



# 10 WILSON ELEMENTARY

Wilson Elementary provides a comprehensive program for 4-Year-Old Kindergarten, Kindergarten, and 1st through 5th grade students.

BUILDING AREA: 44,840 sq. ft.

STUDENT POPULATION: 324 STUDENTS

SITE SIZE: 3.34 ACRES; 64% IMPERVIOUS SURFACE

GRADES SERVED: 4-YEAR-OLD KINDERGARTEN,  
KINDERGARTEN, GRADES 1<sup>ST</sup>-5<sup>TH</sup>

PARKING: 28 STALLS (2 HANDICAP, 26 REGULAR)

BUS QUANTITY: 0 BUSES / 0 BUS ROUTES

## WILSON ELEMENTARY: BUILDING EVOLUTION

Wilson Elementary was originally constructed in 1949. A classroom addition was completed in 1952, another addition in 1992, and its most recent addition in 2004.

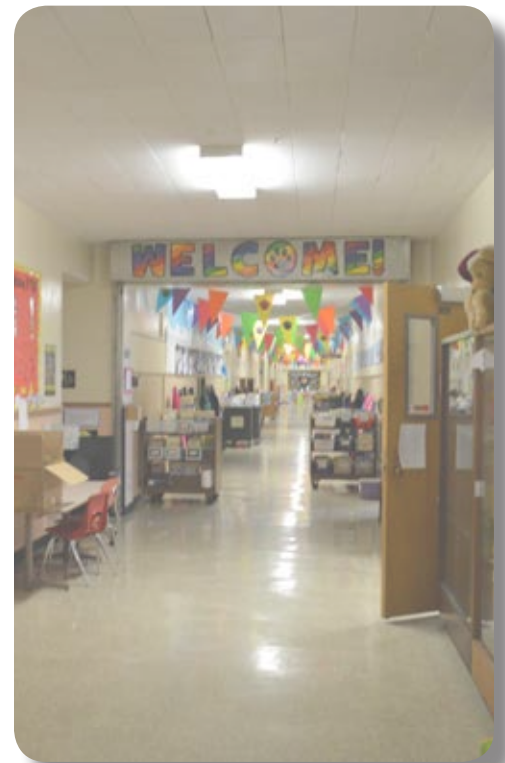
The following building evolution diagram outlines the additions made to the original building over time due primarily to student enrollment growth.



Wilson Elementary Main Entrance & Main Office



Wilson Elementary Classroom



Wilson Elementary Corridor

**WILSON ELEMENTARY: BUILDING EVOLUTION**



**WILSON ELEMENTARY: EXISTING SITE PLAN**



SITE PLAN  
*not to scale*

WILSON ELEMENTARY: EXISTING FLOOR PLAN

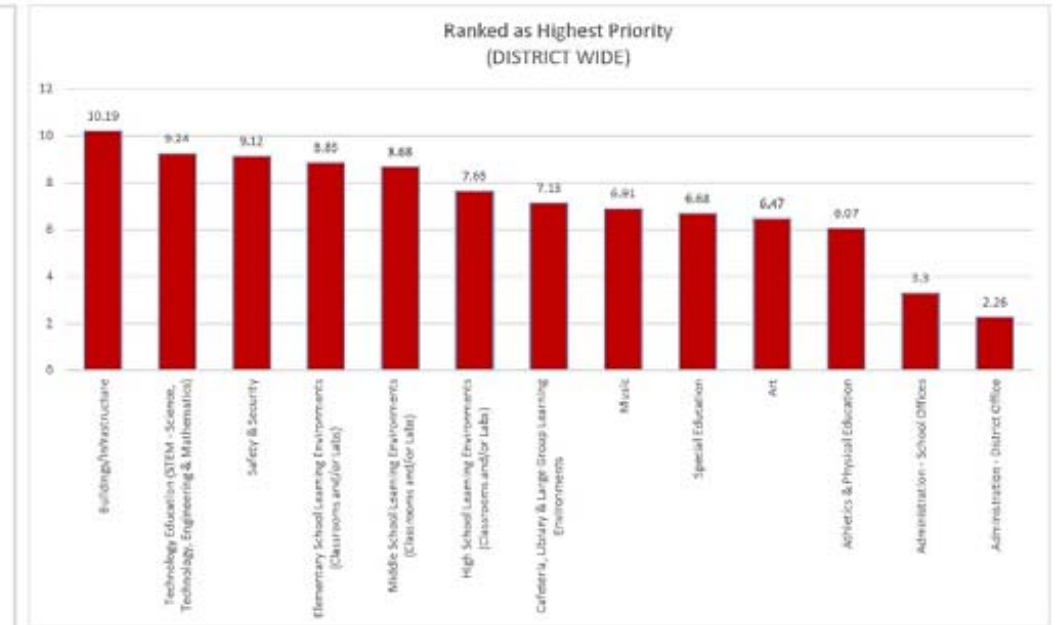
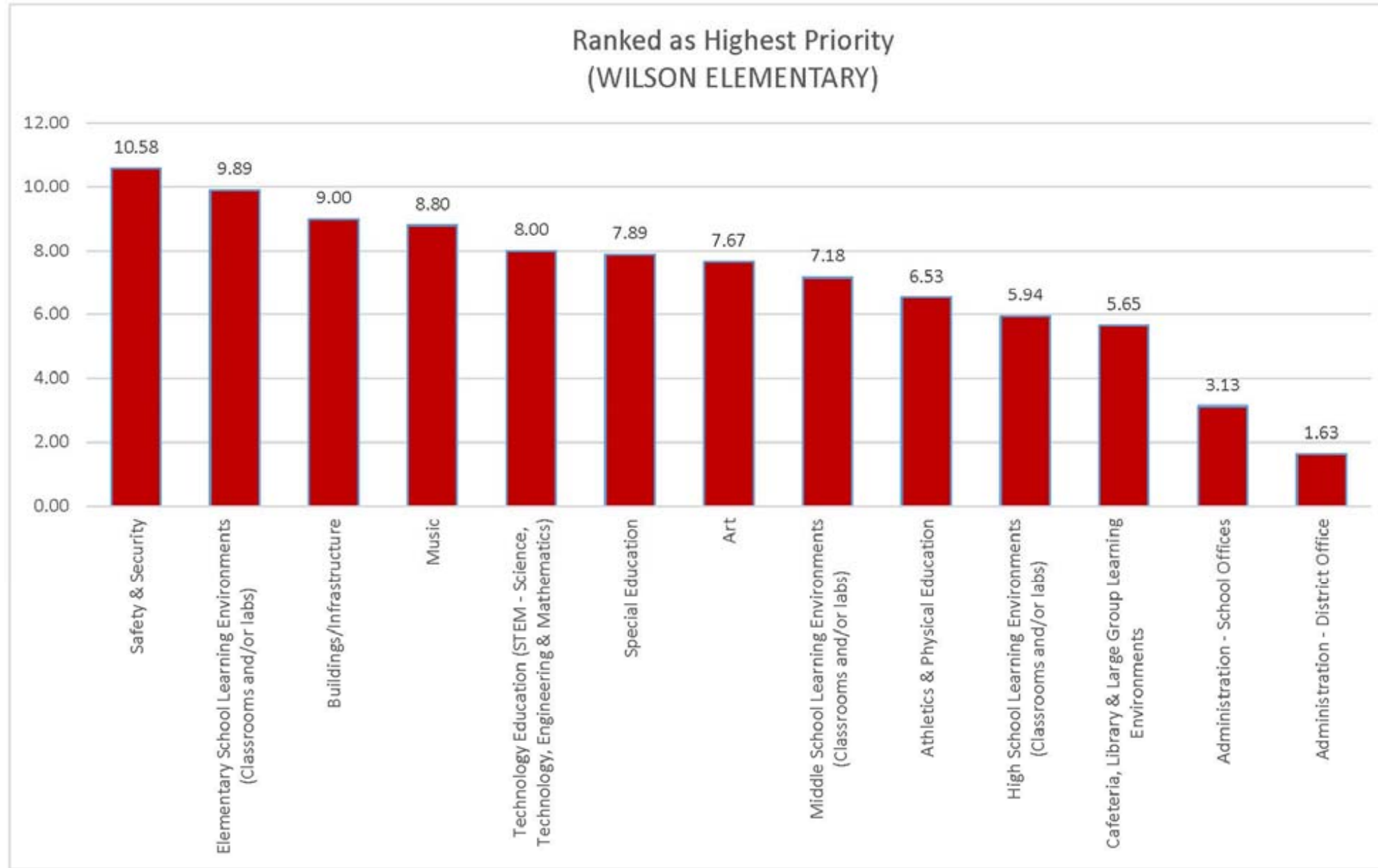


FIRST FLOOR PLAN  
*not to scale*





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# WILSON ELEMENTARY: SUMMARY OF STAFF SURVEY FEEDBACK

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The following is a summary of potential improvements at Wilson 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
- Variety of flexible/movable furniture desired
- Sinks
- Additional tackable cork boards/strips/surfaces desired to allow for additional display of student work
- Sound-proof walls between classrooms desired
- Additional wall space desired for white boards
- Additional storage/updated cabinets and shelving desired within the classroom for supplies, book storage, etc.
- Sound system/audio enhancement within the classroom desired

### CONFERENCE ROOMS & LARGE/SMALL GROUP INSTRUCTION

- Dedicated conference/meeting rooms desired
- Small group instruction spaces desired for one-on-one learning, test taking, tutoring, etc.
- Theater/stage/performance space desired

### SUPPORT

- Dedicated support space for teachers desired to store supplies outside of the classroom
- Larger staff lounge/break room desired; bathroom located in the staff lounge is too small

### SPECIAL ED.

- Additional equipment desired in cross-cat classroom
- Sound-proof walls in EBD classroom desired

### SCIENCE/STEM & TECHNOLOGIES

- Additional space outside of the classroom to provide access to technology for students; grade dedicated STEM space
- Science/STEM center/centralized science department with adequate space, casework/lab stations, sinks, gas jets, and furnishings to support science and STEM curriculum desired

### GYMNASIUM & ATHLETICS

- Fitness/cardio room desired
- New/improved P.A. system in GYM desired

### GUIDANCE

- Larger office space for guidance counselor desired
- Additional/new basketball hoops desired

### STORAGE

- Book Room desired that is centrally located within the building
- Exterior storage shed desired for playground equipment

- Additional storage space for student belongings desired (lockers, hooks, etc.); existing corridor is too tight to support the volume of students in the 3rd/ 5th grade hallways

## 2. Facility & Site Improvements:

### TECHNOLOGY

- DVD players in classrooms
- Smartboards (for every classroom)

### INFRASTRUCTURE

- Windows
  - New/upgraded; Existing windows have insufficient window insulation
  - New blinds desired; current blinds are broken
  - New/upgraded screens desired
- Doors
  - Wider, possibly automated doorways desired that can accommodate students with learning disabilities and mobility needs
- Finishes - Flooring, walls, Ceilings etc.
  - Replace broken/worn floor tiles throughout building
  - Replacement of old/dated carpet desired
  - Some classroom floors are uneven
  - Replace ceiling tiles that are cracked/warped
  - Wall dividers are old/worn; sound/light coming through can be distracting
  - Newly/painted walls desired, especially in the classrooms and corridors

### BUILDING SYSTEMS

- Lighting
  - Updated, energy efficient lighting desired
- HVAC
  - Consistent temperatures/heating/cooling throughout the building desired

### SITE

- Outdoor workspaces/classrooms desired
- Improved paving/resurfacing of parking lot desired
- Additional staff parking stalls desired
- Improved parent/bus pick-up/drop-off sequence desired

### MISCELLANEOUS

- Bathrooms
  - Update bathroom facilities; visibility/privacy concerns
  - Additional student/staff bathrooms desired
  - Bathrooms that are located within the classroom desired
- Safe/secure entry desired, where visitors must enter the office prior to being released into the rest of the building

# WILSON ELEMENTARY: SUMMARY OF STAFF INTERVIEW FEEDBACK

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The following is a summary of potential improvements at Wilson 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 in all classrooms desired
- Additional storage/updated cabinets and shelving desired within the classroom for supplies, book storage, etc.
- Sound-proof walls between classrooms desired

### CONFERENCE ROOMS & LARGE/SMALL GROUP INSTRUCTION

- Dedicated conference/meeting rooms desired
- Small group instruction spaces desired for one-on-one learning, test taking, tutoring, etc.
- Maker space desired; utilized mostly for science

### SUPPORT

- Dedicated support space for teachers desired to store supplies outside of the classroom
- Larger staff lounge/break room desired; bathroom located in the staff lounge is too small

### SPECIAL ED.

- Dedicated sensory/decompression spaces desired
- Larger speech/language space desired
- Two classrooms desired for cross-categorical

### MAIN OFFICE

- Safe and secure entry sequence that requires entrance into the main office/reception prior to being released into the main building desired
- Conference room desired
- Dedicated space for health room with restroom
- More visible principals office desired
- Flexible office desired for visiting social worker or psychologist

### STORAGE

- Book Room desired that is centrally located within the building
- Exterior storage shed desired for playground equipment
- Additional storage space for student belongings desired (lockers, hooks, etc.); existing corridor is too tight to support the volume of students in the 3rd/ 5th grade hallways

### CAFETERIA

- Undersized; two periods of 150 students preferred
- Utilize for breakfast; currently served in classrooms
- Designated full-service kitchen desired
- Larger servery desired
- Hand washing area desired

## 2. Facility & Site Improvements:

### BUILDING SYSTEMS

- HVAC
  - Consistent temperatures/heating/cooling throughout the building desired

### SITE

- Larger school garden space desired
- Better parent drop-off/pick-up sequence
- Staff parking is undersized
- Improvement in paving and concrete needs replacing

### MISCELLANEOUS

- Bathrooms
  - Update bathroom facilities; visibility/privacy concerns
  - Additional student/staff bathrooms desired
  - Bathrooms that are located within the classroom desired
- Access to more natural lighting desired

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# WILSON ELEMENTARY: NEEDS ASSESSMENT

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The following is a summary of potential improvements at Wilson 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. Some walls are cracking and have paint peeling. Staff pointed out a particular cracked area hidden within a closet in classrooms 5; further investigation is needed to determine the cause of cracking

### WINDOWS

- b. Blinds within the classrooms are a mix of old and new, although staff reported that all blinds have difficulty opening and have occasionally fallen down from the wall

### CEILING

- c. Ceilings within the storage/office area behind the Gymnasium were reported by staff as continually leaking water into the building, and there is a significant amount of staining present
- d. There are multiple areas of ceiling tile which appear to have been patched/filled in at one point in time; staff indicated these might be areas where skylights were removed/enclosed

### FLOORING

- e. Much of flooring is stained, worn, and cracking/heaving
- f. Staff indicated areas of potential asbestos tile throughout the building
- g. Carpeting throughout the building is worn, dated and stained, especially in the Library and Computer Room

### MISCELLANEOUS

- h. Coats and boots are hung from hooks on the outside of lockers, causing the corridors to become cluttered and there to be little separation between lockers

## 2. Building Envelope:

### WALLS

- a. Half-wall outside the main entry doors is cracking and stained, possibly due to water damage
- b. Exterior walls are stained, possibly due to water damage; this is especially prevalent at the window sills, roof parapets, decorative door frames, and foundation wall
- c. Exterior brick is crumbling/cracking, especially at building corner conditions and near the foundation wall, and there are some areas where tuckpointing is present; staff reported tuckpointing was addressed a few years ago and has since not been a concern

### WINDOWS

- d. Wood windows are single-pane and have wood and paint peeling at the frame; staff reported that these windows are drafty and there are issues with water leaking into the building and condensation/frost build up on window panes
- e. Glass block windows are cracked and many have adjacent single-pane windows that staff reported are also drafty and leak water into the building; some glass block appears to have been replaced over time

### DOORS

- f. Nearly all wood frame exterior doors are worn and rotting
- g. Steel frame doors were recently replaced

**WILSON ELEMENTARY: NEEDS ASSESSMENT**



FIRST FLOOR PLAN  
not to scale



# WILSON ELEMENTARY: BUILDING SYSTEMS SUMMARY

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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 4" 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 mostly copper tube and fittings with some galvanized pipe and fittings, appears to be in fair condition, and piping in the original building and 1952 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 fire suppression 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 sewer systems in the original building and 1952 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.
- Prep kitchen has a 2-compartment sink and disposal, but 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.
- The sink where art projects are completed should have solids traps added to the waste piping.
- Storm sewer systems in the original building and 1952 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 gas fired water heater is 80% energy efficient, in fair condition, and should be replaced in the next 10 years with a high efficiency unit.
- 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. Some of the drinking fountains have been replaced with wall hung electric water coolers with bottle fillers, but 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.

## HVAC:

- Boiler plant was installed in 1949, is in poor condition, has exceeded its estimated life expectancy, and does not have any reserve capacity as indicated by owner, and has two Kewanee steam boilers that are fired with natural gas. Continue preventative maintenance on the system, and plan for the eventual replacement of the steam boilers with hot water boilers. Any future additions or construction may require the addition of boiler capacity to serve the additional spaces.
- The piping and pumping system has a steam circuit with hot water heat exchanger and a hot water circuit with stand-by pump. While the ages of the heat exchanger and hot water pumps are unknown, they appear to be in fair condition and seem to have exceeded their estimated life expectancy of 30 years. 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 and have exceeded their estimated life expectancy of 25 years; plan for their eventual replacement.
- Constant volume air handling unit serving the gymnasium was installed in 1949, is in poor condition, and has exceeded its estimated life expectancy of 30 years; plan for its eventual replacement.
- Constant volume air handling unit serving the 1992 addition was installed in 1992, is in fair condition, and has an estimated life expectancy of 30 years.
- Rooftop unit serving the offices was installed in 2004, is in fair condition, and has an estimated life expectancy of 15 years.
- 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 offices to the corridor, and current building code does not allow transfer air into a path of emergency egress.

## HVAC (cont.):

- 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 was replaced in 1993, is in good working condition, and has capacity for 7 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 a pad mounted transformer adjacent to the building with an underground electrical service. The electric meter is mounted to the transformer.
- A small Briggs and Stratton generator and transfer switch are in good working condition, and the transfer switch serves emergency lighting loads in addition to other non-life safety loads such as the water heater; it is not recommended to split non-life safety loads to a separate transfer switch to meet today's standards.
- 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. Working clearance areas may not be used for storage.
- 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, most classrooms utilize dual level lighting controls in the room, and 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 verified that it meets today's standards through egress paths and rooms with an occupant load greater than 50 people. Currently there are provisions for emergency lightings; however, it appears to not meet today's light level standards, along with some areas that lack emergency lighting such as the gymnasium.
- 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. Provide additional receptacles with dedicated circuits to serve hot plates in science classrooms, as staff indicated that breakers often get tripped in science classrooms when using hot plates.
- 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 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.
- 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.

### Electrical (cont.):

- Dukane ACC5 intercom system is about 10 years old, is working properly, and lacks coverage in some areas of the building; 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 if desired, 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 18 more cameras to the system in the future; provide new cameras where additional coverage is necessary.
- Faraday fire alarm system is about 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.



# WILSON ELEMENTARY: SITE SUMMARY

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The following is a summary of potential improvements at Wilson 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.

## 4. Site Improvements:

### AREA 1 - MAIN ENTRANCE WALKWAY/ADA ACCESSIBILITY CONCERNS

- Distresses Present:
  - No hand rails
  - Concrete walk is too steep
- Recommended Repair:
  - Remove existing concrete
  - Place 12 inches of base aggregate dense
  - Grade to proper slope
  - Place 6-inch concrete walk
  - Add handrails

### AREA 2 - STAFF PARKING

- Distresses Present:
  - Thermal cracking
  - Raveling
  - Surface weathering
  - Depressions due to base settling
  - Fatigue cracking due to base 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/BASKETBALL COURT

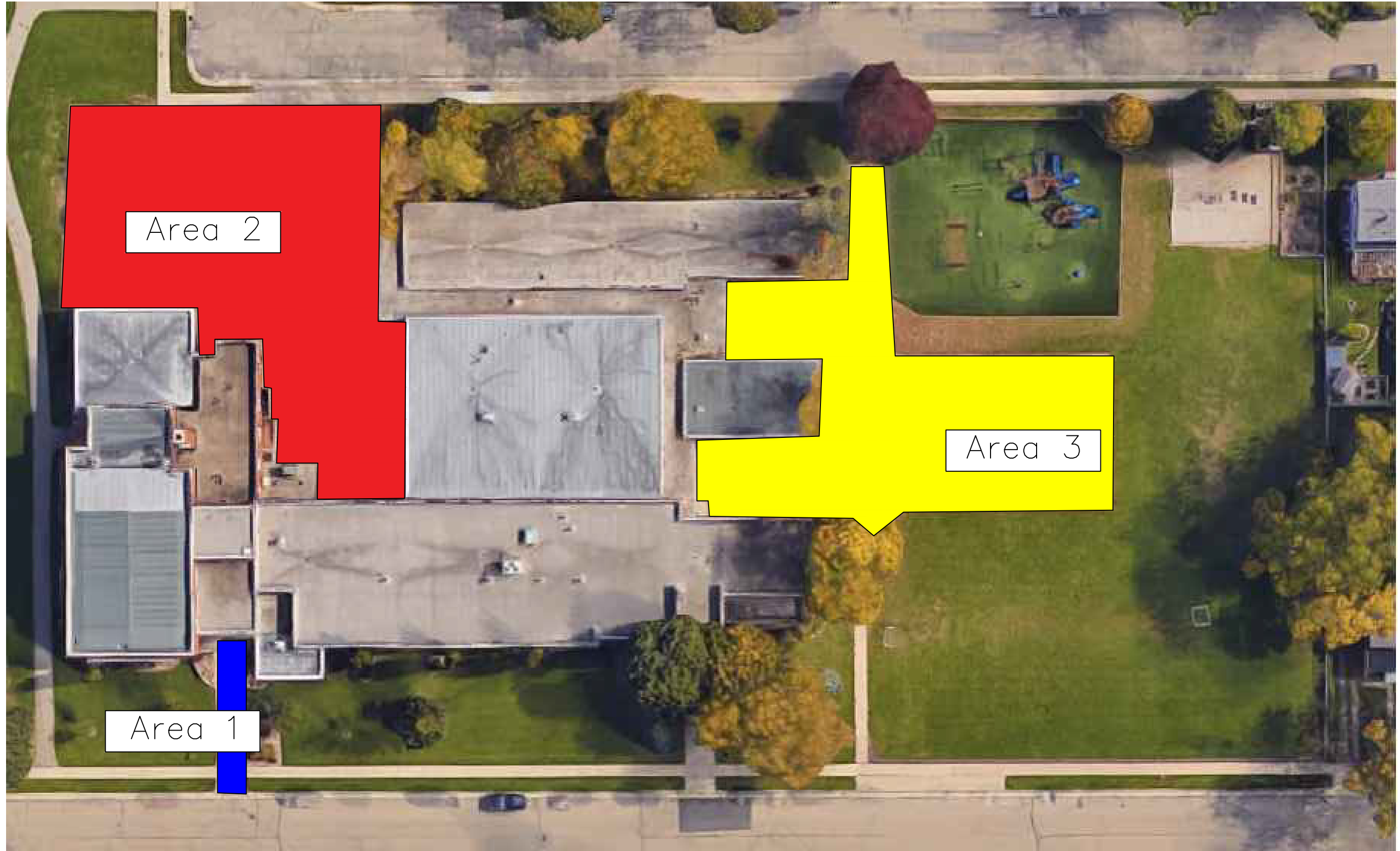
- Distresses Present:
  - Thermal cracking
  - Raveling
  - Surface weathering
  - Depressions due to base settling
- Recommended Repair:
  - Remove existing pavement and 12 inches of base and/or subgrade
  - Place 12 inches of base aggregate dense
  - Grade the area to better drain to the existing inlets
  - Pave 3 inches of asphaltic pavement
  - Paint all pavement markings for a basketball court

### SITE CONCRETE

- Distresses Present:
  - Spalling at edges of sidewalk in areas
  - Large cracks in sidewalk that poses a tripping hazard
  - Entrance apron to the staff parking lot is very steep
- Recommended Repair:
  - Remove and replace the areas of sidewalk that have spalling or cracked
  - Fix grade at parking lot apron

### ADDITIONAL NOTES

- Much of the playground equipment is relatively new, but staff reported that screws often come loose; existing swing-set is dated, and was reported by staff as needing new chain links
- Parking is limited on site
- There is no dumpster enclosure



SITE PLAN  
not to scale

# WILSON ELEMENTARY: ADA ACCESSIBILITY ASSESSMENT

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The following is an analysis of Wilson 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 multiple accessible entrances at this level that 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 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 do not meet 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).

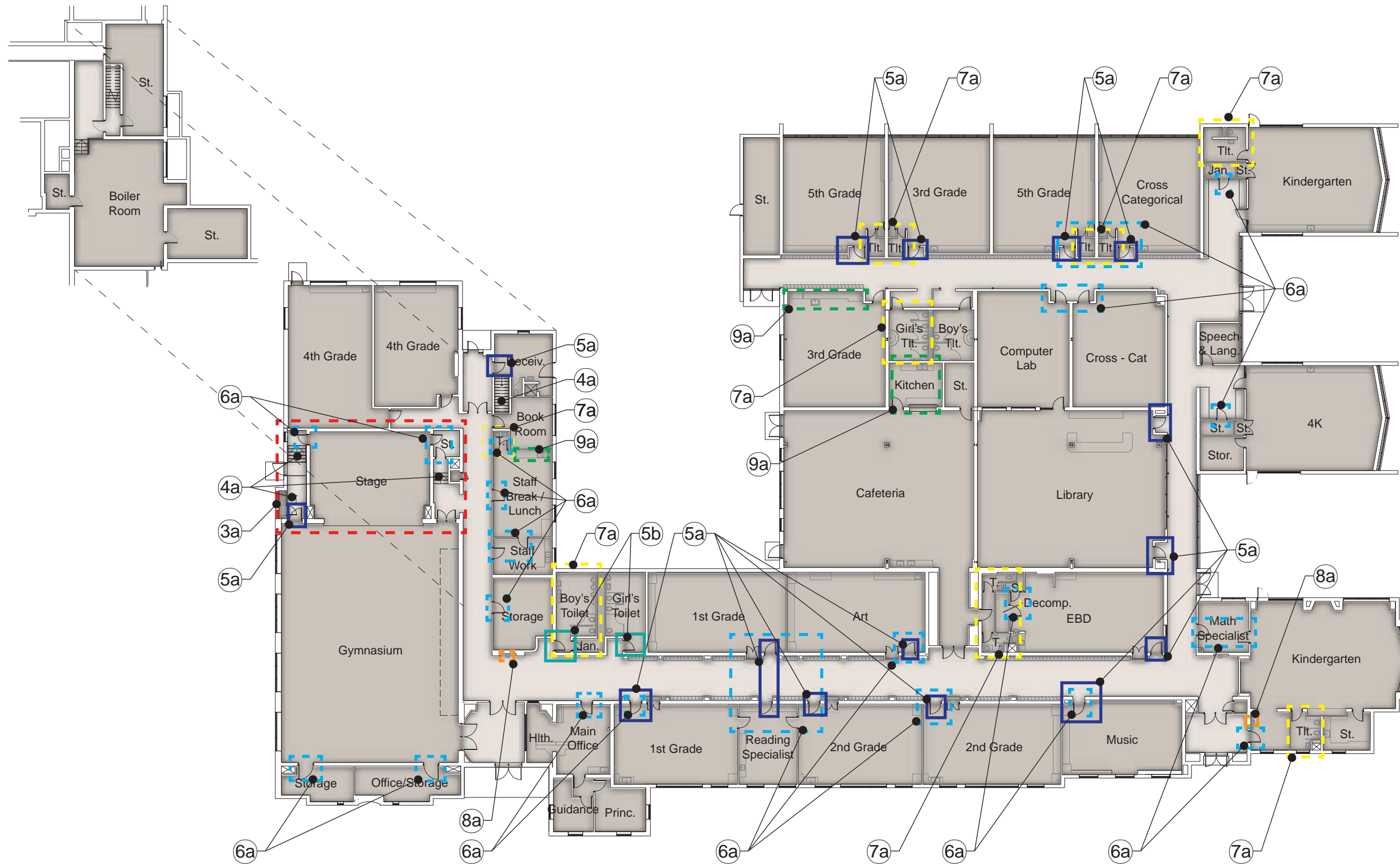
Objects more than 27" and not more than 80" above the floor shall protrude 4" maximum into the circulation path (307.2). Objects shall not reduce clear width required for accessible routes (307.5). Guardrails or other barriers shall be provided where object protrusion is beyond the limits allowed, and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

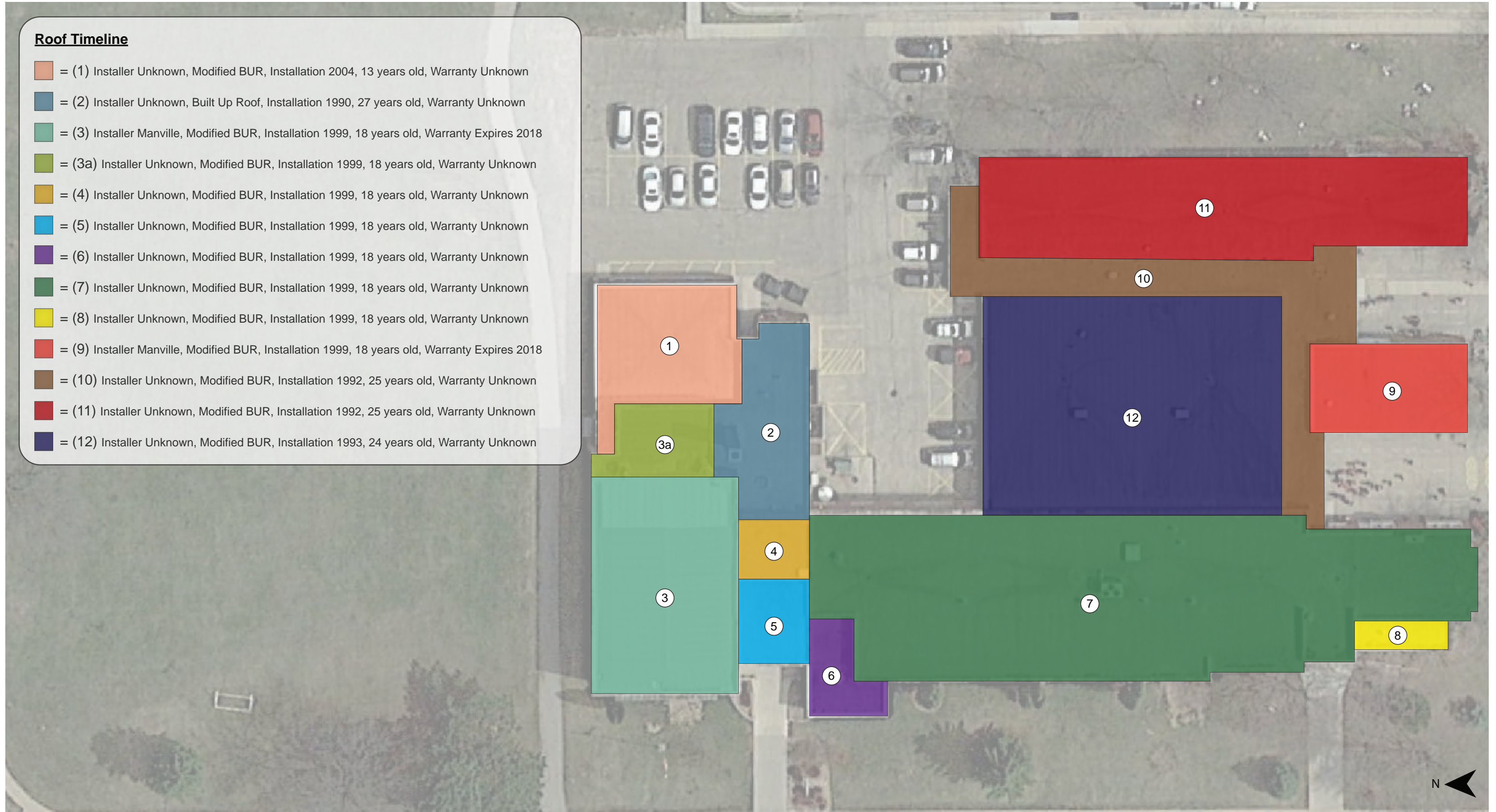


FIRST FLOOR PLAN  
not to scale

# WILSON ELEMENTARY: ROOF PLAN

## Roof Timeline

- = (1) Installer Unknown, Modified BUR, Installation 2004, 13 years old, Warranty Unknown
- = (2) Installer Unknown, Built Up Roof, Installation 1990, 27 years old, Warranty Unknown
- = (3) Installer Manville, Modified BUR, Installation 1999, 18 years old, Warranty Expires 2018
- = (3a) Installer Unknown, Modified BUR, Installation 1999, 18 years old, Warranty Unknown
- = (4) Installer Unknown, Modified BUR, Installation 1999, 18 years old, Warranty Unknown
- = (5) Installer Unknown, Modified BUR, Installation 1999, 18 years old, Warranty Unknown
- = (6) Installer Unknown, Modified BUR, Installation 1999, 18 years old, Warranty Unknown
- = (7) Installer Unknown, Modified BUR, Installation 1999, 18 years old, Warranty Unknown
- = (8) Installer Unknown, Modified BUR, Installation 1999, 18 years old, Warranty Unknown
- = (9) Installer Manville, Modified BUR, Installation 1999, 18 years old, Warranty Expires 2018
- = (10) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (11) Installer Unknown, Modified BUR, Installation 1992, 25 years old, Warranty Unknown
- = (12) Installer Unknown, Modified BUR, Installation 1993, 24 years old, Warranty Unknown



ROOF PLAN  
not to scale

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# WILSON ELEMENTARY: EXTERIOR DOOR ANALYSIS

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



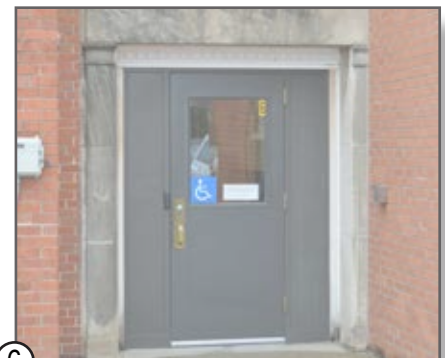
① HOLLOW METAL DOORS & WOOD FRAME



③ HOLLOW METAL DOOR & WOOD FRAME



④ HOLLOW METAL DOOR & HOLLOW METAL FRAME



⑥ HOLLOW METAL DOOR & HOLLOW METAL FRAME



⑭ WOOD DOORS & WOOD FRAME



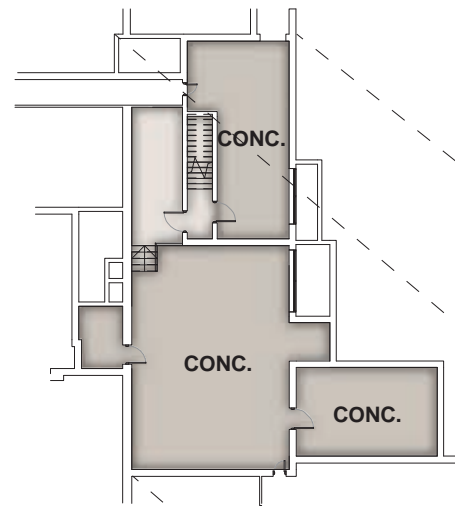
⑪ ALUMINUM DOOR & ALUMINUM STOREFRONT



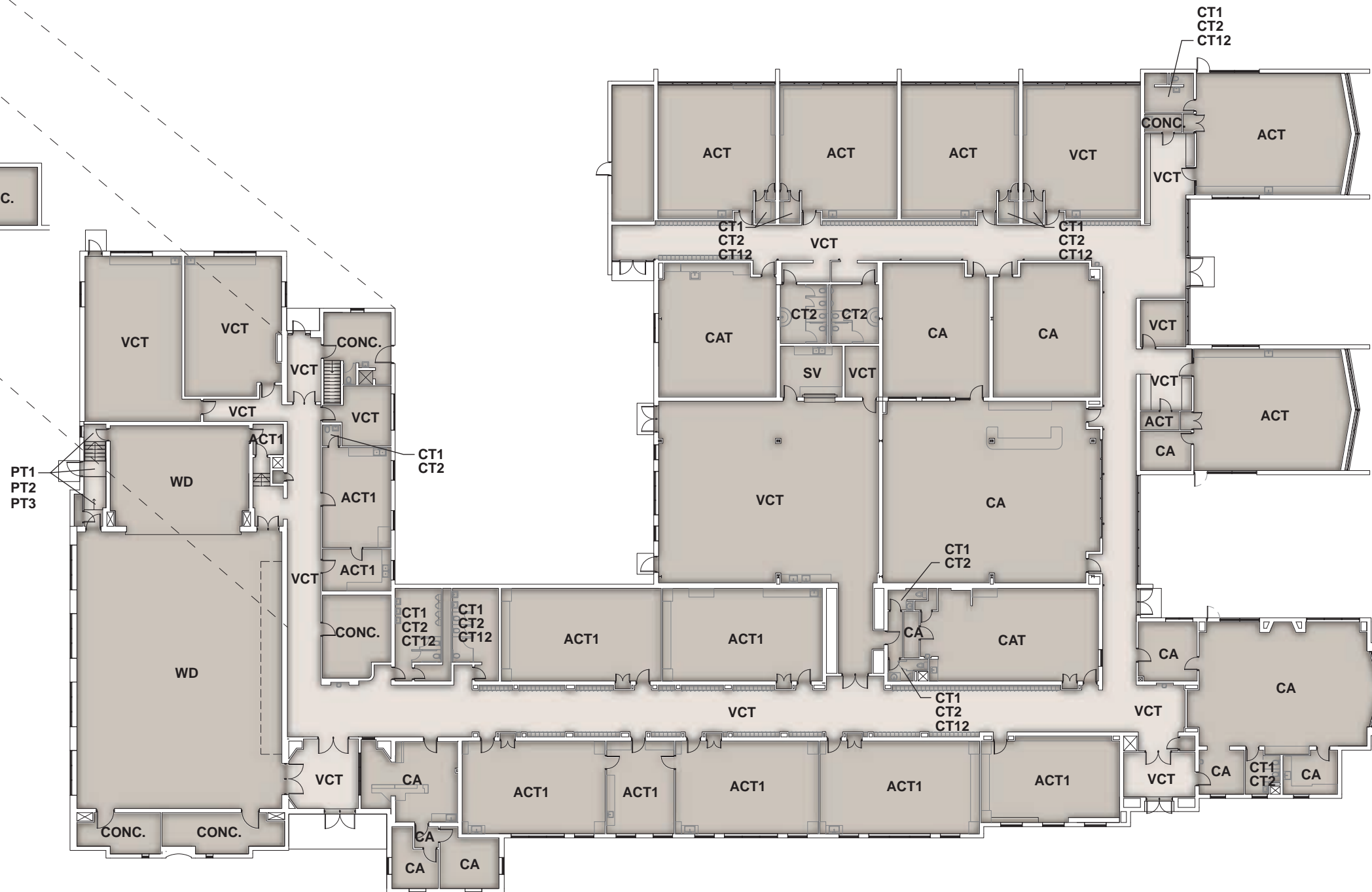
**WILSON ELEMENTARY: EXTERIOR DOOR ANALYSIS**



**WILSON 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*

# WILSON 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 20, 2017. Site observations and interviews with staff were used in the preparation of this report.

The original building was built in 1949 with additions completed in 1952, 1992, and 2004.

## **Domestic Water**

### Observations

- A. Water is supplied to the building by what appears to be 4" 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 majority of the water distribution piping in the building appears to be copper tube and fittings with some galvanized pipe and fittings. The water distribution piping appears to be in fair condition.
- C. There is no fire suppression system in the building.

### Recommendations

- A. The water distribution piping in the original building and the 1952 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 piping type could not be identified. There are no reported challenges with the sewer piping.
- C. The building has a prep kitchen with a 2-compartment sink and disposal. There is no interior grease interceptor.
- D. 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 a clearwater sump pump located in the basement level for removing groundwater. The sump system appears to be in fair to good condition.



### Recommendations



# WILSON ELEMENTARY: ENGINEER REPORT - PLUMBING

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- A. The sanitary sewer system in the original building 1952 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.
- B. The sink where art project are completed should have solids traps added to the waste piping.
- C. The storm sewer system in the original building and 1952 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.
- D. The existing clearwater sump pump should be monitored and repaired or replaced as necessary.

## Plumbing Equipment

### Observations

- A. The building has one gas fired water heater that is 80% efficient. It appears to be in fair condition.
- B. The domestic water is not softened.

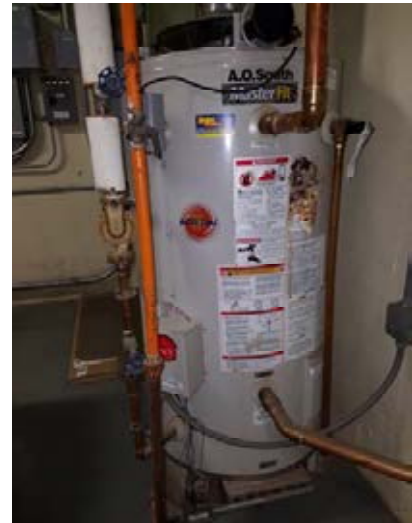
### Recommendations

- A. The existing water heater but should be replaced in the next 10 years with a 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 flush valves or a flush tank style. The flush tank style are not water conserving. The fixtures are old and are in fair condition.
- D. The lavatories in the building are a mix of drop in and 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 drinking fountains in the building are vitreous china drinking fountains or wall hung electric water coolers. They are not ADA compliant and are in fair condition. Some of the drinking fountains have been replaced with wall hung electric water coolers with bottle fillers. The fixtures are in good condition.



# WILSON ELEMENTARY: ENGINEER REPORT - PLUMBING

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- F. The classroom sinks are single bowl, stainless steel drop-in sinks with a variety of faucets 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 older electric water coolers 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 1949, with additions being constructed in 1952, 1992 and 2004.

### 1.1 Heating System

#### A. Existing Data

1. The boiler plant, installed in 1949, consists of two Kewanee steam boilers, each fired with natural gas. Each boiler has a capacity of 2,350,000 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. 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.

#### B. Observations

1. According to information obtained by the Owner, the boiler plant does not have any reserve capacity.
2. The boiler plant is in poor condition. It has exceeded the estimated life expectancy of 30 years.
3. While the age of the heat exchanger and hot water pumps is not specifically known, they appear in fair condition and seem to have exceeded the estimated life expectancy.

#### C. Recommendations

1. Continue preventative maintenance on the system.
2. Any future additions or construction may require the addition of boiler capacity to serve the additional spaces.
3. Plans should be made for the eventual replacement of the steam boilers. 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.

### 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 classroom unit ventilators and constant volume air handling systems.
2. The 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. Steam and condensate piping is run to each unit ventilator.
3. The gymnasium is served by a constant volume air handling unit. Constant volume systems consist of a central supply fan, which contains a steam heating coil, fresh air damper and return air damper. A room thermostat is used to control the temperature of the air supplied to the space.



4. The 1992 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 damper and return air damper. Booster coils are installed in the ductwork to provide individual room temperature control.
5. The offices are served by a constant volume, packaged rooftop unit. A constant volume rooftop unit consists of a central supply fan, gas fired heat exchanger, DX cooling section, fresh air damper, return air damper and relief fan. Booster coils are installed in the ductwork to provide individual room temperature control.

## **B. Observations**

1. The unit ventilators are original to the building. The units have exceeded the estimated life expectancy of 25 years.
2. The constant volume air handling unit serving the gym was installed in 1949 and is in poor condition. The unit has exceeded the estimated life expectancy of 30 years.
3. The constant volume air handling unit serving the 1992 addition was installed in 1992. The unit is in fair condition. The estimated life expectancy is 30 years.
4. The rooftop unit serving the offices was installed in 2004. The unit is in fair condition. The estimated life expectancy is 15 years.
5. Door transfer grilles are currently utilized to transfer relief air from the offices 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 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.

## **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.

# WILSON 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 20, 2017. Site observations, existing plan review and interviews with staff were all used in the preparation of this report. The facility was built in 1949, with additions occurring in 1952, 1992, and 2004.

## Electric Service

### Observations

- A. The facility has an 800-amp, 120/208V 3-phase 4 wire main electric service that was replaced in 1993 and is in good working condition. The main switchboard has capacity for 7 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 a pad mounted transformer across the street with an underground electric service. The electric meter is mounted to the transformer.
- D. There is a small residential grade Briggs & Stratton generator serving a 40 amp automatic transfer switch. The transfer switch serves emergency lighting loads in addition to other non-life safety loads such as the water heater.



Main Electric Service



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. The generator and transfer switch are in good working condition, however it should be noted that it is recommended to split non-life safety loads to a separate transfer switch to meet today's standards.
- 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.



Exterior Generator





## 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 emergency lighting provisions in the space.
- C. General lighting controls in rooms consist of toggle switches with no occupancy sensors. Most classrooms utilize dual level lighting controls in the 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 provisions for emergency lighting, however it appeared to not meet today's light level standards, along with some areas that lacked emergency lighting such as the gymnasium.
- F. Exterior lighting consists of high pressure sodium wall packs and vintage incandescent wall sconces.
- G. Exterior lighting is controlled via a combination of photocell and time clock controls.



Classroom Lighting



Gymnasium Lighting



Library Lighting

### 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 verified that it meets today's standards through egress paths and rooms with an occupant load greater than 50 persons.

## 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.



# WILSON ELEMENTARY: ENGINEER REPORT - ELECTRICAL

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- C. Facility indicated that breakers often get tripped in science classrooms when using hot plates.
- D. There are receptacles within 6 feet of plumbing fixtures that are not GFI protected.

## 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. Provide additional receptacles with dedicated circuits to serve hot plates in science classrooms.
- D. 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.

## 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 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

### Recommendations

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

## Fire Alarm System

### Observations

- A. The building has a Faraday 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.



Fire Alarm System



- C. Notification coverage is lacking by today's standards.

## 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.



Boiler Monitoring System