DMPS FACILITY ASSESSMENT | EAST HIGH SCHOOL

2.27.2024

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ENGINEERS

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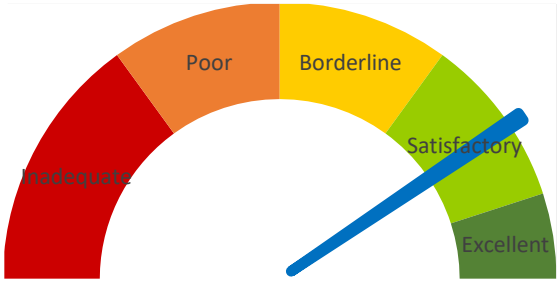


REPORT ORGANIZATION

EXECUTIVE BUILDING SUMMARY

East High School on-site facility conditions assessment was conducted on February 27, 2024 and included visual conditions assessment from professionals covering interior architecture, exterior building envelope, the property's grounds (site), structural condition, mechanical (HVAC/Plumbing) systems, electrical systems (power, exterior lighting, interior lighting, fire alarm, and general IT), and the elevator conditions.

A few of the short term maintenance identified for East High School are: minor restroom repairs, pest management, nurse room privacy installation, door security repairs, roof cleaning, site repairs, railing post replacement, clean combustion air intake, MDF clear space cleaning, MDF cleaning, MDF grounding, roof leak repairs. Several studies were also identified as needing addressed in the near future. One of these is a wayfinding study to increase accessibility throughout the school.

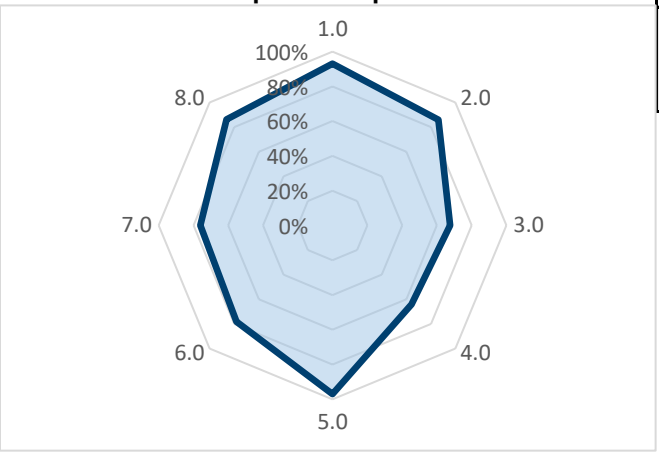
Several of the recommended projects for East High School to be completed in the next 1-2 years are as follows:

- Ceiling Replacement
- Masonry Repoint
- Interior Refinish
- Roof Access installation
- Roof Conduit Replacement
- Exterior Refinish
- Site Improvements
- Roof Drainage Installation
- Thermostatic Mixing Valve Installation
- Fall Protection Installation
- Electrical Panel Replacements
- Telecom Cable Relocation
- Exterior Lighting Installation
- Elevator Ceiling Installation

Additional information on the recoemnded 1-2 year 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	245	228	2.00	490	456	93%	Excellent
2.0	Environment for Education	360	310	0.60	216	186	86%	Satisfactory
3.0	Exterior Envelope	105	71	3.00	315	213	68%	Borderline
4.0	School Site	95	61	1.50	143	92	64%	Borderline
5.0	Structural Conditions	165	160	1.30	215	208	97%	Excellent
6.0	Mechanical Systems	700	547	0.80	560	438	78%	Satisfactory
7.0	Electrical Systems	455	346	0.75	341	260	76%	Satisfactory
8.0	Elevator Conditions	65	56	1.00	65	56	86%	Satisfactory
Total					**2,279**	**1,852**	**81%**	**Satisfactory**

East High School
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 East High School 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. East High School is within this positive range. Improvements to the exterior envelope and school site as described later in this report would make the largest impact in increasing the score to Excellent.

Building Data Record

Building Name: East High

Date: 2.27.2024

Address: 815 East 13th St
Des Moines, IA

High School Feeder System: N/A

Building SF: 344,376 SF

Site Acreage: 39.5 Acres

Date(s) of Construction: 1912, 1966, 1972, 2002, 2006

Date(s) of Roof Replacement: 2000, 2017, 2020

Current/Scheduled Projects:
Security upgrade - 2025
Domestic water line repairs - 2024
ADA Restroom - 2024
Gym Cooling - 2024
Auditorium upgrade - 2025
Stadium water main replacement - 2024

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

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

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

Structure Fireproofing:
- [x] No
- [ ] Yes

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

Exterior Facade:
- [x] Brick
- [ ] Stucco
- [ ] Metal
- [ ] Wood
- [x] Other
  Stone, EIFS

Floor/Roof Structure:
- [ ] Wood Joists
- [x] Steel Joists/Beams
- [x] Slab on Grade
- [x] Struct. Slab
- [ ] Other

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker / Tim Bungert

1.0 Educational Adequacy

		Weight Factor	Rating	Points	Comments
General					
1.1	**Floor materials** are appropriate for space type.	1	5	5	Carpet and wood flooring in the drama department scene shop is susceptible to damage from set construction activities.
Athletics					
1.2	**Gymnasium(s)** are accessible and in good condition. Space is adequate for practice and competition.	3	5	15	
1.3	Athletic department is supported with adequate **training and practice spaces.**	1	4	4	Relatively minor improvements needed to finishes and upgrades/repairs to weight equipment.
1.4	Athletics are supported by adequate **locker rooms** for each sport.	2	4	8	Girls basketball locker rooms do not provide immediate proximity to the main gymnasium. Boys swimming and wrestling locker rooms had very strong unpleasant odors. Girls swimming locker room was extremely warm - refer to mechanical for further detail.
1.5	**Natatorium** is accessible and in good condition. Space is adequate for practice and competition.	2	5	10	
Arts					
1.6	**Vocal music room** is adequate for providing music instruction.	2	5	10	
1.7	**Band room** is adequate for providing music instruction. Practice and storage rooms are sufficient to support use and instruction.	2	5	10	Primary large instruction room is shared with orchestra, but dedicated storage space is provided for both band and orchestra.
1.8	**Orchestra room** is adequate for providing music instruction. Practice and storage rooms are sufficient to support use and instruction.	2	5	10	Primary large instruction room is shared with band, but dedicated storage space is provided for both band and orchestra.
1.9	**Auditorium** has sufficient arrangement, technology, and acoustics for program.	2	5	10	
1.10	**Industrial Arts** space has sufficient accommodations for program.	2	5	10	

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker / Tim Bungert

		Weight Factor	Rating	Points	Comments
1.11	**Art room** has sufficient accommodations for program.	2	5	10	
1.12	**Cafeteria** has adequate space, furniture, and acoustics for efficient lunch use.	1	5	5	
1.13	**Library/Resource/Media Center** provides appropriate and attractive space.	2	4	8	Minor furniture repairs needed. Water stains were visible on roughly 18 ceiling tiles.
Core Classroom					
1.14	**Science** classrooms and labs have sufficient access to water, gas, and emergency safety equipment for program.	1	5	5	
1.15	**Family Consumer Science** classrooms and labs have sufficient accommodations for program.	2	5	10	
1.16	Classroom **acoustical treatment** of ceiling, walls, and floors provide effective sound control.	3	4	12	Many classrooms on level 4 do not have sufficient acoustic absorption on walls, ceilings, or floors. Ceilings in these rooms are generally exposed structure, and the floors are generally polished concrete.
1.17	**Classroom power and data receptacles** are located to support current classroom instruction.	4	4	16	Long power strips and extension cords were in use in roughly 18 classrooms to provide power for student technology/devices.
1.18	Classroom space permits **flexibility of arrangements.**	4	5	20	Some classrooms are notable smaller than other "standard" size rooms, but those classrooms seemed to be generally used for curriculum/programs with fewer students.
1.19	**Furniture systems** are adequate for the intended use of the space and age of students.	1	4	4	Furniture systems that support convenience power for student technology/devices may be appropriate to add to common areas (e.g. library) and some classrooms (e.g. photo studio/editing, computer skills, etc.).
1.20	**Student storage** space is adequate.	2	5	10	

A | Architectural, Programming

ASSESSOR: Kaela Shoemaker / Tim Bungert

		Weight Factor	Rating	Points	Comments
1.21	**Teacher storage** space is adequate.	2	5	10	
1.22	**Educational technology** supports instruction.	1	5	5	Vocal music practice room 2006 is missing a wall-mounted projector. A small projector sitting on the floor was being used in the room.
Administration					
1.23	**Conference/Private meeting rooms** are adequate for large and small meetings.	2	4	8	Small conference areas are provided in many locations throughout the building, but there is no large conference area dedicated for staff use. Spaces such as the cafeteria, library, or auditorium may provide some of this function but may conflict with other uses in the building.
1.24	**Counseling suites** are provided with adequate privacy and meeting spaces.	1	5	5	
1.25	**Main office** has a check-in and waiting area.	2	4	8	Waiting area is very busy and crowded at the beginning of the school day.
	TOTAL			228	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker / Tim Bungert

2.0 Environment for Education

Design

		Weight Factor	Rating	Points	Comments
2.1	**Traffic flow** is aided by appropriate foyers and corridors.	3	4	12	Width of corridors is appropriate, but split-level offsets between additions creates difficulties in wayfinding.
2.2	Communication among students is enhanced by **common areas.**	3	3	9	Cafeteria works successfully as a hub in the center of the building for students to gather. Additional lounge areas or bench seating in corridors (like the corridor outside the 2058-2062 counseling suite).
2.3	Areas for students to i**nteract are suitable to the age group.**	2	4	8	Additional spaces for independent and group studies outside of classrooms would also be beneficial.
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	4	4	Some desks and tables in studio/graphic art rooms and industrial tech rooms were heavily damaged or stained by paints/inks. Staff furniture in the main office area, including the reception desk counter and walls, had some significant damage and wear.
2.6	**Color schemes**, building materials, and decor are **engaging and unify** the school character.	3	4	12	Improvements to finishes/decor in stairwells, corridor outside rooms 1046-1081, and north and south corridors of level 4 would provide a cohesive and engaging character through all areas of the building.
2.7	Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces.	3	3	9	Classrooms in North 2000s and all 4000s had windows that are smaller than appropriate for the size of the spaces. These windows do not provide adequate daylight or views.
2.8	Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces.	3	3	9	Classrooms in North 2000s and all 4000s had windows that are smaller than appropriate for the size of the spaces. These windows do not provide adequate daylight or views.
2.9	**Lighting has proper controls** to provide the required light levels for various teaching and learning needs.	2	4	8	A significant number of classrooms had fabric covers over light fixtures. Consider introducing dimming controls to all classroom spaces.
2.10	**Staff dedicated spaces** include conference space, work space, and dedicated restrooms.	1	5	5	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker / Tim Bungert

		Weight Factor	Rating	Points	Comments
2.11	**Main office** is visually connected to the entry as is welcoming to students, staff, and guests.	3	5	15	
2.12	**Break room** is adequately sized and furnished for proper use.	1	5	5	
2.13	**Mother's room** is a separate designated space properly furnished.	1	0	0	No mother's room observed.
Maintainability					
2.14	**Floor surfaces** throughout the learning and common areas are durable and in good condition. Spaces include classroom, offices, labs, cafeteria etc.	1	4	4	Broadloom carpet in classrooms and administrative office areas is beginning to show signs of age and wear. Painted concrete floors in the industrial arts rooms is also beginning to flake/peel and will require replacement in the future. Wood floors in some classrooms will require refinishing/repairs soon.
2.15	**Floor surfaces** throughout the support and circulation areas are durable and in good condition.Spaces include corridors, restrooms, storage rooms etc.	1	4	4	Epoxy floors in many restrooms are highly textured which makes cleaning difficult. The drama department scene shop floor is heavily damaged.
2.16	**Ceilings** throughout the learning and common areas are easily cleaned and resistant to stain. Spaces include classroom, offices, labs, cafeteria etc.	1	4	4	Water stains and surface damage from vandalism were noted on ceilings throughout the building. See projects list for more information.
2.17	**Ceilings** throughout the support and circulation areas are easily cleaned and resistant to stain. Spaces include corridors, restrooms, storage rooms etc.	1	4	4	Water stains and surface damage from vandalism were noted on ceilings throughout the building. See projects list for more information.
2.18	**Walls** throughout the learning and common areas are easily cleaned and resistant to stain. Spaces include classroom, offices, labs, cafeteria etc.	1	4	4	Paint damage from furniture was noted in many classrooms on plaster and gypsum board walls.
2.19	**Walls** throughout the support and circulation areas are easily cleaned and resistant to stain. Spaces include corridors, restrooms, storage rooms etc.	1	5	5	Phenolic panels adhered over tile surfaces in restroom near classroom 1065 are significantly cracked. Appears to be incorrect installation for that material.
2.20	**Built-in casework** is designed and constructed for ease of maintenance.	1	5	5	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker / Tim Bungert

		Weight Factor	Rating	Points	Comments
2.21	**Doors** are either solid core wood or hollow metal with a hollow metal frame and well maintained.	3	4	12	Finish repairs needed on some wood doors in classrooms - see project list for more information.
2.22	**Facility doors** are keyed to standardized master keying system.	3	5	15	
2.23	**Restroom partitions** are securely mounted and of durable finish.	2	4	8	Mirrors have been removed from many student restrooms. Soap dispensers in many restrooms are either damaged, empty, or have been removed. The door to the accessible stall in restroom 094 is damaged and does not close properly. Partitions is some locker rooms are painted metal and beginning to show signs of rusting/degradation.
2.24	**Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces.	1	5	5	
Occupant Safety					
2.25	Classroom doors are **recessed and open outward.**	4	5	20	
2.26	Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.**	4	5	20	
2.27	**Door panels** into classrooms and other occupied spaces contain **vision lite.**	4	5	20	
2.28	**Vision lite** in doors is clear and uncovered.	2	3	6	Vision lites at many classrooms are partially or fully obstructed.
2.29	**Glass** is properly located and protected to prevent accidental injury.	2	5	10	
2.30	**Flooring** is maintained in a **non-slip** condition	2	5	10	

A | Architectural, Interior

ASSESSOR: Kaela Shoemaker / Tim Bungert

		Weight Factor	Rating	Points	Comments
2.31	**Traffic areas terminate at exit or** stairway leading to egress	5	5	25	
2.32	Multi-story buildings have at least **two stairways** from all upper levels for student egress.	5	5	25	
2.33	**Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements.	5	3	15	Railings at most stairs do not meet current code requirements for guardrail height, but these are considered a grandfathered condition. Access ladder to the pool equipment area has a loose railings, lacked a safety gate/chain, and should be considered for possible alternative access options.
2.34	At least **two independent exits** from any point in the building	5	5	25	The secondary exit from room 047 is obstructed by equipment positioned in front of the door.
2.35	**Emergency lighting** is provided throughout the building.	4	5	20	
	TOTAL			372	

A | Architectural , Exterior

ASSESSOR: Dave, Matthew

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	No significant concerns.
Maintainability					
3.2	**Roofs** appear sound, have positive drainage, and are water tight.	3	3	9	Next roof replacement is in about 10 years and will be large in scope. At the same time, or sooner, many rooftop equipment/ventilators/similar will need to be repainted.
3.3	**Roof access** is safe for all roofs.	3	3	9	Roof hatches lack guardrails, two roof transition lack ladders, and one roof ladder needs to be re-secured to wall.
3.4	Exterior **window sealant** is fully intact without cracks or gaps.	3	3	9	Multiple locations of sealant require replacement.
3.5	**Glazing** is low-e coated, insulated, and overall in good condition.	1	3	3	Several large areas of window wall in original building still contain single-pane glazing, some of which are cracked. Two areas have insulated glazing with broken seals.
3.6	**Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking.	2	4	8	No significant issues noted.
3.7	**Exterior doors** are of durable material requiring minimum maintenance.	2	3	6	All building entries are steel, aluminum or fiberglass-faced units. (5) doors/frames will require repair or replacement. All steel doors should be painted in 1-2 years. At the roof, one wood door requires replacement and one metal door requires repainting.
3.8	**Exterior walls** are of material and finish requiring little maintenance,	1	3	3	Multiple locations of sealant replacement, EIFs repair, and masonry pointing, including areas above the roof.
3.9	**Exterior Doors** open outward and are equipped with **panic hardware.**	1	4	4	No significant concerns.
3.10	**Exterior Doors are monitored** or controlled by an access control system.	3	4	12	(7) Entries have security concerns, including (2) sets of courtyard access doors. (6) Entries have card readers. (8) Entries have keyed locksets. (10) Entries have exit-only hardware. All entries have exterior identification numbers.
	TOTAL			71	

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	4	4	Good drainage away from the building, the open space to the east of the north entrance had some erosion taking place but it did not appear to be a major issue.
4.2	**Parking areas** are in good condition.	5	2	10	Almost all of the entire parking area asphalt needs replacement, some sections requiring immediate replacement. The asphalt was cracking throughout with some areas experiencing sagging, and potholes were found in multiple locations of the parking areas.
4.3	**Drive areas** are in good condition.	3	3	9	The concrete drive along the north side of the building was experiencing subsurface moisture issues and got progressively worse on the approach to 14th St. The east section of the asphalt drive around the building has sections needing replacement, but the concrete drive around the south of the building was in better condition.
4.4	**Sufficient on-site, solid surface parking** is provided for faculty, staff, and community.	2	4	8	Multiple spots in both parking areas were available at the time of visit. Event parking may be challenging with limited parking available off-site. The east, stadium parking lot was open for additional event parking or student parking from observation as well.
4.5	**Sidewalks** around the facility are in good **condition.**	2	3	6	Sections of sidewalk across site require replacement and there were tripping hazards in areas. The brick pavers along the north and northwest of the west parking lot have shifted and will need replacement.
4.6	**Sidewalks are located** in appropriate areas with adequate building access.	2	5	10	All doors have access to sidewalks and the site was easy to walk across by sidewalk.
4.7	**Fencing** around the site is in good condition.	1	5	5	There is not much fencing is on site, the fence along the south is in good condition. The fences at the athletic complex were not evaluated as part of this assessment.
4.8	**Trash enclosure** is in good condition.	1	N/A	0	The dumpsters were to the south of the school behind a chain link fence.
4.9	**Utilities** are in newly constructed conditions and placed in suitable locations.	1	3	3	The outlet structure of the detention pond was in good condition, one intake in the north parking lot needs repair.
4.10	**Site has sufficient room** for both building and parking expansion.	1	3	3	Some space is available to the NW and North of the existing building either a parking or building expansion.

ASSESSOR: Jack Gorman Joel Jackson

		Weight Factor	Rating	Points	Comments
4.11	Site has **onsite bus and parent pickup** up with adequate length, good separation and general good site circulation.	1	3	3	The separation of the parking areas provides enough space for good site circulation but some congestion still occurs, which resolves quickly.
	TOTAL			61	

S | Structural

ASSESSOR: Niles Quick

5.0 Structural Conditions

		Weight Factor	Rating	Points	Comments
Foundations					
5.1	**Foundations** appear to be in good condition with no visible cracks.	1	5	5	
5.2	There does not appear to be any **foundation settlement.**	2	5	10	
5.3	**Basement walls** do not appear to have any cracks.	1	5	5	
5.4	**Stoops** appear to be in good condition.	1	4	4	Stoop just south of room 1081 will need to be replaced
Slab on Grade					
5.5	**Slabs on grade** do not appear to have any cracks	1	5	5	
5.6	Slabs on grade do not appear to have any **settlement.**	1	5	5	
Exterior Walls					
5.7	**Brick masonry** appears to be in good condition.	2	5	10	
5.8	**Lintels** appear in good condition (no visible deflection or rust).	1	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	
5.16	**Canopies** appear to be in good condition.	1	5	5	
5.17	**Loading dock concrete** appears to be in good condition.	2	4	8	Ramp at loading area outside of room 1116 needs to be patched
5.18	**Mechanical screening** appears to be in good condition.	2	5	10	
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	Various locations where railings need to be replaced. Loose railing on upper level of pool stand seating and steps down to pool deck. These locations also have concrete that needs to be repaired or replaced. One exterior railing post East of room 1116 needs to be replaced.

S | Structural

ASSESSOR: Niles Quick

		Weight Factor	Rating	Points	Comments
5.21	**Pool Deck** appears in good condition without cracks.	1	5	5	
5.22	**Balconies** appear in good, stable, condition	1	5	5	
5.23	**Tunnels** appear to be in good condition without cracks.	1	5	5	
5.24	There is a **designated hardened area** in the building.	1	0	0	No designated hardened area observed
5.25	The hardened area appears consistent with the **ICC 2018 code.**	1	N/A	0	
	TOTAL			160	

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	Generally appears to be true.
6.2	**Thermostat location.** Thermostats are properly located in the space.	3	5	15	Generally appears to be true.
6.3	Appropriate **amount of ventilation** are provided to each space.	5	4	20	Difficult to confirm for all building areas. Generally appears true for areas in 2006 Retrofit Project.
6.4	**Ventilation** is provided during occupied hours.	5	5	25	Generally appears to be true.
6.5	**Outdoor air intake locations** are appropriate.	4	5	20	Generally 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	Generally appears to be true.
6.7	**Building pressurization.** The design takes into account the balance between ventilation and exhaust air	2	5	10	Generally appears to be true.
6.8	**Major HVAC Equipment** appears to be within it's acceptable **service life.**	5	2	10	Much of the equipment serving the building is nearing or beyond its expected useful life.
6.9	**Cooling loads** are within equipment operational capacity.	5	5	25	Generally appears to be true.
6.10	**Heating loads** are within equipment operations capacity.	5	4	20	Generally appears to be true. Boilers identified as not having redundancy.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

		Weight Factor	Rating	Points	Comments
6.11	**Dehumidification** is provided and addressed humidity loads in incoming outside air.	4	5	20	Generally appears to be true for normal building spaces.
6.12	Appropriate levels of ventilation, cooling and dehumidification are being provided within **Natatorium.**	5	2	10	Ventilation appears to be appropriate. No cooling/dehumidification provided. Only heating
Plumbing Design					
6.13	**Water Supply Pressure** is adequate to allow for operation of plumbing fixtures.	5	5	25	Appears to be true.
6.14	Appropriate **backflow preventer** is provided at connection to city water supply.	5	5	25	Single reduced-pressure type.
6.15	**Domestic hot-water systems** are within equipment operational capacity.	5	5	25	Generally appears to be true.
6.16	Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time.	3	5	15	Appears to be true.
6.17	**Sanitary sewer systems** are sized and sloped to allow for proper drainage.	5	4	20	Generally appears to be true. Drains at original marble drinking fountains were identified as a problem.
6.18	Appropriately sized **grease interceptors** are provided for facilities with food service.	3	4	12	Appear to be two interceptors with a total capacity of 4,000 gallons. This may be undersized for the DMMWRA requirements for the facility.
6.19	**Roof drainage** systems are sized appropriately and overflow drainage systems are installed.	5	2	10	Multiple roof areas do not have secondary drainage.
6.20	**Restroom fixtures** comply with DMPS preferences.	3	4	12	Restrooms were indicated to function well. Observed flush valves are automatic and faucets are manual.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

Maintainability

		Weight Factor	Rating	Points	Comments
6.21	Equipment is provided with **adequate service clearance** to allow for regular maintenance	3	4	12	Generally appears to be true. Access to a few areas is limited.
6.22	AHUs and chiller are provided with **coil pull space.**	2	4	8	Appears to be true for most AHUs. May be issues with units at mezzanine serving gymnasium area.
6.23	**Filter** sizes are standard and filter types are standard.	2	4	8	Variety of sizes/types with AHUs, heat pumps, and roof-mounted equipment. Does not appear unreasonable for facility of this size.
6.24	**Equipment mounting heights** are reasonable.	3	5	15	Generally appears to be true.
6.25	**Floor surfaces** throughout the mechanical room are non-slip and are dry.	2	5	10	Appears to be true.
6.26	**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	Generally appears to be true.
6.27	Appropriate means are provided for **airflow and water balancing.**	3	5	15	Generally appears to be true.
6.28	**Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location?	2	0	0	No hose bibbs observed at roof. Wall hydrants are at grade, however most of the building is 2-stories or higher. A few roof-mounted units are equipped with condenser coils.
6.29	**Fall protection** is provided for equipment within 15 ft of roof edge.	2	0	0	No fall protection observed. Numerous pieces of equipment are within 15' of a roof edge.
6.30	**Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain.	4	5	20	Appears to be true.

MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

Occupant Safety

		Weight Factor	Rating	Points	Comments
6.31	**Backflow prevention** is provided at all **cross-connections** to non-potable water.	5	5	25	Appears to be true.
6.32	Building is fully **sprinklered.**	5	4	20	Both automatic wet and automatic dry zones serve building. Concern with corrosion at fire protection system service entrance (in pool equipment room). Separately, no standpipe was observed on stage area (believed to be required).
6.33	**Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly.	5	0	0	None observed.
6.34	**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.
6.35	**Emergency boiler stop switches** are located at exits from boiler rooms.	5	4	20	Emergency stop is provided, but there appears to be only one exit from the boiler room. Two exits are likely required by State Boiler code.
6.36	**Refrigeration evacuation systems** are provided in rooms with chillers.	5	N/A	0	N/A.
6.37	**Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment.	5	5	25	True.
	TOTAL			547	

E | Electrical

ASSESSOR: D. Carlson/R. Hedgepeth/A. Contreras

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	3	15	Access to building 2000kVA transformer is partially blocked by parking spaces directly in front of fenced enclosure gates. In an emergency, a line truck would be capable of lifting a new transformer over the obstructions, but damage could be done to cars that are in the way.
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	3	9	Main distribution panel FDP is a GE Spectra Series Switchboard rated at 4000A, accessed off of a building wrestling room. Medium equipment related to wrestling activities is present in FDP working clearance (-2 points).
7.4	The **MDP** appears serviceable.	4	4	16	FDP installed in 2002 (-1 point for age greater than 10 years).
7.5	The MDP is **maintainable.**	3	5	15	
7.6	The MDP will support **future expansion.**	4	4	16	Of 25 positions, 9 remain as spare or space for future expansion (-1 point for less than 50% spare capacity).
7.7	The Distribution Panel **environment is safe**, has adequate clearances and exiting.	4	3	12	Scores are average of all distribution panels observed. Observed HDPE, HDP1, HDPS, and LDPS. Clearances are adequate for HDPE (5), HDPS (5), and LDPS (5). HDP1 does not meet the minimum 3' clear working space (0). No project recommendation for HDP1 as building structure is in clear area.
7.8	The Distribution Panel appears **serviceable.**	4	4	16	All 480V Dist. Panels were installed as part of a major renovation in 2002 (4 Rating x 3). Existing 208V Dist Panels were backfed as part of this project. All existing Dist. Panels were of Square D make and older than 25 years, but in good condition (3).
7.9	The Distribution Panel is **maintainable.**	4	4	16	GE breakers are still readily available (5). Square D breakers of that vintage are more difficult to procure, but still available (3).
7.10	The Distribution Panel will support **future expansion.**	4	3	12	HDPE is at capacity, with no space for expansion (0). HDP1 has 13/24 positions open as spare or space for future expansion (5). HDPS has 4/11 positions available (4).

E | Electrical

ASSESSOR: D. Carlson/R. Hedgepeth/A. Contreras

		Weight Factor	Rating	Points	Comments
7.11	**Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable.	2	4	8	The vast majority of panels in East High are of newer GE make, at least by Square D in the 1960's. Older panels than that are still in service, such as Panels FB, EB, DB, and GB are of older Kinney/Westinghouse make and should be replaced.
7.12	Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities.	1	5	5	
7.13	Building has adequate **exterior lighting** to promote safety and security of the property.	5	4	20	Good lighting on North, South, East, and parking areas. West side of building and pathways to student parking west of the building are dimly lit and could be improved by adding walkway lighting.
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	2	8	MDF rack is very well organized and neat, but remainder of room is cluttered with storage. Trash bins are overflowing, and all filters on equipment are in need of cleaning as they are clogging with dust.
7.15	MDF Equipment Racks have adequate space for **future growth.**	4	4	16	13 of 45 units on the data rack are available for more equipment (-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	Panel LD1 in MDF is fed from a 20kVA UPS backed up by a Kohler ATS and generator.
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	4	4	Panel LD1 (two sections, one GE 18 position, another Square D 16 positions) have 5 spare and 10 spaces available for future growth. (-1 point for less than 50% spare capacity.
7.19	MDF employs up-to-date **network cabling.**	2	4	8	Majority of cabling present 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	3	3	IDFs/FEX fed via OM3 MM cable.

E | Electrical

ASSESSOR: D. Carlson/R. Hedgepeth/A. Contreras

		Weight Factor	Rating	Points	Comments
7.21	MDF has adequate **grounding busbar capacity.**	2	3	6	Grounding busbar is by Harger, a lightning protection company. As such, busbar does not have pre-drilled lug holes. Racks housing fiber distribution panels and cable tray are missing grounding connections. IDF-1S/FEX 111 rack is not grounded despite having a local grounding bus.
7.22	Building is equipped with an **addressable fire alarm system.**	5	3	15	Simplex 4100ES panel. 1 trouble alarm present during assessment.
7.23	Building is equipped with an **access control system.**	5	2	10	Of 17 exterior doors, 7 were observed to have access control. Recommend investigating feasibility of adding card readers to more exterior doors equipped with exterior door hardware.
7.24	Building is equipped with a **CCTV system.**	5	5	25	Exterior cameras are generally render good images after dark. Pole mounted camera on west side of building renders in black and white due to poor west side lighting.
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	Building utilizes Simplex time clock system (-1 for deviation from current DMPS standard, Primex wireless).
	TOTAL			346	

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	Interiors are worn. Ceilings are missing inside of cabs. There is a roof leak in the elevator C hoistway.
8.9	**Maintenance** is adequate.	1	3	3	Pits need debris cleaned.
8.10	**Testing** is up to date, and all **record and logbooks** are present and filled out.	1	0	0	Testing has not been completed per State requirements.
	TOTAL			56	

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

Weightlifting Benches Repair	3 weightlifting benches need upholstery repairs, or replacement.
Restroom Partition Repair	ADA stall door in restroom 094 is damaged. Repair partition door hinge.
Sealant Install	Install sealant between countertop and backsplash in room 2066 to extend the life of the countertop assembly.
Restroom 043 Repairs	Restroom 043 is missing a fixture over the light bulbs. The smoke/fire alarm is covered. Light fixture should be repaired or replaced and smoke/fire detector should remain un-covered. The door had been locked to restrict access during the time of the assessment.
Pest Management	Many areas of the building have evidence of mice or other pests. Traps were visible in some areas. Pest management should be provided until the issue has been resolved.
Nurse Room Privacy	Add curtains into Nurse's room. 2 curtains for openings 4'x7' into cot rooms. 1 curtain or blind for the window between the nurse office and the exam spaces.
Door Security Adjustments	Entry 5 has one leaf (next to electric strike) that is not latching consistently. Entries 6,11, 12, and 18 plus both sets of doors at South Courtyard do not consistently latch. Adjust/repair as necessary.

Door Hardware Modifications	Replace thumb turn deadbolt at exterior door in 1116 (1 story above grade) with double-keyed deadbolt.
Roof Cleaning	Remove debris from roof low spots, drains, overflows, gutters, and other areas where it collects so that the roof membrane remains in good condition and sheds water efficiently as designed.
Replace Detectable Warning Panels	Replace the missing detectable warning panels to improve safety across site. For locations, refer to the civil site plan exhibit found in the appendix of this report.
Erosion Repair	Add soil, sod, and install TRM to prevent further erosion. For location, refer to the civil site plan exhibit found in the appendix of this report.
Railing post replacement	Replace loose railing post at ramp East of room 1116. (1) location. Recommend immediate replacement.
Clean Combustion Air Intake	Clean combustion air intake near roof of boiler room. Intake is currently full of leaves/debris. Likely requires a lift or scaffolding to access.
Remove Storage From MDP Clearance	Relocate wrestling equipment and storage from FDP working clearance (3'-6").
Clean MDF	Remove storage materials and trash from MDF. Clean all equipment and equipment filters.
MDF Grounding	Install #6 grounding conductor from TMGB to equipment racks housing fiber distribution equipment. Install #6 grounding conductor to cable tray serving fiber equipment racks.
FACP Trouble Code	Investigate trouble alarm on FACP.

Secure Loose Conduit	Secure conduit at south door of auditorium and protect from future damage.	
Repair roof leak	Repair the roof. Water was leaking down the front side of the elevator hoistway.	

1 - 2 Year Priority

		Project Costs
Ceiling Replacement	Several locations have 12"x12" adhered ceiling tiles that should be replaced. Vestibule ceilings should all be replaced with gypsum board ceilings. Approximately 750 SF. Wrestling room 038 ceilings should be replaced with standard ACT tiles and grid. Approximately 3,000 SF. Wood Shop ceilings should be replaced with ACT ceiling clouds, panels and grid. Approximately 2,100 SF. Replace 2'x2' ACT ceiling panels throughout the building that are showing damaged or water stains. Approximately 2,500 SF.	$140,000
Masonry Repoint	Repoint Masonry in the interior of the industrial arts room, 058. Approximately 250 SF.	$10,000
Interior Refinish, partial	Miscellaneous painting touch up throughout classrooms. Approximately 5,000 SF. Replace demountable partitions in rooms 2007, 2008, 2011, and 2012 with acoustically separated gypsum walls. Approximately 1500 SF of new wall construction, approximately 120 LF of new wall base.	$55,000
Roof Access Installation	Provide guardrail around roof hatch at roof H and J. Provide the following roof ladders: 6 VLF (2) ladders from roof J to lower, connectors to roof H 12 VLF ladder from roof area M to N. 8 VLF ladder from roof area U to O. Re-anchor ladder from roof area U to R so that it is not loose and add 2 LF horizontal extensions at top.	$25,000
Replace Exterior Doors/Frames	Remove and replace door(s) and frame at Entry 3 (Room 003), Entry 6 (Gym 093), Entry 9 (Class 058), Entry 11 (Class 061), and Entry 18 (SW Cafeteria, etc. exit). (1) Single door, (2) double doors, (1) double door with transom, and (1) double door with sidelight.	$90,000

Repair/Repaint Exterior Doors/Frames, Steel Windows and Lintels	Remove surface rust as necessary and repaint all steel doors and frames: Entries 1-3, 6-9, 11-14, 16, 18, 19, 23, and exterior door at Classroom 1116. (1) single, (1) single with transom, (6) double, (3) double with sidelights, (7) double with transom, and (1) double with transom and sidelights. Paint OH garage door and jambs at Classroom 058 (100 SF). Repaint HM window frames at east wall of Classrooms 058, 061, and 047 ((21) 4'x8' units with (2) intermediate horizontal mullions each), and at east wall of Classroom 1116 ((14) 4'x8' units with (2) intermediate horizontal mullions each at one floor above grade). Repaint louver (6 SF) at south wall Classroom 047. Repaint security mesh screening at west side of 1921 Building (5) @ 8'x4', (8) @ 8'x8', and (2) @ 8'x16'. Paint steel lintels at north side of Natatorium 006, at north and east sides of East Gym 093, at east side of Classrooms 047, 061, 058, and 1116, at south end of soffit of Entry 16, at north wall of Classrooms 2021-2030, and at north wall above Entry 1. (Approximately 350 LF @ 6" width.) Paint underside of canopy at Entry 1 (Approximately 150 SF.)	$65,000
Pavement Replacement	Remove and replace 166 SY of PCC and 1,869 SY of asphalt. For locations, refer to the civil site plan exhibit found in the appendix of this report.	$270,000
Curb Repairs	Return damaged curbs to new condition. Approximately 79 LF of 6" curbs. For locations, refer to civil site plan exhibit found in the appendix of this report.	$9,000
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 115 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$20,000
Install Curbing	Install 115 LF of curbing to prolong life of pavement and reduce maintenance of parking blocks. For location, refer to the civil site plan exhibit found in the appendix of this report.	$13,000
Replace Wall Corner	Replace the corner cap of the landscaping wall. For location, refer to the civil site plan exhibit found in the appendix of this report.	$10,000

Concrete repair	Repair spalled concrete at exterior ramp East of room 1116. 5 sq. ft. x 4" max depth.	$8,000
Add Secondary Roof Drainage	Add secondary roof drainage to areas with only primary drains. Occurs primarily at original building and North and South additions to original building.	$140,000
Add Standpipe to Stage	Confirm requirements for standpipe at stage and add standpipe connection unless determined not to be required.	$120,000
Thermostatic Mixing Valve(s) Installation	Add central digital thermostatic mixing valve(s) to limit domestic hot water temperature.	$13,000
Fall Protection Installation	Add fall protection at multiple roof locations where equipment is less than 15 feet from roof edge.	$180,000
Panel Replacement	Replace antiquated Kinney/Westinghouse electrical panels with new in same location. Estimate accounts for (4) 208/120V, 42 position, 200A main lug only panelboards. More panels in this condition may be present elsewhere in the building.	$65,000
Telecom Cable Relocation	Data cabling in Athletic Activities Office 1109 is run across the floor and presents a tripping hazard. Provide new cabling below floor into poke-through floor box below conference table.	$12,000
Roof Conduit Replacement	Replace 20 LF conduit at west side of roof H. Rehang conduit at west side of roof V, approx 40 LF. See appendix for roof identification plan.	$7,000
Exterior Lighting Installation	Add pedestrian scale lighting to drive and walkways on west side of building to increase camera visibility and safety between building and student parking lot.	$20,000
Elevator Ceiling Installation	Install ceilings in elevator cabs.	$25,000
	Total 1-2 Year Project Costs:	**$1,297,000**

3 - 4 Year Priority

		Project Costs
Door Refinishing	Interior of classrooms single door with single frame approximately - 17 doors average 10 sf / door. Paint doors and frames - 4 single door leaves and frames. 8 double doors and frames.	$20,000
Flooring Replacement, Partial	Ramp and stair risers flooring replacement in rooms 1059 and 4009. Rubber sheet flooring applied to the ramp floor, approximately 400 SF total. Repaint stair risers, 15 SF, in room 1059. Paint stair risers at 4 stairways - outside rooms 1043, 1046, 1069, and 1081 - approximately 250SF total. Replace 150 sf stained VCT with LVT tile in room 3013. Replace 250 SF of stained VCT with LVT tile in room 1073.	$13,000
Corridor Refinish	Paint and graphics should be utilized to refinish corridor areas on all levels. Approximately 36,000 SF of paint. Approximately 2,000 SF of wall graphics could also be utilized to promote school spirit and enhance wayfinding strategies.	$170,000
Exterior Door Replacement	Replace single wooden door and frame at roof V with metal door and frame. See roof identification image in appendix for location information.	$13,000
Exterior Masonry Repairs	Re-point masonry at the following locations. 100 SF at walls facing roof Q where necessary (not full wall) -- north and east sides. 5 SF at south side of roof O. 1 SF at bottom of window jamb overlooking roof K where stone is damaged. 8 SF at both inside corners of pilaster at S side of roof R. 10 LF stone joint at west wall of Classroom 2030. 10 LF stone joint on east wall of Classroom 2021. 10 LF stone joint on south side of Media Center 1085. Patch 100 SF deteriorated stone at east, south, and west sides of Media Center 1085.	$14,000
EIFS Wall System Repair	Repair cracking / damage on EIFS wall system at the following locations (quantities are approximately): 20 SF around roof A. (include very tall lift in price) 250 SF at walls around roof D. 250 SF at walls around roof G. 1 SF near roof access door at roof K. 300 SF around windows overlooking roofs L and P. 20 SF near grade at Entry 1. 40 SF near grade at Entry 18.	$25,000

Exterior Sealant Replacement	Replace sealant at the following locations. Where parapet meets a vertical transition to a higher parapet or wall: 4 LF at NW corner roof F 4 LF at SE corner of roof C 8 LF at NE and NW corners of long, 6'+ tall, metal sided extrusion along east/ north-east of roof H 6 LF total at both ends of parapet at E end of roof U 4 LF total at NE and SE of roof N At masonry soft joints and EIFS: 50 LF top of joints between stone cornice at mid-height of wall along east side of roof H 100 LF at wall between roof S and V 12 LF at inside corner of SW of roof U 20 LF total wide joints at inside corner near NW and SW corners of roof O 150 LF in wall between roof L and roofs M, N, and O 40 LF at west wall of roof T 124 LF at south wall of Roof T 900 LF at north and east walls of East Gym 093. 38 LF at (38) joints in stone window sills at east wall of Classrooms 058, 061, 047, and 1116. At windows: 10 LF window facing north, overlooking roof K 160 LF around windows in wall between roof P and Q 84 LF at jambs and sill of windows at S wall of roof U 80 LF at translucent window panes at SW corner of roof T. 130 LF total at (4) windows on north, east, and south walls of East Gym 093. 250 LF at (9) windows above north and east walls of Entry 1 vestibule. At conduit / pipe penetrations: 4 LF at NW corner of roof B 1 LF near wooden access panel at SE corner roof H. 8LF at roof ladder anchors between roof U and T.	$30,000
Repair/Repaint Exterior Soffit	Replace water damaged gypsum soffit panels at perimeter of Level 2 soffit at 1971 Addition (Media Center 1085). Repaint entire soffit. 700 SF replacement; 1,900 SF paint.	$20,000
Pavement Replacement	Remove and replace 578 SY of PCC and 2,624 SY of asphalt. For locations, refer to the civil site plan exhibit found in the appendix of this report.	$460,000
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 60 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$13,000

Intake Repair	Repair the intake walls of one intake. For location, refer to the civil site plan exhibit found in the appendix of this report.	$9,000
Pool Stair Improvements	Replace 25 L.F. of loose railing, located at the upper level, first row of seating, between the 3rd and 4th steps from the west. Repair spalled concrete in (2) locations located at the upper level, first row of seating, 2nd and 3rd steps from the West. Each location has 36 sq. ft. x 6" of concrete needing repair. Replace 6" x 2'-6" x 2'-6" of concrete curb at stairs that go down to the pool deck from the seating area. New concrete should have #4 bars @ 12" O.C. horizontals and verticals. #4 dowel bars to match curb reinforcing spacing, 2'-0" total length, Hilti HIT HY 200 V3 epoxy (6" min. into existing concrete). Replace 12 L.F. of railing, located at stairs that go down to the pool deck from the seating area.	$60,000
Concrete repair for exterior railing	Repair concrete at (2) railing locations East of room 1109. 1 cubic yard of concrete per location.	$6,000
CMU wall repair in gym	Repair stair step crack in exterior CMU wall in room 042, located on the south wall (east end). 4 L.F. of crack.	$6,000
	Total 3-4 Year Project Costs:	**$859,000**

5 - 10 Year Priority

		Project Costs
Flooring Replacement, Partial	Flooring replacement in several areas. Epoxy flooring replacement in industrial arts rooms 058 and 061,approximately 5,000 SF. Broadloom replacement with carpet tiles, approximately 41,500. Install carpet tiles over prepared concrete floor in level 4 classrooms, approximately 6,400 SF.	$710,000
Roof Replacement	Remove approximately 134,000 SF of PVC roofing and insulation over roof areas B, D, E, G-R, & T-V. Install code compliant insulation and TPO roofing. Approx. year 2031-36.	$4,300,000
Roof Blocking Replacement	Replace approximately one third of 4x4 wood blocking supporting piping at roof J. Replace all of 4x4 wood blocking supporting piping at roof S and replace with longer pieces that do not roll over. Approximately 350 LF 4x4 blocking.	$13,000

Rooftop Repainting	Repaint the following metal elements at the roof, removing light surface rust where present: 16 SF roof hatch, roof J. Single door to access roof, roof K. 100 SF ductwork and unit at S side, roof H. 100 SF ductwork and unit at N side, roof H. 10 SF at mechanical unit north of center, roof H. 40 SF at ventilator at north end of roof H. 10 SF at lintels of (4) windows overlooking connectors to roofs B and J. 240 SF ductwork and ventilators at S end of roof L. 240 SF for (6) ventilators at roof P. 400 SF ductwork at east end of roof R. 300 SF ductwork at center of roof R. 1000 SF ventilators at roof S. 100 SF ventilators at roof V. 1,600 SF steel at equipment at roof Q. Repaint roof ladders: 10 VLF ladder from roof R to S. 10 VLF ladder from roof S to V. Repaint the following wood elements at the roof: 24 SF total for (4) access panels to covered roof curbs at the four corners of roof H. Repaint the following stone elements at roof: 40 SF total for sills at windows at roofs D and G. See appendix for roof identification plan.	$50,000
Exterior Sealant Replacement	Replace sealant at the following locations. At flashing where roof meets wall: 16 LF at SW connector between roof B and H 136 LF at west wall of roof V. 130 LF at west wall of roofs M, N, and O. 320 LF at west wall of roof K, including north and south wrap around of roof H. 10 LF at sill of wall at SE corner of roof Q.	$13,000
Window Wall Repalcement	Remove steel framed window walls surrounding Entries 20 and 21 and at east and west ends of the north and south courtyards. Install aluminum curtain wall with insulated glazing and pair of aluminum doors at each location. (200 SF at each of Entries 20 and 21. 360 SF at each of (4) courtyard locations.) Replace damaged insulating glass units in clerestory windows at north and south end of Roof N (above M and U.) 80 SF total.	$490,000
Pavement Replacement	Remove and replace 850 SY of PCC and 9,177 SY of asphalt. For locations, refer to the civil site plan exhibit found in the appendix of this report.	$1,800,000

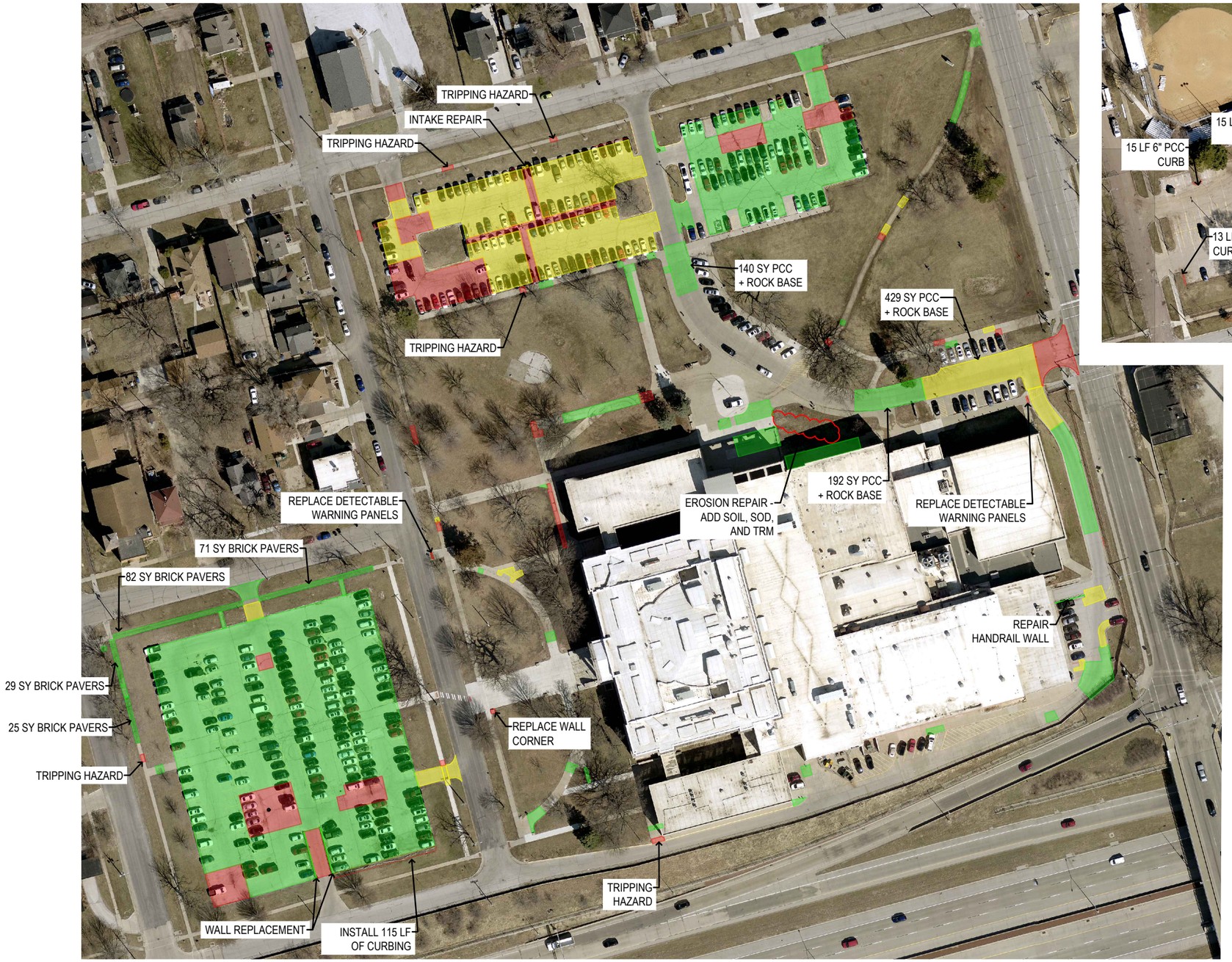
Sidewalk Repairs	Repair damaged sidewalks across the site. Approximately 646 SY. For locations, refer to civil site plan exhibit found in the appendix of this report.	$150,000
Replace Brick Pavers	Replace 207 SY of brick pavers. For locations, refer to civil site plan exhibit found in the appendix of this report.	$25,000
Replace Ramp Walls	Replace the two deteriorated parking ramp walls. For location, refer to civil site plan exhibit found in the appendix of this report.	$70,000
Repair Handrail Wall	Repair the handrail wall to return it to good condition and extend life of the handrail. For location, refer to civil site plan exhibit found in the appendix of this report.	$10,000
Concrete Stoop Replacement	Replace concrete stoop just south of room 1081. Stoop is 16' wide x 24' long. This includes the top landing and stairs. CIP stairs to have #4 nosing bars, and #4 horizontal reinforcing ea. Way at 12" o.c. Top landing to have #4 bars @ 9" o.c. ea. Way in 5" slab. Provide 8" stoop walls that extend a minimum of 3'-6" below grade with #4 bars @ 12" o.c. ea. way.	$70,000
Concrete Repair at Concrete Canopy	Repair spalled concrete on underside of concrete canopy outside of room 1121. 50 sq. ft. x 6" max depth.	$65,000
Steel Column Repair	Repair minor rusting located at bottom of (2) wide flange columns in room 26. 20 L.F. x 24" per column.	$7,000
Concrete Slab Repair	Repair spalled concrete in (2) locations on the underside of the structural slab in tunnel below room 1029 where there is exposed rebar. 16 sq. ft. total x 6" max depth.	$25,000
	Total 5-10 Year Project Costs:	**$7,798,000**

Projects Requiring Study

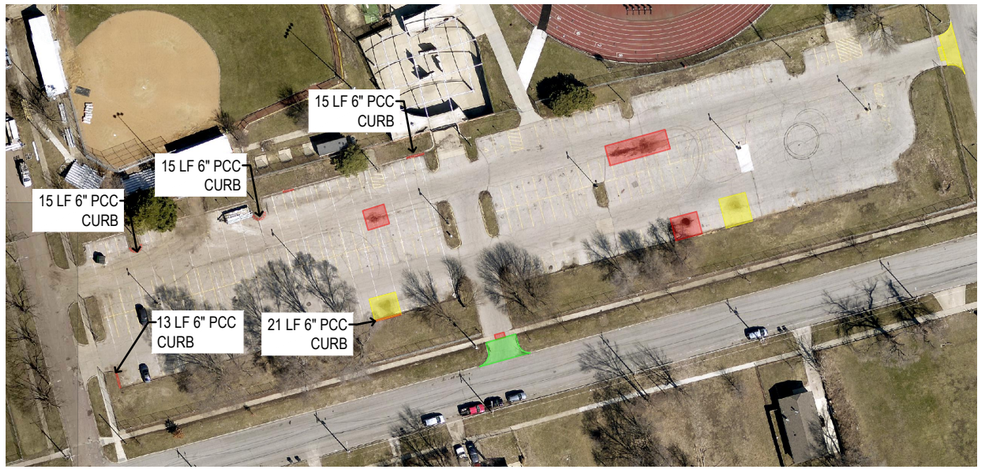
		Design Services Fee
Way Finding Study	Wayfinding study should be completed to increase signage or utilize colors to connect wings or split levels. Identifying proper exit pathways and providing some intuitive wayfinding is important to student safety, especially in the event of relying on emergency personal to navigate the building. **This study should be prioritized.**	$10,000
Spatial Study Targeting Underutilized Space	A study should be conducted to repurpose the underutilized light wells and consider drama scene shop relocation. The current scene shop is overcrowded and lacks any space for movement or working within the room.	$15,000
Water Infiltration Study	Room 1064 has major damage at the northeast wall. This study will likely require some minor exploration demolition to open up the wall.	$5,000
Power Improvements	Select rooms appear to have a need for additional power access. A study should be conducted to determine the best way to add power in the areas of the most need. This could be done with furniture selection, under carpet power access points, or other wall mounted systems. Cord management should be considered for all furniture options.	$12,500
Designated Hardened Area	No designated hardened area was observed. Study to determine the feasibility of adding a designated hardened area to the building including location within the existing building, schematic design concept if deemed feasible, and preliminary project costs.	$2,500
HVAC Retrofit/Replacement	Study to determine appropriate phasing and design for HVAC system retrofit/replacement. Areas to consider include use of steam moving forward, addition of cooling to gym and pool, suitability of existing system configurations for future, etc. **This study should be completed ahead of any HVAC replacement work.**	$50,000
	Anticipated Capital Investment: $29,700,000	
Water Service Entrance Corrosion	Particularly for fire protection water service entrance, review options to address significant corrosion due to pool equipment room environment in which service entrance is located.	$7,500

Anticipated Capital Investment Costs:	**$29,700,000**
Total Study Design Service Fees:	**$102,500**

APPENDIX



STADIUM PARKING LOT



PAVEMENT QUANTITIES (SY)

	SIDEWALK	PCC	ASPHALT
	646	850	9177
	60	578	2624
	115	166	1869

5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

120 0 60 120 240

bbs ARCHITECTS ENGINEERS

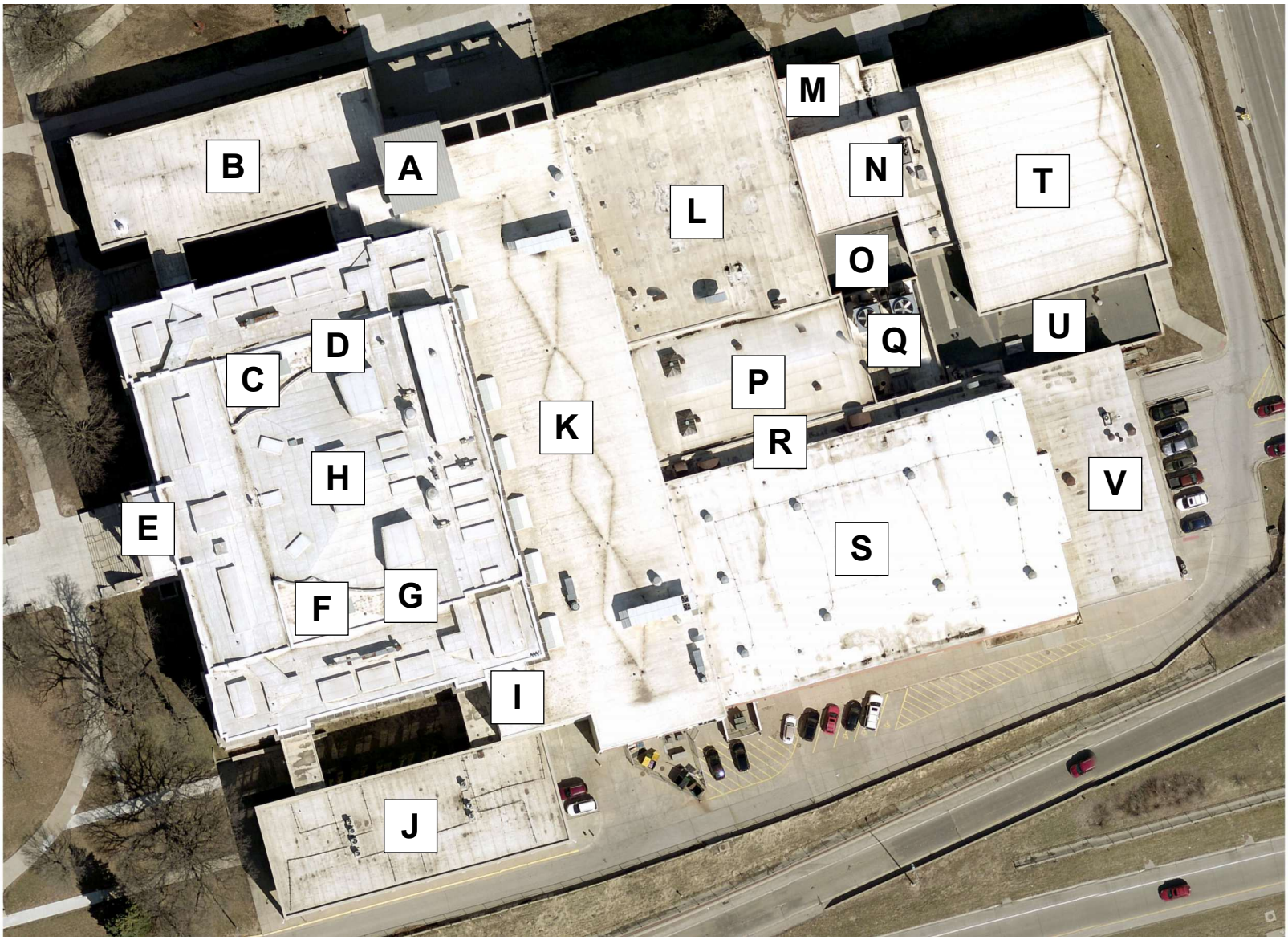
BISHOP ENGINEERING +

EAST HIGH SCHOOL

EXHIBIT

PROJECT # 230286-49

DATE 3/1/2024



N

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
[School Name]
[Assessment Date]

DesMoines PUBLIC SCHOOLS

EAST HIGH SCHOOL

815 E 13TH STREET
DES MOINES, IOWA 50316

FOUNDATION

NORTH

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EAST HIGH SCHOOL

815 E 13TH STREET
DES MOINES, IOWA 50316

FIRST FLOOR

NORTH

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EAST HIGH SCHOOL

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DES MOINES, IOWA 50316

SECOND FLOOR

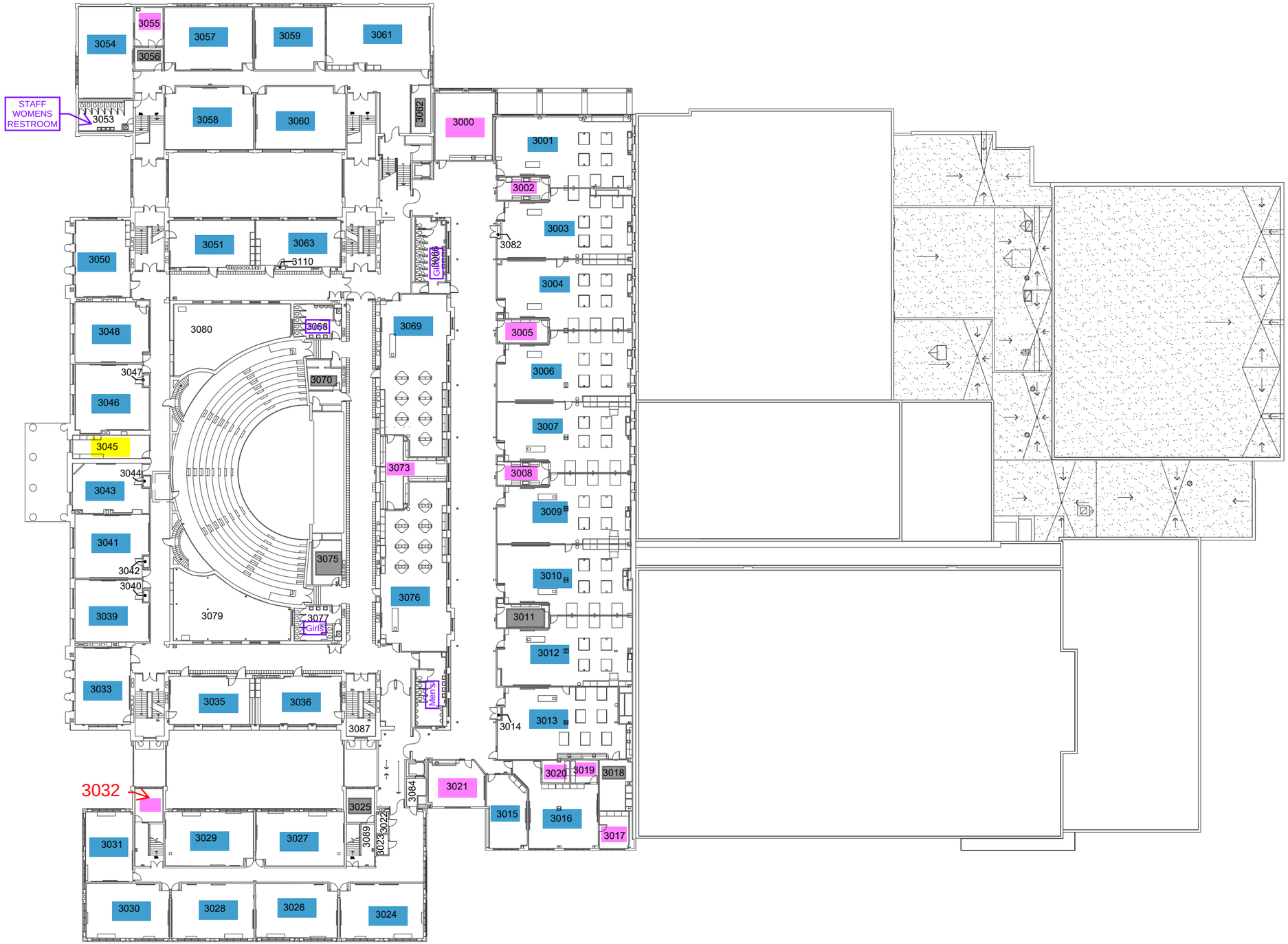
NORTH

EAST HIGH SCHOOL

815 E 13TH STREET
DES MOINES, IOWA 50316

THIRD FLOOR

NORTH



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DES MOINES, IOWA 50316

FOURTH FLOOR

NORTH