

# 5 ROOSEVELT ELEMENTARY (ALLIANCE CHARTER ELEMENTARY)

Roosevelt Elementary and Alliance Charter Elementary share a building, and both schools provide a comprehensive program for Kindergarten and 1st through 5th grade students.

BUILDING AREA: 43,219 sq. ft.  
STUDENT POPULATION: 113 STUDENTS (ROOSEVELT);  
118 STUDENTS (ALLIANCE CHARTER)  
SITE SIZE: 2.20 ACRES; 88% IMPERVIOUS SURFACE  
GRADES SERVED: KINDERGARTEN, GRADES 1ST-5TH  
PARKING: 44 STALLS (2 HANDICAP, 42 REGULAR)  
BUS QUANTITY: 0 BUSES / 0 BUS ROUTES

## ROOSEVELT ELEMENTARY: BUILDING EVOLUTION

Roosevelt Elementary was originally constructed in 1922. An addition was built in 1924, another addition in 1969, a storage addition in 1990, and a multi-purpose addition in 1996.

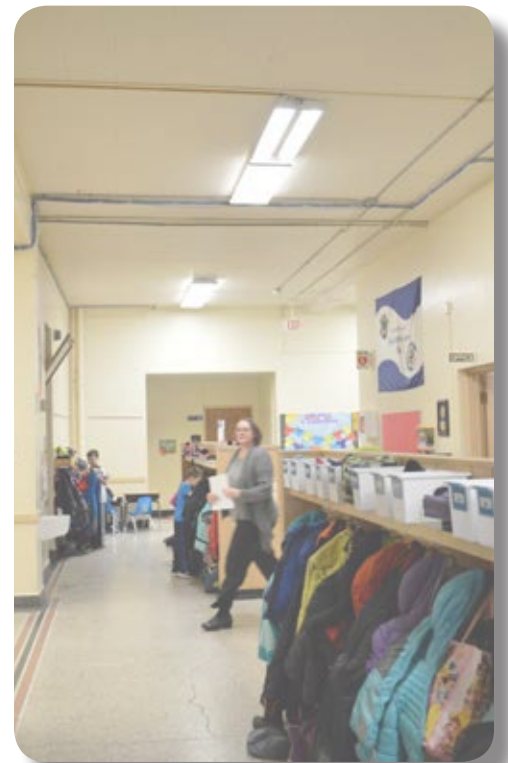
The following building evolution diagram outlines the additions made to the original building over time due primarily to student enrollment growth.



Roosevelt Elementary Main Entrance

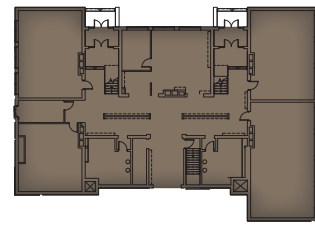


Roosevelt Elementary Classroom

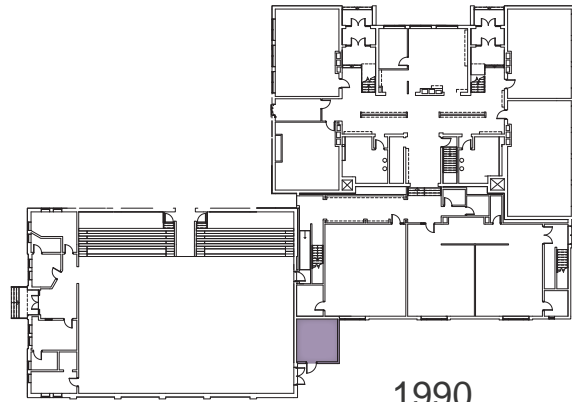


Roosevelt Elementary Corridor

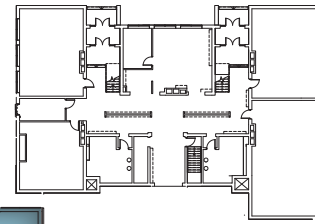
**ROOSEVELT ELEMENTARY: BUILDING EVOLUTION**



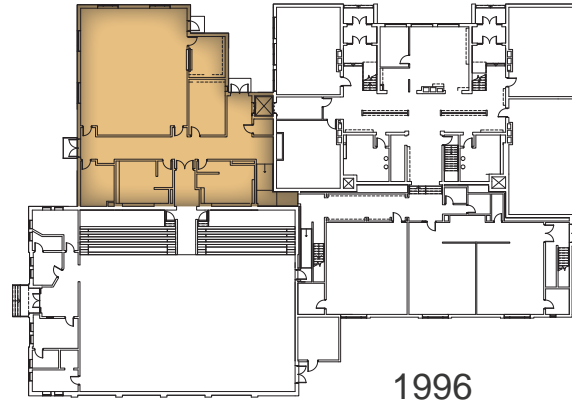
1922



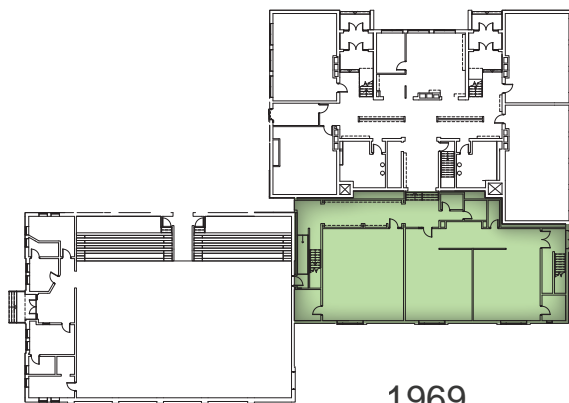
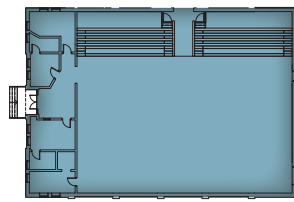
1990



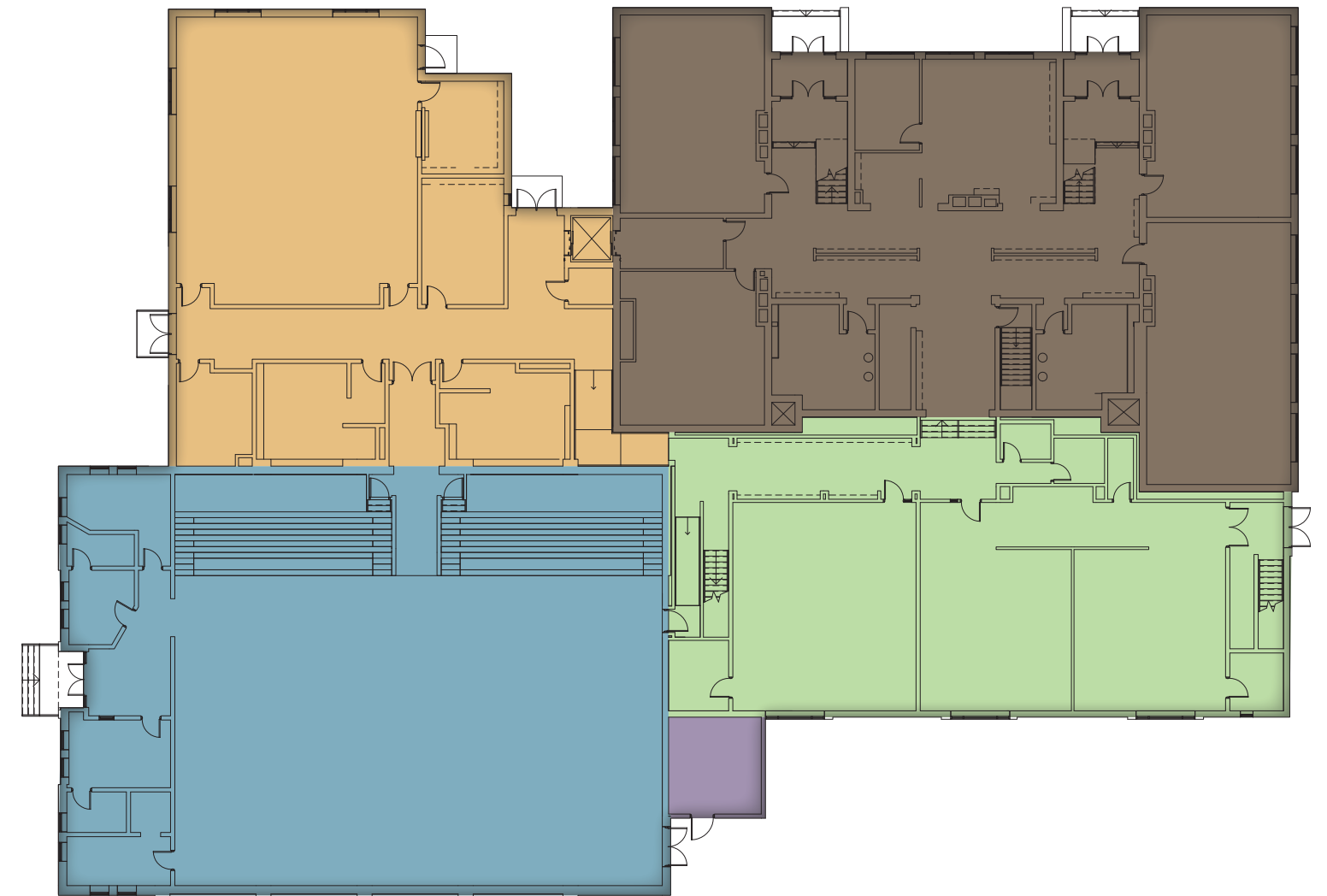
1924



1996



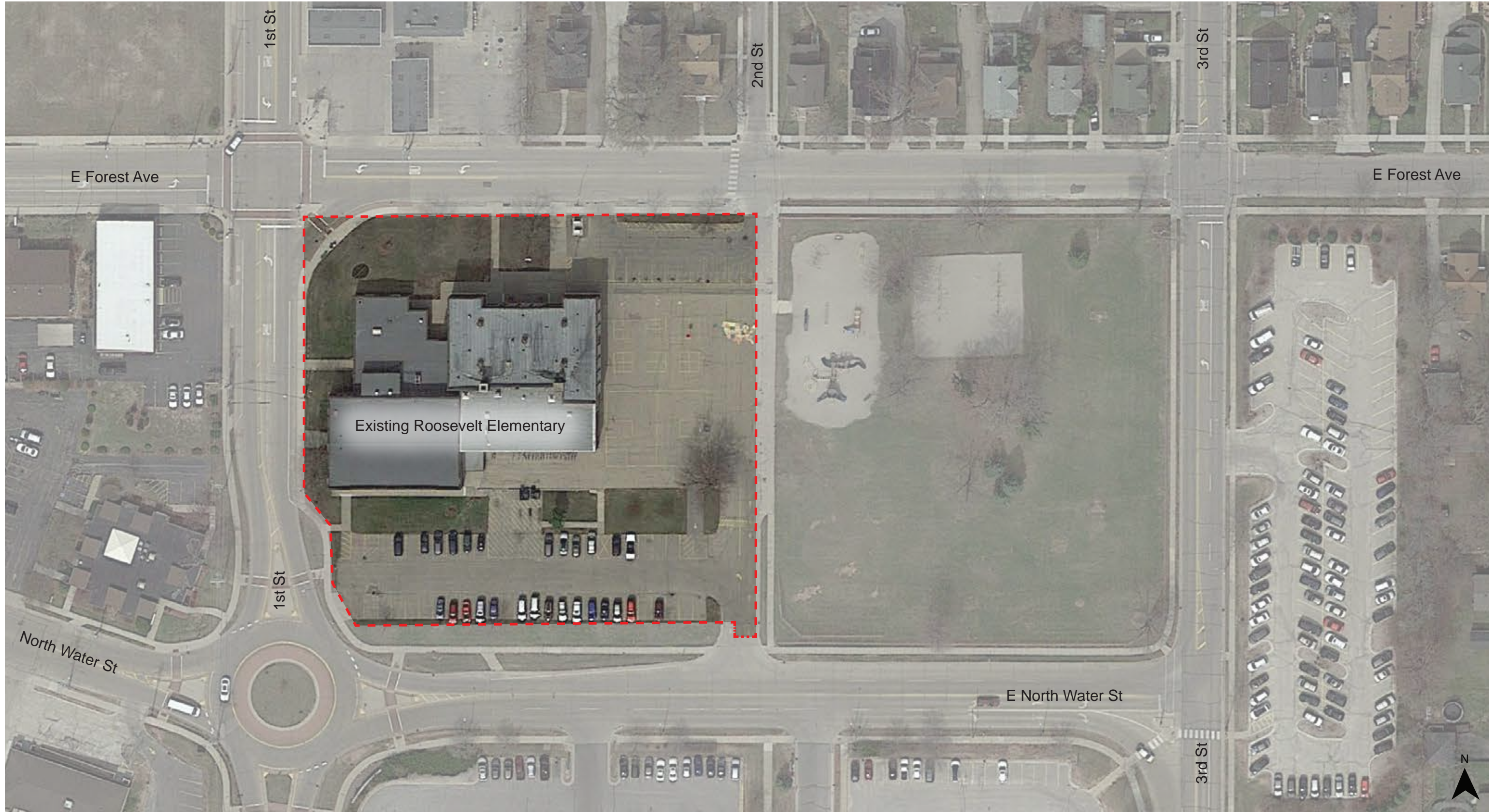
1969



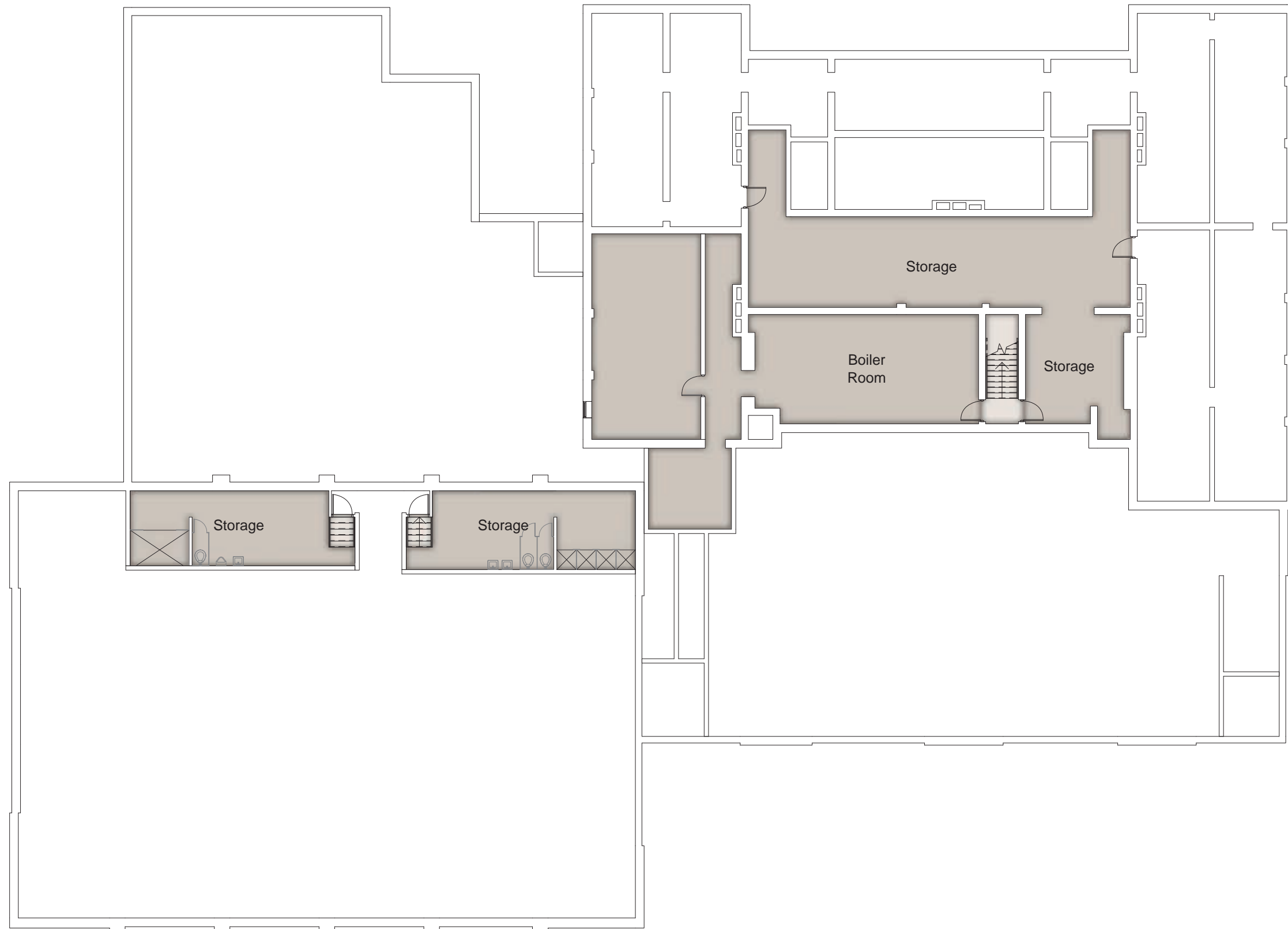
- = 1922 - Original
- = 1924 - Gymnasium Addition
- = 1969 - Classroom Addition
- = 1990 - Storage Addition
- = 1996 - Multi-Purpose Addition



**ROOSEVELT ELEMENTARY: EXISTING SITE PLAN**



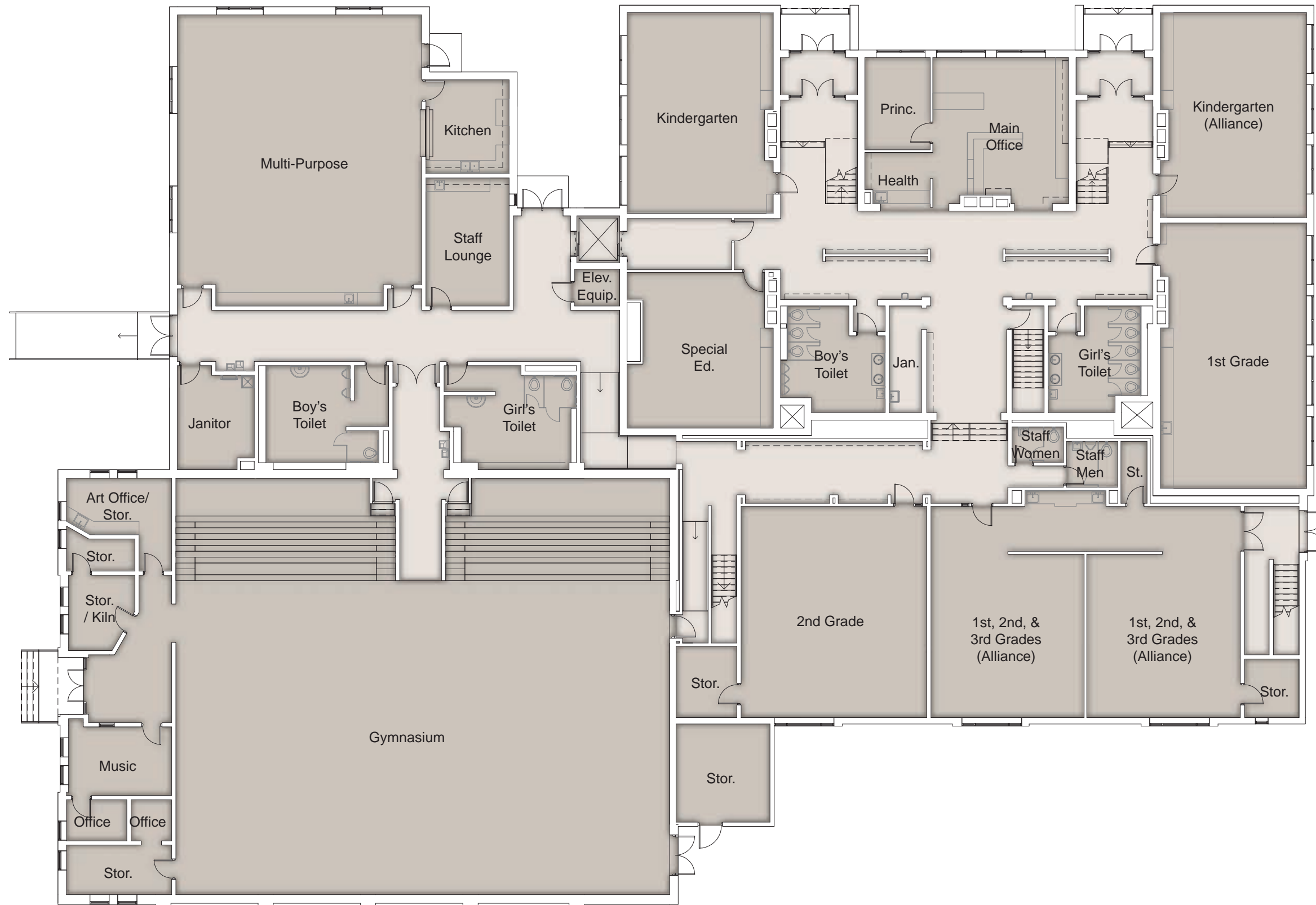
SITE PLAN  
not to scale



**LOWER FLOOR PLAN**  
*not to scale*

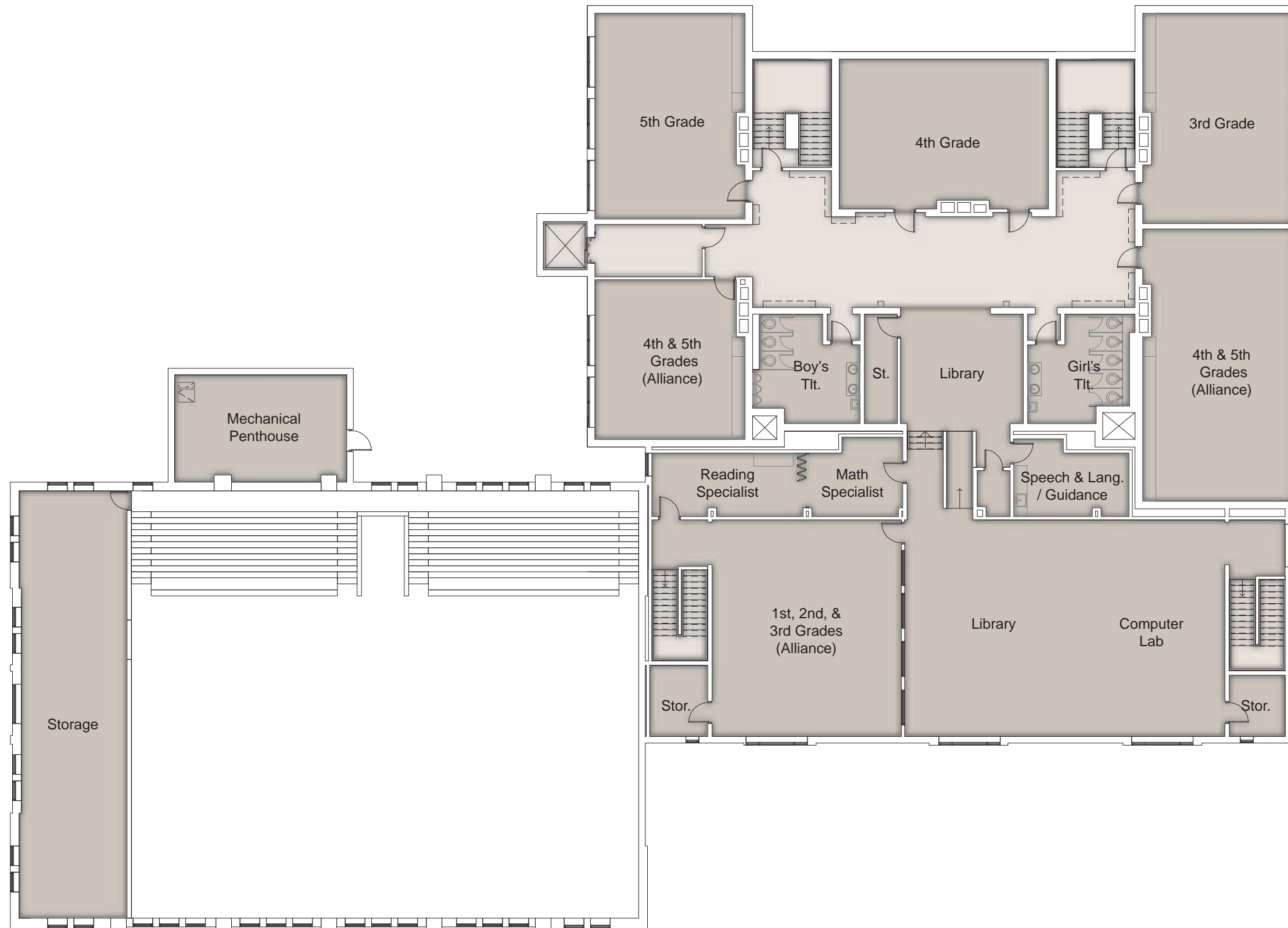


**ROOSEVELT ELEMENTARY: EXISTING FLOOR PLAN**



**FIRST FLOOR PLAN**  
*not to scale*





SECOND FLOOR PLAN  
*not to scale*



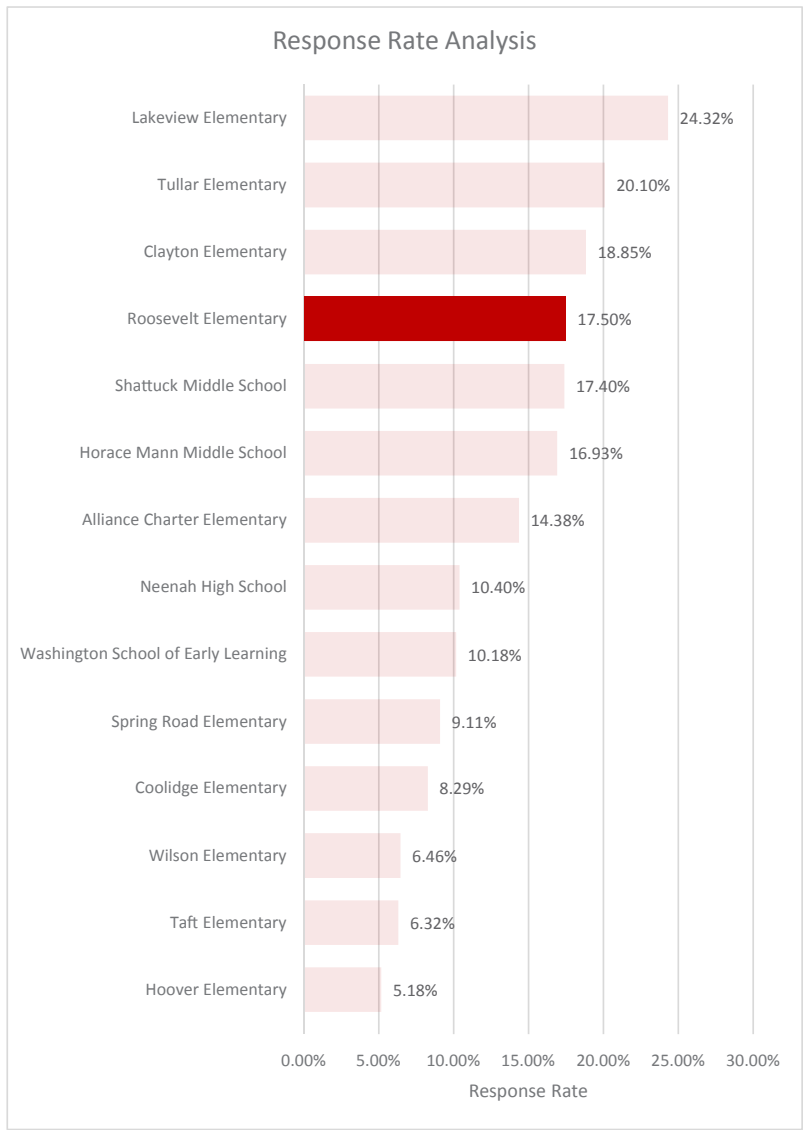
# ROOSEVELT ELEMENTARY: PARENT SURVEY FEEDBACK

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 Roosevelt Elementary.

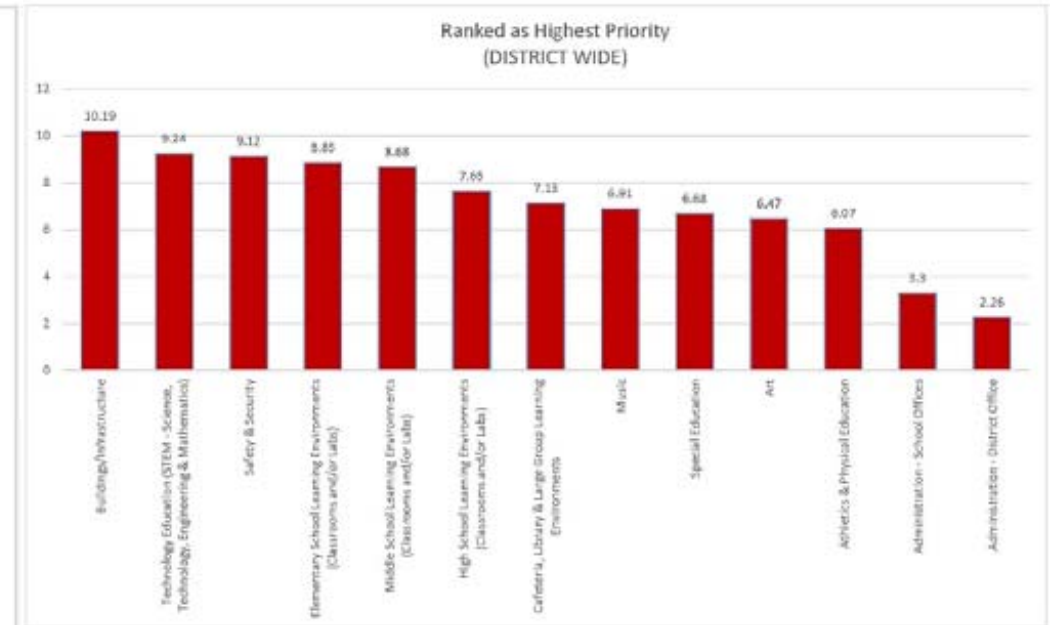
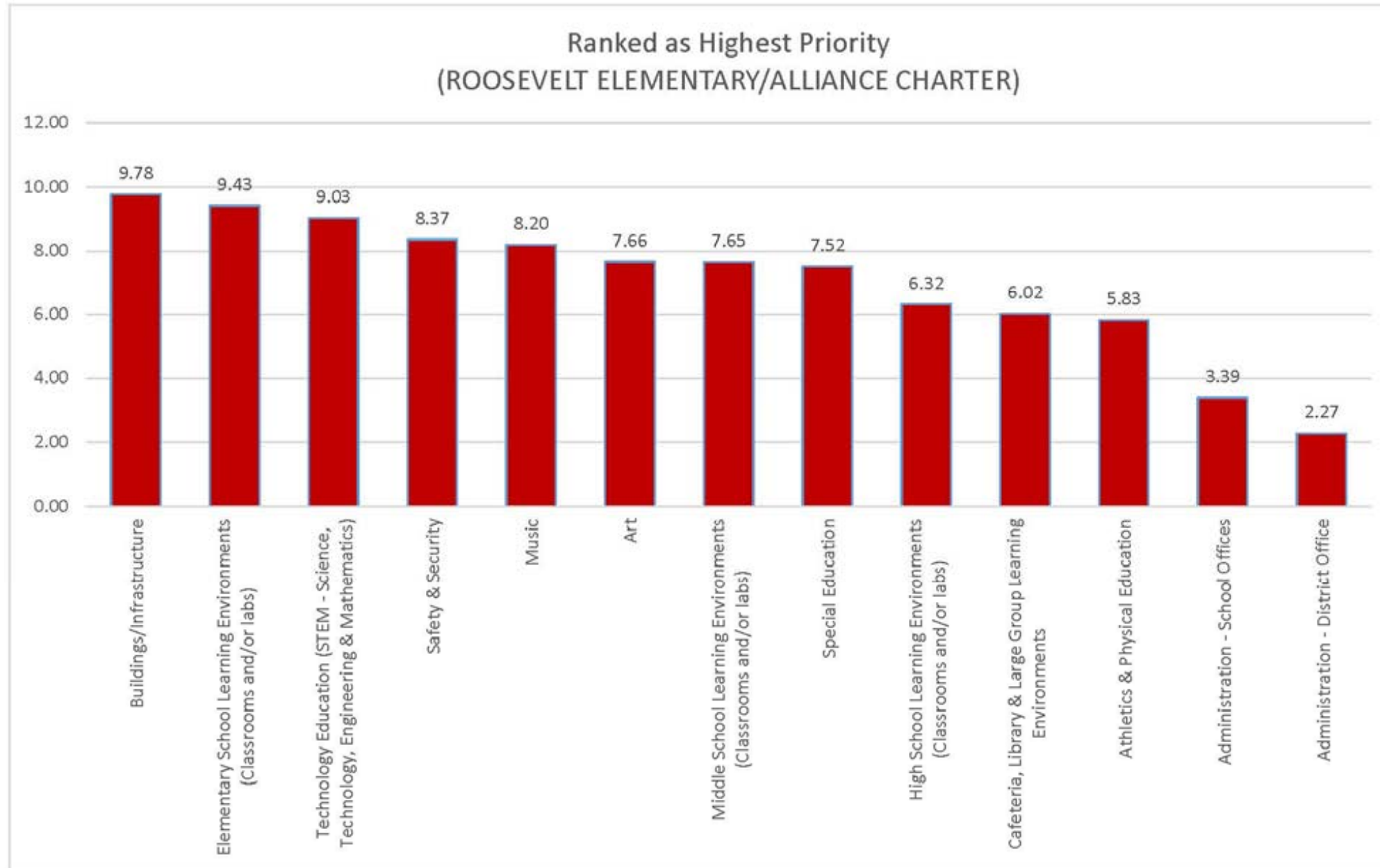
**TOTAL PARENTS TO RECEIVE SURVEY: 120**  
**TOTAL NUMBER OF RESPONSES: 21**  
**RESPONSE RATE: 17.50%**

- ADDITIONAL NOTES**
- Roosevelt Elementary had the fourth highest response rate in the District
  - Roosevelt Elementary accounts for 3.66% of all parent survey feedback





THIS PAGE IS INTENTIONALLY LEFT BLANK.



# ROOSEVELT ELEMENTARY: SUMMARY OF STAFF SURVEY FEEDBACK

---

The following is a summary of potential improvements at Roosevelt 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
  - Adequate space for reading/presentation area desired
- Sinks provided for each classroom desired; current lack of sinks in all classrooms limits activities that require water
- Adequate storage space and shelving for materials and supplies
- Additional outlets and charging stations desired
- Updated casework/storage and updated/additional bulletin boards desired
- Additional wall space desired for hanging items, projects, white boards, etc.
- Sound system/audio enhancement within the classroom desired

### SCIENCE

- Adequate space, casework, sinks, and furnishings to support science and STEM curriculum desired
- Dedicated maker space(s) desired

### CONFERENCE ROOMS & LARGE/SMALL GROUP INSTRUCTION

- Lack of adequate teaching space limits activities; additional learning spaces desired
- Small group instruction spaces desired for one-on-one learning, test taking, tutoring, etc.
- Additional enclosed instructional spaces desired that can be closed off for noise control, testing, etc.
  - Computer lab (Possibly located near the Library)
- Dedicated conference room(s) separate from instructional spaces desired for staff and parent meetings
  - Equipped with adequate T.V.'s/projectors for sharing media on a screen
- Dedicated makerspace desired

### CAFETERIA

- Separate, dedicated cafeteria/lunch room desired

### MUSIC

- Separate, dedicated classroom for Music desired, with space to accommodate (15) students
- Projector and/or wall-mounted T.V. desired for instructional purposes
- Auditorium/performance space desired

### ART

- Separate, dedicated classroom desired

### GYMNASIUM

- Separate, dedicated room/space desired
- Cardio room and equipment desired
- Remove ceiling in the gym, paint; aesthetic upgrades

### LIBRARY

- Undersized
- Presentation area located at the center of circulation; often disruptive
- Adjacent classrooms are accessible only through the library – not ideal; enclosed, dedicated room/space for the Library desired
- Flexible, movable furniture desired to accommodate large and small groups
- Larger computer lab space desired

### SPECIAL ED.

- Dedicated decompression/sensory rooms/spaces desired
- Additional EA support spaces desired
- Additional and/or larger Cross-Categorical room desired

### INSTRUCTIONAL SUPPORT SPACES

- Separate, dedicated classrooms/space for E.L.L., Speech, Reading Support, Math Support & Guidance Counselor desired
- Dedicated book room desired of adequate size to hold all literary resources

### MAIN OFFICE

- Closer proximity to main entrance desired

### STAFF LOUNGE

- Dedicated room with adequate space for staff work desired

### STORAGE

- Upgraded lockers in the corridors desired

## 2. Facility & Site Improvements:

### TECHNOLOGY

- Smartboards (for every classroom)
- Improved WiFi capabilities
- Document camera(s)
- New/updated lap-tops desired for student use; move lap-tops to carts

### INFRASTRUCTURE

- Windows
  - Old and drafty; more efficient and operable windows desired throughout the building
  - Many windows have missing or damaged screens; replacement of windows and screens desired
  - New/ updated window coverings; hard to see the screen at times.
- Finishes - Flooring, Ceiling, etc.
  - Updated finishes and/or repair of existing finishes desired
  - Overall improved aesthetics desired
  - Newly/brightly painted walls desired, especially in the classrooms; existing walls have paint peeling

### BUILDING SYSTEMS

- HVAC
  - Air conditioning throughout the building (second floor) desired
  - Temperature/climate control within the classroom desired; improved heating systems within the classroom desired
  - Existing radiators are excessively hot and dangerous to touch
  - Classroom above the boiler room is challenging to regulate in colder seasons
- Lighting
  - Updated lighting desired

### SITE

- Improved paving/resurfacing at the playground area desired; current condition is a safety concern
- Improved sidewalks – many are cracking/heaving and a safety concern
- Storage to support outdoor activities and equipment.
- Additional/more efficient parking stalls desired
- Improved building entry, parent pick-up/drop-off, bus pick-up/drop-off sequence

### MISCELLANEOUS

- Overall layout/building design
  - Not convenient for students
- Bathrooms
  - Issues with sinks/counters flooding/pooling water
  - Upgraded fixtures and finishes desired
  - Additional bathrooms desired for lower grade levels that are located within the classroom
- Nursing/pumping room desired for mothers with adequate power/ outlets
- Adequate/updated water fill stations and drinking fountains desired; higher quality drinking water desired
- Noise control/reduction
  - At sensory, resource, and small group instruction spaces
  - At the library, to assist with testing
- Additional space desired to allow for growth of the Alliance Charter School program
- Mold and asbestos are a concern
- Safe/secure entry desired, where visitors must enter the office prior to being released into the rest of the building
- Improved handicap accessibility throughout the building desired
- Additional storage space for student belongings desired (lockers, hooks, etc.)
- Storage to support outdoor activities and equipment desired
- Wellness room/space for nursing mothers desired

# ROOSEVELT ELEMENTARY: SUMMARY OF STAFF INTERVIEW FEEDBACK

---

The following is a summary of potential improvements at Roosevelt 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
- Sinks provided for each classroom desired; current lack of sinks in all classrooms limits activities that require water
- Adequate storage space and shelving for materials and supplies
- Additional outlets and charging stations desired
- Dedicated space for each teacher desired; currently some teachers share classrooms

### CONFERENCE ROOMS & LARGE/SMALL GROUP INSTRUCTION

- Lack of adequate teaching space limits activities; additional learning spaces desired
- Small group instruction spaces desired for one-on-one learning, test taking, tutoring, etc.
- Additional enclosed instructional spaces desired that can be closed off for noise control, testing, etc.
  - Computer lab (Possibly located near the Library)
- Dedicated makerspace desired

### CAFETERIA

- Separate, dedicated cafeteria/lunch room desired
- Kitchen is undersized
- Two lunch periods desired; currently have three periods of four classrooms each

### MUSIC

- Separate, dedicated classroom desired, with space to accommodate (15) students

### ART

- Separate, dedicated classroom desired

### GYMNASIUM

- Updates needed; like the look of the old gym
- Drop-down screen and projector desired
- Remove plumbing in unused locker rooms; currently used for storage

### LIBRARY

- Collaboration/small group space desired
- Flexible, movable furniture desired to accommodate large and small groups
- Larger computer lab space desired with smartboard
- Green screen set-up space desired

### SPECIAL ED.

- Dedicated decompression/sensory rooms/spaces desired
- Additional EA support spaces desired
- Additional and/or larger Cross-Categorical room desired

### INSTRUCTIONAL SUPPORT SPACES

- Separate, dedicated classrooms/space for E.L.L., Speech, Reading Support, Math Support & Guidance Counselor desired

### MAIN OFFICE

- Safe and secure entry sequence that requires entrance into the main office/reception prior to being released into the main building desired
- Visibility of main entry desired
- Dedicated health room with restroom desired

### STAFF LOUNGE

- Dedicated lounge and work room desired

### STORAGE

- Upgraded lockers in the corridors desired

## 2. Facility & Site Improvements:

### INFRASTRUCTURE

- Windows
  - Old and drafty; more efficient and operable windows desired throughout the building
  - Many windows have missing or damaged screens; replacement of windows and screens desired

### BUILDING SYSTEMS

- HVAC
  - Air conditioning throughout the building (second floor) desired
  - Temperature/climate control within the classroom desired; improved heating systems within the classroom desired

### SITE

- Improved sidewalks – many are cracking/heaving and a safety concern
- Storage to support outdoor activities and equipment.
- Additional/more efficient parking stalls desired
- Improved building entry, parent pick-up/drop-off, bus pick-up/drop-off sequence

### MISCELLANEOUS

- Overall layout/building design
  - Not convenient for students
- Bathrooms
  - Issues with sinks/counters flooding/pooling water
  - Upgraded fixtures and finishes desired
  - Additional bathrooms desired for lower grade levels that are located within the classroom
- Adequate/updated water fill stations and drinking fountains desired; higher quality drinking water desired
- Additional space desired to allow for growth of the Alliance Charter School program
- Improved handicap accessibility throughout the building desired
- Additional storage space for student belongings desired (lockers, hooks, etc.)
- Storage to support outdoor activities and equipment desired

THIS PAGE IS INTENTIONALLY LEFT BLANK.

# ROOSEVELT ELEMENTARY: NEEDS ASSESSMENT

---

The following is a summary of potential improvements at Roosevelt 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:

### WINDOWS

- a. Many wood window sills have cracking and paint peeling on the interior where the window meets the sill, possibly due to water damage

### CEILING

- b. Ceiling tiles are dated, with some tiles stained/showing signs of water damage and many bowing, bending and separating from the ceiling grid; ceiling tiles in the Gymnasium area have multiple tiles that are lifted or missing pieces of tile

### FLOORING

- c. Much of flooring is stained, worn, cracking and in need of repair; cracking at ramped areas have been taped in attempt to prolong additional cracking
- d. Floors in the Cafeteria and nearby corridors were reported by staff to have been installed incorrectly, as the installer left the stripping agent on the tile too long and allowed it to eat away at the glue; tiles in these areas appear excessively cracked and uneven
- e. Some areas of the Gymnasium wood floor appear to be uneven and separating, especially at the edge conditions where there are vents/openings in the wall

## 2. Building Envelope:

### WALLS

- a. Areas of the foundation walls are cracking/crumbling, especially near the main entrance doors
- b. There are multiple areas of discoloration and staining present on the exterior of the building, possibly due to water damage; this is especially present at sills, cornices, and at the foundation
- c. Many of the unit vents are damaged and rusting

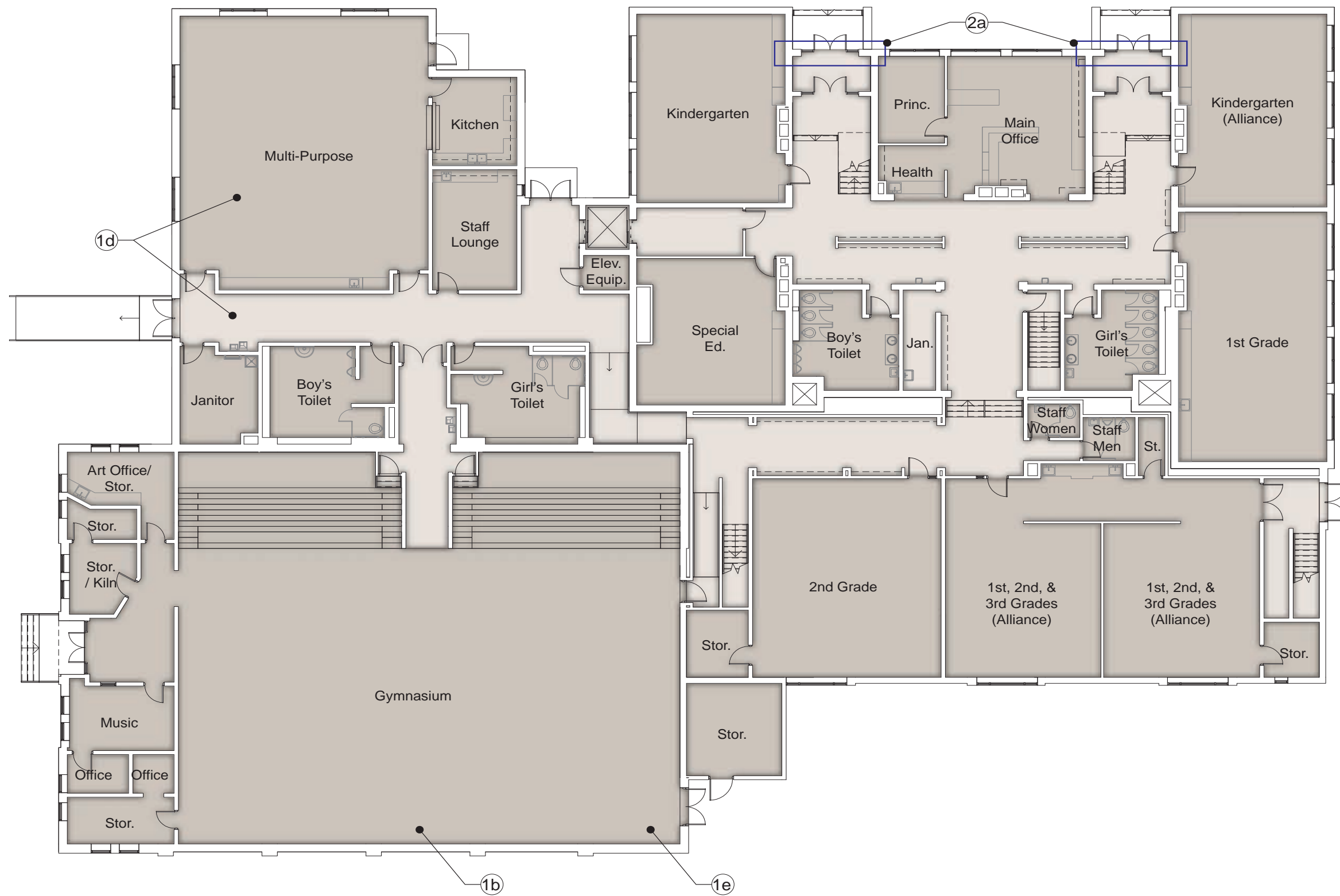
### WINDOWS

- d. Windows throughout the building are single-pane, drafty, and have issues with water leaking; some condensation/frost build up on window panes has been reported by staff; this is especially a concern in the older part of the building at the sliding windows

### DOORS

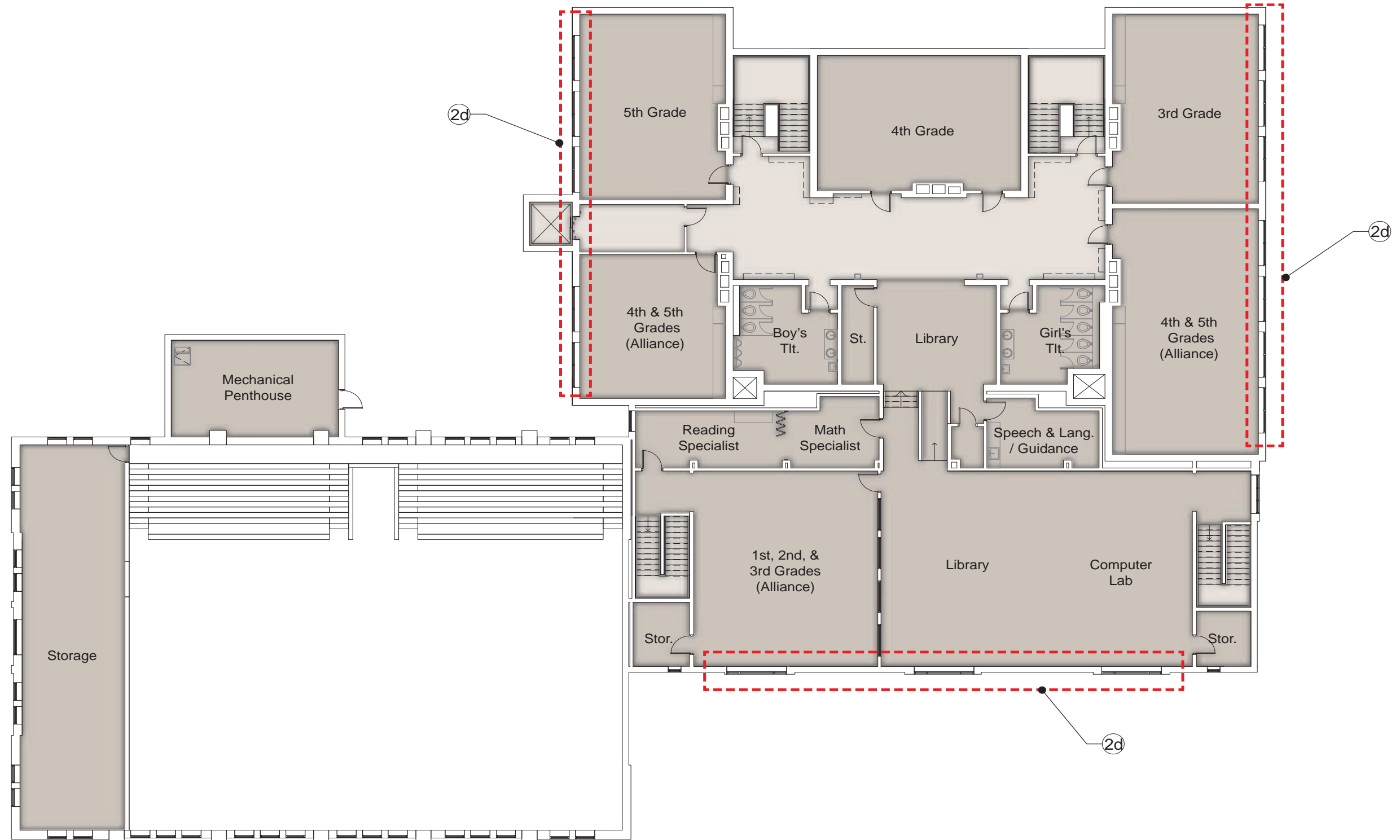
- e. Many exterior doors are worn, rusted and show excessive damage at the frame and threshold, especially the main entrance doors





FIRST FLOOR PLAN  
not to scale





SECOND FLOOR PLAN  
not to scale

# ROOSEVELT 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 2" water service which connects to the Municipal water system; new additions or major renovation would require a new larger water service.
- Water distribution piping is black iron, copper tube and galvanized steel, appears to be in fair condition, and piping in the original building, 1924 addition and 1957 addition 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, 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 waste and vent piping in the original building, 1954 addition and 1969 addition are cast iron pipe and fittings, and the sanitary sewer systems in the original building, 1924 addition and 1969 addition are nearing the end of their life expectancy. Inspection of the existing sewer located below the floor is recommended; replacement pending outcome of scope.
- The kitchen has one sink with no interior grease interceptor.
- Classroom sinks do not have solids traps installed on the waste piping.
- Roof water is collected by internal roof drains and conductors, which connect to the Municipal storm sewer system.
- The clearwater sump pump is in fair to good condition and should be monitored and repaired/replaced as necessary.
- Storm sewer systems in the original building, 1924 addition, and 1969 addition are nearing the end of their life expectancy, and inspection of the existing sewer located below the floor is recommended; replacement pending outcome of scope.
- The domestic water heater is gas fired, does not appear to be high efficiency, and is near the end of its useful life; replacement with a new gas fired high efficiency unit is recommended.
- Domestic water is not softened.

- Plumbing fixtures are a combination 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. Water closets, urinals, and lavatories should be replaced with new water conserving and ADA compliant fixtures, and older electric water coolers should be replaced with new ADA compliant fixtures with a bottle filler. Faucets on classroom sinks should be replaced with new ADA compliant faucets, and older classroom sinks should be replaced. Lower level locker room fixtures have been abandoned and should be removed, along with all floor drains and associated piping serving these fixtures.

## HVAC:

- Steam boiler plant has two Kewanee boilers that are fired with natural gas, are in fair condition, and have exceeded their estimated life expectancy; the boiler plant has no reserve capacity as indicated by owner. Continue preventative maintenance on the system, and plan for the eventual replacement of the aging boilers and system with a hot water system. Any future additions or construction will require the addition of boiler capacity to serve the additional spaces.
- The 1996 addition and multi-purpose room are served by a hot water circuit and inline pump, and the remainder of the building is served by the steam circuit. If the existing steam system is converted to hot water, all steam and condensate piping will be replaced with hot water piping. Owner indicated no current concerns or issues with the heating supply system.
- Unit ventilators in the 1969 classrooms are original to the building and have exceeded their estimated life expectancy of 25 years; plan for their eventual replacement with hot water unit ventilators.
- Constant volume air handling unit serving the 1996 addition is in good condition and has an estimated life expectancy of 30 years.
- Constant volume, multi-zone unit serving the original building is in poor condition and has exceeded the estimated life expectancy of 30 years; plan for the its eventual replacement.
- 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.
- Gymnasium is served by steam radiation and does not receive any outside air; plan for the installation of a single zone, variable volume air handling system with a hot water heating coil to serve the gymnasium, as current WI code requires fan powered outside air.

## HVAC (cont.):

- 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 has been recently replaced, is in good working condition, and has capacity for 3 additional breakers; exercising of circuit breakers and performing thermal imaging analysis for predictive maintenance purposes is recommended. Provide surge suppression, as none exists.

- Panelboards vary in age, with some nearing the end of their useful lifespan, and some having been replaced or added during the most recent service upgrade and are in good condition; 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; there is an emergency electric service fed from the same utility but tapped before the main electric service, and it provides minimal emergency lighting in the facility.

- 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. There is a panelboard concealed behind built-in casework, which is a code violation, as there is no clear working clearance around the panel.

- 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 on 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 some have dual level lighting controls, while corridors have toggle switches with no occupancy sensors. Provide corridors with occupancy sensors and remove light switches.

- Schedule exterior light fixtures with LED equivalents and control via existing timeclock/photocell controls.

- If new LED lighting is provided, emergency lighting should be provisioned 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.

- 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 1 data rack has spare rack capacity for future needs. Data cabling at the data rack 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.

- Reinstall data outlet boxes that are improperly installed and replace existing cabling if damaged.

- 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 ACC5 intercom system is 10 years old and working properly but lacks coverage in some areas of the building, and intercom speakers are nearing the end of their useful lifespan. Bell schedule system is controlled via timeclock and has no reported issues. Schedule the existing intercom system for full replacement with a new IP-based intercom system, or schedule speakers for replacement and provide additional speakers in areas lacking coverage.

### Electrical (cont.):

- CCTV system has 2 cameras, seems to be in good working condition, and the District plans to add about 18 more cameras to the system in the future; provide new cameras where additional coverage is necessary.
- Simplex fire alarm system is 15 years old and in good working condition, but lacking in notification coverage; provide additional fire alarm notification devices in 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.

# ROOSEVELT ELEMENTARY: SITE SUMMARY

---

The following is a summary of potential improvements at Roosevelt 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 - STAFF PARKING, NORTH OF SCHOOL

- Distresses Present:
  - Thermal cracking
  - Surface weathering
  - Raveling
  - Base material washing out from around the inlet
- Recommended Repair:
  - Remove existing pavement and 12 inches of base and/or subgrade
  - Place 12 inches of base aggregate dense
  - Fix washout problem around inlet
  - Pave 4 inches of asphaltic pavement
  - Paint all pavement markings for a parking lot

### AREA 2 - ASPHALT PLAY AREA

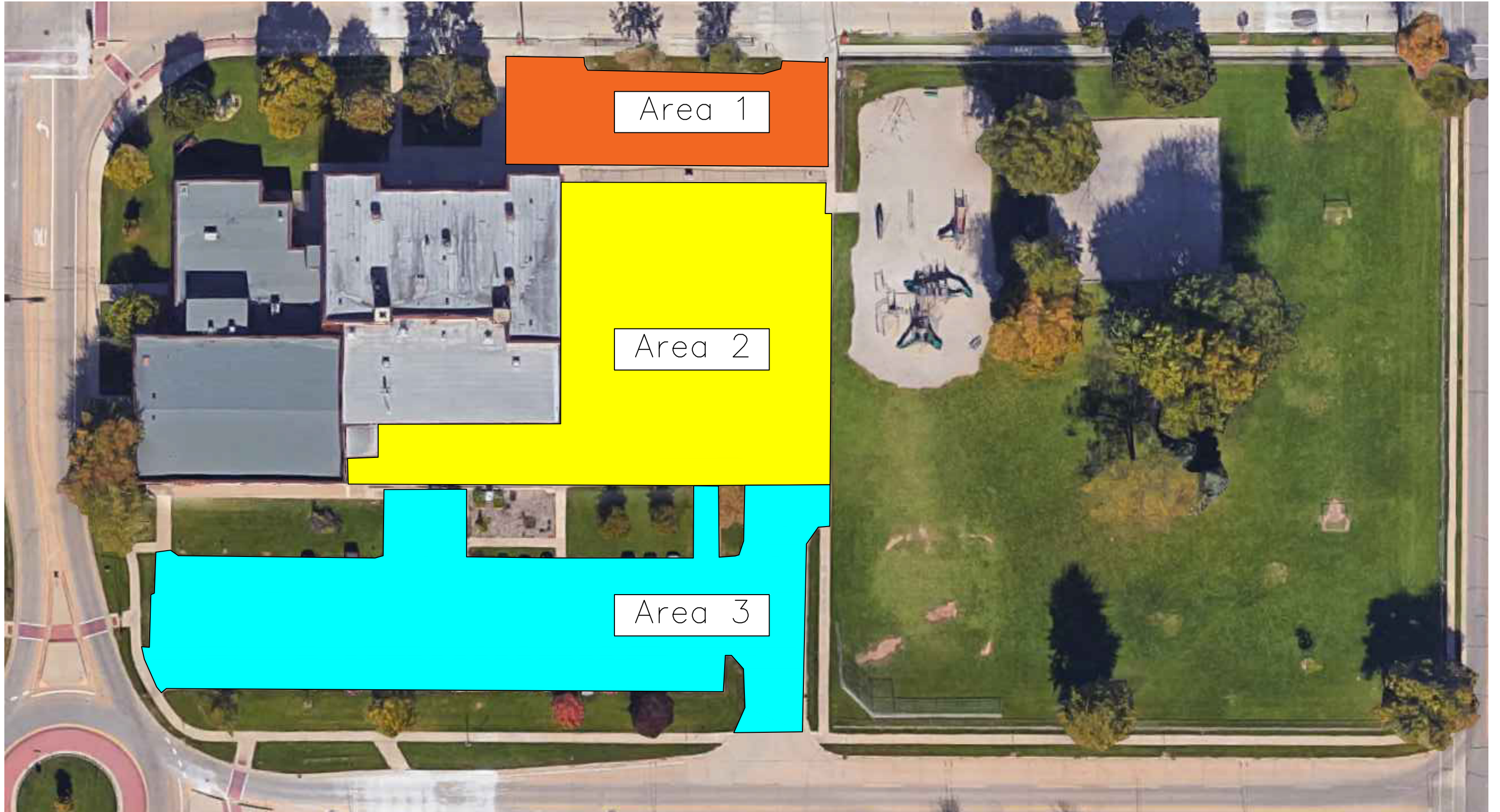
- Distresses Present:
  - Thermal cracking
  - Raveling
  - Surface weathering
  - Depressions due to base settling
- Recommended Repair:
  - Remove existing pavement and 12 inches of base and/or subgrade
  - Place 12 inches of base aggregate dense
  - Pave 4 inches of asphaltic pavement
  - Paint all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

### SITE CONCRETE

- Distresses Present:
  - Spalling at edges of sidewalk in areas
  - Large cracks in sidewalk that poses a tripping hazard
- Recommended Repair:
  - Remove and replace the areas of sidewalk that have spalling or cracked

### ADDITIONAL NOTES

- Much of the playground equipment appears relatively new, but basketball hoops are dated and rusting
- No dumpster enclosure exists



SITE PLAN  
not to scale

# ROOSEVELT ELEMENTARY: ADA ACCESSIBILITY ASSESSMENT

---

The following is an analysis of Roosevelt 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 criteria 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 criteria 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 meets 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).

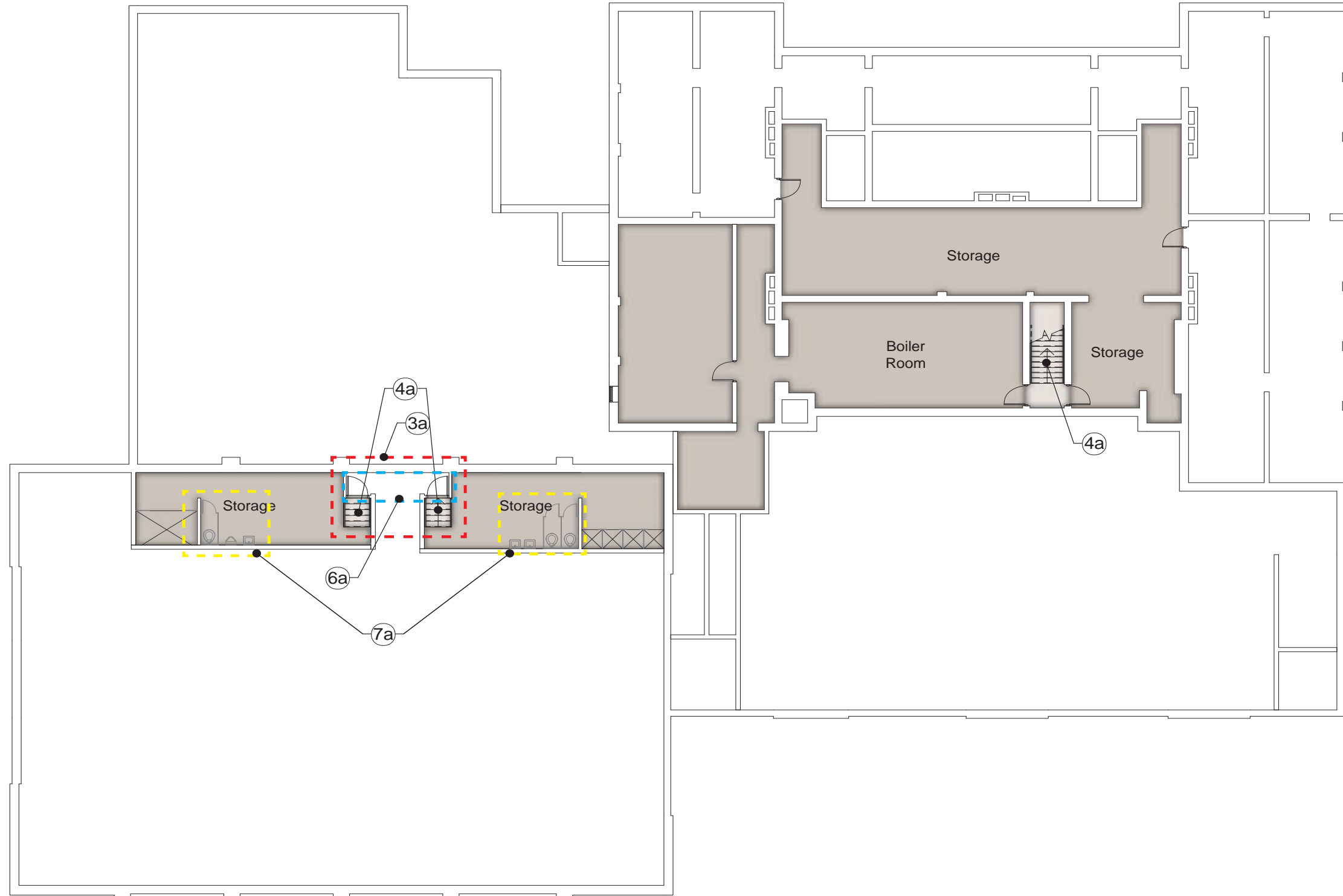
Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and 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. This criteria does not apply to this level.

## 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. This criteria does not apply to this level.



LOWER FLOOR PLAN  
*not to scale*

# ROOSEVELT ELEMENTARY: ADA ACCESSIBILITY ASSESSMENT

---

The following is an analysis of Roosevelt 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.

1b. The main entrances to the building do not meet 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 that are not 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).

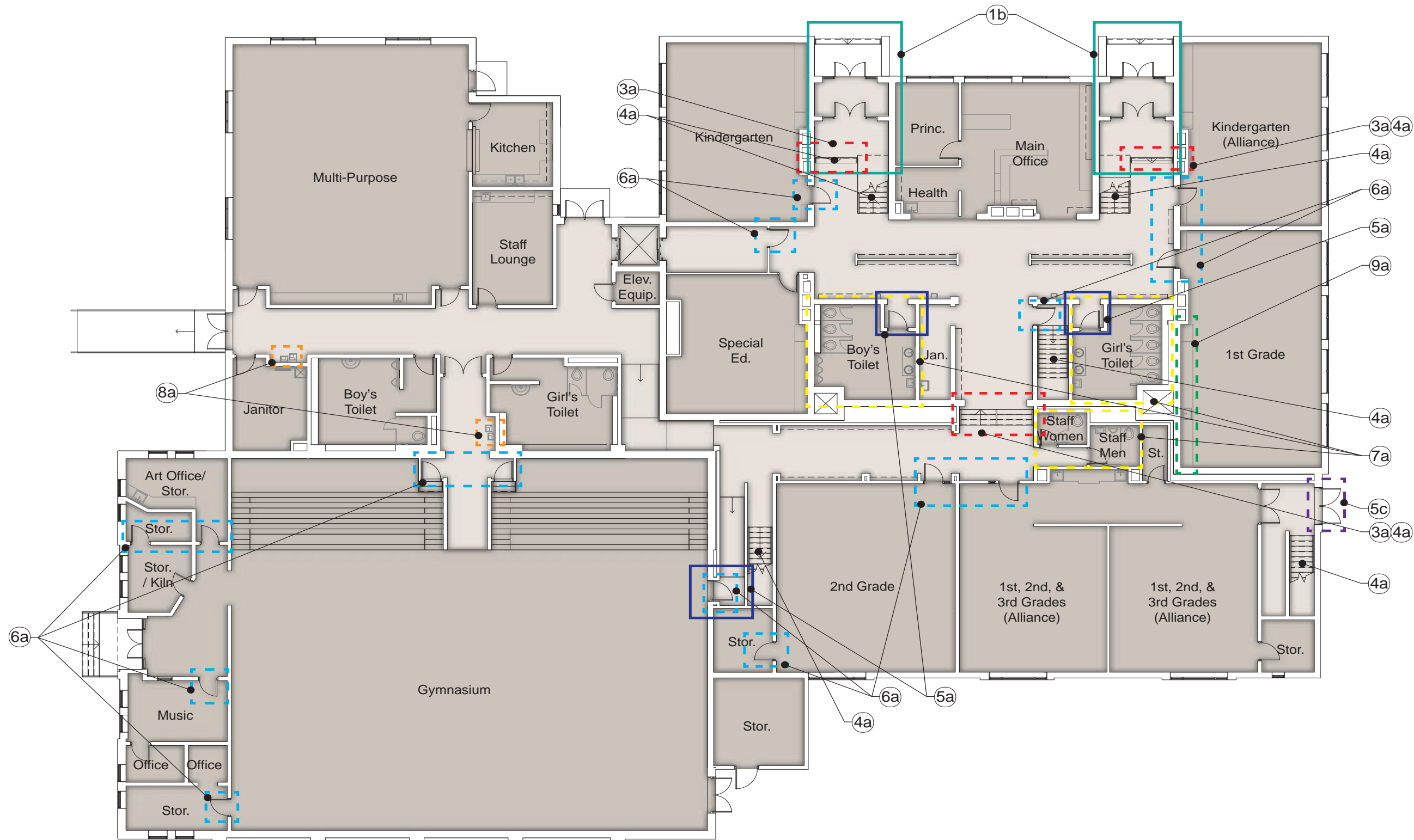
Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and 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



# ROOSEVELT ELEMENTARY: ADA ACCESSIBILITY ASSESSMENT

---

The following is an analysis of Roosevelt 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 criteria 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 criteria 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).

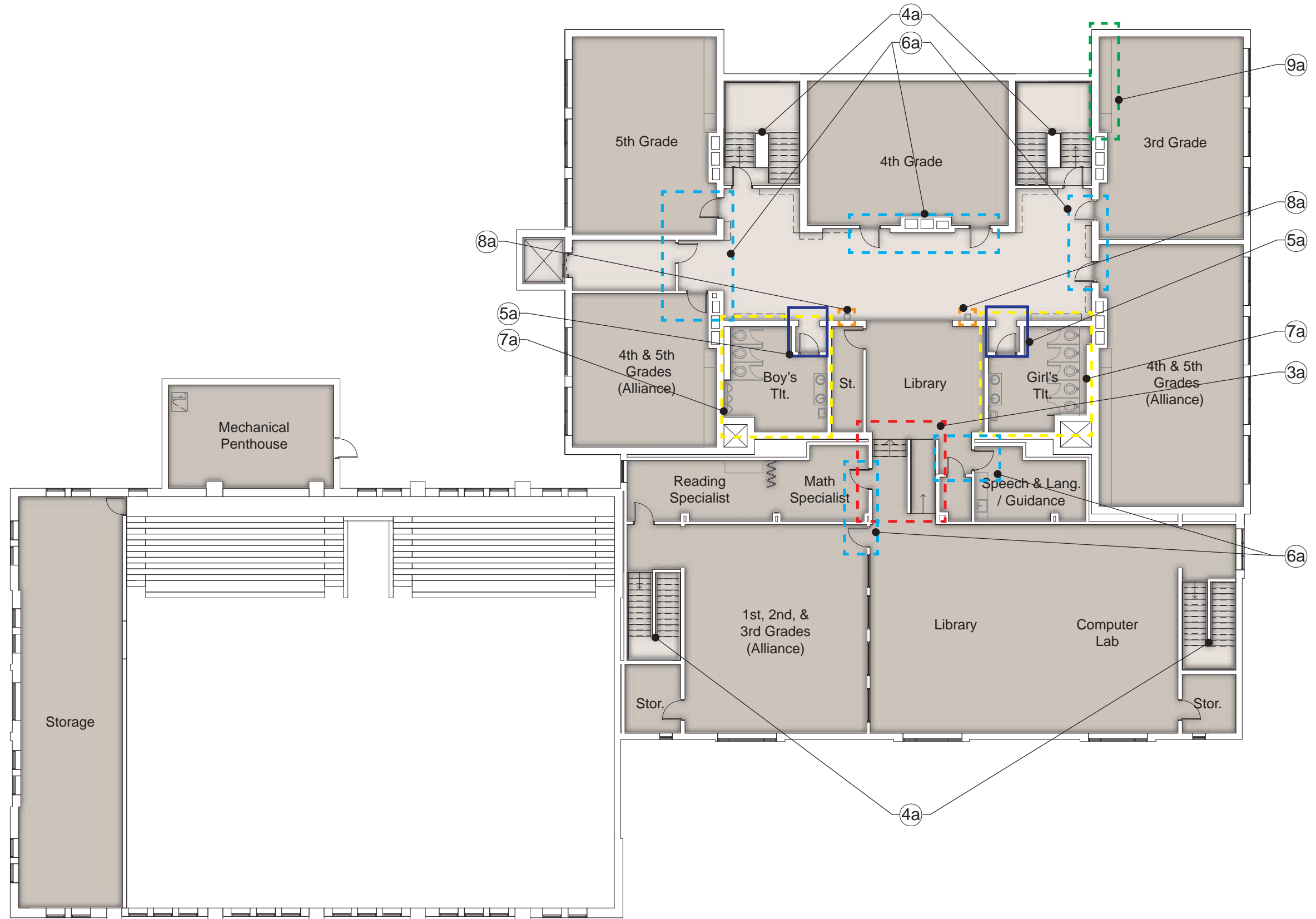
Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and 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. There are counter-tops that do not meet the above criteria for meeting accessibility standards.



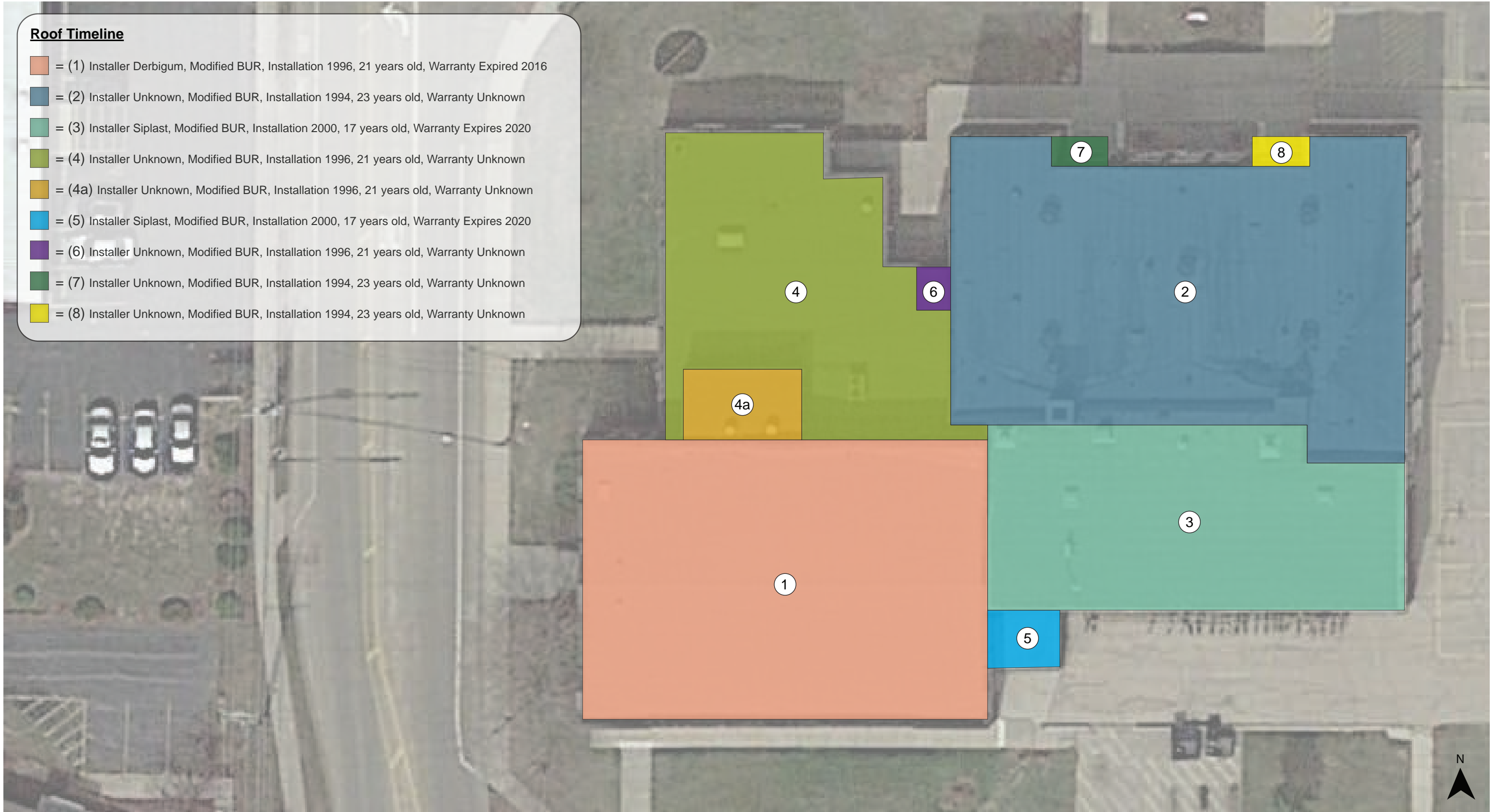
SECOND FLOOR PLAN  
*not to scale*



# ROOSEVELT ELEMENTARY: ROOF PLAN

## Roof Timeline

- = (1) Installer Derbigum, Modified BUR, Installation 1996, 21 years old, Warranty Expired 2016
- = (2) Installer Unknown, Modified BUR, Installation 1994, 23 years old, Warranty Unknown
- = (3) Installer Siplast, Modified BUR, Installation 2000, 17 years old, Warranty Expires 2020
- = (4) Installer Unknown, Modified BUR, Installation 1996, 21 years old, Warranty Unknown
- = (4a) Installer Unknown, Modified BUR, Installation 1996, 21 years old, Warranty Unknown
- = (5) Installer Siplast, Modified BUR, Installation 2000, 17 years old, Warranty Expires 2020
- = (6) Installer Unknown, Modified BUR, Installation 1996, 21 years old, Warranty Unknown
- = (7) Installer Unknown, Modified BUR, Installation 1994, 23 years old, Warranty Unknown
- = (8) Installer Unknown, Modified BUR, Installation 1994, 23 years old, Warranty Unknown

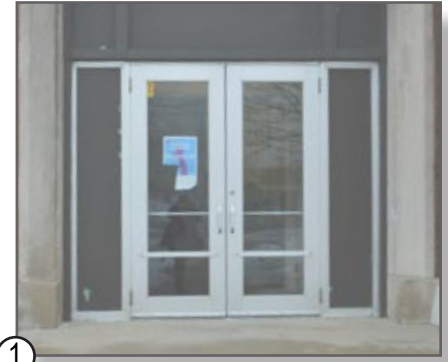


ROOF PLAN  
not to scale

THIS PAGE IS INTENTIONALLY LEFT BLANK.

# ROOSEVELT ELEMENTARY: EXTERIOR DOOR ANALYSIS

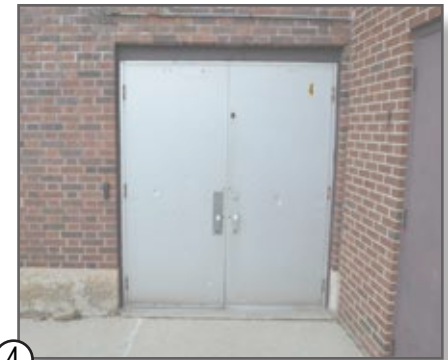
No.	Door Type	Frame Type
1	Aluminum	Aluminum Storefront
2	Aluminum	Aluminum Storefront
3	Aluminum	Aluminum
3A	Hollow Metal	Hollow Metal
4	Aluminum	Aluminum
5	Aluminum	Aluminum Storefront
6	Aluminum	Aluminum
7	Hollow Metal	Hollow Metal
8	Aluminum	Aluminum Storefront



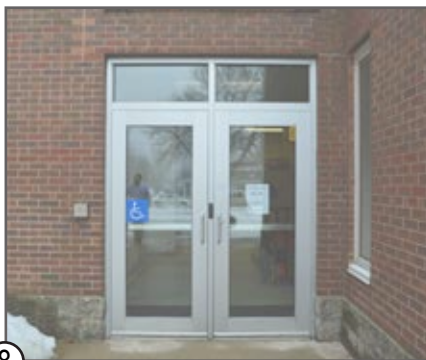
① ALUMINUM DOORS & ALUMINUM STOREFRONT



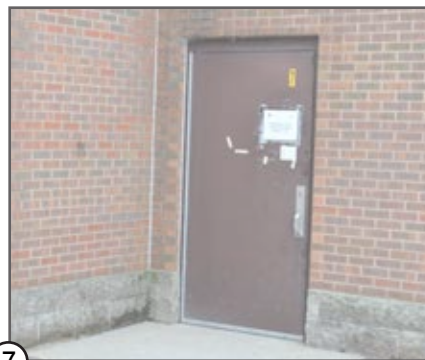
③A HOLLOW METAL DOOR & HOLLOW METAL FRAME



④ ALUMINUM DOORS & ALUMINUM FRAME



⑧ ALUMINUM DOORS & ALUMINUM FRAME

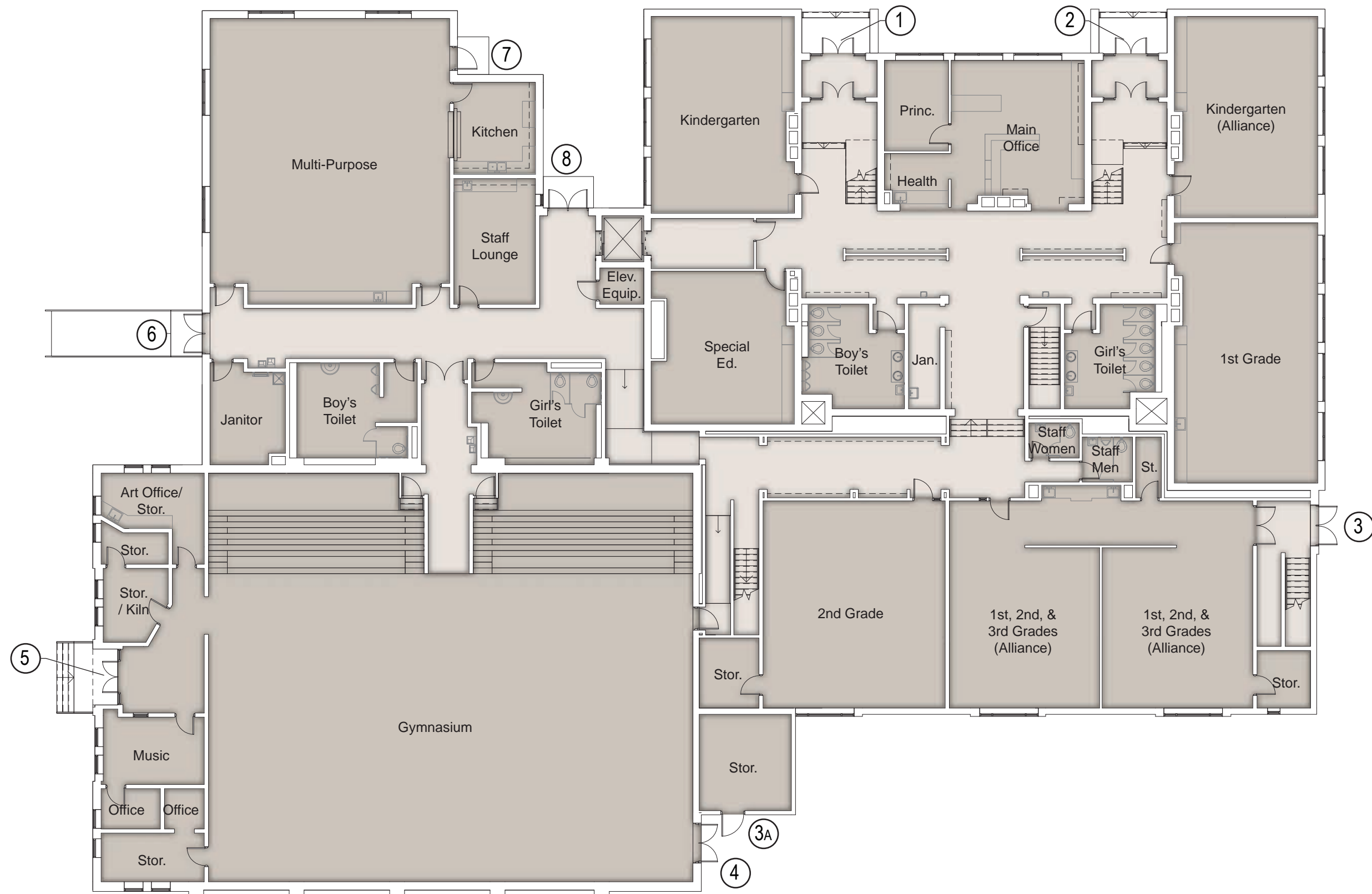


⑦ HOLLOW METAL DOOR & HOLLOW METAL FRAME



⑥ ALUMINUM DOORS & ALUMINUM FRAME

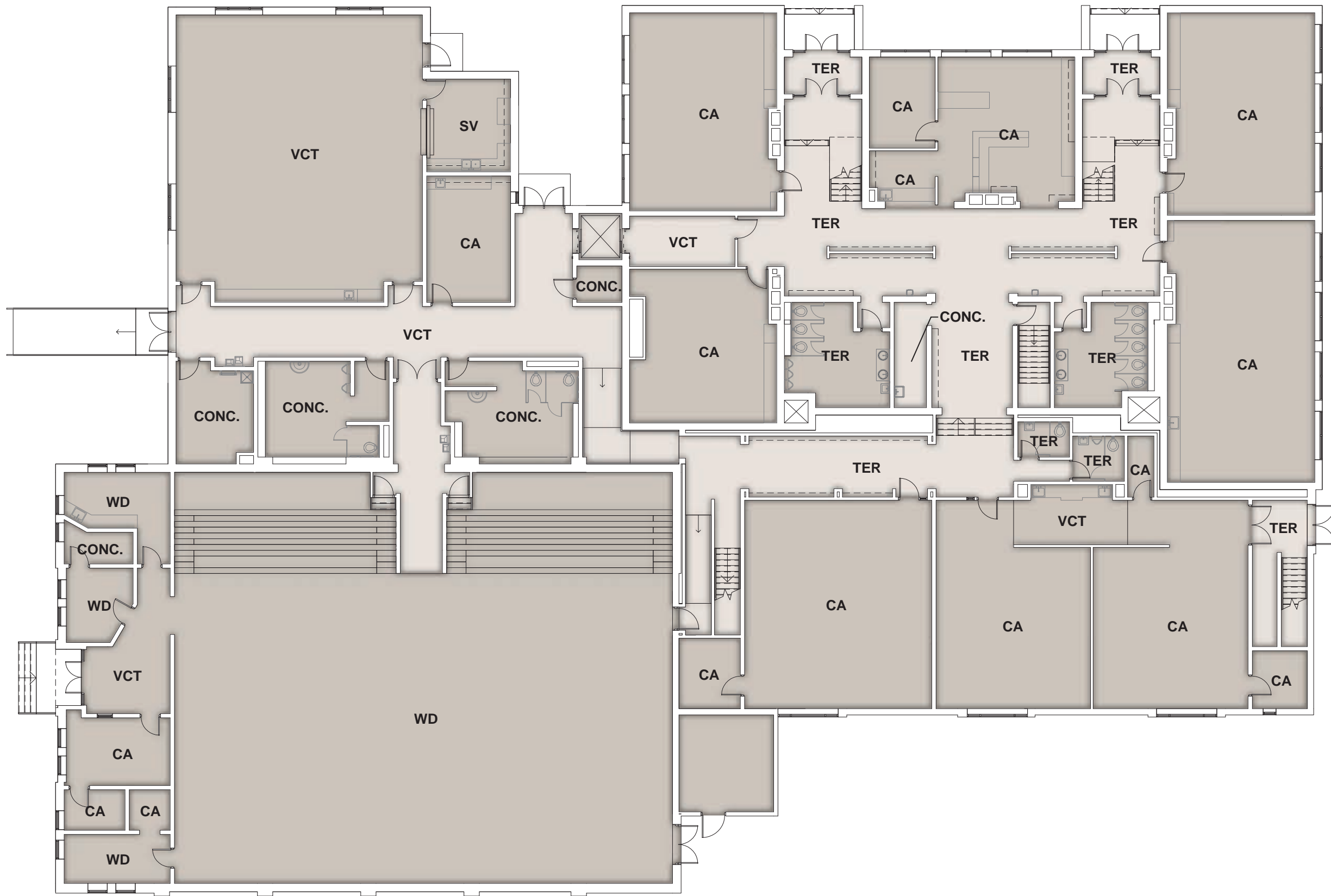
ROOSEVELT ELEMENTARY: EXTERIOR DOOR ANALYSIS



# ROOSEVELT 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

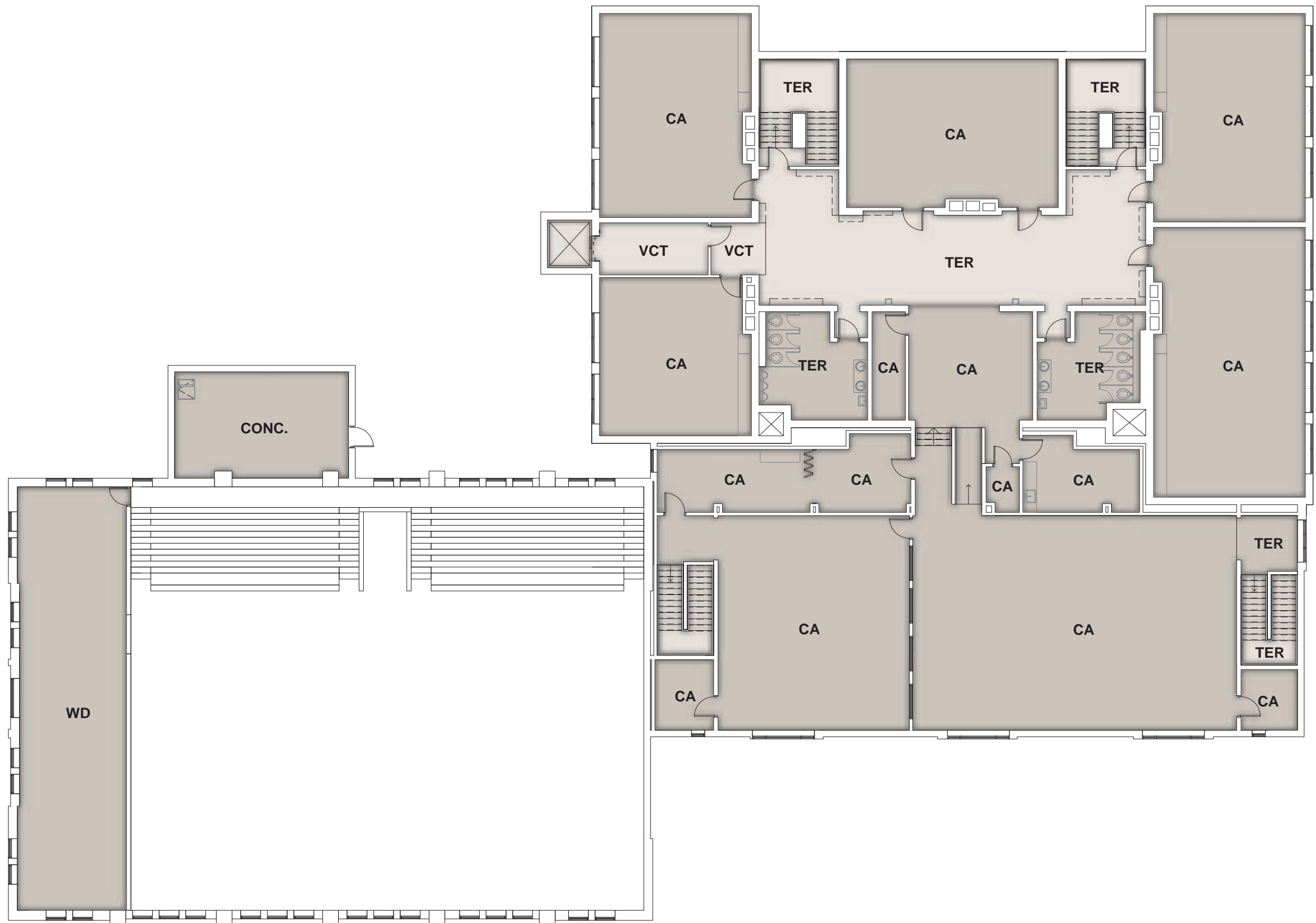


FIRST FLOOR PLAN  
not to scale

# ROOSEVELT 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



**SECOND FLOOR PLAN**  
not to scale



# ROOSEVELT 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 19, 2017. Site observations and interviews with staff were used in the preparation of this report.

The original building was built in 1922 with additions completed in 1924, 1969, and 1996.

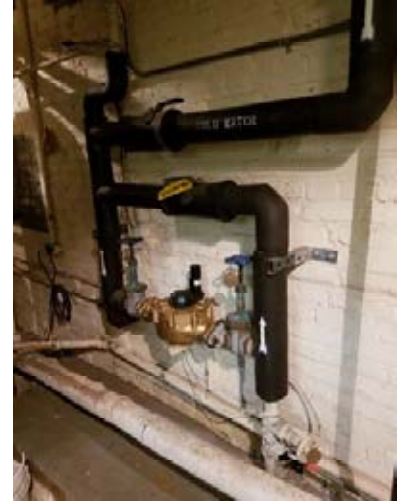
## **Domestic Water**

### Observations

- A. Water is supplied to the building by what appears to be 2" water service which connects to the Municipal water system. There is a water meter located in the boiler room. The water service is at its limit and could not support any future additions.
- B. The water distribution piping in the building appears to be black iron, copper tube and galvanized steel. The water distribution piping appears to be in fair condition.
- C. The building has no fire sprinkler system.

### Recommendations

- A. The water distribution piping in the original building, 1924 addition, and 1957 addition 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 and vent piping in the original building, 1954 addition, and 1969 addition appears to be cast iron pipe and fittings.
- C. The building has a small kitchen with one sink. There is no interior grease interceptor.
- D. The classroom sinks do not have solids traps installed on the waste piping.
- E. The existing roof water is collected by internal roof drains and conductors which flow by gravity out the building and connect to the Municipal storm sewer system.
- F. There is one clearwater sump pumps located in the basement level for removing groundwater. The sump systems appear to be in fair to good condition.

### Recommendations



# ROOSEVELT ELEMENTARY: ENGINEER REPORT - PLUMBING

- A. The sanitary sewer system in the original building, 1924 addition and 1969 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 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 scope.
- C. The existing clearwater sump pumps should be monitored and repaired or replaced as necessary.

## Plumbing Equipment

### Observations

- A. The building has one gas fired domestic water heater that does not appear to be high efficiency and that is near the end of its useful life.
- B. The domestic water is not softened.

### Recommendations

- A. The existing water heaters is not energy efficient. We would recommend replacing the it with a new gas fired high efficiency 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, flush valve 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 set with flush tanks. The fixtures with the flush tank are not water conserving. The fixtures are old and are in fair condition.
- D. The lavatories in the building are a variety of wall hung and drop in fixtures with multiple styles of faucets. They do not appear to be water conserving or ADA compliant and are in fair condition.
- E. The fixtures in the lower level locker rooms in the building have been abandoned.
- F. The drinking fountains in the building are variety of vitreous china drinking fountains and wall hung electric water coolers. Most are not ADA compliant and are in fair condition. The fixtures are in good condition.





## ROOSEVELT ELEMENTARY: ENGINEER REPORT - PLUMBING

---

- G. The a few classrooms have sinks that are single bowl and either stainless steel or vitreous china. Some have 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 older electric water coolers should be replaced with new ADA compliant fixtures with a bottle filler.
- E. older classroom sinks should be replaced. All classroom sinks should have new ADA compliant faucets.
- F. Remove all locker room fixtures, floor drains, and associated piping serving these fixtures.



## 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 1922, with additions being constructed in 1924, 1969 and 1996

### 1.1 Heating System

#### A. Existing Data

1. A steam boiler plant consists of two Kewanee boilers each fired with natural gas. Each boiler has a capacity of 2,050,000 btu. T
2. There are two heating circuits that serve the building; a steam circuit and hot water circuits. Heat exchangers on the steam side are used to transfer heat to the hot water circuit.
3. The hot water circuit serves the 1996 addition and Multi-Purpose room. An inline pump (and a stand-by pump) pumps hot water throughout the 1996 addition.
4. The remainder of the building is served by the steam circuit.

#### B. Observations

1. According to information obtained by the Owner, the boiler plants have no reserve capacity at this point, as all boilers are brought online during periods of colder weather.
2. The Kewanee boilers are in fair condition. The boilers have exceeded the estimated life expectancy.
3. The Owner has indicated that there are no current concerns or issues with the heating supply system.

#### C. Recommendations

1. Continue preventative maintenance on the system.
2. Plans should be made for the eventual replacement of the aging boilers. At the time of replacement, it is strongly recommended that the steam system be converted to hot water. All steam and condensate piping will be replaced with hot water piping.
3. Any future additions or construction will require the addition of boiler capacity to serve the additional spaces.

### 1.2 Ventilation and Air Conditioning Systems

#### A. Existing Data

1. There are three systems that provide ventilation for the facility. The three systems are classroom unit ventilators, constant volume multi-zone system, and constant volume air handling systems.
2. The 1969 classrooms are ventilated using classroom unit ventilators. Unit ventilators house a fan, steam heating coil, fresh air damper, return air damper and controls in a single cabinet mounted in the classroom.
3. The 1996 addition is served by a constant volume air handling unit. Constant volume systems consist of a central supply fan, which contains a hot water heating



coil, DX cooling coil, roof mounted condensing unit, fresh air and return air dampers. Hot water booster coils are installed in the ductwork to provide individual room temperature control.

4. The original building is served by an indoor constant volume, multi-zone system. A constant volume, multi-zone unit consists of a central supply fan, a steam heating coil, hot deck, cold deck and zone dampers for each zone. Each zone has a room thermostat that controls the hot deck and cold deck zone dampers for that space. The dampers are modulated to control the temperature of the air supplied to each space.
5. The gymnasium is served by steam radiation.

## **B. Observations**

1. The unit ventilators are original to the building and have exceeded the estimated life expectancy of 25 years.
2. The constant volume air handling unit serving the 1996 addition is in good condition. The units have an estimated life expectancy of 30 years.
3. The constant volume, multi-zone unit is in poor condition and has exceeded the estimated life expectancy of 30 years.
4. Door transfer grilles are currently utilized to transfer relief air from the classrooms to the corridor.
5. Currently the gymnasium does not receive any outside air. Current Wisconsin code requires fan powered outside air for a space of this type.

## **C. Recommendations**

1. Plans should be made for the eventual replacement of the aging unit ventilators. At the time of replacement, it is recommended that hot water unit ventilators are installed (as mentioned previously in the Heating System).
2. Plans should be made for the eventual replacement of the aging constant volume, multi-zone unit.
3. 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.
4. Plans should be made for the installation of a single zone, variable volume air handling system with a hot water heating coil to serve the gymnasium.

### **1.3 Control Systems**

#### **A. Existing Data**

1. A pneumatic temperature control system serves the school.

#### **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**



## ROOSEVELT ELEMENTARY: ENGINEER REPORT - HVAC

---

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.



# ROOSEVELT 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 19, 2017. Site observations, existing plan review and interviews with staff were all used in the preparation of this report. The facility was built in 1922, with additions occurring in 1924, 1969, and 1996.

## Electric Service

### Observations

- A. The facility has a 400-amp, 120/240V 1-phase 3 wire main electric service that has been recently replaced and is in good working condition. The main switchboard has capacity for 3 additional breakers for potential future loads. There is no surge suppression provision on the main electric service.
- B. 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 were replaced or added during the most recent service upgrade that are in good working condition.
- C. 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 meter.
- D. There is an emergency electric service that is fed from the same utility but tapped before the main electric service. This service provides minimal emergency lighting in the facility.
- E. There is a panelboard that is concealed behind built-in casework. It should be noted that this is a code violation as there is no clear working clearance around the panel.



Main Electric Service



Concealed Panelboard



Old Panelboard

### Recommendations

- A. The main electric service is in good working condition, recommendations include exercising of circuit breakers and possibly performing thermal imaging analysis for predictive maintenance purposes.
- 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.



## 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 use high bay metal halide fixtures to provide general lighting in the space.
- 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, some have dual level lighting controls.
- 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, except for a handful of wall mounted battery packs throughout the facility that provide minimal, non-code compliant light levels.
- F. Exterior lighting consists of high pressure sodium wall packs.
- G. Exterior lighting is controlled via a combination of photocell and time clock controls.



Corridor Lighting



Emergency Lighting Unit

### 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. 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 2 receptacles in the whole room.



# ROOSEVELT ELEMENTARY: ENGINEER REPORT - ELECTRICAL

## 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.

## 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.

## 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 (1) data rack, which has spare rack capacity for future needs. Data cabling management at the rack is run in a disorganized fashion with no labeling. There are also no provisions for backup power.

### 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 rack should be reinstalled in a clean workmanlike manner. Proper labeling of data cabling should also be considered to facilitate cable management and traceability.
- C. Reinstall data outlet boxes that are improperly installed, and replace existing cabling if damaged.
- D. A possible recommendation is to provide a UPS battery backup system to provide backup power to the data rack in the event of power loss.

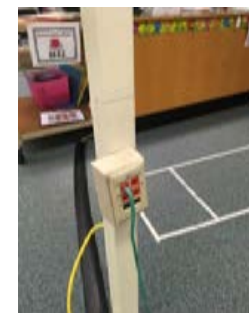
## Keyless Entry System

### Observations

- A. The building has a keyless entry system that is in good working condition.



Data Rack



Loose Data outlet



Card Reader & Electric Strike



- 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.

## Intercom System

### Observations

- A. The building has a Dukane ACC5 intercom system that is about 10 years old. The system is working properly but lacks coverage in some areas of the building.
- B. Intercom speakers throughout are nearing the end of their useful lifespan.
- C. The bell schedule system is controlled via a timeclock. Staff reported no issues with system.



Intercom System Handset

### Recommendations

- A. Existing speakers should be scheduled for replacement in addition to providing additional speakers in areas lacking coverage. Another possible recommendation is to replace the entire intercom system with an IP-based solution.

## 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 18 more cameras to the system in the future.



CCTV Monitor in Office

### Recommendations

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

## Fire Alarm System

### Observations

- A. The building has a Simplex fire alarm system that is about 15 years old and is in good working condition.
- B. The system is monitored and dials out to the fire department during a fire alarm event.
- C. Notification coverage is lacking by today's standards.
- D. Corridors with open cubby storage should be protected with smoke detectors per today's standards.



Fire Alarm Control Panel





## Recommendations

- A. A possible recommendation would be to provide additional fire alarm notification devices in areas where coverage is lacking.

## 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.

### 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.

