DMPS FACILITY ASSESSMENT | HANAWALT ELEMENTARY

12.6.2023

ARCHITECTS
ENGINEERS

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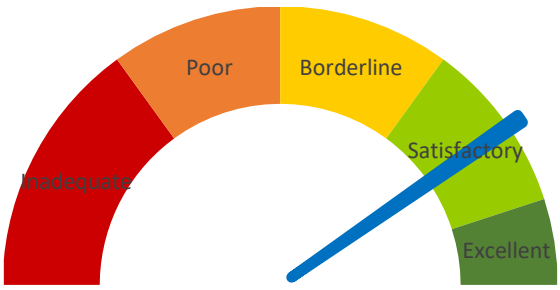


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Hanawalt Elementary's on-site facility conditions assessment was conducted on December 6, 2023, 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 immediate maintenance items identified for Hanawalt Elementary are: door latching repairs, exterior wall cleaning, retaining wall repairs and monitoring, and mechanical filter replacements. Further maintenance items and descriptions are found later in this report. The electrical room door is currently a wooden slat door with a slide latch lock. This is a high safety concern due to the lack of durability, security, and functionality of this door. Replacement is described within the 1-2 year projects, however this is recommended as a high priority. Generally the original building and additions have been thoughtfully planned and interiors appear adequately maintained. Equipment and furnishings are aging and will be nearing the end of their useful life in the next several years. Continued maintenance will help increase the longevity of these existing systems.

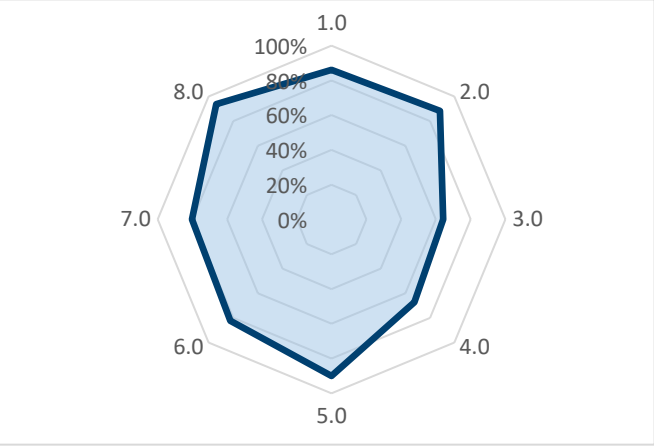
A summary of the recommended projects for Hanawalt Elementary to be completed in the next 1-2 years are as follows:

- Electrical Room Door Replacement
- Exterior Door Improvements
- Site Repairs and Replacement
- Roof Drain Installation
- MDF Panel Installation

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	142	2.00	330	284	86%	Satisfactory
2.0	Environment for Education	375	331	0.60	225	199	88%	Satisfactory
3.0	Exterior Envelope	95	61	3.00	285	183	64%	Borderline
4.0	School Site	95	64	1.50	143	96	67%	Borderline
5.0	Structural Conditions	130	117	1.30	169	152	90%	Excellent
6.0	Mechanical Systems	595	490	0.80	476	392	82%	Satisfactory
7.0	Electrical Systems	370	297	0.75	278	223	80%	Satisfactory
8.0	Elevator Conditions	65	61	1.00	65	61	94%	Excellent
Total					**1,970**	**1,589**	**81%**	**Satisfactory**

Hanawalt 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 Hanawalt Elementary scored a building health rating of 81%, or "Satisfactory", 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. Hanawalt Elementary is within this positive range. Improvements to the exterior envelope and school site as noted within this report would contribute the most to increasing the building rating to "Excellent".

Building Data Record

Building Name: Hanawalt Elementary

Date: 11.29.2023

Address: 225 56th St
Des Moines, IA 50312

High School Feeder System:	Roosevelt High
Building SF:	44,708 SF
Site Acreage:	4.70 Acres
Date(s) of Construction:	1913, 2005, 2018
Date(s) of Roof Replacement:	2004, 2018, 2020
Current/Scheduled Projects:	Interior Painting Rebuild Geo header

Existing Building Data:

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

Site Items:

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

Energy Source:

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

Cooling:

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

Heating:

- [ ] Gas/Electric RTU or DOAS
- [ ] 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
- [x] Other **Precast**

Floor/Roof Structure:

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

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker

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	4	8	Acoustic treatment is needed. Space is otherwise adequate and has projector, screen, and sound system.
1.3	**Cafeteria** has adequate space, furniture, and acoustics for efficient lunch use.	2	5	10	Metro kids storage is sitting in the corner, but out of the way and organized.
1.4	**Music room** is adequate for providing introductory music instruction.	2	4	8	Space for band lessons is provided. That room is only heated with a stand-alone wall mounted space heater.
1.5	**Art room** has sufficient accommodations for program.	2	4	8	Space and storage appear adequate but acoustical treatment is needed on the ceiling.
1.6	**Library/Resource/Media Center** provides appropriate and attractive space.	1	5	5	Access to daylight is provided through 2 central skylights.
Core Classroom					
1.7	Classroom space permits arrangements for **small group activity.**	3	5	15	
1.8	**Student storage space** is adequate.	2	4	8	Lockers are provided at all grade levels in the corridors. Classroom storage for students is provided but the furniture type varies in age and style.
1.9	**Teacher storage space** is adequate.	3	3	9	Minimal storage is provided for teachers. Most classrooms appear to have the space for additional shelving that teachers provide
1.10	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	5	15	

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker

		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	4	16	Small tv monitors are available for teachers in the media center and some classrooms have monitors provided. These were unused during the assessment. Intervention classroom 201 only had tv, no projector.
Administration					
1.13	**Conference/Private meeting rooms** are adequate for large and small meetings.	1	0	0	None observed. Staff indicated there were no designated meeting spaces. The media center, the Principal's office, or classrooms are typically used for meetings.
1.14	**Main office** has a check-in and waiting area.	2	5	10	
	TOTAL			142	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker

2.0 Environment for Education

Design

		Weight Factor	Rating	Points	Comments
2.1	**Traffic flow** is aided by appropriate foyers and corridors.	1	4	4	Corridors at the small 3 story section are inefficient and partially blocked by door swings and center fire doors.
2.2	Communication among students is enhanced by **common areas.**	1	5	5	
2.3	Areas for students to **interact are suitable to the age group.**	1	4	4	Corridors have engaging spaces and artwork, media center has various seating and collaboration spaces, but the classroom furniture is dated and does not provide alternate seating areas.
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	3	3	Much of the classroom furniture is dated and showing surface wear and damage. 4 classrooms have no student storage included in the desks/tables. The other furniture appears to be functional but is lacking in ergonomics as well as the ability to efficiently arrange desks for collaborative group work.
2.6	**Color schemes**, building materials, and decor are **engaging and unify** the school character.	2	5	10	Great tie into original construction with newer additions and renovations.
2.7	Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces.	3	4	12	Classroom 121 is the only classroom that has no access to daylight or exterior views. This could be resolved with a relocation of the classroom.
2.8	Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces.	3	5	15	Classroom 121 is the only classroom that has no access to daylight or exterior views. Other spaces have exterior views.
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	2	2	2 break rooms, one is equipped with microwave, fridge, vending etc. the other is more tables and chairs, appears to double as a work space. There is no dedicated work space or meeting spaces.

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker

		Weight Factor	Rating	Points	Comments
2.11	**Main office** is visually connected to the entry and is welcoming to students, staff, and guests.	2	5	10	
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	None observed
Maintainability					
2.14	**Floor surfaces** are durable and in good condition.	1	4	4	Wood floors in level 2 and 3 are showing wear. Likely need continued maintenance and refinishing in the future.
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	Restroom walls are painted block, in good condition but will need maintenance painting every several years due to Scuffing and surface staining.
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	5	5	
2.18	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	2	6	Level 2 and level 3 doors are heavy wood doors that have significant chipping at the base. Electrical room 126A door is a wooden slat door with minimal latching and does not fully open.
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: Kaela Shoemaker

		Weight Factor	Rating	Points	Comments
2.21	**Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces.	1	5	5	Outlets are exactly at 50'.
Occupant Safety					
2.22	Classroom doors are **recessed and open outward.**	4	3	12	Level 2 and level 3 original doors open out but are not recessed. It is causing concern, especially as noted by staff in room 200 where students are on the stairs as the door opens.
2.23	Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.**	3	5	15	Keyed intruder lock sets are present. Closures appear to be DMPS preferred standard to hold open the doors vs using door stops.
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	Only 2 covered lites
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	3	15	Guardrails do not meet current code for height requirements, but are a grandfathered existing condition.

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker

		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			331	

A | Architectural , Exterior

ASSESSOR: David Unick

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	Building exterior is in good condition. The main entrance is readily identifiable from street and from parking area.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	4	12	Roofs appear to be in good condition, however, all roof areas have ponding water near drains. PVC roofing on Roofs D, E, G, H, I and J is nearing end of anticipated service life. Roof I (Original bldg) has no overflow drainage and significant parapet. Provide overflow roof drains or through-wall scuppers.
3.3	**Roof access** is safe for all roofs.	3	2	6	Access to Roof F is through window on stair landing. Opening must be reached from chair on landing. Access to Roof I is from portable step ladder to fixed ladder in attic. Roof areas B, D, and E have no access. Roof hatch has no guard.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	2	6	Window sealant at perimeter of nearly all windows is gapping or pulling away from frame. Large skylight will require resealing.
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	4	4	Glazing is insulated and appears to have tinted coating.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	4	8	Roof-access window (to Roof F) on stair landing does not remain open.
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	4	8	Exterior doors are either steel or aluminum. Steel doors show minor rusting and should be treated/repainted.
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	3	3	Original building brick with stone accents. All in good condition. Soft joints in masonry walls require replacement. Addition is precast wall panels, some with adhered brick and others exposed concrete. Sealant joints between panels should be replaced. Metal wall panels at main entry good condition
3.9	**Exterior Doors** open outward and are equipped with **panic hardware.**	1	4	4	Exterior doors have proper placement and hardware, but select doors do not properly latch, as noted below.
3.10	**Exterior Doors are monitored** or controlled by an access control system.	1	2	2	(3) Doors require maintenance to address latching issues. (5) Doors have full access control; (2) Doors have keyed exterior hardware only; (5) Doors have no exterior hardware. All exterior doors have identification signage, although some are pulling off of door face.
	TOTAL			61	

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	1	1	Site had positive drainage, to the east of the parking lot is very steep and the slope appears to be failing in spots. The modular block walls on to the south of building just before the playground area should be reassembled. Wall west of the school could be in danger of failing in the future too.
4.2	**Parking areas** are in good condition.	5	4	20	Some cracking and chips were observed but pavement conditions were mostly good overall. The concrete was new and in good condition, the asphalt had some potholes and the northern end will need to be replaced.
4.3	**Drive areas** are in good condition.	3	3	9	Some of the new concrete on the west side of the parking lot had cracking joints that appeared to be the result of subsurface drainage issues. Some of the asphalt was cracking but not failing. Both access into the parking lot were not in good condition.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	1	1	DMPS states parking is short for staff day to day use and that events are managed with use of local parking areas.
4.5	**Sidewalks** around the facility are in good **condition.**	1	3	3	The western portion of the curb to the north of building is a tripping hazard, and the walk through the western drive access also contains tripping hazards. Sidewalk conditions were mostly good otherwise.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	5	5	Moving across the site by sidewalk was done without issue and all the doors had sidewalk access.
4.7	**Hard surface** playground surfaces are in good condition.	3	5	15	The asphalt track and new concrete areas were all in good condition.
4.8	**Fencing** around the site is in good condition.	1	3	3	The fence along the south and eastern portion of the playground area was in good condition. However, the fence along the east side of the parking lot appeared to be falling down the slope.
4.9	**Trash enclosure** is in good condition.	1	N/A	0	Dumpsters were on the south side of the parking lot.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	5	5	All intakes appeared to be in good condition, no issues were observed.

ASSESSOR: Jack Gorman, Joel Jackson

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	1	1	There isn't much room to the north, east, or west for expansion. Any expansion to the south would shrink the playground area.
4.12	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	1	1	Bus drop off is to the west of site along 56th St. and parent drop off is to the north of the building and in the parking lot. DMPS states the bus drop off is not long enough and that multiple issues arise between bus and parent drop off.
	TOTAL			64	

S | Structural

ASSESSOR: Trevor Pullen

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	4	4	There is no stoop at the exit door between rooms 110 and 111.
Slab on Grade					
5.5	**Slabs on grade** do not appear to have any cracks	1	4	4	There are a couple of shrinkage cracks. Nothing in need of repair at this time.
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	4	8	There is some weathering on the original building. Nothing that needs repaired at this time.
5.8	**Lintels** appear in good condition (no visible deflection or rust).	1	5	5	
5.9	**CMU** is in good condition.	1	N/A	0	
5.10	**Precast** is in good condition.	1	5	5	

S | Structural

ASSESSOR: Trevor Pullen

		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	3	3	Retaining walls at the northwest corner of the property, around the stairs, are cracking and leaning in several spots.
5.16	**Canopies** appear to be in good condition.	1	5	5	
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	3	3	Some of the interior stair railings are loose/wobbly.

S | Structural

ASSESSOR: Trevor Pullen

		Weight Factor	Rating	Points	Comments
5.21	**Tunnels** appear to be in good condition without cracks.	1	N/A	0	
5.22	There is a **designated hardened area** in the building.	1	0	0	None observed.
5.23	The hardened area appears consistent with the **ICC 2018 code.**	1	N/A	0	
	TOTAL			117	

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

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	Appears to be true.
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	5	15	Appears to be true.
6.3	Appropriate **amount of ventilation** are provided to each space.	5	4	20	A few spaces with no ventilation observed (rooms off stairwells above third floor level).
6.4	**Ventilation** is provided during occupied hours.	5	5	25	Yes.
6.5	**Outdoor air intake locations** are appropriate.	4	5	20	Appears to be true.
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	5	25	Appears to be true.
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	4	8	Design generally appears to take this into account - operationally plenum return into Mechanical 130 is a concern with door to space propped open.
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	3	15	Equipment appears to range from nearly new (ventilation units, rooftops, and some heat pumps) to approximately 18 years old (heat pumps). Older equipment is likely at or beyond its expected useful life.
6.9	**Cooling loads** are within equipment operational capacity.	5	4	20	Generally appears true. May be a few exceptions in areas where DMPS personnel indicated some heat pumps may be piped incorrectly.
6.10	**Heating loads** are within equipment operations capacity.	5	4	20	Generally appears true. May be a few exceptions in areas where DMPS personnel indicated some heat pumps may be piped incorrectly.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	3	5	15	Appears to be true.
Plumbing Design					
6.12	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	Appears to be true.
6.13	Appropriate **backflow preventer** is provided at connection to city water supply.	5	5	25	Yes.
6.14	**Domestic hot-water systems** are within equipment operational capacity.	5	5	25	Appears to be true.
6.15	Domestic **hot-water reicrulcating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	5	15	Warm water observed very quickly at wash fountain.
6.16	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	5	25	No issues identified.
6.17	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	5	15	Grease interceptor appears likely to be properly sized based on manhole cover spacing observed.
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	3	15	Overflows are installed on newer sections of roof, but not on original roof or earlier addition areas.
6.19	**Restroom fixtures** are in good condition and comply with current DMPS standards.	3	5	15	Automatic flush valves on water closets and urinals and automatic faucets on multi-station wash fountains.
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	4	12	Generally appears to be true. Geothermal pumps block stair access in mechanical room.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.21	AHUs and chiller are provided with **coil pull space.**	2	5	10	Limited coil pull required, but appears to be available on indoor ventilation unit.
6.22	**Filter** sizes are standard and filter types are standard.	2	2	4	Variety of different filter sizes and multiple locations where 1" filters were observed installed in 2" filter racks.
6.23	**Equipment mounting heights** are reasonable.	3	5	15	Generally appears to be true.
6.24	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	5	10	Yes.
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	Appears to be true.
6.26	Appropriate means are provided for **airflow and water balancing.**	3	5	15	Appears to be true.
6.27	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	2	4	None observed at roof, though there are a couple wall hydrants on the wall on the levels below.
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge as per OSHA standard 1910.28(b).	2	3	6	Several pieces of equipment closer than 15 feet to roof edge without fall protection. Though not the focus of this section, roof access points are a significant concern, particularly original roof.
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	5	20	Appears to be true.
Occupant Safety					
6.30	**Backflow prevention** is provided at all **cross-connections** to non-potable water.	5	5	25	Appears to be true.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.31	Building is fully **sprinklered.**	5	4	20	Yes. One blocked sprinkler head (light fixture) observed on west stair at intermediate landing.
6.32	**Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly.	5	0	0	Mixing valves not observed, but may be in place below wash fountains.
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	N/A	0	N/A.
6.35	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	N/A	0	Doesn't appear to be any equipment with an adequate refrigerant charge to necessitate refrigeration machine room designation.
6.36	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	N/A	0	N/A.
	TOTAL			509	

E | Electrical

ASSESSOR: David Carlson

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	Small trees in vicinity of transformer may pose a slight obstruction but typical utility bucket trucks should have little issue with access. Main transformer is 500kVA, 208/120V.
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	
7.3	**The MDP environment** is safe, has adequate clearances and exiting.	3	2	6	Door to electrical room is not standard construction and is closed via a gate pin style latch. If latched from the outside, there is no egress from the room allowed. Paint storage in front of MDP obstructs clearance available, but is readily movable.
7.4	The **MDP** appears serviceable.	4	4	16	Eaton 2000A MDP installed in 2003. -1 point for age greater than 10 years.
7.5	The MDP is **maintainable.**	3	5	15	Eaton Cutler-Hammer products are still supported and readily available.
7.6	The MDP will support **future expansion.**	4	5	20	One prepared space remains of 12 currently utilized. Six unprepared spaces above the current distribution exists but will require modification to front panels.
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: David Carlson

		Weight Factor	Rating	Points	Comments
7.11	**Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable.	2	5	10	More than 90% of observed panels have adequate clearance. Spares are available in all branch panelboards for future power needs.
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	2	2	Seven exterior receptacles are extant on the exterior of the building, but six of them require replacement of the in-use weatherproof cover.
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	3	15	East edge of parking, path from parking to building, and south side of building dark.
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	3	12	Majority of cabling is well laced and trained, but additions made over time are haphazard.
7.15	MDF Equipment Racks have adequate space for **future growth.**	4	4	16	Approximately fifteen of forty-five spaces remain (~33% spare capacity). -1 point for less than 50% spare capacity.
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	
7.17	MDF Power is supplied by **20A circuits and receptacles.**	1	5	5	
7.18	MDF Power is supplied from a branch panel located in the room with **adequate spare circuit capacity.**	1	0	0	Room is supplied with 20A receptacles, but circuits are fed from Panel 2A in the mechanical room outside the MDF.
7.19	MDF employs up-to-date **network cabling.**	2	4	8	Majority of cabling is CAT5e. -1 point for less than CAT6/6A.
7.20	MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.**	1	N/A	0	No IDF present.

E | Electrical

ASSESSOR: David Carlson

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	3	6	All equipment connections are present, but smaller than telecom standards call for. 4AWG wire is largest connection to busbar, and main connection to MDP grounding bus should be much larger. Potential for GEC being utilized as EGC which does not meet code.
7.22	Building is equipped with an **addressable fire alarm system.**	5	5	25	
7.23	Building is equipped with an **access control system.**	5	3	15	Seven of thirteen entrances to the building do not have access control- however, six of those seven are direct exits from classrooms and those doors do not have any exterior door hardware. 7/13=54%
7.24	Building is equipped with a **CCTV system.**	5	3	15	No camera for parking area or for south playground area.
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. -1 point for not matching current DMPS standard programming (Primex Wireless).
	TOTAL			297	

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	5	10	
8.8	**Finishes** are adequate and maintainable.	1	3	3	The interior doors are worn. The kick plate at the bottom of the door is missing. Numerous scratches and dents are present.there are also missing and damaged lights in the ceiling.
8.9	**Maintenance** is adequate.	1	3	3	The door gibs are worn and wearing on the front car sill.
8.10	**Testing** is up to date, and all **record and logbooks** are present and filled out.	1	5	5	
	TOTAL			61	

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

Mechanical Mezzanine Door	Address issue with door to mechanical mezzanine (Room 130) to eliminate conflict with structure and close door since room functions as return air plenum.
Exterior Door Closure Repair	Exterior door #15 (west stair landing)does NOT latch. Closer is not pulling leaf into the electric strike. When door is latched, it is very difficult to open. Electric strike sounds like it is releasing, but difficult to pull door open from outside. Exterior Door #6 (from corridor to playground) does NOT consistently latch. Door leaf bounces upon close and does not engage the electric strike. Exterior Door #12 (from Classroom 113) does not consistently latch, as reported by teacher.
Exterior Wall Cleaning	Remove vines from precast walls along south and southwest sides of building.
Exterior Door Signage	Replace exterior numeral signage on Doors 7, 8, 10 and 11. Monitor other exterior doors for similar adhesive failure.
Modular Block Wall Repair	Disassemble and repair sections of modular block wall. For location, refer to civil site plan exhibit found in the appendix of this report.
Fence Post Replacement	Remove and replace the bent and unconnected fence/gate post. For location, refer to civil site plan exhibit found in the appendix of this report.
Filter Replacement	Replace filters throughout the building with properly sized filters. Multiple locations observed where 1" filter installed in 2" rack at heat pumps leaving openings around filter.

Confirm mixing valves	Confirm local mixing valves are provided for lavatories or wash fountains with protective shrouds.	
Exterior Outlet Cover Replacement	Replace six in-use weatherproof covers around the perimeter of the building.	
Telecom Cabling Adjustment	Train cables in MDF utilizing existing cable management tools.	
Increase maintenance frequency	The elevator is in need of more maintenance visits. Door gibs are in poor condition. Increase frequency to quarterly and include small renewable parts coverage.	
Telecom Grounding Busbar Cable Installation	Install a dedicated 250kcmil grounding electrode conductor from MDP ground bus or IBT to the TMGB in the MDF.	

1 - 2 Year Priority

		Project Costs
Interior Door Replacement	Electrical room door should be replaced with a hollow metal door with locking, door hardware. Storage of paint or other items should be located outside of clearance areas.	$12,000
Acoustic Treatment Installation	Install acoustic ceiling baffles or similar in Art Room to reduce excessive echo. Approximately 900 SF of ceiling space (300 SF acoustic material).	$13,000
Exterior Door Refinish	Treat minor rust on exterior doors and frames. Repaint. Single Doors # 4, 7, 8, 10, 11, and 12; Double Doors # 5, 6, and 9 plus 6' x 8' sectional overhead door at storage bay.	$11,000
Exterior Sealant Replacement	Replace joint sealant at all masonry soft joints (approx. 24 locations, 415 LF), all precast panel joints (approx. 23 locations, 460 LF), and all window perimeters (approx. 63 locations, 1550 LF)	$35,000

Parking Pavement Replacement	Remove and replace 55 SY of PCC. For locations, refer to civil site plan exhibit found in the appendix of this report.	$12,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 42 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$11,000
Curb Repair	Return damaged curbs to new condition. Approximately 115 LF of 6" curbs. For locations, refer to civil site plan exhibit found in the appendix of this report.	$11,000
Stoop Installation	Add a stoop at the exterior door between rooms 110 & 111. Stoop is 4ft x 8ft. 8" thick stoop walls, 42" deep. Reinforce w/ #4 bars @ 12" o.c. each way. 5" thick slab w/ #4 @ 9" o.c. each way.	$8,000
Stair Railing Replacement.	The stair railings going from the 2nd to 3rd floor are wobbly. They might be able to be re-attached, or may need to be replaced. 48 total feet of railing. Estimated project cost is for replacement.	$30,000
Roof Hydrant Installation	Add a roof hydrant or hose bibb to serve multiple units with integral condenser coils at roof.	$11,000
MDF Panel Installation	Install new 100A branch panelboard in MDF to serve all equipment therein.	$20,000
	Total 1-2 Year Project Costs:	**$174,000.00**

3 - 4 Year Priority

		Project Costs
Furniture Replacement	Classroom furniture replacement in approximately 5 classrooms to provide built in student storage with efficient collaborative arrangements. 5 "wiggle" chairs should be provided for group work in all 15 classrooms. Project recommendation is based on observed lack of functionality in furniture storage and ergonomics as well as general wear and age. The 10 additional classroom furniture is functional, but worn.	DMPS

Door Replacement	Replace (8) total single doors on Level 2 and Level 3 These appear to be original wood doors, but are significantly chipped and worn. Door replacement would include code review and minor modifications to the room to recess these doors and alleviate corridor congestion. Total construction is approximately 200SF of stud wall demo and reconfiguration, approximately 800SF of new wall construction, and approximately 250SF of new ceilings. New single doors and frames require new intruder locksets and vision panels. This project is recommended based on current staff concerns, safety, and best practices.	$110,000
Roof Access Installation and Repair	Provide ladder dock to access Roof F. (Current access is through window at open stair landing.) Provide roof access ladders from Roof F to B (8 VLF) and from F to D (4 VLF). Provide permanent access ladder from within office, with ladder guard (9 VLF). Replace rusted, damaged hatch with new unit (30" sq.) and exterior guard rail/gate assembly. Provide guards or fall protection screens at each of three skylights. Approximately 220 LF of railing.	$140,000
Exterior Sealant Replacement	Reseal flashing joint at head of large skylight Roof K. Approximately 52 LF of sealant.	$6,000
Ventilator Replacement	Replace (2) ventilators on Roof I. Existing units are significantly rusted.	$20,000
Masonry Repointing	Repoint masonry chimney on original building, or remove entirely if no longer in use. Approximately 480 SF of repointing.	$13,000
Pavement Replacement	Remove and replace 28 SY of asphalt. For locations, refer to civil site plan exhibit found in the appendix of this report.	$9,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 19 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$9,000
Fencing Replacement	Remove and replace 167 LF of chain link fence. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000

Drainage Repair	Install rip-rap under the drain tile outlet to prevent further erosion. For location, refer to civil site plan exhibit found in the appendix of this report.	$7,000
Concrete Retaining Wall Replacement	Replace retaining walls at the northwest corner of the property around the stairs. There is about 15ft of 6" thick x 4ft tall wall. Reinforce w/ #5 bars @ 18" o.c. both ways. There is about 35ft of 8" thick wall x 4ft tall. Reinforce w/ #5 bars @ 12" o.c. both ways. The walls will have a footing underneath them that is 3ft wide, 12" thick. Footing reinforced with #5 @ 12" o.c.each way. The stairs will need to be replaced when the walls are torn out. The stairs are 6ft wide, 15 ft. long, with 15 risers.	$30,000
Replace Heat Pumps	Replace heat pumps that were installed in2005 and have not yet been replaced.	$990,000
	Total 3-4 Year Project Costs:	**$1,354,000.00**

5-10 Year Priority

		Project Costs
Interior Refinish	Wood floor on level 2 and level 3 needs partially refinished or spot treated. Clean, address blemished area and re-seal. Approximately 2,000 SF of wood floor in classrooms and corridor.	$25,000
Roof Replacement	Remove 15,200 SF of PVC roofing and insulation over roof areas D, E, G-J. Install code compliant insulation and TPO roofing. This is based on service life expectations. See Appendix for Roof Identification Plan.	$490,000
Pavement Replacement	Remove and replace 343 SY of asphalt. Remove and replace 104 SY of PCC and install a rock base under the 88 SY experiencing subsurface moisture issues. For locations, refer to civil site plan exhibit found in the appendix of this report.	$90,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 68 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$15,000
	Total 5-10 Year Project Costs:	**$620,000.00**

Projects Requiring Study

		Design Services Fee
Administration Spatial Study	Spatial study to determine additional administration space needs and if current building spaces could be renovated to meet these needs. Spatial needs include mid-size conference room, dedicated work and storage room, and mother's room.	$10,000
Slope East of Parking Lot	Slope is extremely steep, currently stabilized with TRM, may sluff in the future. Study to determine best way to prevent future failure of slope.	$10,000
Designated Hardened Area	No designated hardened area was observed. Study to determine the feasibility of adding a designated hardened area, including location, within the existing building, schematic design concept if deemed feasible, and preliminary project costs.	$2,500
	Total Study Design Service Fees:	**$22,500**

APPENDIX

5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

60 0 30 60 120

bbs ARCHITECTS ENGINEERS

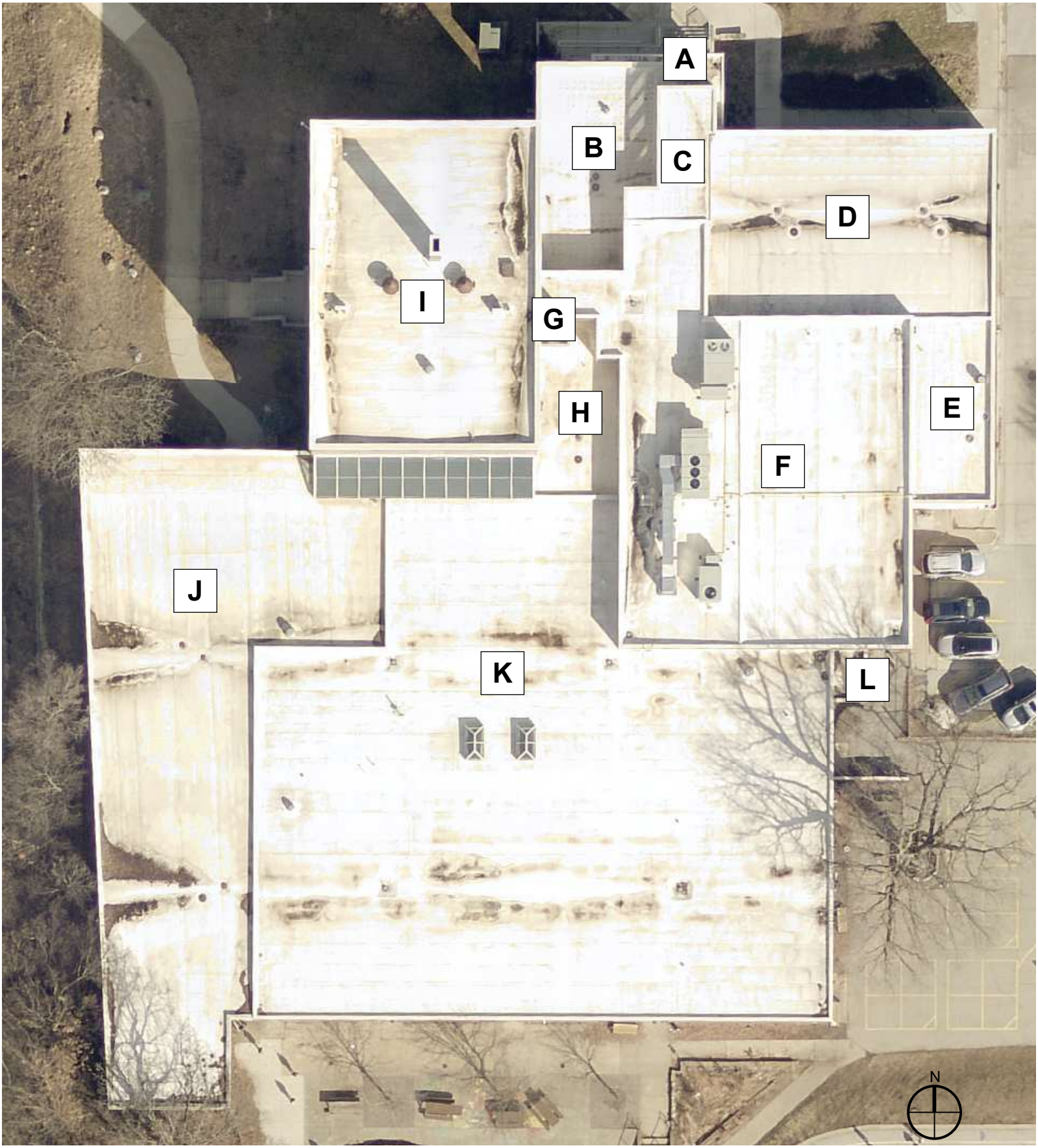
BISHOP ENGINEERING +

HANAWALT ELEMENTARY

EXHIBIT

PROJECT # 230286-11

DATE 10/30/2023



bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Hanawalt Elementary
12.6.2023

HANAWALT ELEMENTARY SCHOOL

225 56TH STREET
DES MOINES, IOWA 50312

FIRST FLOOR

NORTH

LOWER LEVEL STAIRWELL
AND STORAGE ROOMS

- Core Classroom
- Student Support
- Administration
- Large Shared Space
- Other

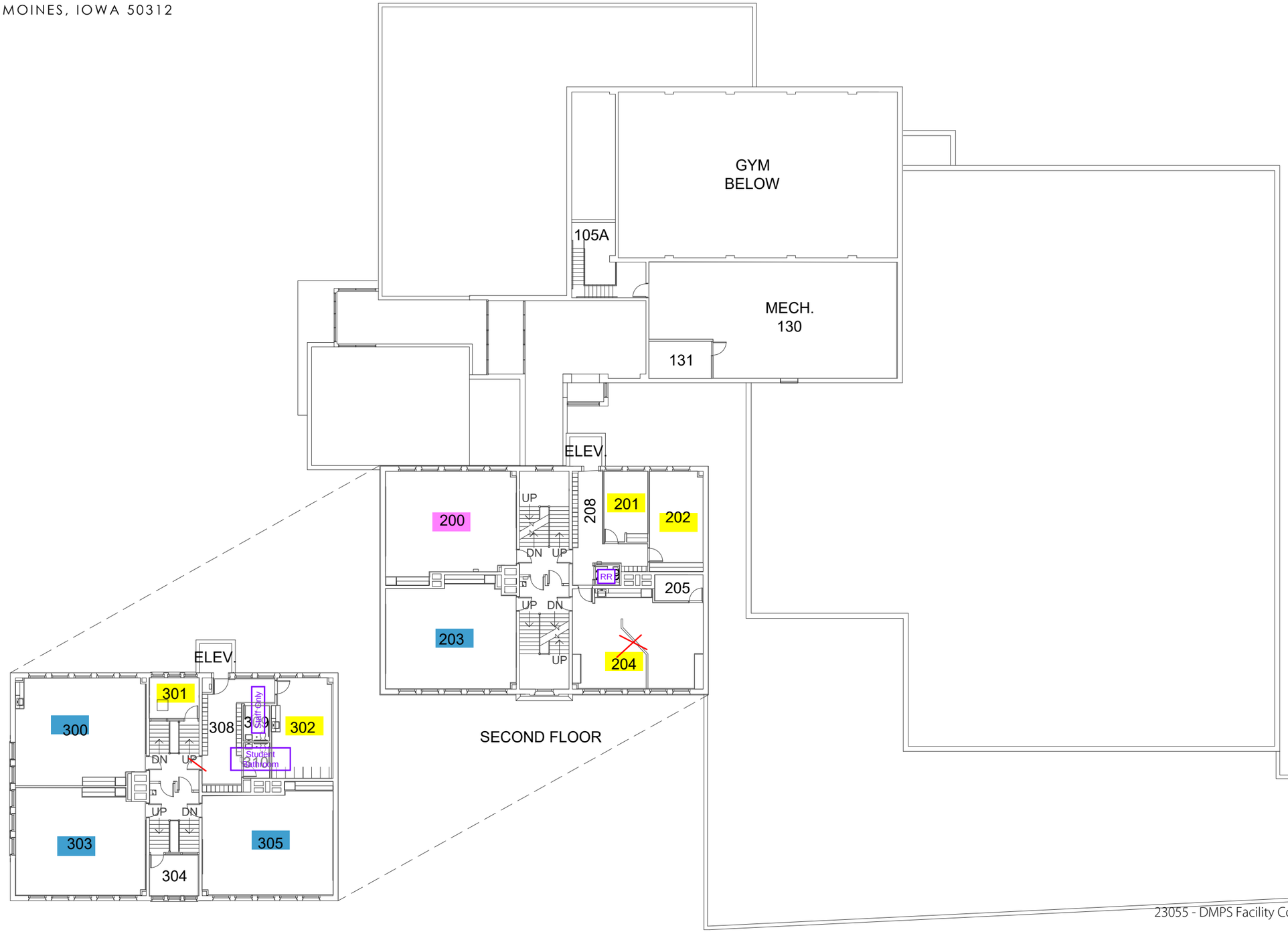
bbs ARCHITECTS ENGINEERS

HANAWALT ELEMENTARY SCHOOL

225 56TH STREET
DES MOINES, IOWA 50312

SECOND FLOOR

NORTH



- Core Classroom
- Student Support
- Administration
- Large Shared Space
- Other

bbs ARCHITECTS ENGINEERS