kitchen. The restrooms that are located inside of the classrooms have vitreous china floor mount toilets with manual flushing valves and some are equipped with auto sensing flushing valves. The classroom restrooms are not equipped with sinks; however, the classrooms all have laminated particle board vanities with stainless steel sink/bubbler combinations mounted inside of the vanity. The remainder of the facility's restrooms have vitreous china sinks with manual or metering faucets, along with vitreous china floor/wall mount toilets and urinals with manually operated flushing valves. There are also wall-mounted service sinks in the janitorial closets. This building's plumbing fixtures were observed to be in average condition. All of the classroom and gymnasium restrooms had old fixtures that were originally installed when the school was built. Staff reported that the divider walls between the urinals in the male restrooms are breaking away from the walls. In addition, it was reported that there were old mop sinks in the janitorial closets that need to be replaced with floor sinks and that the water fountains near the gymnasium had low water pressure. The plumbing fixtures observed throughout the building were either from when the facility was	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		originally constructed or had been installed recently. Though there were fixtures that were aged and required maintenance, all of the fixtures assessed at the time of assessment were functional.	
	Domestic Water Distribution	The plumbing fixtures that are serviced by domestic water distribution equipment are located in the commercial kitchen. The fixtures in the commercial kitchen are serviced by four tankless gas-fired water heaters that are located in the main mechanical room. The tankless water heaters have the ability of producing 199 MBH. The staff reported that the sewer piping associated with the restrooms located in the crawl space was cracked and broken. It was also reported that the original galvanized water distribution piping was in need of replacement. The domestic distribution system was observed to be in good condition at the time of assessment.	Good
	Other Plumbing	The facility is equipped with both external and internal roof-type drainage systems. Staff reported that the drainage at the front office was poor and believed to be caused by an inefficient roof drain in that area. There were no other plumbing system deficiencies at the time of observation. The other plumbing systems observed at the time of the facility condition assessment appeared to be in good condition.	Good
Mechanical/ HVAC	This building has multiple HVAC (heating, ventilating, and air conditioning) applications. The major mechanical equipment consists of indoor water source heat pumps, large roof top mounted packaged/split air conditioning units, and roof top-mounted supply air fans. The estimated capacities of the roof-mounted EFs (exhaust fans) range from 200 to 1300 CFM (cubic feet per minute), and the estimated capacities for the roof top-mounted HRUs (heat recovery units) are 1500 to 3000 CFM. The refrigeration capacities of the HVAC units range from 2.5- to 12.5-TON. All of the indoor water source heat pump units are supported by a common water loop system. The system has an in-line external packaged fluid cooler tower and a horizontal gas-fired boiler. There were 31 HVAC pieces of equipment assessed throughout the building. The mechanical/HVAC system for this building was in good condition at the time of the facility condition assessment. Staff reported that in the summer of 2016 the old geothermal HVAC system was replaced with a closed loop system service by a cooling tower and boiler system. The upgrades that took place during the summer of 2016 also included the installation of new cooling/heating water piping, heat exchangers, air handling units, and indoor water source heat pumps.		Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	The staff also reported that the large roof top-mounted HRUs were aged and needed to be replaced, because they consistently required maintenance. Additionally, the roof top-mounted EFs that serviced the kitchen were reported to be aged and not working efficiently. Of the 31 pieces of HVAC equipment observed, only four had noted deficiencies. The deficiencies consisted of general aging of equipment, enclosure/compressor fin damage due to excessive wear and tear, and the utilization of outdated R-22 refrigerant. The roof top-mounted HRU-2 was observed to be in a failed state of operation at the time of observation because of an electrical fire that took place inside of the unit. HRU-1 was also being worked on by HVAC technicians at the time of observation. The CAC and Principal Brian Hill reported that the HVAC system is experiencing issues related to air flow, humidity, and heating.		
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 panelboard. The fire alarm system equipment was observed to be in average condition. The remote annunciator indicated system trouble.	Average
	Fire Protection/ Suppression	The building is not equipped with a fire sprinkler/suppression system; however, it is protected by portable fire extinguishers that are stationed throughout the building. All portable fire extinguishers observed were inspected within the last year.	N/A
Electrical	Electrical Distribution	The electrical service (utility transformer for the facility) appears to be located on the southwest corner of the campus. The main mechanical room houses a 480-volt 800-amp main switchboard that feeds power to transformers, panelboards, and mechanical equipment. Numerous electrical rooms and storage closets house transformers and sub panelboards to supply power to the buildings end devices and additional mechanical equipment. The electrical distribution equipment was in average condition. The main switchboard, a 45-kVA transformer, and a 30-kVA transformer located in the main mechanical room appeared to be nearing the end of their life expectancy. Panelboard K, located in the kitchen adjacent the serving line, appeared to be nearing the end of its life expectancy and had considerable corrosion on its	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		enclosure. The facility reported that there was an electrical panel located in the MDF (main distribution frame) room. This panel was not accessible due to the MDF security requirements. Additional equipment had been requested in the administration area.	
	Lighting	The exterior of the building is outfitted with what appears to be wall-mount HID (high-intensity discharge) fixtures and screw-type flood fixtures located near the roofline of the building. Covered walkways are illuminated by surface-mounted ceiling fixtures. The interior lighting consists of fluorescent troffer fixtures in classrooms and hallways. The stage is equipped with a specific designed lighting to support stage productions. The gymnasium is equipped with hanging fluorescent style fixtures and there are screw type fixtures in closets, mechanical rooms, and electrical rooms. The exterior lighting was observed to be in average condition due to a mixture of fixtures nearing their life expectancy and newer fixtures that had been recently replaced. The facility reported that exterior lighting was required in the circle drive and in pathways leading to the portable classrooms. The interior lighting was observed in average condition. There were exit signs at every exit; however, various signs were not illuminated. The facility reported that lighting in the hallways and classroom restrooms was dim and insufficient.	Average
	Communications & Security	There is a Gemini security system currently installed with multiple keypads at various entrances. Motion detectors are installed in interior areas and security cameras are installed throughout the interior of the building and strategically on exterior corners and walls. There is a call box is located at the front entrance. The equipment was observed to be in good condition. An MDF communication closet exists west of storage closet 200. This MDF houses network switches, hubs, and routers, in a rack-style configuration. The facility appeared to have wireless routers installed in classroom ceilings and strategically throughout the building.	Average

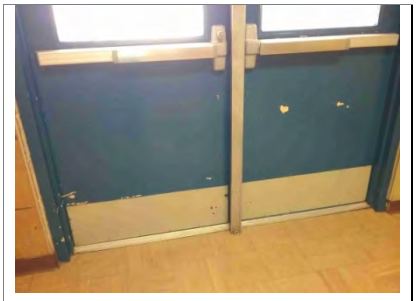
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		The equipment was observed to be in average condition. Networking cabling in various locations throughout the building routed along walls and floor ways presented tripping and tangling hazards.	

Exterior System Deficiency Examples

Exterior Walls

Exterior Windows

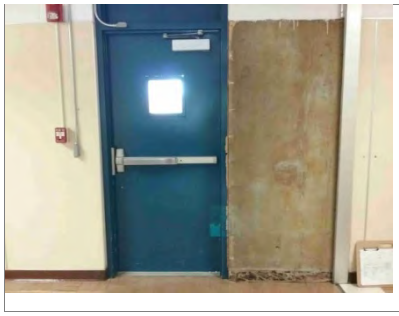
Exterior Doors



Roofing Deficiency Examples

Interior Construction Deficiency Examples

Interior Walls



Interior Doors

Interior Finishes Deficiency Examples

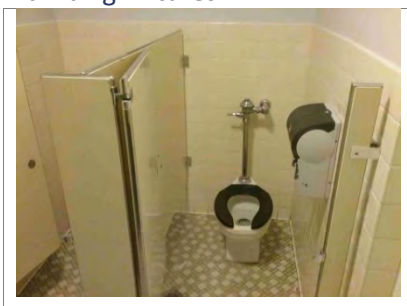
Interior Floor Finishes

Interior Ceiling Finishes



Plumbing System Deficiency Examples

Plumbing Fixtures




Mechanical/HVAC System Deficiency Examples



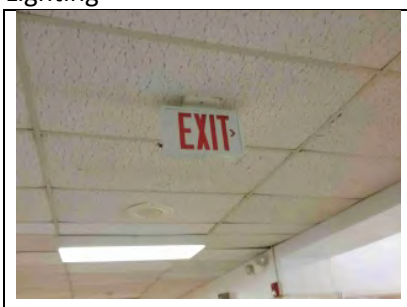
Fire Protection System Deficiency Examples

Fire Alarm

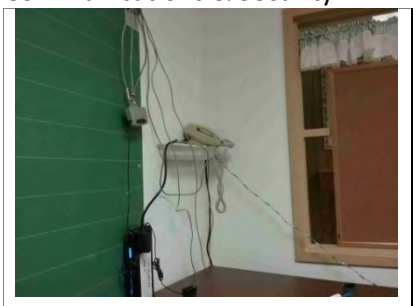
Electrical System Deficiency Examples

Electrical Distribution

Lighting



Communications & Security



Pillow 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.

Main School Building Recommendations

Exterior

1. Repair expansion joints on exit door overhangs.
2. Repair or replace damaged exterior doors and glazing (requested by the CAC and Principal Brian Hill).

Roofing

1. Investigate the complete replacement of the roof system with the exception of A10.
2. Replace skylights over roof A-02 the, gymnasium area.
3. Repair missing roof drain cover on roof A-01.

Interior Construction

1. Replace missing laminate panels in corridors near exits.
2. Repair or refinish chipped, scratched, and worn wood doors.

Interior Finishes

1. Replace stained ceiling tile as needed.
2. Replace AC registers and grid that are rusted.
3. Replace missing floor tile.

Plumbing

1. Continue preventative maintenance on aged plumbing fixtures and / or begin planning for replacement of the fixtures in the future as they continue to age.
2. Further investigate the pooling water issue at the front office door and determine if it is due to a faulty roof drain.
3. Replace or repair divider walls in the bathrooms
4. Replace old mop sinks with floor sinks in the janitorial closets.
5. Replace the cracked and broken sewer piping that services the restrooms located in the crawl space.
6. Replace the facilities galvanized water distribution piping.

Mechanical/HVAC

1. Replace units that use R-22 refrigerant
2. Continue conducting preventive maintenance checks and services for HVAC systems. Begin planning on repair or replacement of all aged and out of date roof top units and other aged and out of date HVAC equipment.
3. Replace outdated kitchen exhaust system.
4. Replace outdated roof mounted HRUs.
5. Investigate operational issues with the HVAC system and repair as needed. Issues with recently replaced equipment should be considered warranty issues (requested by the CAC and Principal Brian Hill).

Fire Protection

1. Identify the cause of the remote annunciator indicating system trouble and implement repair.

Electrical

1. Verify all EXIT signs are in operable condition.
2. Consider replacing equipment nearing the end of its life expectancy.

3. Assess the facility needs for additional power requirements in the administration area.
4. Consider relocating the electrical panel in the MDF room to a more accessible location.
5. Assess lighting in hallways and classroom bathrooms for increasing illumination.
6. Reroute and install communication cabling in a manner that does not cause trip hazards.
7. Replace interior lighting fixtures (requested by CM Randall Sakai).

CRAWL SPACE – Pillow ES – Main School Building (BLDG-151A)

Building Purpose	Administrative, Classrooms, Gym, and Cafeteria
Inspection Date	September 6, 2016, Afternoon
Inspection Conditions	91° - Cloudy

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 beneath the building was generally dry and appeared in good condition. A drainage pipe was observed under the cafeteria and also appeared in good condition. Soil was slightly damp around and lead to the drainage pipe, below a leaking pipe, below broken soil retainers and near various penetrations in perimeter beams. No significant soil deficiencies observed. Soil/drainage deficiencies. • Mildly damp soils	Good
	Soil Retainers	Observed soil retainers were generally in good condition. Cracks were observed on a few retainers on the west side of the main building. Perimeter beams in the classroom addition were built on trapezoidal carton forms and did not have soil retainers. Soil retainer deficiencies. • Cracked concrete soil retainers	Average
	Areaways/Ventilation	Ventilation in the crawl space was provided by multiple vents located at the perimeter of the building. Vents ranged in size. Crawl space ventilation seemed adequate but may not meet current standards. Areaway/ventilation deficiencies: • Ventilation may not meet current standards	Average

	Access Hatches	Access hatches inside the building were located in the admin storage room, the electrical room, and a custodian closet on the southeast classroom wing. All interior access hatches were locked and could not be unlocked with available tools. The southeast classroom addition was accessed through a loose vent on the east wall of the school. The original construction crawl space was accessed through an exterior access door on the south wall near the gym. This access hatch was loosely placed and could be opened easily by anyone. Access hatch deficiencies: • Loose vent on east side of school may not be safe for children • Loose access hatch on south wall near gym may not be safe for children	Good
Exposed Structure	Exposed Columns & Tops of Foundations	Observed exposed columns and tops of foundations appeared generally in good condition. Honeycombing was observed in a few isolated locations. Column/Foundation deficiencies: • Mild column honeycombing	Good
	Exposed Faces of Perimeter Walls / Beams	Perimeter beams were cast-in-place and suspended. All perimeter beams observed were in good condition. No deficiencies were observed	Good
	Exposed Portions of Interior Floor Beams Above	Suspended floor beams spanned between columns and supported a flat slab in the new classroom addition and precast pan joists in the original construction. Minor honeycombing was observed on few beams in the original construction. Beam deficiencies: • Minor honeycombing	Good
	Underside of Suspended Floor Slabs Above	The new classroom addition floor system consists of a flat slab supported by floor beams. The original construction floor system consists of precast pan joists. Spalling in the deck was observed on the precast pan joists. There was also a spall at a pipe penetration. Slab deficiencies: • Spalls with exposed reinforcement in deck • Spalls at pipe penetrations	Average

Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes & Hangers	All pipes observed were suspended. Few pipes had detached and/or degraded insulation and mild rusting and one pipe was leaking and had formed a puddle in the soil below. Failed and rusted hangers were observed in the classroom addition crawl space. Pipe deficiencies: • Leaking pipe • Rusted pipes & hangers • Failed hangers • Degraded/detached insulation	Average
	Exposed Ductwork	N/A – No exposed ductwork was present in the crawl space areas observed.	N/A
	MEP Equipment	N/A – No MEP equipment was present in the crawl space areas observed.	N/A
	Spray Fireproofing/ Insulation	N/A – No spray fireproofing or insulation was present in the crawl space areas observed.	N/A

Crawl Space Deficiency Examples

Soil, Drainage, Ventilation & Access

Damp soil leading to drainage inlet

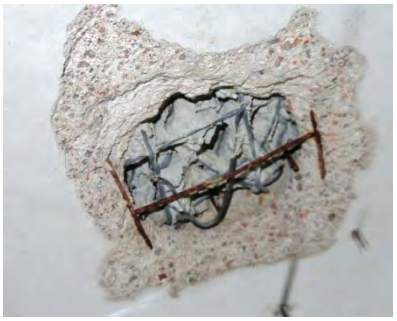
Puddle below leaking pipe

Cracked soil retainer, Damp soil

Exposed Structure

Honeycombing on column

Mild honeycombing in interior beam



Spall and exposed/corroded reinforcement on underside of deck

Spalls and exposed/corroded reinforcement at deck pipe penetration

Pipes, Ducts, Equipment & Fireproofing

Detached/degraded pipe insulation

Rusted pipes

Rusted, failed pipe hangers

Pillow 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. Replace cracked/broken soil retainers
2. Investigate need for additional ventilation
3. Verify adequate security at access points

Exposed Structure

1. Repair significantly damaged areas in concrete deck by cleaning exposed reinforcement and patching spalled concrete.
2. Patch holes in slab and repair slab damage at pipe penetrations

Pipes, Ducts, Equipment & Fireproofing

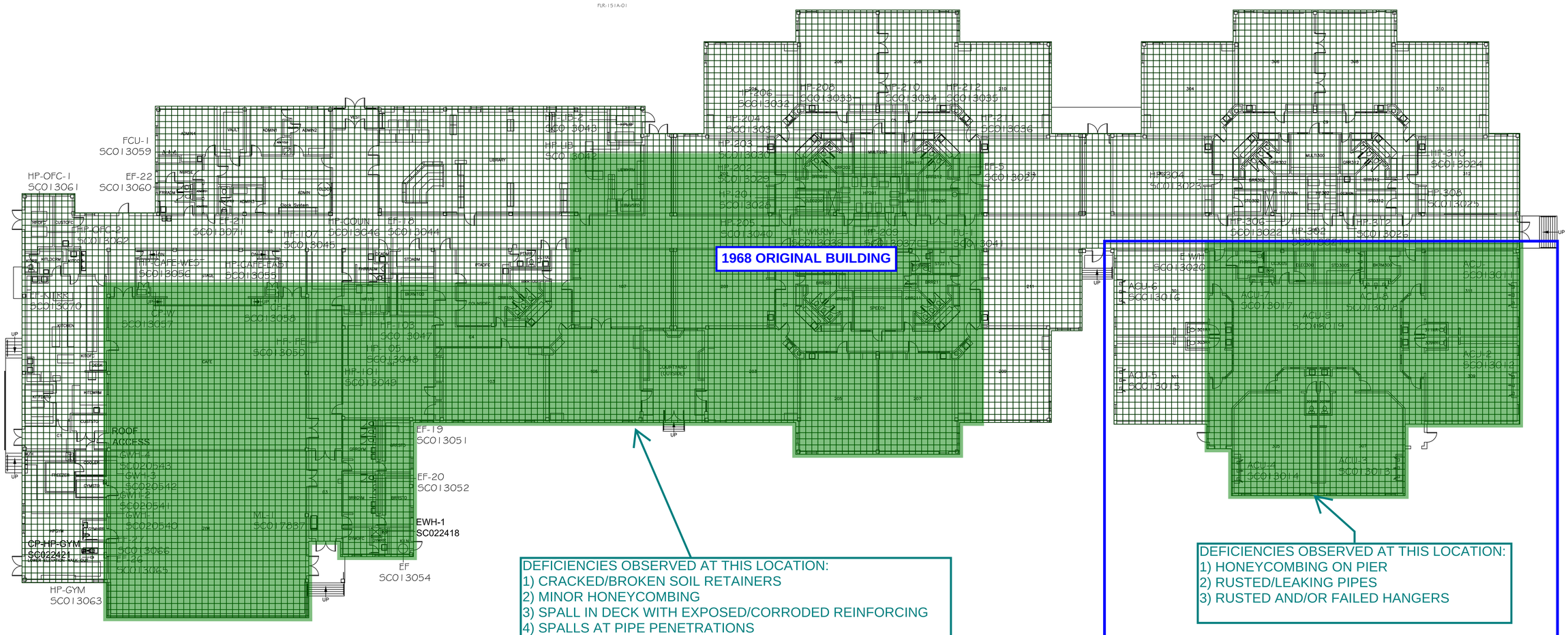
1. Repair leaking pipes
2. Repair or replace rusted pipes and pipe supports
3. Replace failed hangers
4. Replace detached/degraded pipe insulation

DRAFT

APPROXIMATE LIMITS OF CRAWLSPACE OBSERVED DURING SITE VISIT

APPROXIMATE LIMITS OF CRAWLSPACE PER AVAILABLE PLANS AND SITE OBSERVATIONS

A



DEFICIENCIES OBSERVED AT THIS LOCATION:
1) CRACKED/BROKEN SOIL RETAINERS
2) MINOR HONEYCOMBING
3) SPALL IN DECK WITH EXPOSED/CORRODED REINFORCING
4) SPALLS AT PIPE PENETRATIONS
5) RUSTED PIPES
6) RUSTED AND/OR FAILED HANGERS
7) LEAKING PIPES
8) DEGRADED PIPE INSULATION

DEFICIENCIES OBSERVED AT THIS LOCATION:
1) HONEYCOMBING ON PIER
2) RUSTED/LEAKING PIPES
3) RUSTED AND/OR FAILED HANGERS

NORTH

AUSTIN I.S.D.
DEPARTMENT OF CONSTRUCTION MANAGEMENT

PILLOW ELEMENTARY SCHOOL
3025 Crosscreek Dr.
Austin, Texas

FLOOR PLAN
FIRST FLOOR

APPROVALS		
DRAWN	CHECKED	APPROVED
S.P.		
07/12/11		
DWG: 15101		SHEET
DRAWING SCALE 1/16" = 1'-0"		1 OF 1