Summitt Elementary School Site Summary

Address	12207 Brigadoon Lane Austin, TX 78727
Number of Permanent Campus Facilities	2
Original Year of Construction	1986
Total Campus Building Area (combined)	75,903 SF

Introduction

The Summitt Elementary School campus is located at 12207 Brigadoon Lane, Austin, Texas. Summitt Elementary School was built in 1986. It consists of the Main School Building (BLDG-138A), which houses the administration offices, classrooms, cafeteria, library, and gymnasium, and the Stand-Alone Classroom Building (BLDG-138B). These buildings are connected by a covered walkway.

Meeting Log		Revision Log		
Date	**Meeting**	**Revision**	**Date**	**Summary of Content**
8/1/16	Interview	00	9/9/16	Draft Issue
8/2/16	Assessment	01	12/21/16	Added comments from PE Rumman Zamir as indicated on email dated 10/28/16 and comments from PM Craig Estes as indicated on email dated 10/31/16. See pages 3, 5, 6, and 17.
9/26/16	Cluster Meeting (Attended)			

Main School Building – BLDG-138A

Building Purpose	Administration Offices, Classrooms, Cafeteria, Library, and Gymnasium
Building Area	65,936 SF
Inspection Date	August 2, 2016
Inspection Conditions	100ºF - 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 exterior of the building appeared to be in good condition. There was a leaking hose bib on the north wall, which was leading to algae on the brick façade.	Good
	Exterior Windows	The windows are single-pane aluminum metal-framed inset into the brick façade. The windows appeared to be in good condition. The caulk on the triangular windows above the common areas was cracking and separating.	Good
	Exterior Doors	There are many double exterior metal doors with lites throughout the building. Some exterior doors are solid metal with no lites. The exterior doors appeared to be in good condition. Paint on the door frames and on the insides of the doors was chipped in well-used areas.	Good
Roofing	The main part of the building has a single-ply roof. The lobby, library, gymnasium, cafeteria, and common areas are covered by a standing seam metal roof system. The roofs appeared to be in good condition. Roof A01 had tree limbs lying on it. Roof A10-11, which covers the lobby, had significant ceiling stains along the ridge of this area. Roof A08, covering the library, showed ceiling stains at the gypsum board and tile intersection.		Good
Interior Construction	Interior Walls	The interior walls are gypsum board in the classrooms, administration area, and lobby. There is CMU (concrete masonry unit) in the gymnasium and cafeteria areas. The corridors are gypsum board at the top, and plastic	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		laminate from the floor up to six feet. The walls appeared to be in good condition. There were some areas where the gypsum board had been scraped down to the metal edging.	
	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. The paint at door window frames and astragals was chipped. Classroom restrooms door frames were rusted, particularly at the bottom.	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	The interior walls are painted gypsum board in the classrooms, administration area, library, and lobby. There is painted CMU in the gymnasium and cafeteria areas. The corridors are gypsum board at the top, and plastic laminate from the floor up to 6 feet. The wall finishes were in good condition.	Good
	Interior Floor Finishes	The interior floor finishes are VCT (vinyl composition tile) in the administration offices, corridors, cafeteria, and classrooms. Ceramic tile is in the restrooms and kitchen. The flooring is carpet in the library, administration offices, and common areas located outside the classrooms. There is a rubber sport court in the gymnasium. There is wood flooring on the stage. All floor finishes were in good condition. There were some stains on the carpet in the library area. There were three open holes in the cafeteria where floor drains were plugged, and the floor was never repaired. AISD staff reported that the floor was repaired in Summer 2016.	Good
	Interior Ceiling Finishes	The interior ceilings are ACT (acoustical ceiling tile) in metal grid in the classrooms and administration areas. There are 12x12 perforated tiles on the ceiling in the lobby, library, and cafeteria. There are gypsum board ceilings in the restrooms and partially in the library. The gymnasium has tectum acoustical panels in metal grid. The ceiling systems were observed to be in average condition. The perforated tiles were stained in the lobby and library in a pattern indicating a possible roof leak. The ceiling grid in the kitchen area was significantly rusted.	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The facility contains multiple plumbing applications that service one level, consisting of: in-classroom student restrooms, staff restrooms, janitorial closets with service sinks, and one commercial kitchen. The restrooms located inside classrooms have vitreous china floor-mount toilets with manual flushing valves. The classroom restrooms are not equipped with sinks; however, the classrooms have laminated particle board vanities with stainless steel sink/bubbler combinations mounted inside 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 with manually operated flushing valves. There are also wall-mounted service sinks in the janitorial closets. A new ADA (Americans with Disabilities Act) compliant male and female restroom was installed this year next to the administration area. The building's plumbing fixtures were in good condition. There were no major plumbing fixture deficiencies observed at the time of the assessment. The plumbing fixtures observed throughout the building were either from the facility's original construction or had been installed recently. Though there were fixtures that were aged and required maintenance, all of the fixtures assessed were functional. The Staff reported that classroom restrooms 159 and 160 backup and flood about two to three times per year. The water fountain in corridor 6 next to the faculty lounge had low water pressure.	Good
	Domestic Water Distribution	The majority of the plumbing fixtures observed in this facility are not serviced by any domestic water distribution equipment, such as large vertical water heaters (greater than 30-gallon capacity). The remainder of the plumbing fixtures serviced by domestic water distribution equipment are located in the in the commercial kitchen. The fixtures in the commercial kitchen appear to be serviced by one vertical GWH (gas water heater) located in the main mechanical room. This water heater has the ability to produce 365 MBH and hold 85 gallons. The domestic distribution system was in average condition. Staff reported that the domestic water distribution piping for the entire building was aged and	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		was original to the school's construction. The vertical GWH-1 (SC013110) had an installation date of 1998. The water heater had a boiler certificate of operation that expires in 2018; however, the unit had corrosion on the external shell and piping as well as small leaks on the piping. The water heater's piping insulation appeared to have been damaged by the leak and corrosion. AISD staff reported that the water heater was replaced in August 2016.	
	Other Plumbing	The roof drains for this facility were predominantly designed with an external-type drainage system equipped with gutters and downspouts. A new grease trap and associated piping were installed during the summer. The other plumbing systems were observed to be in good condition during the assessment with isolated instances of deterioration. Staff reported two deficiencies for the facility's other plumbing systems including continuously leaking exterior water spigots outside rooms 128 and 211. The exterior water spigot next to CWP-1 and CT-1 could not be used because it backed up and flooded the gymnasium storage room (GYMOSSTO).	Good
Mechanical/ HVAC	This building has multiple HVAC (heating, ventilation, and air conditioning) applications that service one floor level. The major mechanical equipment consists of indoor water source heat pump units, packaged RTUs (roof top units)/HRUs (heat recovery units), small to large roof top exhaust/supply air fans and split system air conditioning units. 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 with a flow capacity of 478 GPM (gallons per minute) and two horizontal gas-fired boilers with rated output capacities of 1,919 MBH. There were 17 HVAC systems assessed throughout the building. The estimated capacities of the roof-mounted exhaust fans ranged from 200 to 1,300 CFM (cubic feet per minute), and the estimated capacities for the HRUs/outdoor air units were 2,500 to 5,000 CFM. The refrigeration capacities of the HVAC units ranged from 2.5 to 35 tons. Staff reported that in 2015, 56 new water source heat pumps were installed, suspended above the ceiling tile. The mechanical/HVAC for this facility was in average condition. Staff reported the multiple deficiencies for the facility's mechanical/HVAC systems. The new HP-162 had multiple condensation leaks/floods. All of the roof top-mounted outdoor air units/HRUs could not be used, because they leaked into classrooms or had electrical issues. All of the exhaust fans in the building were not used because of electrical issues. Many of the deficiencies observed were general aging of equipment and		Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		enclosure and piping/insulation damage due to excessive corrosion. Another widespread observed deficiency was the use of outdated R-22 refrigerant in some of the existing HVAC systems. Another deficiency observed was that all of the roof top outdoor air units/HRUs had electrical disconnect switches in the off position. The units utilized outdated R-22 refrigerant and were nearing the end of their typical design service life. The large water source heat pumps that serviced the gymnasium and the cafeteria were installed in 2001 and were nearing the end of their typical design service life. The fluid cooling tower (CT-1 SC01817) was nearing the end of it typical design service life, had corrosion on its enclosure (possibly from previous leaks), and the fill material installed was dirty, scaled, and blocked by debris. It was reported by AISD Construction Management that the HVAC system upgrades including; two new boilers, new RTU for the administration area, and new Lon-Tridium Control System were completed as part of the recent bond program.	
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 a Silent Knight control panel. The main electronic control panel and the remote annunciator indicated all systems were normal. The fire alarm system was observed to be in good condition.	Good
	Fire Protection/ Suppression	The building is not equipped with a fire sprinkler/ suppression system. 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 and utility meter for the facility) are located on the southwest side of the complex adjacent to the main mechanical room. The main mechanical room houses two 480/277VAC, 1200A switchboards and multiple 480VAC panelboards with varying capacities. A small number of transformers exist in certain mechanical and electrical rooms feeding panelboards to supply 208/120 voltages to end devices in the building. The electrical distribution equipment was in good condition. This building was constructed in 1986; therefore, no electrical equipment was observed nearing the end of its life expectancy. Light corrosion was on the enclosure of a few panelboards and transformers. No deficiencies were observed. The facility staff reported that the kitchen panelboard	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		had reached capacity. The facility staff also reported that the administration area's panelboard was undersized, causing frequent breaker trips.	
	Lighting	The exterior of the building is outfitted with what appears to be wall-mount HID (high-intensity discharge) fixtures located near the roofline of the building. Covered walkways and exterior entranceways are illuminated by surface-mounted ceiling fixtures. The parking lot and property areas are illuminated with pole lights. The interior lighting consists of fluorescent troffer fixtures in areas such as classrooms, administration offices, the cafeteria, and the library. Pendant mounted fixtures along with natural lighting illuminate the classroom corridors. The gymnasium is equipped with suspended fluorescent fixtures, and screw-type fixtures are located in closets and mechanical rooms. The stage is equipped with specifically designed lighting, which is controlled by a local panel, to support stage productions. The exterior and interior lighting was in good condition The staff reported that the exterior lighting output was low and not all preferred areas were illuminated. No detail was provided on which areas needed additional lighting. There are exit signs at every exit; however, various signs were not illuminated.	Good
	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 are also door frame-mount proximity readers for access into certain entrances, and a call box is located at the front entrance. Multiple communication closets hold network switches, hubs, and routers in a rack-style configuration. The facility appears to have wireless routers installed in classroom ceilings strategically throughout the building. All communications and security equipment was in good condition. There were no damaged security panels or cameras observed. The staff reported that the exterior camera coverage was insufficient, multiple blind spots existed, and the cafeteria camera did not cover the entire cafeteria.	Good

Exterior System Deficiency Examples

Exterior Walls

Exterior Windows

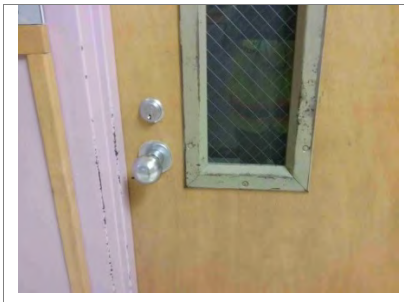
Exterior Doors

Roofing Deficiency Examples

Interior Construction Deficiency Examples

Interior Walls

Interior Doors



Interior Finishes Deficiency Examples

Interior Floor Finishes

Interior Ceiling Finishes



Plumbing System Deficiency Examples

Domestic Water Distribution


Mechanical/HVAC System Deficiency Examples

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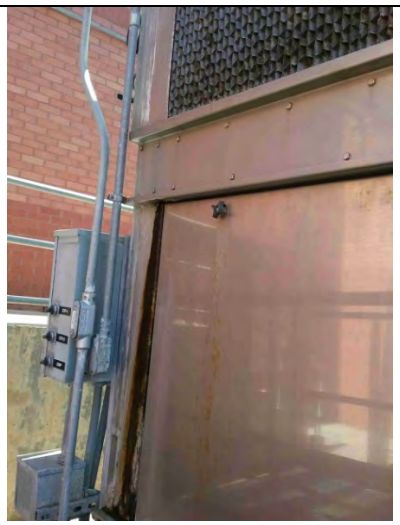

Stand-Alone Classroom Building – BLDG-138B

Building Purpose	Classrooms
Building Area	9,966 SF
Inspection Date	August 2, 2016
Inspection Conditions	100ºF - Hot and sunny
Facility Condition Index	

System Deficiency Overview

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

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Exterior	Exterior Walls	The exterior of the building consists of a brick façade. The exterior was in good condition.	Good
	Exterior Windows	The windows are single-pane aluminum metal-framed inset into the brick façade. The windows appeared to be in good condition.	Good
	Exterior Doors	There are double exterior metal doors with lites throughout the building. The doors appeared to be in good condition.	Good
Roofing	The building has a single-ply roof. The roof appeared to be in good condition.		Good
Interior Construction	Interior Walls	The interior walls are gypsum board in the classrooms. The corridors are gypsum board at the top and plastic laminate from the floor upwards of 5 feet. The walls appeared to be in good condition.	Good
	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 good condition.	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	The interior walls are painted gypsum board in the classrooms. The corridors are gypsum board at the top and plastic laminate from the floor up to 5 feet. The wall finishes were in good condition.	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Interior Floor Finishes	The interior floor finishes are VCT in the corridors and classrooms. Ceramic tile is in the restrooms. The floor finishes were in good condition.	Good
	Interior Ceiling Finishes	The interior ceilings are ACT in metal grid in the classrooms and corridors. There are gypsum board ceilings in the restrooms. The ceiling finishes appeared to be in good condition.	Good
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The facility contains multiple plumbing applications that service one level, consisting of in-classroom student restrooms, one staff restroom, and one janitorial closet with a service sink. The restrooms located inside classrooms have vitreous china floor-mount toilets with manual flushing valves. The classroom restrooms are not equipped with sinks; however, the classrooms have laminated particle board vanities with stainless steel sink/bubbler combinations mounted inside the vanity. The remainder of the facility's restrooms has vitreous china sinks with manual or metering faucets, along with vitreous china floor/wall-mount toilets with manual flushing valves. The restroom plumbing fixtures observed during the assessment were aged but in good working condition.	Good
	Domestic Water Distribution	The majority of the plumbing fixtures observed in this facility are not serviced by any domestic water distribution equipment. There were no staff-reported deficiencies or planned/ requested renovations for the facility's domestic water distribution system. The domestic water distribution plumbing and equipment observed during the assessment were in good condition.	Good
	Other Plumbing	The drains for this facility were predominantly designed with an external-type drainage system equipped with gutters and downspouts. The other plumbing system observed during the assessment was in good condition. There were no reported deficiencies.	Good
Mechanical/ HVAC	This building has two types of HVAC applications that service one floor level. The major mechanical equipment consists of floor-mounted horizontal packaged unit ventilator systems and one large roof top-mounted outdoor air unit/HRU. There were 13 HVAC systems assessed throughout the building. The estimated capacity of the large roof top-mounted outdoor air unit/HRU is 2,500 to 3,000		Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		CFM. The refrigeration capacities of the individual classroom unit ventilators ranged from 1- to 1.5-TON. The mechanical/HVAC for this facility was rated to be in average condition. The staff reported the air conditioning units installed were original to the building and were very loud and disturbing. Staff also reported that OAU-5 had electrical issues, and at times, discharged toxic exhaust fumes from adjacent mechanical equipment into the building. The classroom HVAC units had an estimated installation date of 1989 and had surpassed their typical design service life. The units were also potentially charged with R-22 refrigerant. R-22 refrigerant is being phased out of use and eventually will render equipment that utilizes it obsolete. The roof top outdoor air unit was installed in 2003 and was nearing the end of its typical design service life. The unit also utilized R-22 refrigerant.	
Fire Protection	Fire Alarm	The building contains a fire alarm system that consists of alarm and signaling devices such as horns/ annunciators, strobes, horn/strobe combos, pull stations, and detectors. An electronic control panel was not located in the building, and it is believed the system communicates with a main control panel in BLDG-138A. The fire alarm system was in good condition.	Good
	Fire Protection/ Suppression	The building is not equipped with a fire sprinkler/ suppression system. It is protected by portable fire extinguishers stationed throughout the building. All portable fire extinguishers observed were inspected within the last year.	N/A
Electrical	Electrical Distribution	Electrical room 300 exists on the north corner just inside the main entrance. There are multiple transformers and multiple panelboards housed in this room, feeding power throughout the building. Transformers also feed multiple panelboards in the custodial closet located outside the main entrance. The electrical equipment was observed in good condition.	Good
	Lighting	The exterior of the building is outfitted with what appears to be wall-mount HID fixtures located near the roofline of the building. Covered walkways are illuminated by surface-mounted ceiling fixtures. The interior lighting consists of what appears to be troffer fluorescent-type fixtures in the ceiling with screw-type fixtures illuminating the closets. There are exit signs at every exit that are operational. The exterior and interior lighting was observed in good condition.	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Communications & Security	There is a Gemini security system currently installed with a keypad at the front entrance. Motion detectors are installed in interior areas, and security cameras are installed strategically on exterior corners and walls. A communication closet exists in a storage closet south of the main entrance housing network switches, hubs, and routers in a rack-style configuration. The facility appears to have wireless routers installed in classroom ceilings strategically throughout the building. All communication and security equipment was observed to be in good condition. There were no damaged security panels or cameras observed.	Good

Mechanical/HVAC System Deficiency Examples

Summitt 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 the caulking at the triangular window areas.
2. Clean algae off the north wall.

Roofing

1. Trim trees so they are not touching roof areas.
2. Investigate the standing seam roof A10-A11 ridge over the lobby area.
3. Investigate standing seam roof A08 along the library intersection of perforated tiles and gypsum board wall.

Interior Construction

1. Repair gypsum board tears at wall corners where damaged.
2. Repaint chipped door frames and exit door interiors.
3. Replace classroom restroom rusted door frames.

Interior Finishes

1. Replace stained, yellowed perforated ceiling tile in the lobby and library as needed.
2. Repair the vinyl tile floor in the cafeteria where piping was plugged.
3. Clean the carpet in the library to eliminate stains.

Plumbing

1. Continue preventive maintenance on aged plumbing fixtures and plan for replacement of the fixtures in the future as they continue to age.
2. Further investigate the downstream piping associated with the plumbing fixtures in classroom restrooms 159 and 160 to determine if it can be repaired or replaced to avoid back-up/flooding issues in the future.
3. Repair exterior water spigots outside rooms 128 and 211 that are continuously leaking.
4. Further investigate the upstream piping associated with exterior water spigot next to CWP-1 and CT-1 to determine if it can be repaired or replaced to avoid back-up/flooding issues in the future.
5. Replace aged and out of dated GWH-1. AISD staff reported that the water heater was replaced in August 2016.
6. Repair the hose bib leak on north wall.

Mechanical/HVAC

1. Plan for and track equipment that uses R-22 refrigerant. The refrigerant is being phased out of manufacturing and construction use in the near future and will make all equipment that utilizes R-22 refrigerant obsolete.
2. Continue conducting preventive maintenance checks and services for the HVAC systems. Plan to repair or replace all aged and out-of-date HVAC equipment.
3. Clean and clear cooling tower's fill. It is also recommended that the fluid cooler enclosure be cleaned or repaired to prevent any further corrosion from occurring.

Electrical

1. Assess the kitchen and administration electrical load requirements, and determine if additional panelboards should be added to meet demand.
2. Assess exterior lighting for low illumination levels, and add fixtures as needed.

3. Replace the camera in the cafeteria with one that will cover the required angles, or add additional cameras as required. Assess exterior surveillance blind spots for additional cameras.
4. Verify all EXIT signs are in operable condition.
5. Investigate the exterior camera blind spots.
6. Investigate the camera coverage in the cafeteria.

Stand-Alone Classroom Building Recommendations

Mechanical/HVAC

1. Plan for and track equipment that uses R-22 refrigerant. The refrigerant is being phased out of manufacturing and construction use in the near future and will make all equipment that utilizes R-22 refrigerant obsolete.
2. Continue conducting preventive maintenance checks and services for the HVAC systems. Plan to repair or replace all aged and out-of-date HVAC equipment.