Sunset Valley Elementary School Site Summary

Address	3000 Jones Road Austin, TX 78745
Number of Permanent Campus Facilities	2
Original Year of Construction	1971, 1996
Total Campus Building Area (combined)	64,766 SF

Introduction

The Sunset Valley Elementary campus is located at 3000 Jones Road in Austin, Texas. Sunset Valley Elementary was established in 1971, and consists of the primary school along with one additional campus building. These permanent campus buildings include the Main School Building (BLDG-158A), and the Stand-Alone Building (BLDG-158B) which was constructed in 1996. All buildings are connected via covered walkways. At the time of the assessment, there was a substantial amount of construction work taking place that included restroom remodels, HVAC (heating, ventilating, and air conditioning) equipment replacement, and preparations for an addition.

Meeting Log		Revision Log		
Date	**Meeting**	**Revision**	**Date**	**Summary of Content**
7/25/16	Interview	00	9/9/16	Draft Issue
7/27/16	Assessment	01	1/24/17	Added comments from PM Andrew Miller as indicated on email dated 10/31/16. See page 7.
9/19/16	Cluster Meeting (Not Attended)			
10/31/16	Follow-Up			

Main School Building – BLDG-158A

Building Purpose	Administrative, Classrooms
Building Area	57,298 SF
Inspection Date	July 27, 2016
Inspection Conditions	95°F - Rain
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 for the original building are brick facade with exposed concrete and steel structure. Some portions of the 300-wing appear newer and do not have the exposed beam at grade. The beam at grade appears to have a cementitious coating over the top of the structural concrete or the grade beam. The brickwork appeared to be in good condition, consistent with the age of the building or addition, while the exposed concrete columns and steel structure had more substantive issues that were observed to be in average condition. In some areas, the parging was cracked or spalling off the structure. Some of the exposed concrete columns at the exterior corners appeared to be rusting at the connection with the structural beam. This was particularly true on all of the steel trellises around the 300-wing. On the main building, there were a limited number of columns (less than six) that had a similar issue. Paint on the exposed steel beams and metal decking was observed to be in poor condition at the building and the exterior trellises along with portions of the drip edge at the roof. Sealants at exterior brick joints appeared to be failing.	Average
	Exterior Windows	The window systems are an older aluminum single-hung single-type unit. Some of these are above brick, and in other locations, the system extends to the floor and contains a solid panel at the bottom. Given the lack of thermal performance of this type of	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		unit, degradation of the finishes around the windows was observed. In the 300-wing, the vinyl wall covering was delaminating. In the 200- and 100-wings, the veneer on the wood paneling was delaminating. In the 300-wing, the laminate sills and backsplash showed signs of movement, which may have been due to moisture absorption by the wood substrate. Given the age of the structure, window sealants have aged to the point that they will fail in the near term. Also noted were a number of window panes replaced with acrylic panels. In some cases, these were scratched or aging and turning opaque. These should be surveyed and replaced.	
	Exterior Doors	The exterior doors are older hollow metal doors mounted in hollow metal frames. These elements were observed to be in average condition. It was reported that the thresholds and hardware needed to be replaced. None of this hardware was ADA (Americans with Disabilities Act) compliant, panic hardware tended to be the bar type rather than a crash bar, and none of the thresholds were a saddle type that would direct water out of the building. With the exception of some classroom doors, the exterior doors were under a canopy or overhang. As such, only those without protection appeared to need replacement thresholds. A significant number of doors and sidelights were noted to have acrylic installed, as was the case with the exterior exit at the 300-wing. In addition to the door at AHU-1 having rust, it was noted that there was rust at the exterior door frame for ART.	Average
Roofing	The various roof planes are covered with a variety of materials: built up, modified bitumen, and PVC (polyvinyl chloride) were noted while on the roof. A large number of downspouts appeared to be clogged and ejecting water through the joint at the cast iron boot or other joints in the downspout. All gutters held some amount of water, and in many locations, at the joints between the gutter sections; the joint sealant had failed and was leaking. This caused wetting of the brick and had the potential to introduce water into the exterior envelope. The fully adhered PVC was newer and showed the least number of issues, although leaks were reported and noted under these roof sections. (See ceiling finish deficiencies for documentation of items that were seen.) The PVC roof sections showed ponding at the edges of the roof, though it was not significant. Many of the PVC roof sections had adhesion issues at the transition between the tapered insulation and the roof edge blocking. This manifested itself in the form of wrinkles. None of these appeared to be inflated.		Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	The modified bitumen and built up sections were keeping the water out but had significant issues that need to be addressed. The built up sections had been patched and were aged out. The modified bitumen sections had significant ponding. Though the largest area (A01) appeared to be in average condition, this area of the roof had significant ponding and a significant number of soft spots. Section A09 appeared to be in condition that suggested heavy rain could cause substantive damage inside the building.		
Interior Construction	Interior Walls	The interior wall systems are a combination of exposed brick, CMU (concrete masonry unit), studs with a panelized vinyl-wrapped drywall system, and wood paneling. Given the types of systems covering the walls, minor movements in the foundation would not appear on the exterior surfaces of these interior walls. The walls were observed to be in average condition as a result of the number of surface issues in the vinyl wall covering and the potential for moisture issues as a result of wetting from the outside or the window systems. Accordion doors in the building were typically not as long as shown on the drawings. There had been an amount of infill and the door limited to about 9 feet in length. It was reported that the operable partition in the cafeteria was old and damaged. This unit appeared to be older, but the functioning of the system was not assessed, and material stored on either side limited the review. Many of the classrooms have interior windows looking in on the common areas. In addition, these units contained acrylic window panes. Acrylic is not a durable material.	Average
	Interior Doors	Doors on the interior are solid core wood set in hollow metal frame. Wood transoms are installed above most with adjacent window systems in some cases. None of these doors had ADA hardware, and it was noted that the facility contained three different key types. The door from the cafeteria to the kitchen loading dock was currently an interior grade door and should be replaced with an exterior grade unit with a threshold and weather seals. The doors had minor surface finish issues. Frames typically exhibited wear and tear that was evidenced by the damage to the finish. Many doors and the adjacent window systems contained acrylic.	Average
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	System not present.	N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Interior Stairs	Interior stairs only appear at the stage. Consistent with the age of the facility, these were not code compliant with regard to handrails.	Good
Interior Finishes	Interior Wall Finishes	The facility has a variety of finishes that are designed to be durable but are beginning to show their age in some cases. The facility includes exposed brick, vinyl-wrapped panels that have been painted, wood paneling, and ceramic tile. In the 300-wing and adjacent spaces, the painted vinyl wall covering exhibited adhesion issues at joints. In other locations, these issues appeared to be greater. Some of the vinyl had been painted to the point that the paint system appeared to be failing, and the original wall covering was visible as in corridor C6. In contrast, the wood wall paneling appeared to have fared better over time. The 100-wing and 200-wing are primarily wood paneling in the classrooms. In these areas, the walls next to sinks showed signs of needing a waterproof material to prevent further damage. In the 300-wing, the drywall bulkhead above accordion doors exhibited damage to the finish at the metal corner bead. This was primarily caused by the flexure of the wall system when the accordion door was operated. As a result, the drywall mud on the corner bead cracked and fell out. In LITLIB of the 300-wing, the vinyl wall covering had a residue on the wall that should be sampled and the cause of its presence diagnosed.	Average
	Interior Floor Finishes	Due to construction, much of the flooring was covered with protection and therefore not reviewed. The majority of the floor finish surface is VCT (vinyl composite tile). The stage is wood, the gymnasium is covered in a sheet vinyl system, and the kitchen has quarry tile, while restrooms have ceramic tile. Carpet was noted in the administration area, the library, and a few other locations. From what could be seen, the floor appeared to be in good condition. It was not new but has been well maintained and was free of pitting and other damage. In LITOFC, the carpet is in poor condition and damaged. At one exterior door, the VCT was buckling.	Good
	Interior Ceiling Finishes	The facility has an older 2'x4' suspended ceiling system with drywall accents in the 300-wing. In the 100- and 200-wings, the ceilings have exposed structure with Tectum-type panels. This is similar to the corridors and	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		high-bay spaces. A portion of the drop ceiling tiles had been replaced with a different tile type. This was not extensive but was such that it would suggest past water damage. This appeared clearest in the art room. Damage to a ceiling finish system is typically from water infiltration. Other issues that were consistently observed were damage to ceiling tiles in single restrooms as a result of unsupported light fixtures in the suspended system relying on the tile to support them. As a result, the tiles were cracked from the weight. In addition to this, the grid in several of the male restrooms was rusted.	
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 typically 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.	Good
	Domestic Water Distribution	All of the plumbing fixtures are serviced with domestic cold water. There is a gas water heater adjacent to the kitchen in the main mechanical room. The water heaters near the kitchen spaces were in new condition with no identified or reported deficiencies. There is an additional EWH (electric water heater) in the stand-alone classroom building that serves janitorial closets, which were observed to be in good condition. The plumbing distribution equipment appeared to be in good condition. There is an electric water heater in the admin that is not serviceable.	Good
	Other Plumbing	The roof drain is a scupper system. An internal drainage system is not present.	N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Mechanical/ HVAC	The major mechanical equipment consists of indoor chilled/hot water multi-zone AHUs (air handling units), an air-cooled chiller, and gas-fired boilers. There are three DX (direct expansion) HRUs (heat recovery units) that are located on the roof and provide outside air to the building. All AHUs were located in mechanical closets. All AHUs were being replaced as new and had not been started up at the time of assessment. The HRUs were original and have exceeded their useful life expectancy. The air-cooled chiller was new and had not been started up at the time of assessment. The chilled water pumps were replaced at the same time. The existing boiler was still in place and had passed its service date. It was understood that this boiler was to be replaced as new along with the heating water pumps. Since the majority of the mechanical equipment had been replaced as new, except the HRUs, the system appeared to be in good condition. PM Andrew Miller reported that testing and balance is scheduled to occur for the new HVAC equipment that was replaced in Summer 2016."		Good
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 building is 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 120/208-volt 3,000-amp main switchboard “MSB” located on the exterior near the service transformer. The service is distributed through a new interior switchboard “MDP” in the MAIN ELEC RM that distributes service to branch panelboards and equipment located in various electrical rooms throughout the building. Facility staff reported the kitchen panel was old and out of date. Panel “X2” in mechanical room AC-B had an open space revealing the buss inside. The electrical distribution equipment appeared to be in average condition. The building does not have a lightning protection system, but campus staff is requesting one be installed.	Average

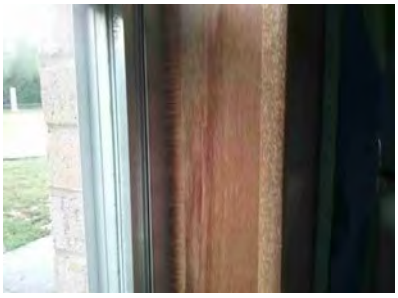
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Lighting	The building exterior lighting consists of HID (high-intensity discharge) light fixtures that are located along the entire perimeter. The interior lighting consists primarily of T8 fluorescent light fixtures. The interior lighting appeared to be in good condition but in need of new lamps. There were exit signs present in the building that appeared to be in good working condition. Facility staff reported that the exterior had insufficient lighting and dark spots due to trees. The Interview Minutes also reported light fixtures in restrooms and mechanical rooms were inadequate.	Average
	Communications & Security	There is a security system including surveillance cameras in the building. There is a public address system and telecommunications system in the building. The security system was reported in the Interview Minutes as not effective in the cafeteria, teacher parking lots, play areas, and behind the gymnasium. Also, the location of the card reader traps people in the vestibule between the 200- and 300-classroom pods. The systems appeared to be in good condition with no deficiencies to report.	Good

Exterior System Deficiency Examples

Exterior Walls




Exterior Windows

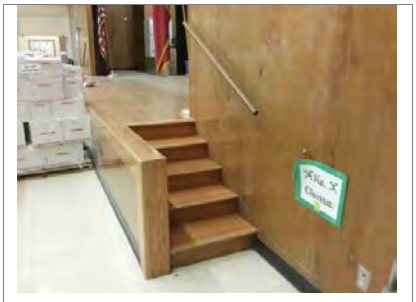
Exterior Doors

Roofing Deficiency Examples



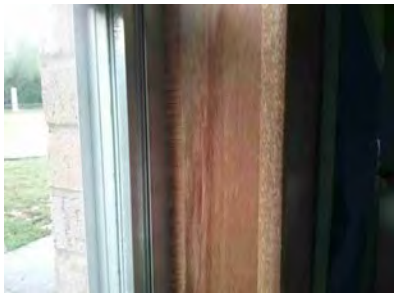

Stairs Deficiency Examples

Interior Stairs

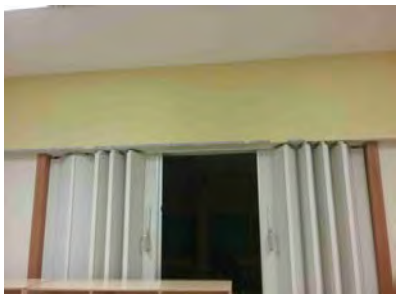


Interior Finishes Deficiency Examples

Interior Wall Finishes

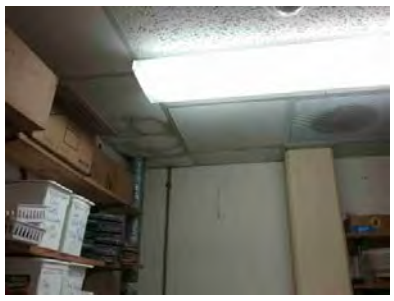


Interior Floor Finishes

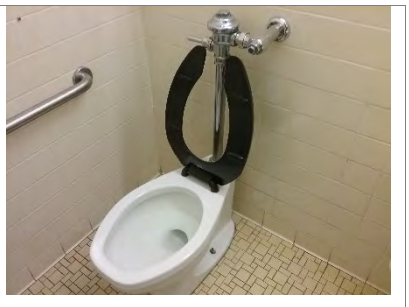

Interior Ceiling Finishes





Plumbing System Deficiency Examples

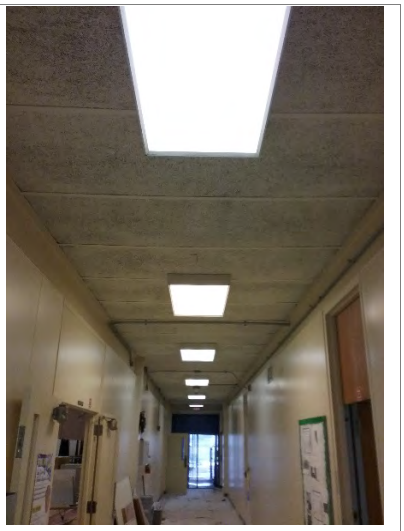
Domestic Water Distribution

Mechanical/HVAC System Deficiency Examples

Electrical System Deficiency Examples

Electrical Distribution



Stand-Alone Classroom – BLDG-158B

Building Purpose	Classrooms
Building Area	9,169 SF
Inspection Date	July 27, 2016
Inspection Conditions	95°F - Overcast and raining in the morning
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	This building has brick exterior walls with windows inset over brick sills. On the east side of the building, there a was vertical crack observed in the masonry through the brick.	Average
	Exterior Windows	The exterior window system is comprised of aluminum frames with single-pane glazing similar to the main building. As a result of moisture, likely the result of condensation, the sills of the exterior windows showed water damage. The sealant around the windows was in a state of failure and needed to be replaced. Acrylic was present in a number of the operable sashes of the windows and should be replaced.	Average
	Exterior Doors	Exterior doors are hollow metal door panels with windows set in hollow metal frames. One pair of doors appeared to have sagged and was repaired with a pivot hinge at the top of the doors. These types of hinges are not durable, and the doors will continue to sag inward.	Average
Roofing	The roof system is comprised of a fully adhered single-ply PVC system on the main building. Covered walkways utilize a metal panel system. Like BLDG-158A, there appeared to be some ponding at the roof edge. At the covered walkway, there was physical damage that allowed water to come through.		Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Interior Construction	Interior Walls	CMU and drywall partitions appeared to be performing consistent with their design. Accordion doors exist between classroom pairs. This was not noted on the floorplans. In one location in the corridor, a crack in the CMU wall was observed.	Average
	Interior Doors	Interior doors consist of solid core wood veneer with hollow metal frames. These doors generally had minor surface damage and were observed to be in average condition due to the volume of damage.	Average
	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 primarily paint on drywall or CMU. The surfaces of the 400-wing appeared to have taken more abuse than the other wings of the facility. In the corridors, the paint on the CMU has a substance that should be sampled and the cause of its presence addressed. This is apparent at rooms 402 and 404.	Average
	Interior Floor Finishes	Floor finishes are limited to VCT throughout the building. The treatment of the flooring in room 404 appeared to have a significant amount of surface damage. In room 408, there was a crack in the floor finish that should be investigated. It ran diagonally from one exterior wall to the other. The crack had no offset between the sides, suggesting minor movement.	Average
	Interior Ceiling Finishes	This building contains a 2'x4' suspended ceiling system throughout. One room was noted to have water-damaged ceiling tile.	Good
Conveying	System not present.		N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Plumbing	Plumbing Fixtures	The building has restrooms for students in each classroom, and separate staff restrooms located in the corridor. These restrooms typically have vitreous china hand sinks in counters with manual faucets, along with vitreous china, floor-mounted 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 closet. The restroom plumbing fixtures were observed to be in good condition as the fixtures were typically aged but still operational.	Good
	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 appeared 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 GSHPs (ground source heat pumps). The loop water temperature is serviced from the ground wells. All of the GSHP units for this building are located in mechanical rooms within the main corridor. These units were original to the building and were approaching their service dates. The outside air for the building is provided through a HRU that is located on the roof. This unit was original to the building and was approaching its service date. Each of the GSHPs are serviced with a push-pull pumping system. Some of these were showing signs of corrosion at the pump connections. The GSHPs utilize R-22. Due to the approaching service dates of the equipment and since the units were still operational with little to no apparent service performed on the equipment, the equipment appeared to be in average condition.		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

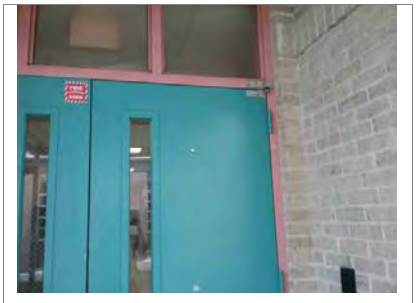
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Fire Protection/ Suppression	The building is does not have a fire suppression system. The building is protected by portable fire extinguishers placed throughout the facility. All observed portable fire extinguishers had inspection tags dated within the last year as required.	N/A
Electrical	Electrical Distribution	In electrical room ELEC EQUIP, the electrical service consists of a 400-amp panel “HE” and a transformer stepping down power from 480 volts to 120/208 volts through two 120/208-volt panels, “L1” and “L2”. The electrical distribution equipment appeared to be in good condition. The building does not have a lightning protection system.	Good
	Lighting	The building's 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 classrooms and corridor 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 with no deficiencies to report.	Good

Exterior System Deficiency Examples

Exterior Walls

Exterior Windows

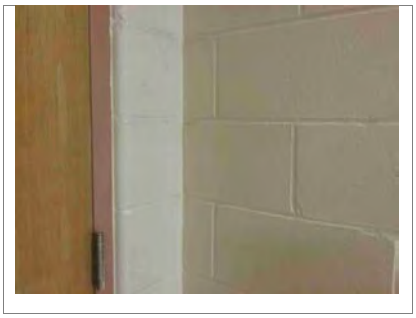
Exterior Doors



Roofing Deficiency Examples

Interior Construction Deficiency Examples

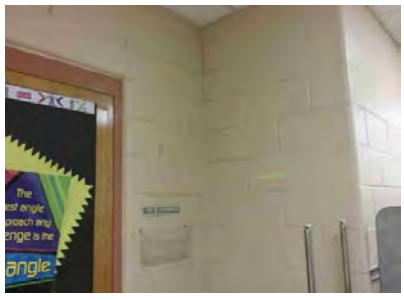
Interior Walls



Interior Doors

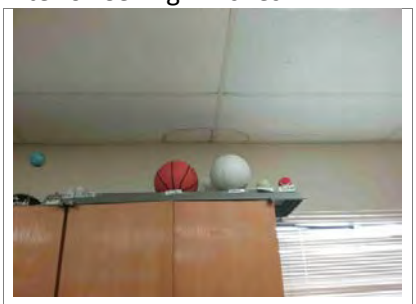
Interior Finishes Deficiency Examples

Interior Wall Finishes



Interior Floor Finishes

Interior Ceiling Finishes



Mechanical/HVAC System Deficiency Examples

Sunset Valley 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

Exterior

1. Remove acrylic panels and replace with appropriate glazing.

Roofing

1. Review ponding at roof edge with installation contractor and warranty provider.

Interior Construction

1. Update CAD drawings to reflect the correct configuration of spaces.

Plumbing

1. Continue preventive maintenance on aged plumbing fixtures and plan for replacement in the future as fixtures continue to age at all associated 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 HVAC equipment in mitigating the humidity observed in all facilities. If any HVAC equipment is planned to be replaced, such as the AHUs or package units, they should be replaced with an updated asset that includes integral dehumidification to 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 noted with excessive noise/vibration by repairing the motor, changing the belt, or 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 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.
7. Replace 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 using it 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.
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 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. New equipment may have different performance compared to the old.

Fire Protection

1. Continue annual inspections of the fire protection system (at the main building) and the portable fire extinguishers (at all facilities).
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. Replace/add cameras in the cafeteria, teacher parking lots, play areas, and rear of gymnasium.
4. Provide a card reader in the vestibule between the 200- and 300-classroom pods.

Main School Building Recommendations

Exterior

1. Repaint steel structural elements.
2. Investigate rusting at concrete columns.
3. Remove old sealant at brickwork and install new.
4. Remove damaged parging and reparge concrete.
5. Replace the window system with one that has better thermal performance or replace finishes adjacent to windows with materials that can be exposed to moisture.
6. Replace existing sealant at windows.
7. Install thresholds at exterior doors that direct water outside.
8. Review existing door hardware.

Roofing

1. Immediately replace the roofing on section A09.
2. Review condition of PVC material with installer.
3. Clean out all gutters and downspouts.
4. Review fall of gutters to ensure positive flow of water.

Interior Construction

1. Review the operable partition between the gymnasium and the cafeteria.
2. Replace acrylic window panes.

Plumbing

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

Mechanical/HVAC

1. Replace the aged roof top units as well as any equipment that utilizes R-22.
2. Create a replacement plan for existing exhaust fans.

Electrical

1. Install a circuit breaker cover in Panel “X2” in Mechanical Room AC-B.
2. Coordinate new kitchen equipment and replace the kitchen panel to accommodate future loads.
3. Inspect all exterior light fixtures to ensure they are working properly and provide adequate coverage.

Stand-Alone Classroom Building Recommendations

Exterior

1. Investigate the crack in brick work.
2. Replace the sealant at windows.
3. Replace pivot and knuckle hinges with continuous gear hinges.

Interior Construction

1. Investigate the damaged floor finish in room 404. Replace floor tile as required.

Interior Finishes

1. Sample and review residue on the walls near rooms 402 and 404.
2. Repaint the entire interior.
3. Monitor room 404 to see if the VCT requires replacement.

Mechanical/HVAC

1. Create a plan for GSHP replacement along with associated pumps.
2. Create a plan for ground source well maintenance and burn-out prevention.

CRAWL SPACE – Sunset Valley ES – Main School Building (BLDG-158A)

Building Purpose	Administrative, Classrooms, Gym, and Cafeteria
Inspection Date	August 26, 2016, Afternoon
Inspection Conditions	90° - Cloudy

Crawl Space System Deficiency Overview

NOTES CONCERNING CRAWL SPACE OBSERVATIONS: Standing water and pipe congestion did not allow access to many areas of the crawl space. The east addition to the Main Building and Building B have slab-on-grade foundations and do not have crawl spaces..

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 at the perimeter was saturated. Soil was typically damp with standing water in some areas on the west side of the building. Source of water could not be determined but is likely accumulation from recent rainfall. Soil/Drainage deficiencies: • Saturated soil / Standing water	Poor
	Soil Retainers	Concrete soil retainers are present at the perimeter of the building. Retainers appeared in good condition overall, but overturned soil retainers were observed south of the administration area. Describe any soil retainer deficiencies. • Overturned concrete retainers	Average
	Areaways/Ventilation	Approximately six areaways are located around the main building. The crawl space was very humid and damp, indicating ventilation is likely inadequate. Condensation was observed on pipes. Areaway/ventilation deficiencies: • Inadequate ventilation	Average

	Access Hatches	Access hatches were located on the floors of mechanical rooms. Two access hatches are located in the main building. One is located by the administration area. The other is accessed through the mechanical room on the west side of the building. Access hatch deficiencies: • Exposed reinforcement in slab opening for access hatch	Average
Exposed Structure	Exposed Columns & Tops of Foundations	Observed columns were generally in good condition. There was slight mushrooming at top of one pier under the admin area. Column/Foundation deficiencies: • Slight mushrooming at top of one pier	Good
	Exposed Faces of Perimeter Walls / Beams	Observed perimeter beams were in good overall condition. No significant deficiencies were observed.	Good
	Exposed Portions of Interior Floor Beams Above	Suspended floor beams spanned between columns. Observed floor beams were in good condition. No significant deficiencies were observed	Good
	Underside of Suspended Floor Slabs Above	The floor slab system consisted of 12" deep precast pan joists. There was significant longitudinal cracking in several the precast panel webs. Spalling and exposed/rusted reinforcement was observed on underside of the slabs and on sides of pan joist webs. Slab deficiencies: • Significant longitudinal cracks in pan joist webs • Exposed/corroded reinforcement on underside of slab and on pan joist webs • Spalling on underside of slab and on pan joist webs	Poor
Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes & Hangers	The crawl space had few suspended pipes. Some pipes were missing insulation, and the insulation that was provided was not in good condition. Rusted pipe hangers were observed. Pipe deficiencies: • Rusted pipe hangers • Stripped/missing pipe insulation or degraded 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

Standing water

Overturned concrete soil retainers

Exposed slab reinforcement below hatch

Exposed Structure

Mushrooming at drill shaft

Longitudinal cracking in precast joist

Exposed reinforcing underside of slab

 Exposed reinforcement in precast joist	 Spalling under deck	

Pipes, Ducts, Equipment & Fireproofing

 Rusted pipe hangers, degraded pipe insulation	 Stripped pipe insulation	

Sunset Valley 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 (BLDG-158A) Recommendations

Soil, Drainage, Ventilation & Access

1. Improve grading outside of building to promote drainage away from building
2. Re-grade in crawl space so lower grades existing around perimeter and prevent water from flowing elsewhere and ponding
3. Replace or reposition rotated retainers
4. Investigate need for improved ventilation

Exposed Structure

1. Clean & protect exposed, rusted reinforcement
2. Use epoxy injection to repair longitudinal cracks in pan joist webs
3. Patch larger spalls under slab or on pan joist webs

Pipes, Ducts, Equipment & Fireproofing

1. Replace severely rusted hangers
2. Replace missing & degraded pipe insulation

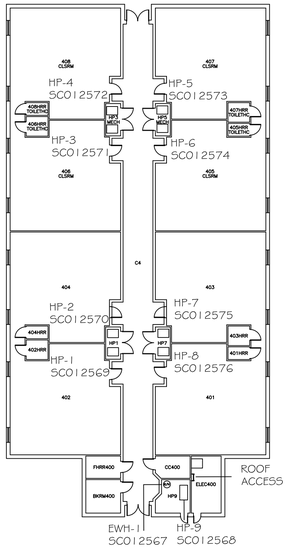
DRAFT

APPROXIMATE LIMITS OF CRAWLSPACE OBSERVED DURING SITE VISIT

APPROXIMATE LIMITS OF CRAWLSPACE PER AVAILABLE PLANS AND SITE OBSERVATIONS

B

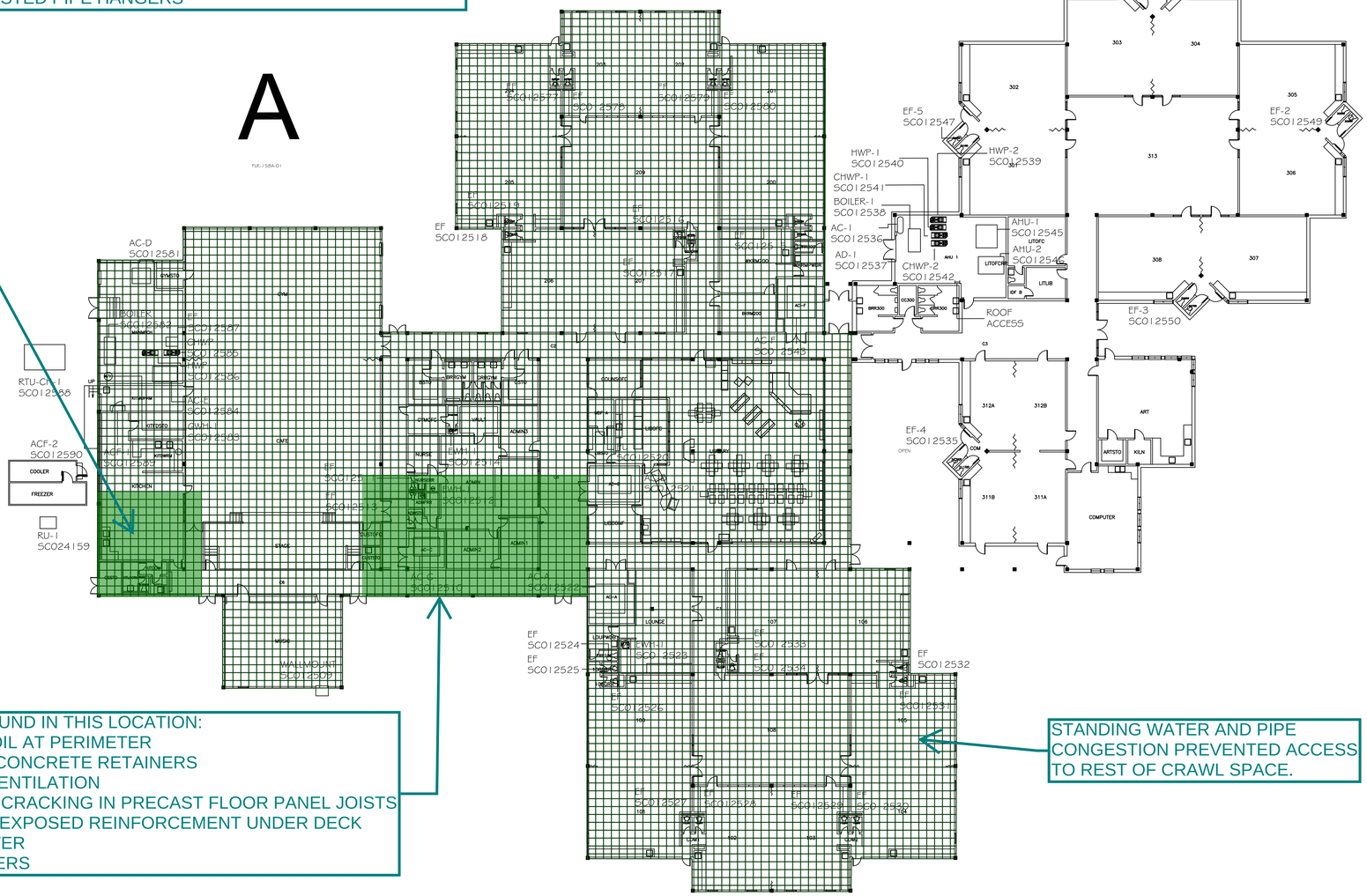
FLR-1588-01



DEFICIENCIES FOUND IN THIS LOCATION:
1) DAMP SOIL
2) SIGNS OF PONDING WATER PREVIOUSLY
3) INADEQUATE VENTILATION
4) EXPOSED REINFORCEMENT IN BEAMS
5) LONGITUDINAL CRACKING IN PRECAST PAN JOIST WEBS
6) EXPOSED/RUSTED REINFORCEMENT IN PAN JOISTS
7) EXPOSED/RUSTED REINFORCEMENT UNDER SLAB
8) MISSING/DEGRADED PIPE INSULATION
9) RUSTED PIPE HANGERS

A

FLR-1584-01



DEFICIENCIES FOUND IN THIS LOCATION:
1) SATURATED SOIL AT PERIMETER
2) OVERTURNED CONCRETE RETAINERS
3) INADEQUATE VENTILATION
4) LONGITUDINAL CRACKING IN PRECAST FLOOR PANEL JOISTS
5) SPALLING AND EXPOSED REINFORCEMENT UNDER DECK
6) STANDING WATER
7) RUSTED HANGERS

STANDING WATER AND PIPE CONGESTION PREVENTED ACCESS TO REST OF CRAWL SPACE.

NORTH

AUSTIN I.S.D.

DEPARTMENT OF CONSTRUCTION MANAGEMENT

SUNSET VALLEY ELEMENTARY SCHOOL

3000 Jones Rd.
Austin, Texas

FLOOR PLAN

FIRST FLOOR

APPROVALS		
DRAWN	CHECKED	APPROVED
J.R.		
08/22/13		
DWG: 158-FLR-01		SHEET
DRAWING SCALE		
1/32"=1'-0"		1 OF 1