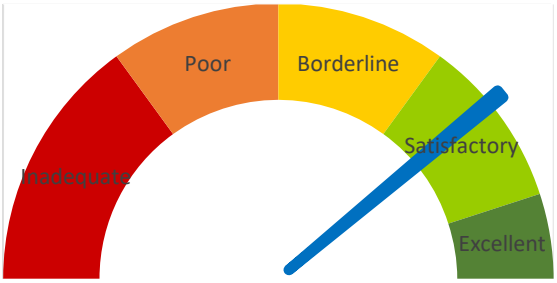
# DMPS FACILITY ASSESSMENT | ROOSEVELT HIGH SCHOOL

03.06.2024

bbs
ARCHITECTS
ENGINEERS

219 Eighth Street
Suite 100
Des Moines, IA 50309
515.244.7167

www.bbsae.com



# REPORT ORGANIZATION

# EXECUTIVE BUILDING SUMMARY

Roosevelt High School's on-site facility conditions assessment was conducted on March 6, 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 Roosevelt High School are: interior door hardware repair, restroom deep cleaning, door security issues, roof repairs and cleaning, plumbing leak repairs, clearing electrical clearance areas, MDF grounding, CCTV camera repairs, and interior and exterior lighting repairs.

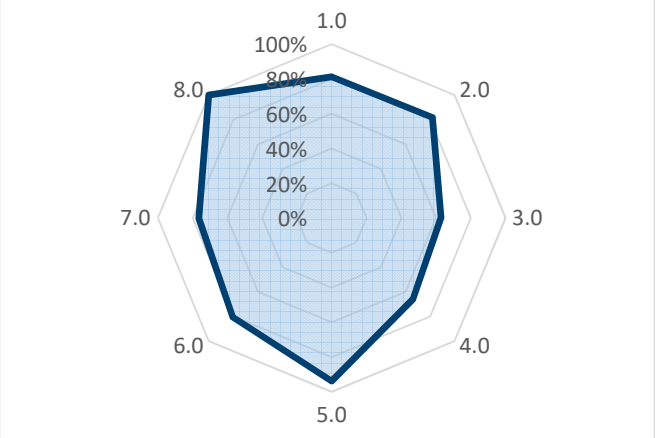
The assessment of Roosevelt High School identified a sizable list of projects that should be addressed in the next 1-2 years. Some of the highest priority items for the 1-2 year projects are:

- Exterior wall restoration and plaster wall replacement
- Exterior painting
- Athletic facility power distribution replacement
- Pavement, curb, and sidewalk Repairs
- Ceiling tile replacement
- Wood flooring repairs
- Pool wall repair
- Restroom fixture upgrades
- Exterior lighting

These projects, along with all of the recommended potential projects at the 1-2 year, 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 | 235 | 191 | 2.00 | 470 | 382 | 81% | Satisfactory |
| 2.0 | Environment for Education | 360 | 295 | 0.60 | 216 | 177 | 82% | Satisfactory |
| 3.0 | Exterior Envelope | 105 | 66 | 3.00 | 315 | 198 | 63% | Borderline |
| 4.0 | School Site | 100 | 66 | 1.50 | 150 | 99 | 66% | Borderline |
| 5.0 | Structural Conditions | 145 | 136 | 1.30 | 189 | 177 | 94% | Excellent |
| 6.0 | Mechanical Systems | 700 | 564 | 0.80 | 560 | 451 | 81% | Satisfactory |
| 7.0 | Electrical Systems | 455 | 348 | 0.75 | 341 | 261 | 76% | Satisfactory |
| 8.0 | Elevator Conditions | 65 | 65 | 1.00 | 65 | 65 | 100% | Excellent |
| **Total** | | | | | **2,241** | **1,745** | **78%** | **Satisfactory** |

**Roosevelt 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 Roosevelt High School scored a building health rating of 78% 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. Roosevelt High School is within this positive range. Significant improvement projects focused on the exterior envelope, school site, and electrical systems are necessary to increase the building's performance score toward Excellent.

# Building Data Record

Building Name: Roosevelt High School

Date: 3/6/2024

Address: 4419 Center Street
Des Moines, IA 50312

High School Feeder System: --

Building SF: 306,722 square feet

Site Acreage: 21.06 acres

Date(s) of Construction: 1923, 1961, 1970, 2010, 2012

Date(s) of Roof Replacement: 2000, 2009

Current/Scheduled Projects:
Flooring Renovation - 2024
Library Renovation - 2024
Wrestling Mat Replacement - 2024
Exterior Restoration and Doors - 2024
Main Office Renovation - 2024
Exterior Concrete - 2024
Auditorium Stage Flooring Renovation - 2024
Parking Lot Lighting - 2024

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

Site Items:
- [ ] Student Garden
- [ ] Loading Dock
- [x] Stormwater Detention

Energy Source:
- [x] Electric
- [x] Gas
- [x] Geothermal
- [ ] Solar

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

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

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

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

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

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 | 4 | 4 | Several rooms with matte finish VCT flooring is showing wear at a greater rate than ideal. Likely the wrong product for these spaces. |
| **Athletics** | | | | | |
| 1.2 | **Gymnasium(s)** are accessible and in good condition. Space is adequate for practice and competition. | 3 | 4 | 12 | Gymnasium 1670 need acoustic improvements. |
| 1.3 | Athletic department is supported with adequate **training and practice spaces.** | 1 | 4 | 4 | Weight room is located on the gym balcony, This is space is adequately sized, but lacks any defining character. Many weight benches were in disrepair. |
| 1.4 | Athletics are supported by adequate **locker rooms** for each sport. | 2 | 4 | 8 | 6 locker rooms. Locker room labeled "Boys Basketball" is quite a ways from the main gym. Locker rooms are in fair condition. Floors are stained/worn, and the rooms lack any defining character - color, graphics, etc.. There is no gender neutral or assisted locker room near the pool. |
| 1.5 | **Natatorium** is accessible and in good condition. Space is adequate for practice and competition. | 2 | 3 | 6 | Seating is showing significant wear, seating spaces are dark. Pool deck is accessible but the walk paths are narrow. |
| **Arts** | | | | | |
| 1.6 | **Vocal music room** is adequate for providing music instruction. | 2 | 4 | 8 | Acoustic improvements are needed in the vocal music room. |
| 1.7 | **Band room** is adequate for providing music instruction. Practice and storage rooms are sufficient to support use and instruction. | 2 | 5 | 10 | |
| 1.8 | **Orchestra room** is adequate for providing music instruction. Practice and storage rooms are sufficient to support use and instruction. | 2 | 5 | 10 | |
| 1.9 | **Auditorium** has sufficient arrangement, technology, and acoustics for program. | 2 | 4 | 8 | Auditorium balcony is not used. Stage floor is wood and showing wear with minor gouges and a few floor boards with minor holes. |
| 1.10 | **Industrial Arts** space has sufficient accommodations for program. | 2 | 0 | 0 | No industrial arts spaces present. Previous wood shop has been reallocated as scene shop and storage for drama department. |

# A | Architectural, Programming

ASSESSOR: Kaela Shoemaker / Tim Bungert

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 1.11 | **Art room** has sufficient accommodations for program. | 2 | 3 | 6 | Outstanding daylight from skylights. Kiln was provided with protected flooring, but separated from the main space with stand-alone storage. Drying storage and additional storage cabinets are located in the corridor. |
| 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 | N/A | 0 | Library is currently under renovation and was not assessed. |
| **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 | 5 | 15 | |
| 1.17 | **Classroom power and data receptacles** are located to support current classroom instruction. | 4 | 4 | 16 | 7 classrooms were noted to have extension cords or several power strips, indicating an additional need for power. |
| 1.18 | Classroom space permits **flexibility of arrangements.** | 4 | 3 | 12 | Many classrooms had over 30 students, significantly limiting flexibility in classroom arrangement and functionality. |
| 1.19 | **Furniture systems** are adequate for the intended use of the space and age of students. | 1 | 4 | 4 | Generally lacking collaborative seating with varied postures and study group arrangements. |
| 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 | |
| **Administration** | | | | | |
| 1.23 | **Conference/Private meeting rooms** are adequate for large and small meetings. | 2 | 5 | 10 | |
| 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 | The main office "welcome center" has a check-in and waiting area, but is visually disconnected from the main entrance. |
| | **TOTAL** | | | 191 | |

# A | Architectural, Interior

ASSESSOR: Tim Bungert / Kaela Shoemaker

## 2.0 Environment for Education

### Design

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 2.1 | **Traffic flow** is aided by appropriate foyers and corridors. | 3 | 5 | 15 | |
| 2.2 | Communication among students is enhanced by **common areas.** | 3 | 3 | 9 | Lobby/corridors near music rooms are great common zones for students. The cafeteria is not as useful as a central gathering space since it is isolated from main corridors and other spaces. |
| 2.3 | Areas for students to i**nteract are suitable to the age group.** | 2 | 4 | 8 | Additional spaces for student interaction and gathering are needed. The library renovation project currently underway will fill some of this need. |
| 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 | Overall, student furniture is in great condition. Room 2280 needs new chairs and power-integrated tables. Roughly 30% of staff desks and chairs throughout the building are worn and in need of replacement. |
| 2.6 | **Color schemes**, building materials, and decor are **engaging and unify** the school character. | 3 | 4 | 12 | 2200s corridor is unremarkable and is not cohesive with the character of the rest of the building. |
| 2.7 | Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces. | 3 | 5 | 15 | Skylights in level 3 art rooms provide excellent light for the spaces. |
| 2.8 | Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces. | 3 | 5 | 15 | Many windows look out at adjacent faces of the building which, fortunately, is a generally attractive view. |
| 2.9 | **Lighting has proper controls** to provide the required light levels for various teaching and learning needs. | 2 | 5 | 10 | |
| 2.10 | **Staff dedicated spaces** include conference space, work space, and dedicated restrooms. | 1 | 4 | 4 | Very few dedicated restrooms for staff were observed. |

# A | Architectural, Interior

ASSESSOR: Tim Bungert / Kaela Shoemaker

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 2.11 | **Main office** is visually connected to the entry as is welcoming to students, staff, and guests. | 3 | 2 | 6 | Main office does not have direct visual connection to the main entrance. The main entrance includes a public-facing "welcome center", but that space also lacks a direct visual connection to the entrance doors. |
| 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 | 3 | 3 | No dedicated mothers room was observed, but a number of small staff-only spaces were noted on level 2 that may be adapted to fulfill this need. |
| **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 | Carpet tile in many rooms is dated and showing signs of wear. Wood flooring in select classrooms is in need of repairs. |
| 2.15 | **Floor surfaces** throughout the support and circulation areas are durable and in good condition.Spaces include corridors, restrooms, storage rooms etc. | 1 | 5 | 5 | |
| 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 | Minor water stains on ceiling tiles along exterior walls in classrooms. Many ceiling tiles adjacent to supply diffusers were noted as dirty. |
| 2.17 | **Ceilings** throughout the support and circulation areas are easily cleaned and resistant to stain. Spaces include corridors, restrooms, storage rooms etc. | 1 | 5 | 5 | |
| 2.18 | **Walls** throughout the learning and common areas are easily cleaned and resistant to stain. Spaces include classroom, offices, labs, cafeteria etc. | 1 | 3 | 3 | Water/moisture damage was noted in many rooms on exterior 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 | 4 | 4 | Tile walls are in need of deep cleaning in most restrooms. Painting and wood finish repairs needed in corridors. |
| 2.20 | **Built-in casework** is designed and constructed for ease of maintenance. | 1 | 5 | 5 | Casework is generally in good to excellent condition. Base cabinet below sink in room 3000 is heavily water damaged. |

# A | Architectural, Interior

ASSESSOR: Tim Bungert / Kaela Shoemaker

| | | 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 | Minor repairs needed to finishes and hardware on interior doors. See project list for more details. |
| 2.22 | **Facility doors** are keyed to standardized master keying system. | 3 | 3 | 9 | The building uses two different master keys between the original building and the additions. Doors in the additions are not consistently keyed one master or the other. |
| 2.23 | **Restroom partitions** are securely mounted and of durable finish. | 2 | 5 | 10 | |
| 2.24 | **Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces. | 1 | 2 | 2 | Outlets in corridors of the original building are very infrequent. |
| **Occupant Safety** | | | | | |
| 2.25 | Classroom doors are **recessed and open outward.** | 4 | 4 | 16 | Most doors are recessed and open outwards. 7 doors were noted as in-swinging and 3 doors swing out and impede corridor traffic. |
| 2.26 | Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.** | 4 | 5 | 20 | Key tumbler on door 2160 is loose. |
| 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 | 5 | 10 | |
| 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: Tim Bungert / Kaela Shoemaker

| | | 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 | 1 | 5 | Third floor areas are isolated and each only have one primary egress stair. Secondary egress for these spaces requires occupants to climb a ladder, traverse a metal walkway across the roof, and re-enter another portion of the building. |
| 2.33 | **Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements. | 5 | 3 | 0 | Lighting in stair 2902 does not appear to be controlled by a switch or occupancy sensor. Guardrails on many stairs do not meet current code for height requirements, but are a grandfathered existing condition. |
| 2.34 | At least **two independent exits** from any point in the building | 5 | 1 | 0 | Third floor areas are isolated and each only have one primary egress stair. Secondary egress for these spaces requires occupants to climb a ladder, traverse a metal walkway across the roof, and re-enter another portion of the building. |
| 2.35 | **Emergency lighting** is provided throughout the building. | 4 | 5 | 0 | |
| | **TOTAL** | | | 295 | |

# A | Architectural , Exterior

ASSESSOR: David Unick

## 3.0 Exterior Envelope

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Design** | | | | | |
| **3.1** | Overall **design is aesthetically pleasing** and appropriate for the age of students. | 2 | 4 | 8 | No significant concerns. |
| **Maintainability** | | | | | |
| **3.2** | **Roofs** appear sound, have positive drainage, and are water tight. | 3 | 3 | 9 | Roofs slope to drains or gutters. Existing modified bitumen areas (Roofs A, B, C, K , L, and M plus Roofs D-J and N-AD are nearing end of service life and should be replaced within 3-4yrs. The other roof areas should have approx 5-7 yrs of anticipated service life. |
| **3.3** | **Roof access** is safe for all roofs. | 3 | 2 | 6 | Primary access to west half of building is via door in corridor. Access to east half of building is only by means of portable extension ladder. Several roof levels have zero access. One ladder requires addition of upper landing and rear-face-of parapet rungs. Roof appears to serve as emergency exit path for 3rd Flr classrooms west of Auditorium. |
| **3.4** | Exterior **window sealant** is fully intact without cracks or gaps. | 3 | 2 | 6 | Window sealant is generally crazing or pulling away from frame/surrounding wall. Sealing replacement should be included in exterior wall restoration project scope. |
| **3.5** | **Glazing** is low-e coated, insulated, and overall in good condition. | 1 | 4 | 4 | Glazing appears to all be insulated with tinted coating. |
| **3.6** | **Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking. | 2 | 4 | 8 | No significant concerns. |
| **3.7** | **Exterior doors** are of durable material requiring minimum maintenance. | 2 | 3 | 6 | All exterior doors are steel. Two units require repair/replacement, while all others require repainting. |
| **3.8** | **Exterior walls** are of material and finish requiring little maintenance, | 1 | 2 | 2 | Most walls consist of brick with limestone accents. Finishes on recent building additions also include EIFS and metal wall panels high on walls. The majority of the building will require restoration effort, including repointing of masonry joints, resealing of soft joints and window perimeters, and repair/replacement of damaged stone and brick. |
| **3.9** | **Exterior Doors** open outward and are equipped with **panic hardware.** | 1 | 5 | 5 | No comments. |
| **3.10** | **Exterior Doors are monitored** or controlled by an access control system. | 3 | 4 | 12 | (2) Doors have security concerns.<br>(7) Entries have card readers.<br>(10) Entries have keyed locksets.<br>(5) Entries have exit-only hardware.<br>(8) of the keyed or exit-only entries have local alarms.<br>All entries have exterior identification numbers. |
| | **TOTAL** | | | 66 | |

ASSESSOR: Jack Gorman Joel Jackson

## 4.0 The School Site

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 4.1 | **Site topography** and grading drains water away from the building and retaining walls. | 1 | 3 | 3 | Around the building is fairly flat, the western side of the site is a low spot and stagnant water was observed in a few locations. Some erosion is taking place as water drains out from the parking lots. Standing water was observed in the NE parking lot but there did not appear to be a drainage issue. |
| 4.2 | **Parking areas** are in good condition. | 5 | 3 | 15 | Most of the PCC pavement is holding up well, the asphalt pavement is cracking throughout and will need replacement in the future. |
| 4.3 | **Drive areas** are in good condition. | 3 | 4 | 12 | Some of the PCC panels are cracking and the drive area pavement around a manhole is crackly badly and has shifted. The asphalt drive areas are also cracking and will need replacement. |
| 4.4 | **Sufficient on-site, solid surface parking** is provided for faculty, staff, and community. | 2 | 2 | 4 | On site parking is tight, cars were observed parking in unauthorized areas like island and on sidewalks. Event parking is helped with the available parking to the east at Hubbell Elementary but it is still challenging. Many students seem to use streets for parking as well. |
| 4.5 | **Sidewalks** around the facility are in good **condition.** | 2 | 3 | 6 | Sections of sidewalk across site need replacement, the south side of the site and the western side of the building are two areas in particular that need work. |
| 4.6 | **Sidewalks are located** in appropriate areas with adequate building access. | 2 | 5 | 10 | All building doors had sidewalk access. |
| 4.7 | **Fencing** around the site is in good condition. | 1 | 5 | 5 | No fencing issues were observed. |
| 4.8 | **Trash enclosure** is in good condition. | 1 | 4 | 4 | There is a gate on the north side of the building that screen the dumpsters from the street. It is a little beat up but still in good condition. |
| 4.9 | **Utilities** are in newly constructed conditions and placed in suitable locations. | 1 | 3 | 3 | An open space intake needs to be cleared of brush and debris and another intake needs to have the concrete apron replaced. All other site utilities are in good condition. |
| 4.10 | **Site has sufficient room** for both building and parking expansion. | 1 | 2 | 2 | The site is limited in space for expansion to the east but the west offers some room for parking expansion. However, the slopes on the west side may require walls. |

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 | 2 | 2 | The main drive to the west of the building experiences a lot of traffic with buses and students and the area can get bogged down. Dismissal is challenging with all the students trying to leave at once. |
| | **TOTAL** | | 66 | | |

# S | Structural

ASSESSOR: Trevor Pullen

## 5.0 Structural Conditions

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Foundations** | | | | | |
| **5.1** | **Foundations** appear to be in good condition with no visible cracks. | 1 | 5 | 5 | |
| **5.2** | There does not appear to be any **foundation settlement.** | 2 | 5 | 10 | |
| **5.3** | **Basement walls** do not appear to have any cracks. | 1 | 4 | 4 | There are some cracks in basement walls, mostly minor. |
| **5.4** | **Stoops** appear to be in good condition. | 1 | 3 | 3 | There is one door missing a stoop and one stoop with significant cracking. |
| **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 | The brick is showing signs of weathering and has a few locations of small cracking and mortar chipping out. |
| **5.8** | **Lintels** appear in good condition (no visible deflection or rust). | 1 | 3 | 3 | Most of the steel lintels have some corrosion. |
| **5.9** | **CMU** is in good condition. | 1 | 5 | 5 | |
| **5.10** | **Precast** is in good condition. | 1 | N/A | 0 | |

# S | Structural

ASSESSOR: Trevor Pullen

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Interior Walls** | | | | | |
| **5.11** | **Interior walls** appear to be in good condition. | 1 | 5 | 5 | |
| **Floor Framing (Elevated)** | | | | | |
| **5.12** | **Floor framing** appears to be in good condition. | 3 | 5 | 15 | |
| **5.13** | Floor framing appears to meet the **code requirements.** | 3 | 5 | 15 | |
| **Roof Framing** | | | | | |
| **5.14** | **Roof framing** appears to be in good condition. | 3 | 5 | 15 | |
| **Miscellaneous** | | | | | |
| **5.15** | **Retaining walls** appear to be in good condition. | 1 | N/A | 0 | |
| **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 | |
| **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: Trevor Pullen

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **5.21** | **Pool Deck** appears in good condition without cracks. | 1 | 4 | 4 | There is some cracking and spalling in one area of the pool wall. RRE performed a site observation and proposed fix on 06/17/2019. As of this assessment, this has still not been fixed. |
| **5.22** | **Balconies** appear in good, stable, condition | 1 | 5 | 5 | |
| **5.23** | **Tunnels** appear to be in good condition without cracks. | 1 | 4 | 4 | There is some cracking in the tunnel walls, but nothing of structural concern. |
| **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** | | | 136 | |

# 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 | 3 | 15 | Unclear based on available information. Drawings needed to verify values. Drawings requested multiple times but never received. |
| 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 | 3 | 15 | Generally appears to be true, but can't be verified without additional drawings. |
| 6.7 | **Building pressurization.** The design takes into account the balance between ventilation and exhaust air | 2 | 3 | 6 | Cannot be verified without drawings. No obvious concerns observed. |
| 6.8 | **Major HVAC Equipment** appears to be within it's acceptable **service life.** | 5 | 3 | 15 | Appears to be true. Console heat pumps may be nearing their end of 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 | 5 | 25 | Generally appears to be true. |

# 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 | Appears to be true for areas served by dedicated outdoor air systems. |
| 6.12 | Appropriate levels of ventilation, cooling and dehumidification are being provided within **Natatorium.** | 5 | 3 | 15 | Numerous issues with pool unit identified. While not at expected useful life, regular maintenance issues may necessitate replacement in the relatively near future. |
| **Plumbing Design** | | | | | |
| 6.13 | **Water Supply Pressure** is adequate to allow for operation of plumbing fixtures. | 5 | 5 | 25 | Generally appears to be true. |
| 6.14 | Appropriate **backflow preventer** is provided at connection to city water supply. | 5 | 5 | 25 | Yes. Dual reduced pressure type backflow preventers. |
| 6.15 | **Domestic hot-water systems** are within equipment operational capacity. | 5 | 5 | 25 | Appears to be true. |
| 6.16 | Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time. | 3 | 4 | 12 | Hot water in reasonable amount of time at tested outlets (metered faucets with separate hot and cold). |
| 6.17 | **Sanitary sewer systems** are sized and sloped to allow for proper drainage. | 5 | 5 | 25 | Generally appears to be true. |
| 6.18 | Appropriately sized **grease interceptors** are provided for facilities with food service. | 3 | 5 | 15 | Dual 5,000 gallon interceptors. |
| 6.19 | **Roof drainage** systems are sized appropriately and overflow drainage systems are installed. | 5 | 3 | 15 | Most areas have scuppers or openings in parapet, but there are some locations where secondary drainage does not exist. |
| 6.20 | **Restroom fixtures** comply with DMPS preferences. | 3 | 3 | 9 | Metered faucets and manual flush valves. |

# MP | Mechanical & Plumbing

ASSESSOR: Corey Metzger

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Maintainability** | | | | | |
| **6.21** | Equipment is provided with **adequate service clearance** to allow for regular maintenance | 3 | 4 | 12 | True for most equipment and systems. Sprinkler riser is difficult to access behind boilers. |
| **6.22** | AHUs and chiller are provided with **coil pull space.** | 2 | 5 | 10 | True. |
| **6.23** | **Filter** sizes are standard and filter types are standard. | 2 | 4 | 8 | Multiple types and sizes of filters with different equipment. Not unreasonable for this type/size of facility. |
| **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 | Generally 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 | 1 | 2 | Wall hydrants at grade but none near roof level. Several roof mounted condensing units. |
| **6.29** | **Fall protection** is provided for equipment within 15 ft of roof edge. | 2 | 0 | 0 | Some significant equipment near roof edges without fall protection. |
| **6.30** | **Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain. | 4 | 5 | 20 | Generally 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 | 5 | 25 | True. Building equipped with engine-driven fire pump. |
| 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 at lavatories. |
| 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 | 5 | 25 | Emergency stop switches are located on both primary exit paths from the boiler room (both are well outside of the room, but along the path to allow for disabling the system while departing the space). |
| 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 | Yes. |
| | **TOTAL** | | | 564 | |

# E | Electrical

ASSESSOR: David Carlson / Abe 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 | 5 | 25 | Service entrance consists of 1500kVA, 480/277V transformer. |
| 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 | Medium. Equipment for exterior work stored in front of MDP. All equipment is large, but has wheels for relocation in an emergency. (-2 points for equipment stored in clear area). Exiting is code-compliant, with two exits and doors that swing in path of egress. |
| 7.4 | The **MDP** appears serviceable. | 4 | 4 | 16 | MDP is Square D QED-S type switchboard rated at 3000A, 3000A main circuit breaker installed as part of 2012 renovation. (-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 | 2 | 8 | Distribution section of MDP has 117" of total mounting space available, of which 13.5" is remaining (~11%). Spare capacity of more than 10% would typically score a 3, but spaces are spread out and not conducive for additional 3-phase breakers. MDP bussing equipped for additional future section. |
| 7.7 | The Distribution Panel **environment is safe**, has adequate clearances and exiting. | 4 | 3 | 12 | Scores for Distribution Panels are average scores of Panels HB, LB1, L1, and DP-3. HB: 5. LB1: 5. L1: 2, heavy maintenance materials stored in panel clear area. Was difficult to access doors to inspect panel. DP-3: 0, clearances are not adequate in basement pool tunnels. |
| 7.8 | The Distribution Panel appears **serviceable.** | 4 | 3 | 12 | HB, LB1, L1, score of 4. (-1 point for age greater than 10 years) (All Square D I-Line panelboards rated 1000A)<br><br>DP-3: 0, age greater than 25 years and in very poor condition due to corrosive pool additives. Frank Adam, 800A. |
| 7.9 | The Distribution Panel is **maintainable.** | 4 | 4 | 16 | HB, LB1, L1, score of 5.<br><br>DP-3: Frank Adam electrical equipment is no longer supported or maintainable. Does not meet modern safety standards and should be replaced. |
| 7.10 | The Distribution Panel will support **future expansion.** | 4 | 3 | 12 | HB: 4. 49.5" of 108" mounting space available. (-1 point for <50% spare.)<br>LB1: 2. 9" of 108" mounting space available. (-3 points for <10% spare.)<br>L1: 5. 57" of 108" mounting space available. (No deduction, >50% spare.)<br>DP-3: 3. 2 of 10 spaces available, but not recommended due to condition. |

# E | Electrical

ASSESSOR: David Carlson / Abe Contreras

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 7.11 | **Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable. | 2 | 4 | 8 | Score is average of all panels observed. Existing Frank Adams Electric panelboards are in poor condition and should be replaced (Panels K, P, M, R, H, S, and L). All other panels installed were in good condition. |
| 7.12 | Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities. | 1 | 4 | 4 | Six receptacles noted on exterior. Three are in good condition and need no attention. Two more on fine arts addition need their covers replaced (currently not present) and one more should have an in-use cover installed rather than the spring-loaded gasketed cover. |
| 7.13 | Building has adequate **exterior lighting** to promote safety and security of the property. | 5 | 3 | 15 | Parking on south good except for one pole light inoperative. Two insets in building dark. West side very dark. North side Student parking dark. North side of building by practice ball field is dark. LED floodlights on poles create quite a bit of glare. |
| **Electronic System Design** | | | | | |
| 7.14 | MDF is **neatly organized** and has appropriate clearances and working spaces. Cables are neatly laced or trained. Entry to the room is restricted. | 4 | 5 | 20 | |
| 7.15 | MDF Equipment Racks have adequate space for **future growth.** | 4 | 4 | 16 | 35 of 90 total rack units between two racks are available for expansion. (-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 | MDF power supplied by Panel EM1, which is powered via a 208/120V 15kVA Vertiv Liebert EXM UPS. UPS has Kohler natural gas backup 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 | 3 | 3 | Panel EM1 is a Square D NQ panelboard manufactured in 2009. 9 of 42 positions remain for future growth. (-2 points for less than 25% 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 connected with armored OM3 multi-mode fiber. |

# E | Electrical

ASSESSOR: David Carlson / Abe Contreras

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **7.21** | MDF has adequate **grounding busbar capacity.** | 2 | 3 | 6 | Grounding busbar capacity is excellent. Missing equipment grounding conductor connections to cable tray and armored sheathing on fiber cabling. (-2 points for missing equipment connections). |
| **7.22** | Building is equipped with an **addressable fire alarm system.** | 5 | 3 | 15 | Simplex 4100U FACP. 2 Trouble and 1 Supervisory alarms present during assessment. |
| **7.23** | Building is equipped with an **access control system.** | 5 | 2 | 10 | 20 exterior entrances noted. 5 card readers. (-2 points for less than 50% of entrances monitored/controlled.) |
| **7.24** | Building is equipped with a **CCTV system.** | 5 | 4 | 20 | Cameras at SW corner of building not connecting to server. Some maintenance required? Cameras on-line looked good. |
| **7.25** | Building is equipped with an **intercom system.** | 4 | 5 | 20 | |
| **7.26** | Building is equipped with a **master clock system.** | 4 | 5 | 20 | Unable to locate head-end during assessment, but system is DMPS standard Primex Wireless. |
| | **TOTAL** | | | 348 | |

# 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 | 5 | 5 | |
| **8.9** | **Maintenance** is adequate. | 1 | 5 | 5 | |
| **8.10** | **Testing** is up to date, and all **record and logbooks** are present and filled out. | 1 | 5 | 5 | |
| | **TOTAL** | | | 65 | |

# 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

| | |
|---|---|
| Interior Door Maintenance | Door 1060: Adjust hardware or trim door bottom as required to prevent door from scraping on floor.<br>Door1490: Install missing screws to properly secure the strike plate.<br>Door 1706: Door is not keyed to either building master key.<br>Door 2160: Adjust or replace loose lock tumbler. |
| Locker Room Showers Cleaning | Rust staining and other soiling was noted on walls and floors in shower and lavatory areas of many locker rooms. Recommend deep cleaning of all locker room showers and lavatories. Remove stored items from shower room 1332. |
| Scene Shop Cleaning | Clean and reorganize the drama scene shop 1270 to provide improved storage, safety, and functionality of the space. |
| Weight Room Bench Repairs | Repair 5 weight room benches with damaged upholstery. |
| Return Grille Cleaning | Clean all return grilles in art rooms 3000, 3020, and 3040. Ensure proper filtration media is in place to keep dust and debris generated in these rooms out of HVAC equipment. |
| Sink and Faucet Repairs | Repair leaking faucets and missing sealant at sinks in rooms 2921, 2925, and 3040. |
| Restroom Deep Cleaning | Steam clean wall and floor tile in all restrooms to remove built-up dirt and staining. |

| | |
|---|---|
| Door Security Issues | Entry 18 (South wing, access from Stair and Classroom 1270) has non-functioning local alarm unit on the east door leaf. Repair or replace alarm.<br>Door 19 (Mech 1930) west leaf does not consistently latch. Adjust as necessary. |
| Roof Repairs | Gash in roofing membrane identified at Roof AG south of roof top mechanical unit.<br>Roofing membrane on Roofs AF and AK are NOT fully adhered, and observed to be billowing during wind gusts.<br>Roof edge fascia on southwest side of Roof Z, near Gymnasium, has pulled loose from retainer clip. Roof appears to be intact but at risk, and top of wall exposed to weather.<br>**These conditions were immediately brought to the attention of Roosevelt staff and to District personnel, so are anticipated to have been addressed prior to report publication.** |
| Fill Exterior Wall Opening | Fill the open end of steel tube embedded in wall above Roof A (North wall of Classroom 3040.) Birds appear to be nesting in this opening. |
| Roof Cleaning | Remove debris from gutters, downspouts, and roof drain strainers. Several roof drains and gutters/downspouts had significant buildup at time of observation. |
| Roof Counterflashing Reinstallation | Replace missing prefinished metal counterflashing above Roof U, below window on west wall of Classroom 2250 (Field verify location.) Approx. 20 LF. |
| Exterior Door Hardware | Replace damaged weatherstripping on Entries 3, 5, 7, 8, and 22 (5 pair doors); and on Entries 10, 13, and 14 (9 single door units.) |
| Add Fall Protection | Add fall protection for roof-mounted equipment requiring service near edge of roofs. Packaged ventilation units near area well are of key concern. |
| Water Leak Repairs | Evidence of potential active plumbing leaks noted in rooms 1918, 2170, 2190, and 2919. Investigate and repair leaks. |

| | |
|---|---|
| Clear Electrical Working Clearance Area | Relocate carts housing exterior maintenance tools and supplies from 3'-6" clear area in front of MDP. |
| Clear Electrical Working Clearance Area | Relocate ceiling tile and filter stock from in front of distribution panel L1 to maintain working clearance. |
| Exterior Receptacle Repair | Replace two weatherproof in-use covers and replace one gasketed non-in-use cover on exterior of Fine Arts Addition. |
| MDF Grounding | Install #6 grounding conductor from TMGB to cable tray. Install #6 grounding conductors to each armored OM3 MM fiber cable at both ends of cable. |
| Exterior Lighting Repair | Repair inoperative pole light fixture at western-most parking lot on south side. |
| CCTV Cameras Repairs | Cameras at SW corner of building were not connected to server. Repair. |
| Egress Lighting Repairs | Repair light fixtures and lighting controls in egress stairwell 2902 to ensure lights are operational. Lights were off during assessment, and no switch or occupancy sensor was observed. |
| Interior Lighting Repairs | Multiple suspended light fixtures in the gymnasium are knocked out of position and may have damage to mounting brackets or cables. Adjust light fixtures and mount securely to prevent any further damage.<br>Install missing trim and lens on one light fixture in shower room 1963. |

## 1 - 2 Year Priority

| | | Project Costs |
|---|---|---|
| Ceiling Tile Replacement | Replace dirty, stained, damaged, or missing ceiling tiles in rooms 1003A, 1170, 1280, 1320, 1360, 1370, 1420, 1473, 1700, 1702, 1820, 1907, 1908, 1909, 1919, 1980, 1990, 1992, 200, 2050, 2130, 2150, 2160, 2221, 22500, 2370, 2700, 2780, 2820, 2840, 2924, 2980, 2992, 3021, 3040, 3350, and 3390.<br>Total approximately 575 tiles. | $75,000 |

| | | |
|---|---|---|
| Casework Replacement | Replace 14 LF of water-damaged wood base cabinets and countertop at art room 3000. Triple-basin sink may be reused. | $25,000 |
| Interior Door Replacement | Replace damaged single wood doors at rooms 1600 and 1610. Frames may be reused. 2 doors total. | $20,000 |
| Flooring Transition Strip Installation | Replace missing or damaged flooring transition strips at entrances to rooms 1020, 1110, 1190. 1320, 1611, 1620, and 1921. Approximately 24 LF total. | $6,000 |
| Wood Flooring Repairs | Repair portions of exposed wood floors including missing/loose floor boards, large gouges, and floor finish in select areas of rooms 1030, 1091, 1270, 1340, 2030, 2050, and 2903. Approximately 700 SF total. | $30,000 |
| Classroom Whiteboards Installation | Nearly all math classrooms are currently employing large paper pads or roll-up dry-erase boards taped up around the room to support small group work settings. Provide additional permanent whiteboards or demountable whiteboards (similar to Steelcase Flex system) in rooms 1820, 1830, 1840, 1850, 1860, 1870, and 1880.<br>Project not costed due to variations on specific furniture requirements and service contracts DMPS may hold. | DMPS |
| Corridor 1927 Improvements | At corridor 1927 near the drama scene shop:<br>Repair minor wall damage and repaint walls. Approximately 500 SF.<br>Install plastic wall protection panels on all corridor walls up to 60 inches above floor. Approximately 800 SF. | $20,000 |
| Plaster Walls Replacement | Remove and replace water-damaged plaster on exterior wall(s) in rooms 1070, 1360, 1850, 1870, 1990, 2030, 2040, 2221, 2240, 2250, 2370, 2710, 2711, 2800, 2810, 2820, 2830, 2850, 2860, 2870, and 2880. Paint all new plaster areas to match adjacent walls. Approximately 2,500 SF total.<br>Recommendation is to perform this work only after "Exterior Wall Restoration" project below is completed to prevent water damage to new plaster finish. | $35,000 |

| | | |
|---|---|---|
| Exterior Wall Restoration | Majority of exterior walls require repair/restoration. (East wall completed in 2021/2022.) Scope expected to include cleaning of stains on masonry; repointing of brick, stone, and precast concrete panel joints; and replacement of sealant in masonry joints, at window perimeters, and metal wall panels. Scope also would include addition of cap flashing or elastomeric coating at stone parapet caps on 1921 Building. Refer to 2021 Exterior Masonry Restoration Assessment conducted by Angelo Architectural Associates for additional information. Please note that estimated project cost is based upon Angelo study estimates. A fully-defined work scope will be determined by DMPS and the Design Professional at time of project realization. | $2,400,000 |
| Exterior Doors Repair and Replacement | Re-anchor the meeting mullion at eastern pair of doors at Entry 10.<br>Replace doors and frame of Entry 21. (2) single doors with center lite. | $25,000 |
| Exterior Doors and Steel Components Painting | Remove surface rust and repaint doors/frames at all Entries 1-22 plus (9) roof-level doors. (12) single openings, (3) single openings with sidelight, (2) double openings with sidelight or centerlight, (11) double openings with transom, (1) group of 3-pair doors, (1)group of 2-pair doors with transom and sidelight, (1) group of 3-pair doors with transom and 24 LF sidelights, and (1) group of 7 doors with 12 LF sidelights.<br>Remove rust and repaint steel lintels at Entry 19 and at windows of Classrooms 1930 and 1117A (approx. 36 LF.)<br>Repaint steel roof ladders ((3) @ 4 VLF, (3) @ 8 VLF, and (1) @ 21 VLF. Repaint vertical sunshades at south wall of south Level 2 link between 1921 Building and Athletic/Fine Arts Wing (Approx. (30) @ 9'x1',two faces = 540 total SF.) | $55,000 |
| Pavement Replacement | Remove and replace 149 SY of PCC and 122 SY of asphalt. For locations, refer to the civil site plan exhibit found in the appendix of this report. | $35,000 |
| Sidewalk Repairs | Repair damaged sidewalks across the site. Approximately 43 SY. For locations, refer to civil site plan exhibit found in the appendix of this report. | $11,000 |
| Curb Repairs | Return damaged curbs to new condition. Approximately 22 LF of 6" curbs. For locations, refer to civil site plan exhibit found in the appendix of this report. | $7,000 |

| | | |
|---|---|---|
| Stoop Addition | Add stoop at exit door to room 1550. 4ft x 5ft. 8" thick stoop walls, 42" deep stoop walls, 5" thick slab w/ #4 @ 9" o.c. each way. Reinforce walls w/ #4 @ 12" o.c. each way. | $9,000 |
| Stoop Crack Sealing | Stoop at the entrance between the pool and the gym. Clean and seal cracks. 30LF. | $6,000 |
| Pool Wall Repair | RRE performed a site visit and proposed a fix for this cracking and spalling in June of 2018. At the time of the assessment on 03/07/2024, this area has not been fixed, but has not appeared to worsen. | $45,000 |
| CMU Crack Repair | Repair vertical crack in CMU located on the NE side of the large gymnasium, interior face of wall. Crack is approximately 30 L.F. | $6,000 |
| Replace RTU Serving Natatorium | Though not at the end of it's useful life, issues have been reported regarding operation of th RTU serving the pool. Replace with newer unit. | $620,000 |
| Add Overflow Roof Drainage | Add overflow roof drainage to each of (5) primary roof drains on Roof AD (Gymnasium), several low points identified at parapets where no scupper or opening was provided. | $40,000 |
| Sensor operated flush valves. | Replace existing manual operated flush valves with new sensor operated flush valves at urinals and water closets. | $230,000 |
| Add Hose Bibbs | Add hose bibbs to service roof-mounted equipment. | $20,000 |
| Add Thermostatic Mixing Valves | Add digital thermostatic mixing valves to serve fixtures used by students and staff. | $30,000 |
| Replace Athletic Facility Distribution System | Replace distribution panel DP-3 and all eight associated branch panelboards with new equipment, conduit, and wiring. Evaluate existing panel locations and determine if new layout is appropriate, else 1-for-1 replacements. | $220,000 |

| | | |
|---|---|---|
| Exterior Lighting | Add perimeter lighting at two insets on south side and along practice field on north side. | $12,000 |
| Exterior Pole Lighting | Add lighting for north side parking lots and drive along west side of building. | $160,000 |
| | **Total 1-2 Year Project Costs** | **$4,042,000.00** |

## 3 - 4 Year Priority

| | | Project Costs |
|---|---|---|
| Acoustic Improvements, Vocal Music Room | At vocal music room 1410 install acoustic panels or baffles to reduce sound reverberation time. The space is approximately 3,000 SF with approximately 1,000 SF of acoustic material needed. | $40,000 |
| Acoustic Improvements, Practice Gym | At practice gym 1670 install acoustic panels or baffles to reduce sound reverberation time. The space is approximately 4,825 SF with approximately 1,500 SF of acoustic material needed. | $60,000 |
| Interior Doors Finish Repair | Repair finish on 10 total wood doors at rooms 1110, 1515, 1670, 1980, 2030, 2300, 2750, 2780, 2981, and 3170. | $9,000 |
| Flooring Replacement | Replace carpet in rooms 1003, 1009, 1070, 1080, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1170, 1180, 1190, 1200, 1220, 1230, 1240, 1242, 1250, 1260, 1280, 1290, 1320, 1360, 1412, 1413, 1414, 1430, 1440, 1450, 1460, 1472, 1600, 1620, 1780, 1800, 1810, 1820, 1840, 1860, 2110, 2230, 2700, and 2790. Approximately 19,000 SF total.<br>Replace VCT tile in rooms 1410, 1411, 2120, 2130, 214, 2150, 2300, 2310, and 2780. Approximately 11,000 SF total. | $250,000 |
| Terrazzo Crack Repairs | Repair cracks in terrazzo flooring in room 1500 and corridors 1957, 2944, and 2974. Approximately 300 SF total. | $20,000 |
| Furniture Upgrades | Upgrade student furniture in room 2280. Consider office-type chairs and table with integrated power outlets.<br>Upgrade teacher desks and chairs in rooms 2050 and 2640.<br>Upgrade worn systems furniture in counseling suite 1110. | DMPS |

| | | |
|---|---|---|
| Interior Walls Painting and Repair | Repaint all walls of rooms 1370 and 2860. Paint damaged areas of interior walls in rooms 1370, 1482, 1740, 2860, 2927, 3040, and 3370. Approximately 4,500 SF total. | $20,000 |
| Roof Access and Safety Improvements | Add roof access for west half of building (Athletics and Fine Arts.) Two existing roof hatches in place--at Roofs Y and AA--appear to be accessible only from corridor outside of upper Natatorium Bleacher access. The ceiling access panels are directly above landing between stairs and floor opening to 1st Floor, and appear to be within the swing path of the Natatorium doors. Provide new roof access ladder with security gate and roof hatch in Storage 1401 (10 VLF.) Provide guard rail at (1) new hatch and at the (3) existing hatches.<br>No apparent access to Roof X (north side of Natatorium) or to Roof D (Kitchen). Recommend ladder docks (tie-offs) for access from grade in lieu of roof ladder due to above-roof pathways. Provide guardrails or fall protection screens at each of (3) skylights on Roof X (14 LF each.)<br>At ladder to Roof S, add landing at top of parapet with rear-side rungs (3 VLF) to improve access.<br>Access to Roof N (Stage) appears to be via ladder from fly loft catwalk, severely limiting access. Provide new exterior ladder from Roof O to Roof N (19 VLF).<br>There does not appear to be access to Roof G (west of Auditorium). Provide exterior ladder at south side from Roof J. (21 VLF) Provide guardrail at each of (2) skylights on Roof G (38 LF, each.)<br>Provide guardrail at Roof R edge adjacent to the mechanical units on north and south side of the lightwell (Roof Q.) ((2) railings @ 40 LF each.) | $150,000 |
| Roof Replacement | Remove modified bitumen roofing systems at Roofs A, B, C, E, F, K, L, and M. (38,600 SF on (8) roof levels.) Install code compliant insulation and TPO roofing. | $1,100,000 |
| Pavement Replacement | Remove and replace 127 SY of PCC. For locations, refer to the civil site plan exhibit found in the appendix of this report. | $20,000 |
| Sidewalk Repairs | Repair damaged sidewalks across the site. Approximately 134 SY. For locations, refer to civil site plan exhibit found in the appendix of this report. | $25,000 |
| Erosion Repair | Add soil and install TRM to prevent further erosion as water drains from the parking lots. For locations, refer to civil site plan exhibit found in the appendix of this report. | $12,000 |

| | | |
|---|---|---|
| Replace Intake Apron | Replace the deteriorated concrete around the open space intake. For location, refer to civil site plan exhibit found in the appendix of this report. | $8,000 |
| Mullion Repainting | Rusted WT-shape mullions at the entrance by room 1942. Sand blast and repaint. 35 Sq. Ft. | $7,000 |
| Steel Lintel Repainting | Lintels at room 1117A and 1930. Scrape, sand blast and re-paint. 26LF. | $6,000 |
| Exterior Stone Repair | Piece of exterior stone has broken off outside of room 2710. 1 SF, 6" thick patch w/ concrete or grout to match stone color. | $7,000 |
| New Lintel Installation | Install steel angle lintel L5x3 1/2 over 3'-0" opening below the interior stairs between rooms 1880 and 1870. | $8,000 |
| Floor Crack Repairs | Repair crack between room 1740 and 1700. Crack is 30 L.F.<br>Repair crack between rooms 1949 and 1958. Crack is 16 L.F. | $6,000 |
| Masonry Stone and Brick Repairs | The NW corner of the stone window jamb at the 1st/2nd level stair landing between rooms 2880 and 2870 has some deterioration. Clean and repair 20' x 4' area. Repair 8 L.F. of grout, and patch 1 sq. ft. x 4" max depth of stone block w/ concrete or grout to match stone color.<br>The NE corner of the concrete window jamb at the 1st/2nd level stair landing between rooms 2880 and 2870 is popping out and cracked. Replace 5' x 8" x 8" section.<br>The SE corner of the concrete window jamb at the 1st/2nd level stair landing between rooms 2060 and 2070 is popping out and cracked. Replace 5' x 8" x 8" section.<br>The SE corner of brick wall in the 1st/2nd level stair landing between rooms 2060 and 2070 is cracked. Repair 10 L.F. of stair step cracking in this area. | $50,000 |
| Skywalk Floor Repair | Patch spalling concrete in SE skywalk. 6 sq. ft. x 1" max depth. | $6,000 |

| | | |
|---|---|---|
| Restroom Lighting Upgrade | Install additional light fixtures to provide adequate light to toilet stalls in restroom 1907. 22 LF total. | $11,000 |

| | |
|---|---|
| **Total 3-4 Year Project Costs** | **$1,775,000.00** |

## 5 - 10 Year Priority

| | | Project Costs |
|---|---|---|
| Locker Room Renovations | Locker Rooms 1330, 1400, 1420, 1513, 1515, 1550, and 1610. Lockers to be replaced with collegiate style lockers and arranged to provide teaming spaces within each room. Approximately 100 LF of lockers each room. Wall finishes and graphics are either nonexistent or starting to peel and wear. Approximately 9,500SF total wall painting. 7 total wall graphics. Walls should be prepped and repainted with new epoxy paint and wall graphics. Athletic carpet, such as Kinetex, "rug" spaces could be provided in the teaming spaces. Approximately 400 SF of Kinetex Carpet tile. Approximately 6,300 SF of epoxy flooring. | $400,000 |
| FLEX Academy Furniture | Provide new furniture for FLEX Academy classroom that supports multiple learning environments within the space. Consider furniture for soft seating/lounge, meeting/collaboration, and comfortable office chairs for individual work areas. | DMPS |
| Roof Replacement | Remove adhered PVC roofing systems at Roofs D, G-J, and N-AD. (98,100 SF on (22) roof levels. Install code compliant insulation and TPO roofing, in 5-7 years. | $3,200,000 |
| Pavement Replacement | Remove and replace 604 SY of PCC and 2339 SY of asphalt. For locations, refer to the civil site plan exhibit found in the appendix of this report. | $520,000 |
| Sidewalk Repairs | Repair damaged sidewalks across the site. Approximately 542 SY. For locations, refer to civil site plan exhibit found in the appendix of this report. | $120,000 |
| Stair Replacement | Remove and replace the stair on the south side of the building. For location, refer to civil site plan exhibit found in the appendix of this report. | $35,000 |

| | | |
|---|---|---|
| Roof Emergency Exit Catwalk Replacement | Catwalk is severely rusted. Width= 3ft. Length= 270ft. Catwalk construction: 2-1/2" std. pipe posts @ 8ft O.C. each side of catwalk. C6x8.2 beam each side. 3/4" bar grating between C6 beams. 1-1/4 std. pipe" guardrail posts @ 7ft O.C. 1-1/4" pipe guardrail and hand rail each side, full length of the catwalk. Posts are 3'-6" tall. | $340,000 |
| Concrete Wall Repair | Patch 2' x 2' x 18" hole in concrete above SE double door in room 0936. Provide (2) #4 x 2'-0" epoxy dowels (6" min. embedment) into existing concrete. | $11,000 |
| Replace console style heat pumps | Replace console style heat pumps. Replace with 2-speed compressor to provide better part load performance and dehumidificaiton. | $1,500,000 |
| | **Total 5-10 Year Project Costs** | **$6,401,000.00** |

## Projects Requiring Study

| | | Design Services Fee |
|---|---|---|
| Mother's Room Space Study | Study to define a private dedicated space for a Mother's Room that includes a sink, side table, chair, and privacy door hardware. | $5,000 |
| Room 2250 Egress Study | Evaluate possible design options for modifying egress from science room 2250. Two doors from this room swing outward, but impede required egress width in the corridor. Consider reversing the swing direction of these doors or modifying walls and casework to allow the doors to be repositioned recessed off of the corridor. | $5,000 |
| Auditorium Balcony | Auditorium balcony appears to be unused. Study to determine what improvements to the balcony are necessary to make the space once again functional. | $5,000 |
| Designated Hardened Area | No designated hardened area was observed. Study to determine the feasibility of adding a designated hardened area to the building including location within the existing building, schematic design concept if deemed feasible, and preliminary project costs. | $2,500.00 |

| | | |
|---|---|---|
| Power Installation | Study to determine the best practices to add power within classroom spaces as necessary. Additional access to power appears to be needed in approximately 10 classrooms. Power could be added to exterior walls with a surface mounted raceway, power columns within the classroom, or an underfloor system select carpets or similar flooring materials. | $7,500 |
| HVAC System Study | The existing HVAC system at Roosevelt is geothermal with water source heat pumps at the zone level. Though ok for an elementary or medium sized middle school, this type of system may be less practical for a high school as the quantity of water source heat pumps is singificant. This leads to more maintenance and more frequent replacement projects at the zone level as heat pump life span is typically 20 yrs. Study options for going to a centralized geothermal system with chiller/heaters or water-to-water heat pumps. Study options for replacement of water source heat pumps at the zone level which could be 4-pipe fan coils, blower coils or small air handlers. | $50,000 |
| | **Total Study Design Service Fees** | **$25,000** |

# APPENDIX


| PAVEMENT QUANTITIES (SY) | | | |
|---|---|---|---|
| | SIDEWALK | PCC | ASPHALT |
| | 542 | 604 | 2339 |
| | 134 | 127 | 0 |
| | 43 | 149 | 122 |

5+ YEAR REPLACEMENT

3-4 YEAR REPLACEMENT

1-2 YEAR REPLACEMENT

NORTH

GRAPHIC SCALE

100 0 50 100 200

bbs ARCHITECTS ENGINEERS

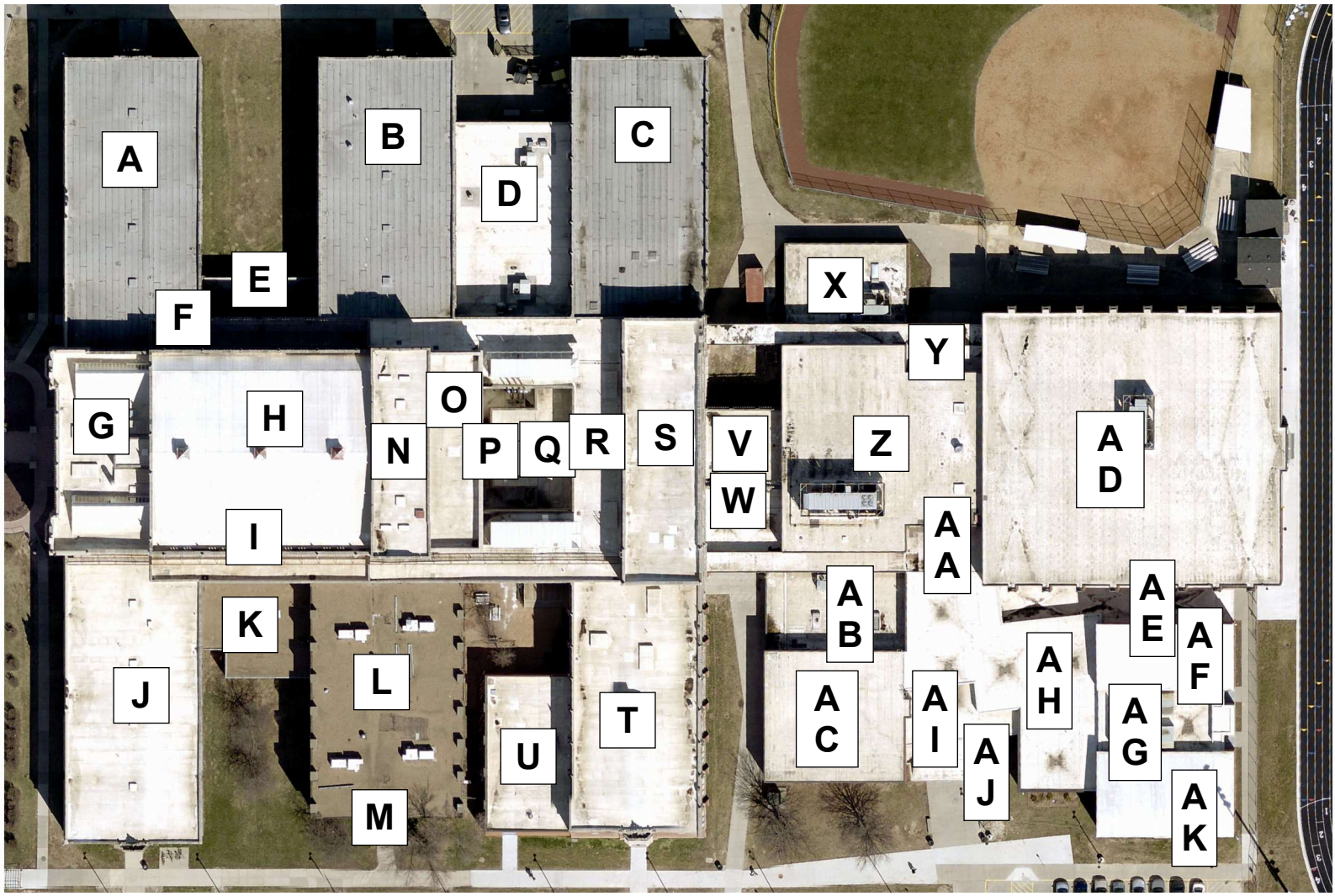
BISHOP ENGINEERING +

# ROOSEVELT HIGH SCHOOL

EXHIBIT

PROJECT # 230286-53

DATE 3/15/2024




N

bbs ARCHITECTS ENGINEERS

23055 - DMPS Facility Conditions Assessment
Roof Identification Image
Roosevelt High School
March 6, 2024

# DMPS FACILITY ASSESSMENT | ROOSEVELT BOILER BUILDING

3.15.2024


bbs
ARCHITECTS
ENGINEERS

219 Eighth Street
Suite 100
Des Moines, IA 50309
515.244.7167

**www.bbsae.com**

# REPORT ORGANIZATION

COVER SHEET

EXECUTIVE SUMMARY
- Building Summary
- Overall Project Priorities

SCORING REPORTS
- 2.0 Environment for Education
- 3.0 Exterior Envelope
- 5.0 Structural Conditions
- 6.0 Mechanical Systems
- 7.0 Electrical Systems

COST METHODOLOGY

RECOMMENDED PROJECTS AND PRIORITIES
- Short Term Maintenance
- 1-2 Year Project Priorities
- 3-4 Year Project Priorities
- 5-10 Year Project Priorities
- Projects Requiring a Study

# EXECUTIVE BUILDING SUMMARY

The Roosevelt Boiler Building's on-site facility conditions assessment was conducted on March 15, 2024 and included visual conditions assessment from professionals covering interior architecture, exterior building envelope, structural condition, mechanical (HVAC/Plumbing) systems, and electrical systems (power, exterior lighting, interior lighting, fire alarm, and general IT).

This building previously housed mechanical equipment including boilers that served Roosevelt High School. These are no longer in place, however much of the piping and spaces reflect this previous use. Currently the Roosevelt Boiler Building houses minor spaces for site and athletic field maintenance equipment, athletic storage, and restrooms supporting the nearby sporting feilds. The assessment of this building was conducted to determine general building stability and feasibility for potential future repurpose. This report has been modifed to propoerly reflect the existing buidling and the needs of DMPS to understand current conditions and future feasability uses. In the following pages each discipline has scored this building and made comments based on this intent.

By completing a full building assessment of Roosevelt's Boiler Building it was determined there were several exterior and structural building projects that should be completed in the next 1-2 years in order to maintain the building's integrity. Full project lists to maintain the current use and keep the building in a condition acceptable for future re-use is provided in the recommended projects list later in this report.

The recommended projects for the Roosevelt Boiler Building to be completed in the next 1-2 years are as follows:

- Roof Replacement
- Door Replacement
- Sealant Replacement
- Masonry Repoint
- Concrete Patch
- Lintel Refinish

Based on these projects and assessment comments there does appear to be positive potential in re-use of this space. In order to determine the best potential use for this buidling or site, a study is noted in the project recommendations section later in this report.

| Discipline Comparison | | | | Building Health | | | | |
|---|---|---|---|---|---|---|---|---|
| Assessment Category Summary | | Max Pnts | Earned Pnts | Bldg Weight Factor | Max Pnts | Earned Pnts | % | Rating |
| 2.0 | Environment for Education | 145 | 120 | 0.60 | 87 | 72 | 83% | Satisfactory |
| 3.0 | Exterior Envelope | 85 | 23 | 3.00 | 255 | 69 | 27% | Inadequate |
| 5.0 | Structural Conditions | 115 | 87 | 1.30 | 150 | 113 | 76% | Satisfactory |
| 6.0 | Mechanical Systems | 330 | 250 | 0.80 | 264 | 200 | 76% | Satisfactory |
| 7.0 | Electrical Systems | 195 | 93 | 0.75 | 146 | 70 | 48% | Poor |
| **Total** | | | | | **902** | **524** | **58%** | **Borderline** |

# 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 | N/A | 0 | |
| 2.2 | Communication among students is enhanced by **common areas.** | 3 | N/A | 0 | |
| 2.3 | Areas for students to i**nteract are suitable to the age group.** | 2 | N/A | 0 | |
| 2.4 | Large group areas are designed for effective **management of students.** | 2 | N/A | 0 | |
| 2.5 | **Furniture Systems** are in good or like new condition. | 1 | N/A | 0 | |
| 2.6 | **Color schemes**, building materials, and decor are **engaging and unify** the school character. | 3 | 3 | 9 | Multi-wythe brick walls relate to the character of Roosevelt and surrounding site. Paint on the existing walls is peeling and based on age and appearance likely contains lead. |
| 2.7 | Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces. | 3 | 5 | 15 | Large windows allow plenty of daylight into the space. There is no shade control, at this time there is no concern with that. If space use changes glare should be considered at that time. |
| 2.8 | Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces. | 3 | 4 | 12 | There are large windows that allow daylight, but are elevated above eye level. This works well for storage or many other potential uses where occupants would not be in the building for extended periods of time (5+ hours). |
| 2.9 | **Lighting has proper controls** to provide the required light levels for various teaching and learning needs. | 2 | 5 | 10 | Lights appear operational. |
| 2.10 | **Staff dedicated spaces** include conference space, work space, and dedicated restrooms. | 1 | N/A | 0 | |

# 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 | N/A | 0 | |
| 2.12 | **Break room** is adequately sized and furnished for proper use. | 1 | N/A | 0 | |
| 2.13 | **Mother's room** is a separate designated space properly furnished. | 1 | N/A | 0 | |
| **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 | N/A | 0 | |
| 2.15 | **Floor surfaces** throughout the support and circulation areas are durable and in good condition.Spaces include corridors, restrooms, storage rooms etc. | 1 | 3 | 3 | Restroom floors are extremely dusty/dirty. This is a bit of a concern depending on where the dirt has come from. Floors in occupied areas should be kept clean and maintained in a non-slip condition. Main room's floors have abandoned equipment pads throughout. If building use changes removal of these will be important for access and safety. |
| 2.16 | **Ceilings** throughout the learning and common areas are easily cleaned and resistant to stain. Spaces include classroom, offices, labs, cafeteria etc. | 1 | N/A | 0 | |
| 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 | Where present, restroom ceilings appeared adequate. Most of the building is exposed structure which is showing many areas of repeated water damage and degradation. See 3.0 and 5.0 reports for additional 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 | N/A | 0 | |
| 2.19 | **Walls** throughout the support and circulation areas are easily cleaned and resistant to stain. Spaces include corridors, restrooms, storage rooms etc. | 1 | 3 | 3 | Restroom walls are in good condition, but are extremely dusty and dirty. All restroom walls are gypsum board, painted finish so longevity and resistance to use is likely low. If use is increased it is recommended to install tile or other more durable and cleanable materials. All other walls are exposed brick with peeling paint. See 2.6 |
| 2.20 | **Built-in casework** is designed and constructed for ease of maintenance. | 1 | N/A | 0 | |

# 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 | 2 | 6 | Restroom doors and the main exterior entrance door appear adequate for material and maintainability. There are several other doors that are damaged. Doors that intend to serve occupied areas should be replaced for easier maintenance and security control of unoccupied areas. |
| 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 | 5 | 10 | |
| 2.24 | **Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces. | 1 | N/A | 0 | |
| **Occupant Safety** | | | | | |
| 2.25 | Classroom doors are **recessed and open outward.** | 4 | N/A | 0 | |
| 2.26 | Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.** | 4 | N/A | 0 | |
| 2.27 | **Door panels** into classrooms and other occupied spaces contain **vision lite.** | 4 | N/A | 0 | |
| 2.28 | **Vision lite** in doors is clear and uncovered. | 2 | N/A | 0 | |
| 2.29 | **Glass** is properly located and protected to prevent accidental injury. | 2 | N/A | 0 | |
| 2.30 | **Flooring** is maintained in a **non-slip** condition | 2 | 4 | 8 | Restroom floors were very dusty at the time of assessment. These should be cleaned prior to use to prevent slipping. |

# 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 | N/A | 0 | |
| 2.33 | **Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements. | 5 | 4 | 20 | |
| 2.34 | At least **two independent exits** from any point in the building | 5 | 5 | 25 | Exiting will have to be considered if this building becomes an occupied space. |
| 2.35 | **Emergency lighting** is provided throughout the building. | 4 | 4 | 16 | Signage is provided at the restrooms, other spaces are not. If building use changes this will need to be added/updated. |
| | **TOTAL** | | | 181 | |

# A | Architectural , Exterior

ASSESSOR: David Unick

## 3.0 Exterior Envelope

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Design** | | | | | |
| **3.1** | Overall **design is aesthetically pleasing** and appropriate for the age of students. | 2 | N/A | 0 | Storage Building. |
| **Maintainability** | | | | | |
| **3.2** | **Roofs** appear sound, have positive drainage, and are water tight. | 3 | 1 | 3 | Roofs not accessible so not directly observed. However, sloping structure visible from interior. Scuppers at east wall for all roof levels. (2) large water puddles inside building indicating leaks at high roof. Water staining of roof decks and peeling paint at wall/roof intersections indicate long-term water issues. |
| **3.3** | **Roof access** is safe for all roofs. | 3 | 0 | 0 | No means of roof access. |
| **3.4** | Exterior **window sealant** is fully intact without cracks or gaps. | 3 | 3 | 9 | All window perimeters should be resealed. |
| **3.5** | **Glazing** is low-e coated, insulated, and overall in good condition. | 1 | 1 | 1 | High windows and east side ground level are aluminum with insulated glazing. Remainder of windows are original steel units with single pane glass. Multiple panes are cracked but remain in place. |
| **3.6** | **Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking. | 2 | N/A | 0 | All windows appear to be fixed units. |
| **3.7** | **Exterior doors** are of durable material requiring minimum maintenance. | 2 | 2 | 4 | (2) entry doors are hollow metal. (1) wood door and frame are badly deteriorated. (3) metal garage doors in place, (1) of which should be replaced. |
| **3.8** | **Exterior walls** are of material and finish requiring little maintenance, | 1 | 2 | 2 | Walls are brick. Some damaged areas have been repointed previously. Minor exterior repointing will be required. |
| **3.9** | **Exterior Doors** open outward and are equipped with **panic hardware.** | 1 | 4 | 4 | The only publicly-accessible door (restroom entry on east side) contains panic device. |
| **3.10** | **Exterior Doors are monitored** or controlled by an access control system. | 3 | 0 | 0 | No doors have access control or monitoring |
| | **TOTAL** | | | 23 | |

# 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 | 2 | 4 | The multiple cracks in the structural brick walls in the high bay area and cracks in plaster in the Northern most low roof area could potentially be caused by foundation settlement. A future study was noted to perform a more in depth study of these cracks. |
| 5.3 | **Basement walls** do not appear to have any cracks. | 1 | 4 | 4 | Exposed basement walls were in good shape for how old this building is. Some of the basement walls look to be old multi-wythe structural brick that has since been covered with concrete. The brick walls in these spots were not able to be observed. |
| 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 | 3 | 3 | Areas that were able to be observed were in good shape for the age of building. There were a lot of items on the floor in the high bay area, which made observing the slab difficult throughout this room. |
| 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 | 2 | 4 | There are multiple cracks in the walls of the high bay area. A future, in-depth study should be performed to determine the extents and severity of cracking. There are also cracks in the plaster in the Northern most low roof area that requires a future study once plaster is removed to observe the condition of the brick. |
| 5.8 | **Lintels** appear in good condition (no visible deflection or rust). | 1 | 4 | 4 | Several lintels were rusted and should be cleaned and re-painted. |
| 5.9 | **CMU** is in good condition. | 1 | N/A | 0 | |
| 5.10 | **Precast** is in good condition. | 1 | N/A | 0 | |

# S | Structural

ASSESSOR: Niles Quick

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Interior Walls** | | | | | |
| 5.11 | **Interior walls** appear to be in good condition. | 1 | 2 | 2 | See comments on 5.7. This pertains to the structural brick walls only. |
| **Floor Framing (Elevated)** | | | | | |
| 5.12 | **Floor framing** appears to be in good condition. | 3 | 4 | 12 | Elevated concrete floor slab had spalling at the bottom of the stairs in the high bay area, and rebar was exposed. Patch concrete. |
| 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 | 3 | 9 | Minor water damage in some areas in the high bay room. It was not possible to observe how this has affected the structure due to the height of the roof and color of structure. A future study could be performed to determine this. |
| **Miscellaneous** | | | | | |
| 5.15 | **Retaining walls** appear to be in good condition. | 1 | N/A | 0 | |
| 5.16 | **Canopies** appear to be in good condition. | 1 | N/A | 0 | |
| 5.17 | **Loading dock concrete** appears to be in good condition. | 2 | N/A | 0 | |
| 5.18 | **Mechanical screening** appears to be in good condition. | 2 | N/A | 0 | |
| 5.19 | **Stairs** appear to be in good condition. | 1 | 5 | 5 | |
| 5.20 | **Stair railings** appear to be in good condition. | 1 | 5 | 5 | |

# S | Structural

ASSESSOR: Niles Quick

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **5.21** | **Pool Deck** appears in good condition without cracks. | 1 | N/A | 0 | |
| **5.22** | **Balconies** appear in good, stable, condition | 1 | N/A | 0 | |
| **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 | N/A | 0 | |
| **5.25** | The hardened area appears consistent with the **ICC 2018 code.** | 1 | N/A | 0 | |
| | **TOTAL** | | | 87 | |

# 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 | N/A | 0 | No cooling and no heating except new RR area. |
| 6.2 | **Thermostat location.** Thermostats are properly located in the space. | 3 | 5 | 15 | One thermostat in new RR area heating only. |
| 6.3 | Appropriate **amount of ventilation** are provided to each space. | 5 | N/A | 0 | No ventilation. |
| 6.4 | **Ventilation** is provided during occupied hours. | 5 | N/A | 0 | No ventilation. |
| 6.5 | **Outdoor air intake locations** are appropriate. | 4 | N/A | 0 | No OA provided. |
| 6.6 | Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms. | 5 | 4 | 20 | Minimal exhaust provided for new RR only. |
| 6.7 | **Building pressurization.** The design takes into account the balance between ventilation and exhaust air | 2 | N/A | 0 | No makeup for exhaust provided. |
| 6.8 | **Major HVAC Equipment** appears to be within it's acceptable **service life.** | 5 | 5 | 25 | Heating equipment is minimal for RR area only. |
| 6.9 | **Cooling loads** are within equipment operational capacity. | 5 | N/A | 0 | No cooling. |
| 6.10 | **Heating loads** are within equipment operations capacity. | 5 | N/A | 0 | Limited heating in RR only. |

# MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 6.11 | **Dehumidification** is provided and addressed humidity loads in incoming outside air. | 4 | N/A | 0 | |
| 6.12 | Appropriate levels of ventilation, cooling and dehumidification are being provided within **Natatorium.** | 5 | N/A | 0 | |
| **Plumbing Design** | | | | | |
| 6.13 | **Water Supply Pressure** is adequate to allow for operation of plumbing fixtures. | 5 | 4 | 20 | Unable to test due to winterization. |
| 6.14 | Appropriate **backflow preventer** is provided at connection to city water supply. | 5 | 0 | 0 | No BFP present. |
| 6.15 | **Domestic hot-water systems** are within equipment operational capacity. | 5 | 4 | 20 | Unable to test due to winterization. |
| 6.16 | Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time. | 3 | 4 | 12 | Unable to test due to winterization. |
| 6.17 | **Sanitary sewer systems** are sized and sloped to allow for proper drainage. | 5 | 5 | 25 | New RR only. |
| 6.18 | Appropriately sized **grease interceptors** are provided for facilities with food service. | 3 | N/A | 0 | |
| 6.19 | **Roof drainage** systems are sized appropriately and overflow drainage systems are installed. | 5 | 3 | 15 | Unable to access roof. |
| 6.20 | **Restroom fixtures** comply with DMPS preferences. | 3 | 5 | 15 | New RR only. |

# MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Maintainability** | | | | | |
| **6.21** | Equipment is provided with **adequate service clearance** to allow for regular maintenance | 3 | 5 | 15 | New RR only. |
| **6.22** | AHUs and chiller are provided with **coil pull space.** | 2 | N/A | 0 | |
| **6.23** | **Filter** sizes are standard and filter types are standard. | 2 | 5 | 10 | New RR only. |
| **6.24** | **Equipment mounting heights** are reasonable. | 3 | 5 | 15 | New RR only. |
| **6.25** | **Floor surfaces** throughout the mechanical room are non-slip and are dry. | 2 | 4 | 8 | Multiple areas with moisture infiltration due to roof and foundations leaks. |
| **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 | New RR only. |
| **6.27** | Appropriate means are provided for **airflow and water balancing.** | 3 | N/A | 0 | |
| **6.28** | **Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location? | 2 | N/A | 0 | |
| **6.29** | **Fall protection** is provided for equipment within 15 ft of roof edge. | 2 | N/A | 0 | No roof access or roof equipment. |
| **6.30** | **Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain. | 4 | N/A | 0 | No automation. |

# MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Occupant Safety** | | | | | |
| **6.31** | **Backflow prevention** is provided at all **cross-connections** to non-potable water. | 5 | N/A | 0 | |
| **6.32** | Building is fully **sprinklered.** | 5 | 0 | 0 | No fire sprinkler. |
| **6.33** | **Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly. | 5 | 5 | 25 | New RR only. |
| **6.34** | **Emergency eye-washes and tempering valves** are located where required. | 5 | N/A | 0 | |
| **6.35** | **Emergency boiler stop switches** are located at exits from boiler rooms. | 5 | N/A | 0 | |
| **6.36** | **Refrigeration evacuation systems** are provided in rooms with chillers. | 5 | N/A | 0 | |
| **6.37** | **Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment. | 5 | N/A | 0 | |
| | **TOTAL** | | | 250 | |

# E | Electrical

ASSESSOR: David Carlson

## 7.0 Electrical Systems

### Electrical Design

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 7.1 | **Transformer location** is easily accessible by utility line truck to allow for rapid transformer replacement in the event of an issue. | 5 | 4 | 20 | Building power source/transformer not identified with 100% certainty. Adjacent 75kVA transformer more closely associated with the baseball complex is readily accessible. |
| 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 | 4 | 12 | Light storage items in front of MDP. MDP is 208/120V Square D QMB Saflex Fused Distribution Panelboard rated at 400A, main fuse 400A. If building usage changes from Storage, recommend replacement with new 400A NQ panelboard to allow for future renovation. Currently acceptable if left undisturbed. |
| 7.4 | The **MDP** appears serviceable. | 4 | 1 | 4 | MDP is in poor condition, with substantial rust and damage to individual fuse bays. |
| 7.5 | The MDP is **maintainable.** | 3 | 3 | 9 | QMB Saflex parts are available as retrofit but typically not without field modification. |
| 7.6 | The MDP will support **future expansion.** | 4 | 0 | 0 | Open positions remain, but is not suggested for use. Square D NQO panelboard adjacent to MDP seems to be the main power source for the building. |
| 7.7 | The Distribution Panel **environment is safe**, has adequate clearances and exiting. | 4 | N/A | 0 | |
| 7.8 | The Distribution Panel appears **serviceable.** | 4 | N/A | 0 | |
| 7.9 | The Distribution Panel is **maintainable.** | 4 | N/A | 0 | |
| 7.10 | The Distribution Panel will support **future expansion.** | 4 | N/A | 0 | |

# E | Electrical

ASSESSOR: David Carlson

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **7.11** | **Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable. | 2 | 2 | 4 | 100A panelboard adjacent to MDP is antiquated Square D NQO panel and is poor condition. Panel C load center adjacent to NQO panel is 24 position panel installed in 2023. Unknown how panels are feeding each other. |
| **7.12** | Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities. | 1 | 0 | 0 | No exterior receptacles noted. |
| **7.13** | Building has adequate **exterior lighting** to promote safety and security of the property. | 5 | 0 | 0 | To be assessed at a later date after-hours in conjunction with DMPS Security. |
| **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 | 1 | 4 | Boiler building is a splice location for fiber service feeding from Roosevelt to Hubbell Elementary. No horizontal cabling save for one wireless access point. Switches are sitting on a dirty shelf, and all equipment is gathering dust. Recent upgrade from Cisco to Aruba switch. |
| **7.15** | MDF Equipment Racks have adequate space for **future growth.** | 4 | N/A | 0 | No rack, a single switch and wall-mount fiber splice is present. |
| **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 | N/A | 0 | |
| **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 | N/A | 0 | |
| **7.19** | MDF employs up-to-date **network cabling.** | 2 | 5 | 10 | Single CAT6A cable for wireless access point. |
| **7.20** | MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.** | 1 | N/A | 0 | |

# E | Electrical

ASSESSOR: David Carlson

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **7.21** | MDF has adequate **grounding busbar capacity.** | 2 | N/A | 0 | |
| **7.22** | Building is equipped with an **addressable fire alarm system.** | 5 | N/A | 0 | |
| **7.23** | Building is equipped with an **access control system.** | 5 | N/A | 0 | |
| **7.24** | Building is equipped with a **CCTV system.** | 5 | N/A | 0 | |
| **7.25** | Building is equipped with an **intercom system.** | 4 | N/A | 0 | |
| **7.26** | Building is equipped with a **master clock system.** | 4 | N/A | 0 | |
| | **TOTAL** | | | 93 | |

# 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

| | | |
|---|---|---|
| Clean Flooring | Restroom flooring is very dusty and appears to be covered with sand. Prior to occupancy for the season floors need to be cleaned to provide proper slip resistance. | |

## 1 - 2 Year Priority

| | | Project Costs |
|---|---|---|
| Roof Replacement | Standing water, covered equipment, and masonry cracking on north wall of high roof and peeling paint at low roof intersection indicate probable moisture intrusion in several areas. Replace roofing, existing roofing is likely modified bitumen, but is unknown. Replace with TPO membrane and insulation. Approximately 6,000SF. | $150,000 |
| Door/Frame Replacement | Remove and replace wood-framed door/sidelight assembly accessing NE mezzanine from east side of north bay. (8'x10' opening).<br>Remove and replace wood opening bucks and garage door on NW side -- bucks 2x10 HSS, door 8'x12'.<br>Remove and replace steel tube bucks and garage door on west-center side, remove and reinstall garage door -- bucks 2x10 HSS, door 10'x12'.<br>Remove and replace wood opening bucks and garage door on SW side, remove and reinstall door -- bucks 2x10 HSS, door 10'x10'.<br>Remove deteriorated particle board transom above west entry door. Replace with 3'x5' wall infill. | $55,000 |
| Sealant Replacement | Reseal perimeter of all aluminum framed windows and wall louvers. (16) openings, 580 LF sealant. | $11,000 |
| Masonry Repoint | Reinstall brick at jamb on NW garage door. Repoint adjacent. (5 SF.) Infill east louver opening (15 SF), Repoint cracked mortar joints ,various locations on exterior walls, (50 SF.) | $7,000 |

| | | |
|---|---|---|
| Concrete Patch | There is a section of exposed rebar at the bottom of the stairs located at the bottom of the elevated floor slab in the high-bay room. Patch spalled concrete, 3 sq. ft. x 6" max depth | $8,000 |
| Lintel Refinish | Remove rust and repaint exposed steel lintels at all windows and louvers. (20) openings, 120 LF. | $7,000 |

**Total 1-2 Year Project Costs: $238,000.00**

## 3 - 4 Year Priority

| | | Project Costs |
|---|---|---|
| Replace Steel Window Assemblies | Remove all steel window assemblies. Replace with aluminum assemblies. (4) 4'x8' units and (2) 3'x8' units. Remove and replace existing wire mesh security screens. This project scope could be reduced to glazing only replacement if determined the building will remain un-conditioned for the foreseeable future. | $30,000 |

**Total 3-4 Year Project Costs: $30,000.00**

## 5 - 10 Year Priority

| | Project Costs |
|---|---|
| None Noted | |

## Projects Requiring Study

| | | Design Services Fee |
|---|---|---|
| Future Re-Use Feasibility, Study | A feasabiltiy and cost analysis study should be conducted to compare initial and long term costs for renovation and re-use of the existing building versus demolition and construction of a new facility. Along with this, a structural study should be conducted to determine full conditions and anticipated load limitations on exterior brick walls and the roof framing members. Due to height and access limitations during the time of the assessment these items could not be studied in depth.<br>Included in this study should be needs of the school, structural feasability for supporting new construction within, and comparisons to a newly constructed facility.<br>Fee includes initial study, not design work fees. | $20,000 |

**Total Study Design Service Fees: $20,000**

# DMPS FACILITY ASSESSMENT | ROOSEVELT BOILER BUILDING

3.15.2024


bbs
ARCHITECTS
ENGINEERS

219 Eighth Street
Suite 100
Des Moines, IA 50309
515.244.7167

**www.bbsae.com**

# REPORT ORGANIZATION

COVER SHEET

EXECUTIVE SUMMARY
- Building Summary
- Overall Project Priorities

SCORING REPORTS
- 2.0 Environment for Education
- 3.0 Exterior Envelope
- 5.0 Structural Conditions
- 6.0 Mechanical Systems
- 7.0 Electrical Systems

COST METHODOLOGY

RECOMMENDED PROJECTS AND PRIORITIES
- Short Term Maintenance
- 1-2 Year Project Priorities
- 3-4 Year Project Priorities
- 5-10 Year Project Priorities
- Projects Requiring a Study

# EXECUTIVE BUILDING SUMMARY

The Roosevelt Boiler Building's on-site facility conditions assessment was conducted on March 15, 2024 and included visual conditions assessment from professionals covering interior architecture, exterior building envelope, structural condition, mechanical (HVAC/Plumbing) systems, and electrical systems (power, exterior lighting, interior lighting, fire alarm, and general IT).

This building previously housed mechanical equipment including boilers that served Roosevelt High School. These are no longer in place, however much of the piping and spaces reflect this previous use. Currently the Roosevelt Boiler Building houses minor spaces for site and athletic field maintenance equipment, athletic storage, and restrooms supporting the nearby sporting feilds. The assessment of this building was conducted to determine general building stability and feasibility for potential future repurpose. This report has been modifed to propoerly reflect the existing buidling and the needs of DMPS to understand current conditions and future feasability uses. In the following pages each discipline has scored this building and made comments based on this intent.

By completing a full building assessment of Roosevelt's Boiler Building it was determined there were several exterior and structural building projects that should be completed in the next 1-2 years in order to maintain the building's integrity. Full project lists to maintain the current use and keep the building in a condition acceptable for future re-use is provided in the recommended projects list later in this report.

The recommended projects for the Roosevelt Boiler Building to be completed in the next 1-2 years are as follows:

- Roof Replacement
- Door Replacement
- Sealant Replacement
- Masonry Repoint
- Concrete Patch
- Lintel Refinish

Based on these projects and assessment comments there does appear to be positive potential in re-use of this space. In order to determine the best potential use for this buidling or site, a study is noted in the project recommendations section later in this report.

| Discipline Comparison | | | | Building Health | | | | |
|---|---|---|---|---|---|---|---|---|
| Assessment Category Summary | | Max Pnts | Earned Pnts | Bldg Weight Factor | Max Pnts | Earned Pnts | % | Rating |
| 2.0 | Environment for Education | 145 | 120 | 0.60 | 87 | 72 | 83% | Satisfactory |
| 3.0 | Exterior Envelope | 85 | 23 | 3.00 | 255 | 69 | 27% | Inadequate |
| 5.0 | Structural Conditions | 115 | 87 | 1.30 | 150 | 113 | 76% | Satisfactory |
| 6.0 | Mechanical Systems | 330 | 250 | 0.80 | 264 | 200 | 76% | Satisfactory |
| 7.0 | Electrical Systems | 195 | 93 | 0.75 | 146 | 70 | 48% | Poor |
| **Total** | | | | | **902** | **524** | **58%** | **Borderline** |

# 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 | N/A | 0 | |
| 2.2 | Communication among students is enhanced by **common areas.** | 3 | N/A | 0 | |
| 2.3 | Areas for students to i**nteract are suitable to the age group.** | 2 | N/A | 0 | |
| 2.4 | Large group areas are designed for effective **management of students.** | 2 | N/A | 0 | |
| 2.5 | **Furniture Systems** are in good or like new condition. | 1 | N/A | 0 | |
| 2.6 | **Color schemes**, building materials, and decor are **engaging and unify** the school character. | 3 | 3 | 9 | Multi-wythe brick walls relate to the character of Roosevelt and surrounding site. Paint on the existing walls is peeling and based on age and appearance likely contains lead. |
| 2.7 | Windows and skylights provide access to **adequately controlled daylight** for regularly occupied spaces. | 3 | 5 | 15 | Large windows allow plenty of daylight into the space. There is no shade control, at this time there is no concern with that. If space use changes glare should be considered at that time. |
| 2.8 | Windows provide access to **quality views** (to exterior, courtyards, artwork etc.) for regularly occupied spaces. | 3 | 4 | 12 | There are large windows that allow daylight, but are elevated above eye level. This works well for storage or many other potential uses where occupants would not be in the building for extended periods of time (5+ hours). |
| 2.9 | **Lighting has proper controls** to provide the required light levels for various teaching and learning needs. | 2 | 5 | 10 | Lights appear operational. |
| 2.10 | **Staff dedicated spaces** include conference space, work space, and dedicated restrooms. | 1 | N/A | 0 | |

# 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 | N/A | 0 | |
| 2.12 | **Break room** is adequately sized and furnished for proper use. | 1 | N/A | 0 | |
| 2.13 | **Mother's room** is a separate designated space properly furnished. | 1 | N/A | 0 | |
| **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 | N/A | 0 | |
| 2.15 | **Floor surfaces** throughout the support and circulation areas are durable and in good condition.Spaces include corridors, restrooms, storage rooms etc. | 1 | 3 | 3 | Restroom floors are extremely dusty/dirty. This is a bit of a concern depending on where the dirt has come from. Floors in occupied areas should be kept clean and maintained in a non-slip condition. Main room's floors have abandoned equipment pads throughout. If building use changes removal of these will be important for access and safety. |
| 2.16 | **Ceilings** throughout the learning and common areas are easily cleaned and resistant to stain. Spaces include classroom, offices, labs, cafeteria etc. | 1 | N/A | 0 | |
| 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 | Where present, restroom ceilings appeared adequate. Most of the building is exposed structure which is showing many areas of repeated water damage and degradation. See 3.0 and 5.0 reports for additional 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 | N/A | 0 | |
| 2.19 | **Walls** throughout the support and circulation areas are easily cleaned and resistant to stain. Spaces include corridors, restrooms, storage rooms etc. | 1 | 3 | 3 | Restroom walls are in good condition, but are extremely dusty and dirty. All restroom walls are gypsum board, painted finish so longevity and resistance to use is likely low. If use is increased it is recommended to install tile or other more durable and cleanable materials. All other walls are exposed brick with peeling paint. See 2.6 |
| 2.20 | **Built-in casework** is designed and constructed for ease of maintenance. | 1 | N/A | 0 | |

# 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 | 2 | 6 | Restroom doors and the main exterior entrance door appear adequate for material and maintainability. There are several other doors that are damaged. Doors that intend to serve occupied areas should be replaced for easier maintenance and security control of unoccupied areas. |
| 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 | 5 | 10 | |
| 2.24 | **Adequate electrical outlets** are located to permit routine cleaning in corridors and large spaces. | 1 | N/A | 0 | |
| **Occupant Safety** | | | | | |
| 2.25 | Classroom doors are **recessed and open outward.** | 4 | N/A | 0 | |
| 2.26 | Door hardware (into classrooms or any occupied rooms off of corridors) include **intruder classroom locksets.** | 4 | N/A | 0 | |
| 2.27 | **Door panels** into classrooms and other occupied spaces contain **vision lite.** | 4 | N/A | 0 | |
| 2.28 | **Vision lite** in doors is clear and uncovered. | 2 | N/A | 0 | |
| 2.29 | **Glass** is properly located and protected to prevent accidental injury. | 2 | N/A | 0 | |
| 2.30 | **Flooring** is maintained in a **non-slip** condition | 2 | 4 | 8 | Restroom floors were very dusty at the time of assessment. These should be cleaned prior to use to prevent slipping. |

# 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 | N/A | 0 | |
| 2.33 | **Stairs (interior and exterior)** are well maintained and in good condition meeting current safety requirements. | 5 | 4 | 20 | |
| 2.34 | At least **two independent exits** from any point in the building | 5 | 5 | 25 | Exiting will have to be considered if this building becomes an occupied space. |
| 2.35 | **Emergency lighting** is provided throughout the building. | 4 | 4 | 16 | Signage is provided at the restrooms, other spaces are not. If building use changes this will need to be added/updated. |
| | **TOTAL** | | | 181 | |

# A | Architectural , Exterior

ASSESSOR: David Unick

## 3.0 Exterior Envelope

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Design** | | | | | |
| **3.1** | Overall **design is aesthetically pleasing** and appropriate for the age of students. | 2 | N/A | 0 | Storage Building. |
| **Maintainability** | | | | | |
| **3.2** | **Roofs** appear sound, have positive drainage, and are water tight. | 3 | 1 | 3 | Roofs not accessible so not directly observed. However, sloping structure visible from interior. Scuppers at east wall for all roof levels. (2) large water puddles inside building indicating leaks at high roof. Water staining of roof decks and peeling paint at wall/roof intersections indicate long-term water issues. |
| **3.3** | **Roof access** is safe for all roofs. | 3 | 0 | 0 | No means of roof access. |
| **3.4** | Exterior **window sealant** is fully intact without cracks or gaps. | 3 | 3 | 9 | All window perimeters should be resealed. |
| **3.5** | **Glazing** is low-e coated, insulated, and overall in good condition. | 1 | 1 | 1 | High windows and east side ground level are aluminum with insulated glazing. Remainder of windows are original steel units with single pane glass. Multiple panes are cracked but remain in place. |
| **3.6** | **Operable windows** are functional and safe. Operable portion of window fully seals when closed without gapping or leaking. | 2 | N/A | 0 | All windows appear to be fixed units. |
| **3.7** | **Exterior doors** are of durable material requiring minimum maintenance. | 2 | 2 | 4 | (2) entry doors are hollow metal. (1) wood door and frame are badly deteriorated. (3) metal garage doors in place, (1) of which should be replaced. |
| **3.8** | **Exterior walls** are of material and finish requiring little maintenance, | 1 | 2 | 2 | Walls are brick. Some damaged areas have been repointed previously. Minor exterior repointing will be required. |
| **3.9** | **Exterior Doors** open outward and are equipped with **panic hardware.** | 1 | 4 | 4 | The only publicly-accessible door (restroom entry on east side) contains panic device. |
| **3.10** | **Exterior Doors are monitored** or controlled by an access control system. | 3 | 0 | 0 | No doors have access control or monitoring |
| | **TOTAL** | | | 23 | |

# 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 | 2 | 4 | The multiple cracks in the structural brick walls in the high bay area and cracks in plaster in the Northern most low roof area could potentially be caused by foundation settlement. A future study was noted to perform a more in depth study of these cracks. |
| 5.3 | **Basement walls** do not appear to have any cracks. | 1 | 4 | 4 | Exposed basement walls were in good shape for how old this building is. Some of the basement walls look to be old multi-wythe structural brick that has since been covered with concrete. The brick walls in these spots were not able to be observed. |
| 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 | 3 | 3 | Areas that were able to be observed were in good shape for the age of building. There were a lot of items on the floor in the high bay area, which made observing the slab difficult throughout this room. |
| 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 | 2 | 4 | There are multiple cracks in the walls of the high bay area. A future, in-depth study should be performed to determine the extents and severity of cracking. There are also cracks in the plaster in the Northern most low roof area that requires a future study once plaster is removed to observe the condition of the brick. |
| 5.8 | **Lintels** appear in good condition (no visible deflection or rust). | 1 | 4 | 4 | Several lintels were rusted and should be cleaned and re-painted. |
| 5.9 | **CMU** is in good condition. | 1 | N/A | 0 | |
| 5.10 | **Precast** is in good condition. | 1 | N/A | 0 | |

# S | Structural

ASSESSOR: Niles Quick

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Interior Walls** | | | | | |
| 5.11 | **Interior walls** appear to be in good condition. | 1 | 2 | 2 | See comments on 5.7. This pertains to the structural brick walls only. |
| **Floor Framing (Elevated)** | | | | | |
| 5.12 | **Floor framing** appears to be in good condition. | 3 | 4 | 12 | Elevated concrete floor slab had spalling at the bottom of the stairs in the high bay area, and rebar was exposed. Patch concrete. |
| 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 | 3 | 9 | Minor water damage in some areas in the high bay room. It was not possible to observe how this has affected the structure due to the height of the roof and color of structure. A future study could be performed to determine this. |
| **Miscellaneous** | | | | | |
| 5.15 | **Retaining walls** appear to be in good condition. | 1 | N/A | 0 | |
| 5.16 | **Canopies** appear to be in good condition. | 1 | N/A | 0 | |
| 5.17 | **Loading dock concrete** appears to be in good condition. | 2 | N/A | 0 | |
| 5.18 | **Mechanical screening** appears to be in good condition. | 2 | N/A | 0 | |
| 5.19 | **Stairs** appear to be in good condition. | 1 | 5 | 5 | |
| 5.20 | **Stair railings** appear to be in good condition. | 1 | 5 | 5 | |

# S | Structural

ASSESSOR: Niles Quick

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **5.21** | **Pool Deck** appears in good condition without cracks. | 1 | N/A | 0 | |
| **5.22** | **Balconies** appear in good, stable, condition | 1 | N/A | 0 | |
| **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 | N/A | 0 | |
| **5.25** | The hardened area appears consistent with the **ICC 2018 code.** | 1 | N/A | 0 | |
| | **TOTAL** | | | 87 | |

# 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 | N/A | 0 | No cooling and no heating except new RR area. |
| 6.2 | **Thermostat location.** Thermostats are properly located in the space. | 3 | 5 | 15 | One thermostat in new RR area heating only. |
| 6.3 | Appropriate **amount of ventilation** are provided to each space. | 5 | N/A | 0 | No ventilation. |
| 6.4 | **Ventilation** is provided during occupied hours. | 5 | N/A | 0 | No ventilation. |
| 6.5 | **Outdoor air intake locations** are appropriate. | 4 | N/A | 0 | No OA provided. |
| 6.6 | Appropriate **levels of exhaust** are provided for areas requiring this such as restrooms, janitor's closets and locker rooms. | 5 | 4 | 20 | Minimal exhaust provided for new RR only. |
| 6.7 | **Building pressurization.** The design takes into account the balance between ventilation and exhaust air | 2 | N/A | 0 | No makeup for exhaust provided. |
| 6.8 | **Major HVAC Equipment** appears to be within it's acceptable **service life.** | 5 | 5 | 25 | Heating equipment is minimal for RR area only. |
| 6.9 | **Cooling loads** are within equipment operational capacity. | 5 | N/A | 0 | No cooling. |
| 6.10 | **Heating loads** are within equipment operations capacity. | 5 | N/A | 0 | Limited heating in RR only. |

# MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 6.11 | **Dehumidification** is provided and addressed humidity loads in incoming outside air. | 4 | N/A | 0 | |
| 6.12 | Appropriate levels of ventilation, cooling and dehumidification are being provided within **Natatorium.** | 5 | N/A | 0 | |
| **Plumbing Design** | | | | | |
| 6.13 | **Water Supply Pressure** is adequate to allow for operation of plumbing fixtures. | 5 | 4 | 20 | Unable to test due to winterization. |
| 6.14 | Appropriate **backflow preventer** is provided at connection to city water supply. | 5 | 0 | 0 | No BFP present. |
| 6.15 | **Domestic hot-water systems** are within equipment operational capacity. | 5 | 4 | 20 | Unable to test due to winterization. |
| 6.16 | Domestic **hot-water recirculating systems** allow for hot-water at fixtures within a reasonable amount of time. | 3 | 4 | 12 | Unable to test due to winterization. |
| 6.17 | **Sanitary sewer systems** are sized and sloped to allow for proper drainage. | 5 | 5 | 25 | New RR only. |
| 6.18 | Appropriately sized **grease interceptors** are provided for facilities with food service. | 3 | N/A | 0 | |
| 6.19 | **Roof drainage** systems are sized appropriately and overflow drainage systems are installed. | 5 | 3 | 15 | Unable to access roof. |
| 6.20 | **Restroom fixtures** comply with DMPS preferences. | 3 | 5 | 15 | New RR only. |

# MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Maintainability** | | | | | |
| **6.21** | Equipment is provided with **adequate service clearance** to allow for regular maintenance | 3 | 5 | 15 | New RR only. |
| **6.22** | AHUs and chiller are provided with **coil pull space.** | 2 | N/A | 0 | |
| **6.23** | **Filter** sizes are standard and filter types are standard. | 2 | 5 | 10 | New RR only. |
| **6.24** | **Equipment mounting heights** are reasonable. | 3 | 5 | 15 | New RR only. |
| **6.25** | **Floor surfaces** throughout the mechanical room are non-slip and are dry. | 2 | 4 | 8 | Multiple areas with moisture infiltration due to roof and foundations leaks. |
| **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 | New RR only. |
| **6.27** | Appropriate means are provided for **airflow and water balancing.** | 3 | N/A | 0 | |
| **6.28** | **Hose Bibbs** located in proximity to **outdoor condensers and condensing units**. Is cottonwood an issue at this location? | 2 | N/A | 0 | |
| **6.29** | **Fall protection** is provided for equipment within 15 ft of roof edge. | 2 | N/A | 0 | No roof access or roof equipment. |
| **6.30** | **Building devices are on DDC controls** and fully visible through Building Automation System. No pneumatic controls remain. | 4 | N/A | 0 | No automation. |

# MP | Mechanical & Plumbing

ASSESSOR: Chuck Heldenbrand

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **Occupant Safety** | | | | | |
| **6.31** | **Backflow prevention** is provided at all **cross-connections** to non-potable water. | 5 | N/A | 0 | |
| **6.32** | Building is fully **sprinklered.** | 5 | 0 | 0 | No fire sprinkler. |
| **6.33** | **Domestic hot-water temperature** at lavatories used by students or staff is provided with a thermostatic mixing valve and adjusted properly. | 5 | 5 | 25 | New RR only. |
| **6.34** | **Emergency eye-washes and tempering valves** are located where required. | 5 | N/A | 0 | |
| **6.35** | **Emergency boiler stop switches** are located at exits from boiler rooms. | 5 | N/A | 0 | |
| **6.36** | **Refrigeration evacuation systems** are provided in rooms with chillers. | 5 | N/A | 0 | |
| **6.37** | **Carbon Monoxide monitoring** and alarming is provided for areas with gas-fired equipment. | 5 | N/A | 0 | |
| | **TOTAL** | | | 250 | |

# E | Electrical

ASSESSOR: David Carlson

## 7.0 Electrical Systems

### Electrical Design

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| 7.1 | **Transformer location** is easily accessible by utility line truck to allow for rapid transformer replacement in the event of an issue. | 5 | 4 | 20 | Building power source/transformer not identified with 100% certainty. Adjacent 75kVA transformer more closely associated with the baseball complex is readily accessible. |
| 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 | 4 | 12 | Light storage items in front of MDP. MDP is 208/120V Square D QMB Saflex Fused Distribution Panelboard rated at 400A, main fuse 400A. If building usage changes from Storage, recommend replacement with new 400A NQ panelboard to allow for future renovation. Currently acceptable if left undisturbed. |
| 7.4 | The **MDP** appears serviceable. | 4 | 1 | 4 | MDP is in poor condition, with substantial rust and damage to individual fuse bays. |
| 7.5 | The MDP is **maintainable.** | 3 | 3 | 9 | QMB Saflex parts are available as retrofit but typically not without field modification. |
| 7.6 | The MDP will support **future expansion.** | 4 | 0 | 0 | Open positions remain, but is not suggested for use. Square D NQO panelboard adjacent to MDP seems to be the main power source for the building. |
| 7.7 | The Distribution Panel **environment is safe**, has adequate clearances and exiting. | 4 | N/A | 0 | |
| 7.8 | The Distribution Panel appears **serviceable.** | 4 | N/A | 0 | |
| 7.9 | The Distribution Panel is **maintainable.** | 4 | N/A | 0 | |
| 7.10 | The Distribution Panel will support **future expansion.** | 4 | N/A | 0 | |

# E | Electrical

ASSESSOR: David Carlson

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **7.11** | **Electrical panels and disconnect switches** observed during assessment are safe, serviceable, and maintainable. | 2 | 2 | 4 | 100A panelboard adjacent to MDP is antiquated Square D NQO panel and is poor condition. Panel C load center adjacent to NQO panel is 24 position panel installed in 2023. Unknown how panels are feeding each other. |
| **7.12** | Building has adequate and appropriately located, **safe exterior power** to allow for regular maintenance activities. | 1 | 0 | 0 | No exterior receptacles noted. |
| **7.13** | Building has adequate **exterior lighting** to promote safety and security of the property. | 5 | 0 | 0 | To be assessed at a later date after-hours in conjunction with DMPS Security. |
| **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 | 1 | 4 | Boiler building is a splice location for fiber service feeding from Roosevelt to Hubbell Elementary. No horizontal cabling save for one wireless access point. Switches are sitting on a dirty shelf, and all equipment is gathering dust. Recent upgrade from Cisco to Aruba switch. |
| **7.15** | MDF Equipment Racks have adequate space for **future growth.** | 4 | N/A | 0 | No rack, a single switch and wall-mount fiber splice is present. |
| **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 | N/A | 0 | |
| **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 | N/A | 0 | |
| **7.19** | MDF employs up-to-date **network cabling.** | 2 | 5 | 10 | Single CAT6A cable for wireless access point. |
| **7.20** | MDF is connected to Intermediate Distribution Frame (IDF) closets with **fiber optic cabling.** | 1 | N/A | 0 | |

# E | Electrical

ASSESSOR: David Carlson

| | | Weight Factor | Rating | Points | Comments |
|---|---|---|---|---|---|
| **7.21** | MDF has adequate **grounding busbar capacity.** | 2 | N/A | 0 | |
| **7.22** | Building is equipped with an **addressable fire alarm system.** | 5 | N/A | 0 | |
| **7.23** | Building is equipped with an **access control system.** | 5 | N/A | 0 | |
| **7.24** | Building is equipped with a **CCTV system.** | 5 | N/A | 0 | |
| **7.25** | Building is equipped with an **intercom system.** | 4 | N/A | 0 | |
| **7.26** | Building is equipped with a **master clock system.** | 4 | N/A | 0 | |
| | **TOTAL** | | | 93 | |

# 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

| | | |
|---|---|---|
| Clean Flooring | Restroom flooring is very dusty and appears to be covered with sand. Prior to occupancy for the season floors need to be cleaned to provide proper slip resistance. | |

## 1 - 2 Year Priority

| | | Project Costs |
|---|---|---|
| Roof Replacement | Standing water, covered equipment, and masonry cracking on north wall of high roof and peeling paint at low roof intersection indicate probable moisture intrusion in several areas. Replace roofing, existing roofing is likely modified bitumen, but is unknown. Replace with TPO membrane and insulation. Approximately 6,000SF. | $150,000 |
| Door/Frame Replacement | Remove and replace wood-framed door/sidelight assembly accessing NE mezzanine from east side of north bay. (8'x10' opening).<br>Remove and replace wood opening bucks and garage door on NW side -- bucks 2x10 HSS, door 8'x12'.<br>Remove and replace steel tube bucks and garage door on west-center side, remove and reinstall garage door -- bucks 2x10 HSS, door 10'x12'.<br>Remove and replace wood opening bucks and garage door on SW side, remove and reinstall door -- bucks 2x10 HSS, door 10'x10'.<br>Remove deteriorated particle board transom above west entry door. Replace with 3'x5' wall infill. | $55,000 |
| Sealant Replacement | Reseal perimeter of all aluminum framed windows and wall louvers. (16) openings, 580 LF sealant. | $11,000 |
| Masonry Repoint | Reinstall brick at jamb on NW garage door. Repoint adjacent. (5 SF.) Infill east louver opening (15 SF), Repoint cracked mortar joints ,various locations on exterior walls, (50 SF.) | $7,000 |

| | | |
|---|---|---|
| Concrete Patch | There is a section of exposed rebar at the bottom of the stairs located at the bottom of the elevated floor slab in the high-bay room. Patch spalled concrete, 3 sq. ft. x 6" max depth | $8,000 |
| Lintel Refinish | Remove rust and repaint exposed steel lintels at all windows and louvers. (20) openings, 120 LF. | $7,000 |

**Total 1-2 Year Project Costs: $238,000.00**

## 3 - 4 Year Priority

| | | Project Costs |
|---|---|---|
| Replace Steel Window Assemblies | Remove all steel window assemblies. Replace with aluminum assemblies. (4) 4'x8' units and (2) 3'x8' units. Remove and replace existing wire mesh security screens. This project scope could be reduced to glazing only replacement if determined the building will remain un-conditioned for the foreseeable future. | $30,000 |

**Total 3-4 Year Project Costs: $30,000.00**

## 5 - 10 Year Priority

| | Project Costs |
|---|---|
| None Noted | |

## Projects Requiring Study

| | | Design Services Fee |
|---|---|---|
| Future Re-Use Feasibility, Study | A feasabiltiy and cost analysis study should be conducted to compare initial and long term costs for renovation and re-use of the existing building versus demolition and construction of a new facility. Along with this, a structural study should be conducted to determine full conditions and anticipated load limitations on exterior brick walls and the roof framing members. Due to height and access limitations during the time of the assessment these items could not be studied in depth.<br>Included in this study should be needs of the school, structural feasability for supporting new construction within, and comparisons to a newly constructed facility.<br>Fee includes initial study, not design work fees. | $20,000 |

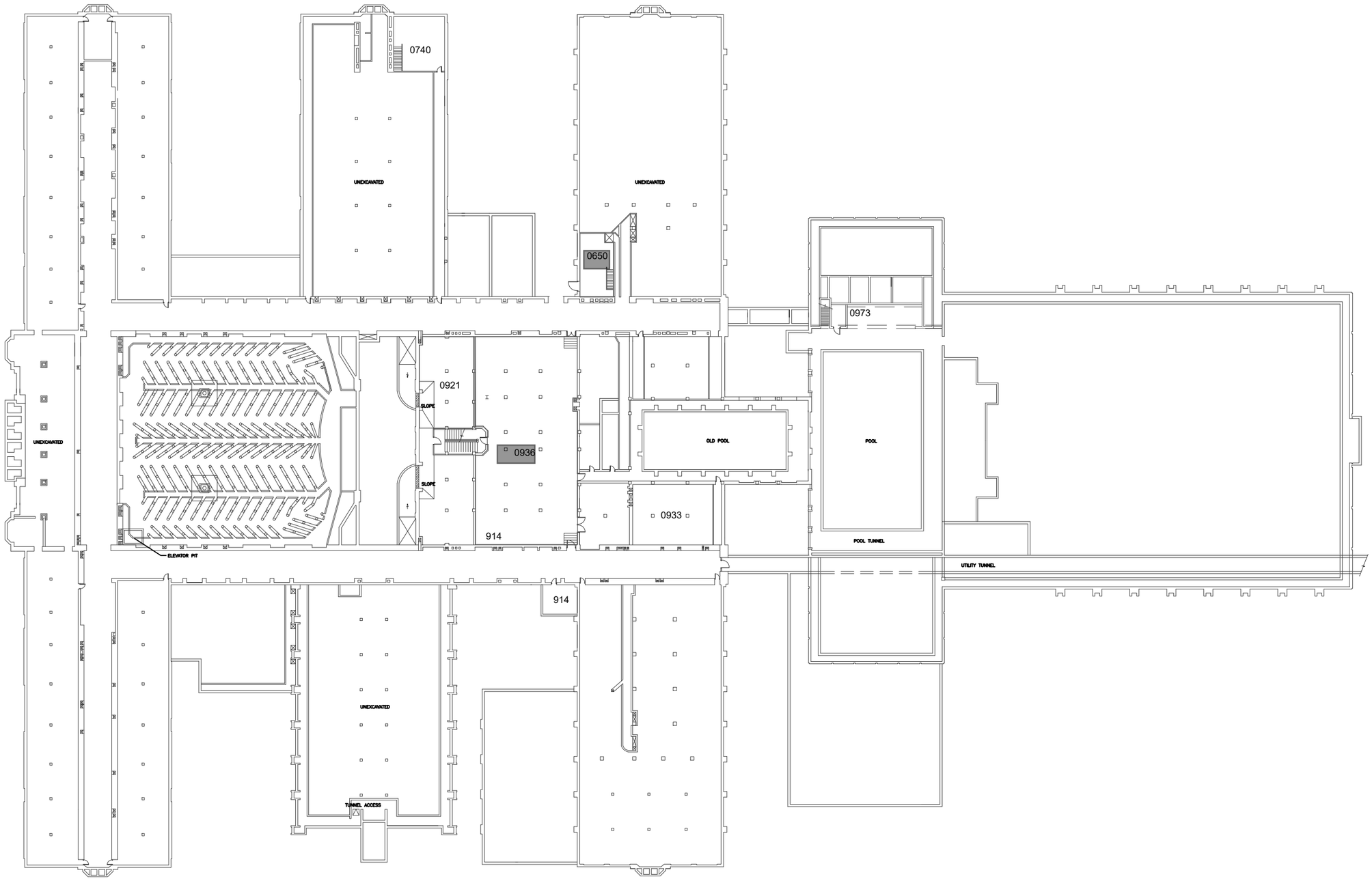
**Total Study Design Service Fees: $20,000**

# ROOSEVELT HIGH SCHOOL

4419 CENTER STREET
DES MOINES, IOWA 50312

## BASEMENT

NORTH



DesMoines PUBLIC SCHOOLS

# ROOSEVELT HIGH SCHOOL

4419 CENTER STREET
DES MOINES, IOWA 50312

# FIRST FLOOR

NORTH

DesMoines PUBLIC SCHOOLS

# ROOSEVELT HIGH SCHOOL

4419 CENTER STREET
DES MOINES, IOWA 50312

# SECOND FLOOR

NORTH

# ROOSEVELT HIGH SCHOOL

4419 CENTER STREET
DES MOINES, IOWA 50312

## THIRD FLOOR

NORTH