DMPS FACILITY ASSESSMENT | JACKSON ELEMENTARY

10.31.2023

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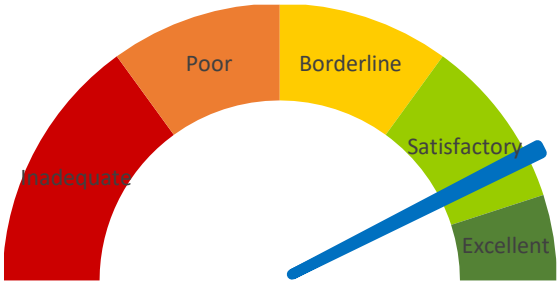


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

Jackson Elementary's on-site facility conditions assessment was conducted on October 31, 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.

There were no immediate concerns identified for Jackson Elementary. Maintenance items requiring attention include proper grounding of IDF rooms and adjustments to exterior door hardware to ensure proper latching.

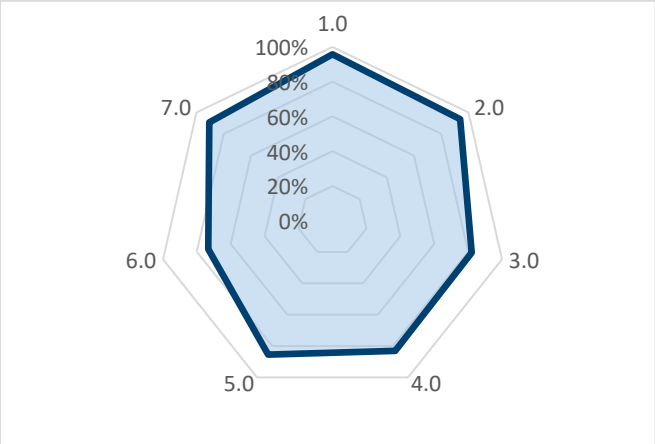
The recommended projects for Jackson Elementary to be completed in the next 1-2 years include:

- Repair of Exterior Storefront and Caulking
- Staff Lounge Renovation
- Repair Casework & Replace Countertops
- Site Grading and Sidewalk Replacement
- Exterior Lighting Improvements
- Replace ERVs with DOAS/ERVs
- Replace Heatpumps

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	158	2.00	330	316	96%	Excellent
2.0	Environment for Education	325	305	0.60	195	183	94%	Excellent
3.0	Exterior Envelope	95	78	3.00	285	234	82%	Satisfactory
4.0	School Site	100	83	1.50	150	125	83%	Satisfactory
5.0	Structural Conditions	165	141	1.30	215	183	85%	Satisfactory
6.0	Mechanical Systems	660	484	0.80	528	387	73%	Satisfactory
7.0	Electrical Systems	455	413	0.75	341	310	91%	Excellent
Total					**2,044**	**1,738**	**85%**	**Satisfactory**

Jackson 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 disciplines, Jackson Elementary scored a building health rating of 85%, or "Satisfactory", per the scale described within this report. Per the graph shown on the cover page of this report, scores within the "green" range are considered positive scores. Jackson Elementary is within this positive range. Improvements to the exterior envelope and mechanical systems, site improvements, as further detailed in the report, would increase this rating to "Excellent".

Building Data Record

Building Name: **Jackson Elementary**

Date: **October 31, 2023**

Address: **3825 Indianola Avenue**
Des Moines, IA 50320

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

Building SF: **57,969 square feet**

Site Acreage: **11.80 acres**

Date(s) of Construction: **1962, 1971, 2018**

Date(s) of Roof Replacement: **2000, 2010, 2017**

Current/Scheduled Projects: **Flooring Renovation - 2024**

Existing Building Data:

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

Site Items:

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

Energy Source:

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

Cooling:

- [ ] DX RTU or DOAS
- [ ] Chiller
- [ ] VRF
- [x] Water Source Heat Pump
- [ ] 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
- [x] Other
  Precast Concrete

Exterior Facade:

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

Floor/Roof Structure:

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

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	
Core Classroom					
1.7	Classroom space permits arrangements for **small group activity.**	3	4	12	Classrooms in the older south wing are smaller and offer less flexibility for creating small group spaces.
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	3	6	Front office has excellent visibility of main entrance. Check-in and waiting area is very small and cramped, especially during the high-traffic periods at the start and end of the day.
	TOTAL			158	

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	
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	4	12	A few classrooms (notably 1019 and 1032) have smaller window area relative to space size, but all classrooms had at least some daylight access.
2.8	Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces.	3	4	12	A few classrooms (notably 1019 and 1032) have smaller window area relative to space size, but all classrooms had at least some view access.
2.9	**Lighting has proper controls** to provide the required light levels for various teaching and learning needs.	2	4	8	Classroom lighting is LED and adequate for general use. All classrooms have two-zone lighting control, but no dimming control. We noted many instances of fabric or paper coverings installed over light fixtures.
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	5	10	
2.12	**Break room** is adequately sized and furnished for proper use.	1	3	3	Staff lounge lacks permanent storage/casework, counter space, and a sink.
2.13	**Mother's room** is a separate designated space properly furnished.	1	0	0	No mothers room provided.
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	4	4	Sizable water stains noted on acoustic ceiling tiles outside room 1018 and inside rooms 1030 and 1036. Size of staining may be indicative of mechanical/plumbing or roof system leaks.
2.16	**Walls** throughout the building – including services areas – are easily cleaned and resistant to stain.	1	5	5	
2.17	**Built-in casework** is designed and constructed for ease of maintenance.	1	4	4	Wood casework in the older portion of the building (south wing) is sturdy, but does have veneer damage and countertop water damage in most classrooms. Casework in other areas of the building is generally in excellent condition.
2.18	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	5	15	Excellent condition on nearly all doors. Media center wood doors are high-traffic and have cosmetic damage. Consider adding kick plates to these doors.
2.19	**Facility doors** are keyed to standardized master keying system.	3	4	12	Some mechanical rooms are not on the same master key as the rest of the building.
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	N/A	0	
2.30	**Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements.	5	N/A	0	

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			305	

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	5	10	
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	4	12	Areas of modified bitumen roofing are showing their age and losing granuals. May need replacement in ten years.
3.3	**Roof access** is safe for all roofs.	3	3	9	The current gymnasium and cafeteria roofs are not accessible. Other roof transitions are greater than 24" difference in height.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	4	12	A window requires gasket replacement or sealant to close gaps. One segment of storefront has a missing base trim.
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	4	4	Low-e coating cannot be determined. Windows are tinted.
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	5	10	
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	3	3	Additions made around 2010 are of corrugated metal and have been damaged such that sheathing is visible. Otherwise, these materials do require little maintenance. Caulking at a handful of masonry control joints and seven rock faced precast concrete panels need to be repaired.
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	02 - Doors do not latch 11 - Doors with card readers 07 - Doors with locks or no locks 18 - Doors with no signage. 02 - Doors at courtyard with no monitoring.
	TOTAL			78	

C | Civil

ASSESSOR: Jack Gorman

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	2	2	Potential drainage against building on the north side. The east and northeast sections of the play area were a little steep but still easily walkable. The modular retaining wall to the NW of the west parking lot needs to be disassembled and repaired but it is not an immediate need.
4.2	**Parking areas** are in good condition.	5	4	20	There were some cracked panels in the west parking lot but there were no areas needing immediate replacement of pavement.
4.3	**Drive areas** are in good condition.	3	5	15	The southeast drive through lane was in good condition with only a few cracks in a small amount of panels.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	1	2	2	The site has insufficient parking for staff and hosted events.
4.5	**Sidewalks** around the facility are in good **condition.**	1	4	4	A panel just outside the main entrance and some of the surrounding pavement is in poor condition. There were a couple of other sidewalk panels with cracks along the walk just SW of the school but good conditions overall on site.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	1	5	5	Site was easy to navigate on sidewalks and the routes all make sense for students.
4.7	**Hard surface** playground surfaces are in good condition.	3	4	12	The asphalt surface will need repair work in the future. The concrete playground surface looked new and was in good condition.
4.8	**Fencing** around the site is in good condition.	1	5	5	Fences were in good condition, no issues were observed.
4.9	**Trash enclosure** is in good condition.	1	4	4	Fence and gate around the dumpsters were in good condition. A couple of the pavement panels need replacement.
4.10	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	5	5	The utilities on site were in good condition and laid out appropriately. One of the intakes in the southwest drive needs some dirt behind the curb to prevent water from ponding behind it.

ASSESSOR: Jack Gorman

		Weight Factor	Rating	Points	Comments
4.11	**Site has sufficient room** for both building and parking expansion.	1	5	5	The west parking lot has room to expand to the NE and the building could be expanded to the SE by shifting the play area in the same direction.
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 west side parking lot. Parent drop off is in the SE lot and pickup is done in both the west and SE lots. There are conflicts in the staff lot to the west with buses and parents both using it.
	TOTAL		83		

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	N/A	0	
5.4	**Stoops** appear to be in good condition.	1	5	5	
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	4	8	Cracking noted in the brick on one side of lintel above window facing courtyard in room 1019
5.8	**Lintels** appear in good condition (no visible deflection or rust).	1	5	5	
5.9	**CMU** is in good condition.	1	5	5	
5.10	**Precast** is in good condition.	1	5	5	

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	5	5	There was one site retaining wall on site. Unsure if this was an engineered retaining wall or not, but looked to be in good condition.
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	5	10	There was a trash enclosure screen and RTU screen on site. Both appeared to be in good condition
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	N/A	0	
5.22	There is a **designated hardened area** in the building.	1	5	5	Area of Refuge area is located adjacent to the new gym
5.23	The hardened area appears consistent with the **ICC 2018 code.**	1	3	3	Based on existing drawings, it appears the hardened area was designed for an EF3 event.
	TOTAL		141		

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	4	12	Classrooms on separate heat-pump. Some offices are combined.
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	OA to classrooms dumped into mech closet and not ducted to classroom. Mech closet used as return plenum leading to uncontrolled air circulation from other areas and minimal ventilation to the occupied spaces.
6.4	**Ventilation** is provided during occupied hours.	5	1	5	ERVs on roof not operational during day, with the exception of one. ERV for new addition not operational during the day. ERV in main mech room was operational for some of the classrooms. Recommend replacing older ERVs with DOAS/ERV units and include dehumidification.
6.5	**Outdoor air intake locations** are appropriate.	4	2	8	OA intake for main ERV located adjacent to parking lot. All other intakes to ERVs on roof with inadequate separation as the ERV exhaust is adjacent to the intake.
6.6	Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms.	5	1	5	ERVs not operational and PRV not operational with the exception of one for the kitchen.
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	1	2	No exhaust or ventilation air being delivered. Radon mitigations system on site requires positive pressurization of building per Owners comments.
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	4	20	Equipment between 5 and 12 years old. Rooftop ERVs appear to be nonfunctional. RTU is 5 years old but showing some deterioration. ERV for addition appears to be in good condition but not operational during the day. Recommend replacing ERVs with DOAS/ERV equipment and ducting OA to classrooms.
6.9	**Cooling loads** are within equipment operational capacity.	5	4	20	Use of mini-split in entryway for supplemental cooling.
6.10	**Heating loads** are within equipment operations capacity.	5	3	15	Supplemental electric heat used in several areas. Mini split unit added to entryway. Hot water boiler is non-condensing gas boiler and direct connected to wellfield?piped differently from plan and uses 3-way valve at boiler, in addition to one at wellfield bypass, to circulate water through boiler.

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	1	3	Heat-pumps in addition have HOT GAS REHEAT along with ERV unit for some dehumidification ability. No dehumidification in most of building. Recommend replacing older ERVs with DOAS/ERV with dehumidification.
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	Dual RPZ and accessible
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	5	15	Outdoor tank added during renovation.
6.18	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	5	25	
6.19	**Restroom fixtures** comply with DMPS preferences.	3	5	15	All auto-flush fixtures . Wash stations hands free operations. Lavatories hands free operation.
Maintainability					
6.20	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	4	12	Mechanical room has adequate space for service. Large ERVs in mech rooms have limited access for service or repair.

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	2	4	Filter sizes vary by equipment type and have several types in building.
6.23	**Equipment mounting heights** are reasonable.	3	4	12	Some ceiling mounted heat-pumps hard to access. Most heat-pumps have mechanical closet and mounted on stand for easier access.
6.24	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	5	10	
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	3	6	No roof hydrant for rooftop equipment.
6.28	**Fall protection** is provided for equipment within 15 ft of roof edge.	2	5	10	Most equipment is indoors or centrally located.
6.29	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	5	20	Full DDC system and recently upgraded.
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	Eyewash not observed. Recommend evaluation by occupational safety and health professional to determined if eye irrigation is needed.
6.34	**Emergency boiler stop switches** are located at exits from boiler rooms.	5	4	20	Located inside boiler room at exit door.
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	2	10	Main mech room does have a CO moniitoring. There is a gas-fired ERV unit in new addition that does not have CO monitoring and also does not meet code requirements for combustion air. This is not a "grandfathered" system.
	TOTAL			494	

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	
7.3	**The MDP environment** is safe, has adequate clearances and exiting.	3	5	15	Square D 480y/277 1200A Built in surge suppression
7.4	The **MDP** appears serviceable.	4	5	20	
7.5	The MDP is **maintainable.**	3	5	15	
7.6	The MDP will support **future expansion.**	4	5	20	63"/35" 55%
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	5	20	800A/225kva
7.8	The Distribution Panel appears **serviceable.**	4	5	20	
7.9	The Distribution Panel is **maintainable.**	4	5	20	
7.10	The Distribution Panel will support **future expansion.**	4	5	20	

E | Electrical

ASSESSOR: Rob Hedgepeth

		Weight Factor	Rating	Points	Comments
7.11	**Electrical panels and disconnect switches** 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	4	4	No ground-mounted mechanical equipment. One or two exterior receptacles with covers broken.
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	4	20	Additional exterior lighting needed for south (front) exposure and by NE corner door at Gym.
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	4	16	Small amount of storage in room.
7.15	MDF Equipment Racks have adequate space for **future growth.**	4	3	12	Rack is approaching capacity.
7.16	MDF is equipped with Liebert UPS to back up main switch(es), providing **backup power** to necessary equipment in the event of a power outage.	5	4	20	Two minuteman 2Kva UPSs. One older, one newer.
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	5	5	
7.19	MDF employs up-to-date **network cabling.**	2	5	10	Cat 5E, Cat 6, 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	Very neat TMGB
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	7/16=44%
7.24	Building is equipped with a **CCTV system.**	5	5	25	
7.25	Building is equipped with an **intercom system.**	4	4	16	Limited night vision for cameras on NE building corner (room 1036).
7.26	Building is equipped with a **master clock system.**	4	5	20	Primex
	TOTAL			413	

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

Exterior Door Adjustment	Adjust or repair exterior door latches and closers to properly secure doors. Exterior door from room 1008 and the south door from the courtyard to the corridor were of particular concern.
Grading Repair	Add soil behind the intake to prevent erosion around structure. For location, refer to civil site plan exhibit found in the appendix of this report.
IDF Bonding	Bond IDF rack in new mechanical space to TGB in room.
Exterior Masonry Repair	Remove and replaced cracking brick masonry at lintel of window in courtyard from room 1019 (2 SF).

1 - 2 Year Priority

		Project Cost
Interior Refinish	Add approximately 15 LF of base and wall cabinets with solid surface countertop and one kitchen sink to the staff lounge.	$45,000
Casework Repair and Countertop Replacement	In the 10 classrooms in the south wing, repair wood veneer damage to casework doors (110 LF). Remove and replace countertops, backsplashes, and sinks in classrooms (72 LF, 10 sinks). Cost based on full replacement.	$200,000
Roof Replacement	Remove 6,200 SF of modified bitumen roofing and insulation over roof areas I, J, and K Install code compliant insulation and TPO roofing.	$150,000

Exterior Sealant Replacement	Replace caulk: At 7 rock-faced precast concrete panels, 252 LF. At 4 masonry control joints, 75 LF. At two gym precast concrete panels, 50 LF. At northeast end of courtyard where soffit meets wall, 4 LF.	$10,000
Storefront Repair	Repair 8-foot long section of storefront base framing at exterior near the south end of the courtyard.	$7,000
Sidewalk Repair	Repair damaged sidewalks and tripping hazards across the site. Approximately 74 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$14,000
Curb Repair	Return damaged curbs to new condition. Approximately 20 LF of 6" curbs. For locations, refer to civil site plan exhibit found in the appendix of this report.	$6,000
Heatpumps Replacement	Replace heat-pumps that are over 15 years in age (installed during 2011 project.) Consider a two-stage heat pump unit to match space load and reduce load on wellfield.	$1,200,000
Exterior Lighting Installation	Add (2) exterior lights, one at south entrance and one at northeast corner door of gymnasium.	$9,000
ERVs Replacement-Except Addition	Repalce all ERVs for the building (except for the addition) with roof-mounted DOAS units with ERV, gas heat, DX cooling and hot-gas reheat for dehumidification.	$1,500,000
	Total 1-2 Year Project Costs	**$3,141,000.00**

3 - 4 Year Priority

		Project Cost
Exterior Repainting	Provide sealant at existing holes from previously removed building signage near main entrance. Clean up existing sealant. Repaint wall, approx 250 SF.	$6,000
Soffit Repair	Repair direct-applied finish system on soffit at southwest face of school, 20 SF.	$6,000

Roof Access Installation	Provide a permanent roof access ladder from the main roof level to the gymnasium roof, approximately 10 foot elevation change. Provide guardrail at roof hatch.	$12,000
Pavement Replacement	Remove, replace, and reinforce 48 SY of pavement. For location, refer to civil site plan exhibit found in the appendix of this report.	$12,000
Playground Asphalt Replacement	Take out and restore deteriorated playground asphalt. Approximately 478 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$70,000
Detectable Warning Repair	Repair the damaged detectable warnings. Approximately 6 SY. For location, refer to civil site plan exhibit found in the appendix of this report.	$7,000
ERV Replacement-Addition	Replace the indoor ERV serving the addition with a rooftop DOAS unit. DOAS unit to include ERV, DX, gas and hot-gas reheat.	$320,000
	Total 3-4 Year Project Costs	$433,000.00

5-10 Year Priority

		Project Cost
Roof Replacement	Remove 23,800 SF of TPO roofing and insulation over roof areas B, C, D, and L. Install code compliant insulation and TPO roofing.	$760,000
Repair Modular Block Wall	Dissasseble and repair modular block wall, approximately 21 LF. For location, refer to civil site plan exhibit found in the appendix of this report.	$10,000
Pavement Replacement	Remove and replace 225 SY of pavement. For location, refer to civil site plan exhibit found in the appendix of this report.	$40,000
Sidewalk Repair	Repair damaged sidewalks across the site. Approximately 106 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$25,000

Geothermal Loop Pump Replacement. Add VFDs.	Install new geothermal loop pumps and motors. Inlcude VFDs in place of soft starters for pumps.	$180,000
Boiler Replacement	Replace existing backup boiler with new high efficiency boiler.	$130,000
Dedicated outdoor air unit - Gym	Add a dedicated outdoor air unit for the Gym	$510,000
	Total 5-10 Year Project Costs	**$1,655,000.00**

Projects Requiring Study

		Design Services Fee
Mother's Room Space	Study to define a private dedicated space for a Mother's Room that includes at least a sink, side table, chair, and privacy door hardware.	$5,000
Main Office Space	Investigate options for reallocating space to provide more adequate areas for administrative functions - main office check-in desk, principal and vice principal offices, nurse's office, and staff work areas.	$5,000
Drainage Study	A large rain event will drain a considerable amount of water towards the building. A study to determine the slopes present, location of intakes, and any necessary grading is needed. For location, refer to civil site plan exhibit found in the appendix of this report.	$5,000.00
Parking Expansion	The site is short on staff parking and event parking is challenging. A study to determine the number of stalls, location, associated utility work, and construction cost of increasing on-site parking is needed.	$2,500.00
	Total Study Design Service Fees	**$17,500**

APPENDIX

5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

80 0 40 80 160

ARCHITECTS ENGINEERS

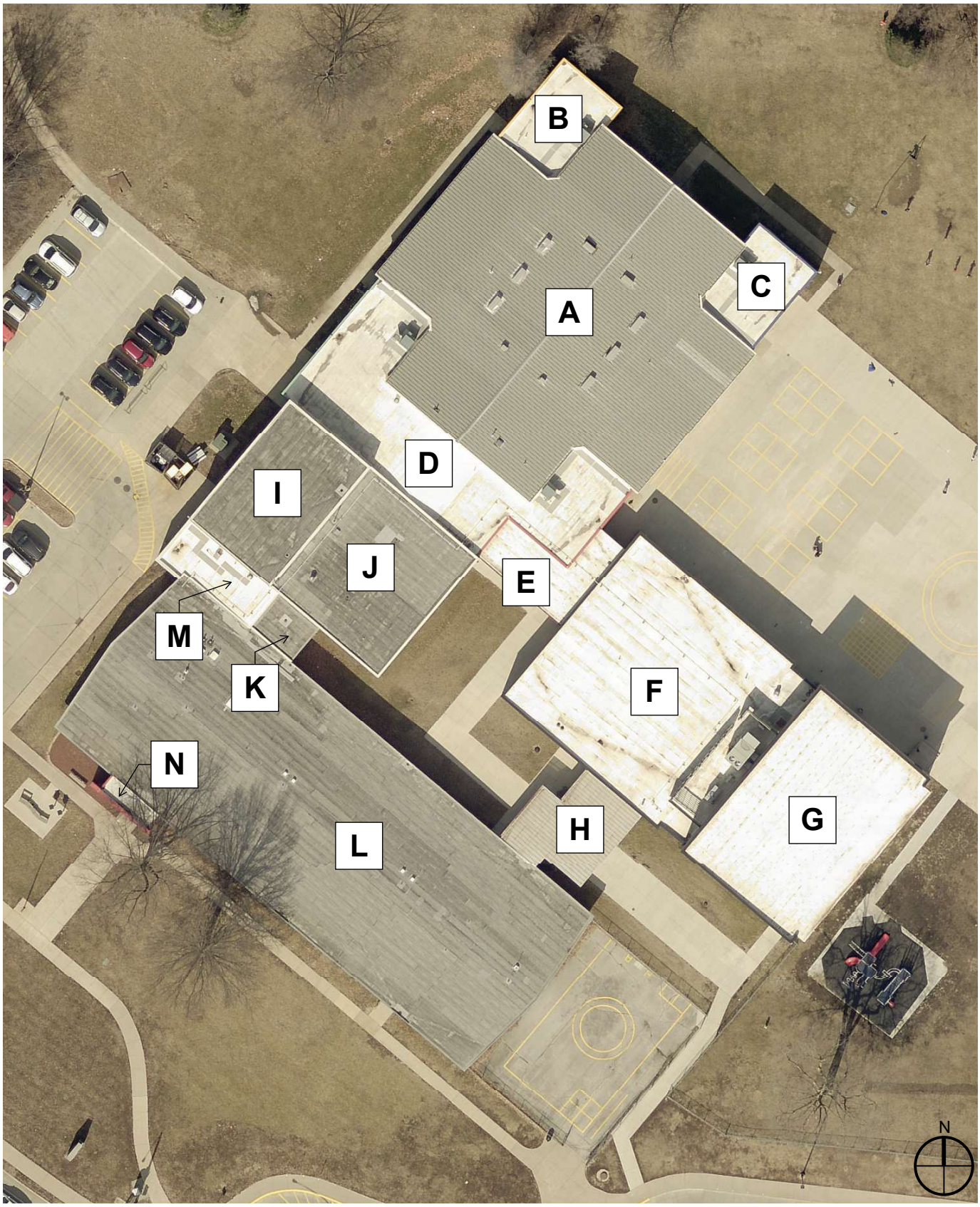
BISHOP ENGINEERING +

JACKSON ELEMENTARY

EXHIBIT

PROJECT # 230286-15

DATE 10/19/2023



bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Jackson Elementary
10.31.2023

JACKSON ELEMENTARY SCHOOL

3825 INDIANOLA AVENUE
DES MOINES, IOWA 50320

FIRST FLOOR

NORTH

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

bbs ARCHITECTS ENGINEERS