

4 LAKEVIEW ELEMENTARY

Lakeview Elementary provides a comprehensive program for Kindergarten and 1st through 5th grade students.

BUILDING AREA: 43,055 sq. ft.

STUDENT POPULATION: 372 STUDENTS

SITE SIZE: 8.18 ACRES; 28% IMPERVIOUS SURFACE

GRADES SERVED: KINDERGARTEN, GRADES 1ST-5TH

PARKING: 49 STALLS (2 HANDICAP, 47 REGULAR)

BUS QUANTITY: 5 BUSES / 5 BUS ROUTES

LAKEVIEW ELEMENTARY: BUILDING EVOLUTION

Lakeview Elementary was originally constructed in 1936. A classroom addition was built in 1951, a gymnasium/classroom addition in 1957, and a classroom addition in 1967. The entrance addition was added in 1998.

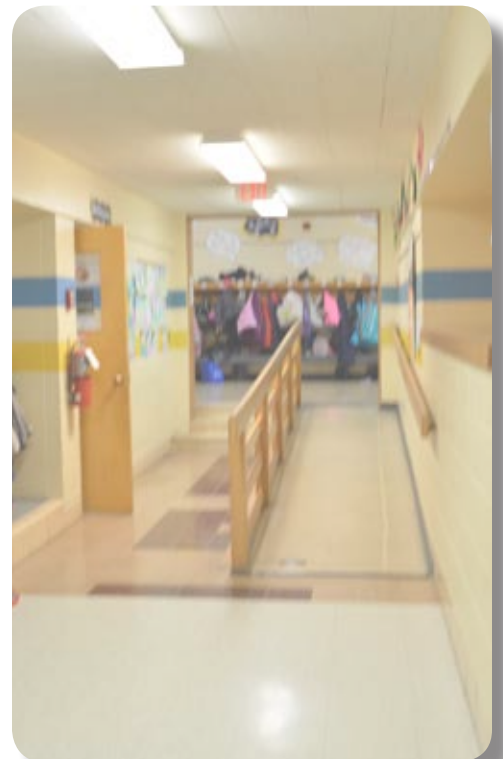
The following building evolution diagram outlines the additions made to the original building over time due primarily to student enrollment growth.



Lakeview Elementary Main Entrance from Doors

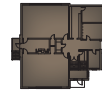


Lakeview Elementary Classroom

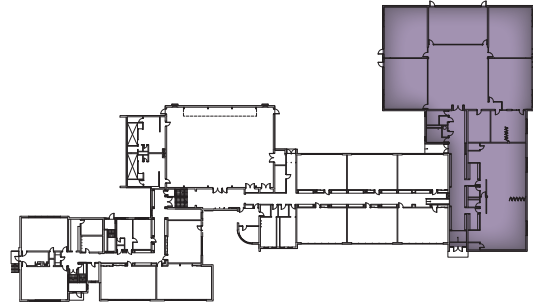


Lakeview Elementary Corridor

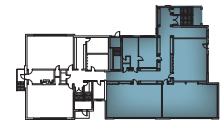
LAKEVIEW ELEMENTARY: BUILDING EVOLUTION



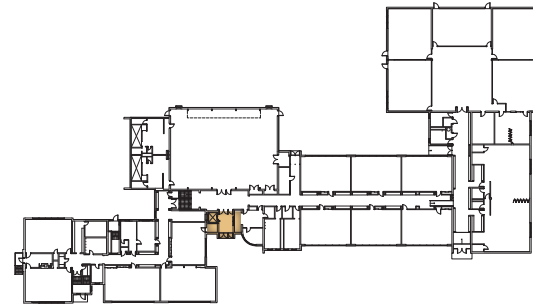
1936



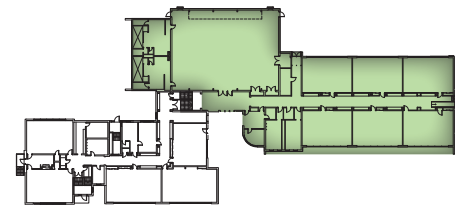
1967



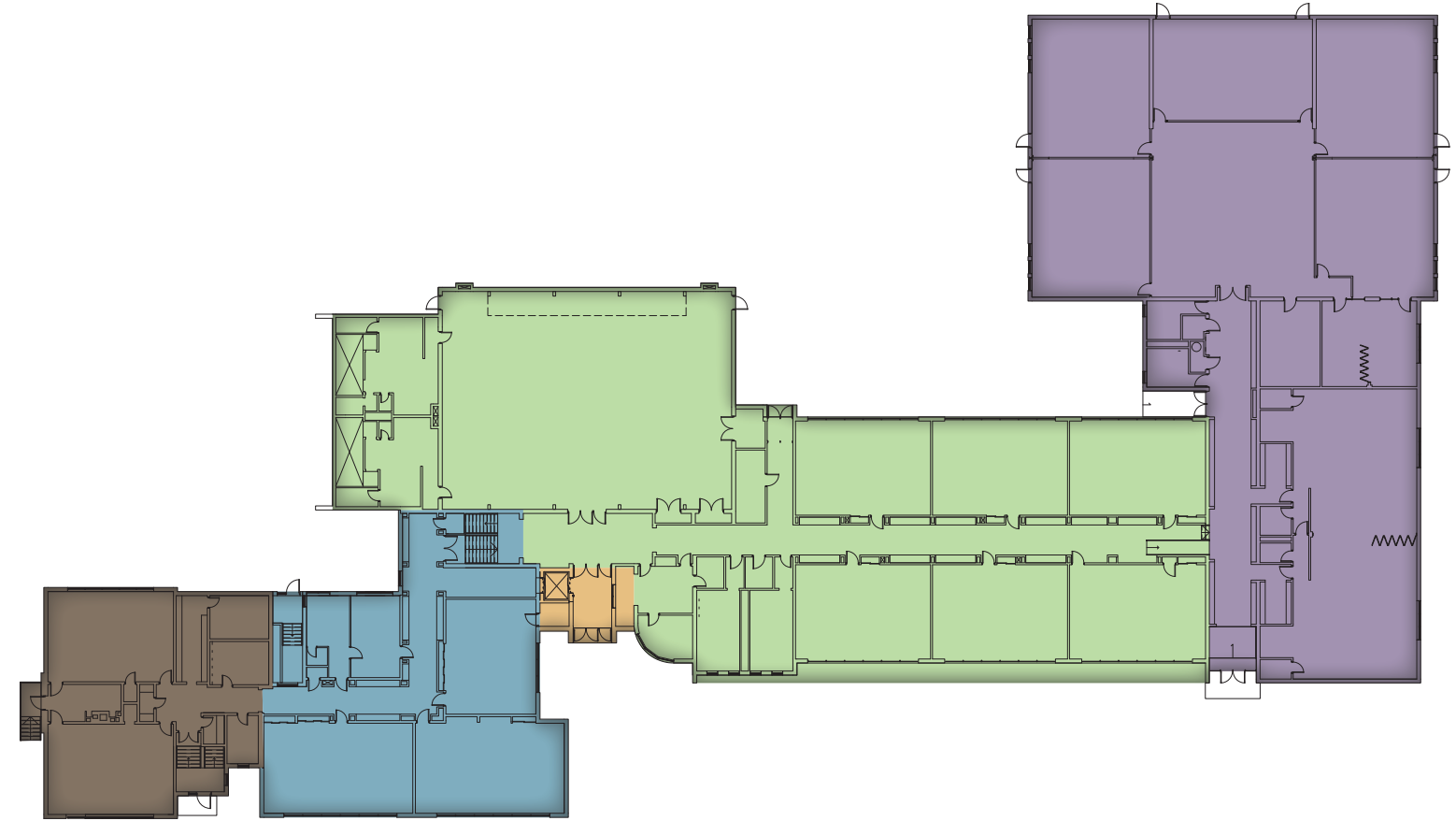
1951



1998



1957



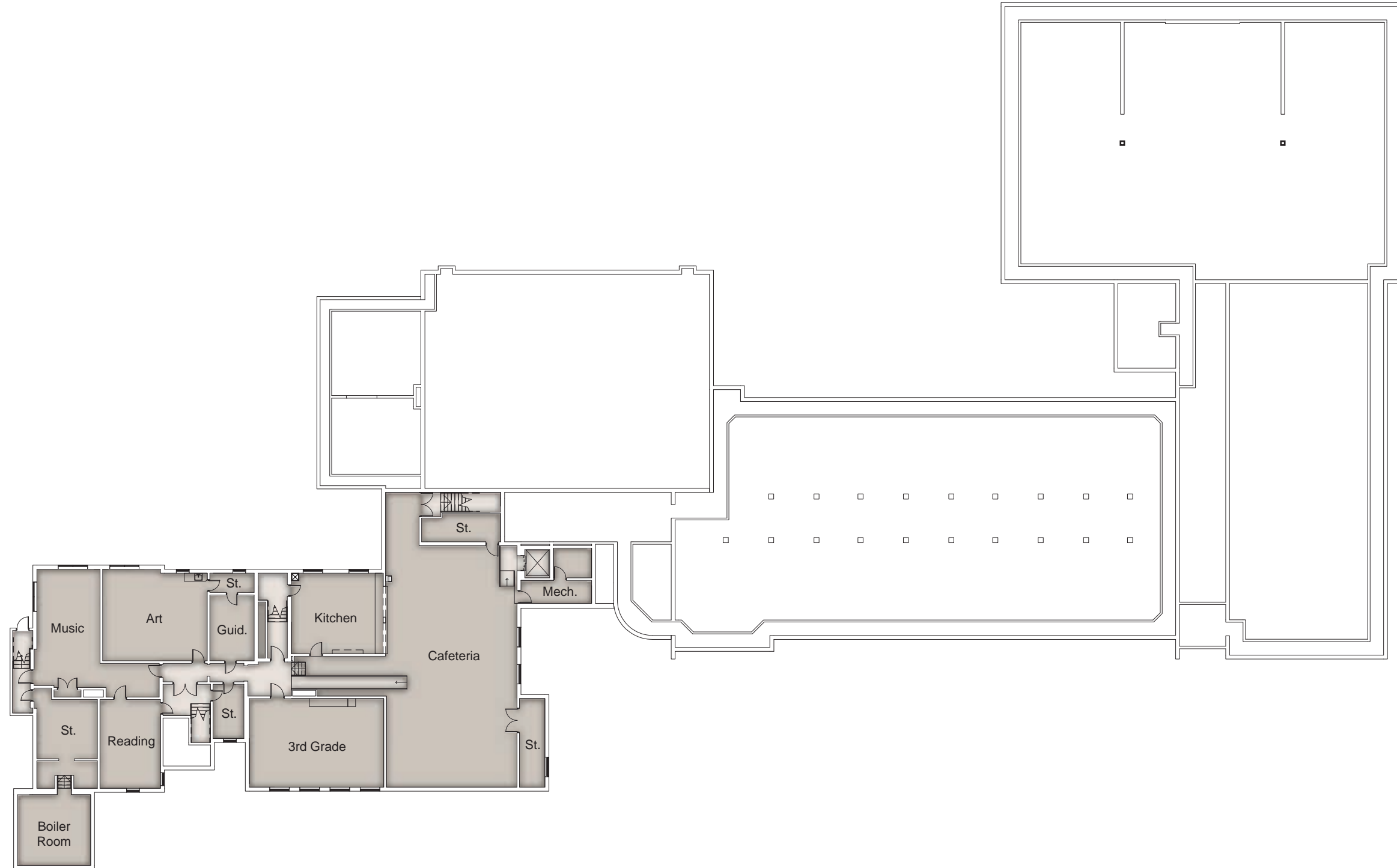
- = 1936 - Original
- = 1951 - Classroom Addition
- = 1957 - Gymnasium/Classrooms Addition
- = 1967 - Classroom Addition
- = 1998 - Entrance Addition



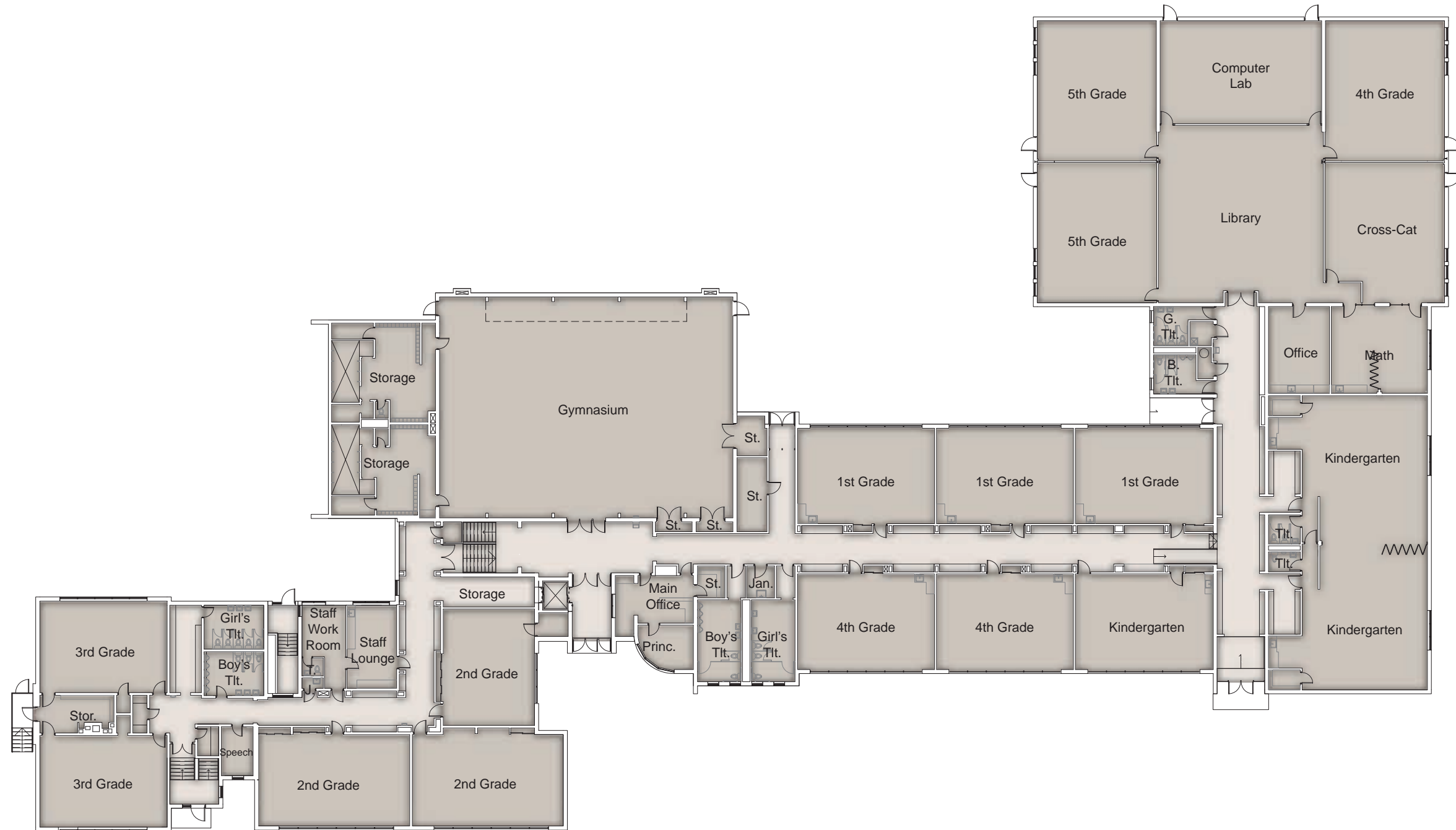
LAKEVIEW ELEMENTARY: EXISTING SITE PLAN



SITE PLAN
not to scale



LOWER FLOOR PLAN
not to scale



FIRST FLOOR PLAN
not to scale



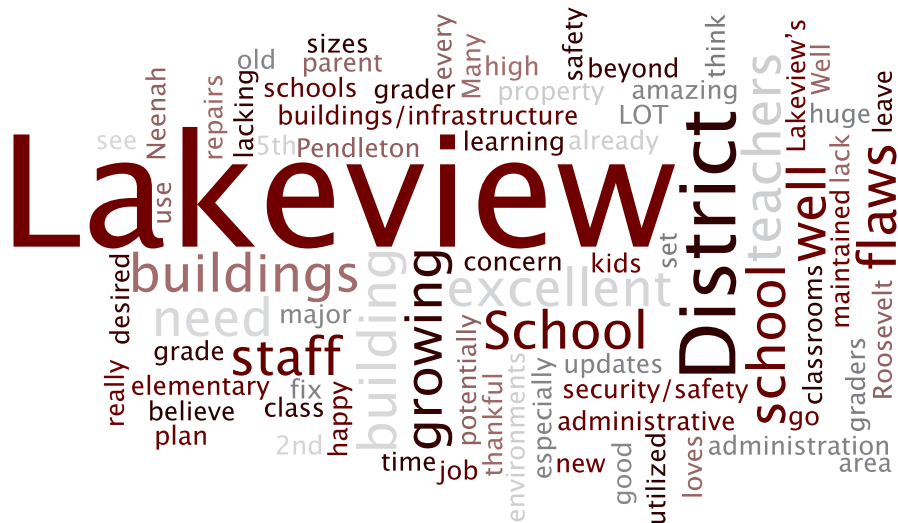
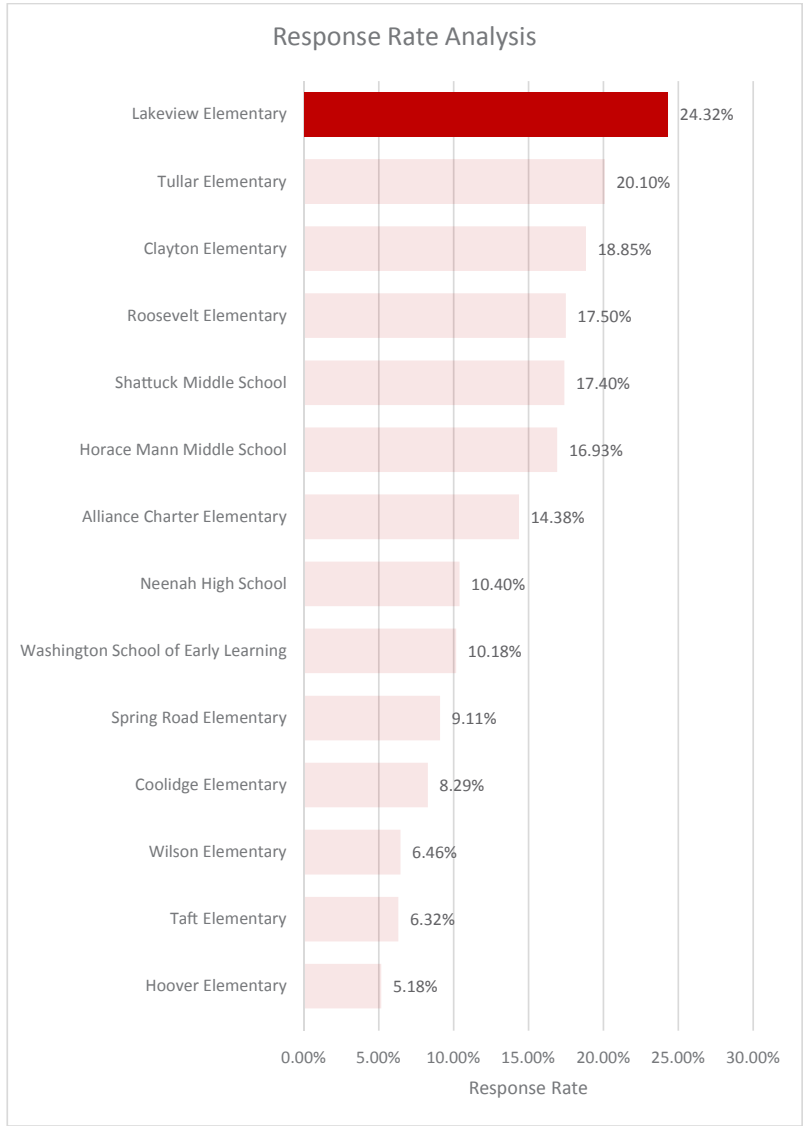
LAKEVIEW ELEMENTARY: PARENT SURVEY FEEDBACK

In February 2017, the District sent out a survey via email to all parents of students within the District with the focus on identifying and prioritizing needs at each school. Parents were asked to respond to a series of questions, as well as provide open-ended comments if desired.

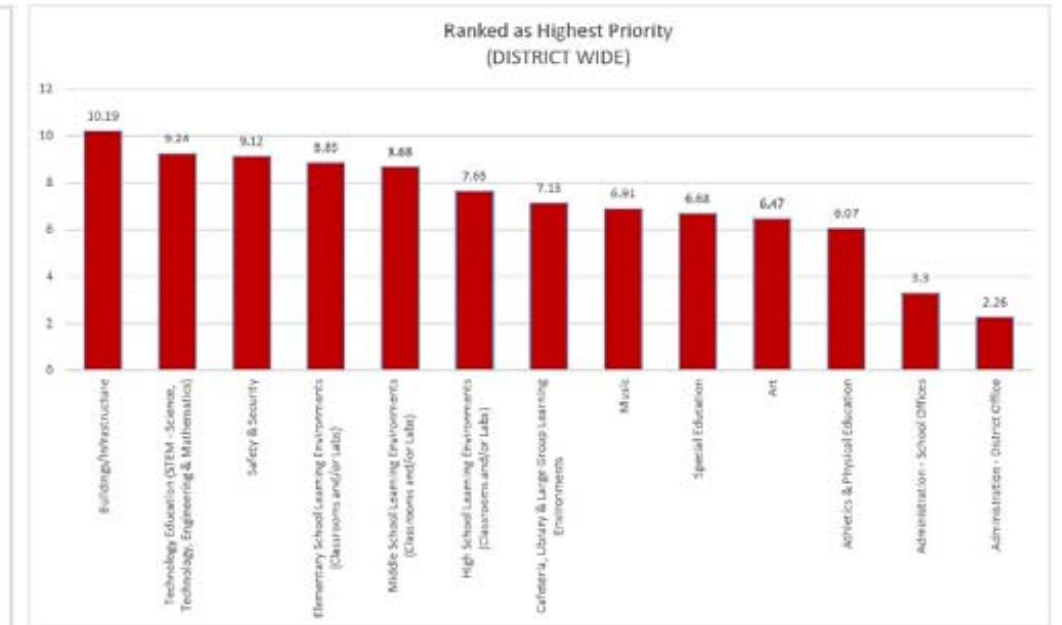
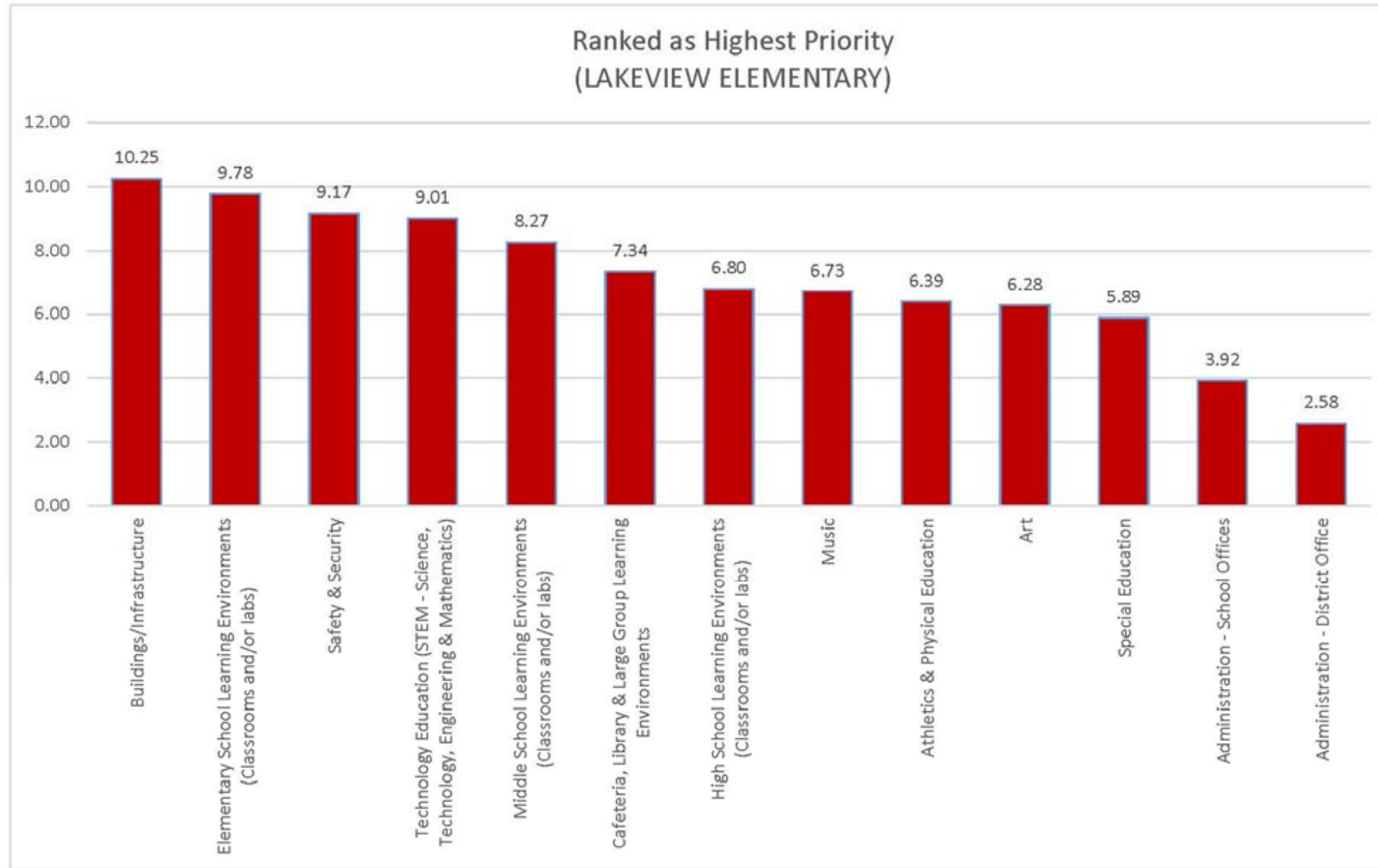
The following information reflects feedback and response rate for Lakeview Elementary.

TOTAL PARENTS TO RECEIVE SURVEY: 370
TOTAL NUMBER OF RESPONSES: 90
RESPONSE RATE: 24.32%

- ADDITIONAL NOTES**
- Lakeview Elementary had the highest response rate in the District
 - Lakeview Elementary accounts for 15.71% of all parent survey feedback



THIS PAGE IS INTENTIONALLY LEFT BLANK.



LAKEVIEW ELEMENTARY: SUMMARY OF STAFF SURVEY FEEDBACK

The following is a summary of potential improvements at Lakeview Elementary. This is not intended to be a comprehensive list, but a summary of possible upgrades as identified by staff. The following information was obtained from staff survey responses and numerous meetings and listening sessions held by district leadership and Bray Architects with the objective of casting a broad net to try and gather as much feedback regarding needs as possible.

1. Academic & Educational Improvements:

CLASSROOMS

- Undersized
 - Space limits capabilities for full-class presentations and group work
 - Currently have (17) full-size sections, although (18) is desired
 - Classrooms 1-6 in the main corridor are particularly small
- Would like to keep grade levels in close proximity to one another (difficult to achieve with current building layout)
- Adequate/controllable lighting desired
- Sinks that are resistant to mold/mildew and provided for each classroom desired
- Flexible/movable and updated furniture desired
- Additional outlets and charging stations desired
- Additional wall space desired for hanging items and projects
- Sound-proof walls between classrooms desired
- Additional storage desired within the classroom

SCIENCE

- Dedicated STEM classroom desired
- Adequate storage desired

CONFERENCE ROOMS & LARGE/SMALL GROUP

INSTRUCTION

- Greater variety of learning spaces desired; small group instruction within and outside of the classroom desired
- Large group instruction/multi-purpose/commons space desired
 - Currently classrooms and music room utilized for after school activities, forcing teachers out of their rooms
 - Space large enough to accommodate (1) full grade level desired
 - Adequate space to accommodate multiple after school activities desired; currently these activities are limited due to space restrictions
 - Space to accommodate school assemblies desired
 - Dedicated conference room(s) desired for staff collaboration
 - Dedicated conference room(s) desired for meeting with parents

GYMNASIUM & PHYSICAL EDUCATION

- Additional/new basketball hoops desired

MUSIC

- Undersized; not enough classroom space for movement activities or for large group rehearsal space
- Lack of temperature control causes instruments to get damaged
- Additional storage desired – allotted space and instrument/casework storage
- Sound proof walls/noise control desired
 - Louder activities are limited due to noise transfer between music room and surrounding classrooms
 - More isolated location desired
- Lack of storage for instruments and equipment; limits learning variety/experiences

ART

- Undersized

LIBRARY

- Undersized; expansion is restricted by surrounding classrooms
- Adjacent classrooms are accessible only through the library – not ideal

SPECIAL ED.

- Currently housing (1) Special Ed. program; no additional space available should additional programs be desired

HEALTH ROOM/NURSE

- Dedicated room located near the main office
- Adequate waiting area for students desired
- Privacy for ill students desired
- Restroom and/or sink within the health room desired

MAIN OFFICE

- Undersized

STORAGE

- Adequate storage desired for classroom libraries and teaching materials
- Adequate storage desired for student/project storage
- Adequate storage desired for student items and personal belongings
- Casework/storage that allows for organizational capabilities desired

2. Facility & Site Improvements:

TECHNOLOGY

- Smartboard
- FM Microphone system
- Voice/sound enhancing device(s)
- Improved WiFi capabilities
- Adequate power to support technology desired
- Updated/new bell and PA system desired

INFRASTRUCTURE

- Doors
 - Some doors do not lock securely and are able to be opened even when locked
- Windows
 - Leaking water from windows creates slipping hazard and ruins equipment
 - Old, single-paned, drafty and allow for air and bugs to get into the classroom; more efficient and operable windows desired
 - Windows at the cafeteria are a safety concern
 - Operable windows desired
- Finishes - Flooring, Ceiling, etc.
 - Updated finishes and/or repair of existing finishes desired; replace missing floor and/or ceiling tiles
 - Newly/brightly painted walls desired

BUILDING SYSTEMS

- HVAC
 - Moisture forms on floors during hot/humid temperatures, creating a slipping hazard
 - Temperature/climate control within the classroom desired
 - Consistent temperatures/heating/cooling throughout the building desired
 - Air conditioning throughout the building desired
 - Air quality/filtration desired; asbestos and mold are a concern and unpleasant odors reported
 - Adequate ventilation desired, especially at bathroom areas
 - Exposed piping throughout building would like to be addressed
 - Loud equipment is distracting for students and staff
- PA/Sound
 - Alarm system is too loud; softer bell desired
 - PA system that is audible and accessible throughout the building (including at the exterior) desired

SITE

- Pick-up/drop-off areas are undersized, with limited parking for parents/visitors
- Limited staff parking
- Outdoor workspaces, classrooms desired
- New playground/equipment and walking path desired

MISCELLANEOUS

- Overall layout/building design
 - Limited circulation in the corridors, especially at entrance/exit locations, restricts student circulation, results in lost instructional time, and is a safety concern during large group exiting
- Noise control/reduction
 - At Art/Music & Lunch Room areas
 - Carpeting preferred to assist with noise control
- Bathrooms
 - Multiple staff bathrooms throughout the building desired; currently only (1) exists
 - Issues with urinals and toilets - clogging, leaking, etc.
 - Additional student/group bathrooms desired
 - Additional bathrooms desired at each floor level
- Adequate/updated water fill stations and drinking fountains desired; higher quality drinking water desired
- Pest control desired
- Overall appearance of the building is a concern, especially when bringing in potential new students and families

LAKEVIEW ELEMENTARY: SUMMARY OF STAFF INTERVIEW FEEDBACK

The following is a summary of potential improvements at Lakeview Elementary. This is not intended to be a comprehensive list, but a summary of possible upgrades as identified by staff. The following information was obtained from staff interviews and numerous meetings and listening sessions held by district leadership and Bray Architects with the objective of casting a broad net to try and gather as much feedback regarding needs as possible.

1. Academic & Educational Improvements:

CLASSROOMS

- Undersized
- Flexible/movable and updated furniture desired
- Additional outlets and charging stations desired
- Sound-proof walls between classrooms desired
- Additional storage desired within the classroom

CONFERENCE ROOMS & LARGE/SMALL GROUP

INSTRUCTION

- Greater variety of learning spaces desired; small group instruction within and outside of the classroom desired
- Large group instruction/multi-purpose/commons space desired
 - Currently classrooms and music room utilized for after school activities, forcing teachers out of their rooms
 - Adequate space to accommodate multiple after school activities desired; currently these activities are limited due to space restrictions
 - Dedicated conference room(s) desired

GYMNASIUM & PHYSICAL EDUCATION

- Additional bleachers desired
- Storage for PE/Wellness/OT/PT desired
- Larger gym with partition desired

MAIN OFFICE

- Dedicated health room desired; no nurse currently
- Larger principal's office; table with 3/4 seated and desk
- Sensory/decompression space desired
- Flexible/hotel office
- Dedicated offices for psychologist and guidance counselor

CAFETERIA & KITCHEN

- Humidity concern during warmer months; slippery floor conditions
- Undesirable location; have to go upstairs and around to avoid cafeteria
- Hand washing stations desired

MUSIC

- Undersized; not enough classroom space for movement activities or for large group rehearsal space
- Additional storage desired – allotted space and instrument/casework storage
- Sound proof walls/noise control desired
 - More isolated location desired
- Performance space desired

ART

- Undersized
- Dedicated space with storage desired

LIBRARY

- More flexible space and furniture desired
- Adjacent classrooms are accessible only through the library – not ideal

SPECIAL ED.

- Currently housing (1) Special Ed. program; no additional space available should additional programs be desired
- Flexible/movable seating desired

STORAGE

- Adequate storage desired for classroom libraries and teaching materials
- Adequate storage desired for student items and personal belongings

2. Facility & Site Improvements:

TECHNOLOGY

- Adequate power to support technology desired
- Updated/new bell and PA system desired
- Additional laptops desired

BUILDING SYSTEMS

- HVAC
 - Moisture forms on floors during hot/humid temperatures, creating a slipping hazard
 - Air conditioning throughout the building desired
 - Air quality/filtration desired; asbestos and mold are a concern and unpleasant odors reported

SITE

- Pick-up/drop-off areas are undersized, with limited parking for parents/visitors
- Limited staff parking

MISCELLANEOUS

- Overall layout/building design
 - Limited circulation in the corridors, especially at entrance/exit locations, restricts student circulation, results in lost instructional time, and is a safety concern during large group exiting
- Bathrooms
 - Multiple staff bathrooms throughout the building desired; currently only (1) exists
 - Issues with urinals and toilets - clogging, leaking, etc.
 - Additional student/group bathrooms desired
 - Additional bathrooms desired at each floor level

THIS PAGE IS INTENTIONALLY LEFT BLANK.

LAKEVIEW ELEMENTARY: NEEDS ASSESSMENT

The following is a summary of potential improvements at Lakeview Elementary. This is not intended to be a comprehensive list. The following information was obtained through notations made by Bray Architects at extensive tours of the building and grounds, as well as needs identified by school maintenance personnel.

1. Interior Infrastructure/Maintenance:

WALLS

- a. Exterior walls in the lower level of the building are cracking, and there were indications that water leaks into the building at these areas
- b. Classrooms on the East side of the building have cracking within the exterior walls and along the window frames

CEILING

- c. Ceiling tiles are dated, with some tiles stained/showing signs of water damage and many bowing, bending and separating from the ceiling grid; there are a mix of tile types throughout the building

FLOORING

- d. Much of the hard-surface flooring is stained, worn, cracking/heaving and in need of repair; there are multiple types of flooring throughout the building
- e. There appears to be areas of potential asbestos tile throughout the building where 9"x9" tile flooring is present, and there were indications that some of these areas might have been covered with carpeting

2. Building Envelope:

WALLS

- a. Exterior brick is crumbling/cracking, especially at building corner conditions and near the foundation wall

WINDOWS

- b. Windows are dated/worn, single-paned, and appear to periodically allow draftiness and water into the building, especially at windows that are at pavement level on the exterior; many windows appear to be plexi-glass, and all windows appear to be due for replacement
- c. Some windows do not lock
- d. Plexi windows by door #4 are scheduled for replacement
- e. Windows at the gymnasium area are boarded up; further investigation needed
- f. Staff indicated having problems with bees nesting within/near the window frames
- g. There is some staining present at the exterior window sills and at the base of the brick exterior walls

DOORS

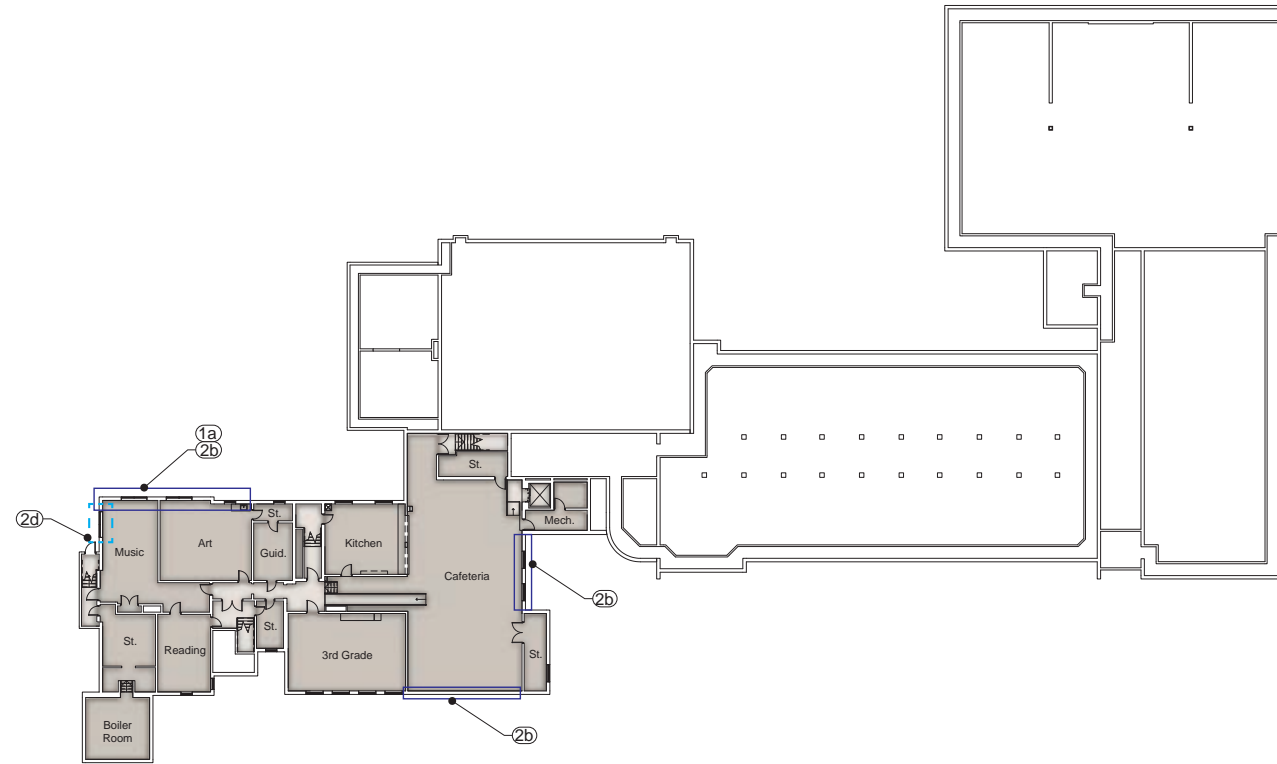
- h. Staff indicated that exterior doors in the summer have difficulty opening
- i. Many exterior doors are dated, dented and rusting
- j. Exterior garage door is dated, dented, rusting, and has paint peeling at the frame

ROOFS

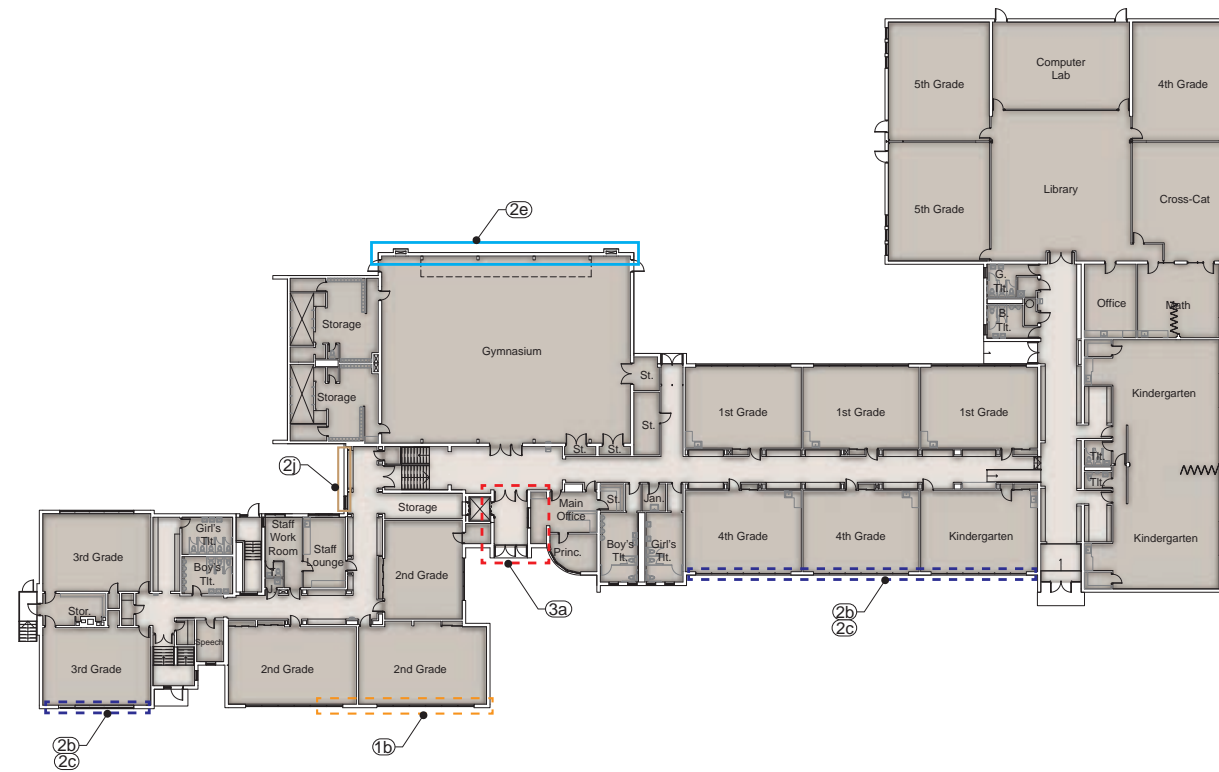
- k. Underside of the roof overhangs are worn
- l. Gutter downspouts have been shortened due to damage; not ideal for water control

3. Safety and Security Upgrades:

- a. Secure entry sequence desired for visitors while school is in session; current layout allows visitors to be released into the building, whereas a preferred layout would require visitors to be processed through the main office prior to being released into the building



LOWER FLOOR PLAN
not to scale



FIRST FLOOR PLAN
not to scale

LAKEVIEW ELEMENTARY: BUILDING SYSTEMS SUMMARY

The following is summary of Plumbing, HVAC and Electrical needs. This is not intended to be a comprehensive list, but a summary of existing building system needs and possible recommendations as identified by the engineering team. Full engineers' reports are located later in this document.

Plumbing:

- Water is supplied by a well pressure tank serving 56 psi pressure water; new additions or major renovations would require a new larger water service.
- Water distribution piping in the original building is copper tube and fittings with some galvanized pipe and fittings, is in fair condition, and is at the end of its life expectancy; replacement of existing pipe and fittings with new type "L" copper tube and fittings is recommended.
- There is no sprinkler system; if a complete fire sprinkler system is desired or required by code, a new 6" water service is required.
- Sanitary waste flows by gravity out of the building and connects to the Municipal sanitary sewer system. Sanitary sewer system is nearing the end of its life expectancy, and inspection of the existing sewer located below the floor is recommended; repair/replacement may be needed pending outcome of inspection.
- Prep kitchen has a 2-compartment sink with no disposer, grease interceptor or dishwasher installed.
- Roof water is collected by a mix of internal roof drains and conductors and gutter and downspout, which connect to the Municipal storm sewer system.
- There are multiple clearwater sump pumps that are in fair to good condition, and some of which have been replaced with new pumps; monitor and repair/replace as necessary.
- Storm sewer systems in the original building and 1957 addition are nearing the end of their life expectancy, and inspection of the existing sewer located below the floor is recommended; repair/replacement may be needed pending outcome of inspection.
- The domestic hot water system serving the building was installed in 2011, is gas fired, and is in good condition. The other domestic hot water system providing hot water for the kitchen is older, electric, and in good condition, but replacement of this unit with a new energy efficient unit is recommended.
- Domestic soft water systems serve both cold and hot water.

- Plumbing fixtures are of various styles and ages, with most of the fixtures original to the building age they were installed and some of the fixtures having been replaced with newer water efficient and ADA compliant fixtures. Showers have been abandoned. Water closets, urinals, and lavatories should be replaced with new water conserving and ADA compliant fixtures, and drinking fountains should be replaced with new ADA compliant fixtures with a bottle filler. Faucets on classroom sinks should be replaced with new ADA compliant faucets.

HVAC:

- Boiler plant has a Kewanee steam boiler that is fired with natural gas, was installed in 1967, is in fair condition, and has exceeded its estimated life expectancy; it also has a Hurst steam boiler that is fired with natural gas, was installed in 2008, is in good condition, and has an estimated life expectancy of 30 years. The boiler plant likely does not have reserve capacity. Continue preventative maintenance on the system, and plan for the eventual replacement of the aging steam boilers with hot water boilers.
- The piping and pumping system has a steam heating circuit, a hot water heating circuit, heat exchanger and stand-by pump. The ages of the heat exchanger and hot water pumps are unknown, but they appear to be in fair condition and seem to have exceeded their estimated life expectancy; much of the pipe insulation is deteriorating. Plan for the eventual replacement of the aging heat exchanger and hot water pumps if the system remains steam. If existing boilers are replaced with hot water boilers, all steam and condensate piping, along with all steam equipment should be converted to hot water piping and equipment.
- Unit ventilators in the classrooms are original to the building, in fair condition, and have exceeded their estimated life expectancy of 25 years; plan for their eventual replacement.
- Constant volume air handling units serving the gymnasium and cafeteria are original, in fair condition, and have exceeded their estimated life expectancy of 30 years; plan for their eventual replacement. Units serving the library and computer room were installed in 2014, are in good condition, and have an estimated life expectancy of 30 years.
- Plan for the installation of an exhaust system to serve the janitor closets, as they currently do not have exhaust, which is required by current code.
- Plan for the installation of a fan powered ventilation system for the offices, as they currently do not have fan powered fresh air, and current code does not allow fresh air via operable windows.

HVAC (cont.):

- With any renovation, plan to replace the door transfer grille relief system with a code approved system, as door transfer grilles are currently used to transfer relief air from the classrooms to the corridor, and current building code does not allow transfer air into a path of emergency egress.
- The building has a mixture of pneumatic and digital temperature controls. The pneumatic control system has limitations that result in comfort complaints and requires frequent calibration to maintain accuracy; continue to maintain and operate the system as long as the current mechanical equipment remains. When renovations to the existing equipment are made, a changeover to digital controls is strongly recommended.

Electrical:

- Main electric service is nearing the end of its useful lifespan, and should be scheduled for replacement within the next 5-8 years. Provide surge suppression, as none exists.
- Panelboards vary in age, with some nearing the end of their useful lifespan, and some that are newer but showing signs of premature corrosion. This could be caused by the panelboard making physical contact with metallic piping that could be causing dielectric corrosion issues through the rest of the electrical distribution system. Vintage circuit breaker panelboards should be scheduled for replacement within the next 10 years.
- Utility service consists of pole mounted transformers with an overhead electrical service.
- Provide a new emergency generator system if desired, as there is no emergency backup power available in the building.
- Ensure proper working clearances are maintained in front of all panelboards at all times by using safety tape to physically indicate clearances on floor/wall around panelboards.
- Much of interior lighting throughout the building consists of a variety of T8 fluorescent or incandescent light fixtures that range in age and are in good condition, while the gymnasium has high bay metal halide fixtures; **replace fixtures with LED equivalents and provide dimming controls and occupancy sensors to maximize energy savings.**

- General lighting controls in rooms consist of toggle switches with no occupancy sensors or dual level lighting, most classrooms utilize split area zones, and corridors have toggle switches with no occupancy sensors. Provide corridors with occupancy sensors and remove light switches.
- **Replace exterior light fixtures with LED equivalents and control via existing timeclock/photocell controls.**
- Library and adjoining classrooms have been recently renovated and **have direct/indirect fluorescent basket fixtures with occupancy sensors, dual level lighting, and built-in emergency battery backup.**
- Relocate classroom switches in the basement to be inside the classroom.
- Clean exterior light fixtures throughout the facility to remove potential fire hazards, as there is a severe amount of spider webs around some fixtures.
- If new LED lighting is provided, emergency lighting should be provided through back up batteries to normal light fixtures through egress paths and rooms with an occupant load greater than 50 people. An alternative option would be to provide a new emergency generator system. Currently there are no provisions for emergency lighting, except for a handful of wall mounted battery packs throughout the facility that provide minimal, non-code compliant light levels.
- Replace existing 15A rated receptacles with 20A rated type and provide additional receptacles throughout working spaces as necessary, as there is currently a general lack of receptacles throughout the building. **Replace existing receptacles within 6'-0" of plumbing fixtures with GFI protected type.**
- Shoretel IP based phone system is in good working condition; no recommendations.
- **Data service is provided via fiber optic utility service, is in good working condition, and fiber optic wiring interconnects all schools to the main district network. While it is unknown if the facility has ceiling plenums, riser rated data cabling should be replaced with plenum rated cabling if there are plenums in the ceiling.**
- Data cabling consists of a variety of Cat5e and Cat6 cabling, in plenum and riser rated varieties, and the 2 data racks have spare rack capacity for future needs. Data cabling at the data racks should be reinstalled in a clean workmanlike manner with proper labeling.
- Provide a UPS battery backup system to provide battery backup power to the data rack, as there are no provisions for backup power.

Electrical (cont.):

- Keyless entry system is in good working condition; access controlled doors are controlled via electric strikes and card readers, and none of the exterior doors have door position contacts. Provide door monitor contacts on all exterior doors to help monitor and control access to the facility.
- Dukane intercom system is nearing the end of its useful lifespan and does not have the capacity to cover the entire school, intercom speakers are nearing the end of their useful lifespan, and staff reported faulty call-in switches getting stuck in the "call" position. Bell schedule system is controlled via time clock and has no reported issues. Schedule the existing intercom system for full replacement with a new IP-based intercom system, schedule speakers for replacement, and provide additional speakers in areas lacking coverage.
- CCTV system has 2 cameras, seems to be in good working condition, and the District plans to add about 17 more cameras to the system in the future; provide new cameras where additional coverage is necessary.
- Simplex fire alarm system is 20 years old, is nearing the end of its useful lifespan, is most likely not monitored, and is lacking in notification coverage; replace the existing system with a new system meeting today's standards for coverage and add additional smoke detectors in the corridors and areas where coverage is lacking.
- Add a security system to control and monitor access to the facility, as none exists.
- Replace existing clocks with a synchronized clock system such as a GPS wireless clock system.
- Building has a monitoring system to ensure boilers in the facility are operational.

LAKEVIEW ELEMENTARY: SITE SUMMARY

The following is a summary of potential improvements at Lakeview Elementary. This is not intended to be a comprehensive list, but a summary of possible upgrades as identified by Bray Architects and the engineering team. The following information was obtained through notations made by architects and engineers at extensive tours of the building and grounds, as well as needs identified by maintenance personnel.

Site Improvements:

AREA 1 - SIDEWALK ADDITION

- Distresses Present:
 - Thermal cracking
 - Surface weathering
- Recommended Repair:
 - Crack fill
 - Seal coat

AREA 2 - STAFF/VISITOR PARKING

- Distresses Present:
 - Thermal cracking
 - Fatigue cracking due to base failure
 - Raveling
 - Surface weathering
 - Edge failure
- Recommended Repair:
 - Remove existing pavement and 12 inches of base and/or subgrade
 - Place 12 inches of base aggregate dense
 - Pave 4 inches of asphaltic pavement
 - Paint all pavement markings for a parking lot

AREA 3 - ASPHALT PLAY AREA/STUDENT DROP-OFF/STAFF PARKING

- Distresses Present:
 - Thermal cracking
 - Fatigue cracking due to base failure
 - Raveling
 - Surface weathering
 - Edge failure
- Recommended Repair:
 - Remove existing pavement and 12 inches of base and/or subgrade
 - Place 12 inches of base aggregate dense

SITE CONCRETE

- Distresses Present:
 - Large cracks in the sidewalk which pose a tripping hazard
 - Spalling near the main entrance
 - Grade issues with sidewalk going towards the flagpole
- Recommended Repair:
 - Remove and replace the areas of sidewalk that have spalling or cracks
 - Remove concrete and fix grade issues

DOWNSPOUT ADDITION

- Concerns:
 - Downspout was removed to make room for vent exhaust out the side of the building
 - Caused a depression to form due to water displacing the soil
 - Downspouts removed on same side, farther south for unknown reasons
- Recommended Repair:
 - Add downspouts to redirect the water

ADDITIONAL NOTES

- No dumpster enclosure exists
- Spiders are a concern as indicated by staff
- Staff indicated most recent pavement patching was done at the bus area this past summer



SITE PLAN
not to scale

LAKEVIEW ELEMENTARY: ADA ACCESSIBILITY ASSESSMENT

The following is an analysis of Lakeview Elementary in regards to meeting building code requirements under the Americans with Disability Act (ADA) and regulated by the American National Standard (ANSI) Accessible and Usable Buildings and Facilities. This is not intended to be a comprehensive list, but an analysis as identified by Bray Architects and engineers gathered through extensive tours and assessment of the existing building facility.

1. Building Entrance:

There is at least (1) accessible route of travel. Entry at grade level or ramps with slope no greater than 1:12, and has 5'-0" long landings every 30'-0".

1a. This standard does not apply to this level.

2. ADA Parking:

Designated/marked ADA stalls are located near the entrance of the building and have 5'-0" access aisles between stalls (502.4.1; 502.4.2).

2a. This standard does not apply to this level.

3. Ramps & Lifts:

There is at least (1) accessible route to each floor level. Changes in level greater than 1/2" in height shall be ramped (303); ramps have a slope no greater than 1:12 and have 5'-0" long landings every 30'-0" (405.2).

3a. There are areas of limited accessibility where the building does not meet the criteria for accessibility standards.

4. Railings:

Handrails shall be provided on both sides of stairs and ramps, except for aisle stairs and ramps, which may be provided with a handrail either at the side or within the aisle width (505.2). Ramp runs with a rise greater than 6 inches shall have handrails (405.8).

Ramp handrails shall extend horizontally above the landing 12 inches minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs, except for handrails in aisles serving seating (505.3).

At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight (505.10.2).

At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight (505.10.3).

4a. There are handrails that do not meet the above criteria for accessibility standards.

5. Maneuvering, Thresholds, & Push/Pull:

On the pull side, a minimum clearance of 18" is required parallel to the doorway. On the push side, a minimum of 12" is required parallel to the doorway (404.2.3.1). Distance between two hinged or pivoted doors in series shall be 48" minimum plus the width of any door swinging into the space (404.2.5). Doors have a minimum 32" wide clearance. Maneuvering clearances on either side of the door are a minimum of 60" from the pull side and 48" from the push side.

Thresholds at doorways shall be maximum 1/2" high otherwise a ramp is required (303.2; 303.3).

5a. There are areas where the requirements for push/pull do not meet the above criteria for accessibility standards.

5b. There are areas where the requirements for maneuvering meets the above criteria for accessibility standards.

5c. There are areas where the requirements for thresholds meets the above criteria for accessibility standards.

6. Door Hardware & Panic Hardware:

Doors have open, lever-styled hardware (no round/knob hardware) (404.2.6). Egress doors have panic hardware.

6a. There are doors that do not meet the above criteria for accessibility standards

7. Restrooms:

Public restrooms have at least 5'-0" clearance space for a wheelchair to turn around, at least (1) ADA accessible stall (sized 60" min. depth x 56" min. width, for wall-mounted stalls, and 59" min. depth for floor-mounted stalls) with 5'-0" clearance (604.3.1), and at least (1) sink at a 34" maximum height (606.3). The compartment door clearance between the door side of the compartment and any obstruction shall be 42" minimum. Compartment doors shall not swing into the required minimum area of the compartment (604.9.3)

There is at least (1) unisex restroom per floor level, and unisex restrooms have at least 5'-0" clearance space for a wheelchair to turn around, as well as a sink/counter-top height at a maximum of 34".

Mirrors located above the sink or counter shall have the bottom edge at a maximum height of 40" above the floor. Mirrors not located above a sink or counter shall have a bottom edge at a maximum height of 35" above the floor (603.3).

Fixed stall grab bars shall be 42" minimum in length located 12" maximum from the rear wall. Vertical fixed grab bars shall be 18" minimum in length, the bottom edge of the bar shall be 39" to 41" above the floor, and 39" to 41" from the rear wall (604.5.1). Rear fixed grab bars shall be 36" minimum in length and extend 12" from the centerline of the toilet. Rear grab bars shall be 24" minimum in length centered from where wall space doesn't permit 36" grab bar (604.5.2).

Bottom edge of urinals shall be 17" maximum above the floor (604.10.4).

ADA showers shall be 36" by 36" minimum with an entry of 36" by 48" minimum. A 36" minimum depth shall be provided adjacent to the open face of the compartment (608.2.1). A roll in shower shall be 60" x 30" minimum with a 60" minimum opening adjacent to the stall (608.2.2). A seat shall be 24" minimum to 36" maximum in length shall be provided at the entry side of the compartment (608.2.3).

Horizontal shower grab bars shall be provided across the control wall and on the back wall to a point 18" from the control wall (608.3.1.1). Vertical shower grab bars shall be 18" minimum in length on the control wall and 3" minimum to 6" maximum above the horizontal grab bar and 4" maximum inward from the front edge of the shower (608.3.1.2).

7a. There are restrooms that do not meet the above criteria for accessibility standards.

8. Drinking Fountains & Protruding Objects:

At least (1) fountain has a clear foot space of at least 30" x 48" in front and has a spout height at a maximum of 36" off the ground. Children's fountain spout shall be 30" maximum above the floor. Wheelchair fountain spout shall be 36" maximum and standing 38" to 43" above the floor (602.4).

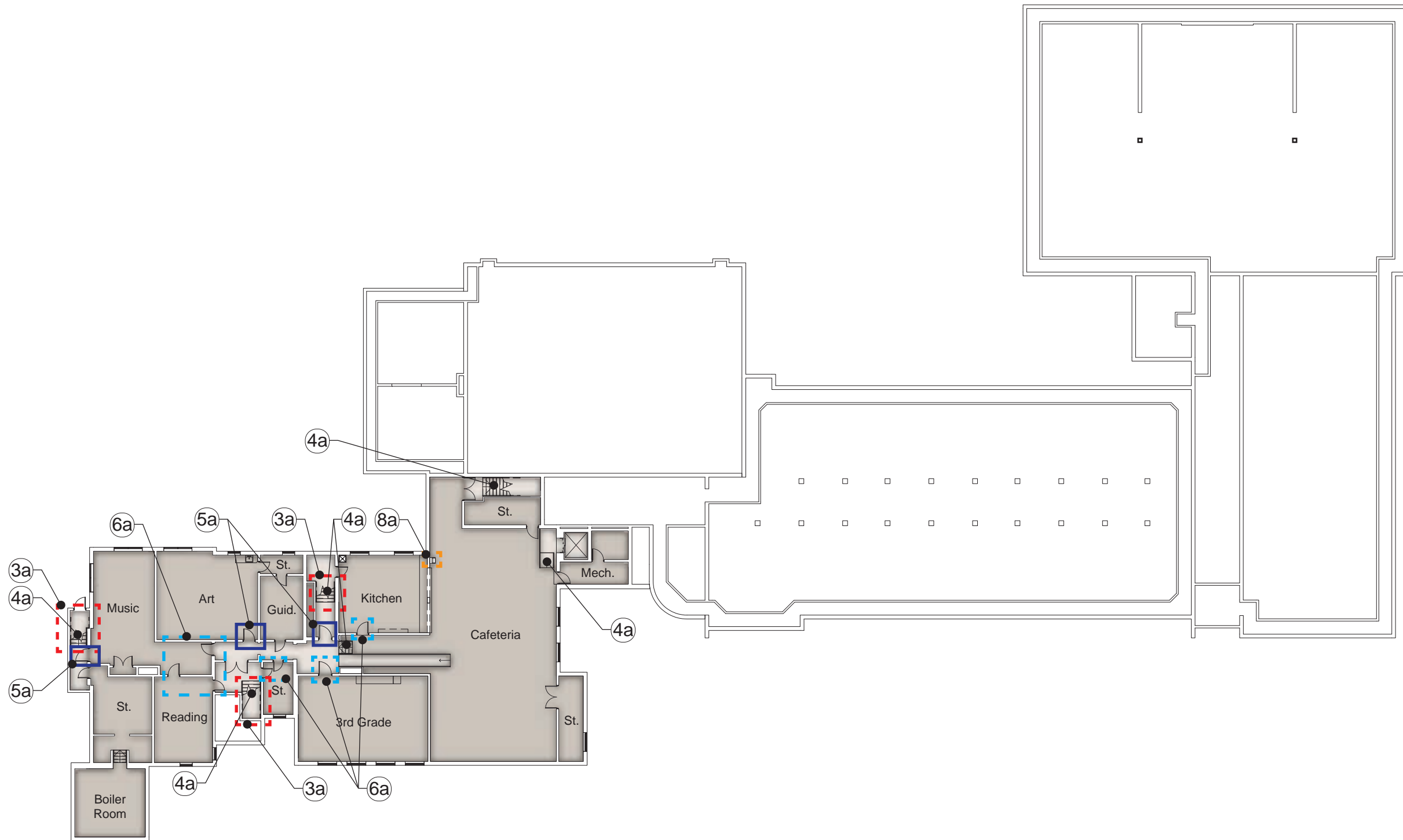
Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and where the vertical clearance is less than 80 inches above the floor. The leading edge of such guardrail or barrier shall be 27 inches maximum above the floor (307.4).

8a. Drinking fountains do not meet the above criteria for meeting accessibility standards.

9. Casework, Transaction Counters, & Counters with Sinks:

Counter-tops have a maximum 34" height, and transaction counters have an accessible portion that is at a maximum 34" height for wheelchair accessibility (606.3). Counters and work surfaces for children's use shall be 26" minimum and 30" maximum above the floor (902.4.2).

9a. Counter-tops meet the above criteria for meeting accessibility standards.



LOWER FLOOR PLAN
not to scale

LAKEVIEW ELEMENTARY: ADA ACCESSIBILITY ASSESSMENT

The following is an analysis of Lakeview Elementary in regards to meeting building code requirements under the Americans with Disability Act (ADA) and regulated by the American National Standard (ANSI) Accessible and Usable Buildings and Facilities. This is not intended to be a comprehensive list, but an analysis as identified by Bray Architects and engineers gathered through extensive tours and assessment of the existing building facility.

1. Building Entrance:

There is at least (1) accessible route of travel. Entry at grade level or ramps with slope no greater than 1:12, and has 5'-0" long landings every 30'-0".

1a. The building has an accessible entrance at this level that meets the above criteria.

2. ADA Parking:

Designated/marked ADA stalls are located near the entrance of the building and have 5'-0" access aisles between stalls (502.4.1; 502.4.2).

2a. The site contains marked ADA stalls located near the nearest accessible entrance.

3. Ramps & Lifts:

There is at least (1) accessible route to each floor level. Changes in level greater than 1/2" in height shall be ramped (303); ramps have a slope no greater than 1:12 and have 5'-0" long landings every 30'-0" (405.2).

3a. There are areas of limited accessibility where the building does not meet the criteria for accessibility standards.

4. Railings:

Handrails shall be provided on both sides of stairs and ramps, except for aisle stairs and ramps, which may be provided with a handrail either at the side or within the aisle width (505.2). Ramp runs with a rise greater than 6 inches shall have handrails (405.8).

Ramp handrails shall extend horizontally above the landing 12 inches minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs, except for handrails in aisles serving seating (505.3).

At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches minimum beginning directly above the nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight (505.10.2).

At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight (505.10.3).

4a. There are handrails that do not meet the above criteria for accessibility standards.

5. Maneuvering, Thresholds, & Push/Pull:

On the pull side, a minimum clearance of 18" is required parallel to the doorway. On the push side, a minimum of 12" is required parallel to the doorway (404.2.3.1). Distance between two hinged or pivoted doors in series shall be 48" minimum plus the width of any door swinging into the space (404.2.5). Doors have a minimum 32" wide clearance. Maneuvering clearances on either side of the door are a minimum of 60" from the pull side and 48" from the push side.

Thresholds at doorways shall be maximum 1/2" high otherwise a ramp is required (303.2; 303.3).

5a. There are areas where the requirements for push/pull do not meet the above criteria for accessibility standards.

5b. There are areas where the requirements for maneuvering meets the above criteria for accessibility standards.

5c. There are areas where the requirements for thresholds do not meet the above criteria for accessibility standards.

6. Door Hardware & Panic Hardware:

Doors have open, lever-styled hardware (no round/knob hardware) (404.2.6). Egress doors have panic hardware.

6a. There are doors that do not meet the above criteria for accessibility standards

7. Restrooms:

Public restrooms have at least 5'-0" clearance space for a wheelchair to turn around, at least (1) ADA accessible stall (sized 60" min. depth x 56" min. width, for wall-mounted stalls, and 59" min. depth for floor-mounted stalls) with 5'-0" clearance (604.3.1), and at least (1) sink at a 34" maximum height (606.3). The compartment door clearance between the door side of the compartment and any obstruction shall be 42" minimum. Compartment doors shall not swing into the required minimum area of the compartment (604.9.3)

There is at least (1) unisex restroom per floor level, and unisex restrooms have at least 5'-0" clearance space for a wheelchair to turn around, as well as a sink/counter-top height at a maximum of 34".

Mirrors located above the sink or counter shall have the bottom edge at a maximum height of 40" above the floor. Mirrors not located above a sink or counter shall have a bottom edge at a maximum height of 35" above the floor (603.3).

Fixed stall grab bars shall be 42" minimum in length located 12" maximum from the rear wall. Vertical fixed grab bars shall be 18" minimum in length, the bottom edge of the bar shall be 39" to 41" above the floor, and 39" to 41" from the rear wall (604.5.1). Rear fixed grab bars shall be 36" minimum in length and extend 12" from the centerline of the toilet. Rear grab bars shall be 24" minimum in length centered from where wall space doesn't permit 36" grab bar (604.5.2).

Bottom edge of urinals shall be 17" maximum above the floor (604.10.4).

ADA showers shall be 36" by 36" minimum with an entry of 36" by 48" minimum. A 36" minimum depth shall be provided adjacent to the open face of the compartment (608.2.1). A roll in shower shall be 60" x 30" minimum with a 60" minimum opening adjacent to the stall (608.2.2). A seat shall be 24" minimum to 36" maximum in length shall be provided at the entry side of the compartment (608.2.3).

Horizontal shower grab bars shall be provided across the control wall and on the back wall to a point 18" from the control wall (608.3.1.1). Vertical shower grab bars shall be 18" minimum in length on the control wall and 3" minimum to 6" maximum above the horizontal grab bar and 4" maximum inward from the front edge of the shower (608.3.1.2).

7a. There are restrooms that do not meet the above criteria for accessibility standards.

8. Drinking Fountains & Protruding Objects:

At least (1) fountain has a clear foot space of at least 30" x 48" in front and has a spout height at a maximum of 36" off the ground. Children's fountain spout shall be 30" maximum above the floor. Wheelchair fountain spout shall be 36" maximum and standing 38" to 43" above the floor (602.4).

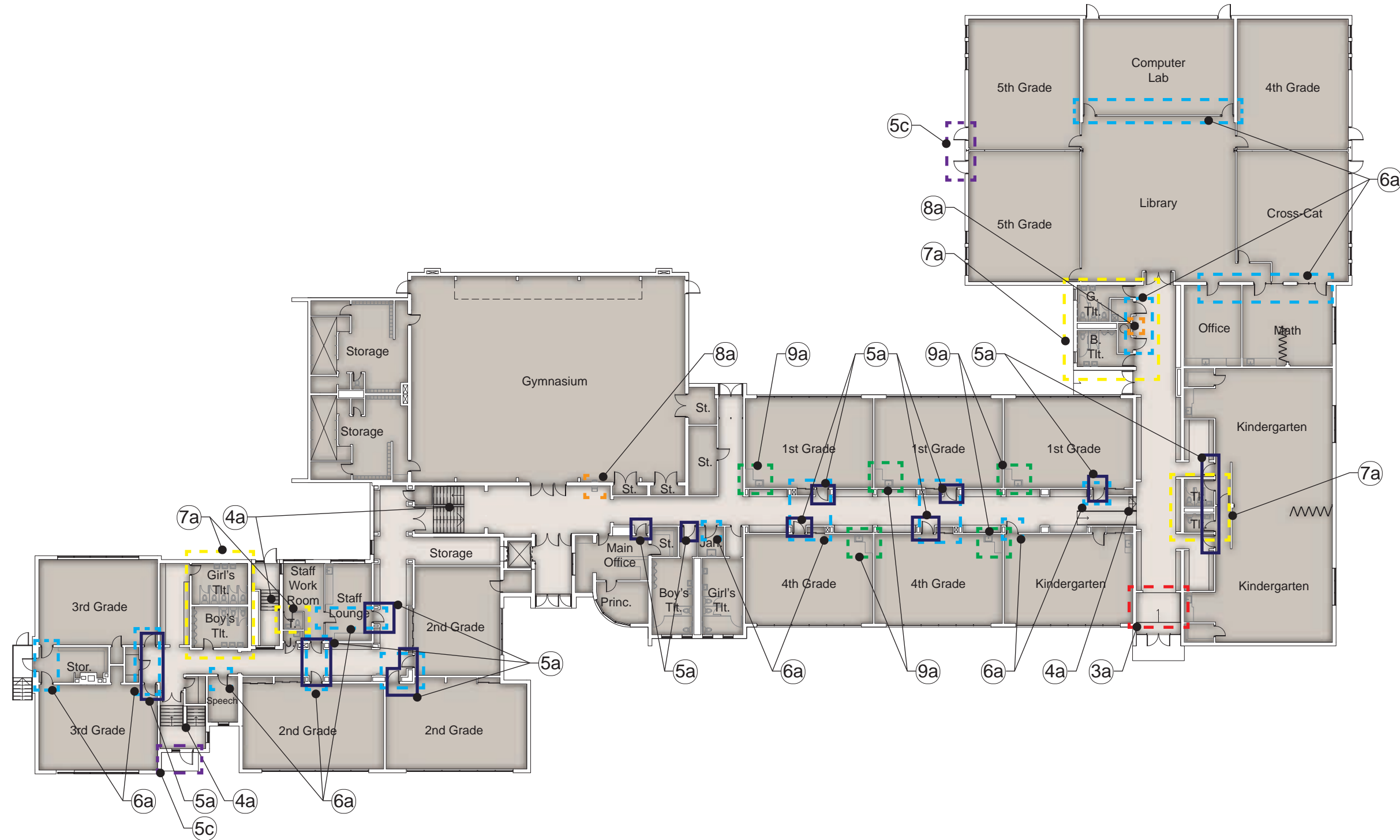
Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and where the vertical clearance is less than 80 inches above the floor. The leading edge of such guardrail or barrier shall be 27 inches maximum above the floor (307.4).

8a. Drinking fountains do not meet the above criteria for meeting accessibility standards.

9. Casework, Transaction Counters, & Counters with Sinks:

Counter-tops have a maximum 34" height, and transaction counters have an accessible portion that is at a maximum 34" height for wheelchair accessibility (606.3). Counters and work surfaces for children's use shall be 26" minimum and 30" maximum above the floor (902.4.2).

9a. There are counter-tops that do not meet the above criteria for meeting accessibility standards.



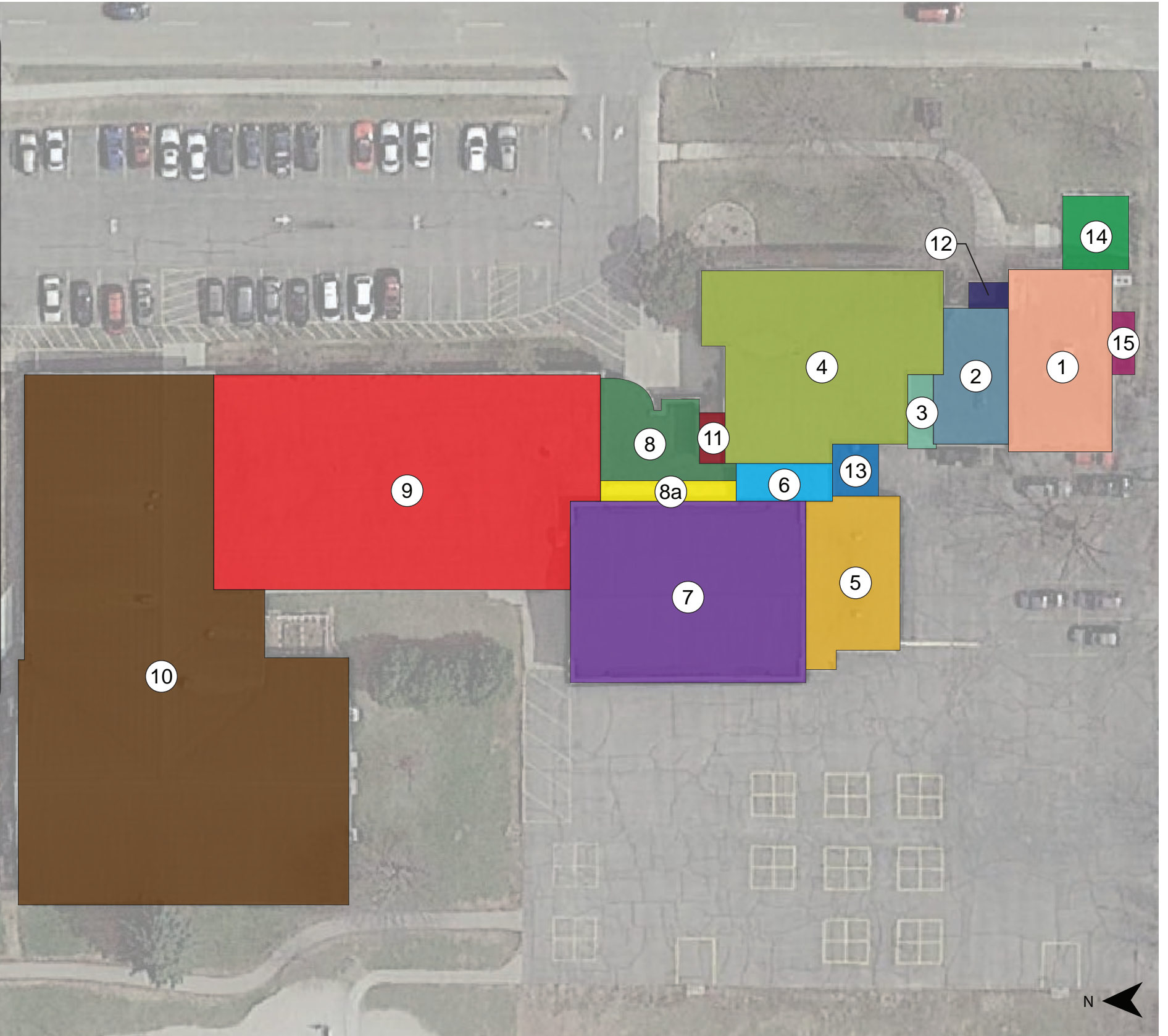
FIRST FLOOR PLAN
not to scale



LAKEVIEW ELEMENTARY: ROOF PLAN

Roof Timeline

- = (1) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (2) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (3) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (4) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (5) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (6) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (7) Installer Unknown, Modified BUR, Installation 1998, 19 years old, Warranty Unknown
- = (8) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (8a) Installer Unknown, Type Unknown, Installation Unknown, Age Unknown, Warranty Unknown
- = (9) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (10) Installer Unknown, Modified BUR, Installation 1990, 27 years old, Warranty Unknown
- = (11) Installer Derbigum, Modified BUR, Installation 1995, 22 years old, Warranty Expired 2015
- = (12) Installer Derbigum, Modified BUR, Installation 1995, 22 years old, Warranty Expired 2015
- = (13) Installer Unknown, EPDM, Installation Unknown, Age Unknown, Warranty Unknown
- = (14) Installer Unknown, Modified BUR, Installation 2011, 6 years old, Warranty Unknown
- = (15) Installer Unknown, Asphalt Shingles, Installation 1999, 18 years old, Warranty Unknown



ROOF PLAN
not to scale

THIS PAGE IS INTENTIONALLY LEFT BLANK.

LAKEVIEW ELEMENTARY: EXTERIOR DOOR ANALYSIS

No.	Door Type	Frame Type
1	Aluminum	Aluminum
2	Hollow Metal	Hollow Metal
3	Hollow Metal	Hollow Metal
4	Hollow Metal	Hollow Metal
5	Hollow Metal	Hollow Metal
6	Hollow Metal	Hollow Metal
7	Hollow Metal	Hollow Metal
8	Aluminum	Aluminum
9	Aluminum	Aluminum
10	Hollow Metal	Hollow Metal
11	Hollow Metal	Hollow Metal
12	Hollow Metal	Hollow Metal
13	Hollow Metal	Hollow Metal
14	Hollow Metal	Hollow Metal
15	Hollow Metal	Hollow Metal
16	Aluminum	Aluminum Storefront



① ALUMINUM DOORS & ALUMINUM STOREFRONT



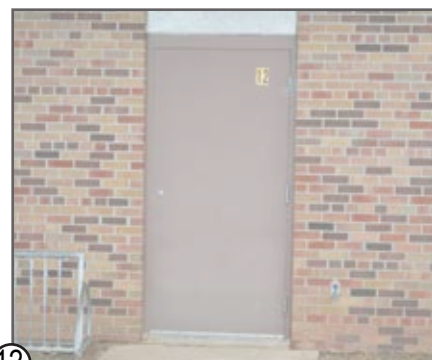
② HOLLOW METAL DOOR & HOLLOW METAL FRAME



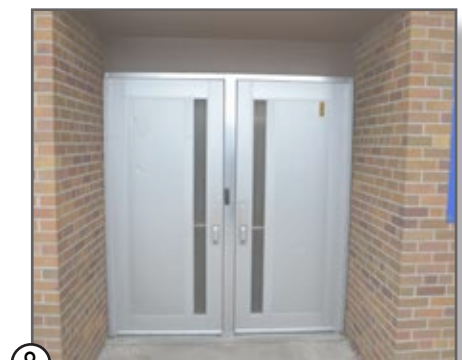
④ HOLLOW METAL DOOR & HOLLOW METAL FRAME



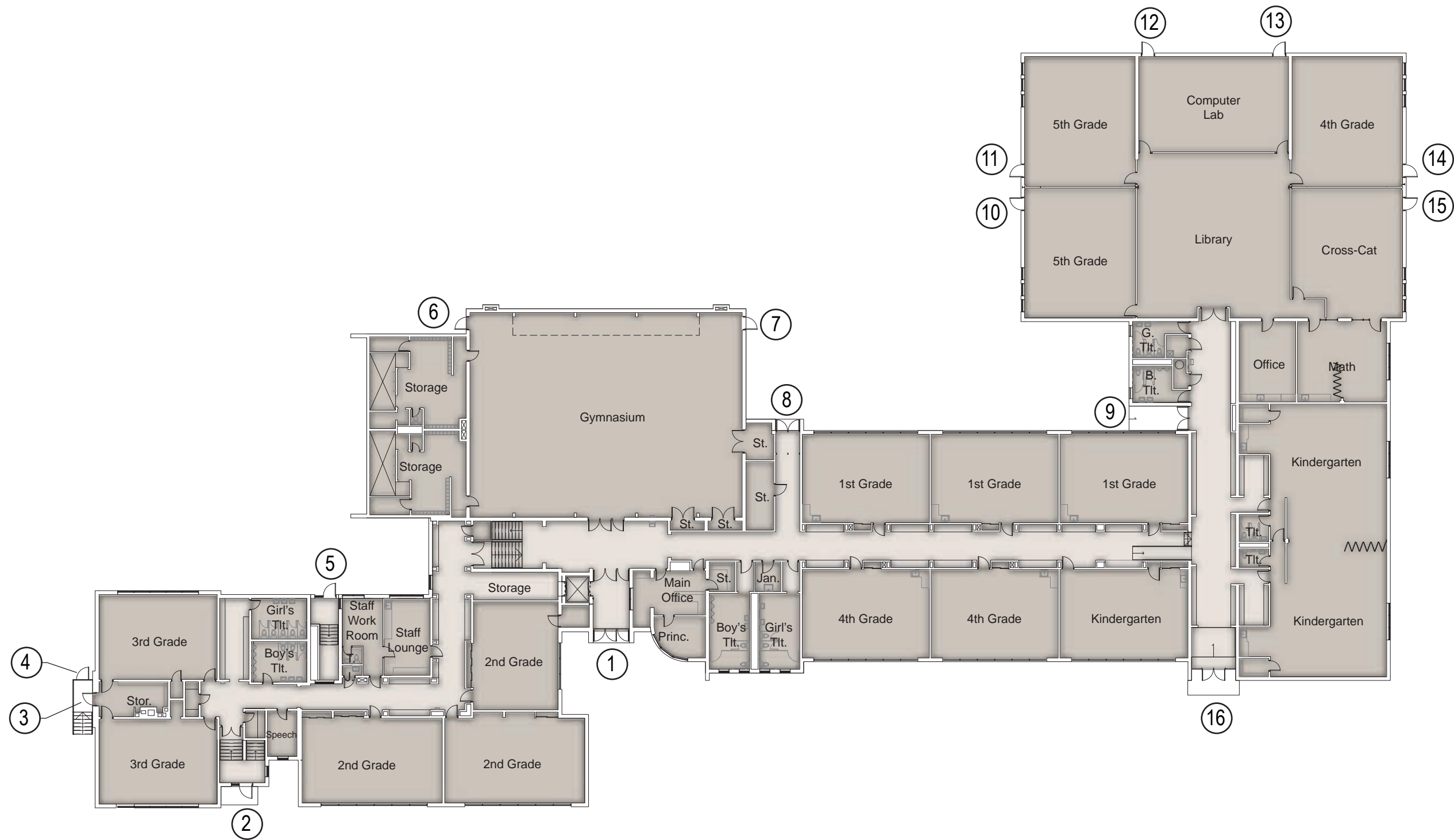
⑬ ALUMINUM DOORS & ALUMINUM STOREFRONT



⑫ HOLLOW METAL DOOR & HOLLOW METAL FRAME



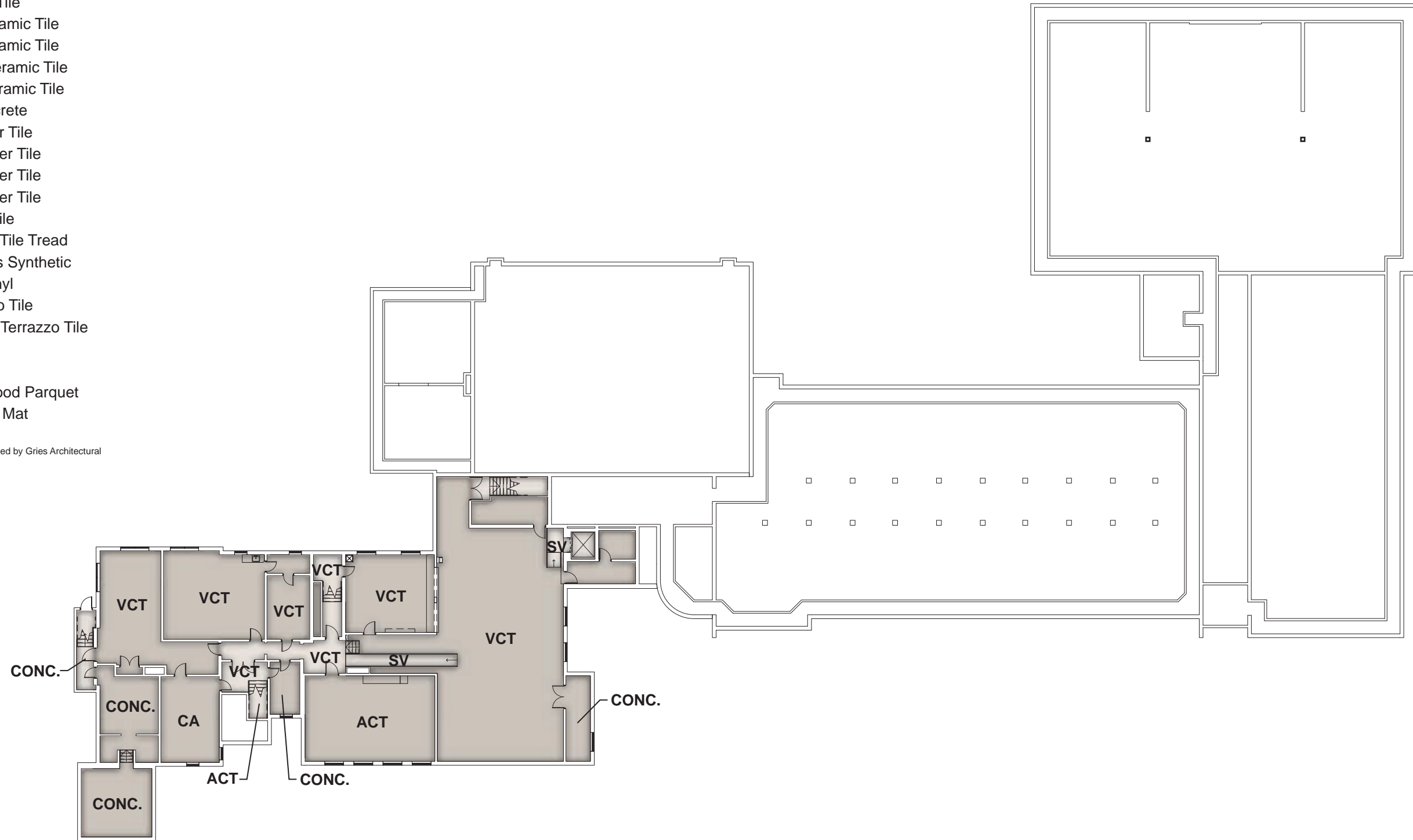
⑧ ALUMINUM DOORS & ALUMINUM FRAME



LAKEVIEW ELEMENTARY: FLOORING ANALYSIS

- ACT - 9x9 (Asbestos)
- ACT1 - 12x12 (Asbestos)
- ACT2 - 6x6 (Asbestos)
- CA - Carpet Broadloom
- CAT - Carpet Tile
- CT1 - 1x1 Ceramic Tile
- CT2 - 2x2 Ceramic Tile
- CT12 - 1x2 Ceramic Tile
- CTH - Hex Ceramic Tile
- CONC. - Concrete
- PT - 8x8 Paver Tile
- PT1 - 6x6 Paver Tile
- PT2 - 3x3 Paver Tile
- PT3 - 3x6 Paver Tile
- RT - Rubber Tile
- RTT - Rubber Tile Tread
- SS - Seamless Synthetic
- SV - Sheet Vinyl
- TER - Terrazzo Tile
- TER1 - 12x12 Terrazzo Tile
- VCT - 12x12
- WD - Wood
- WDP - 4x4 Wood Parquet
- WM - Walk-off Mat

* Flooring Types Identified by Gries Architectural Group

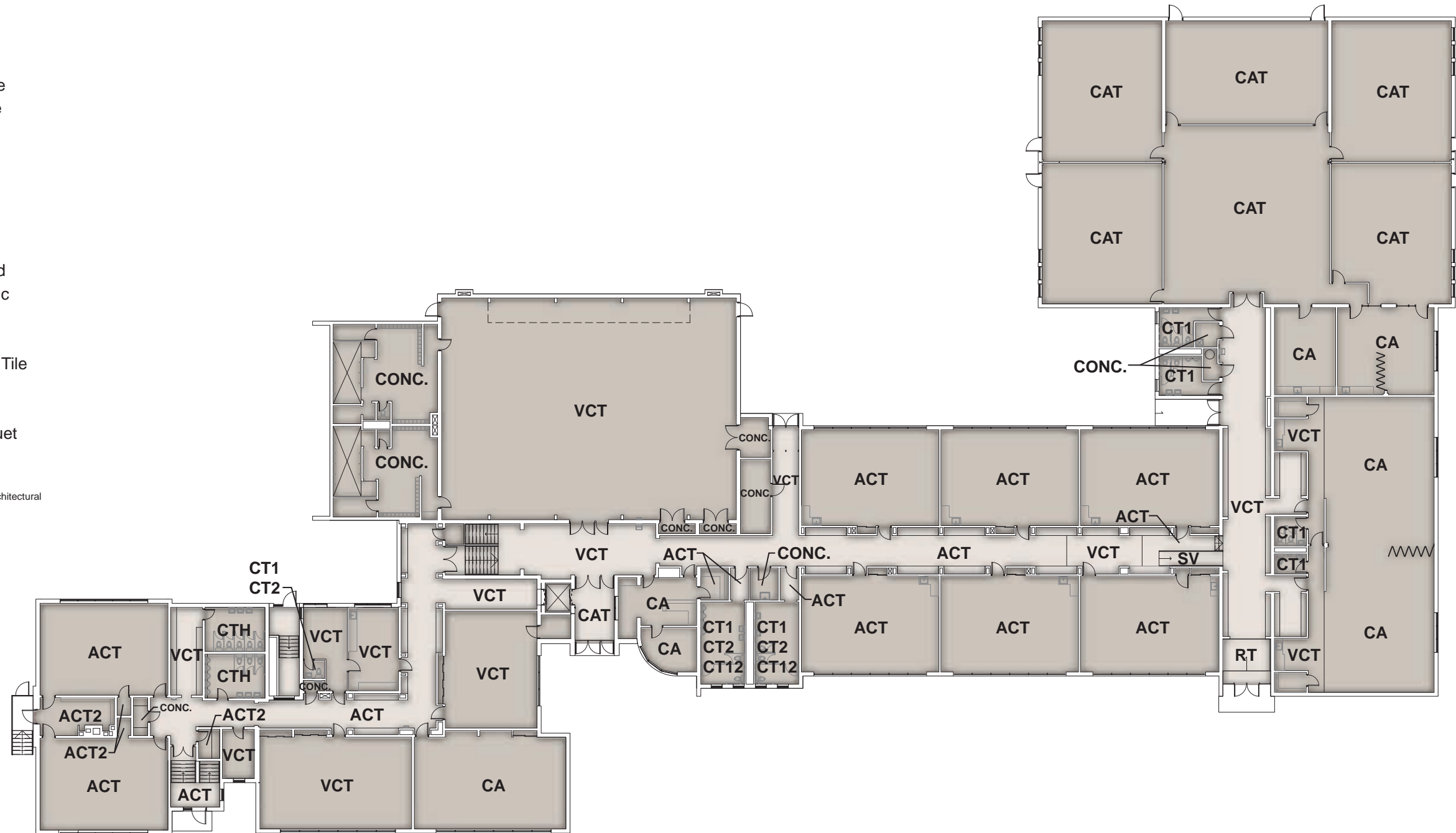


LOWER FLOOR PLAN
not to scale

LAKEVIEW ELEMENTARY: FLOORING ANALYSIS

- ACT - 9x9 (Asbestos)
- ACT1 - 12x12 (Asbestos)
- ACT2 - 6x6 (Asbestos)
- CA - Carpet Broadloom
- CAT - Carpet Tile
- CT1 - 1x1 Ceramic Tile
- CT2 - 2x2 Ceramic Tile
- CT12 - 1x2 Ceramic Tile
- CTH - Hex Ceramic Tile
- CONC. - Concrete
- PT - 8x8 Paver Tile
- PT1 - 6x6 Paver Tile
- PT2 - 3x3 Paver Tile
- PT3 - 3x6 Paver Tile
- RT - Rubber Tile
- RTT - Rubber Tile Tread
- SS - Seamless Synthetic
- SV - Sheet Vinyl
- TER - Terrazzo Tile
- TER1 - 12x12 Terrazzo Tile
- VCT - 12x12
- WD - Wood
- WDP - 4x4 Wood Parquet
- WM - Walk-off Mat

* Flooring Types Identified by Gries Architectural Group



FIRST FLOOR PLAN
not to scale



LAKEVIEW ELEMENTARY: ENGINEER REPORT - PLUMBING

Plumbing System Review:

The following report is the result of a site visit by Leslie Fry of Muermann Engineering, LLC that occurred in January 2017. Site observations and interviews with staff were used in the preparation of this report.

The original building was built in 1936 with additions completed in 1951, 1957, and 1967.

Domestic Water

Observations

- A. Water is supplied to the building by a well with pressure tank serving 56 psi pressure water.
- B. The majority of the water distribution piping in the building appears to be copper tube and fittings with some galvanized pipe and fittings in the original building. The water distribution piping appears to be in fair condition.
- C. The existing building has no sprinkler system.

Recommendations

- A. The water distribution piping in the original building, and additions are at the end of their life expectancy. We would recommend replacing the existing pipe and fittings with new type "L" copper tube and fittings.
- B. If there are any new additions or major remodeling planned, a new larger water service will need to be provided.
- C. If a complete fire sprinkler system is preferred for the building, a new 6" water service will need to be provided.



Sanitary and Storm Piping

Observations

- A. The sanitary waste from the building flows by gravity out the building and connects to the Municipal sanitary sewer system.
- B. The sanitary waste piping is below the slab and material could not be verified.
- C. The building has a prep kitchen with a 2-compartment stainless steel sink. No disposer, grease interceptor, or dishwasher is installed.
- D. The existing roof water is collected by mix of internal roof drains and conductors and gutter and downspout which flow by gravity out the building and connect to the Municipal storm sewer system.
- E. There are multiple clearwater sump pumps located in the basement level for removing groundwater. Some of the pumps have been replaced with new pumps. The sump systems appear to be in fair to good condition.

Recommendations

- A. The sanitary sewer system is nearing the end of their life expectancy. We would recommend the existing sewer located



below the floor be inspected with a camera and may need to be replaced pending outcome of the scope.

- B. The storm sewer system in the original building, 1954 addition, and 1957 addition are nearing the end of their life expectancy. We would recommend the existing sewer located below the floor be inspected with a camera and may need to be replaced pending outcome of the scope.
- C. The existing clearwater sump pumps should be monitored and repaired or replaced as necessary.

Plumbing Equipment

Observations

- A. The building has two domestic hot water. The system serving the building was installed in 2011 and is gas fired. The one that provides hot water to the kitchen only is older and electric. Both water heaters are in good condition.
- B. There is a domestic soft water systems in the building that serves both cold and hot water.

Recommendations

- A. Replace the older electric water heater with a new energy efficient unit.

Plumbing Fixtures

Observations

- A. The existing plumbing fixtures in the building are a combination of various styles and ages. Most of the fixtures are original to the building age they were installed. Some of the fixtures have been replaced with newer water efficient and ADA compliant fixtures.
- B. The water closets are floor set, tank type fixtures. They do not appear to be water conserving or ADA compliant. The fixtures are old and in fair condition.
- C. The urinals in the building are floor. The fixtures are not water conserving, or ADA, are old and yet in fair condition.
- D. The lavatories in the building are wall hung with multiple styles of faucets. Some lavatories have sensor faucets, metering faucets, wrist blade deck faucets or rear mounted tee handle faucets. They do not appear to be water conserving or ADA compliant and are in fair condition.
- E. The showers in the building have been abandoned.
- F. The drinking fountains in the building are wall hung vitreous china or stainless steel. They are not ADA compliant and are in fair condition.
- G. One electric water cooler with bottle filler is installed near the kitchen and is good condition.



LAKEVIEW ELEMENTARY: ENGINEER REPORT - PLUMBING

- H. The classroom sinks are single bowl, stainless steel drop-in sinks with gooseneck faucet and separate drinking fountain. The fixtures are not ADA compliant and are in fair condition.

Recommendations

- A. The water closets should be replaced with new water conserving and ADA compliant fixtures.
- B. The urinals should be replaced with new water conserving and ADA compliant fixtures.
- C. The lavatories should be replaced with new water conserving and ADA compliant fixtures.
- D. The drinking fountains should be replaced with new ADA compliant fixtures with a bottle filler.
- E. The faucets on the classroom sinks should be replaced with new ADA compliant faucets.



HVAC SYSTEM

The following report is the result of a site visit by Jason Testin of Fredericksen Engineering that occurred on January 19, 2017. Site observations, construction plan review, and interviews with staff were all used in the preparation of this report.

The original building was constructed in 1936, with additions being constructed in 1951, 1957 and 1967.

1.1 Heating System

A. Existing Data

1. The boiler plant consists of a Kewanee steam boiler and a Hurst steam boiler, each fired with natural gas. The Kewanee boiler was installed in 1967 and the Hurst boiler was installed in 2008. The Kewanee boiler has a capacity of 2,500,000 btu and the Hurst boiler has as capacity of 2,588,000 btu.
2. The piping and pumping system for the boiler plant is comprised of two heating circuits, the first being a steam circuit and the second being a hot water circuit.
3. A heat exchanger on the steam side is used to transfer heat to the hot water circuit. That hot water circuit also has a stand-by pump. If the primary pump fails, the secondary (stand-by) pump will provide hot water circulation to the system.

B. Observations

1. According to information obtained by the Owner, the boiler plant has no reserve capacity at this point, as both boilers are needed in the winter.
2. The Kewanee boiler is in fair condition but has exceeded the estimated life expectancy of 30 years.
3. The Hurst boiler is in good condition. It has an estimated life expectancy of 30 years.
4. While the age of the heat exchanger and hot water pumps in not specifically known, they appear in fair condition and seem to have exceeded the estimated life expectancy.
5. Much of the pipe insulation is deteriorating.

C. Recommendations

1. Continue preventative maintenance on the system.
2. Plans should be made for the eventual replacement of the aging steam boiler. At the time of replacement, it is recommended that hot water boilers be installed in lieu of steam boilers. All steam and condensate piping, along with all steam equipment would be converted to hot water piping and equipment.
3. Plans should be made for the replacement of the aging heat exchanger and hot water pumps (if the system remains steam).

1.2 Ventilation and Air Conditioning Systems

A. Existing Data

1. There are two systems that provide ventilation for the facility. The two systems are unit ventilators and constant volume air handling systems.



2. The majority of the classrooms are ventilated using unit ventilators. Unit ventilators house a fan, steam or hot water heating coil, fresh air damper, return air damper and controls in a single cabinet mounted in the space. Steam and condensate or hot water piping is run to each unit ventilator.
3. The gymnasiums and cafeteria are served by individual constant volume air handling units. Constant volume systems consist of a central supply fan, which contains a steam heating coil, fresh air damper, return air damper and controls. A room thermostat is used to control the temperature of the air supplied to the space.
4. The library and computer lab are served by a constant volume air handling unit. Constant volume systems consist of a central supply fan, which contains a hot water heating coil, fresh air damper, return air damper and controls. Hot water booster coils are installed in the ductwork to provide individual room temperature control.

B. Observations

1. The unit ventilators are original to the building and are in fair condition. The units have exceeded the estimated life expectancy of 25 years.
2. The constant volume air handling units serving the gymnasiums and cafeteria are original and are in fair condition. The units have exceeded the estimated life expectancy of 30 years.
3. The constant volume air handling unit serving the library and computer room was installed in 2014 and is in good condition. The estimated life expectancy is 30 years.
4. The janitor closets currently do not have exhaust. Current Wisconsin code requires exhaust.
5. The offices currently do not have fan powered fresh air being provided to the space. Current Wisconsin code does not allow fresh air via operable windows for this type of building.
6. Door transfer grilles are currently utilized to transfer relief air from the classrooms to the corridor.

C. Recommendations

1. Plans should be made for the eventual replacement of the aging unit ventilators.
2. Plans should be made for the eventual replacement of the aging constant volume air handling units.
3. Plans should be made for the installation of an exhaust system to serve the janitor closets.
4. Plans should be made for the installation of a fan powered ventilation system for the offices.
5. With any remodel or renovation, plans should be made to replace the door transfer grille relief system with a code approved system. The current building code does not allow transfer air into a path of emergency egress.

1.3 Control Systems

A. Existing Data

1. A mixture of pneumatic temperature controls and digital temperature controls serve the building.



B. Observations

1. The limitations of the pneumatic system do result in comfort complaints. Pneumatic systems require frequent calibration to maintain accuracy. The newer digital controls are more accurate and more flexible. In addition, the industry has made such a complete changeover to digital controls that it is becoming difficult to find good pneumatic service technicians.

C. Recommendations

1. Continue to maintain and operate the pneumatic control system as long as the current mechanical equipment remains. When any renovations to the existing equipment are made, a changeover to digital controls is strongly recommended.



LAKEVIEW ELEMENTARY: ENGINEER REPORT - ELECTRICAL

Electrical System Review:

The following report is the result of a site visit by Daniel Cedeno of Muermann Engineering, LLC that occurred on January 23, 2017. Site observations, existing plan review and interviews with staff were all used in the preparation of this report. The facility was built in 1936, with additions occurring in 1951, 1957, and 1967.

Electric Service

Observations

- A. The facility has a 600-amp, 120/240V 1-phase 3 wire main electric service that is nearing the end of its useful lifespan.
- B. It was noted that there are various panelboards that show signs of premature corrosion. A possible cause could be a panelboard that is making physical contact with metallic piping that could be causing dielectric corrosion issues through the rest of the electrical distribution system. It was indicated that the building also has humidity and mold issues.
- C. The electric panelboards throughout the facility vary in age between old circuit breaker panelboards that are nearing the end of their useful lifespan, and some panelboards that are newer but showing signs of premature corrosion.
- D. Utility service to the building consists of pole mounted transformers across the street with an overhead electric service terminating at an interior wall mounted CT cabinet and electric meter.
- E. There is no emergency backup power available in the building.



Main Electric Service



C/T Cabinet

Recommendations

- A. The main electric service is nearing the end of its useful lifespan and should be scheduled for replacement within the next 5-8 years.
- B. Provide surge suppression to prevent equipment damage in the building during power surges.
- C. Vintage circuit breaker panelboards should be scheduled for replacement within the next 10 years.
- D. A possible recommendation is to provide a new emergency generator system to provide backup power and emergency lighting to the building during electric outages.
- E. Ensure proper working clearances are maintained in front of all panelboards at all times. Working clearance area may not be used for storage. Recommendations include using industrial vinyl safety tape to physically indicate clearance on floor/wall around panelboards.



Corroded Panelboards

Light Fixtures & Controls

Observations

- A. Much of the interior lighting throughout the facility consists of a variety of T8 fluorescent or incandescent light fixtures, including



recessed, surface, and pendant mounted varieties. The fixtures range in age but all are in good working condition.

- B. The gymnasium uses high bay metal halide fixtures to provide general lighting in the space. There are no provisions for emergency lighting.
- C. General lighting controls in rooms consist of toggle switches with no occupancy sensors or dual level lighting. Most classrooms utilize split area zones to split lighting controls in room.
- D. Corridor lighting controls consist of local toggle switches with no occupancy sensors. Staff indicated they prefer to turn off the corridor lighting circuit breakers to minimize efforts.
- E. There are no provisions for emergency lighting through most of the facility, except for a handful of wall mounted battery packs throughout the facility that provide minimal, non-code compliant light levels.
- F. The library and adjoining classrooms have been recently renovated and have direct/indirect fluorescent basket fixtures with occupancy sensors, dual level lighting, and built-in emergency battery backup.
- G. The basement had some classrooms where the lighting controls were located in the hallway.
- H. Exterior lighting consists of a mixture of high pressure sodium and LED wall packs. It was noted that there is a severe amount of spider webs around some of the fixtures that may pose a potential fire hazard.
- I. Exterior lighting is controlled via a combination of photocell and time clock controls.



Classroom Lighting



Gymnasium Lighting



Exterior Wall Pack

Recommendations

- A. Recommendations to interior lighting include replacing fixtures with LED equivalents, providing dimming controls and occupancy sensors to maximize on energy savings.
- B. Schedule existing exterior light fixtures with LED equivalents and control via existing timeclock/photocell controls.
- C. Corridors should be provided with occupancy sensors and light switches removed to automatically control the lighting and maximize on energy savings.
- D. Relocate classroom switches in basement to be inside classroom.
- E. Clean exterior light fixtures throughout the facility to remove potential fire hazards.
- F. If new LED lighting is provided, it is recommended that emergency lighting be provisioned through back up batteries integral to the normal light fixtures through egress paths and rooms with an occupant load greater than 50 persons.



Alternatively, providing a new emergency generator system would be an alternative option to battery backup.

Wiring Devices

Observations

- A. Most receptacles throughout the facility are 15A rated.
- B. There was a general lack of receptacles throughout the facility. Facility staff indicated they have problems finding available receptacles often. Some classrooms only have 3 receptacles in the whole room.
- C. There are receptacles within 6 feet of plumbing fixtures that are not GFI protected.



Non-GFI Receptacle

Recommendations

- A. Recommendations include replacing existing 15A rated receptacles with 20A rated type.
- B. Provide additional receptacles throughout working spaces as necessary to meet needs of space.
- C. Replace existing receptacles within 6' of plumbing fixtures with GFI protected type.

Phone System

Observations

- A. The facility has a Shoretel IP based phone system that is in good working condition.

Recommendations

- A. No recommendations at this time.



IP Telephone

Data System

Observations

- A. Data service is provided via fiber optic utility service. The system seems to be in good working condition.
- B. Fiber optic wiring interconnects all of the schools to the main district network.
- C. General data cabling consists of a variety of Cat5e and Cat6 cabling, both in plenum and riser rated varieties.
- D. The school has (2) data racks, which have spare rack capacity for future needs. Data cabling management at the racks is run in a disorganized fashion with no labeling. There are also no provisions for backup power.



Data Rack

Recommendations

- A. It was unknown at the time of the site visit if the facility has ceiling plenums, but if there are plenums in the ceiling spaces, the riser rated data cabling should be replaced with plenum rated cabling.



- B. Data cabling at the data racks should be reinstalled in a clean workmanlike manner. Proper labeling of data cabling should also be considered to facilitate cable management and traceability.
- C. A possible recommendation is to provide a UPS battery backup system to provide backup power to the data racks in the event of power loss.

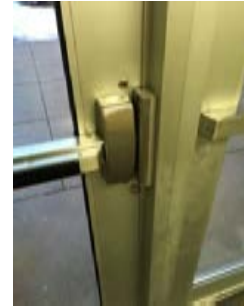
Keyless Entry System

Observations

- A. The building has a keyless entry system that is in good working condition.
- B. Access controlled doors are controlled via electric strikes and card readers.
- C. None of the exterior doors have door position contacts to monitor if doors are shut or left open.

Recommendations

- A. It is recommended to provide door monitor contacts on all exterior doors to help monitor and control access to the facility at all times.



Keyless Entry
Electric Strike

Intercom System

Observations

- A. The building has a vintage Dukane intercom system that is nearing the end of its useful lifespan.
- B. The intercom system does not have the capacity to fully cover the entire school, various classrooms don't have speakers.
- C. Intercom speakers throughout are nearing the end of their useful lifespan.
- D. Issues reported by secretary with faulty call-in switches getting stuck on "call" position in some rooms.
- E. The bell schedule system is controlled via a timeclock. Staff reported no issues with system.



Intercom System Head-End

Recommendations

- A. The existing intercom system should be scheduled for full replacement with a new IP-based intercom system. Existing speakers should be scheduled for replacement in addition to providing additional speakers in areas lacking coverage.



Bell Schedule Timeclock

CCTV System

Observations

- A. The building has a CCTV system consisting of 2 cameras throughout the facility. The system seems to be in good working condition. The district plans to add about 17 more cameras to the system in the future.



Recommendations

- A. Provide new CCTV cameras where additional coverage is necessary.

Fire Alarm System

Observations

- A. The building has a vintage simplex fire alarm system that is over 20 years old and is nearing the end of its useful lifespan.
- B. It was not confirmed if the system was monitored but it is most likely not monitored.
- C. Notification coverage is lacking by today's standards.

Recommendations

- A. It is highly recommended to replace the existing fire alarm system with a new system meeting today's standards.
- B. Corridors with open cubby storage should be protected with smoke detectors per today's standards.



Fire Alarm Control Panel

Other Low Voltage Systems

Observations

- A. The building does not have a security system.
- B. The building has a monitoring system to ensure the boilers in the facility are operational. The system is programmed to dial facility management in the event of a boiler failure.
- C. The building does not have a synchronized clock system.



Boiler Monitoring System

Recommendations

- A. Other possible recommendations include adding a security system to control and monitor access to the facility.
- B. Replacing the existing clocks with a synchronized clock system such as a GPS wireless clock system may be a recommended upgrade to minimize labor efforts required when updating clocks during daylight savings time changes.