DMPS FACILITY ASSESSMENT | WILLARD ELEMENTARY

01.09.2024

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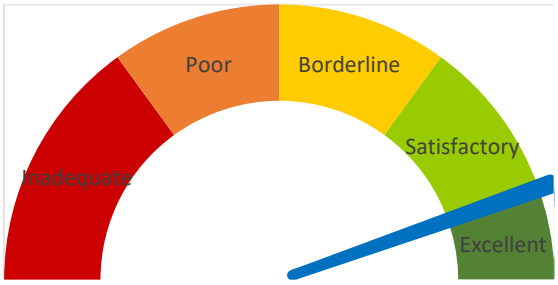


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Willard Elementary's on-site facility conditions assessment was conducted on January 9, 2024 and included visual conditions assessment from professionals covering interior architecture, exterior building envelope, the property's grounds (site), structural condition, mechanical (HVAC/Plumbing) systems, electrical systems (power, exterior lighting, interior lighting, fire alarm, and general IT), and the elevator conditions.

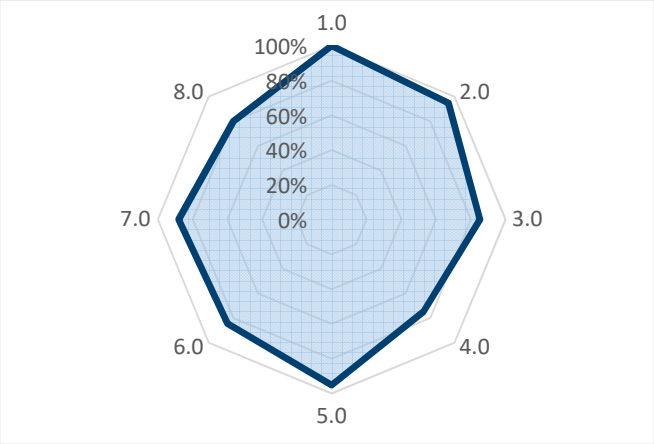
A few of the short term maintenance identified for Willard Elementary are: ceiling repairs, light fixture repairs, roof cleaning, exterior door adjustments, mechanical system controls, electrical grounding, and elevator maintenance. Willard Elementary appears to be well cared for as a historic property and is in generally excellent condition. Some of the recommended projects for Willard Elementary to be completed in the next 1-2 years are as follows:

- Interior Wall Painting
- Plaster Wall Repair
- Exterior Door Replacement and Repainting
- Exterior Sealant Replacement
- Masonry Repairs and Cleaning
- Exterior Brick Lintel Repairs
- Door Stoop Installation
- Grease Interceptor Installation
- Exterior Lighting Improvements
- Elevator Motor Starter Replacement

These projects along with all of the recommended potential projects at the 3-4 year and 5-10 year priority levels are further described within this report.

Discipline Comparison				Building Health				
Assessment Category Summary		Max Pnts	Earned Pnts	Bldg Weight Factor	Max Pnts	Earned Pnts	%	Rating
1.0	Educational Adequacy	165	165	2.00	330	330	100%	Excellent
2.0	Environment for Education	375	356	0.60	225	214	95%	Excellent
3.0	Exterior Envelope	95	81	3.00	285	243	85%	Satisfactory
4.0	School Site	95	71	1.50	143	107	75%	Satisfactory
5.0	Structural Conditions	125	119	1.30	163	155	95%	Excellent
6.0	Mechanical Systems	660	559	0.80	528	447	85%	Satisfactory
7.0	Electrical Systems	375	330	0.75	281	248	88%	Satisfactory
8.0	Elevator Conditions	65	52	1.00	65	52	80%	Satisfactory
Total					**1,954**	**1,743**	**89%**	**Satisfactory**

Willard Elementary
Discipline Comparison



Rating Table				
1-29%	30-49%	50-69%	70-89%	90-100%
Inadequate	Poor	Borderline	Satisfactory	Excellent

After totaling the scores from the various discipline assessment reports Willard Elementary scored a building health rating of 89% or "Excellent" per the scale described above. Per the graph shown on the cover page of this report, scores within the "green" range are considered positive scores. Willard Elementary is within this positive range. Improvements to the School Site would make the largest impact in increasing this score further.

Building Data Record

Building Name: **Willard Elementary**

Date: **January 9, 2024**

Address: **2941 Dean Avenue**
Des Moines, IA 50317

High School Feeder System: **East High School**

Building SF: **59,301 square feet**

Site Acreage: **4.73 acres**

Date(s) of Construction: **1917, 1924, 2003**

Date(s) of Roof Replacement: **2014**

Current/Scheduled Projects: **No projects currently planned.**

Existing Building Data:

- [x] Egress Plans
- [x] Original Docs
- [x] Major Renovations and Additions
- [ ] Minor Projects
- [ ] Maint. Reports

Site Items:

- [ ] Student Garden
- [ ] Loading Dock
- [ ] Stormwater Detention

Energy Source:

- [x] Electric
- [x] Gas
- [ ] Geothermal
- [ ] Solar

Cooling:

- [ ] DX RTU or DOAS
- [ ] Chiller
- [ ] VRF
- [x] Water Source Heat Pump
- [x] Fluid Cooler

Heating:

- [ ] Gas/Electric RTU or DOAS
- [x] Boiler
- [ ] Water-to-Water Heat Pump
- [ ] VRF
- [x] Water Source Heat Pump

Structure Fireproofing:

- [x] No
- [ ] Yes

Construction:

- [x] Load Bearing Masonry
- [x] Steel Frame
- [x] Concrete
- [ ] Wood
- [ ] Other

Exterior Facade:

- [x] Brick
- [ ] Stucco
- [ ] Metal
- [ ] Wood
- [ ] Other

Floor/Roof Structure:

- [ ] Wood Joists
- [x] Steel Joists/Beams
- [x] Slab on Grade
- [x] Struct. Slab
- [x] Other
  Pan Joist system

A | Architectural, Programming

ASSESSOR: Tim Bungert

1.0 Educational Adequacy

		Weight Factor	Rating	Points	Comments
General					
1.1	**Floor materials** are appropriate for space type.	2	5	10	
Elective/Secondary Classroom					
1.2	**Gymnasium** is adequate for providing physical education programming.	2	5	10	
1.3	**Cafeteria** has adequate space, furniture, and acoustics for efficient lunch use.	2	5	10	
1.4	**Music room** is adequate for providing introductory music instruction.	2	5	10	
1.5	**Art room** has sufficient accommodations for program.	2	5	10	
1.6	**Library/Resource/Media Center** provides appropriate and attractive space.	1	5	5	Beautiful reuse of the former gymnasium, though the space on the balcony above appears very underutilized.
Core Classroom					
1.7	Classroom space permits arrangements for **small group activity.**	3	5	15	
1.8	**Student storage space** is adequate.	2	5	10	
1.9	**Teacher storage space** is adequate.	3	5	15	
1.10	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	5	15	

A | Architectural, Programming

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
1.11	**Classroom power and data receptacles** are located to support current classroom instruction.	4	5	20	
1.12	Educational **technology** supports instruction.	4	5	20	
Administration					
1.13	**Conference/Private meeting rooms** are adequate for large and small meetings.	1	5	5	
1.14	**Main office** has a check-in and waiting area.	2	5	10	
	TOTAL			165	

A | Architectural, Interior

ASSESSOR: Tim Bungert

2.0 Environment for Education

Design

		Weight Factor	Rating	Points	Comments
2.1	**Traffic flow** is aided by appropriate foyers and corridors.	1	5	5	
2.2	Communication among students is enhanced by **common areas.**	1	5	5	Lounge areas on the central stair landings are a creative solution to student gathering areas.
2.3	Areas for students to **interact are suitable to the age group.**	1	5	5	
2.4	Large group areas are designed for effective **management of students.**	2	5	10	
2.5	**Furniture Systems** are in good or like new condition.	1	5	5	
2.6	**Color schemes**, building materials, and decor are **engaging and unify** the school character.	2	5	10	
2.7	Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces.	3	5	15	
2.8	Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces.	3	0	0	
2.9	**Lighting has proper controls** to provide the required light levels for various teaching and learning needs.	2	5	10	
2.10	**Staff dedicated spaces** include conference space, work space, and dedicated restrooms.	1	5	5	

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.11	**Main office** is visually connected to the entry and is welcoming to students, staff, and guests.	2	4	8	Good visual connection to main entrance, but limited control/containment of visitors once they are buzzed in to the building.n
2.12	**Break room** is adequately sized and furnished for proper use.	1	5	5	
2.13	**Mother's room** is a separate designated space properly furnished.	1	0	0	No mother's room observed.
Maintainability					
2.14	**Floor surfaces** are durable and in good condition.	1	5	5	
2.15	**Ceilings** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	5	5	
2.16	**Walls** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	4	4	Peeling paint was observed in many areas. Refer to proposed projects for more information.h
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	4	4	
2.18	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	5	15	
2.19	**Facility doors** are keyed to standardized master keying system.	3	5	15	
2.20	**Restroom partitions** are securely mounted and of durable finish.	2	5	10	

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.21	**Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces.	1	5	5	
Occupant Safety					
2.22	Classroom doors are **recessed and open outward.**	4	5	20	
2.23	Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.**	3	5	15	
2.24	**Door panels** into classrooms and other occupied spaces contain **vision lite.**	3	5	15	
2.25	**Vision lite** in doors is clear and uncovered.	2	5	10	
2.26	**Glass** is properly located and protected to prevent accidental injury.	2	5	10	
2.27	**Flooring** is maintained in a **non-slip** condition	2	5	10	
2.28	**Traffic areas terminate at exit or** stairway leading to egress	5	5	25	
2.29	Multi-story buildings have at least **two stairways** from all upper levels for student egress.	5	5	25	
2.30	**Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements.	5	4	20	Stair railings do not meet code height requirements for guardrails, but are grandfathered as an existing condition.

A | Architectural, Interior

ASSESSOR: Tim Bungert

		Weight Factor	Rating	Points	Comments
2.31	At least **two independent exits** from any point in the building	5	5	25	
2.32	**Emergency lighting** is provided throughout the building.	5	5	25	
	TOTAL			346	

A | Architectural , Exterior

ASSESSOR: Matthew Gaul

3.0 Exterior Envelope

		Weight Factor	Rating	Points	Comments
Design					
3.1	Overall **design is aesthetically pleasing** and appropriate for the age of students.	2	4	8	Some locations of exterior stone/ masonry require cleaning.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	4	12	Next roof replacement in 5-10 years.
3.3	**Roof access** is safe for all roofs.	3	4	12	Roof hatches require guardrails and one roof ladder has a loose anchorage point.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	5	15	
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	4	4	Low-e glazing cannot be determined. Windows are tinted. A few glass blocks at the gymnasium require replacement.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	5	10	
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	4	8	Doors in multiple locations require repainting. Several doors are original wood, which while less durable can be maintained for a very long time to come -- and should be.
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	4	4	Locations of sealant replacement and masonry cleaning.
3.9	**Exterior Doors** open outward and are equipped with **panic hardware.**	1	5	5	
3.10	**Exterior Doors are monitored** or controlled by an access control system.	1	3	3	4- Doors do not latch 4 - Doors with card readers 3 - Doors with locks 3 - Doors with no exterior lock 0 - Doors with no signage.
	TOTAL			81	

C | Civil

ASSESSOR: Jack Gorman / Joel Jackson

4.0 The School Site

		Weight Factor	Rating	Points	Comments
4.1	**Site topography** and grading drains water away from the building and retaining walls.	1	3	3	Fairly flat site, issues around main entrance where water doesn't appear to drain out. DMPS states they didn't know about any issues in this area. Against the E 33rd Street bridge, area of rock is washing out, suggest paving this area to eliminate problem.
4.2	**Parking areas** are in good condition.	5	4	20	West parking new is newer concrete and good condition, east side asphalt has sections due for replacement.
4.3	**Drive areas** are in good condition.	3	3	9	Southeast asphalt sagging and cracking in the drive aisle. Remainder of drive aisles are in good condition.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	4	4	DMPS states parking is adequate for day to day but events have no places to park
4.5	**Sidewalks** around the facility are in good **condition.**	1	4	4	Sections of the north side need repairs but sidewalk conditions mostly good
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	4	4	Only 1 ADA entrance and there is a lip between the building stoop and pavement that would be hard to roll a wheelchair over
4.7	**Hard surface** playground surfaces are in good condition.	3	4	12	Walk track in good condition, most of the asphalt is good but the area by the tree has serious damage from the roots
4.8	**Fencing** around the site is in good condition.	1	4	4	The SW area by the walk track needs replacement, All other areas good.
4.9	**Trash enclosure** is in good condition.	1	N/A	0	Dumpsters currently out in east parking lot and no enclosure is located on site.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	4	4	The pavement around the intake near the walk track was chipping and the north side would drain better with an additional open space intake

ASSESSOR: Jack Gorman / Joel Jackson

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	3	3	Space for building expansion to south and parking expansion to east but would lose some play area
4.12	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	4	4	Buses use the north pull in and parents use the west side. DMPS states there is minimal conflict between the two and that parents occasionally stack up onto 29th Court.
	TOTAL			71	

S | Structural

ASSESSOR: Niles Quick

5.0 Structural Conditions

		Weight Factor	Rating	Points	Comments
Foundations					
5.1	**Foundations** appear to be in good condition with no visible cracks.	1	5	5	
5.2	There does not appear to be any **foundation settlement.**	2	5	10	
5.3	**Basement walls** do not appear to have any cracks.	1	5	5	
5.4	**Stoops** appear to be in good condition.	1	5	5	Missing stoops at exterior doors in room 103 and 104
Slab on Grade					
5.5	**Slabs on grade** do not appear to have any cracks	1	5	5	
5.6	Slabs on grade do not appear to have any **settlement.**	1	5	5	
Exterior Walls					
5.7	**Brick masonry** appears to be in good condition.	2	5	10	
5.8	**Lintels** appear in good condition (no visible deflection or rust).	1	4	4	Minor rusting in the majority of window lintels on each level
5.9	**CMU** is in good condition.	1	5	5	
5.10	**Precast** is in good condition.	1	N/A	0	

S | Structural

ASSESSOR: Niles Quick

		Weight Factor	Rating	Points	Comments
Interior Walls					
5.11	**Interior walls** appear to be in good condition.	1	5	5	
Floor Framing (Elevated)					
5.12	**Floor framing** appears to be in good condition.	3	5	15	
5.13	Floor framing appears to meet the **code requirements.**	3	5	15	
Roof Framing					
5.14	**Roof framing** appears to be in good condition.	3	5	15	
Miscellaneous					
5.15	**Retaining walls** appear to be in good condition.	1	N/A	0	
5.16	**Canopies** appear to be in good condition.	1	N/A	0	
5.17	**Loading dock concrete** appears to be in good condition.	2	N/A	0	
5.18	**Mechanical screening** appears to be in good condition.	2	N/A	0	
5.19	**Stairs** appear to be in good condition.	1	5	5	
5.20	**Stair railings** appear to be in good condition.	1	5	5	

S | Structural

ASSESSOR: Niles Quick

		Weight Factor	Rating	Points	Comments
5.21	**Tunnels** appear to be in good condition without cracks.	1	5	5	
5.22	There is a **designated hardened area** in the building.	1	0	0	No designated hardened area observed.
5.23	The hardened area appears consistent with the **ICC 2018 code.**	1	N/A	0	
	TOTAL			119	

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

6.0 Mechanical Systems

HVAC Design

		Weight Factor	Rating	Points	Comments
6.1	**Zone Control.** Thermostats are provided in each space for individual zone control of space temperatures.	3	5	15	
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	5	15	
6.3	Appropriate **amount of ventilation** are provided to each space.	5	3	15	ERV not running the day of site visit. Potentially due to lack of heating capacity in ERV. Recent DX coil with water cooled chiller installed for dehumidification.
6.4	**Ventilation** is provided during occupied hours.	5	3	15	ERV not running
6.5	**Outdoor air intake locations** are appropriate.	4	5	20	
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	3	15	ERV not running and providing exhaust
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	5	10	
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	3	15	Much of the equipment except the boilers and the ERV unit are 20+ years old. Heat- pumps, cooling tower and pumps in need of replacement.
6.9	**Cooling loads** are within equipment operational capacity.	5	5	25	
6.10	**Heating loads** are within equipment operations capacity.	5	3	15	The cooling tower coil is circulated during heating season due to manual control of bypass and due to freezing concerns with coil.

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	3	5	15	Dehumidification was added to the ERV in recent project. 2023 Project drawings also indicate room level dehumidifiers are installed.
Plumbing Design					
6.12	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	
6.13	Appropriate **backflow preventer** is provided at connection to city water supply.	5	5	25	
6.14	**Domestic hot-water systems** are within equipment operational capacity.	5	5	25	
6.15	Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	5	15	
6.16	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	5	25	
6.17	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	1	3	Current grease interceptor is inside the building and only 40 gal. DSM WRA requires a larger grease intereceptor.
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	5	25	
6.19	**Restroom fixtures** are in good condition and comply with current DMPS standards.	3	5	15	
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	4	12	Some limited access to heat-pumps above ceiling

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.21	AHUs and chiller are provided with **coil pull space.**	2	N/A	0	
6.22	**Filter** sizes are standard and filter types are standard.	2	4	8	Varies by equipment type.
6.23	**Equipment mounting heights** are reasonable.	3	4	12	Heat-pumps above ceiling in corridor.
6.24	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	4	8	Damp conditions due to recent heating issues AND open sump tank in room for cooling tower.
6.25	**Isolation valves** are located in the plumbing and hydronic systems to allow for isolation of only portions of the system for servicing.	2	5	10	
6.26	Appropriate means are provided for **airflow and water balancing.**	3	5	15	
6.27	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	5	10	
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge as per OSHA standard 1910.28(b).	2	5	10	
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	4	16	Cooling tower bypass is not automated (manual valves) Runs heat-pump loop to tower year-around.
Occupant Safety					
6.30	**Backflow prevention** is provided at all **cross-connections** to non-potable water.	5	5	25	

MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

		Weight Factor	Rating	Points	Comments
6.31	Building is fully **sprinklered.**	5	5	25	
6.32	**Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly.	5	5	25	
6.33	**Emergency eye-washes and tempering valves** are located where required.	5	0	0	Not observed. Recommend evaluation with an occupational safety and health professional to determine necessity of eye wash(es) for facility spaces.
6.34	**Emergency boiler stop switches** are located at exits from boiler rooms.	5	5	25	
6.35	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	N/A	0	
6.36	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	5	25	
	TOTAL			559	

E | Electrical

ASSESSOR: Rob Hedgepeth

7.0 Electrical Systems

Electrical Design

		Weight Factor	Rating	Points	Comments
7.1	**Transformer location** is easily accessible by utility line truck to allow for rapid transformer replacement in the event of an issue.	5	5	25	
7.2	**Transformer** has adequate clearance from non-combustible building components, paths of egress, etc. 10' clear working area in front of doors.	5	5	25	Fence has gate allowing access.
7.3	**The MDP environment** is safe, has adequate clearances and exiting.	3	5	15	
7.4	The **MDP** appears serviceable.	4	4	16	~2003 switchgear install. 208Y/120 2500A Siemens MDP.
7.5	The MDP is **maintainable.**	3	3	9	An exact replacement for the main breaker does not appear to be available, but a newer style breaker and retrofit kit is a possibility.
7.6	The MDP will support **future expansion.**	4	5	20	10 of 18=55%
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	N/A	0	
7.8	The Distribution Panel appears **serviceable.**	4	N/A	0	
7.9	The Distribution Panel is **maintainable.**	4	N/A	0	
7.10	The Distribution Panel will support **future expansion.**	4	N/A	0	

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.11	**Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable.	2	5	10	
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	5	5	
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	4	20	Dark areas on East and West sides, from parking towards building.
Electronic System Design					
7.14	MDF is **neatly organized** and has appropriate clearances and working spaces. Cables are neatly laced or trained. Entry to the room is restricted.	4	5	20	
7.15	MDF Equipment Racks have adequate space for **future growth.**	4	4	16	With removal of abandoned HP switch, rack has adequate space for expansion
7.16	MDF is equipped with UPS to back up main switch(es), providing **backup power** to necessary equipment in the event of a power outage.	5	5	25	Two minuteman plus additional (older) unit for intercom system.
7.17	MDF Power is supplied by **20A circuits and receptacles.**	1	0	0	MDF room has 15A receptacles.
7.18	MDF Power is supplied from a branch panel located in the room with **adequate spare circuit capacity.**	1	5	5	
7.19	MDF employs up-to-date **network cabling.**	2	4	8	Cat 5e/Cat 6A
7.20	MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.**	1	5	5	

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	5	10	Rack is not grounded. Other grounding in room does not meet applicable standards. Shield grounding for intercom cable does not have an appropriate fitting - just wire wrapped around a connector. (photo on file)
7.22	Building is equipped with an **addressable fire alarm system.**	5	5	25	Simplex 4100U
7.23	Building is equipped with an **access control system.**	5	2	10	4 of 11 exterior doors = 36%
7.24	Building is equipped with a **CCTV system.**	5	5	25	
7.25	Building is equipped with an **intercom system.**	4	5	20	
7.26	Building is equipped with a **master clock system.**	4	4	16	Simplex time clock, not District Standard Primex.
	TOTAL			330	

EV | Elevator

ASSESSOR: Mike Brown - ATIS

8.0 Elevator Conditions

		Weight Factor	Rating	Points	Comments
Design					
8.1	**Size** meets minimum as directed by ADA.	2	5	10	
8.2	**Control protections and signals** meet ADA standards.	2	5	10	
8.3	**Signage** meets code requirements.	1	5	5	
Operation and Safety					
8.4	Elevators have **proper level accuracy and door times.**	1	5	5	
8.5	**Safety devices** are in place and operable.	1	5	5	
Condition and Maintainability					
8.6	**Equipment is easily accessible** for periodic maintenance.	1	5	5	
8.7	**Equipment** is at an acceptable point in the life cycle, and does not contain obsolete parts.	2	3	6	The solid state motor starter is obsolete. The Consultant recommends an upgrade.
8.8	**Finishes** are adequate and maintainable.	1	3	3	The cab interior is worn and damaged .
8.9	**Maintenance** is adequate.	1	3	3	Recommend increasing the maintenance frequency to quarterly.
8.10	**Testing** is up to date, and all **record and logbooks** are present and filled out.	1	0	0	The testing is overdue and log books are incomplete.
	TOTAL			52	

RECOMMENDED PROJECTS AND COST ESTIMATING METHODOLOGIES

One of the major impetuses for our facility condition assessment work is the need to support strategic fiscal and maintenance planning for their facilities. As such, DMPS requires that recommended projects be assigned a total project cost in order to support the strategic planning needs of the District. A total project cost is a cost that includes the estimated construction cost as well as the various other 'hard' and 'soft' costs of a construction project such as professional design fees, contractor overhead, required contingencies, inflation, direct costs (e.g. permitting costs), etc. The full list of these hard and soft costs are defined later in this section.

Project Descriptions

Every building assessment report includes a section titled Recommended Projects and Priorities. This section is divided into the following subcategories: "Short Term Maintenance", "1-2 Year Project Priorities", "3-4 Year Project Priorities", "5 - 10 Year Project Priorities", and "Projects Requiring a Study". Each of these subcategories includes a list of project recommendations. The projects listed in each subcategory are grouped by discipline and listed in the following order: interior architecture, exterior architecture, civil (site), structural, mechanical, electrical, and elevator projects. The discipline order as described mirrors the order of the discipline Scoring Reports section found earlier in the building assessment report. The projects listed within Short Term Maintenance section do not include a cost. It is assumed that DMPS will perform this work. Additionally, projects which recommend furniture repair or replacement do not include a cost since furniture systems are selected and procured via a separate process. All other projects associated with the remaining subcategories, other than "Projects Requiring a Study" are provided an estimated total project cost.

Projects Requiring a Study

The projects listed within Projects Requiring a Study are provided estimated professional design fees to produce the recommended design study. In the future, once commissioned and completed, these recommended studies will not produce a completed design. Rather, the completed study will provide recommended project descriptions and estimated total project costs similar to the projects listed in this assessment report. For studies that most likely will result in a substantial project with a substantial cost associated, an "anticipated capital investment" cost number has been provided to help assist the District's strategic planning. This anticipated capital investment cost is based on a 5-10 Year Priority completion date and very high level general 'rules of thumb' estimations since it is unknown exactly what conclusions or recommendations will be determined by the study before the study is commissioned and completed.

Cost Estimating

To achieve the total project cost reflected in this building report, the recommended projects incorporate construction costs with added percentages to account for professional design services, design phase contingency, construction contingency, general contractor overhead and profit, other direct costs incurred by the project, and year-over-year inflation dependent on how many years out the recommended project is recommended to be completed. Not included in the total project cost are costs associated with hazardous materials abatement, testing, surveys, or site exploration (geotechnical testing, etc.). Additionally, for projects that are expected to produce a minimal amount of waste that is normally acceptable to City of Des Moines collection, costs for dumpsters have been excluded. To arrive at the final estimated total project cost as described above, the following methodology was used by the assessment team for each recommended project:

Step 1: Determine estimated direct cost of construction in 2024 dollars.

The recommended projects are conceptual in nature; therefore, all cost multipliers are overall systems level and/or unit costs. (These costs are not based on itemized breakdowns.) The cost information used is based on current available information which is in 2024 dollars and is a mixture of recent bids, firm experience, manufacturer provided information, and RS Means costing data.

Step 2: For recommended projects that are smaller in scale, scope, and estimated cost, a "small project fee" additive cost is applied to the estimated direct cost of construction determined in Step 1. This additive cost works to cover outsized mobilization, staffing, and equipment costs that are incurred on a small scale project the same as for a large project with a large economy of scale. These costs are as follows:

For projects with a Step 1 cost of $4,999.99 or less, an additive cost of $5,000.00 has been added.

For projects with a Step 1 cost of $5,000.00 to $14,999.99, a graduated additive cost from $5,000.00 to $0 has been added.

For all other projects (Step 1 cost of $15,000.00 and above) this step is skipped.

Step 3: Add 10% of the estimated direct construction cost for construction contingency.

RECOMMENDED PROJECTS AND COST ESTIMATING METHODOLOGIES

Step 4: Add a percentage of estimated direct construction cost plus construction contingency for inflation.
The projects are grouped based on how many years out it is recommended that the project is started. Projects closer to 2024 are more urgent projects. As project start times move further and further away from 2024, inflation must be added to best estimate how 2024 dollars will translate into the future. 5% year-over-year inflation was chosen as a reasonable assumption for this work.

- For projects assigned the 1-2 Year Priority add 10% of the estimated construction cost.
- For projects assigned the 3-4 Year Priority add 20% of the estimated construction cost.
- For projects assigned the 5-10 Year Priority add 50% of the estimated construction cost.

Step 5: Add 5% of the estimated direct construction cost, construction contingency, plus inflation for general conditions.
This cost covers the incidental costs incurred by the contractor to perform the work that are not directly tied to the specific materials and labor; examples include mobilizing to the site and final cleaning.

Step 6: Add 10% of the estimated direct construction cost, construction contingency, inflation, plus inflation for general contractor overhead and profit; combined, this is the total construction cost.

Step 7: Add 10% of the total construction cost for professional design services.
These services include, when appropriate: architectural design and project management, civil engineering, structural engineering, mechanical engineering, and electrical engineering. These services are for conceptual design through construction phase work.

Step 8: Add 5% of the total construction cost and professional design services for other direct costs.
These costs cover various other costs directly associated with the project such as printing, equipment, required permits, etc.

At the conclusion of Step 8, the total project cost for the recommended project is finalized.

PROJECT RECOMMENDATIONS

Below are recommended maintenance, projects, and studies based on the previous assessment scoring information. Short Term Maintenance items are items requiring DMPS attention in less than a year's time and is less than $5,000. Costs for these items are not estimated. 1-2 year priority projects are projects that require attention within the next 2 years. 3-4 year priority projects are projects that require attention within the next 4 years. 5-10 year priority projects are projects that require attention within the next 10 years. Project quantities are all estimated based on observations. These are not measured or verified quantities. Project costs are listed. Project requiring Study are items where project scope is not able to be defined at this time and further investigation is required. Costs for these items are design service fees, not project costs. See the Cost Methodology description for additional information.

Short Term Maintenance

Countertop Edge Banding Repair	Repair approximately 35 total LF of plastic laminate edge banding in rooms 105, 109, 203, 207, 208, 209, 303, 305, and 309.
Room 110 Ceiling Repair	Repair sagging ceiling grid in northwest corner of room 110.
Acoustic Ceiling Tile Replacement	Replace approximately 25 total stained or damaged ceiling tiles in rooms 103, 105, 108, corridor outside 110, 207, and 305.
Light Fixture Repairs	Repair 9 light fixtures with loose lenses in rooms 101M, 104, 207, 203, 207, 209, 306, and 312.
Window Treatment Repair	Repair horizontal blinds on exterior door from room 103.
Roof Cleaning	Remove debris from roof low spots, drains, overflows, gutters, and other areas where it collects so that the roof membrane remains in good condition and sheds water efficiently as designed.
Exterior Door Adjustment	Adjust 4 exterior doors so that they latch from any closing position at the following locations: 1 at main entry; 1 at room 1034; 2 at top of stairs N of room 1035.
Exterior Repair	Repair anchorage of roof ladder between roof area E and F.

Automate cooling tower bypass	Install automatic controls for cooling tower bypass during winter to prevent heat loss at tower. Add glycol to heat pump loop to protect tower coil from freezing.	
Review new VRF (water-source) to verify if heating capability is being used.	Recently installed VRF (water-sourced) unit appears to have cooling and heating capacity but does not appear to be operating in heating mode per discussion with DMPS. Per TRANE cutsheets (270 MBH x 2) is possible with installed	
Repair Grounding	Properly ground intercom cable shields in MDF.	
Complete Annual Testing and documentation	Contact Vendor to complete.	

1 - 2 Year Priority

		Project Costs
Wood Door Repairs	Repair crack in 1 single wood door at room 208 (door is intact - cracked piece likely can be securely affixed with a few wood screws through stile). Repair finish on 3 single wood doors at rooms 203, 204, and 208.	$7,000
VCT Flooring Replacement	Replace 30 SF of heavily worn VCT flooring in room 108.	$6,000
Interior Wall Painting	Remove loose/peeling paint and repaint approximately 550 SF on interior walls/columns in rooms 103, 106, stairway near 107, 109, 110, 121, 122, stairway 200, corridor outside 301, and 313.	$8,000
Plaster Wall Repair	In room 103, remove and replace portions of plaster exterior wall between windows with significant water damage (approximately 50 SF). This project should be completed in conjunction with the "Exterior Masonry Repairs" project below.	$6,000
Roof Access Installation	Provide guardrail around roof hatches at roof areas B and G; 2 total.	$11,000

Exterior Door Replacement	Replace door frame of double door with sidelites near room 108. Reuse door and hardware.	$12,000
Exterior Door Repaint	Repaint door(s) and frame(s) as follows: 3 double wood door frames with sidelites at room 100; single door and sidelite at room 100; single door at rm128; 10x12 wood garage door; door and sidelites at out building; double door and sidelites near room 121A; double door with sidelites at room 103; also 4 wood window frames with wood infill, 4'x6' each.	$15,000
Exterior Sealant Replacement	Replace sealant at most masonry soft joints around gymnasium, 7 locations; approx. 175 LF Replace sealant at window jamb of window across corner from room 111; approx.: 8 LF Replace sealant at masonry near doors: near room 107, near room 108 approx.: 8 LF	$8,000
Exterior Masonry Repairs	Repoint masonry outside room 103; approx. 24 SF. Repoint masonry at backside of parapet at west end of roof area B; approx. 3 SF.	$6,000
Exterior Masonry Cleaning	Clean stonework at main entry and entries near room 107 and 108; approx. 600 SF.	$10,000
Replace Fence Mesh	Replace 82 LF of chain link fence mesh. For locations, refer to the civil site plan exhibit found in the appendix of this report.	$7,000
Repair ADA Entrance	Remove the lip between the building stoop and asphalt of the ADA entrance on the west side of the school. For location, refer to the civil site plan exhibit found in the appendix of this report.	$7,000
Playground Pavement or Tree Removal	Remove 25 SY of asphalt to provide more space for tree roots or remove tree. For location, refer to the civil site plan exhibit found in the appendix of this report.	$10,000
Exterior Brick Lintel Rust Repairs	Rusted steel lintels need to be cleaned and loose material removed down to sound metal. New high performance coating and sealant shall be applied. This was typical at the majority of window lintels on the exterior of the building on each level that were able to be observed. Approximately 350 linear feet of lintel per level.	$15,000

Add in door stoop at (2) locations. Entrance to rooms 103 and 104	Add in (2) 5'x5' door stoops. 5" slab with #4 bars @ 9" o.c. each way. #4 x 4'-0" dowels into new 8" thick x 3'-6" deep footings. Footings to be reinforced with #4 bars @ 12" O.C. each way.	$11,000
Add Exterior Lighting	Add exterior lighting at SE and SW sides of building to provide better security at parking areas to building. Cost includes four exterior wall packs.	$12,000
Elevator Motor Starter Upgrade	The elevator motor starter is obsolete. Upgrade to a serviceable model.	$20,000
	Total 1-2 Year Project Costs:	**$171,000.00**

3 - 4 Year Priority

		Project Costs
Wood Millwork Finish Repair	Repair finish on approximately 200 LF of wood wall base/trim in rooms 202, 203, 204, 206, and 205.	$13,000
Music Room and Band Room Acoustic Improvements	Install acoustic wall panels in music room 107 (585 SF) and band room 301 (700 SF) to reduce reverberation time and contain sound within the rooms.	$20,000
Band Room Storage Improvements	Install approximately 22 LF of tall storage casework for musical instruments in room 301.	$25,000
Exterior Glazing Replacement	Replace glass blocks at gymnasium, 4 total.	$6,000
Grease Interceptor Installation	Replace interior 40 gal grease interceptor with new DMWWA approved grease interceptor.	$530,000
Heat Pump Replacement	Replace all existing water-source heat pumps. Install 2-speed heat pumps to assist with dehumidification and low load conditions.	$1,600,000
	Total 3-4 Year Project Costs:	**$2,194,000.00**

5 - 10 Year Priority

		Project Costs
Roof Replacement	Remove approx. 30,177 SF of PVC roofing and insulation over all roof areas. Install code compliant insulation and TPO roofing. Approx. year 2034	$960,000
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 59 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$14,000
Pavement Replacement	Remove and replace 1,290 SY of asphalt and replace 29 SY of asphalt around the dumpsters with reinforced PCC. For locations, refer to civil site plan exhibit found in the appendix of this report.	$240,000
Fence Replacement	Remove and replace 132 LF of 6' chain link fence. For location, refer to civil site plan exhibit found in the appendix of this report.	$20,000
Replace closed circuit cooling tower	Replace existing closed circuit cooling tower. Confirm sizing requirements of the existing cooling tower sump. DMPS reports that they regularly overflow it now.	$360,000
Replace existing loop water pumps	Replace existing water-source heat pump loop water ciruclating pumps	$110,000
	Total 5-10 Year Project Costs:	**$1,704,000.00**

Projects Requiring Study

		Design Services Fee
Mother's Room Space Study	Study to define a private dedicated space for a Mother's Room that includes a sink, side table, chair, and privacy door hardware.	$5,000
Room 316 Space Use Study	Study to explore potential uses for room 316, the balcony overlooking the library. This room was previously used as a computer lab and still has adequate power/data connections for similar uses.	$5,000

Designated Hardened Area	No designated hardened area was observed. Study to determine the feasibility of adding a designated hardened area to the building including location within the existing building, schematic design concept if deemed feasible, and preliminary project costs.	$2,500
Drainage Issue - Front of Building	Water appears to pond next to the building, a study is needed to confirm if the building experiences any issues with the ponded water	$2,000.00
Drainage Issue - East Parking Lot	A study to evaluate if the slope of the east parking lot is adequate to drain water out of the lot as there are currently multiple ponding locations. Also, the gravel between the asphalt and bridge is being washed out over the walk track. Should be coordinated with any pavement	$2,500.00
HVAC System Evalulation	Review issues with exsiting HVAC system including the inability to use the cooling tower sump, lack of heat or not using the heating capability of the existing ERVs and alternate ways to address humidity issues in the space besides the room dehumidifiers. **This study is a high priority and should be completed ahead of any mechanical replacement projects.** Anticipated Capital Investment: $2,200,000	$10,000
	Anticipated Capital Investment Costs:	**$2,200,000**
	Total Study Design Service Fees:	**$27,000**

APPENDIX

5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

80 0 40 80 160

bbs ARCHITECTS ENGINEERS

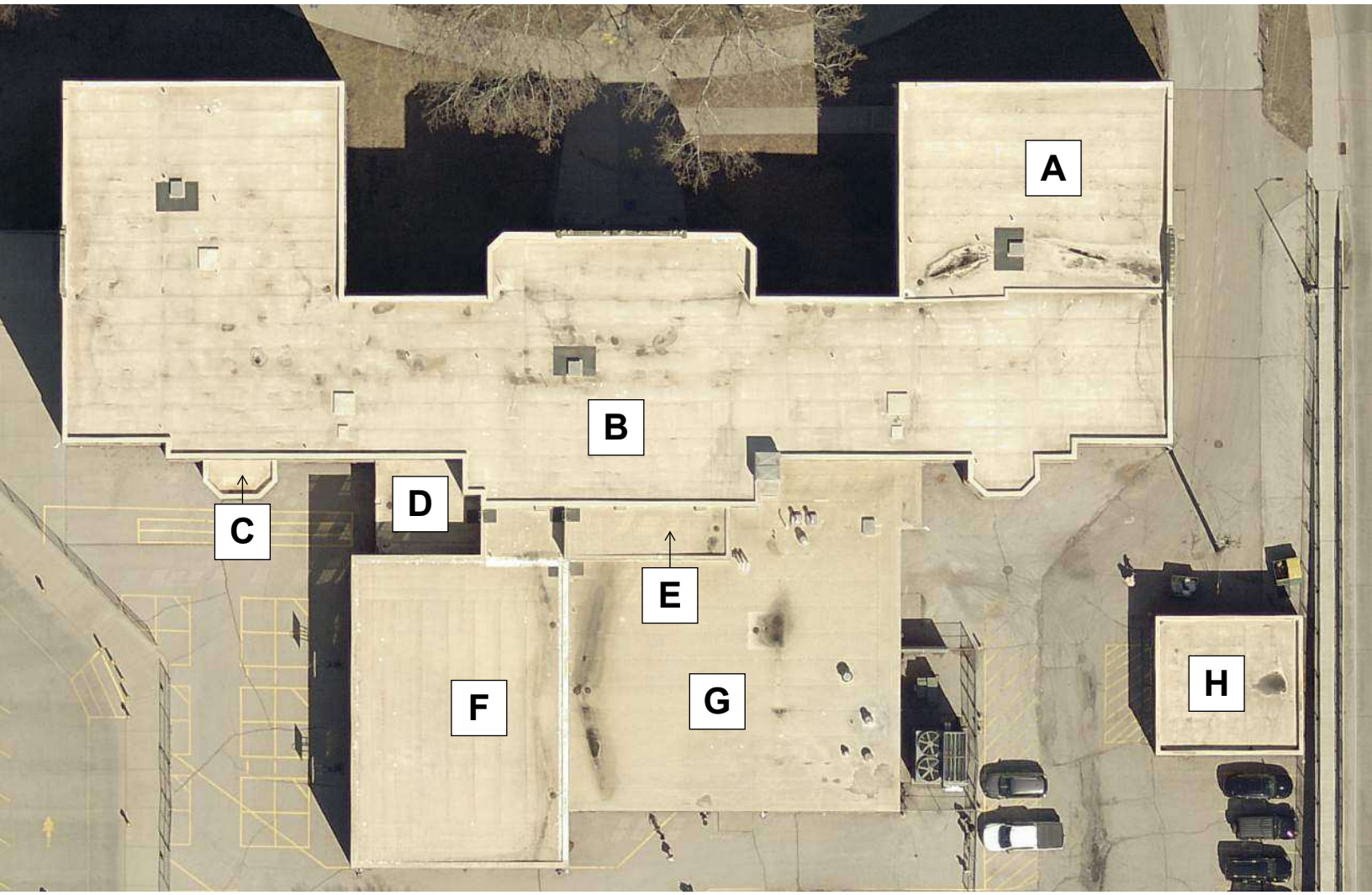
BISHOP ENGINEERING +

WILLARD ELEMENTARY

EXHIBIT

PROJECT # 230286-36

DATE 1/8/2024



N

bbs ARCHITECTS ENGINEERS

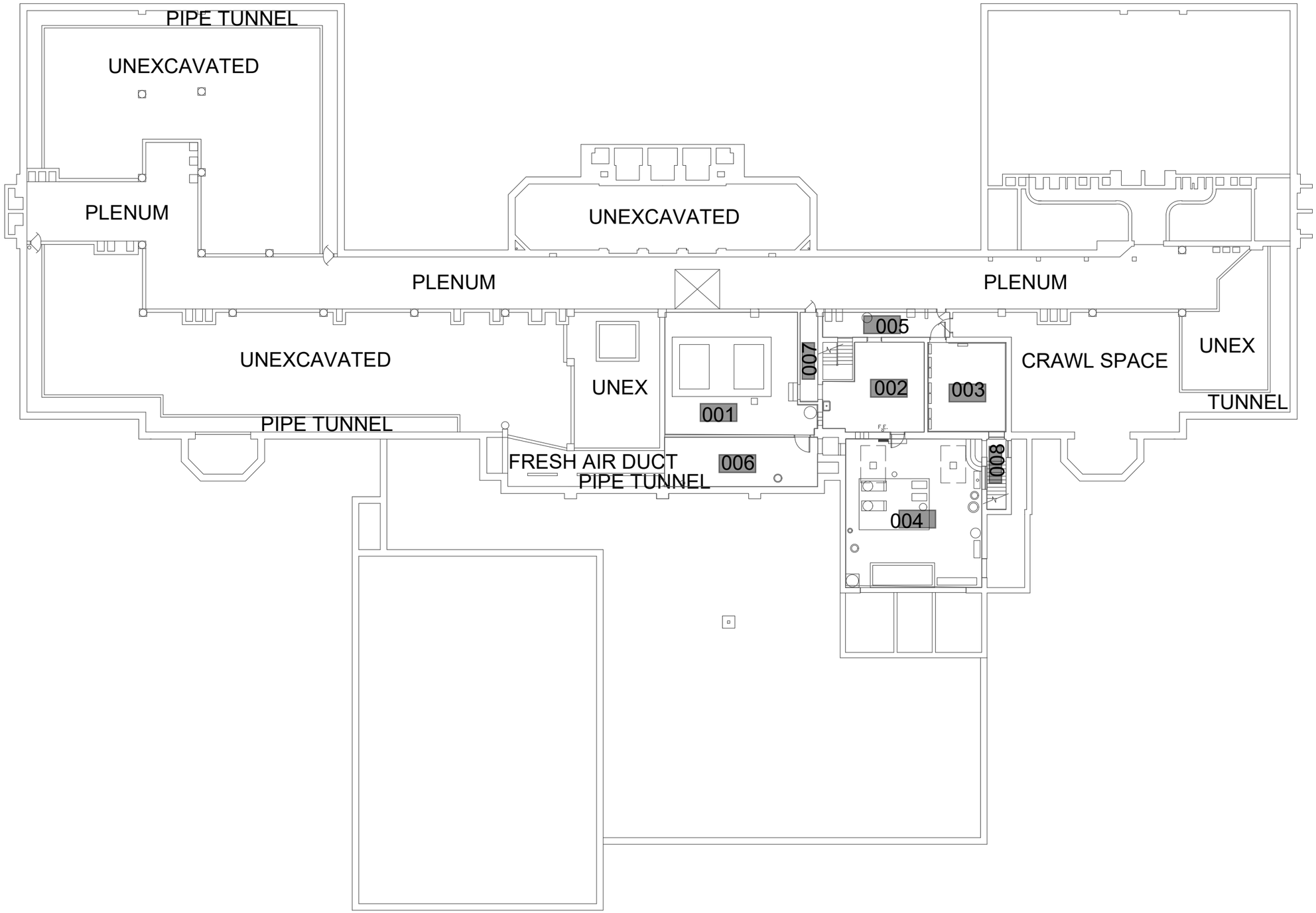
23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Willard Elementary
January 9, 2024

WILLARD ELEMENTARY SCHOOL

2941 DEAN AVENUE
DES MOINES, IOWA 50317

FOUNDATION

NORTH



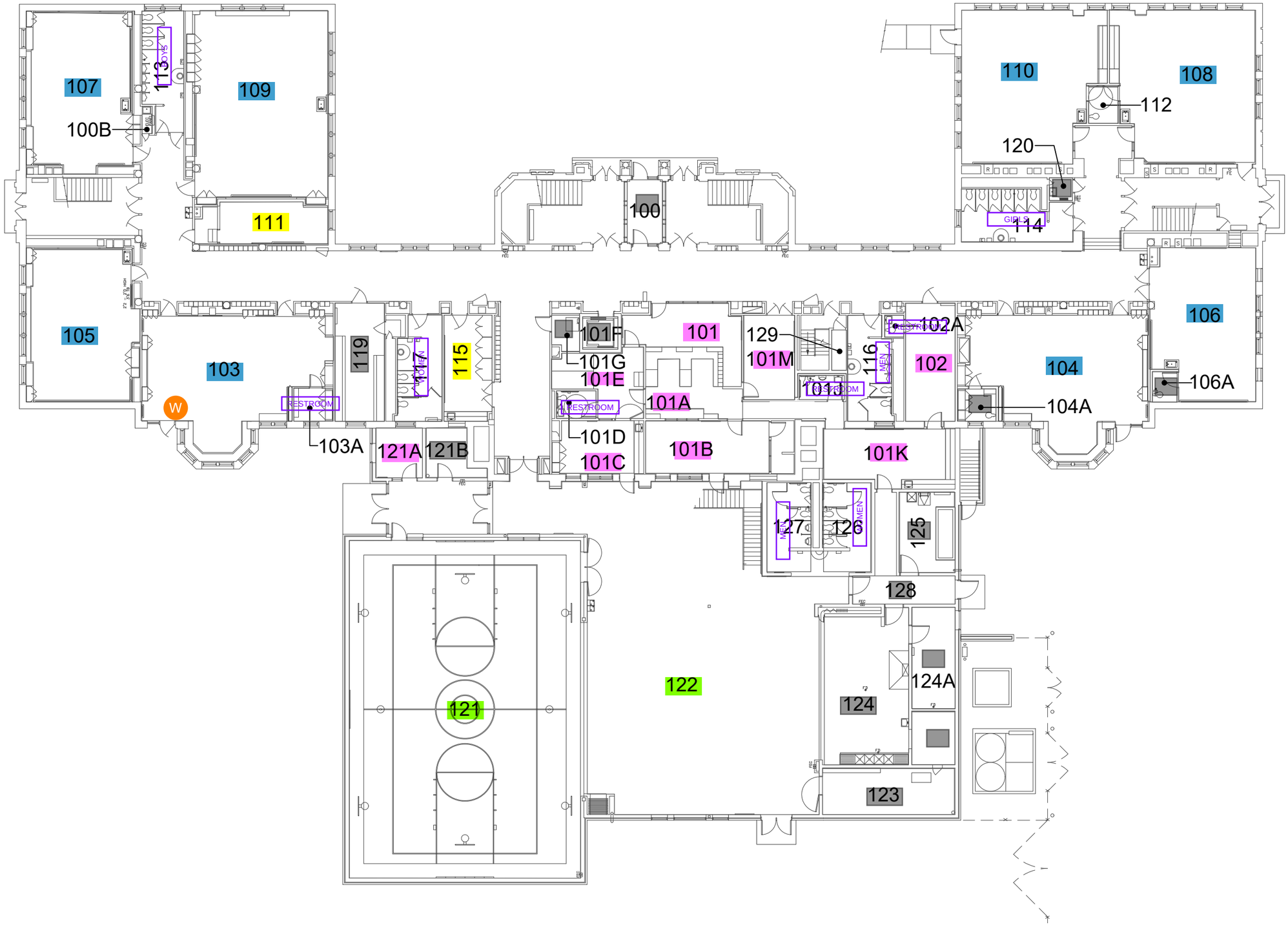
DesMoines PUBLIC SCHOOLS

WILLARD ELEMENTARY SCHOOL

2941 DEAN AVENUE
DES MOINES, IOWA 50317

FIRST FLOOR

NORTH



WILLARD ELEMENTARY SCHOOL

2941 DEAN AVENUE
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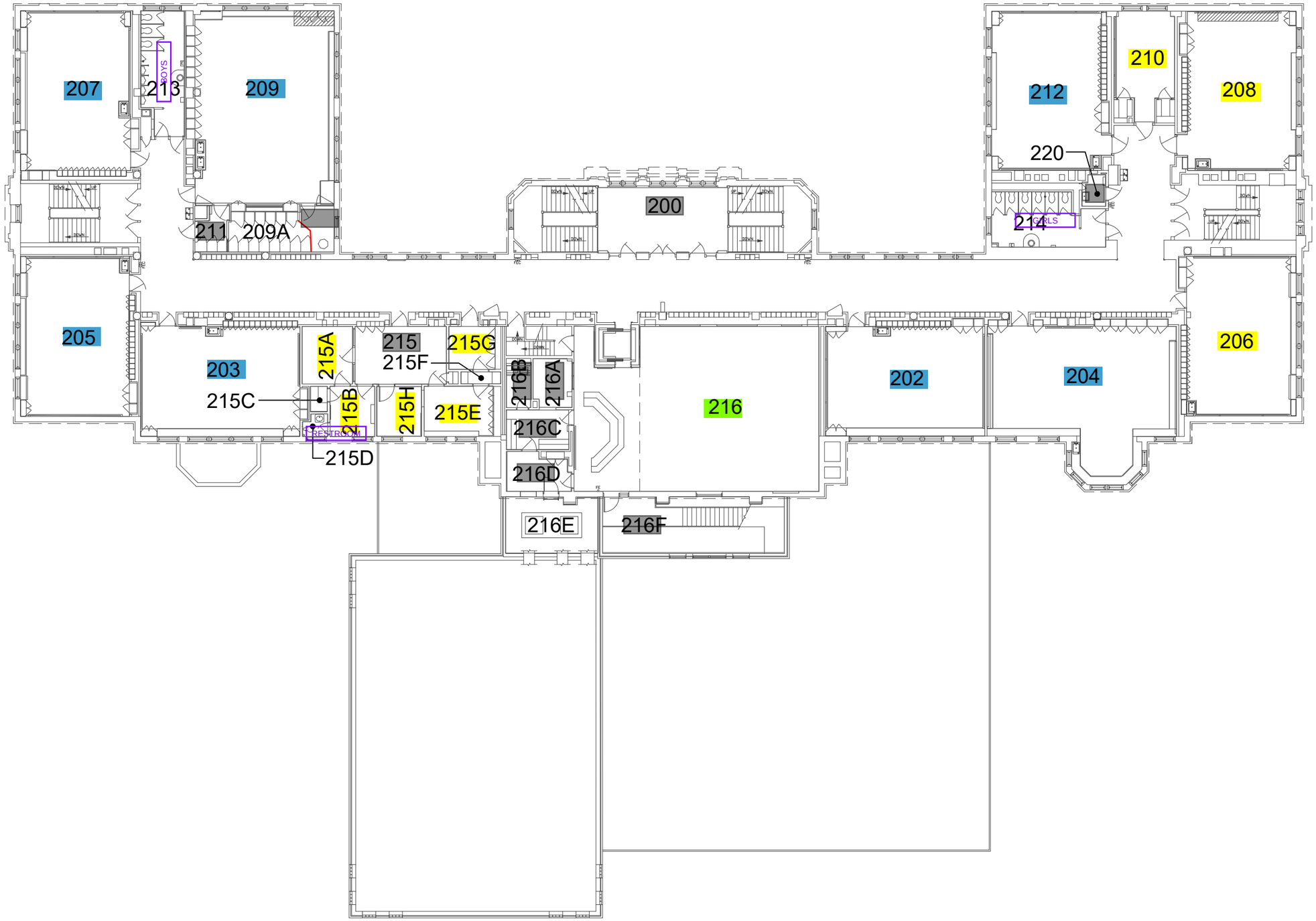
SECOND FLOOR

NORTH



WILLARD ELEMENTARY SCHOOL

2941 DEAN AVENUE
DES MOINES, IOWA 50317

THIRD FLOOR

NORTH