

Odom Elementary School Site Summary

Address	1010 Turtle Creek Boulevard Austin, TX 78745
Number of Permanent Campus Facilities	1
Original Year of Construction	1970
Total Campus Building Area (combined)	61,008 SF



Introduction

The Odom Elementary School campus is located at 1010 Turtle Creek Boulevard in Austin, Texas. Odom Elementary School was established in 1970 and consists of one permanent building, the Main School Building (BLDG-156A.)

Main School Building – BLDG-156A

Building Purpose	Administrative, Classrooms, Cafeteria, and Gymnasium
Building Area	61,008 SF
Inspection Date	July 26, 2016
Inspection Conditions	93°F - Raining
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 is finished with brick with prefinished metal downspouts and coping. The concrete foundation wall is finished with a painted plaster coating. The plaster finish on the concrete portions of the exterior walls was peeling and cracking. Water was leaking through one concrete wall of the building. Streams of insects were entering the building through various openings.	Good
	Exterior Windows	The exterior windows consist of single-pane glazing set in metal frames. Some windows are covered with mesh insect and metal safety screens. The metal and insect screens were broken on the windows facing the playground. Condensation was present on a few of the windows, namely those near the bus drop-off door. Peeling paint was observed on many window and awning frames. The windows to classroom 114 were reported to be leaking, but no evidence of water was observed. Windows in the primary-wing were operational, but unclean and missing an insect screen.	Average
	Exterior Doors	The exterior doors are glazed metal doors set into metal storefront systems. The exterior doors were observed to be in average condition due to the appearance of the finishes. Peeling paint was observed on many of the doors and frames. A few lites were damaged, either due to holes or cracks in the glazing. One lite had been replaced with acrylic.	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		Many of the doors were hosting swarms of insects. The logbook in the main office states that the last pest treatment was on 6/21/2016 in rooms 110 and 112, and the main office, gymnasium, and cafeteria for ants.	
Roofing		<p>The roof systems consist of built up with a granular topping and modified bitumen. Some of the modified bitumen membrane is covered with a white reflective coating. There are eight skylights over the gymnasium.</p> <p>Not only was excessive ponding observed on the modified bitumen roof, the material was undulating. Some standing water was observed to be 1.5 inches deep. The sealant material at the edges of the sheets was cracked and worn away. The portions of the modified bitumen roof finished with a white reflective coating were the most damaged, exhibiting extreme cracking, ponding, and discoloration. Ponding was also observed on the built-up roof near the gutter feeds. The skylights were observed to be in good condition.</p>	Poor
Interior Construction	Interior Walls	<p>The interior walls are varied in composition. In the classroom wings of the building, metal window systems are set into drywall. In the primary-wing of the building, the classroom walls are drywall on metal studs and terminate below the ceiling.</p> <p>The walls were observed to be in good condition, except for the acrylic in the classroom windows; it was scratched and scuffed.</p>	Good
	Interior Doors	<p>The interior doors are wood doors in metal frames with narrow lites and fixed transom windows. Some transom windows are covered with plastic paneling. The service doors are metal in metal frames.</p> <p>The interior doors were observed to be in average condition with splitting wood and worn door frames. The male restroom door in the 100-wing would only shut from the inside as the closer is either too strong or too tight. Many of the door closers are either too strong or not engaged; for example, the janitorial closet next to room 207 swings shut strongly and could pose a safety hazard. Many of the equipment closets were observed to have missing or inoperable hardware/locksets.</p>	Average
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	<p>There are multiple exterior stairs leading to building entrances around the school. They are all cast-in-place concrete with metal handrails. One stair has metal anti-slip nosings.</p> <p>The stairs were observed to be in good condition, though many of the stairs did not have an adjacent access ramp. The metal handrails were worn, and the plaster finish on one exterior stair was cracking and</p>	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		peeling. The handrails were also rusting at the connection points.	
	Interior Stairs	System not present.	N/A
Interior Finishes	Interior Wall Finishes	<p>The interior wall finishes in the school consist of paint, wood paneling, and ceramic tile. Some brick is left exposed as well.</p> <p>The acoustical wall panels in the gymnasium and music room were observed to be in good condition. The janitorial closet in the primary-wing showed signs of water damage behind the wall. The wood paneling in the corridors appeared to be in good condition. The toilet partitions were observed to be in poor condition; some are rusted, and some are missing segments.</p>	Average
	Interior Floor Finishes	<p>The majority of the school is finished with vinyl composition tile (VCT) tile, with a layer of rubber athletic tile in the gymnasium. The library is finished with carpet, as is a portion of the administration space. The restrooms are finished with ceramic tile. The kitchen floor is finished with ceramic tile.</p> <p>The VCT appeared to be in good condition throughout the school. The restroom finishes were observed to be in poor condition. The restroom floors and grout were deteriorating at the wall base. Ants were prevalent in the 200-wing. The rubber base in the art-wing corridor was very aged and dried. The carpet in the primary-wing was very stained in the classrooms and in the open space. It was reported that overflow from the toilets caused the staining. The rubber base in this wing was also messily painted.</p>	Average
	Interior Ceiling Finishes	<p>The majority of the building is ceiled with 2x4 lay-in ACT (acoustical ceiling tile), including the restrooms. The library, classrooms, gymnasium, and cafeteria are ceiled with painted wood wool panels. The library has a perimeter drywall soffit. The kitchen ceiling consists of lay-in FRP (fiber-reinforced plastic) tiles.</p> <p>The library ceiling exhibited negligible spots of water damage, though ponding was observed on the roof. The same condition was observed in the classrooms. The ACT ceiling finishes were damaged in the interior rooms of the 100-wing, such as the restrooms and offices, but not in the classrooms themselves. The ACT ceiling in the administration office was observed to be in poor condition, appearing aged and dingy with more water stains and broken tiles than the rest of the school.</p>	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		Water damage was observed on the gymnasium ceiling. The ceilings in the primary wing were more aged than other parts of the school. Many tiles were askew.	
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	<p>The building has public restrooms for males and females as well as separate staff restrooms located throughout the facility. These restrooms have vitreous china hand sinks, floor-mounted toilets, and wall-hung urinals. The urinals and toilets have manual flush valves, and the sinks have manual faucets. Service sinks are located in janitorial closets throughout the building.</p> <p>Most of the plumbing fixtures for this building were functioning well. The 100-wing exhibited the most deficiencies. The urinal in BRR104 next to MLTCLS2 did not flush properly. There was low water pressure for the faucet in room 104 and the faucet located in the corridor across from room 104. The urinal in BRR106 had a leaking flush valve. The urinal in the male restroom next to MLTCLS4 was falling off the wall. As a whole, the urinals in the 100-wing did not flush well, and the faucets had low water pressure. Water for the faculty restroom in the administration area was warm when the cold water valve was open and the hot water valve was closed. There was low water pressure for the faucet in room 209.</p>	Average
	Domestic Water Distribution	The staff and kitchen areas are serviced with hot water, while the classrooms only have cold water. Two electric water heaters in this building were not accessible for assessment. The two GWHs (gas water heaters) that were observed appeared to be in poor condition. The units and distribution piping appeared aged and corroded.	Poor
	Other Plumbing	The roof drains were observed to be in good condition, although water had collected on the roof due to the rainfall from the night prior to the assessment.	Average
Mechanical/ HVAC	<p>The major mechanical equipment in this building consists of two chillers, central air handlers, heat pumps located in classrooms, and packaged RTUs (roof top units). Some of the air handlers are located in the interior of the building.</p> <p>An exhaust grille was falling out of the ceiling in one of the male restrooms next to MLTCLS4. Some of the exhaust grilles on the roof appeared to be abandoned, while others were new. The make-up air unit on the roof appeared to be in good condition, except for the metal grate on the air intake. This metal grate needed to be replaced. The air conditioners in rooms 204 and 209 were observed to be in</p>		Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		<p>poor condition.</p> <p>It was reported that the chiller units in the main mechanical room (CH-1 and CH-2) were aging and will be in need of replacement in the near future. Upon assessment, it appeared that these chillers were in fact aging and may need to be replaced soon.</p> <p>According to the facility interview notes, AHU-6A in the crawlspace had a cracked coil and was not functioning. It was also reported to be aged 20+ years and in need of replacement.</p> <p>It was reported that AHU-7, located between rooms 113 and 114, does not provide sufficient airflow. Upon assessment, this classroom area was observed to be warm.</p>	
Fire Protection	Fire Alarm	<p>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 5820XL addressable control panel.</p> <p>The fire alarm system appeared to be in good condition.</p>	Good
	Fire Protection/Suppression	<p>This building does not have a sprinkler system. Fire extinguishers are placed throughout the building for protection in the event of a fire.</p> <p>The equipment looked to be in good condition, and the tags were signed by an inspector.</p>	N/A
Electrical	Electrical Distribution	<p>There is a 750KVA pad-mounted utility transformer that serves a 480/277V 1600A MSB located in the main mechanical room. There is also a 250KVAR PF correction bank. MSB serves panels and transformers located throughout the facility. There are several transformers and panels from the original 1970 construction that are still active. Approximately 90% of the electrical distribution equipment appeared to be in average condition. The electrical service appears to have been upgraded in 1998. The remaining 10% of the electrical distribution equipment appeared to be in poor condition, severely corroded and worn out. The disconnect switches on the roof appeared to be severely corroded. It was reported that several panels in the facility have breakers that are permanently in the "tripped" state. It was also reported that the electrical outlets on the cafeteria wall opposite the kitchen have issues. Plugging in more than one item causes frequent electrical breaker trips. The electrical outlet on the front side of the stage closest to the kitchen was reported to</p>	Poor

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		be unusable, as anything plugged into it trips the circuit. Existing Panel 'LVK2' (that is in the main mechanical room) appeared to to not have adequate code-required working clearance.	
	Lighting	<p>The administration area has 2x4 fluorescent fixtures. Approximately 30% of the light fixtures appear to be worn out, with deficiencies such as bent lenses, yellowed lenses, and burned-out lamps. Approximately 20% of the areas have occupancy sensors, and they appear to be functioning. Lighting in all janitorial closets consist of incandescent sockets with compact fluorescent lamps.</p> <p>The 100-wing classrooms have pendant-mounted 1x4 fluorescent fixtures. Approximately 30% of the light fixtures appear to have lamps that are burned out, cracked, or with yellowed lenses. The corridor areas have surface-mounted 2x4 fixtures that appear worn out. A small percentage of classrooms have occupancy sensors. The corridors do not have occupancy sensors.</p> <p>Lighting and lighting controls are similar throughout the remaining wings. The 200-wing mostly consists of 2x4 recessed lay-in fixtures. Corridor areas have recessed 2x4 fixtures with no occupancy sensors.</p> <p>The classrooms in the 300-wing have occupancy sensors.</p> <p>The library has pendant-mounted fluorescent light fixtures. About 10% of these fixtures have lenses falling off, and some have lamps out. There are no occupancy sensors in the general library area, but the librarian's office has a wall-mounted occupancy sensor switch. The teacher's lounge in the library has an occupancy sensor.</p> <p>The gymnasium has fluorescent lowbay fixtures with wire guard. The gymnasium has occupancy sensors that appear to be tampered with.</p> <p>Cafeteria space has surface-mounted fluorescent fixtures. The cafeteria has occupancy sensors.</p> <p>The staff parking lot has one pole with two HID (high-intensity discharge) flood light fixtures, and the visitors parking lot has no lighting at all. The playground and basketball court area have no lighting.</p> <p>The lighting for the building appeared to be in poor condition. Many interior and exterior light fixtures appeared to be aged past their design life. Observed</p>	Poor

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		<p>deficiencies included broken lenses, inconsistent color temperatures, and non-functional fixtures. There are exit signs present in the building; however, approximately 95% appeared to be from the original construction and were non-functional in the emergency mode. About 95% of the exterior building-mounted lights are worn out and outdated. Around 5% of the exterior lighting consists of LED (light-emitting diode) building-mounted light fixtures that appeared to be in good condition and appear to be installed recently. The lighting timeclocks are mechanical type and appeared to be in poor condition and likely non-functional. There were several areas in the 200 and 300 Wings that appeared to have issues with occupancy sensor not functioning properly. After closer observation, it appeared the likely cause was due to location of the sensor. The gymnasium and cafeteria occupancy sensors appeared to have been tampered with and due to this did not exhibit proper operation.</p> <p>The school has very limited emergency lighting in most areas of the facility. It was reported that during a power outage in the spring, the cafeteria emergency back-up lights did not come on. Specifically, maintenance staff reported lack of emergency lighting and lack of general lighting in the main mechanical room and in the crawlspace.</p>	
	Communications & Security	<p>There is a Gemini security system including surveillance cameras in the building and on the exterior of the building.</p> <p>The security system appeared to be in good condition; however, it was reported that the secured door buzzer is located on the door furthest from the administration offices, which creates a safety issue because it allows guests access to the cafeteria and other areas of the school before arriving at the administration offices.</p> <p>There is a public address (PA) system in the building.</p> <p>The PA system appeared to be in poor condition, as it was reported to not be functioning correctly in the cafeteria, kitchen, and administration offices. Exterior speakers are worn out and at the end of their design life.</p> <p>The school bell system is controlled via the school's phone system and appeared to be functioning well, with no reported issues.</p> <p>The building is equipped with telecommunications</p>	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		systems, but the main backbone equipment is located in an inaccessible room. Wi-Fi hubs throughout the facility appeared to be working and in good condition. Some coaxial cable outlets in the 200-wing were falling out from the wall.	

Exterior System Deficiency Examples

Exterior Walls



Exterior Windows



Exterior Doors



Roofing Deficiency Examples

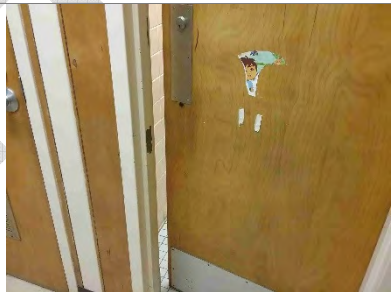


Interior Construction Deficiency Examples

Interior Walls



Interior Doors



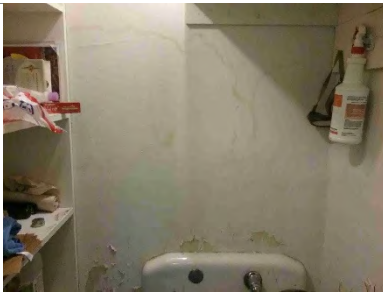
Stairs Deficiency Examples

Exterior Stairs

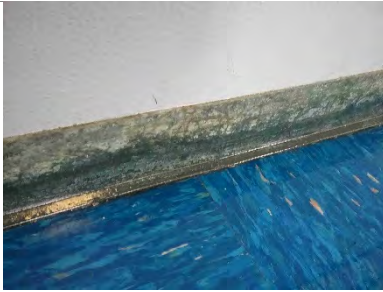
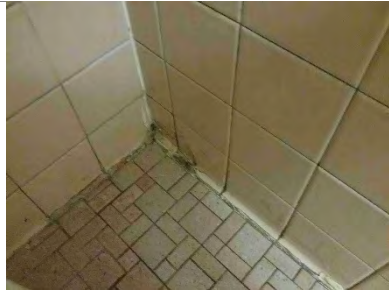


Interior Finishes Deficiency Examples

Interior Wall Finishes



Interior Floor Finishes



Interior Ceiling Finishes



Plumbing System Deficiency Examples

Plumbing Fixtures



Domestic Water Distribution



Other Plumbing



Mechanical/HVAC System Deficiency Examples



Electrical System Deficiency Examples

Electrical Distribution



Lighting



Communications & Security



DRAFT

Odom 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. Patch cracking plaster on exterior stairs.
2. Refinish the metal handrails on the exterior stairs.
3. Apply perimeter treatment to the building and seal holes and cracks to prevent further insect intrusion.
4. Clean exterior windows.
5. Refinish aged exterior doors.
6. Replace damaged door lites.
7. Investigate cause of water seepage through concrete and mitigate.
8. Patch peeling and cracking plaster finish.
9. Monitor windows in room 114 for water intrusion.
10. Reinstall windows showing condensation.
11. Refinish peeling window frames.
12. Install insect screens on all operable windows.

Roofing

1. Further investigate all roof areas observed with ponding to reslope to proper drainage points. Include areas around roof drains.
2. Replace all deteriorated roofing.

Interior Construction

1. Recondition the wood doors, and refinish the metal frames. Replace them if the procedure is cost prohibitive.
2. Provide functioning door closers at all the doors where they are not currently reliable.
3. Provide functioning locksets for all of the equipment closets.

Interior Finishes

1. Repair the water-damaged wall in the janitorial closet in the primary-wing.
2. Refinish the restrooms, and replace the damaged toilet partitions.
3. Replace the rubber base in the art-wing.
4. Replace the carpet in the primary-wing "open space" with carpet tile.
5. Remove the excess paint from rubber base in the primary-wing.
6. Install moisture-proof ceiling in the restrooms.
7. Replace all damaged ceiling tiles and tees.

Plumbing

1. Continue preventive maintenance on aged plumbing fixtures and plan for replacement in the future as fixtures continue to age.
2. Plan to replace GWs in the main mechanical room.
3. Address the water pressure issues in the 100-wing and room 209.
4. Repair the leaking flush valve in BRR106.
5. Repair the urinal that is falling off the wall in the male restroom next to MLTCLS4.
6. Repair the urinal in BRR104 for flushing issues.

Mechanical/HVAC

1. Address any rust or corrosion observed on the mechanical equipment by cleaning, repainting, or repairing to prevent further deterioration.
2. Repair or replace any damaged or missing piping insulation as needed.
3. Consider replacing main mechanical room chillers (CH-1 and CH-2) per building staff recommendations.
4. Address room temperature issues for AHU-7. Rooms 113 and 114 were observed to be warm.
5. Replace failing air conditioners in the 200 wing, especially the units in rooms 204 and 209.

Fire Protection

1. Continue annual inspections of the portable fire extinguishers.

Electrical

1. Immediately provide missing break cover plates for all electrical equipment that were noted, as these instances should be considered life safety hazards.
2. Repair or replace all electrical equipment affected by corrosion or rust. If the corrosion/rust is beyond the enclosure, then replacement is suggested.
3. Remove any floor receptacles as they are being phased out of use district-wide.
4. Replace all interior and exterior outdated light fixtures with LED light fixtures with dimming capabilities.
5. Provide additional exterior LED light fixtures as required.
6. Replace all existing exit signs with LED fixtures, and add more exit signs where required for all buildings.
7. Provide all new LED egress lighting as required for the entire facility.
8. Relocate the secured buzzer/lock to the door that is directly outside of the administration area.
9. Provide additional security cameras in the corridor areas.
10. Replace outdated Panels HVG, HVC, HVE, LVDA, LVD, and LVE.
11. Replace outdated Transformers D, C, and E.
12. Replace the electrical panel (located in janitorial closet CC120) and the circuits that serve the 100-wing. This is a panel that was reported with breakers that remain permanently "tripped."
13. Adjust (decrease/increase sensor sensitivity) and reposition all existing occupancy sensors installed in the facility. Provide new occupancy sensors if existing sensors are determined to be defective. Pay specific attention to the occupancy sensors installed in the gymnasium and cafeteria.
14. Replace the circuit that serves the duplex electrical outlet at the front side of the stage closest to the kitchen with a new dedicated 20A, 120V circuit.
15. Replace the circuit(s) that serve the duplex electrical outlets on the cafeteria wall opposite the kitchen. Provide a dedicated 20A, 120V circuit for each duplex electrical outlet.
16. Provide new LED damp location-rated light fixtures with integral batteries in the main mechanical room and in the crawlspace.
17. Provide new public address facilities for the cafeteria, kitchen, and administration offices. Replace all exterior public address speakers, and provide additional speakers as required to obtain adequate coverage.
18. Provide new NEMA 3R-rated disconnect switches for all roof-mounted equipment.
19. Relocate existing Panel 'LVK2' (that is in the main mechanical room) such that it has adequate code-required working clearance.

CRAWL SPACE – Odom ES – Main School Building (BLDG-156A)

Building Purpose	Administrative, Classrooms, Cafeteria, and Gymnasium
Inspection Date	August 25, 2016
Inspection Conditions	85° - Sunny & Dry

Crawl Space System Deficiency Overview

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








System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Soil, Drainage, Ventilation & Access	Soil Below Building, Site Drainage in Crawl Space	<p>The soil below the original building was mostly flat throughout the interior, raised around the perimeter and ranged from dry to damp, except the soil was completely saturated below rooms 102 and 104 in the original building. Damp soils appeared to originate from leaking and/or condensating pipes. The source of water at the saturated area could not be determined (too wet to traverse), but we suspect the water is due to recent rains. No drains or inlets were seen in the original building. The 1971 building additions had generally drier soils except for a small area in the north addition that had roughly 1" of standing water from a pipe leak.</p> <p>Soil/Drainage deficiencies:</p> <ul style="list-style-type: none"> • Saturated soil / poor drainage 	Average
	Soil Retainers	Soil retainers were not specified at the original building or the additions.	N/A
	Areaways/Ventilation	<p>The ventilation system in the original building and in the east addition consisted of small, above-grade louvered openings in the perimeter beams. The size and number of vents appear to be inadequate based on current requirements. Condensation on pipes and concrete structure also indicated poor ventilation. Some vents were also partially blocked. The <i>MainMech</i> room at the western end of the original building has mechanical fans but the louvers were closed and the fans were not running. The larger openings in the north addition provided better ventilation relative to the other crawl spaces. An areaway was seen only at the north addition and was found to be in good condition.</p> <p>Areaway/ventilation deficiencies:</p> <ul style="list-style-type: none"> • Poor cross-ventilation • Partially blocked vents 	Average

		<ul style="list-style-type: none"> • Closed louvers, mechanical ventilation turned off 	
	Access Hatches	<p>Access hatches were located in mechanical and utility rooms.</p> <p>Access hatch deficiencies:</p> <ul style="list-style-type: none"> • Mild to moderate corrosion on hatch frames • Broken door latch • Poor access in mechanical room at west end of original building due to pipe congestion 	Average
Exposed Structure	Exposed Columns & Tops of Foundations	The foundations in the original building were below ground and unobservable. The above-ground columns below the original building were concealed behind sonotube forms and could not be observed. The columns at the additions were 12" square columns and no significant deficiencies were observed.	Good
	Exposed Faces of Perimeter Walls / Beams	<p>Except for occasional exposed and corroded reinforcement, the perimeter beams in the original building were generally in good condition. Some spalling/honeycombing was observed at pipe penetrations. Perimeter beams in the additions were in better condition with no significant defects seen.</p> <p>Perimeter wall/beam deficiencies:</p> <ul style="list-style-type: none"> • Exposed and corroded reinforcement • Honeycombing/spalling at pipe penetrations • Corroded form ties 	Average
	Exposed Portions of Interior Floor Beams Above	<p>The suspended floor beams of the original building were generally in good shape. However, minor to advanced corrosion was observed in some areas. In the additions, the suspended floor beams were found to be in better condition but also have some locations with exposed/corroded reinforcement.</p> <p>Beam deficiencies:</p> <ul style="list-style-type: none"> • Mild to moderate honeycombing and/or spalling • Exposed and corroded reinforcement 	Average

	Underside of Suspended Floor Slabs Above	<p>The precast pan joists in the original building were in poor condition overall, with exposed reinforcement in the webs and flanges that ranged from mildly to extremely corroded. Areas with a flat, cast-in-place slab appeared to be in better condition. While minor spalling and occasional rust was seen at pipe penetrations, the pan joists in the additions were in significantly better condition.</p> <p>Slab deficiencies:</p> <ul style="list-style-type: none"> • Cracks, spalls, and honeycombing • Exposed and heavily corroded reinforcement • Spalling and corrosion at pipe penetrations 	Poor
Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes & Hangers	<p>A significant number of cast iron pipes were seen in both the original building and the additions, most of which, along with the support hangers, were heavily corroded. Throughout the building, pipe insulation was heavily degraded and/or had fallen off and several pipes appeared to have light to moderate leaks.</p> <p>Pipe deficiencies:</p> <ul style="list-style-type: none"> • Heavily corroded hangers and pipes with leaks in some areas • Degraded and missing pipe insulation 	Poor
	Exposed Ductwork	<p>Only the north addition contained ductwork that could be observed. The majority of the ducts were internally insulated and appeared to be in good condition. The few externally insulated ducts were in poor condition, with the insulation generally badly degraded and falling off.</p> <p>Ductwork deficiencies:</p> <ul style="list-style-type: none"> • Insulation for externally insulated ducts badly degraded and falling off 	Average
	MEP Equipment	The MEP equipment, which was installed only in the north addition crawl space, appeared to be in good condition. No visible damage or deficiencies were observed.	Good
	Spray Fireproofing/Insulation	No fireproofing or insulation was applied in the crawlspaces.	N/A

Crawl Space Deficiency Examples

Soil, Drainage, Ventilation & Access

		
Partially blocked vent	Small vents / poor ventilation	Standing water under pipe leak
		
Condensation on pipes	Mechanical fan off, louvers closed	Broken hinge on access hatch door
		
Pipe congestion at access door		

Exposed Structure



Corroded form ties at perimeter beams



Honeycombing/spalling in perimeter beam
at pipe penetration



Beam honeycombing



Spalled concrete, exposed and corroded
reinforcement at underside of precast pan
joist web



Spalling & exposed/corroded
reinforcement at underside of precast pan
joist flange



Exposed/corroded reinforcement in
bottom of slab due to insufficient clear
cover

Pipes, Ducts, Equipment & Fireproofing



Wet/leaking pipe, corrosion



Failed pipe insulation



Rusted cast iron pipe



Corroded pipe supports



Corroded pipe hangers



Degraded duct insulation

Odom 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.

Building A Recommendations

Soil, Drainage, Ventilation & Access

1. Clear blocked vents
2. Investigate need for additional ventilation
3. Investigate source of soil saturation in the vicinity of rooms 102 and 104
4. Repair damaged access hatch doors, clean hatch frames/doors & protect from further corrosion

Exposed Structure

1. Repair badly spalled/honeycombed concrete elements
2. Clean exposed reinforcement and protect from further corrosion

Pipes, Ducts, Equipment & Fireproofing

1. Repair corroded cast iron pipes & protect from further corrosion or replace
2. Replace heavily corroded hangers/supports
3. Repair leaking pipes
4. Repair degraded/missing pipe and duct insulation

ORIGINAL BUILDING DEFICIENCIES

- APPROXIMATE LIMITS OF CRAWL SPACE OBSERVED DURING SITE VISIT
- APPROXIMATE LIMITS OF CRAWL SPACE PER AVAILABLE PLANS AND SITE OBSERVATIONS

A

FLR-156A-01

SEE NEXT SHEET FOR 1971 BUILDING ADDITION DEFICIENCIES

1990 ADDITION (SLAB-ON-GRADE)

- Deficiencies found in this location:
- 1) Some vent louvers closed
 - 2) Access limited due to large number of pipes at crawl space entrance
 - 3) Some pan joists with exposed corroded reinforcement
 - 4) Wet soil from pipe leak

- Deficiencies found in this location:
- 1) Saturated soil at NW corner; damp soil elsewhere
 - 2) Vents partially blocked
 - 3) Exposed and corroded reinforcement in perimeter beams
 - 4) Minor to heavy corrosion and spalling in floor slab and beams
 - 5) Significant corrosion in cast iron pipes
 - 6) Degraded of pipe insulation
 - 7) Possible pipe leaks

Access thru floor hatch here

Access thru side hatch here

ORIGINAL BUILDING

1971 ADDITION



AUSTIN I.S.D.
DEPARTMENT OF CONSTRUCTION MANAGEMENT

ODOM ELEMENTARY SCHOOL

1010 Turtle Creek Rd.
Austin, Texas

FLOOR PLAN
FIRST FLOOR

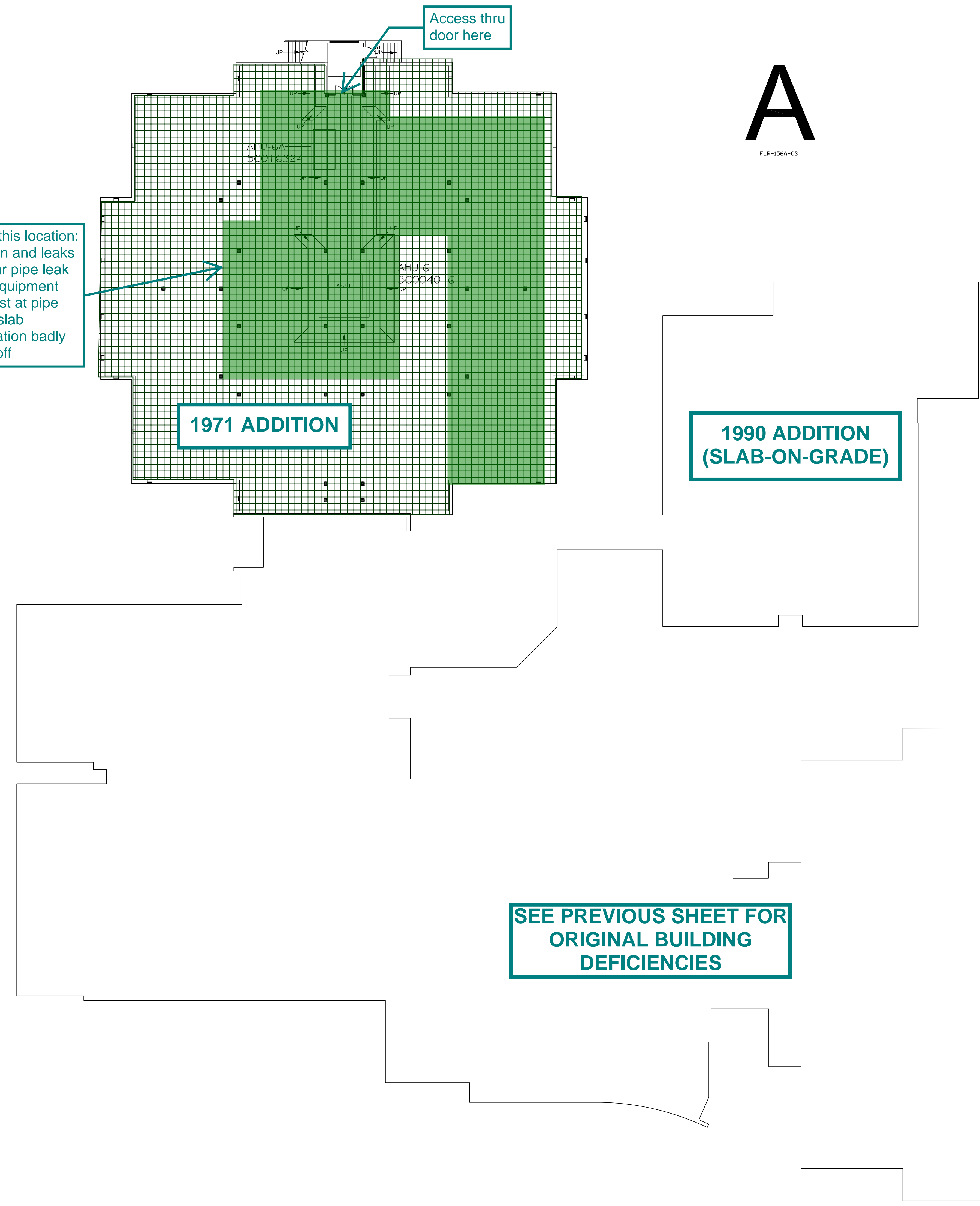
APPROVALS

DRAWN	CHECKED	APPROVED
J.R.		

12/02/13

DWG:156-FLR-01

1/16"=1'-0" 1 OF 1



Deficiencies found in this location:
1) Major pipe corrosion and leaks
2) Standing water near pipe leak adjacent to MEP equipment
3) Minor spalls and rust at pipe penetrations through slab
4) External duct insulation badly degraded and falling off

Access thru door here

1971 ADDITION

1990 ADDITION
(SLAB-ON-GRADE)

SEE PREVIOUS SHEET FOR
ORIGINAL BUILDING
DEFICIENCIES

1971 ADDITION

Access thru side hatch here

Deficiencies found in this location:
1) Minor soil dampness
2) Corroded hatch latch
3) Minor corrosion on pan joists
4) Corroded cast iron pipes
5) Degraded pipe insulation

DEFICIENCIES FOR 1971 ADDITION BUILDING

- APPROXIMATE LIMITS OF CRAWL SPACE OBSERVED DURING SITE VISIT
- APPROXIMATE LIMITS OF CRAWL SPACE PER AVAILABLE PLANS AND SITE OBSERVATIONS

NORTH

AUSTIN I.S.D.
DEPARTMENT OF
CONSTRUCTION MANAGEMENT

ODOM
ELEMENTARY
SCHOOL
1010 Turtle Creek Rd.
Austin, Texas

CRAWL SPACE		
APPROVALS		
DRAWN	CHECKED	APPROVED
J.R.		
12/02/13		

DWG: 156-FLR-CS

SHEET

DRAWING SCALE

1/16"=1'-0"

1 OF 1