OPN ARCHITECTS

HSS ANK IMEO EXPANSION & RENOVATION – ADDENDUM #1

Date: November 24, 2025

Project: HSS ANK IMEO Expansion & Renovation

State of Iowa project number: 9429.00

Client: Iowa Department of Administrative Services

Project Location: 2250 S Ankeny Blvd, Ankeny, Iowa 50023

This Addendum forms a part of the contract documents and modifies the original bidding documents dated November 13, 2025 as noted below. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the bidder to disqualification.

To: Bidders

Contents: (7) Attached Typed Pages
(7) Drawing Sheets
(86) Specification Pages

BIDDING QUESTIONS & ANSWERS

QUESTION #1:
Will BP 003A be responsible for the retaining wall at the loading dock area?

ANSWER #1:
Yes, BP 003A is responsible for the retaining wall at the loading dock area as noted in other inclusions in the bid scope clarified in BP 003A and BP 031A.

QUESTION #2:
What are the reinforcing requirements for the site paving, 8" and 7"? Detail 1/C600 shows #4 @ 24"O.C.E.W. Will this apply to both the 8" and 7" Parking lot?

ANSWER #2:
Per note "1A" on C301, 8" pavement DOES have CD baskets. Note "1B", for 7" pavement does NOT list reinforcing or CD baskets. Reinforcing in the 7" pavements would be dependent on the contractor's operations and tying different days construction pours to each other spelled out in the specifications but does not require continuous reinforcing or CD baskets. The "where specified" in the detail note refers to the more detailed description of notes 1A and 1B.

QUESTION #3:
Will CD Baskets be required for the 8" PCC parking lot?

ANSWER #3:
Per note "1A" on C301, 8" pavement DOES have CD baskets.

OPN ARCHITECTS

QUESTION #4:
What bid package is responsible for the exterior light pole footings? Could you provide a light pole footing design detail including the necessary reinforcement?

ANSWER #4:
This is spelled out to be by the electrical contractor, in 2.2.17 of the BP 026A spec which states ''Contractor shall furnish and install site lighting bases.'' Detail 6 / E501 calls out lighting pole base with size, depth, and reinforcing.

SUBSTITUTION REQUESTS

1. APPROVED
    a. 08 71 00 – Record USA Series 8100; Automatic Door Operator

GENERAL INFORMATION & CLARIFICATIONS

1. Pre-Bid Meeting #1 Minutes and Attendees Log attached from meeting that occurred November 19, 2025 at 2:30pm.
2. **REMOVE** notation for VOL 2 in footer of specification section 13 46 13.
3. **REMOVE** notation for VOL 2 in footer of each specification section for Division 21, 22, 23, 26, 27, and 28.

GENERAL DRAWINGS & FRONT END SPECIFICATIONS

Front end specifications

1. 00 11 13 – NOTICE TO BIDDERS
    - **REVISE** the third paragraph to state the time that Bids must be received by to ***"2:00 pm, Tuesday, December 16, 2025".***
2. 00 31 13 – PRELIMINARY SCHEDULE
    - **ADD** attached preliminary schedule after section 00 31 13 and before section 00 31 43.
3. 01 12 00 – CONTRACT SUMMARY
    - **ADD** Construction Manager Bid Package Scope Description information after section 01 12 00 and before Section 01 12 00.003A.
4. 01 12 003A – CONCRETE FOUNDATIONS, SOG, & MISC CONCRETE
    - **REVISE** specification footer to correctly reference specification section.
    - **MODIFY** paragraph 2.2.11 as shown.
5. 01 12 004A – MASONRY
    - **REVISE** specification footer to correctly reference specification section.
6. 01 12 005A – STRUCTURAL STEEL & MISC METALS (FURNISH & INSTALL)
    - **REVISE** specification footer to correctly reference specification section.
7. 01 12 006A – GENERAL CONSTRUCTION
    - **REVISE** specification footer to correctly reference specification section.
8. 01 12 007A – ROOFING & SHEET METAL
    - **REVISE** specification footer to correctly reference specification section.
9. 01 12 007B – METAL PANELS
    - **REVISE** specification footer to correctly reference specification section.
10. 01 12 008A – EXTERIOR & INTERIOR GLAZING SYSTEMS
    - **REVISE** specification footer to correctly reference specification section.

11. 01 12 009A – GYPSUM WALLBOARD, INSULATION, CEILINGS, PAINTING, & WALLCOVERING
    - **REVISE** specification footer to correctly reference specification section.
12. 01 12 009C – TERRAZZO
    - **REVISE** specification footer to correctly reference specification section.
13. 01 12 021A – FIRE PROTECTION
    - **REVISE** specification footer to correctly reference specification section.
14. 01 12 022A – MECHANICAL (HVAC, PLUMBING, & BAS)
    - **REVISE** specification footer to correctly reference specification section.
15. 01 12 026A – ELECTRICAL (FIRE ALARM, STRUCTURED CABLING, SECURITY/ACCESS CONTROL, & AV)
    - **REVISE** specification footer to correctly reference specification section.
16. 01 12 031A – SELECTIVE SITE DEMO (GRADING/EXCAVATING, SITE UTILITIES, SITE PAVING, & EXTERIOR IMPROVEMENTS)
    - **REVISE** specification footer to correctly reference specification section.
    - **REMOVE** paragraph 2.4.2 as not applicable.
    - **MODIFY** paragraph 2.5.12 as shown.
17. 01 31 00 – PROJECT MANAGEMENT & COORDINATION
    - **ADD** link for contractors to use for background checks to paragraph 3.05 – F.

General drawings

1. G001 – INDEX, SEALS, & LOCATION MAP
    - **ADD** sheet A532 – INTERIOR SECTION & PLAN DETAILS to sheet index.

ARCHITECTURAL

Architectural clarifications

1. No items at this time.

Architectural specifications

1. 08 71 00 – DOOR HARDWARE
    - **ADD** Record USA – 8100 Series as an approved manufacturer to paragraph 2.13-3-c.

Architectural drawings

1. A361 – EXTERIOR PLAN DETAILS
    - **ADD** sheet into Bid Documents Drawings - Volume 1 that was previously missing.

CIVIL

Civil clarifications

1. No items at this time.

Civil specifications

1. No items at this time.

Civil drawings

1. No items at this time.

OPN ARCHITECTS

STRUCTURAL

Structural clarifications

1. No items at this time.

Structural specifications

1. No items at this time.

Structural drawings

1. No items at this time.

LABORATORY

Laboratory clarifications

1. No items at this time.

Laboratory specifications

1. No items at this time.

Laboratory drawings

1. No items at this time.

FIRE PROTECTION

Fire Protection clarifications

1. No items at this time.

Fire Protection specifications

1. No items at this time.

Fire Suppression drawings

1. No items at this time.

PLUMBING

Plumbing clarifications

1. P101A-N – PLUMBING FLOOR PLAN – MAIN LEVEL – ADDITION – NORTH
    - **REMOVE** the following from Keynote #1 “REFER TO EQUIPMENT CONNECTION PLANS ON THIS SHEET”.
2. P101A-S – PLUMBING FLOOR PLAN – MAIN LEVEL – ADDITION – SOUTH
    - **REMOVE** the following from Keynote #1 “REFER TO EQUIPMENT CONNECTION PLANS ON THIS SHEET”.

Plumbing specifications

1. No items at this time.

Plumbing drawings

3. PD101B – PLUMBING DEMOLITION – MAIN LEVEL
    - **REVISE** demolition note to read "DEMO BACK TO WALL, CAP AND ABANDON."
4. P001 – PLUMBING SITE PLAN
    - **REVISE** detail callout for Water Entrance Detail to read "11/P300."
5. P101B-N – PLUMBING FLOOR PLAN – MAIN LEVEL – RENOVATION – NORTH
    - **REMOVE** the following from Keynote #1 "REFER TO EQUIPMENT CONNECTION PLANS ON THIS SHEET".
    - **REVISE** FS to FS-1 in ANTHRO B144.
    - **REVISE** FS to FS-2 in DIRTY LAUNDRY B142.
6. P101B-S – PLUMBING FLOOR PLAN – MAIN LEVEL – RENOVATION – SOUTH
    - **REVISE** WDS to WDS-2 in CART WASH B143
7. P500 – PLUMBING SCHEDULES
    - **ADD** "PROVIDE WITH TRAP GUARD; PROSET "TRAP GUARD", SURE SEAL "MODEL SS", OR APPROVED EQUAL" to TRIM of FD-2.

MECHANICAL

Mechanical clarifications

1. No items at this time.

Mechanical specifications

1. No items at this time.

Mechanical drawings

1. No items at this time.

ELECTRICAL

Electrical clarifications

1. No items at this time.

Electrical specifications

1. No items at this time.

Electrical drawings

1. No items at this time.

OPN ARCHITECTS

TECHNOLOGY

Technology clarifications

1. No items at this time.

Technology specifications

1. No items at this time.

Technology drawings

1. No items at this time.

Attachments:

- Typed Pages
  - Pre-Bid Meeting #1 Meeting Minutes & Attendance List (7 pages)
- Drawings
  - G001; A361; PD101B; P001; P101A-N; P101A-S; P101B-N; P101B-S; P500
- Specifications
  - 00 11 13; 00 31 13; 01 12 00; 01 12 00.003A; 01 12 00.031A; 001 31 00; 08 71 00

END OF ADDENDUM 1

State of Iowa - Department of Administrative Services
109 SE 13th St.
Des Moines, Iowa 50319
P: (515) 281-7260

Project: 9429.00 HHS ANK IMEO Expansion and Renovation
2250 S Ankeny Blvd
Ankeny, Iowa 50023
P: (515) 725-1400

RFB Pre-Bid Minutes: Meeting #1

Meeting Date	Nov 19, 2025	**Meeting Time**	02:30 pm - 04:30 pm Central Time (US & Canada)
Meeting Location	IMEO, 2250 S. Ankeny Blvd, Ankeny IA 50023, Rooms 207 & 208		
Overview	Meeting to allow prospective bidders to visit the site, when possible, and learn more about the project.		
Notes			
Attachments			

Scheduled Attendees

Introduction

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
1.1	1	Introductions				Open

Description
Welcome

Project Team Introductions:

- CM - Weitz
- Owner - DAS, CCM & IMEO
- Architect - OPN
- Design Consultants

Housekeeping Items:

- Weitz Sign-in Sheet
- Site Visit Form (Required to bid on BP's with mandatory pre-bid attendance)
    - BP 003A Concrete (Foundations/SOG/Misc Concrete)
    - BP 005A Structural Steel & Misc Metals (Material & Install)
    - BP 006A General Construction
    - BP 009A Gypsum Wallboard, Insulation & Ceilings, Paint & Wallcovering
    - BP 021A Fire Protection
    - BP 022A Mechanical (HVAC, Plumbing & BAS)
    - BP 026A Electrical (Fire Alarm, Structured Cabling, Security, Access Control & AV
    - BP 031A Selective Site Demo, Grading/Excavating, Site Utilities, Site Paving & Exterior Improvements
- IMEO Form (Required for facility access to tour)

Official Documented Meeting Minutes

- Project team introductions were given for Weitz, Design Team, DAS, CCM
- Discussed BPs with mandatory attendance listed above.

Project Overview

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
2.1	1	Project Description				Open

Description
Architectural & MEP Overview, including phasing

- Phase 1 Addition
- Phase 2 Remodel (Lab, Sally Port, Tissue Storage & SE Offices)
- Phase 3 Remodel (NE Offices)

Base bid

Alternates

- Alternate No. 1: Site Improvements
- Alternate No. 2: Existing Office Finishes & Window Treatments
- Alternate No. 3: Mechanical Piping Redundancy
- Alternate No. 4: Structured Cabling

IMEO **MUST remain operational through all phases of construction.**
Contractors shall perform their workscope in a manner that minimizes (or eliminates when possible) any impact to IMEO. Contractors shall be respectful of the sensitive work of IMEO and the elevated level of security the facility demands.

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Official Documented Meeting Minutes

- Aaron T. gave a brief overview of scope on the project
    - Emphasized importance of keeping existing facility operational through all 3 phases
    - Discussed 3 different phases
    - Mechanical scope service areas & tie in / sequencing with existing phases
    - Adding cooling tower & pump house
    - Adding dedicated generator to lab facility
    - Condensers on west side of existing building relocation as one of 1st activities on site
    - Site logistics plans referenced
    - Background checks necessary before working on site
    - 3 main punchlists - one for each phase
    - 2 main allowances with Siemens & Basepoint
    - 4 Alternates - site improvements, existing office finishes, mechanical piping for campus redundancy, structured cabling
- Stephanie discussed 13 BPs found in 01 12 00, with bidder responsibility to look through other bid packages as well as entire plan set
    - Weitz safety rules, inclusions, exclusions listed here

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
2.2	1	Project Schedule				Open

Description
Milestone Bid Schedule to be issued via Addendum #1:

- Phase 1 Addition: March 2026 - July 2027
- Phase 2 Remodel (Lab, Sally Port, Tissue Storage & SE Offices): Sept. 2027 - March 2028
- Phase 3 Remodel (NE Offices): April 2028 - June 2028

Anticipate contract(s) Issued: Early February 2026

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status

- Coordination & pre-planning meetings
- Submittal processing

Multiple pull-plan sessions will be held with the successful bid package contractors to add detail and finalize the construction schedule.

State Holidays: New Year's Day, Martin Luther King Day, Memorial Day, 4th of July, Labor Day, Veterans Day, Thanksgiving and day after Thanksgiving, Christmas Day

Official Documented Meeting Minutes

- Stephanie noted that the Last Planner method will be used for schedule
  - She discussed large milestones
  - There is time between phases in order to give owner time to move items, equipment, and furniture in between
  - Anticipate contracts finalized in February
  - Notice of intent is aiming to be sent out before Christmas

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
2.3	1	Site Rules				Open

Description

- **Onsite supervision by Prime Contractor is REQUIRED AT ALL TIMES** when work by that contractor or their subcontractors/suppliers is taking place.
- Contractors shall provide daily logs for each day they are on site.
- Weekly Prime Contractor Meetings will be established once construction starts. Contractors to begin attending the weekly meetings 6 weeks before starting work on site, if not before.
- It is of the utmost importance to show respect and courtesy to all staff at all times.
- No smoking, vaping or smokeless tobacco use onsite.
- Work Hours: 7am - 3:30pm Mon-Fri, unless pre-approved and coordinated with Weitz
- **Background checks are REQUIRED,** a passed background check must be on file before a worker is allowed to be on site.

Temporary Facilities & Controls Matrix is included in the specifications & outlines responsibilities of Contractors.

Site Logistics Plans for each phase are included in the drawings.

Official Documented Meeting Minutes

- Stephanie discussed site rules listed in description above.
- Stephanie to add link to background check in the specs
  - $15 / person roughly, which will be by each contractor needing checks

RFB Overview

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.1	1	Bid Submission				Open

Description

- Bids are due ***Tuesday, December 16, 2025 at 2pm (to be clarified via addendum #1)***
- The Bid shall be submitted to the Issuing Officer through the IMPACS Electronic Procurement System.

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status

- Link and information is in the project manual
- Contractors will need to register prior to bidding
- Bidders will need to register regardless of whether they have conducted business previously with the State of Iowa.
- Bidders should complete the registration process and ensure the ability to log in as soon as possible to ensure Bids can be submitted on the due date.
- Please make sure the electronic documents submitted contain any required signatures. Digital signatures will be accepted.

- Bid Opening will be held via conference call on ***Tuesday, December 16, 2025 at 3pm***
- Contractor shall reference the specifications for the bid submittal checklist
  - Bid Proposal Information
  - Non Discrimination Clause Information
  - Contractor Targeted Small Business Enterprise Pre-Bid Contract Information
  - Bid Security – 5% of total Bid amount
- Apparent low bidder will be required to submit subcontractor/supplier list 48hrs after the bid opening

Official Documented Meeting Minutes

- Stephanie talked through bid submission process as described in the description above
  - Noted to log in and make sure no issues ahead of bid day so technology issues do not prevent bidding

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.2	1	Bid Schedule				Open

Description
Bidder questions must be submitted in writing to DAS Procurement: Construction.Procurement@iowa.gov

- Questions/Substitution Requests are due in writing by 5pm on Tuesday, December 9, 2025

Addendum Schedule (tentative):

- Addendum #1: Monday, November 24, 2025
- Addendum #2: Friday, December 5, 2025
- Addendum #3: Thursday, December 11, 2025

- Bids Due: Tuesday, December 16, 2025 by 2pm
- Tentative NOI Issued: December 23, 2025
- Tentative Prime Contracts Executed: February 2, 2026

Official Documented Meeting Minutes

- Stephanie talked through bid schedule as listed in description above.

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.3	1	Administrative Details				Open

Description

- Contractors will sign a modified ConsensusDocs 802. Example in the project manual.
- Project-specific Certificate of Insurance must be provided prior to contract execution. Follow example in the project manual and limits in the 802.

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status

		• Project-specific P&P bonds must be provided prior to contract execution.
		• Successful contractor must turn in their list of subcontractors and suppliers within 48 hours of the bid.
		• DAS will provide tax exempt certificates upon request.
		• Procore will be used for all project management, at no cost to the trade contractor.
		  ◦ Submittals, Invoicing, RFIs, ASIs, PRs, RFQs
		  ◦ Contracts, Change Orders and Certificates of Substantial and Final Completion will also use Docusign
		• Contractor Schedule of Values shall be broken out as specified in the project manual.
		  ◦ SOV must contain a closeout line item for at least 1% of the total contract value.
		  ◦ This line item can only be invoiced once the certificate of final completion has been signed by all parties.			

		Official Documented Meeting Minutes • Stephanie talked through admin. details as listed in description above.				

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.4	1	Pre-Bid Site Visits				Open
		Description ***Site Tour (Break into smaller groups if needed)*** • Site • Basement • Interior				
		Official Documented Meeting Minutes • The entire group walked through the facility, including exterior, lower level / basement, and interior.				

Questions

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
4.1	1	Questions				Open
		Description Submit all questions in writing to construction.procurement@iowa.gov.				

9429.00 HHS ANK IMEO Expansion & Renovation
Pre-Bid Walk
Wednesday November 19, 2025

	Name	Company	Phone #	Email
1.	Stephanie Morrison	Weitz	515.201.3766	stephanie.morrison@weitz.com
2.	James Trower	DAS	515-380-[illegible]049	James.trower@iowa.gov
3.	Ty Corrigan	Weitz	515-314-1569	Ty.corrigan@weitz.com
4.	Connor McClain	Bailey Roofing	515-253-0191	Connor@baileyroofing.com
5.	Curtis McGrane	Weitz	515-698-4279	Curtis.mcgrane@weitz.com
6.	Will Stecker	Weitz	515 491 5106	Will.stecker@weitz.com
7.	Jamie Knutson	Baker Group	515-208-1986	knutsonj@thebakergroup.com
8.	Hermes Diaz	Concrete Technologies Inc.	515-252-1650	hdiaz@cti-ia.com
9.	Tom Martens	Summit Fire Protection	515-339-5346	Tmartens@summitfire.com
10.	Scott Hoffman	Cunningham	515-943-3505	Shoffman@cunninghaminc.com
11.	Josh Freeman	All Star Concrete	515-778-0039	Josh@AllStarConcreteIowa.com
12.	Matt Trewet	Waldinger	515-208-9557	matt.trewet@waldinger.com

9429.00 HHS ANK IMEO Expansion & Renovation
Pre-Bid Walk
Wednesday November 19, 2025

	Name	Company	Phone #	Email
13.	Aaron Twedt	QAN Architects	515-309-0722	atwedt@qnarchitects.com
14.	Kevin Clemens	NEUMANN	515-243-0156	BID@NEUMANNBROS.COM
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				

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VOLUME I

GENERAL DRAWINGS

G001	INDEX, SEALS, LOCATION MAP
G002	DESIGN EXCELLENCE
G005	CODE SUMMARY
G010	LIFE SAFETY PLAN - LOWER LEVEL & SITE
G011	LIFE SAFETY PLAN - MAIN LEVEL - BLDG B
G021	PHASING PLANS
G022	PHASING PLANS
G023	PHASING PLANS
G030	SITE LOGISTICS PLAN - PHASE 1
G031	SITE LOGISTICS PLAN - PHASE 2
G032	SITE LOGISTICS PLAN - PHASE 3
G033	SITE LOGISTICS PLAN - SUPPLEMENTAL PARKING
G100	EXISTING - EQUIPMENT SCHEDULE
G101	EXISTING - FLOOR PLAN & EQUIPMENT
G151	EXISTING - REFLECTED CEILING PLAN & EQUIPMENT
G200	ALTERNATE #1 - SITE DEMOLITION & IMPROVEMENTS
G201	ALTERNATE #2 & ALTERNATE #3

CIVIL DRAWINGS

C100	PROJECT INFORMATION
C200	DEMOLITION PLAN
C300	OVERALL PLAN
C301	DIMENSION PLAN
C400	GRADING & EROSION CONTROL PLAN
C500	UTILITY PLAN
C600	DETAILS

STRUCTURAL DRAWINGS

S001	STRUCTURAL NOTES
S101B	FOUNDATION PLAN
S102B	FOUNDATION PLANS
S201	FOUNDATION DETAILS
S202	FOUNDATION DETAILS
S203	FOUNDATION DETAILS
S301B	FRAMING PLANS
S401	FRAMING DETAILS
S402	FRAMING DETAILS

ARCHITECTURAL DEMOLITION DRAWINGS

AD101A	ADDITION - DEMO FLOOR PLAN - MAIN LEVEL
AD101B	RENOVATION - DEMO FLOOR PLAN - MAIN LEVEL
AD103A	ADDITION - DEMO ROOF PLAN
AD103B	RENOVATION - DEMO ROOF PLAN
AD151A	ADDITION - DEMO RCP - MAIN LEVEL
AD151B	RENOVATION - DEMO RCP - MAIN LEVEL
AD601A	ADDITION - DEMO FINISH PLAN - MAIN LEVEL
AD601B	RENOVATION - DEMO FINISH PLAN - MAIN LEVEL
AD701A	ADDITION - DEMO EQUIPMENT PLAN
AD701B	RENOVATION - DEMO EQUIPMENT PLAN

ARCHITECTURAL DRAWINGS

A000	GENERAL DRAWING INFORMATION
A001	INTERIOR WALL TYPES
A002	HORIZONTAL ASSEMBLIES & EXTERIOR WALL SYSTEMS
A003	ROOM PENETRATIONS PLAN - MAIN LEVEL
A004	INTEGRATED SHIELDING ASSEMBLY DETAILS
A010	ARCHITECTURAL SITE LAYOUT PLAN
A011	PUMP HOUSE & DETAILS
A050	SLAB COORDINATION PLAN
A051	CURB DETAILS
A100	FLOOR PLAN - LOWER LEVEL & SUBDRAINAGE
A101	FLOOR PLAN - MAIN LEVEL
A102	FLOOR PLAN & RCP - PENTHOUSE
A103	ROOF PLAN
A110	ENLARGED ROOF PLAN & DETAILS
A111	ROOF DETAILS
A112	ROOF DETAILS
A151	REFLECTED CEILING PLAN - MAIN LEVEL
A200	EXTERIOR ELEVATIONS
A210	AXONOMETRICS
A211	AXONOMETRICS
A220	CURTAINWALL ELEVATIONS
A300	BUILDING SECTIONS
A301	BUILDING SECTIONS
A302	BUILDING SECTIONS
A303	BUILDING SECTIONS
A310	WALL SECTIONS
A311	WALL SECTIONS
A312	WALL SECTIONS
A313	WALL SECTIONS
A314	WALL SECTIONS
A315	WALL SECTIONS
A316	WALL SECTIONS
A317	WALL SECTIONS
A318	WALL SECTIONS
A319	WALL SECTIONS
A320	WALL SECTIONS
A321	WALL SECTIONS
A322	WALL SECTIONS
A323	WALL SECTIONS
A324	WALL SECTIONS
A325	WALL SECTIONS
A326	WALL SECTIONS
A327	WALL SECTIONS
A328	WALL SECTIONS
A350	EXTERIOR SECTION DETAILS
A351	EXTERIOR SECTION DETAILS
A352	EXTERIOR SECTION DETAILS
A360	EXTERIOR PLAN DETAILS
A361	EXTERIOR PLAN DETAILS
A370	EXTERIOR ENVELOPE DETAILS
A400	ENLARGED PLAN & RCP - SALLYPORT
A401	ENLARGED PLAN & RCP - INTAKE-DISCHARGE SUITE
A402	ENLARGED PLAN & RCP - LOCKER ROOM/ IMAGING & LOBBY/ ADMIN SUITE
A403	ENLARGED PLAN & RCP - MAIN AUTOPSY SUITE
A404	ENLARGED PLAN & RCP - EAST LAB
A405	ENLARGED PLAN & RCP - SOUTH OFFICES & LAB
A406	ENLARGED PLAN & RCP - BREAK ROOM
A407	ENLARGED PLAN & RCP - NORTH NEW OFFICES
A408	ENLARGED PLAN & RCP - NORTH EXISTING OFFICES
A409	ENLARGED PLAN & RCP - COOLERS
A410	ENLARGED PLAN & RCP - CORRIDORS
A420	ENLARGED STAIR PLAN & SECTION
A500	INTERIOR ELEVATIONS
A501	INTERIOR ELEVATIONS
A502	INTERIOR ELEVATIONS
A503	INTERIOR ELEVATIONS
A504	INTERIOR ELEVATIONS
A505	INTERIOR ELEVATIONS
A506	INTERIOR ELEVATIONS
A507	INTERIOR ELEVATIONS
A508	INTERIOR ELEVATIONS
A509	INTERIOR ELEVATIONS
A510	INTERIOR ELEVATIONS
A511	INTERIOR ELEVATIONS
A520	CASEWORK DETAILS
A521	CASEWORK DETAILS & AXONS
A530	INTERIOR SECTION DETAILS
A531	INTERIOR SECTION & PLAN DETAILS
A532	INTERIOR SECTION & PLAN DETAILS
A550	CEILING DETAILS
A551	CEILING DETAILS
A601	OVERALL FINISH PLAN - MAIN LEVEL
A610	ENLARGED FINISH PLANS
A611	ENLARGED FINISH PLANS
A612	ENLARGED FINISH PLANS
A613	ENLARGED FINISH PLANS
A620	INTERIOR FINISH SPECIFICATIONS & ROOM FINISH SCHEDULE
A630	FINISH DETAILS
A650	DOOR SCHEDULE AND FRAME ELEVATIONS
A660	DOOR & FRAME DETAILS
A661	DOOR & FRAME DETAILS
A700	EQUIPMENT SCHEDULE
A701	EQUIPMENT PLAN - MAIN LEVEL
A800	SIGNAGE TYPES & SCHEDULES
A801	SIGNAGE PLAN - MAIN LEVEL
A802	SIGNAGE PLAN - PENTHOUSE
A901	FURNITURE PLAN (FOR REFERENCE ONLY)

A531 ADD

ARCHITECTURAL LAB DRAWINGS

L100	LAB SCHEDULES & ABBREVIATIONS
L102	LAB CASEWORK ELEVATIONS
L200	OVERALL LAB FLOOR PLAN
L201B	ENLARGED LAB PLAN A
L202	ENLARGED LAB PLAN B
L203B	ENLARGED LAB PLAN C
L204A	ENLARGED LAB PLAN D
L500	LAB DETAILS
L501	LAB DETAILS
L502	AUTOPSY STATION ELEVATIONS
L503	DOWNDRAFT AUTOPSY STATION ELEVATIONS

VOLUME II

MECHANICAL DRAWINGS

M000	MECHANICAL GENERAL NOTES & SYMBOLS
MD101	MECHANICAL DEMOLITION - MAIN LEVEL - ADDITION
MD102	MECHANICAL DEMOLITION - MAIN LEVEL - RENOVATION
MD103	MECHANICAL PIPING DEMOLITION - ADDITION
MD104	MECHANICAL PIPING DEMOLITION - RENOVATION
M001	MECH SITE PLAN
M101A	HVAC PLAN - MAIN LEVEL - ADDITION
M101A-N	HVAC PLAN - MAIN LEVEL - ADDITION - NORTH
M101A-S	HVAC PLAN - MAIN LEVEL - ADDITION - SOUTH
M101B	HVAC PLAN - MAIN LEVEL - RENOVATION
M101B-N	HVAC PLAN - MAIN LEVEL - RENOVATION - NORTH
M101B-S	HVAC PLAN - MAIN LEVEL - RENOVATION - SOUTH
M102	HVAC PLAN - PENTHOUSE
M103	HVAC PLAN - ROOF PLAN
M300	MECHANICAL DETAILS
M301	MECHANICAL DETAILS
M302	MECHANICAL DETAILS
M303	MECHANICAL DETAILS
M304	MECHANICAL DETAILS
M400	MECHANICAL CONTROLS
M401	MECHANICAL CONTROLS
M500	MECHANICAL SCHEDULES
M501	MECHANICAL SCHEDULES
M502	MECHANICAL SCHEDULES
MH100	MECHANICAL PIPING PLAN - LOWER LEVEL
MH101A	MECHANICAL PIPING MAIN LEVEL - ADDITION
MH101A(ALT)	MECHANICAL PIPING MAIN LEVEL - ADDITION (ALTERNATE)
MH101B	MECHANICAL PIPING MAIN LEVEL - RENOVATION
MH101B(ALT)	MECHANICAL PIPING MAIN LEVEL - RENOVATION (ALTERNATE)

PLUMBING DRAWINGS

P001	PLUMBING SITE PLAN
PD101B	PLUMBING DEMOLITION - MAIN LEVEL
P100A	PLUMBING PLAN - LOWER LEVEL - ADDITION
P100B	PLUMBING PLAN - LOWER LEVEL - RENOVATION
P101A	PLUMBING PLAN - MAIN LEVEL - ADDITION
P101A-N	PLUMBING PLAN - MAIN LEVEL - ADDITION - NORTH
P101A-S	PLUMBING PLAN - MAIN LEVEL - ADDITION - SOUTH
P101B	PLUMBING PLAN - MAIN LEVEL - RENOVATION
P101B-N	PLUMBING PLAN - MAIN LEVEL - RENOVATION - NORTH
P101B-S	PLUMBING PLAN - MAIN LEVEL - RENOVATION - SOUTH
P102	PLUMBING PLAN - PENTHOUSE LEVEL
P103	PLUMBING PLAN - ROOF
P300	PLUMBING DETAILS
P500	PLUMBING SCHEDULES
P501	PLUMBING SCHEDULES

FIRE PROTECTION DRAWINGS

F101A	FIRE PROTECTION PLAN - MAIN LEVEL - ADDITION
F101B	FIRE PROTECTION PLAN - MAIN LEVEL - RENOVATION

ELECTRICAL DRAWINGS

E000	ELECTRICAL GENERAL NOTES & SYMBOLS
E001	ELECTRICAL SITE PLAN
ED101	ELECTRICAL POWER - ADDITION DEMO
ED102	ELECTRICAL POWER - RENOVATION DEMO
ED103	ELECTRICAL POWER - MAIN LEVEL - TEMPORARY PHASE
ED301	ELECTRICAL LIGHTING - ADDITION DEMO
ED302	ELECTRICAL LIGHTING - RENOVATION DEMO
E100	ELECTRICAL POWER PLAN - LOWER LEVEL
E101	ELECTRICAL POWER PLAN - MAIN LEVEL - ADDITION
E101A-N	ELECTRICAL POWER PLAN - MAIN LEVEL - ADDITION - NORTH
E101A-S	ELECTRICAL POWER PLAN - MAIN LEVEL - ADDITION - SOUTH
E101B-N	ELECTRICAL POWER PLAN - MAIN LEVEL - RENOVATION - NORTH
E101B-S	ELECTRICAL POWER PLAN - MAIN LEVEL - RENOVATION - SOUTH
E102	ELECTRICAL POWER - PENTHOUSE & MAIN LEVEL ELECTRICAL ROOM
E301	ELECTRICAL LIGHTING PLAN - MAIN LEVEL - ADDITION
E301A-N	ELECTRICAL LIGHTING PLAN - MAIN LEVEL - ADDITION - NORTH
E301A-S	ELECTRICAL LIGHTING PLAN - MAIN LEVEL - ADDITION - SOUTH
E301B-N	ELECTRICAL LIGHTING PLAN - MAIN LEVEL - RENOVATION - NORTH
E301B-S	ELECTRICAL LIGHTING PLAN - MAIN LEVEL - RENOVATION - SOUTH
E302	ELECTRICAL LIGHTING PLAN - PENTHOUSE
E401	ELECTRICAL ONE-LINE DIAGRAM
E501	ELECTRICAL DETAILS
E601	ELECTRICAL SCHEDULES
E602	ELECTRICAL SCHEDULES
E603	ELECTRICAL PANEL SCHEDULES
E604	ELECTRICAL PANEL SCHEDULES
E605	ELECTRICAL EXISTING PANEL SCHEDULES

FIRE ALARM DRAWINGS

FAD101A	FIRE ALARM DEMO - MAIN LEVEL - ADDITION
FAD101B	FIRE ALARM DEMO - MAIN LEVEL - RENOVATION
FA101A	FIRE ALARM PLAN - MAIN LEVEL - ADDITION
FA101B	FIRE ALARM PLAN - MAIN LEVEL - BLDG B

TECHNOLOGY DRAWINGS

T000	TECHNOLOGY COVER
T100	TECHNOLOGY - SITE PLAN
TD201	TECHNOLOGY - ADDITION DEMO
TD202	TECHNOLOGY - RENOVATION DEMO
TA101A	AUDIO VISUAL - MAIN LEVEL - ADDITION
TA101B	AUDIO VISUAL - MAIN LEVEL - RENOVATION
TA300	AUDIO VISUAL - DETAILS
TA400	AUDIO VISUAL ELEVATIONS
TS102A	SECURITY CEILING PLAN - MAIN LEVEL - ADDITION
TS102B	SECURITY CEILING PLAN - MAIN LEVEL - RENOVATION
TS200	ACCESS CONTROL DETAILS
TT101A	TECHNOLOGY - MAIN LEVEL - ADDITION
TT101B	TECHNOLOGY - MAIN LEVEL - RENOVATION
TT103	TELECOM ENLARGED PLANS & DETAILS

SITE LOCATION MAP

All questions regarding these plans and specifications should be directed to:

AARON TWEDT, AIA
Project Manager
atwedt@opnarchitects.com
515-309-0722

LICENSED PROFESSIONAL ARCHITECT
Terry Gebard
05219
IOWA

I hereby certify these plans and specifications were prepared by me or under my direct personal supervision and that I am a duly licensed professional architect under the laws of the state of Iowa.

Signature: _____

Name: Terry Gebard

Iowa Registration No: 05219 **Renewal Date:** 6/30/2026

Sheets covered by this seal: Listed As "Architectural"

LICENSED PROFESSIONAL ENGINEER
Erik Raker
17922
IOWA

I hereby certify this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed professional engineer under the laws of the state of Iowa.

Signature: _____

Name: Erik Raker

Iowa Registration No: 17922 **Renewal Date:** 12/31/2025

Sheets covered by this seal: Listed As "Structural"

LICENSED PROFESSIONAL ENGINEER
Justin F. Strom
P24140
IOWA

I hereby certify this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed professional engineer under the laws of the state of Iowa.

Signature: _____

Name: Justin F. Strom

Iowa Registration No: P24140 **Renewal Date:** 12/31/2026

Sheets covered by this seal: Listed As "Civil"

LICENSED PROFESSIONAL ENGINEER
Chad Bass
21397
IOWA

I hereby certify this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed professional engineer under the laws of the state of Iowa.

Signature: _____

Name: Chad Bass

Iowa Registration No: 21397 **Renewal Date:** 12/31/2025

Sheets covered by this seal: Listed As "Fire Protection, Mechanical, & Plumbing"

LICENSED PROFESSIONAL ENGINEER
Eric Heynen
P24706
IOWA

I hereby certify this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed professional engineer under the laws of the state of Iowa.

Signature: _____

Name: Eric Heynen

Iowa Registration No: P24706 **Renewal Date:** 12/31/2025

Sheets covered by this seal: Listed As "Electrical & Technology"

PROJECT ALTERNATES

1. SITE IMPROVEMENTS
   SHEETS: G200, C301
2. EXISTING OFFICE FINISHES & WINDOW TREATMENTS
   SHEETS: G201
3. AHU-2 MECHANICAL PIPING REDUNDANCY CONNECTIONS
   SHEETS: G201, MH101A(ALT), MH101B(ALT)
4. ALL NEW STRUCTURED CABLING TO BE PROVIDED AS CAT6A AND EXISTING CABLING CHANGED TO CAT6A THROUGHOUT.
   SHEETS: TECHNOLOGY SHEETS INCLUDING T000

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Laboratory Design Specialist
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

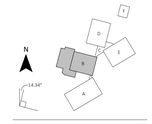
Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

Key Plan



Revision	Description	Date
ADD 01	ADDENDUM 01	11/24/2025

OPN Project No. **23825001**
SOS Project No. **9429.00**

Sheet Issue Date
BID DOCUMENTS 11/13/2025

Sheet Name
INDEX, SEALS, LOCATION MAP

Sheet Number
G001

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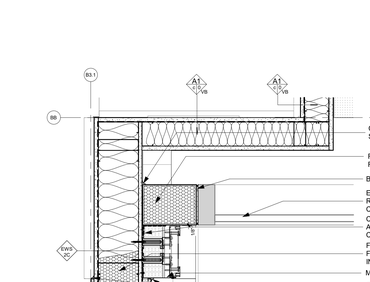
A1 PLAN DETAIL - LOADING DOCK WEST SIDE WALL
1 1/2" = 1'-0"

A7 PLAN DETAIL - LOADING DOCK SHELTER
1 1/2" = 1'-0"

A12 PLAN DETAIL - LOADING DOCK EAST SIDE WALL
1 1/2" = 1'-0"

A17 PLAN DETAIL - SOUTH EXTERIOR EXPANSION JOINT
1 1/2" = 1'-0"



A23 PLAN DETAIL - JAMB @ OHC-2
1 1/2" = 1'-0"

M23 PLAN DETAIL - GRIDLINE BB / B3.1
1 1/2" = 1'-0"

G23 PLAN DETAIL - GRIDLINE BA.7 / B3.1
1 1/2" = 1'-0"

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Laboratory Design Specialist
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

Key Plan

Revision	Description	Date
ADD 01	ADDENDUM 01	11/24/2025

OPN Project No.
23825001
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9429.00

Sheet Issue Date
BID DOCUMENTS **11/13/2025**

01 ADD

Sheet Name
EXTERIOR PLAN DETAILS

Sheet Number
A361

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GENERAL NOTES:

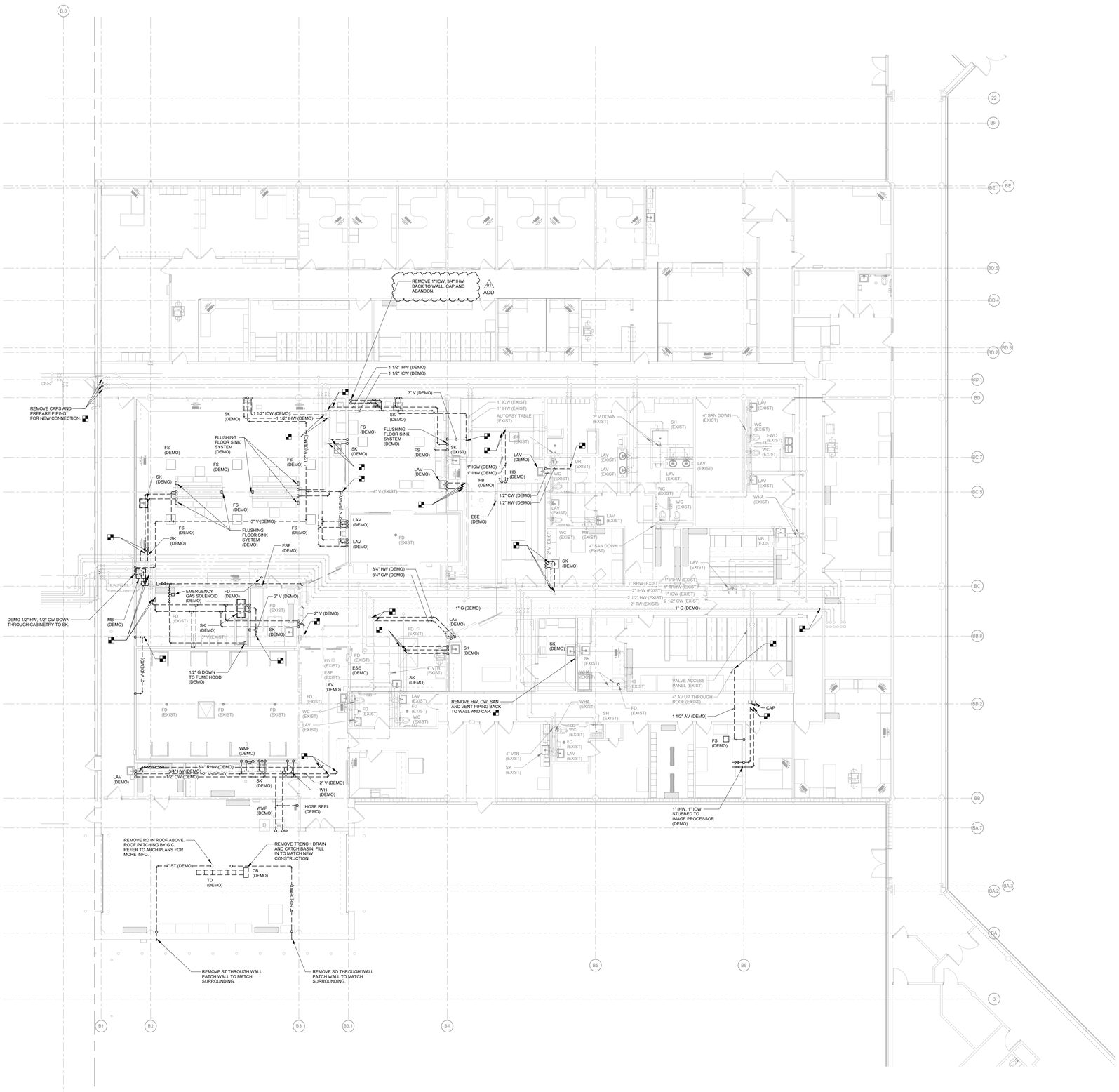
A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. PATCH WALLS, ROOFS, AND/OR FLOOR WHERE PIPES OR EQUIPMENT ARE REMOVED. FINISH TO MATCH ORIGINAL OR NEW CONSTRUCTION.

C. WHERE PIPING, EQUIPMENT, AND PLUMBING FIXTURES ARE REMOVED, REMOVE ALL VALVES, SUPPORTS, INSULATION, AND APPURTENANCES. REMOVE PIPING BACK TO MAINS AND CAP. DO NOT LEAVE DEAD LEGS LONGER THAN 12".

D. REMOVE ALL PIPING BACK TO MAIN AND CAP UNLESS OTHERWISE NOTED. IN AREAS WHERE CEILING IS NOT BEING REPLACED: REMOVE PIPING BACK AS FAR AS POSSIBLE AND CAP. REFER TO ARCHITECTURAL PLANS AND RCPS.

E. WHERE PLUMBING FIXTURES ARE REMOVED IN WALL AND ADJACENT CEILINGS ARE NOT BEING REPLACED, CAP PIPING IN WALL AND PATCH WALL TO MATCH SURROUNDING CONDITIONS.



N 1 PLUMBING DEMOLITION - MAIN LEVEL
1/8" = 1'-0"

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Design Architect (Lab Specialist)
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

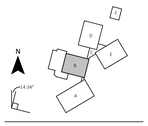
Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

Key Plan



Revision	Description	Date
ADD 01	ADDENDUM 01	11/24/2025

OPN Project No. **23825001**
SOS Project No. **9429.00**

Sheet Issue Date
BID DOCUMENTS **11/13/2025**

Sheet Name
PLUMBING DEMOLITION - MAIN LEVEL

Sheet Number
PD101B

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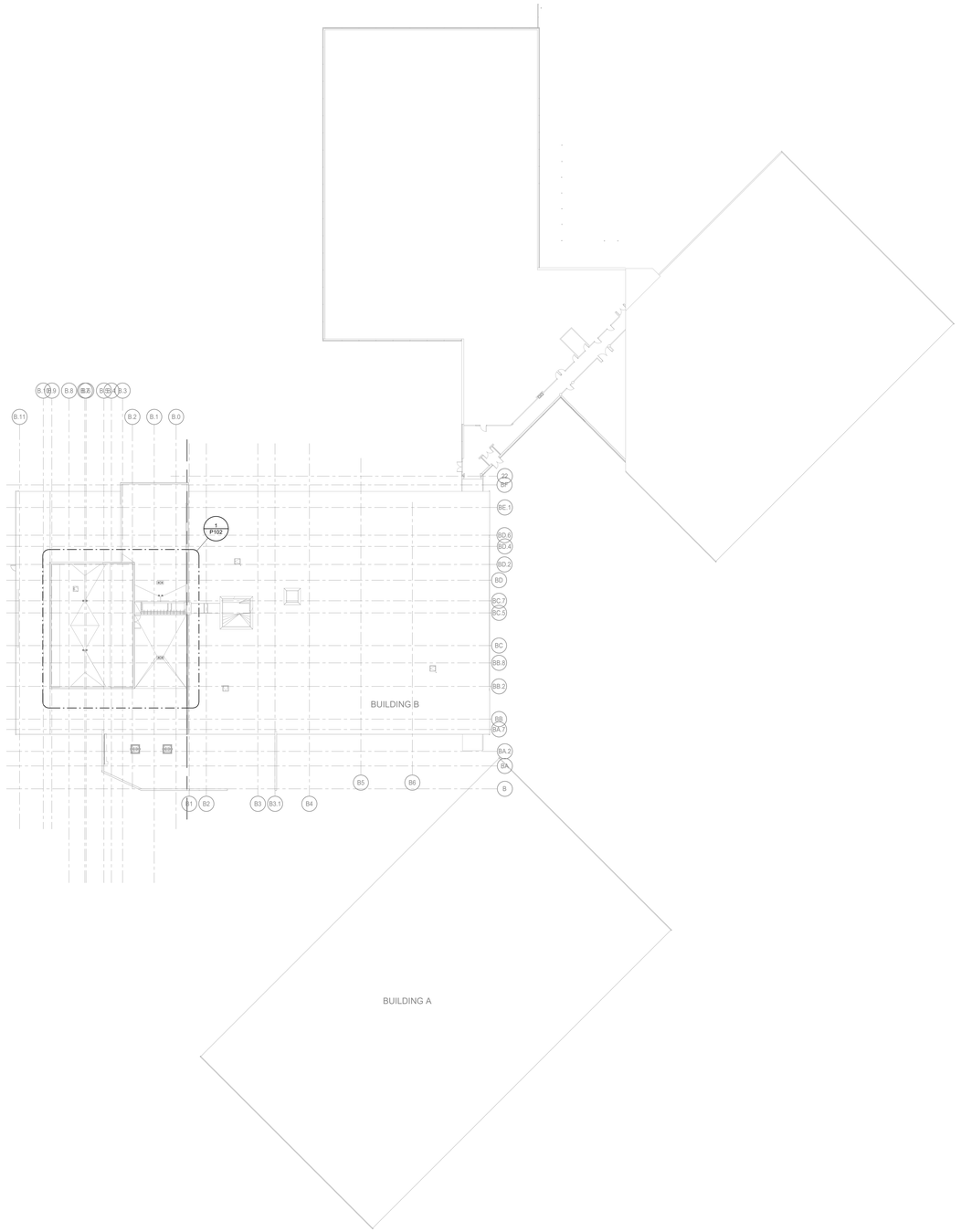
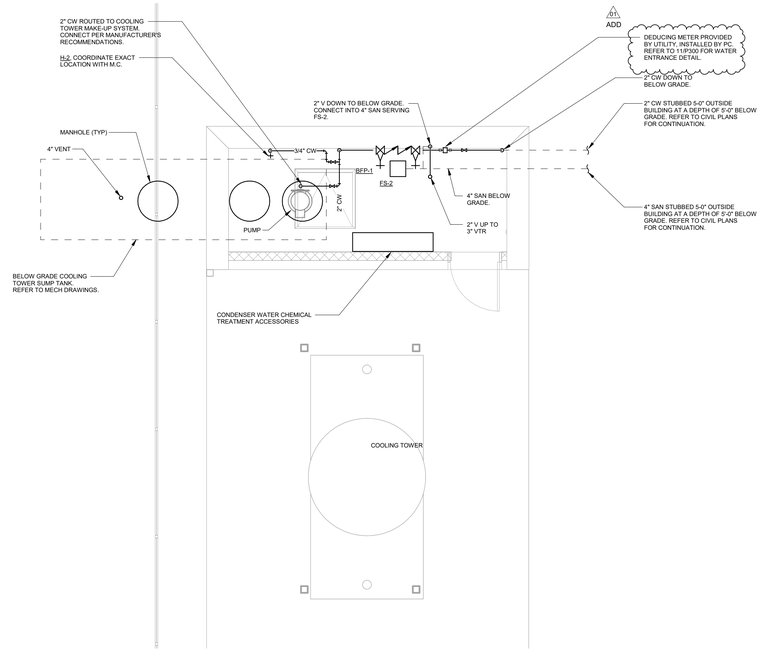


N 1 PLUMBING SITE PLAN
1" = 30'-0"



N 2 ENLARGED PLAN -COOLING TOWER / GENERATOR / PUMP HOUSE - PLUMBING
1/4" = 1'-0"

GENERAL NOTES:

A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. REFER TO P300 FOR PLUMBING DETAILS.

C. REFER TO P500 AND P501 FOR PLUMBING SCHEDULES.

D. REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR BRANCH PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.

E. COORDINATE PIPE ROUTING WITH DUCTWORK. DUCTWORK HAS PRIORITY OVER PRESSURE PIPING. ROUTE PIPING WITHIN JOIST SPACES WHERE POSSIBLE.

F. BRANCH PIPING SHALL BE TAKEN OFF THE TOP OF MAIN PIPING.

G. REFER TO LABORATORY PLANS FOR LABORATORY EQUIPMENT LOCATIONS AND REQUIREMENTS.

H. COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH BELOW GRADE DUCTWORK. FIELD VERIFY DEPTH OF EXISTING SANITARY PIPING PRIOR TO COORDINATION OF INSTALLATION.

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Design Architect (Lab Specialist)
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

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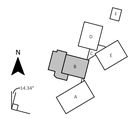

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OPN Project No. 23825001
SOI Project No. 9429.00

Sheet Issue Date
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Sheet Name
PLUMBING SITE PLAN

Sheet Number
P001

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KEYNOTES

1. INSTALL IHW, ICW VALVES IN FB-1. ROUTE PIPING TO EQUIPMENT UNDERFLOOR AS NEEDED. REFER TO P100 FOR UNDERFLOOR PIPE ROUTING.
2. 1" ICW TO FLUSHING FLOOR DRAIN CONTROL BOX, FB-1. COORDINATE BOX MOUNTING HEIGHT WITH EC AND ARCHITECTURAL PLANS PRIOR TO INSTALLATION.
3. ROUTE 3/4" IHW, 3/4" ICW DOWN TO SERVE AUTOPSY STATION.
4. 3/4" IHW, 3/4" ICW, 2" SAN FROM BELOW TO SERVE AUTOPSY EQUIPMENT. ROUTE CW/HW PIPING TIGHT TO FLOOR (TABLE WILL MOVE VERTICALLY) AND PROVIDE ISOLATION VALVES WITH HANDLES LOCATED ON TOP FOR EASY ACCESS VIA TABLE ACCESS PANEL. EXTEND CW/HW PIPING TO WITHIN 12" OF TABLE CONNECTIONS AND PROVIDE STAINLESS STEEL FLEXIBLE HOSES THAT EXTEND TO THREADED HOSE CONNECTIONS AT TABLE. PROVIDE FLEXIBLE SAN LINES FROM DISPOSERS THAT ARE RATED FOR 140F AND CHEMICALLY RESISTANT. FINAL FLEXIBLE SAN LINE LENGTH TO BE FIELD DETERMINED REFER TO AUTOPSY STATION DETAILS ON LAB SHEETS.
5. SKYLIGHT LOCATION, DO NOT INSTALL ANY PIPING IN THIS AREA. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATION.
6. ROUTE 2" SAN FROM EACH WASHING MACHINE TO DISCHARGE OVER RECESSED TROUGH. PROVIDE FS-1 IN THE BOTTOM OF CONCRETE TROUGH. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
7. 2" V DOWN.
8. 3/4" IHW, 3/4" ICW DOWN TO SERVE INSTRUMENT WASHER ON COUNTER. ROUTE 1/2" IHW, 1/2" ICW TO SERVE DISHWASHER BELOW COUNTER. ROUTE DRAIN FROM INSTRUMENT WASHER AND DISHWASHER TO DISCHARGE INTO ADJACENT LAB SINK 2" SAN STACK.
9. EXISTING FLOOR DRAIN LOCATION TO REMAIN. ALIGN DRAIN WITH NEW FINISH FLOOR. CLEAN DRAIN AND REPLACE GRATE WITH NEW.

GENERAL NOTES:

A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. REFER TO P300 FOR PLUMBING DETAILS.

C. REFER TO P500 AND P501 FOR PLUMBING SCHEDULES.

D. REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR BRANCH PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.

E. COORDINATE PIPE ROUTING WITH DUCTWORK. DUCTWORK HAS PRIORITY OVER PRESSURE PIPING. ROUTE PIPING WITHIN JOIST SPACES WHERE POSSIBLE.

F. BRANCH PIPING SHALL BE TAKEN OFF THE TOP OF MAIN PIPING.

G. REFER TO LABORATORY PLANS FOR LABORATORY EQUIPMENT LOCATIONS AND REQUIREMENTS.

H. COORDINATE ALL BELOW GRADE PLUMBING PIPINS WITH BELOW GRADE DUCTWORK. FIELD VERIFY DEPTH OF EXISTING SANITARY PIPING PRIOR TO COORDINATION OF INSTALLATION.

N 1 PLUMBING PLAN - MAIN LEVEL - RENOVATION - NORTH
1/4" = 1'-0"

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Design Architect (Lab Specialist)
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

Key Plan

Revision	Description	Date
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Sheet Issue Date
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Sheet Name
PLUMBING PLAN - MAIN LEVEL - RENOVATION - NORTH

P101B-N

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GENERAL NOTES:

A. REFER TO M000 FOR GENERAL NOTES & SYMBOLS.

B. REFER TO P300 FOR PLUMBING DETAILS.

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KEYNOTES (#)

1 ROUTE 3/4" IHW, 3/4" ICW DOWN TO SERVE AUTOPSY STATION.

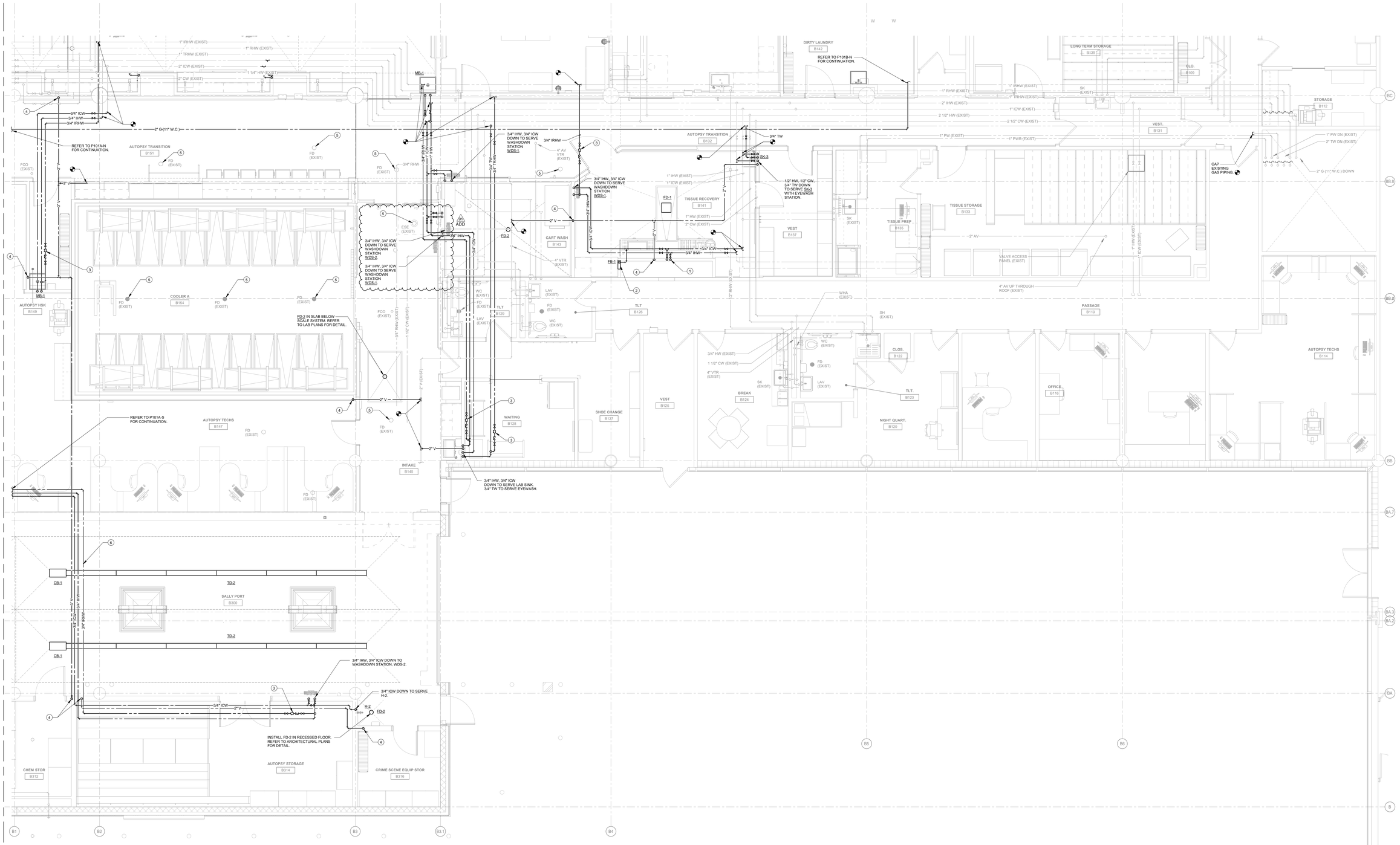
2 1" ICW TO FLUSHING FLOOR DRAIN CONTROL BOX, FB-1. COORDINATE BOX MOUNTING HEIGHT WITH EC AND ARCHITECTURAL PLANS PRIOR TO INSTALLATION.

3 BALANCE TO 0.5 GPM.

4 2" V DOWN.

5 EXISTING FLOOR DRAIN LOCATION TO REMAIN. ALIGN DRAIN WITH NEW FINISH FLOOR. CLEAN DRAIN AND REPLACE GRATE WITH NEW.

6 ROUTE PIPING UP IN STRUCTURE IN SALLY PORT.



N 1 PLUMBING PLAN - MAIN LEVEL - RENOVATION - SOUTH
1/4" = 1'-0"

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Design Architect (Lab Specialist)
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

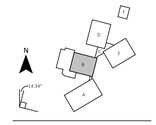
Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

Key Plan



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Sheet Name
PLUMBING PLAN - MAIN LEVEL - RENOVATION - SOUTH

P101B-S

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PLUMBING PIPING AND INSULATION SCHEDULE

SYSTEM	SIZE RANGE (INCHES)	LOCATION	PIPE MATERIAL (NOTE 1)	JOINT TYPE (NOTE 1)	VALVE TYPES (NOTE 3)	INSULATION TYPE (NOTE 2)	INSULATION THICKNESS (INCHES)	JACKET (NOTE 4)	NOTES
ACID WASTE (GRAVITY DRAIN)	1 1/2 - 4	BELOW GROUND	SCH 40 CPVC, POLYPRO	SOLVENT WELD/FUSION	N/A	--	--	--	
ACID WASTE VENT	1 1/4 - 3	BELOW GROUND	SCH 40 CPVC, POLYPRO	SOLVENT WELD/FUSION	N/A	--	--	--	
ACID WASTE (GRAVITY DRAIN)	1 1/2 - 4	ABOVE GROUND	SCH 40 CPVC, POLYPRO	SOLVENT WELD/FUSION	N/A	--	--	--	
ACID WASTE VENT	1 1/4 - 3	ABOVE GROUND	SCH 40 CPVC, POLYPRO	SOLVENT WELD/FUSION	N/A	MINERAL FIBER	1	--	5,6
COIL CONDENSATE DRAIN	1/2 - 1 1/4	INTERIOR	TYPE L COPPER	SOLDER OR PRESS	N/A	MINERAL FIBER	1/2	--	
COIL CONDENSATE DRAIN	1 1/2 - 3	INTERIOR	TYPE L COPPER	SOLDER OR PRESS	N/A	MINERAL FIBER	1	--	
COIL CONDENSATE DRAIN	1/2 - 3	EXTERIOR	TYPE L COPPER	SOLDER OR PRESS	N/A	--	--	--	
COIL CONDENSATE DRAIN	1/2 - 1 1/4	INTERIOR	TYPE L COPPER	SOLDER OR PRESS	N/A	MINERAL FIBER	1/2	--	
COIL CONDENSATE DRAIN	1 1/2 - 3	INTERIOR	TYPE L COPPER	SOLDER OR PRESS	N/A	MINERAL FIBER	1	--	
DOMESTIC COLD WATER	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1/2	PVC	5,8
DOMESTIC COLD WATER	1 1/2 - 2	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
DOMESTIC COLD WATER	2 1/2 - 8	ABOVE GROUND	TYPE L COPPER	GROOVED		MINERAL FIBER	1	ALUMINUM	5,8
DOMESTIC HOT WATER	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
DOMESTIC HOT WATER	1 1/2 - 2	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1 1/2	--	5,8
DOMESTIC HOT WATER	2 1/2 - 8	ABOVE GROUND	TYPE L COPPER	GROOVED		MINERAL FIBER	1 1/2	ALUMINUM	5,8
DOMESTIC HOT WATER CIRC	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
DOMESTIC COLD/HOT/RECIRC	3/4 - 2	BELOW GROUND	TYPE K COPPER	SOLDER / BRAZE	BRONZE BALL W/ SS TRIM	--	--	--	
DOMESTIC WATER	2 - 8	BELOW GROUND	DUCTILE IRON	MECHANICAL / PUSH ON	GATE / BUTTERFLY	--	--	--	
INSTRUMENT COLD WATER	1 1/2 - 2	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
INSTRUMENT HOT WATER	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
INSTRUMENT HOT WATER CIRC	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
NATURAL GAS (UNDER 2 PSIG)	3/4 - 2	ABOVE GROUND	SCH 40 STEEL	THREADED	BRONZE BALL OR PLUG	--	--	--	
NATURAL GAS (2PSIG AND OVER)	2 - 6	ABOVE GROUND	SCH 40 STEEL	WELDED	CAST IRON PLUG	--	--	--	
SANITARY DRAIN (GRAVITY)	1 1/2 - 8	BELOW GROUND	SCH 40 PVC DWV	SOLVENT / NO HUB	N/A	--	--	--	
SANITARY VENT PIPING	1 1/4 - 4	BELOW GROUND	SCH 40 PVC DWV	SOLVENT / NO HUB	N/A	--	--	--	
SANITARY DRAIN (GRAVITY)	1 1/2 - 8	ABOVE GROUND	CI	NO HUB	N/A	--	--	--	
SANITARY VENT PIPING	1 1/4 - 6	ABOVE GROUND	CI	NO HUB	N/A	MINERAL FIBER	1	--	5,6
STORM DRAINAGE	4 - 12	BELOW GROUND	SCH 40 PVC DWV	SOLVENT	N/A	--	--	--	
STORM DRAINAGE	4 - 12	ABOVE GROUND	CI	NO HUB	N/A	MINERAL FIBER	1	--	5,7
TEMPERED WATER	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8
TEMPERED WATER CIRC	3/4 - 1 1/4	ABOVE GROUND	TYPE L COPPER	SOLDER/PRESSURE SEAL	BRONZE BALL W/ SS TRIM	MINERAL FIBER	1	PVC	5,8

NOTES:
1. ALL PIPING UTILIZED FOR POTABLE WATER SHALL MEET NSF 14, 61 AND 372. PUSH TO CONNECT / PUSH ON TYPE JOINTS ARE NOT ALLOWED. REFER TO SPECIFICATIONS FOR FURTHER JOINT AND MATERIAL REQUIREMENTS.
2. REFER TO SPECIFICATIONS FOR FURTHER INSULATION REQUIREMENTS. INSULATION R-VALUE SHALL MEET INTERNATIONAL ENERGY CODE 2012 REQUIREMENTS.
3. ALL VALVES UTILIZED IN POTABLE WATER SYSTEMS SHALL MEET NSF 61 AND 372. REFER TO SPECIFICATIONS FOR FURTHER VALVE REQUIREMENTS.
4. EXPOSED PIPING MOUNTED BELOW 10'-0" ABOVE FLOOR SHALL HAVE PVC JACKET.
5. INSULATION APPLIED TO PIPING THAT IS LOCATED IN RETURN AIR PLENUMS SHALL MEET ASTM E 84 25/50 FLAME AND SMOKE SPREAD RATING AND COMPLY WITH NFPA STANDARD 90A.
6. VENT PIPING SHALL BE INSULATED A MINIMUM OF 5'-0" FROM EXTERIOR WALL OR ROOF PENETRATION.
7. STORM PIPING SHALL BE INSULATED A MINIMUM OF 5'-0" FROM ROOF DRAIN CONNECTION. ALL HORIZONTAL PIPING ABOVE CEILING SHALL BE INSULATED.
8. THIS INCLUDES INSTRUMENT WATER AND TEMPERED WATER LINES.

PLUMBING FIXTURE ROUGH-IN SCHEDULE

FIXTURE	CW	HW	VENT	WASTE	NOTES
EMERGENCY EYEWASH	1/2"	1/2"	1 1/2"	1 1/2"	1,2,4
EMERGENCY SHOWER & COMBO	1 1/4"	1 1/4"	-	-	1,4
FLOOR DRAIN	-	-	1 1/2"	2"	1
FLUSHING FLOOR DRAIN	1"	-	3"	6"	1
FLOOR DRAIN / FLOOR SINK	-	-	1 1/2"	3"	1
FLOOR DRAIN	-	-	2"	4"	1
FLUSHING FLOOR SINK	1" ICW	-	2"	6"	1
HOSE BIBB (INTERIOR)	1/2"	-	-	-	1
LAVATORY	1/2"	1/2"	1 1/4"	1 1/4"	1,2
MOP BASIN	3/4"	3/4"	1 1/2"	3"	1
SINK	1/2"	1/2"	1 1/2"	1 1/2"	1,2
SHOWER	1/2"	1/2"	1 1/2"	2"	1,3
WALL BOX (ICEMAKER)	1/2"	-	-	-	1
WALL HYDRANT (EXTERIOR)	3/4"	-	-	-	1
WATER CLOSET (FLUSH VALVE)	1"	-	2"	4"	1
WASHING MACHINE BOX	3/4"	3/4"	2"	3"	1,3

NOTES:
1. ALL SIZES SHOWN ARE MINIMUM CONNECTION SIZES, REFER TO DRAWINGS FOR FINAL SIZES.
2. ALL VERTICAL WASTE RISERS TO FIXTURES AND ALL BELOW FLOOR WASTE SIZES SHALL BE A MINIMUM OF 2".
3. MINIMUM 3/4" CW AND HW TO FIXTURE. REDUCE PIPE SIZE AT FIXTURE CONNECTIONS ONLY.
4. FOR TEMPERED WATER SHOWER, EXTEND 1 11/4" TW TO ASSEMBLY UNLESS NOTED OTHERWISE.

WATER HEATER SCHEDULE

REFERENCE	WH-1	WH-2
MANUFACTURER	AO SMITH	AO SMITH
MODEL #	BTH300	BTH120
SERVES	LAUNDRY	SEE PLANS
DIMENSIONS (DIAM, HEIGHT)	42/90	33.12/75.5
GALLONS	120	60
RECOVERY GPH 140°F RISE	247	99
BTUH INPUT	300,000	120,000
THERMAL EFFICIENCY	95%	95%
MAXIMUM GAS SUPPLY PRESSURE	10 IN W.C.	10 IN W.C.
COMBUSTION AIR INTAKE	4" SCH. 80 CPVC	4" SCH. 80 CPVC
FLUE	4" SCH. 80 CPVC	4" SCH. 80 CPVC
DELIVERY WATER TEMP (°F)	180	120
VOLTAGE/PH	120/1	120/1
AMPS	15	15
NOTES	1,2,3,4,5,6	1,2,3,4,5,7

NOTES:
1. PROVIDE WITH ASME RATED T&P RELIEF VALVE
2. UNIT TO MEET REQUIREMENTS OF IECC 2012.
3. WATER HEATER TO BE ASME RATED
4. PROVIDE WITH CONCENTRIC VENTING KIT.
5. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.
6. PROVIDE WITH AMTROL ST-30VC-DD, 16.5 GALLON EXPANSION TANK.
7. PROVIDE WITH AMTROL ST-12C-DD, 6.4 GALLON EXPANSION TANK.

DOMESTIC CIRC. PUMP SCHEDULE

REFERENCE	CP-1
MANUFACTURER	GRUNDFOS
MODEL #	UP SERIES
TYPE	INLINE - 3 SPEED
SERVES	WH-2
GPM	2.0
FT HEAD	15
VOLTAGE/PH	120/1
NOTES	1,2,3

NOTES:
1. DISCONNECT PROVIDED BY EC.
2. PUMP TO BE SCHEUDLED BY DDC SYSTEM. REFER TO CONTROL DRAWINGS.
3. PUMP RATED FOR 125 PSIG AT 225F.

PLUMBING FIXTURE SCHEDULE

REFERENCE	MFR	MODEL	DESCRIPTION	TRIM
BF-1	ELKAY	EMASM	BOTTLE FILLING STATION, NON-FILTERED, NON-REFRIGERATED STAINLESS, ANTIMICROBIAL LAMINAR FLOW, BUTTON ACTIVATED, RECESS MOUNTED IN WALL.	
BFP-1	WATTS	LF009/LF909	BACKFLOW PREVENTER - REDUCED PRESSURE ZONE TYPE, BRONZE OR FDA APROVED EPOXY COATED CAST IRON CONSTRUCTION, SIZE SAME AS CONNECTED PIPE, NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN SPRING-LOADED CHECK VALVES WITH SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF VALVES, FACTORY TESTED SERVICEABLE WITHOUT REMOVING UNIT FROM LINE. APPROVED BY USC FCCC & HR, AWWA C511-92, ASSE 1013. IAPMO AND SBCCI LISTED.	BRONZE OR FDA APPROVED EPOXY COATED CAST IRON STRAINER UPSTREAM OF BACKFLOW PREVENTER, TO BE FURNISHED WITH BACKFLOW PREVENTER.
BFP-2	WATTS	SD-3	BACKFLOW PREVENTOR - DUAL CHECK WITH ATMOSPHERIC PORT AND STRAINER. 3/8" CONNECTIONS, 316 STAINLESS STEEL CONSTRUCTION AND ALL RUBBER COMPONENTS SHALL COMPLY WITH FDA FOOD ADDITIVE REGULATIONS. COMPLIANT WITH SAFE DRINKING WATER ACT, NSF, AND ASSE 1022.	NA
CB-1	ZURN	Z-887-12	12" W x 24" L x 24" DEEP SEDIMENT BUCKET WITH REMOVABLE CAST IRON GRATE TO ACCESS THE REMOVABLE STRAINER BASKET. CATCH BASIN SHALL BE MADE OF 0% ABSORBANT, HIGH DENSITY POLYETHYLENE THAT LOCKS INTO THE CONCRETE SURROUND. BASIN SHALL HAVE REBAR CLIPS TO SECURE BASIN IN ITS FINAL LOCATION. PROVIDE HEAVY DUTY CAST IRON GRATE. 4" BOTTOM OUTLET.	
FB-1	SLOAN	WB-1-A	WALL MOUNTED EASY ACCESS WALL BOX FOR FLUSHING FLOOR DRAIN SYSTEM, STAINLESS STEEL FRAME FOR+F25 12"x12" WALL OPENING. 13.5"x13.5" BRUSHED STAINLESS STEEL WALL PANEL W/4 STAINLESS STEEL FASTENING SCREWS AND GROUTING PINS TO ANCHOR FRAME TO WALL. COORDINATE MOUNTING HEIGHTS WITH ARCHITECTURAL PLANS.	SLOAN "MODEL 152-WB" OR APPROVED EQUAL, 1.6 GPF PUSH BUTTON OPERATED FLUSH VALVE WITH VANDAL RESISTANT CAP.
FCO-1	ZURN	Z1400	ADJUSTABLE FLOOR CLEANOUT, CAST IRON BODY, TAPERED THREAD PLUG AND ROUND NICKEL BRONZE SCORIATED CAST IRON HEAVY-DUTY SECURED TOP, ADJUSTABLE TO FINISHED FLOOR. OUTLET SIZE AS NOTED ON DRAWINGS.	NA
FD-1 (FLUSHING FLOOR DRAIN)	ZURN	Z319	CAST IRON BODY, STAINLESS STEEL HINGED PERFORATED GRATE, 25" SQUARE, 6" BOTTOM OUTLET, 12" DEEP BODY, WHITE ACID RESISTANT COATED INTERIOR, FLUSHING CONNECTION BODY WITH 1" ICW PIPE CONNECTION.	NA (1) ADD
FD-2	ZURN	Z415B-AR	CAST IRON BODY FLOOR DRAIN, TYPE "B" 6" ROUND POLISHED NICKEL BRONZE STRAINER. PROVIDE WHITE ACID RESISTANT COATING. OUTLET SIZE AS NOTED ON DRAWINGS.	PROVIDE WITH TRAP GUARD; PROSET "TRAP GUARD", SURE SEAL "MODEL SS", OR APPROVED EQUAL.
FD-3	ZURN	Z415S	CAST IRON BODY FLOOR DRAIN, TYPE "S" 6"x6" SQUARE POLISHED NICKEL BRONZE, HEEL-PROOF, LIGHT-DUTY STRAINER.	PROVIDE WITH TRAP GUARD; PROSET "TRAP GUARD", SURE SEAL "MODEL SS", OR APPROVED EQUAL.
FS-1	ZURN	Z1910	CAST IRON BODY, NICKEL BRONZE RIM AND GRATE, 8" SQUARE, 3" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH WHITE ACID RESISTANT SEDIMENT BUCKET, SEEPAGE FLANGE WITH CLAMP, DEEP SEAL TRAP.	NA
FS-2	ZURN	Z19101	CAST IRON BODY, NICKEL BRONZE RIM AND GRATE, 12" SQUARE, 4" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH WHITE ACID RESISTANT SEDIMENT BUCKET, ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE WITH CLAMP, DEEP SEAL TRAP.	NA
GCO-1	ZURN	Z1474	GRADE CLEANOUT, ROUND, DURA-COATED CAST IRON, SIZE AS INDICATED, DOUBLE FLANGED HOUSING, HEAVY DUTY SECURED SCORIATED DURA-COATED CAST IRON COVER, LIFTING DEVICE, BRONZE CLEANOUT PLUG WITH GAS/WATER-TIGHT SEAL.	NA
GD-1	IN-SINK-ERATOR	BADGER 5XP	GARBAGE DISPOSAL, CONTINUOUS FEED, GALVANIZED STEEL GRINDING ELEMENTS WITH STAINLESS STEEL 360° SWIVEL LUGS, PERMANENTLY LUBRICATED, 3/4 HP, 120V, MANUAL RESET OVERLOAD, WITH CORD AND PLUG. CONTROLLED BY WALL SWITCH. WIRING BY E.C.	NA
H-1	WOODFORD	B65	FREEZELESS WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP, CONCEALED IN FLUSH MOUNTED LOCKABLE WALL BOX, KEY OPERATED, ASSE 1019 APPROVED AND LISTED. INSTALL AT 18" ABOVE FINISH GRADE.	NA
H-2	WOODFORD	H23	COLD INDOOR HOSE BIBB, BRASS VALVE BODY, CHROME FINISH, BACKFLOW PREVENTER, 3/4" MALE HOSE THREAD, TWO INDEPENDENT CHECK VALVES, INTERNAL RESETTING PRESSURE RELIEF VALVE, POLYCARBONATE WHEEL HANDLES AND LOOSE KEY TEES. HOSE THREAD, METAL WHEEL HANDLE, LOOSE TEE KEY.	NA
IMB-1	GUY GRAY	BIM875QTSAB	ICE MAKER OUTLET BOX - 20-GAUGE G90 GALVANIZED ENCLOSURE, 1/2" FIP INLET, 1/4" OD OUTLET QUARTER TURN BRASS BALL VALVE WITH FACEPLATE.	INSTALL BFP-2 DOWNSTREAM OF ICE MAKER OUTLET BOX.
L-1	KOHLER	K-2005	WALL HUNG, VITREOUS CHINA LAVATORY, OVERALL DIMENSIONS 21" x 18", 4" CENTER HOLES, BACKSPLASH, OVERFLOW. WALL MOUNT / PROVIDE WITH CONCEALED ARM CARRIER. ADA COMPLIANT.	SLOAN "EBF-650", ADA COMPLIANT, HARDWIRED SENSOR TYPE FAUCET, WITH OFFSET GRID STRAINER AND TRAP, TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND ESCUTCHEONS. MAXIMUM FIXTURE FLOW TO BE 0.5 GPM. PROVIDE POWERS "LFE480" POINT OF USE MIXING UNDER FIXTURE. MIXING VALVE MUST MEET ASSE 1070 AND UPC 2009 REQUIREMENTS. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.
L-2	CORIAN	820P	OVAL, UNDERMOUNT, VITREOUS CHINA LAVATORY, GLACIER WHITE, OVERALL DIMENSIONS 16 1/2" x 12", 5 1/2" DEEP BOWL.	SLOAN "EBF-650", ADA COMPLIANT, HARDWIRED SENSOR TYPE FAUCET, WITH OFFSET GRID STRAINER AND TRAP, TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND ESCUTCHEONS. MAXIMUM FIXTURE FLOW TO BE 0.5 GPM. PROVIDE POWERS "LFE480" POINT OF USE MIXING UNDER FIXTURE. MIXING VALVE MUST MEET ASSE 1070 AND UPC 2009 REQUIREMENTS. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.
LT-1	ZURN	Z199	LAMBS TONGUE TYPE DOWNSPOUT NOZZLE, ALL NICKEL BRONZE BODY. SIZE AS INDICATED ON DRAWINGS.	NA
MB-1	FIAT	TSB100	SQUARE MOP BASIN - PRECAST TERRAZZO, 24"x24"x12", CONTINUOUS STAINLESS STEEL CAPS ON ALL CURBS, STAINLESS STEEL INTEGRAL DRAIN WITH REMOVABLE STRAINER, 3" OUTLET. CAULK BETWEEN MOP BASIN AND WALL WITH SILICONE BASED CAULK. PROVIDE WITH STAINLESS STEEL SPLASH PLATE 48" HIGH WHICH EXTENDS 8" ON EACH SIDE, MOP HANGER, HOSE AND HOSE BRACKET, AND DEEP SEAL TRAP.	ZURN "Z-841M1" , EXPOSED TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, WRIST BLADE HANDLES, 3/4" HOSE THREAD SPOUT WITH INTEGRAL VACUUM BREAKER, WALL BRACE, PAIL HOOK, INTEGRAL STOPS.
NT-1	STRIEM	LB-2	NEUTRALIZATION TANK, POLYETHELYENE CONSTRUCTION, UNDER SINK MOUNTED. INTERNAL SEWER GAS TRAP, THREADED INLET AND OUTLETS WITH OPTION FOR SIDE INLET OR TOP INLET.	NA
OD-1	JOSAM	21500-AE-16	OVERFLOW ROOF DRAIN - CAST IRON BODY, 16" ROUND, CLAMP/GRAVEL GUARD, 2" EXTENSION FOR LARGE SUMP DRAIN RECEIVER WITH ADJUSTABLE EXTENSION RODS AND BOTTOM OUTLET, AND CAST IRON LOW SILHOUETTE DOME. PROVIDE WITH 2" STATIC EXTENSION FOR OVERFLOW ROOF DRAIN.	NA
RD-1	JOSAM	21500-AER	ROOF DRAIN - CAST IRON BODY, 16" ROUND, CLAMP/GRAVEL GUARD, LARGE SUMP DRAIN RECEIVER WITH ADJUSTABLE EXTENSION RODS AND BOTTOM OUTLET, AND CAST IRON LOW SILHOUETTE DOME. PROVIDE WITH 2" STATIC EXTENSION FOR OVERFLOW ROOF DRAIN.	NA
RD-2	ZURN	Z125	ROOF DRAIN - CAST IRON BODY, 8 3/8" ROUND, COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD, UNDERDECK CLAMP, BOTTOM OUTLET, AND CAST IRON LOW SILHOUETTE DOME. PROVIDE WITH EXTENSION FOR INSULATION THICKNESS.	NA
SH-1 (ADA)	AQUARIUS	SB-6034	PROVIDE SHOWER BASE. 60"x34", FIBERGLASS CONSTRUCTION, WHITE GELCOAT FINISH, 2" FLOOR DRAIN, 4" NICKEL BRONZE STRAINER. 26"x21" FOLD UP SEAT, 1" DIAMETER STAINLESS STEEL CURTAIN ROD. MOUNT WITH STAINLESS STEEL NUTS AND BOLTS. SHOWER CURTAIN BY OWNER. BASE SHALL BE RECESSED IN SUB-FLOOR TO ALLOW FOR A MAXIMUM CURB HEIGHT OF 1/2" OR LESS ABOVE THE FINISHED FLOOR. DRAIN TO BE CENTERED IN BASE. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MOUNTING HEIGHTS AND FINAL ROUGH-IN LOCATIONS. COORDINATE FINAL DIMENSIONS AND FLOOR RECESS WITH ARCHITECTURAL PLANS.	DELTA "T13H152", SINGLE HANDLE PRESSURE BALANCED MIXING FAUCET, BRASS OR BRONZE CONSTRUCTION, ON/OFF-COLD-HOT TEMPERATURE RANGE INDICATOR DIAL, POLISHED CHROME CAST METAL LEVER HANDLE, INTEGRAL CHECK STOPS, ADJUSTABLE TEMPERATURE LIMIT STOP, ADJUSTABLE SPRAY HAND HELD SHOWER, CHROME-PLATED 24" MOUNTING RAIL, CHROME-PLATED BRASS SWIVEL CONNECTOR, 92" SS HOSE, CHROME-PLATED BRASS SUPPLY ELBOW WITH FLANGE, CHROME-PLATED IN-LINE VACUUM BREAKER WITH CHROME-PLATED PIPING AND FLANGES, ASSE 1016 LISTED. INSTALL CONTROLS BETWEEN 38" AND 48".
SHV-1	DELTA	(TRIM ONLY)	N/A	DELTA "T13H152", SINGLE HANDLE PRESSURE BALANCED MIXING FAUCET, BRASS OR BRONZE CONSTRUCTION, ON/OFF-COLD-HOT TEMPERATURE RANGE INDICATOR DIAL, POLISHED CHROME CAST METAL LEVER HANDLE, INTEGRAL CHECK STOPS, ADJUSTABLE TEMPERATURE LIMIT STOP, CHROME-PLATED IN-LINE VACUUM BREAKER WITH CHROME-PLATED PIPING AND FLANGES, ASSE 1016 LISTED. INSTALL CONTROLS BETWEEN 38" AND 48".
SK-1	ELKAY	LRAD221960	ADA, SINGLE BOWL, COUNTER TOP MOUNT, 18-GAUGE STAINLESS STEEL, COMPLETELY UNDERCOATED, 22" SIDE TO SIDE x 19 1/2" FRONT TO BACK, 18" x 14" x 5 7/8" DEEP BOWL. VERIFY FINAL DIMENSIONS FROM ARCH ELEVATION AND MILWORK DRAWINGS. COORDINATE ALL REQUIRED HOLES FOR TRIM AND INDICATE IN SUBMITTAL. REMOVABLE STAINLESS STEEL BASKET STRAINER AND OFFSET TAILPIECE.	DELTA "26C3942", ADA, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SWIVEL GOOSENECK SPOUT, METAL HOLD-DOWN PACKAGE, 6" REACH, 1.5 GPM AERATOR, TWO HOODED BLADE HANDLES ON 8" CENTERS. PROVIDE POWERS "LFLM495" POINT OF USE MIXING UNDER FIXTURE. MIXING VALVE MUST MEET ASSE 1070 AND IPC 2009 REQUIREMENTS.TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND ESCUTCHEONS. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.
SK-2	FIAT	SF-1	SINGLE BOWL, MOLDED POLYMER, LAUNDRY TUB WITH LEGS, HEAVY DUTY POLYETHEYLENE, 20" x 23 7/8" x 14 3/8" OVERALL DIMENSIONS.	ELKAY "LK3000CR" OR APPROVED EQUAL. DECK MOUNTED, TWO HANDLE LAUNDRY/UTILITY FAUCET, BRASS CONSTRUCTION WITH CHROME FINISH, LEVER HANDLES, 2.2 GPM, 360 DEGREE SPOUT SWING ROTATION, SPOUT WITH STANDARD MALE GARDEN HOSE THREADS. ACCESSORIES - PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS AND FLEXIBLE METAL SUPPLY LINES.
SK-3	JUST MANUFACTURING	JKS7701-NP-J	SINGLE BOWL, 16 GA. STAINLESS STEEL WALL HUNG SCRUB SINK. 30"x23"x26" OVERALL DIMENSIONS.	ELKAY "LKB736C" OR APPROVED EQUAL. LK18B DRAIN, INTEGRAL SOAP DISPENSER AND HANDS FREE, KNEE OPERATED CONTROLS. PROVIDE ULINE H-9459 OR APPROVED EQUAL, DECK MOUNTED EYEWASH STATION. LK723L2 THERMOSTATIC MIXING VALVE MIXING VALVE MUST MEET ASSE 1070 AND IPC 2009 REQUIREMENTS.TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND ESCUTCHEONS. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.
SK-4	JUST MANUFACTURING	A33338S-J	SINGLE BOWL, 16 GA. STAINLESS STEEL WALL HUNG SCRUB SINK. 22"x19"x5.5" BOWL DEPTH, 16"x11.5"x5.5" BOWL. 2.5" BACKSPLASH HEIGHT.	"ELKAY LKB736C" OR APPROVED EQUAL, HARDWIRED SENSOR CONTROLS. PROVIDE POWERS "LFLM495" POINT OF USE MIXING UNDER FIXTURE. MIXING VALVE MUST MEET ASSE 1070 AND IPC 2009 REQUIREMENTS.TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND ESCUTCHEONS. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.

NOTES:
1. REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR MINIMUM CONNECTION SIZES.

OPN ARCHITECTS
100 Court Ave., Suite 100
Des Moines, IA 50309
P: 515-309-0722
www.opnarchitects.com

Owner
IOWA DEPARTMENT OF ADMINSTRATIVE SERVICES
109 SE 13TH ST
DES MOINES, IA 50319

Project
HSS ANK IMEO EXPANSION & RENOVATION
2250 S ANKENY BLVD
ANKENY, IA 50023

Construction Manager
The Weitz Company
5901 Thornton Avenue
Des Moines, IA 50321
P. 515-246-4700

Design Architect (Lab Specialist)
McClaren, Wilson & Lawrie, Inc.
11798 N Lakeridge Parkway
Ashland, VA 23005
P. 804-314-9359

Architect of Record
OPN Architects, Inc
100 Court Avenue, Ste 100
Des Moines, IA 50309
P. 515-309-0722

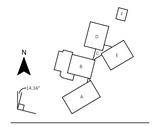
Civil Engineer
Snyder & Associates, Inc
2727 SW Snyder Blvd
Ankeny, IA 50023
P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering LLC
4717 Grand Ave
Des Moines, IA 50312
P. 515-277-0275

MEPT Engineer
KCL Engineering
300 4th Street
West Des Moines, IA 50265
P. 515-724-7938

Envelope Consultant
Lerch Bates
9780 S Meridian Blvd, Ste 450
Englewood, CO 80112
P. 877-711-1565

Key Plan



Revision	Description	Date
ADD 01	ADDENDUM 01	11/24/2025

OPN Project No. 23825001
SOI Project No. 9429.00

Sheet Issue Date
BID DOCUMENTS 11/13/2025

Sheet Name
PLUMBING SCHEDULES

Sheet Number
P500

SECTION 00 11 13

NOTICE TO BIDDERS

RFB942900-01

The Iowa Department of Administrative Services will be receiving bids for the expansion and renovation of the Office of the State Medical Examiner, Ankeny, Iowa 50023.

The Iowa Department of Administrative Services anticipates construction to begin in March 2026 and end in July 2028.

Bids must be received no later than **2:00 pm, Tuesday, December 16, 2025**. Late bids will not be considered. Bids shall be submitted on IMPACS Electronic Procurement System. The Bid shall be accompanied by a Bid Security as set forth in the Instructions to Bidders in the amount of 5% of the total bid amount. Each bid shall be accompanied by a bid bond, cashier's check or a certified check drawn upon a solvent bank chartered under the laws of the United States of America.

Bid Opening

The time and place of bid opening will be held at meet.google.com/mqg-cwyg-rom and teleconference number +1 470-327-0670, PIN: 787 675 554# at 3:00pm on December 16, 2025.

The Iowa Department of Administrative Services reserves the right to reject any and all bids, and to waive irregularities and to accept a bid that is deemed in the best interest of the State of Iowa.

Bidders must comply with all affirmative action/equal employment opportunity provisions of the State of Iowa and the Federal Government.

This project is exempt from Iowa Sales Tax. Davis Bacon Wages **will not** apply to this project.

Questions must be submitted by 5:00pm, December 9, 2025, to the Issuing Officer.

Bidding documents may stipulate a specific product. Substitute product will be considered if a written request is received by 5:00pm, December 9, 2025, prior to bid opening. Substitution requests will be considered for all products per Section 01 2500 Substitution Procedures, even if the specification does not include a statement such as "or equal," "equal to," "equivalent to," or "basis of design," unless otherwise noted.

Pre-Bid meetings will be held on Wednesday, November 19, 2025, at 2:30pm and Wednesday, December 3, 2025, at 2:30pm at the Office of the State Medical Examiner, located at 2250 S Ankeny Blvd, Ankeny, Iowa 50023. November 19, 2025, pre-bid meeting will be held in Rooms 207 & 208. December 3, 2025, pre-bid meeting will be held in Rooms 207, 208 & 209. Attendance at one of the two pre-bid meetings is mandatory (required to qualify for bidding) for the bid packages listed below:

- Bid Package 003A Concrete (Foundations/SOG/Misc Concrete)
- Bid Package 005A Structural Steel & Misc Metals (Material & Install)
- Bid Package 006A General Construction
- Bid Package 009A Gypsum Wallboard, Insulation & Ceilings, Painting & Wallcovering
- Bid Package 021A Fire Protection
- Bid Package 022A Mechanical (HVAC, Plumbing & BAS)
- Bid Package 026A Electrical (Fire Alarm, Structured Cabling, Security, Access Control & AV)
- Bid Package 031A Selective Site Demo, Grading/Excavating, Site Utilities, Site Paving & Exterior Improvements

Bidding Documents, including drawing sheets bearing the project name Iowa Department of Administrative Services – HSS ANK IMEO Expansion & Renovation, dated 11/13/2025 and the Project Manual prepared by OPN Architects dated 11/13/2025, may be obtained from Rapids Reproductions by visiting rapidsreproplanroom.com or by calling (515) 251-3222 on Friday, November 14, 2025.

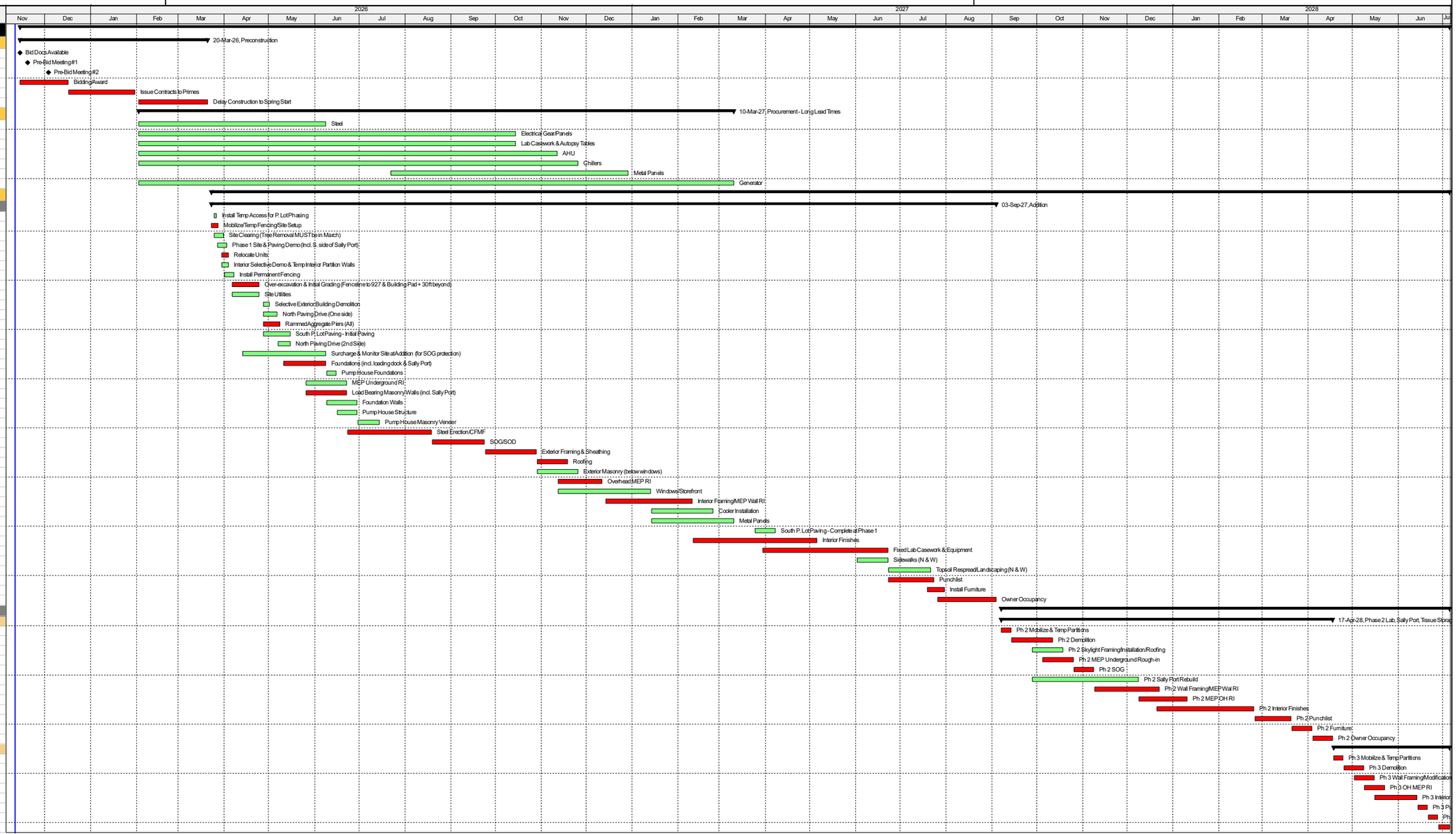
For further information regarding this project contact:
Michael Bradbury – Issuing Officer
Phone: (515) 823-9327
E-Mail: construction.procurement@iowa.gov

END OF SECTION

9429.00 HHS ANK IMEO Expansion & Renovation

Data Date: 11-Nov-25
Run Date: 13-Nov-25

Activity ID	Activity Name	OD	Start	Finish
Iowa Office of State Medical Examiner - Adc		666	14-Nov-25	05-Jul-28
Preconstruction		86	14-Nov-25	20-Mar-26
A2180	Bid Docs Available	0	14-Nov-25*	
A2220	Pre-Bid Meeting #1	0	19-Nov-25*	
A2230	Pre-Bid Meeting #2	0	03-Dec-25*	
A1340	Bidding/Award	21	14-Nov-25	16-Dec-25
A1350	Issue Contracts to Primes	30	17-Dec-25	30-Jan-26
A1370	Delay Construction to Spring Start	35	02-Feb-26	20-Mar-26
Procurement - Long Lead Times		280	02-Feb-26	10-Mar-27
A1390	Steel	90	02-Feb-26	08-Jun-26
A2470	Electrical Gear/Panels	180	02-Feb-26	14-Oct-26
A2490	Lab Casework & Autopsy Tables	180	02-Feb-26	14-Oct-26
A1420	AHU	200	02-Feb-26	11-Nov-26
A1480	Chillers	210	02-Feb-26	25-Nov-26
A1400	Metal Panels	110	22-Jul-26	29-Dec-26
A1430	Generator	280	02-Feb-26	10-Mar-27
Construction		580	23-Mar-26	05-Jul-28
Addition		370	23-Mar-26	03-Sep-27
A2250	Install Temp Access for P. Lot Phasing	2	25-Mar-26	26-Mar-26
A1000	Mobilize/Temp Fencing/Site Setup	5	23-Mar-26	27-Mar-26
A1270	Site Clearing (Tree Removal MUST be in Marc	5	25-Mar-26	31-Mar-26
A2260	Phase 1 Site & Paving Demo (Incl. S. side of Sa	5	27-Mar-26	02-Apr-26
A1010	Relocate Units	5	30-Mar-26	03-Apr-26
A2290	Interior Selective Demo & Temp Interior Partition	5	30-Mar-26	03-Apr-26
A2240	Install Permanent Fencing	5	01-Apr-26	07-Apr-26
A1020	Over-excavation & Initial Grading (Fenceline to	15	06-Apr-26	24-Apr-26
A1030	Site Utilities	15	06-Apr-26	24-Apr-26
A2280	Selective Exterior Building Demolition	5	27-Apr-26	01-May-26
A1200	North Paving Drive (One side)	8	27-Apr-26	06-May-26
A2300	Rammed Aggregate Piers (All)	10	27-Apr-26	08-May-26
A2270	South P. Lot Paving - Initial Paving	15	27-Apr-26	15-May-26
A2500	North Paving Drive (2nd Side)	7	07-May-26	15-May-26
A1280	Surcharge & Monitor Site at Addition (for SOG	40	13-Apr-26	08-Jun-26
A1040	Foundations (incl. loading dock & Sally Port)	20	11-May-26	08-Jun-26
A1230	Pump House Foundations	5	09-Jun-26	15-Jun-26
A1050	MEP Underground RI	20	26-May-26	22-Jun-26
A1060	Load Bearing Masonry Walls (incl. Sally Port)	20	26-May-26	22-Jun-26
A1410	Foundation Walls	15	09-Jun-26	29-Jun-26
A2530	Pump House Structure	10	16-Jun-26	29-Jun-26
A2540	Pump House Masonry Veneer	10	30-Jun-26	14-Jul-26
A1070	Steel Erection/CFMF	40	23-Jun-26	18-Aug-26
A1080	SOG/SOD	25	19-Aug-26	23-Sep-26
A1090	Exterior Framing & Sheathing	25	24-Sep-26	28-Oct-26
A1110	Roofing	15	29-Oct-26	18-Nov-26
A1100	Exterior Masonry (below windows)	20	29-Oct-26	25-Nov-26
A1120	Overhead MEP RI	20	12-Nov-26	11-Dec-26
A1140	Windows/Storefront	40	12-Nov-26	13-Jan-27
A1130	Interior Framing/MEP Wall RI	40	14-Dec-26	10-Feb-27
A1160	Cooler Installation	30	14-Jan-27	24-Feb-27
A1150	Metal Panels	40	14-Jan-27	10-Mar-27
A2510	South P. Lot Paving - Complete at Phase 1	10	25-Mar-27	07-Apr-27
A1170	Interior Finishes	60	11-Feb-27	05-May-27
A1180	Fixed Lab Casework & Equipment	60	30-Mar-27	22-Jun-27
A1190	Sidewalks (N & W)	15	02-Jun-27	22-Jun-27
A1210	Topsoil Respread/Landscaping (N & W)	20	23-Jun-27	21-Jul-27
A1220	Punchlist	22	23-Jun-27	23-Jul-27
A1290	Install Furniture	10	19-Jul-27	30-Jul-27
A1240	Owner Occupancy	30	26-Jul-27	03-Sep-27
Remodel		210	07-Sep-27	05-Jul-28
Phase 2 Lab, Sally Port, Tissue Storage & SE Offices		155	07-Sep-27	17-Apr-28
A2160	Ph 2 Mobilize & Temp Partitions	5	07-Sep-27	13-Sep-27
A2190	Ph 2 Demolition	20	14-Sep-27	11-Oct-27
A2520	Ph 2 Skylight Framing/Installation/Roofing	15	28-Sep-27	18-Oct-27
A2200	Ph 2 MEP Underground Rough-in	15	05-Oct-27	25-Oct-27
A2310	Ph 2 SOG	10	26-Oct-27	08-Nov-27
A2360	Ph 2 Sally Port Rebuild	50	28-Sep-27	08-Dec-27
A2320	Ph 2 Wall Framing/MEP Wall RI	30	09-Nov-27	22-Dec-27
A2330	Ph 2 MEP OH RI	20	09-Dec-27	10-Jan-28
A2340	Ph 2 Interior Finishes	45	21-Dec-27	24-Feb-28
A2350	Ph 2 Punchlist	17	25-Feb-28	20-Mar-28
A2370	Ph 2 Furniture	10	21-Mar-28	03-Apr-28
A2380	Ph 2 Owner Occupancy	10	04-Apr-28	17-Apr-28
Phase 3 NE Offices		55	18-Apr-28	05-Jul-28
A2390	Ph 3 Mobilize & Temp Partitions	5	18-Apr-28	24-Apr-28
A2400	Ph 3 Demolition	10	25-Apr-28	08-May-28
A2410	Ph 3 Wall Framing/Modifications & MEP RI	10	02-May-28	15-May-28
A2420	Ph 3 OH MEP RI	10	09-May-28	22-May-28
A2430	Ph 3 Interior Finishes	20	16-May-28	13-Jun-28
A2440	Ph 3 Punchlist	5	14-Jun-28	20-Jun-28
A2450	Ph 3 Furniture	5	21-Jun-28	27-Jun-28
A2460	Ph 3 Owner Occupancy	5	28-Jun-28	05-Jul-28



Remaining Level of Effort
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
Summary

MILESTONE BID SCHEDULE
11/13/2025

WEITZ /// BUILD A BETTER WAY.®

BID PACKAGES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Bid Package Scope Descriptions

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General Conditions and other Division 01 Specifications Sections, apply to this Section.

1.03 DEFINITIONS

A. Bid Package: A defined scope of work that will establish a single prime construction contract for the work described in that specific Bid Package. There are multiple planned Bid Packages for this Project.

1.04 COORDINATION

A. The Prime Contractors shall be responsible for coordinating their respective Work with the Work of other Prime Contractors. The Construction Manager shall assist and facilitate such coordination as necessary to maintain the Project schedule, quality and safety.

1.05 CONSTRUCTION MANAGER

A. Construction Manager: The Owner has retained a full-time Construction Manager (The Weitz Company) to serve as the Owner's authorized contract representative in the coordination of the Work. Contractors shall respond to and perform any instructions, reviews, approvals, orders or directions given by the Construction Manager to the Contractor as if the same were being given directly by the Owner.

1. Reference Documents:
    i. Section 01 31 00 – Project Management & Coordination
    ii. Section 01 73 00 – Execution Requirements
    iii. Section 01 78 00 – Closeout Submittals
2. Coordination activities of Construction Manager include, but are not limited to, the following:
    i. Provide overall coordination of temporary facilities and controls
    ii. Coordinate, schedule and approve interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services.
    iii. Coordinate construction and operations of the Work with work performed by each contract and Owner's construction forces.
    iv. Coordinate sequencing and scheduling of the Work including, but not limited to, the following:
        1. Arrange and conduct meetings with separate contractors for sequencing and coordinating the Work; negotiate reasonable adjustments to schedules.
        2. Coordinate the processing of submittals (shop drawings, samples, etc.) request for information, requests for proposals, change orders and other construction phase documentation.

3. Prepare a combined Master Construction Schedule for the entire Project. This Master Construction Schedule will contain the same required milestone and completion dates indicated in the Preliminary Schedule included in the Bid Documents. Minor sequencing changes may take place between the Preliminary and Master Construction Schedule, but required milestone and completion dates will not change, unless agreed upon by the Owner and documented in an Owner change order.
4. Prepare updated Progress Schedules and look-ahead schedules for use in evaluating and coordinating the progress of the work. Input from applicable Contractors will be required for these schedule updates.
5. Distribute copies of schedules to Design Professional, Owner and separate Contractors.
6. Arrange for and conduct weekly Contractor Coordination Meetings and any special coordination meetings, as needed, to coordinate and evaluate the progress of the Work.
7. Arrange for and conduct monthly Owner / Design Professional / Contractor Progress Meetings to discuss progress of the Work, and pending changes, any quality or safety issues, and other business as applicable.

v. Provide quality-assurance and quality-control services specified in Division 01 Section “Quality Requirements”.
vi. Coordinate sequence of activities to accommodate tests and inspections, and coordinate schedule of tests and inspections.
vii. Provide information necessary to adjust, move, or relocate existing utility structures affected by construction.
viii. Provide one benchmark and one grid line in each direction at the building pad.
ix. Coordinate the cleanup of the separate Contractors. Provide dumpsters for Contractor’s use. See cleanup clauses in individual Bid Package scope for a complete description of cleanup duties and responsibilities.
x. Maintain construction cost accounting records on the Project.
xi. Review and make recommendations with respect to requests for changes in the Contractor’s contracts including all proposed change orders and field change directives.
xii. Manage a coordinated safety program involving all Contractors.
xiii. Collect and compile a coordinated payment application for all Contractors and make recommendations for Contractors’ pay requests.
xiv. Receive and review Contractor’s certificates and policies of insurance to confirm compliance with Contract Documents.
xv. Coordinate cutting and patching.
xvi. Coordinate protection of the Work.
xvii. Coordinate firestopping.
xviii. Coordinate completion of interrelated punchlist items.
xix. Work with architect to determine substantial completion, final completion of the Work and final acceptance by the Owner.

3. Responsibilities of the Construction Manager for temporary facilities and controls are outlined in each individual Bid Package in the Temporary Facilities & Controls Matrix.

1.06 SCHEDULE OF BID PACKAGES

A. Bid Package 003A: Section 01 12 00.003A, BP 003A Concrete (Foundations/SOG/Misc Concrete)
B. Bid Package 004A: Section 01 12 00.004A, BP 004A - Masonry
C. Bid Package 005A: Section 01 12 00.005A, BP 005A – Structural Steel & Misc Metals (Material & Install)
D. Bid Package 006A: Section 01 12 00.006A, BP 006A – General Construction
E. Bid Package 007A: Section 01 12 00.007A, BP 007A – Roofing & Sheetmetal
F. Bid Package 007B: Section 01 12 00.007B, BP 007B – Metal Panels
G. Bid Package 008A: Section 01 12 00.008A, BP 008A – Exterior/Interior Glazing Systems
H. Bid Package 009A: Section 01 12 00.009A, BP 009A – Gypsum Wallboard, Insulation & Ceilings, Painting & Wallcovering
I. Bid Package 009C: Section 01 12 00.009C, BP 009C - Terrazzo
J. Bid Package 021A: Section 01 12 00.021A, BP 021A – Fire Protection
K. Bid Package 022A: Section 01 12 00.22A, BP 022A - Mechanical
L. Bid Package 026A: Section 01 12 00.026A, BP 026A – Electrical
M. Bid Package 031A: Section 01 12 00.031A, BP 031A – Selective Site Demo, Grading/Excavating, Site Utilities, Site Paving, and Exterior Improvements

PART 2 PRODUCTS – Not Used

PART 3 EXECUTION – Not Used

END OF SECTION

SECTION 01 12 00.003A
BP 003A – CONCRETE (FOUNDATIONS/SOG/MISC CONCRETE)

Section 1. Contractor's Work

The Contractor's Work includes all labor; supervision; materials; equipment; services; supplies; tools; facilities; transportation; storage; receiving; licenses; inspections; certifications; overhead; profit; insurance; and other items required or reasonably inferable to properly and timely perform and complete all work and services to be performed by the Contractor pursuant to this Agreement. Unless specifically stated otherwise, incidental work required to accomplish the work of this Bid Package shall be included in the bid. This would include, but not be limited to temporary facilities, protection of the work, security of equipment, materials, and work in progress, etc. Contractor's Work shall be completed in compliance with the standards described in the Prime Contract and in the Drawings and Specifications, or, if no such standards are specified, in compliance with industry standards.

Contractor's work includes the following Specification Division(s) and/or Section(s):

Spec Section	**Description**
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
03 30 00	Cast-in-Place Concrete
03 35 11	Concrete Floor Finishes
07 14 00	Fluid-Applied Waterproofing
07 21 00	Thermal Insulation (as applicable)
07 26 13	Under-Slab Vapor Barriers
31 23 33	Trench Excavation and Backfill
31 61 00	Rammed Aggregate Piers

Section 2. Contract Inclusions

The Contractor's Work specifically includes, but is not limited to the following:

2.1. General

2.1.1. Pricing escalations for all materials, equipment, product shortages or product availability or any other cause are the responsibility of the Contractor. Contractor shall take all necessary measures to ensure materials are procured in a manner that supports the Construction Manager's scheduled start dates, uninterrupted progress and activity durations. Storage for early procurement of materials if required will be the Contractor's responsibility and will be considered a means and method of construction to ensure timely completion of the work. All onsite-stored material shall be housed in accordance with requirements set forth within the Contract Documents. All cost escalations are included in the Contract Sum.

2.1.2. Joint Sealant Responsibility

2.1.2.1. In General, each Contractor is responsible for all joint sealants required to complete their scope of work's system.
2.1.2.2. Floor and Wall Penetrations – By Contractor Installing Penetration
2.1.2.3. Sealed Concrete Control Joints or Concrete Expansion Joints – By Concrete Contractor (BP 003A)
2.1.2.4. Brick and Masonry Wall System, Including Top of Walls to Structure – By Masonry Contractor (BP 004A)
2.1.2.5. Casework/Countertops – By GC Package Contractor (BP 006A)
2.1.2.6. Tile Control Joints – By GC Package Contractor (BP 006A)
2.1.2.7. Fluid Applied Cove Base to Wall – By GC Package Contractor (BP 006A)
2.1.2.8. Corner & Wall Guards to Wall – By GC Package Contractor (BP 006A)
2.1.2.9. Door Frames in Block Walls & Exterior Walls – By GC Package Contractor (BP 006A)
2.1.2.10. Fire Extinguisher Cabinet to Wall - By GC Package Contractor (BP 006A)
2.1.2.11. Roofing – By Roofing Contractor (BP 007A)
2.1.2.12. Metal Panels – By Metal Panels Contractor (BP 007B)
2.1.2.13. Aluminum Entrances – By Glazing Contractor (BP 008A)
2.1.2.14. Curtainwall System and Windows – By Glazing Contractor (BP 008A)
2.1.2.15. Drywall Wall System, Including Bottom & Top of Walls – By Drywall Package Contractor (BP 009A)
2.1.2.16. Drywall to Drywall Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.2.17. Drywall to Masonry Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.2.18. Drywall to any other surface - By Drywall Package Contractor (BP 009A)
2.1.2.19. Interior Door & Window Frames – By Drywall Package Contractor (BP 009A)
2.1.2.20. Aesthetic Sealant Between Drywall and Aluminum Frames – By Drywall Package Contractor (BP 009A)
2.1.2.21. Elevator Door Frames – By Drywall Package Contractor (BP 009A)
2.1.2.22. Site Paving – By Site Paving Contractor (BP 031A)

2.1.3. Fire Stopping Responsibility

2.1.3.1. In General, each Contractor is responsible for all fire stopping to complete their scope of work's system. Hilti Products must be used.
2.1.3.2. Floor and Wall Penetrations – By Contractor Installing Penetration
2.1.3.3. Top of Masonry Wall – By Masonry Contractor (BP 004A)
2.1.3.4. Masonry to Masonry Wall Transition – By Masonry Contractor (BP 004A)
2.1.3.5. Top of Drywall Wall – By Drywall Package Contractor (BP 009A)
2.1.3.6. Drywall to Drywall Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.3.7. Drywall to Masonry Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.3.8. Drywall to any other surface – By Drywall Package Contractor (BP 009A)

2.1.3.9. Edge of Slab – By Drywall Package Contractor (BP 009A)

2.2. FOOTINGS & FOUNDATION WALLS

2.2.1. Contractor agrees that it has undertaken a thorough review of the geotechnical report and is familiar with the subsurface conditions described therein.

2.2.2. All staking and surveying are the responsibility of this Contractor. Contractor shall utilize Snyder for all site survey/layout/staking.

2.2.3. Contractor shall furnish and install footing and foundation walls as indicated in the Contract Documents. Installation shall include footing excavation, forming, rigid insulation, reinforcing steel, void form, anchor bolts, embeds, water stop, granular fill, backfill and all accessories and incidentals for a complete installation.

2.2.4. This scope includes all grade beams, spread footings, step footings, foundation walls, retaining walls, thickened slab footings, pit foundations, loading dock foundation/pits, stoops, equipment pad for the emergency generator, equipment pad for the chiller, and any other equipment/housekeeping pads shown per the contract documents.

2.2.5. Contractor shall install any/all sleeves and/or block outs. Other trades requiring sleeves or block outs will provide the sleeve or blockout material for installation by this Contractor.

2.2.6. Contractor shall haul any/all excess spoils from this scope of work to a location off site daily.

2.2.7. Contractor shall furnish and install concrete washouts as required for this scope.

2.2.8. Contractor includes dewatering of any/all excavations.

2.2.9. Contractor understands a 3rd Party Testing Agency and City Official will complete installation inspections. Contractor shall schedule and participate in inspections. Contractor will make any corrections noted.

2.2.10. Construction Manager will provide control point pins on the site. This Contractor is responsible for all layout from control point pins including establishing building corners. Contractor is responsible to provide (2) grid intersections and (2) elevation benchmarks on each floor for other trades use.

2.2.11. Contractor understands that Bid Package 031A Selective Site Demo, Grading/Excavating, Site Utilities, Site Paving, and Exterior Improvements contractor will provide excavation for the foundation wall along the building near the loading dock as well as between the retaining walls. Excavation shall be to top of footing and sloping 1-1/2:1 towards the interior of the building pad and away from the retaining walls. This contractor will be responsible for furnishing, installing, and backfilling of the foundation wall and retaining walls.

2.2.12. Contractor understands that a rock working mat equal to the footprint of the building, and per the site logistics plan, with top of rock at -0’-7” will be provided by Bid Package 031A. Above subsurface forming may be required at interior columns.

2.2.13. Contractor shall be responsible for granular fill import, prep, and all fine grading from -0’-7” to bottom of slab on grade at the building pad. Any subgrade prep & granular fill is to be per the Geotech report. An additional 2” of rock shall also be included as a ‘refresh’ at the building pad.

2.2.14. Contractor includes having a skid steer with sweeper attachment and operator on site beginning during the rammed aggregate piers scope of work through slab on grade completion. Contractor includes sweeping the project paving and City streets as needed. Necessary spotters/flaggers are included.

2.2.15. Contractor includes an allowance of $15,000 for misc. drill & epoxy and blockouts not shown on the contract documents as well as out of sequence work/overtime that may be required in order to keep the existing facility undisturbed. This work needs to be pre-planned and will be tracked on daily work tickets that must be signed by the Construction Manager at the end of each work shift. Unused amount to be credited back to project if unused.

2.3. SLAB ON GRADE, CURBS, & SLAB ON DECK

2.3.1. Contractor shall furnish and install any/all slabs on grades as required by the contract documents. Work shall include granular sub base, vapor barrier, rigid insulation, reinforcing steel, embeds, control joints, forming, anchor bolts, concrete, and all accessories and incidentals for a complete installation.

2.3.2. Contractor shall furnish and install all slabs on deck and topping slabs as required by the contract documents. Work shall include forming, reinforcing steel, temporary shoring, embeds, concrete, and all accessories and incidentals for a complete installation.

2.3.3. Contractor shall provide a carbon monoxide monitoring plan in accordance with Construction Manager's safety policy for any slab pours in enclosed areas. Contractor to provide fans as needed.

2.3.4. Contractor shall furnish and install the granular subbase below all slab on grade. Subbase material shall be modified subbase and approved by 3rd party inspector. Contractor understands that modified subbase shall be placed immediately prior to placing the slab and that MEP underground will be in place.

2.3.5. Contractor shall furnish and install sealer/hardener and slip resistant finish as required by Contract Documents. This includes cleaning/buffing floors prior to sealer. Drywall mud shall be removed by others prior to this contractor's work.

2.3.6. This scope includes floor trench drain bases, recessed floor scales, boot wash drain, dirty laundry discharge basin, autopsy table equipment bases, locker bases, lab casework bases, interior bollard material and install, and MEP bases.

2.3.7. Contractor shall furnish and install boot wash embedded frame. Coordinate with BP 022A to ensure frame is installed as required for plumbing and grate by others.

2.3.8. Contractor understands that all expansion joints & covers will be furnished and installed by BP 006A – General Construction. This Contractor shall coordinate with BP 006A to ensure any blockouts are installed as necessary.

2.3.9. Contractor understands that concrete washout bags may be required to clean concrete trucks during phase 2.

2.3.10. Contractor shall follow Indoor Air Quality Procedures as required by the contract documents.

2.4. WATERPROOFING

2.4.1. Contractor shall furnish and install waterproofing as required by contract documents. This includes all accessories required for a complete assembly including, but not limited to cant strips, protection board, joint seal, term bars, etc.

2.5. RAMMED AGGREGATE PIERS

2.5.1. Contractor agrees that it has undertaken a thorough review of the geotechnical report and is familiar with the subsurface conditions described therein.
2.5.2. Contractor shall design, furnish and install all rammed aggregate piers as required by the Contract Documents.
2.5.3. Contractor shall provide layout of rammed aggregate pier elements. Contractor is responsible for the initial and final layout of each rammed aggregate pier.
2.5.4. Contractor shall dip piles or cut down as required to maintain correct top of pile elevations.
2.5.5. Contractor shall furnish and install reinforcing for this scope as required by the Contract Documents.
2.5.7. Contractor is responsible for removal of spoils, slurry, and excavated material from the site on a daily basis.
2.5.8. Contractor is responsible for verifying and submitting an actual pile location layout with all variances noted for approval by the design engineer.
2.5.9. Contractor shall cover and protect piles per OSHA standards.
2.5.10. Contractor shall install all piers east of column line B.1 after 3:00 PM due to the concern over vibration during hours of operation.

2.6. MISCELLANEOUS

2.6.1. Contractor shall provide anchor bolt protection at all anchor bolts. Protection to consist of a wood box built of 2x material as well as a handrail standard. Contractor will remove and dispose of protection prior to steel erection. Contractor is responsible for maintenance of anchor bolt protection.
2.6.2. Contractor shall furnish and install plywood over any holes in slab on grade or slab on deck. This includes column blockouts if they are not poured first.

Section 3. Contract Exclusions

The Contractor's Work specifically excludes the following:

3.1. Dumpsters
3.2. Latrines
3.3. Concrete light pole bases
3.4. Site paving, sidewalks and site amenity foundations

3.5. Masonry rebar

Section 4. Contract Time

The Contractor's Work shall be completed as follows:

4.1. Contractor agrees to meet or exceed durations and sequences as outlined in the Milestone Construction Schedule (included in this specification section), and as modified from time to time during the course of the project and as communicated through regularly scheduled progress meetings. Increased manpower or overtime required to meet these obligations shall be borne by this Contractor.

4.2. Acceptance of Revised Master Construction Schedules - After each LEAN Last Planner pull session, the Construction Manager will compile the pulled activities and notify Contractors of the updated Master Construction Schedule. Within 48 hours of issuance by the Construction Manager, Contractors must accept or dispute the revised Master Construction Schedule. If any Contractor disputes the new handoff dates, disputing contractors will have an opportunity to re-pull their activities. All contractors will be held to the last fully accepted Master Construction Schedule.

4.3. Contractor shall provide sufficient labor, material, and equipment to maintain or improve upon the construction schedule.

4.4. Contractor shall assume working a standard forty-hour work week based on five (5) eight (8) hour days (Monday thru Friday).

4.5. Contractor shall provide the Construction Manager written notice 48 hours in advance of request to work additional hours during the week or on the weekend and is subject to Construction Manager's approval.

4.6. The Contractor understands that there will be concurrent work activities taking place that may require additional supervision, manpower, and equipment or material deliveries to accommodate the schedule needs.

4.7. Contractor agrees to mobilize on the scheduled start date and continue without pause, hesitation or interruption provided there is not impedance by others to his work.

4.8. Contractor understands that this project will require multiple mobilizations in order to complete their scope(s) of work due to project phasing, sequencing, as well as existing building operations needing to remain unaffected. Refer to G-series phasing & site logistics drawings for further information regarding project phasing.

Section 5. VDC/BIM Coordination

5.1. The Construction Manager shall lead the 3D Computer Model Coordination process. The Construction Manager will require coordination drawings and a 3D Model for the following trades: Steel (Bid Package 005A), Fire Protection (Bid Package 021A), Mechanical Ductwork, Piping and Equipment (Bid Package 0022A), and Electrical Piping & Equipment (Bid Package 026A). See 3D Coordination Drawing Matrix for further detail.

5.2. The coordination drawings shall be produced in three dimensional CAD, Revit, Archicad, or other 3D modeling software that allows for exporting, save as, or native import into Autodesk Navisworks for 3D model management. Coordination Drawings shall also be exported as 2D installation drawings and submitted to the Construction Manager.

5.3. The Construction Manager shall provide a Coordinated Computer Model in a Navisworks NWD file on a periodic basis and will be used for Contractors to reference and make corrections to each respective trade model until all conflicts are resolved.

5.4. Model Coordination Meetings shall be held at regular intervals to execute the process. The Construction Manager will lead model management efforts and will require the Contractors with model assignments to attend several meetings to assign special parameters of each trade prior to final approval of coordination drawings. The initial model coordination meeting will be to develop the file naming, origin coordination, and software file testing prior to 3D model and drawing conception. The coordination schedule and clash resolution priorities will also be reviewed and established. Contractors should allow for a model coordination meeting once a week until the process is complete. The coordination meetings shall be attended by each Contractor that is required to build a 3D Model. Each representative must have decision making authority and first-hand knowledge of what has been modeled and be prepared to resolve conflicts based on what is discussed in the coordination meeting.

3D Coordination Drawing Matrix

Description	Responsible Party	Level of Development (Defined by AIA E202)	Additional Requirements:
Architectural			
Foundations & Structural Concrete	Design Professional	300	
SOG	Design Professional	300	
Interior Walls	Design Professional	200	
Ceilings	Bid Package 022A	200	*Allows for better ceiling coordinattion
Metals			
Structural Steel	Bid Package 005A	400	
Misc Steel	Bid Package 005A	400	
Steel Joist	Bid Package 005A	400	
Steel Deck	Bid Package 005A	300	
Precast			

Walls	Not Applicable	400	*Includes all embeds and connection
Fire Sprinkler			
Piping Assemblies	Bid Package 021A	400	*Pumps, Tampers, Flows, Valves, etc.
Main Piping	Bid Package 021A	400	*Include hangers. All size piping.
Branch Piping	Bid Package 021A	400	*Include hangers. All size piping.
Drop Piping and Heads	Bid Package 021A	400	*All size piping.
Plumbing			
Underslab Piping	Bid Package 022A	400	*Includes from 5-0 outside of building.
Above Ground Piping	Bid Package 022A	400	*1/2" diameter and larger piping only.
Equipment	Bid Package 022A	400	All equipment
Mechanical			
Ductwork	Bid Package 022A	400	*All sizes.
Mechanical Piping	Bid Package 022A	400	*1/2" diameter and larger piping only. Includes hangers.
Equipment	Bid Package 022A	400	All equipment. Include clearance zones.
Electrical			
Underslab Conduits	Bid Package 026A	300	*1" diameter conduit, raceway,

			and larger. Show intended trenches.
Conduit, Raceways	Bid Package 026A	300	*1" diameter conduit, raceway, and larger. Includes cable tray.
Equipment and Panels	Bid Package 026A	300	*All panels, all sizes. Panel labels/names. Include code/service space requirements above and in front.
Light Fixtures	Bid Package 026A	300	Include install clearance.

Section 6. Jobsite

6.1. Nothing Hits The Floor

6.1.1. Contractor shall conform to Construction Manager's Nothing Hits the Floor Program. Placing material, tools, or debris on the floor or ground is prohibited.

6.1.2. Contractor shall provide rolling carts, debris containers or other means of collecting scrap material/trash at Contractor's work areas. Scrap material shall be promptly placed into containers when produced. Contractor shall remove its debris at least daily to dumpsters provided by others. When debris containers are shared amongst multiple Contractors, each Contractor shares an equal part in the responsibility of getting debris containers dumped into the dumpsters.

6.1.3. Contractor shall establish work/cutting stations at waist height in order to eliminate bending and or squatting down when cutting material. Cutting of material at ground level is prohibited.

6.1.4. Contractor agrees to use battery-operated tools wherever and whenever possible. If cordless tools cannot be utilized, all cords and hoses shall be elevated from the point they leave an outlet to the point of use. Contractor shall supply cord trees and S hooks as needed for equipment cords.

6.1.5. Contractor is responsible for all labor and equipment to unload, account for all material delivered, stock, and delivery for this scope of work. Materials to be installed will be

delivered “just in time” to reduce the amount of material stored on the project site. Materials delivered and moved into the building shall be used within 3 work days unless otherwise authorized by Construction Manager. If anything stored obstructs the progress of any portion of the work, it shall be promptly removed or relocated by the Contractor without reimbursement. Attic stock shall be held at Contractor’s storage until the end of project or approved by the Construction Manager.

6.1.6. At no time shall materials be stored directly on the floor or ground. All material at the Project shall be stored in trailers, wheeled carts, storage racks, storage bins, or on pallets. When wheeled carts are used, the casters shall be lockable. Materials shall only be stored on pallets or storage bins on level surfaces where they are accessible with a pallet jack.

6.2. Drug Free Verification Policy

Contractor agrees to be bound to, and comply with, the Construction Manager’s Drug-Free Verification Policy. Contractors will provide only trades people who have given prior consent to submit to a drug test. The Construction Manager retains the right, but not the obligation, to require the Contractor’s employees to be tested to insure that they are drug free. Contractor’s employees may be included in jobsite testing at the option of the Construction Manager. The Contractor will pay the cost of such drug testing.

6.3. Clean Up

6.3.1. The Contractor shall, on an on-going basis or at the direction of the Construction Manager, keep the Project site and surrounding area free from accumulation of waste materials, debris or rubbish caused by performance of the Contractor’s Work.

6.3.2. If such clean-up is not properly or timely performed, Construction Manager shall give Contractor’s representative a written notice to comply within 24 hours from the time notice is given. If Contractor fails to correct such noncompliance within said 24 hours, Construction Manager is authorized to perform the clean up and to assess Contractor a reasonable charge. Contractor also agrees to accept pro-rata responsibility for clean up of unclean conditions which Construction Manager is unable to identify to a particular Contractor. The Contract Sum will be reduced for Construction Manager’s clean up costs.

6.3.3. Contractor shall cleanup and haul off to dumpster provided by others for all debris resulting from Contractor’s scope of work. Contractor shall provide brooms, shovels and other equipment for Contractor’s own clean-up.

6.3.4. In addition to the general clean up in paragraph above, Contractor shall furnish one laborer for each six (6) employees working on site the preceding four work days for clean up of general trash and debris. The Construction Manager shall supervise this clean up crew. If Contractor fails to comply with this clean up policy, Construction

Manager shall reduce the Contract Sum in the amount of $100 per man hour for such non-participation in the weekly clean up effort.

6.3.5. Contractor shall take all necessary measures to prevent tracking of mud onto surrounding streets and driveways. Include street cleaning and/or sweeping necessitated by this scope and comply with all local codes.

6.4. Protection

6.4.1. Protect adjacent existing building elements from damage from Scope of work. Repair existing building elements damaged during Contractor's Scope of work.

6.5. Hoisting

Contractor is responsible for all hoisting facilities for Contractor's material, equipment and personnel to complete the work.

Section 7. Safety

7.1 **Safety Precautions**

The Contractor shall take all necessary safety precautions with respect to performance of the Contractor's Work and shall comply with applicable safety measures and with the applicable laws, ordinances, rules, regulations, and orders of public authorities and with the requirements of the Contract Documents for the safety of persons and property. The Contractor agrees to participate in periodic site safety meetings as requested by Construction Manager, including weekly "toolbox talks". The Contractor shall comply with all Project Safety Requirements listed in this section.

7.2 **Safety Protections**

The Contractor and its employees must, at a minimum, comply with all applicable laws, codes, rules, regulations and requirements pertaining to the safe performance of its Work, including the Federal Occupational Safety and Health Act (OSHA). Contractor agrees to provide protection as is necessary to protect all persons and property from Contractor's operations. Contractor shall effectively secure and protect the Contractor's Work. The Contractor shall furnish all safety equipment required to safely perform the Contractor's Work.

7.3 **Assumption of Safety Responsibility**

The Contractor agrees and acknowledges that it has assumed full responsibility and liability for safety precautions in connection with the construction means, methods, techniques, sequences, supervision and procedures pertaining to Contractor's Work.

7.4 **Safety Requirements**

The following minimum safety requirements are also applicable and will be enforced on this Project. Specific questions regarding these safety requirements should be directed to the Construction Manager.

7.4.1 ***Unsafe Conditions***

BE ALERT! All un-safe conditions shall be reported immediately to the Construction Manager's Project supervision and to the Contractor's Project Site Supervisor. No person is required to work under any unsafe conditions. OSHA Standard 1926.20.

7.4.2 ***Reporting Injuries***

All accidents or injuries deemed Recordable, Lost Time or Restricted by OSHA, or non-injury incidents resulting in property damage or high potential for severe injury shall be reported immediately to the Construction Manager's Superintendent, giving full details and identifications and statements of any witnesses. The Contractor shall be responsible for completing a written injury and/or incident investigation in accordance with referenced procedures and providing such report to the Construction Manager's supervision in a timely manner.

7.4.3 ***Project Safety Officer***

The Construction Manager's personnel have the authority to remove any of the Contractor's unsafe equipment, tools, scaffolding or other unsafe items, and have the authority to remove any Contractor employees that do not comply with these safety requirements. Contractors that receive two (2) written notices on the Project from the Construction Manager for failure to follow OSHA safety standards or these safety requirements, may have their payment withheld until such time as the managing principal of the Contractor has met with the Construction Manager and agreed on a plan to eliminate future safety violations. Continuing violations of these safety requirements may also result in termination of the Contractor's continuing performance under this Agreement.

7.4.4 ***Fall Protection***

All work performed at elevations over 6 feet must have a 100 percent fall protection or prevention system. This includes, but is not limited to; all leading edge work, iron connecting, working off of elevated work platforms (scaffoldings), and residential type construction. Only methods referenced and meeting or exceeding OSHA Standard 1926 Subpart M shall be used.

"Monitors" or "safety zones" are NOT an acceptable means of fall protection unless other positive protection methods create a demonstrated greater hazard. The Contractor's use of "monitors" or "safety zones" requires the prior written consent of the Construction Manager and must, at a minimum, meet OSHA requirements. Safety monitors and other "non-positive" means of fall protection and prevention can only be used when a written Project Specific Fall Protection Plan is submitted to and approved in writing by the Construction Manager. The Contractor's written Fall Protection Plan must meet all OSHA requirements and provide the most effective employee protection possible. The Contractor is responsible for enforcement of its fall protection plan.

Where no identifiable tie off point is identifiable on the roof, Contractor shall provide roof cart or equivalent to complete Contractor's work.

7.4.5 ***Barricades***

Barricades or covers meeting OSHA Standards are required around excavations, holes or openings in floors or roofs, edges of roofs, elevated platforms, around certain types of overhead work and whenever necessary to warn or prevent persons or equipment from falling.

7.4.6 ***GFCI Protection***

All work using cords or power tools must utilize Ground Fault Circuit Interrupter (GFCI) protection. Only authorized electricians shall perform electrical work.

7.4.7 ***Excavations***

Excavations must be sloped, shored or shielded, and must meet all other OSHA requirements. Before digging in any location, the Contractor must check to ensure that all public & private underground utilities have been located and properly marked.

Contractor shall hydro-vac to confirm utility location if digging within 5 feet of marked utility. Hydro-vacing will then be required every 20' if digging alongside existing utilities, prior to digging with equipment.

When excavation is to occur within an existing building or similar location, Ground Penetrating Radar (or similar) shall be used to scan under slab on grade conditions for potential underground utilities.

Contractor shall complete a Ground Disturbance Permit for any operation that creates any man-made penetration, cut, cavity, trench, or depression formed by earth removal regardless of depth.

7.4.8 ***Lockout/Tag***

Contractor's employees shall comply with OSHA Standard 1910.147 lockout/tag procedures when working on energized systems or equipment. The Contractor may utilize Construction Manager's lockout/tag procedures. Contractor shall utilize the Daily Electrical Checklist anytime that lockout/tagout conditions change.

7.4.9 ***Personal Protective Equipment***

7.4.9.1 All of the Contractor's employees on the Project site must use proper personal protective equipment (PPE) and clothing suited to the Work and the Work environment. The Contractor is responsible for providing its personnel the proper PPE which includes; gloves where applicable; no dangling or loose clothing or jewelry may be worn around moving machinery; shirts which cover the shoulder, work boots or shoes, high visibility shirt/vest, and long pants are required; hardhats must be worn by all workers, supervisors, clients, visitors and vendors at all times; eye and face protection (meeting ANSI Z87.1-1989 standards) must be worn at all times on the Project site. Additional forms of eye protection may also be required as prescribed by OSHA standards and manufacturer recommendations. Steps must be taken to protect other workers and the public from eye injury whenever tasks producing flying chips or particles are being performed; respirators will be used when an employee is exposed to airborne hazards (proper training, physical exam and a fit test are required; 1910.134); hearing protection in the form of earmuffs or

approved ear plugs shall be worn on all high noise level jobs as required; no radios will be allowed on the Project site other than 2-way radios for jobsite communication; and Contractor shall maintain appropriate first aid equipment and supplies in its Work areas at all times.

7.4.9.2 Contractor will provide ANSI cut 4 or higher gloves to their employees and ensure all subtiers are provided with the same. Gloves are required to be worn at all times.

7.4.9.3 Contractor employees and visitors who will be on site will be required to wear an ANSI Type II or an EN12492 helmet (i.e., a safety helmet that meets the requirements of testing against vertical, front, back, and side impacts and penetration) with an integrated four-point chin strap tightly attached and secured under the chin with no more than a 2-finger gap between strap and chin

7.4.10 ***Housekeeping***

Contractor shall maintain good housekeeping in and around its Work areas at all times. Stack materials so that safe clearances are maintained and falling is prevented. Keep all walk ways and aisles clear. Place cords and air hoses to one side (elevated) to allow safe passage. Remove loose overhead material, dispose of garbage. Immediately remove oil and water spillage. Immediately remove or bend over nails protruding from lumber. Secure all stored or loose materials (especially on roof) to prevent it from becoming airborne.

7.4.11 ***Illumination***

All of Contractor's Work areas shall be properly illuminated at all times.

7.4.12 ***Ventilation***

All of Contractor's employees performing confined space work shall be properly trained. All necessary requirements contained in OSHA Standard1910.146 must be met. Contractor shall maintain proper ventilation in enclosed areas when using equipment.

7.4.13 ***Ladders***

Contractor shall train its employees in the safe use of ladders and scaffolding as required. Defective ladders and scaffold components shall be tagged and removed from service

7.4.14 ***Tools and Equipment***

Tools, equipment, trucks, loaders, backhoes, cranes and forklifts shall be used, operated and maintained properly to prevent injury. No Contractor employee shall operate any equipment unless specifically authorized and trained to do so. Powder-actuated tools require certified training before use. Power tools shall be operated only by authorized personnel and with guard's in-place. Hand tools such as hammers and chisels shall be properly used and maintained. All slings, choker and rigging equipment shall be free of defects. All hooks must have safety latches or keepers. Taglines shall be used to control loads when their use does not create an additional hazard. Tampering with or unauthorized use or removal of fire extinguishers from assigned locations is prohibited. All of Contractor's tools and equipment must be inspected daily by Contractor before

use. Damaged tools shall be tagged “DO NOT USE” and removed from service immediately. Documentation of training and inspections shall be provided to the Construction Manager upon request.

7.4.15 ***Safety Plan***

A written Project specific safety plan and/or a Job Safety Analysis shall be completed. Such plans shall be completed and provided to the Construction Manager at least (2) weeks before the work begins.

7.4.16 ***Toolbox Talk***

Attendance at weekly Tool Box Talks is required for all Contractor personnel and documentation of meetings is mandatory. The Contractor shall ensure that its personnel watch Construction Manager’s Safety Introduction as required by the Construction Manager prior to performing work on site.

7.4.17 ***Hazard Communication***

If Contractor or its Contractors bring any material to the Project site which requires notification to employees of the Contractor, Owner or its other contractors, suppliers, vendors, material men and/or local fire departments or other authorities, in conformance with applicable environmental, hazardous substance, right to know, or similar laws, the Construction Manager shall be provided with material safety data sheets to be available at the Project site for inspection and reference prior to delivery of such products or materials to the job-site. Contractor shall provide appropriate training for its job-site personnel. The Contractor shall maintain a hazardous material program, including proper placarding of all locations where hazardous materials are located, in conformance with the aforementioned laws.

7.4.18 ***Unsafe Acts***

Contractor’s employees who report for work under the influence of intoxicants or narcotics or engage in the consumption of them on the Project site will be removed from the Project site. Contractor’s employees who engage in horseplay, fistfights, unsafe acts, whistling, yelling at the public or obscene gestures will be removed from the Project site. Weapons of all types, including firearms, are strictly forbidden on the Project site.

7.4.19 ***Visitors***

All of Contractor’s visitors to the Project site must check in with the Construction Manager’s supervision prior to going on site.

7.4.20 ***Competent Person***

The Contractor shall identify their OSHA Competent Person for the work that they perform in either their written safety plan or in a memo form submitted at the beginning of work.

7.4.21 ***Project Site Communications***

Contractor shall have on site at all times a supervisor (or multiple supervisors if required by crew size) that is able to speak, understand and communicate in English all job site safety and contractual requirements, obligations and responsibilities to Contractor's workers and employees. Contractor shall require its' lower tier Contractors and suppliers to comply with this requirement and shall incorporate this section in its agreement with lower tier Contractors and suppliers.

7.4.22 ***Consent to Use of Drones***

Contractor and its employees consent to the use of an unmanned aerial system (UAS) at the Project site if approved by Construction Manager, and specifically to any UAS flyovers.

7.4.23 ***Hot Work Operations***

Hot work operations require the use of a permit.

Combustible Material: All portable combustible material must be removed a minimum of 20 feet away from the working area and adjoining areas.

Flammable Liquids or Vapors: Drums, tanks or other containers or explosive liquids or vapors must be cleaned and cleared of flammable or explosive liquids or vapors before work is done on them.

Pre-Operation Precautions: When feasible, work area should be wetted down.

Spark Control: Sheet metal guards, asbestos and similar protection must be provided to prevent hot metal and sparks from falling on combustible material which cannot be moved.

Fire Protection: If the area in which hot work operations are being performed is presently under operative sprinkler protection, the sprinklers in that area must be operative during welding or cutting operations. Suitable fire extinguishers or hand hose must be maintained near the operations. An extra person must be provided in the welding or cutting team whose sole responsibility is to watch for sparks and promptly use the extinguishing equipment.

Post-Operation Precautions: After work, a thorough check must be made for smoldering fire in out-of-the-way places, and guard patrol protection must be maintained for a minimum for one hour.

"Hot Work Operations" means:

The process whereby one or more of the parts to be joined is heated near of above its melting point, and the heated surfaces are caused to flow together.

The process of applying heat to bring to red heat the spot to be severed, gouged or pierced, and the metal is burned in a jet of oxygen;

Grinding operations that generate sparks;

Torch-on roofing operations;

Roof tarring operations.

7.4.24 *Daily Stretch & Flex*

Contractor and its on-site crew (including sub-tier Contractors) will attend a daily stretch and flex to start each work day. All workers will meet at a central location on site for stretching and to review site logistics and/or other safety topics. Stretch and Flex will last for approximately 15 minutes. Construction Manager will facilitate the daily stretch and flex.

7.4.25 *Daily JSA*

Contractor is responsible for pre-task planning, including filling out a daily Job Safety Analysis (JSA). The daily JSA is to be filled out each morning and reviewed with the Contractor's crew prior to the crew starting work. Contractor shall fill out additional JSA's during the day when conditions or tasks change. Contractor's foreman shall review the JSA each morning with the crew and obtain signatures. Contractor's foreman to keep JSA's clean and organized in Contractor's trailer or gang box. Construction Manager will review the daily JSA's with the foreman on a periodic basis.

7.4.26 *Ladders Last Program*

Contractor shall comply with Construction Manager's Ladders Last program. This specifically includes all costs to furnish lifts/scaffolding, etc. as required to meet the program requirements.

Ladders are to be the last choice for accessing elevated work areas. Alternative means of access shall be used whenever feasible. Alternate means of access may include:

- Scissors life
- Aerial lift
- Scaffolding (Baker, Perry or other rolling scaffold)
- Rolling stairs
- Stair towers

Extension ladders may be set up in one location and used for access between elevations for a period of no more than one week. If long term access is required (more than one week), a stair tower, stairway or personnel hoist shall be utilized.

At no time will work be performed from an extension ladder without a permit. The cost of alternate means of accessing the work area is not to be a factor when determining whether to issue a permit for working from an extension ladder. 100% fall protection is required if work is to be performed at height of 6' or more from an extension ladder.

Step ladders 8' or less are allowed to be used without a permit.

When step ladders are used, platform style step ladders are the preferred ladder.

The ladder use permit must be completed and approved by the project team for requests to use step ladders greater than 8’ in height or extension ladders for a duration of greater than one week.

The ladder Permit will be affixed to all ladders while in use. The inspection safety checklist (on the back of the permit) will be completed prior to use. The ladder and safety inspection checklist will be completed by a competent person.

7.4.27 ***Prime Contractor Executive Engagement***

Each month a Prime Contractor Executive will be asked to attend the morning stretch and flex, address the jobsite workers with a safety message and conduct a jobsite walk. This responsibility will rotate through the Prime Contractors on the project. The Construction Manager will coordinate with the Prime Contractors to set up a rotation.

7.4.28 ***Behavior Based Safety***

Contractor agrees to participate in the project Behavior Based Safety program that includes training and observations

7.4.29 ***Safety Meetings – Level 1, 2 and 3***

Contractor shall participate in Level 1, 2 and 3 safety meetings. Level 1 meetings are the standard preconstruction meetings. Level 2 meetings are only required if/when during the Level 1 meeting a scope of work is identified to have a High Risk Activity (HRA) associated with it. Level 2 meetings will be held two weeks prior to the scope of work beginning. Contractor will be required to develop a Method of Procedure (MOP) and Sequence of Steps (SOS) for these HRAs. Level 3 meetings take place in the field just prior to the scope of work beginning.

7.4.30 ***Site Supervision***

Contractor shall have supervision on site anytime that a Contractor is on site. This includes supervision of work that is taking place by subtier-contractor/supplier of Contractor.

END OF SECTION

SECTION 01 12 00.031A
BP 031A – Selective Site Demo, Grading/Excavating, Site Utilities, Site Paving, and Exterior Improvements

Section 1. Contractor's Work

The Contractor's Work includes all labor; supervision; materials; equipment; services; supplies; tools; facilities; transportation; storage; receiving; licenses; inspections; certifications; overhead; profit; insurance; and other items required or reasonably inferable to properly and timely perform and complete all work and services to be performed by the Contractor pursuant to this Agreement. Unless specifically stated otherwise, incidental work required to accomplish the work of this Bid Package shall be included in the bid. This would include, but not be limited to temporary facilities, protection of the work, security of equipment, materials, and work in progress, etc. Contractor's Work shall be completed in compliance with the standards described in the Prime Contract and in the Drawings and Specifications, or, if no such standards are specified, in compliance with industry standards.

Contractor's work includes the following Specification Division(s) and/or Section(s):

Spec Section	**Description**
Division 00	Procurement and Contracting Requirements
Division 01	General Requirements
02 41 23	Site Selective Demolition
31 20 00	Excavation and Earthwork
31 23 33	Trench Excavation and Backfill
31 25 00	Erosion and Sediment Control
32 13 13	Concrete Paving
32 17 23	Pavement Markings
32 23 33	Trench Excavation and Backfill
32 31 00	Chain Link Fencing
32 92 19	Seeding
32 93 00	Plant Material and Planting
Division 33	Utilities
SUDAS	

Section 2. Contract Inclusions

The Contractor's Work specifically includes, but is not limited to the following:

2.1. General

2.1.1. Pricing escalations for all materials, equipment, product shortages or product availability or any other cause are the responsibility of the Contractor. Contractor shall take all necessary measures to ensure materials are procured in a manner that supports the Construction Manager's scheduled start dates, uninterrupted progress and activity durations. Storage for early procurement of materials if required will be the Contractor's responsibility and will be considered a means and method of construction

to ensure timely completion of the work. All onsite-stored material shall be housed in accordance with requirements set forth within the Contract Documents. All cost escalations are included in the Contract Sum.

2.1.2. Joint Sealant Responsibility

2.1.2.1. In General, each Contractor is responsible for all joint sealants required to complete their scope of work's system.
2.1.2.2. Floor and Wall Penetrations – By Contractor Installing Penetration
2.1.2.3. Sealed Concrete Control Joints or Concrete Expansion Joints – By Concrete Contractor (BP 003A)
2.1.2.4. Brick and Masonry Wall System, Including Top of Walls to Structure – By Masonry Contractor (BP 004A)
2.1.2.5. Casework/Countertops – By GC Package Contractor (BP 006A)
2.1.2.6. Tile Control Joints – By GC Package Contractor (BP 006A)
2.1.2.7. Fluid Applied Cove Base to Wall – By GC Package Contractor (BP 006A)
2.1.2.8. Corner & Wall Guards to Wall – By GC Package Contractor (BP 006A)
2.1.2.9. Door Frames in Block Walls & Exterior Walls – By GC Package Contractor (BP 006A)
2.1.2.10. Fire Extinguisher Cabinet to Wall - By GC Package Contractor (BP 006A)
2.1.2.11. Roofing – By Roofing Contractor (BP 007A)
2.1.2.12. Metal Panels – By Metal Panels Contractor (BP 007B)
2.1.2.13. Aluminum Entrances – By Glazing Contractor (BP 008A)
2.1.2.14. Curtainwall System and Windows – By Glazing Contractor (BP 008A)
2.1.2.15. Drywall Wall System, Including Bottom & Top of Walls – By Drywall Package Contractor (BP 009A)
2.1.2.16. Drywall to Drywall Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.2.17. Drywall to Masonry Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.2.18. Drywall to any other surface - By Drywall Package Contractor (BP 009A)
2.1.2.19. Interior Door & Window Frames – By Drywall Package Contractor (BP 009A)
2.1.2.20. Aesthetic Sealant Between Drywall and Aluminum Frames – By Drywall Package Contractor (BP 009A)
2.1.2.21. Elevator Door Frames – By Drywall Package Contractor (BP 009A)
2.1.2.22. Site Paving – By Site Paving Contractor (BP 031A)

2.1.3. Fire Stopping Responsibility

2.1.3.1. Contractor is responsible for all fire stopping to complete their scope of work's system. In General, each Contractor is responsible for all fire stopping to complete their scope of work's system. Hilti Products must be used.
2.1.3.2. Floor and Wall Penetrations – By Contractor Installing Penetration
2.1.3.3. Top of Masonry Wall – By Masonry Contractor (BP 004A)
2.1.3.4. Masonry to Masonry Wall Transition – By Masonry Contractor (BP 004A)

2.1.3.5. Top of Drywall Wall – By Drywall Package Contractor (BP 009A)
2.1.3.6. Drywall to Drywall Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.3.7. Drywall to Masonry Wall Transition – By Drywall Package Contractor (BP 009A)
2.1.3.8. Drywall to another other surface – By Drywall Package Contractor (BP 009A)
2.1.3.9. Edge of Slab – By Drywall Package Contractor (BP 009A)

2.2. General Selective Site Demo, Grading/Excavation, Site Utilities, and Exterior Improvements Scope

2.2.1. All staking and surveying are the responsibility of this Contractor. Contractor shall utilize Snyder for all site survey/layout/staking.
2.2.2. Contractor shall coordinate all earthwork and utilities with respect to adjacent work. This includes potholing and hydrovac excavations as required. Protect existing trees, structures, utilities, sidewalks, adjacent properties, pavements, etc., from damage caused by settlement, lateral movement, undermining, washout and other hazards created by grading and utilities operations.
2.2.3. All loading, trucking and dump fees to remove from the site and legally dispose non-salvaged material and debris are the responsibility of this Contractor. Provide flagger as needed.
2.2.4. Contractor agrees that it has undertaken thorough review of the geotechnical report and has included its findings and recommendations as they relate to this scope of work.
2.2.5. Contractor is responsible for street cleaning as it relates to this scope of work.
2.2.6. Contractor shall dewater all excavations associated with this work scope.
2.2.7. Contractor agrees that is has visited the site and is aware of existing site conditions.
2.2.8. Contractor understands a 3rd Party Testing Agency and City Official will complete installation inspections. Contractor shall participate in inspections and make any corrections noted. Contractor is responsible for coordinating and scheduling with the City and 3rd Party testing agency directly.
2.2.9. Contractor includes all required permits, licenses, fees, etc. required by municipality, county, city, state, or utility. Impact fees are by the Owner.
2.2.10. Contractor understands that portions of scope will be completed at a time based on phasing, sequencing, and other factors. It is understood this work will occur in multiple mobilizations.

2.3. Selective Site Demo

2.3.1. Contractor is responsible for all site clearing, demolition, and relocation per the contract documents. This includes but is not limited to existing site pavement, gravel/rock/mulch, utilities, trees and plantings, bollards, landscaping etc.
2.3.2. Contractor is responsible for using ground penetrating radar ahead of any slab / pavement cuts to verify underslab utilities.
2.3.3. Contractor shall coordinate with the Electrical & Low Voltage contractor on removal of any items which may need terminations removed ahead of removal by this contractor.

2.3.4. Contractor is responsible for all protection and support of existing utility structures, utility piping, etc.

2.3.5. Contractor includes having a skid steer with sweeper attachment and operator on site beginning during the clearing/grubbing & site demo scope of work through subgrade & subbase prep completion. Contractor includes sweeping the project paving and City streets as needed. Necessary spotters/flaggers are included.

2.3.6.

2.4. Site Logistics

2.4.1. Building Pad Working Mat - Install 5" of total rock on the building pad. This rock does not require fabric and does not require removal (except overbuild). Contractor shall install top of rock at 7" below top of slab. Contractor shall overbuild the building pad by 5' in all directions & per the site logistics plan. Overbuild rock shall be removed by this Contractor.

~~2.4.2. Paving Access Road – Install with top of rock at 6" below bottom of paving. This rock can does not need to be removed since it is directly below paving. Top with 6" of specified subbase directly prior to paving.~~

2.4.3. Contractor is responsible for the site access roads, crane access road, walkways, laydown, and overbuild areas as described on the site logistics plan. These areas are to be constructed of 6" of rock over geofabric. Contractor to furnish, install and remove temporary at all areas.

2.4.4. Contractor to reference the phased site logistics plan and work with the CM to determine exact timing of install and removal of temporary rock.

2.4.5. In addition to installing and removing the temporary access roads, Contractor shall include an allowance of $75,000 for site access maintenance, additional overexcavation, undercut & fill at unstable areas (see Geotech report), additional cleaning at parking lot and drives, and paving and sidewalk patching. This work will be tracked on daily work tickets that must be signed by the CM at the end of each work shift.

2.5. Grading and Excavation

2.5.1. Contractor shall complete any/all site grading from existing conditions, cuts and fill to elevation, profiles and contours indicated in the Contract Documents.

2.5.2. Contractor shall furnish and install subgrade prep below any/all paving/sidewalks/civil pads per the Contract Documents.

2.5.3. Contractor shall furnish and install any/all rock subbase/granular fill below paving/sidewalks, and slab on grade as required by the contract documents. At the addition building pad, this Contractor will leave granular fill at 7" below top of slab. BP 003A – Concrete will be responsible for remainder of granular fill & fine grading at this location.

2.5.4. Contractor understands all paving subgrade prep and subbase cannot be installed at once. It will need to be installed in multiple mobilization as construction traffic allows.

2.5.5. Contractor shall backfill all curbs.

2.5.6. Contractor, at fill locations, shall provide fill materials per Geotechnical Report parameters and only as approved by 3rd party inspector confirming suitable fill materials.
2.5.7. Contractor shall remove all spoils from the site as necessary.
2.5.8. Contractor shall provide any imported soils to the site as necessary.
2.5.9. Contractor shall grade building pad and subgrades with positive drainage.
2.5.10. Contractor shall fine grade to +/- 0.1' with suitable materials, for all landscaping areas ready for landscaping contractor's plantings, seed, and sod. Contractor shall remove all rocks from landscaping areas.
2.5.11. Contractor is responsible for achieving required density and compaction results. Costs for re-tests of failed soil compaction tests shall be borne by this Contractor.
2.5.12. Contractor will provide excavation for the stem wall along the building near the loading dock as well as between the retaining walls. Excavation shall be to top of footing and sloping 1-1/2:1 towards the interior of the building pad and away from the retaining walls. Furnishing, Installing, and backfilling of the stem wall and retaining walls is by Bid Package 003A Concrete.
2.5.13. Contractor to strip and haul-off topsoil from all areas to be cut or filled. Contractor responsible for hauling back in topsoil & respread to a minimum depth of 8" to finish grades at all disturbed areas.
2.5.14. Contractor shall furnish and install settlement monitoring plates ahead of structural fill of the building pad. Contractor shall survey the monitoring plates at regular intervals over the course of 6 – 10 weeks and report data to the CM.
2.5.15. Contractor shall be responsible for any/all subgrade preparation as described by the geotechnical report. This includes but is not limited to overexcavation, proofroll, scarifying, and structural fill.

2.6. Site Utilities

2.6.1. Contractor includes all removal and replacement of existing paving and/or sidewalks as needed for utility installation or removal. This includes paving and sidewalk replacement for sidewalk removed through other scopes of work.
2.6.2. Contractor shall furnish and install all site utility work including but not limited to; fittings, structures, equipment, bedding, backfill, detectable warning tape and all miscellaneous components required for a complete assembly. Furnish and install the utility to within 5'-0" of the outside of the building.
2.6.3. Contractor shall furnish and install storm piping up to building edge and stubbed up above ground to allow roof downspouts, which are furnished and installed by others, to be installed directly into the storm piping. It is understood this work will occur in multiple mobilizations. Contractor shall coordinate with downspout installer for location of stub-ups.
2.6.4. Contractor shall furnish and install a complete drain tile system per the contract documents. This includes but is not limited to tile, cleanouts, fittings, and sleeves per the contract documents. Contractor understands that this includes any part of the system shown on all drawing disciplines, i.e. structural and architectural plans as well as

Civil. Contractor shall coordinate with other trades as necessary for sleeves and cleanouts.

2.6.5. Contractor shall furnish, install, maintain, and remove all traffic control and public safety requirements to complete site utility installations for any work occurring outside of the construction perimeter fence. Contractor is responsible for restoring disturbed areas.

2.6.6. Contractor shall locate and verify all existing utilities prior to start of construction. This includes potholing as required. Confirm all utilities requiring deactivation are deactivated prior to commencing with the work. Protect all existing utilities through completion of work. Any damages caused to existing utilities by this Contractor will be this Contractor's responsibility to repair or replace to the utility company's satisfaction.

2.6.7. Contractor shall maintain service to existing utilities at all times, unless required or approved by local jurisdictions

2.6.8. Contractor includes all road plates and lane closures costs required for their work. Provide flagger as needed for all hauling activities.

2.6.9. Contractor to furnish and install temporary fencing for excavations as required. Included is maintenance, removal, and disposal of fencing and barricades. Contractor is to restore areas where fence posts were in the ground to their original state.

2.6.10. Contractor shall complete all tie-ins to existing utilities as required including all miscellaneous materials and labor required for all connections of adjoining materials, i.e., tapping, cutting, patching, grouting, coatings, thrust blocks, etc. Coordinate all required shut-downs and provide timely notice, minimum of 10 calendar days before shut-down is needed.

2.6.11. Contractor shall verify the elevations at existing utility tie-ins with elevations indicated on the contract documents to ensure the line maintains positive flow.

2.6.12. Contractor shall coordinate and maintain separation clearances between utilities as required.

2.6.13. This scope includes locating wire (tracer) for any utilities installed under this scope of work. Contractor includes final termination of wiring as needed.

2.6.14. For new utility installation, install marking device at the termination so plumbing Contractor can locate termination point later. Mark as-built drawings for termination depth and valve/flange location/depth.

2.6.15. Contractor is responsible for concrete associated with the utilities such as but not limited to thrust blocks, flared end toe walls, haunches, seats, manhole flumes, etc.

2.6.16. Contractor is responsible for any temporary shoring required to complete this scope of work.

2.6.17. Contractor shall repair, reroute or connect any/all active existing field tile as required by Contract Documents. Contractor shall notify Construction Manager immediately and is responsible for providing as-built information of any active lines encountered as required by Contract Documents.

2.6.18. Contractor is responsible for all testing, cleaning, chlorination and televising required by the contract documents or the local authority having jurisdiction.

2.7. Site Paving, Paving Sealant, and Pavement Markings

2.7.1. Contractor shall furnish and install any/all concrete paving and sidewalks/ramp including but not limited to; concrete, reinforcing steel, joint reinforcement, expansion joints, control joints, detectable warning panels, cure and seal and any/all miscellaneous components required for a complete assembly.

2.7.2. Contractor shall include all pavement removal as necessary to tie into existing paving including full depth saw cuts.

2.7.3. Contractor shall include all fine grading, forming, pouring, and finishing of concrete paving.

2.7.4. Contractor shall furnish and install any concrete curb and gutter.

2.7.5. Contractor shall furnish and install paving at the cooler tower pad & exterior of the pump room. Concrete at the interior of the pump room shall be by others.

2.7.6. Contractor shall furnish and install all reinforcing steel where tying into existing paving and any/all rebar that is reinforcing site paving as required by Contract Documents.

2.7.7. Contractor shall furnish and install all exterior bollards & footings per the contract documents. Bollard painting is by others.

2.7.8. Contractor shall coordinate paving sequence with Construction Manager. Contractor understands multiple mobilizations will be required to complete this scope in order to coordinate with site access.

2.7.9. Contractor shall provide concrete washout for this scope.

2.7.10. Contractor shall furnish and install any/all paving and sidewalk sealant as required by Contract Documents. Contractor shall install paving sealant as paving is installed in multiple mobilizations. Contractor shall include re-sealing any joints that need re-sealed immediately prior to punchlist.

2.7.11. Contractor shall furnish and install all traffic and parking signage as required by Contract Documents. Scope Includes footings and associated posts/bollards. Contractor is responsible to haul spoils off site.

2.7.12. Contractor shall furnish and install any/all pavement markings. Contractor to stripe the parking lots immediately after placement to be used during construction. Contractor shall include re-striping the parking lots immediately prior to punchlist. Contractor shall sweep and clean the paving prior to paving markings.

2.7.13. Contractor is responsible for any removal of existing pavement markings per the contract documents as well as re-installation of any existing pavement markings damaged or removed as a part of this scope of work.

2.7.14. Contractor shall provide reasonable blockage, signage, and/or flagging to quarantine pavement markings installation areas against damage until product is cured and able to accept traffic.

2.7.15. Contractor shall final clean the paving and sidewalks once all sitework is complete.

2.8. Fencing, Landscaping, and Seeding

2.8.1. Contractor shall furnish and install all permanent fencing, gates, and hardware per the contract documents.

2.8.2. Contractor shall furnish and install any landscape edging, landscape rock, and benches per the contract documents.

2.8.3. Contractor shall furnish and install any/all seeding including but not limited to; preparation, seed, fertilizers, planting soils, mulches, pesticides, erosion control materials and any/all miscellaneous components required for a complete assembly at all disturbed areas.
2.8.4. Contractor shall clear/de-grub any/all areas prior to install of final seed. Contractor shall remove any weeds in areas to be seeded as part of seeding preparation.
2.8.5. Contractor shall fine grade and remove any/all rocks and other debris from seeded areas as required for this scope.
2.8.6. Contractor shall furnish and install any temporary rolled erosion control products at any landscape/seeding locations upon final grading & seeding at locations indicated on SWPP plans and as specified.
2.8.7. Contractor shall be responsible for ensuring that adequate water and maintenance is provided to seeded areas promote establishment and growth from date of installation til establishment.
2.8.8. Contractor shall furnish and install all hydromulch or straw mulch at any/all seeded areas as required by Contract Documents.
2.8.9. Contractor shall protect adjacent areas from hydromulch overspray. Any overspray will be required to be power washed off.
2.8.10. Contractor shall coordinate with Erosion Control contractor as needed. Contractor shall coordinate removal of silt fence and understands there will be touch up work after removal.

Section 3. Contract Exclusions

The Contractor's Work specifically excludes the following:

3.1. General Construction Waste Dumpsters
3.2. Equipment Curbs (furnished and installed by BP 8 - Mechanical & BP 9 - Electrical)
3.3. Site gas piping
3.4. Site chilled water piping
3.5. Rammed Aggregrate Piers
3.6. Utility usage fees (by owner)

Section 4. Contract Time

The Contractor's Work shall be completed as follows:

4.1. Contractor agrees to meet or exceed durations and sequences as outlined in the Milestone Construction Schedule (included in this specification section), and as modified from time to time during the course of the project and as communicated through regularly scheduled progress meetings. Increased manpower or overtime required to meet these obligations shall be borne by this Contractor.
4.2. Acceptance of Revised Master Construction Schedules - After each LEAN Last Planner pull session, the Construction Manager will compile the pulled activities and notify Contractors of the updated Master Construction Schedule. Within 48 hours of issuance by the Construction Manager, Contractors must accept or dispute the revised Master Construction Schedule. If any

Contractor disputes the new handoff dates, disputing contractors will have an opportunity to re-pull their activities. All contractors will be held to the last fully accepted Master Construction Schedule.

4.3. Contractor shall provide sufficient labor, material, and equipment to maintain or improve upon the construction schedule.

4.4. Contractor shall assume working a standard forty-hour work week based on five (5) eight (8) hour days (Monday thru Friday).

4.5. Contractor shall provide the Construction Manager written notice 48 hours in advance of request to work additional hours during the week or on the weekend and is subject to Construction Manager's approval.

4.6. The Contractor understands that there will be concurrent work activities taking place that may require additional supervision, manpower, and equipment or material deliveries to accommodate the schedule needs.

4.7. Contractor agrees to mobilize on the scheduled start date and continue without pause, hesitation or interruption provided there is not impedance by others to his work.

4.8. Contractor understands that this project will require multiple mobilizations in order to complete their scope(s) of work due to project phasing, sequencing, as well as existing building operations needing to remain unaffected. Refer to G-series phasing & site logistics drawings for further information regarding project phasing.

Section 5. VDC/BIM Coordination

5.1. The Construction Manager shall lead the 3D Computer Model Coordination process. The Construction Manager will require coordination drawings and a 3D Model for the following trades: Steel (Bid Package 005A), Fire Protection (Bid Package 021A), Mechanical Ductwork, Piping and Equipment (Bid Package 0022A), and Electrical Piping & Equipment (Bid Package 026A). See 3D Coordination Drawing Matrix for further detail.

5.2. The coordination drawings shall be produced in three dimensional CAD, Revit, Archicad, or other 3D modeling software that allows for exporting, save as, or native import into Autodesk Navisworks for 3D model management. Coordination Drawings shall also be exported as 2D installation drawings and submitted to the Construction Manager.

5.3. The Construction Manager shall provide a Coordinated Computer Model in a Navisworks NWD file on a periodic basis and will be used for Contractors to reference and make corrections to each respective trade model until all conflicts are resolved.

5.4. Model Coordination Meetings shall be held at regular intervals to execute the process. The Construction Manager will lead model management efforts and will require the Contractors with model assignments to attend several meetings to assign special parameters of each trade prior to final approval of coordination drawings. The initial model coordination meeting will be to develop the file naming, origin coordination, and software file testing prior to 3D model and drawing conception. The coordination schedule and clash resolution priorities will also be reviewed and established. Contractors should allow for a model coordination meeting once a week until the process is complete. The coordination meetings shall be attended by each Contractor that is required to build a 3D Model. Each representative must have decision making authority and first-hand knowledge of what has been modeled and be prepared to resolve conflicts based on what is discussed in the coordination meeting.

3D Coordination Drawing Matrix

Description	Responsible Party	Level of Development (Defined by AIA E202)	Additional Requirements:
Architectural			
Foundations & Structural Concrete	Design Professional	300	
SOG	Design Professional	300	
Interior Walls	Design Professional	200	
Ceilings	Bid Package 022A	200	*Allows for better ceiling coordinattion
Metals			
Structural Steel	Bid Package 005A	400	
Misc Steel	Bid Package 005A	400	
Steel Joist	Bid Package 005A	400	
Steel Deck	Bid Package 005A	300	
Precast			
Walls	Not Applicable	400	*Includes all embeds and connection
Fire Sprinkler			
Piping Assemblies	Bid Package 021A	400	*Pumps, Tampers, Flows, Valves, etc.
Main Piping	Bid Package 021A	400	*Include hangers. All size piping.

Branch Piping	Bid Package 021A	400	*Include hangers. All size piping.
Drop Piping and Heads	Bid Package 021A	400	*All size piping.
Plumbing			
Underslab Piping	Bid Package 022A	400	*Includes from 5-0 outside of building.
Above Ground Piping	Bid Package 022A	400	*1/2" diameter and larger piping only.
Equipment	Bid Package 022A	400	All equipment
Mechanical			
Ductwork	Bid Package 022A	400	*All sizes.
Mechanical Piping	Bid Package 022A	400	*1/2" diameter and larger piping only. Includes hangers.
Equipment	Bid Package 022A	400	All equipment. Include clearance zones.
Electrical			
Underslab Conduits	Bid Package 026A	300	*1" diameter conduit, raceway, and larger. Show intended trenches.
Conduit, Raceways	Bid Package 026A	300	*1" diameter conduit, raceway, and larger. Includes cable tray.
Equipment and Panels	Bid Package 026A	300	*All panels, all sizes. Panel labels/names. Include code/service space

			requirements above and in front.
Light Fixtures	Bid Package 026A	300	Include install clearance.

Section 6. Jobsite

6.1. Nothing Hits The Floor

6.1.1. Contractor shall conform to Construction Manager's Nothing Hits the Floor Program. Placing material, tools, or debris on the floor or ground is prohibited.

6.1.2. Contractor shall provide rolling carts, debris containers or other means of collecting scrap material/trash at Contractor's work areas. Scrap material shall be promptly placed into containers when produced. Contractor shall remove its debris at least daily to dumpsters provided by others. When debris containers are shared amongst multiple Contractors, each Contractor shares an equal part in the responsibility of getting debris containers dumped into the dumpsters.

6.1.3. Contractor shall establish work/cutting stations at waist height in order to eliminate bending and or squatting down when cutting material. Cutting of material at ground level is prohibited.

6.1.4. Contractor agrees to use battery-operated tools wherever and whenever possible. If cordless tools cannot be utilized, all cords and hoses shall be elevated from the point they leave an outlet to the point of use. Contractor shall supply cord trees and S hooks as needed for equipment cords.

6.1.5. Contractor is responsible for all labor and equipment to unload, account for all material delivered, stock, and delivery for this scope of work. Materials to be installed will be delivered "just in time" to reduce the amount of material stored on the project site. Materials delivered and moved into the building shall be used within 3 work days unless otherwise authorized by Construction Manager. If anything stored obstructs the progress of any portion of the work, it shall be promptly removed or relocated by the Contractor without reimbursement. Attic stock shall be held at Contractor's storage until the end of project or approved by the Construction Manager.

6.1.6. At no time shall materials be stored directly on the floor or ground. All material at the Project shall be stored in trailers, wheeled carts, storage racks, storage bins, or on pallets. When wheeled carts are used, the casters shall be lockable. Materials shall only be stored on pallets or storage bins on level surfaces where they are accessible with a pallet jack.

6.2. Drug Free Verification Policy

Contractor agrees to be bound to, and comply with, the Construction Manager's Drug-Free Verification Policy. Contractors will provide only trades people who have given prior consent to submit to a drug test. The Construction Manager retains the right, but not the obligation, to require the Contractor's employees to be tested to insure that they are drug free. Contractor's employees may be included in jobsite testing at the option of the Construction Manager. The Contractor will pay the cost of such drug testing.

6.3. Clean Up

6.3.1. The Contractor shall, on an on-going basis or at the direction of the Construction Manager, keep the Project site and surrounding area free from accumulation of waste materials, debris or rubbish caused by performance of the Contractor's Work.

6.3.2. If such clean-up is not properly or timely performed, Construction Manager shall give Contractor's representative a written notice to comply within 24 hours from the time notice is given. If Contractor fails to correct such noncompliance within said 24 hours, Construction Manager is authorized to perform the clean up and to assess Contractor a reasonable charge. Contractor also agrees to accept pro-rata responsibility for clean up of unclean conditions which Construction Manager is unable to identify to a particular Contractor. The Contract Sum will be reduced for Construction Manager's clean up costs.

6.3.3. Contractor shall cleanup and haul off to dumpster provided by others for all debris resulting from Contractor's scope of work. Contractor shall provide brooms, shovels and other equipment for Contractor's own clean-up.

6.3.4. In addition to the general clean up in paragraph above, Contractor shall furnish one laborer for each six (6) employees working on site the preceding four work days for clean up of general trash and debris. The Construction Manager shall supervise this clean up crew. If Contractor fails to comply with this clean up policy, Construction Manager shall reduce the Contract Sum in the amount of $100 per man hour for such non-participation in the weekly clean up effort.

6.3.5. Contractor shall take all necessary measures to prevent tracking of mud onto surrounding streets and driveways. Include street cleaning and/or sweeping necessitated by this scope and comply with all local codes.

6.4. Protection

6.4.1. Protect adjacent existing building elements from damage from Scope of work. Repair existing building elements damaged during Contractor's Scope of work.

6.5. Hoisting

Contractor is responsible for all hoisting facilities for Contractor's material, equipment and personnel to complete the work.

Section 7. Safety

7.1 **Safety Precautions**

The Contractor shall take all necessary safety precautions with respect to performance of the Contractor's Work and shall comply with applicable safety measures and with the applicable laws, ordinances, rules, regulations, and orders of public authorities and with the requirements of the Contract Documents for the safety of persons and property. The Contractor agrees to participate in periodic site safety meetings as requested by Construction Manager, including weekly "toolbox talks". The Contractor shall comply with all Project Safety Requirements listed in this section.

7.2 **Safety Protections**

The Contractor and its employees must, at a minimum, comply with all applicable laws, codes, rules, regulations and requirements pertaining to the safe performance of its Work, including the Federal Occupational Safety and Health Act (OSHA). Contractor agrees to provide protection as is necessary to protect all persons and property from Contractor's operations. Contractor shall effectively secure and protect the Contractor's Work. The Contractor shall furnish all safety equipment required to safely perform the Contractor's Work.

7.3 **Assumption of Safety Responsibility**

The Contractor agrees and acknowledges that it has assumed full responsibility and liability for safety precautions in connection with the construction means, methods, techniques, sequences, supervision and procedures pertaining to Contractor's Work.

7.4 **Safety Requirements**

The following minimum safety requirements are also applicable and will be enforced on this Project. Specific questions regarding these safety requirements should be directed to the Construction Manager.

7.4.1 ***Unsafe Conditions***

BE ALERT! All un-safe conditions shall be reported immediately to the Construction Manager's Project supervision and to the Contractor's Project Site Supervisor. No person is required to work under any unsafe conditions. OSHA Standard 1926.20.

7.4.2 ***Reporting Injuries***

All accidents or injuries deemed Recordable, Lost Time or Restricted by OSHA, or non-injury incidents resulting in property damage or high potential for severe injury shall be reported immediately to the Construction Manager's Superintendent, giving full details and identifications and statements of any witnesses. The Contractor shall be responsible for completing a written injury and/or incident investigation in accordance with referenced procedures and providing such report to the Construction Manager's supervision in a timely manner.

7.4.3 ***Project Safety Officer***

The Construction Manager's personnel have the authority to remove any of the Contractor's unsafe equipment, tools, scaffolding or other unsafe items, and have the authority to remove any Contractor employees that do not comply with these safety requirements. Contractors that receive two (2) written notices on the Project from the Construction Manager for failure to follow OSHA safety standards or these safety requirements, may have their payment withheld until such time as the managing principal of the Contractor has met with the Construction Manager and agreed on a plan to eliminate future safety violations. Continuing violations of these safety requirements may also result in termination of the Contractor's continuing performance under this Agreement.

7.4.4 ***Fall Protection***

All work performed at elevations over 6 feet must have a 100 percent fall protection or prevention system. This includes, but is not limited to; all leading edge work, iron connecting, working off of elevated work platforms (scaffoldings), and residential type construction. Only methods referenced and meeting or exceeding OSHA Standard 1926 Subpart M shall be used.

"Monitors" or "safety zones" are NOT an acceptable means of fall protection unless other positive protection methods create a demonstrated greater hazard. The Contractor's use of "monitors" or "safety zones" requires the prior written consent of the Construction Manager and must, at a minimum, meet OSHA requirements. Safety monitors and other "non-positive" means of fall protection and prevention can only be used when a written Project Specific Fall Protection Plan is submitted to and approved in writing by the Construction Manager. The Contractor's written Fall Protection Plan must meet all OSHA requirements and provide the most effective employee protection possible. The Contractor is responsible for enforcement of its fall protection plan.

Where no identifiable tie off point is identifiable on the roof, Contractor shall provide roof cart or equivalent to complete Contractor's work.

7.4.5 ***Barricades***

Barricades or covers meeting OSHA Standards are required around excavations, holes or openings in floors or roofs, edges of roofs, elevated platforms, around certain types of overhead work and whenever necessary to warn or prevent persons or equipment from falling.

7.4.6 ***GFCI Protection***

All work using cords or power tools must utilize Ground Fault Circuit Interrupter (GFCI) protection. Only authorized electricians shall perform electrical work.

7.4.7 ***Excavations***

Excavations must be sloped, shored or shielded, and must meet all other OSHA requirements. Before digging in any location, the Contractor must check to ensure that all public & private underground utilities have been located and properly marked.

Contractor shall hydro-vac to confirm utility location if digging within 5 feet of marked utility. Hydro-vacing will then be required every 20' if digging alongside existing utilities, prior to digging with equipment.

When excavation is to occur within an existing building or similar location, Ground Penetrating Radar (or similar) shall be used to scan under slab on grade conditions for potential underground utilities.

Contractor shall complete a Ground Disturbance Permit for any operation that creates any man-made penetration, cut, cavity, trench, or depression formed by earth removal regardless of depth.

7.4.8 ***Lockout/Tag***

Contractor's employees shall comply with OSHA Standard 1910.147 lockout/tag procedures when working on energized systems or equipment. The Contractor may utilize Construction Manager's lockout/tag procedures. Contractor shall utilize the Daily Electrical Checklist anytime that lockout/tagout conditions change.

7.4.9 ***Personal Protective Equipment***

7.4.9.1 All of the Contractor's employees on the Project site must use proper personal protective equipment (PPE) and clothing suited to the Work and the Work environment. The Contractor is responsible for providing its personnel the proper PPE which includes; gloves where applicable; no dangling or loose clothing or jewelry may be worn around moving machinery; shirts which cover the shoulder, work boots or shoes, high visibility shirt/vest, and long pants are required; hardhats must be worn by all workers, supervisors, clients, visitors and vendors at all times; eye and face protection (meeting ANSI Z87.1-1989 standards) must be worn at all times on the Project site. Additional forms of eye protection may also be required as prescribed by OSHA standards and manufacturer recommendations. Steps must be taken to protect other workers and the public from eye injury whenever tasks producing flying chips or particles are being performed; respirators will be used when an employee is exposed to airborne hazards (proper training, physical exam and a fit test are required; 1910.134); hearing protection in the form of earmuffs or approved ear plugs shall be worn on all high noise level jobs as required; no radios will be allowed on the Project site other than 2-way radios for jobsite communication; and Contractor shall maintain appropriate first aid equipment and supplies in its Work areas at all times.

7.4.9.2 Contractor will provide ANSI cut 4 or higher gloves to their employees and ensure all subtiers are provided with the same. Gloves are required to be worn at all times.

7.4.9.3 Contractor employees and visitors who will be on site will be required to wear an ANSI Type II or an EN12492 helmet (i.e., a safety helmet that meets the requirements of testing against vertical, front, back, and side impacts and

penetration) with an integrated four-point chin strap tightly attached and secured under the chin with no more than a 2-finger gap between strap and chin

7.4.10 ***Housekeeping***

Contractor shall maintain good housekeeping in and around its Work areas at all times. Stack materials so that safe clearances are maintained and falling is prevented. Keep all walk ways and aisles clear. Place cords and air hoses to one side (elevated) to allow safe passage. Remove loose overhead material, dispose of garbage. Immediately remove oil and water spillage. Immediately remove or bend over nails protruding from lumber. Secure all stored or loose materials (especially on roof) to prevent it from becoming airborne.

7.4.11 ***Illumination***

All of Contractor's Work areas shall be properly illuminated at all times.

7.4.12 ***Ventilation***

All of Contractor's employees performing confined space work shall be properly trained. All necessary requirements contained in OSHA Standard1910.146 must be met. Contractor shall maintain proper ventilation in enclosed areas when using equipment.

7.4.13 ***Ladders***

Contractor shall train its employees in the safe use of ladders and scaffolding as required. Defective ladders and scaffold components shall be tagged and removed from service

7.4.14 ***Tools and Equipment***

Tools, equipment, trucks, loaders, backhoes, cranes and forklifts shall be used, operated and maintained properly to prevent injury. No Contractor employee shall operate any equipment unless specifically authorized and trained to do so. Powder-actuated tools require certified training before use. Power tools shall be operated only by authorized personnel and with guard's in-place. Hand tools such as hammers and chisels shall be properly used and maintained. All slings, choker and rigging equipment shall be free of defects. All hooks must have safety latches or keepers. Taglines shall be used to control loads when their use does not create an additional hazard. Tampering with or unauthorized use or removal of fire extinguishers from assigned locations is prohibited. All of Contractor's tools and equipment must be inspected daily by Contractor before use. Damaged tools shall be tagged "DO NOT USE" and removed from service immediately. Documentation of training and inspections shall be provided to the Construction Manager upon request.

7.4.15 ***Safety Plan***

A written Project specific safety plan and/or a Job Safety Analysis shall be completed. Such plans shall be completed and provided to the Construction Manager at least (2) weeks before the work begins.

7.4.16 ***Toolbox Talk***

Attendance at weekly Tool Box Talks is required for all Contractor personnel and documentation of meetings is mandatory. The Contractor shall ensure that its personnel watch Construction Manager's Safety Introduction as required by the Construction Manager prior to performing work on site.

7.4.17 ***Hazard Communication***

If Contractor or its Contractors bring any material to the Project site which requires notification to employees of the Contractor, Owner or its other contractors, suppliers, vendors, material men and/or local fire departments or other authorities, in conformance with applicable environmental, hazardous substance, right to know, or similar laws, the Construction Manager shall be provided with material safety data sheets to be available at the Project site for inspection and reference prior to delivery of such products or materials to the job-site. Contractor shall provide appropriate training for its job-site personnel. The Contractor shall maintain a hazardous material program, including proper placarding of all locations where hazardous materials are located, in conformance with the aforementioned laws.

7.4.18 ***Unsafe Acts***

Contractor's employees who report for work under the influence of intoxicants or narcotics or engage in the consumption of them on the Project site will be removed from the Project site. Contractor's employees who engage in horseplay, fistfights, unsafe acts, whistling, yelling at the public or obscene gestures will be removed from the Project site. Weapons of all types, including firearms, are strictly forbidden on the Project site.

7.4.19 ***Visitors***

All of Contractor's visitors to the Project site must check in with the Construction Manager's supervision prior to going on site.

7.4.20 ***Competent Person***

The Contractor shall identify their OSHA Competent Person for the work that they perform in either their written safety plan or in a memo form submitted at the beginning of work.

7.4.21 ***Project Site Communications***

Contractor shall have on site at all times a supervisor (or multiple supervisors if required by crew size) that is able to speak, understand and communicate in English all job site safety and contractual requirements, obligations and responsibilities to Contractor's workers and employees. Contractor shall require its' lower tier Contractors and suppliers to comply with this requirement and shall incorporate this section in its agreement with lower tier Contractors and suppliers.

7.4.22 ***Consent to Use of Drones***

Contractor and its employees consent to the use of an unmanned aerial system (UAS) at the Project site if approved by Construction Manager, and specifically to any UAS flyovers.

7.4.23 *Hot Work Operations*

Hot work operations require the use of a permit.

Combustible Material: All portable combustible material must be removed a minimum of 20 feet away from the working area and adjoining areas.

Flammable Liquids or Vapors: Drums, tanks or other containers or explosive liquids or vapors must be cleaned and cleared of flammable or explosive liquids or vapors before work is done on them.

Pre-Operation Precautions: When feasible, work area should be wetted down.

Spark Control: Sheet metal guards, asbestos and similar protection must be provided to prevent hot metal and sparks from falling on combustible material which cannot be moved.

Fire Protection: If the area in which hot work operations are being performed is presently under operative sprinkler protection, the sprinklers in that area must be operative during welding or cutting operations. Suitable fire extinguishers or hand hose must be maintained near the operations. An extra person must be provided in the welding or cutting team whose sole responsibility is to watch for sparks and promptly use the extinguishing equipment.

Post-Operation Precautions: After work, a thorough check must be made for smoldering fire in out-of-the-way places, and guard patrol protection must be maintained for a minimum for one hour.

"Hot Work Operations" means:

The process whereby one or more of the parts to be joined is heated near of above its melting point, and the heated surfaces are caused to flow together.

The process of applying heat to bring to red heat the spot to be severed, gouged or pierced, and the metal is burned in a jet of oxygen;

Grinding operations that generate sparks;

Torch-on roofing operations;

Roof tarring operations.

7.4.24 *Daily Stretch & Flex*

Contractor and its on-site crew (including sub-tier Contractors) will attend a daily stretch and flex to start each work day. All workers will meet at a central location on site for stretching and to review site logistics and/or other safety topics. Stretch and Flex will

last for approximately 15 minutes. Construction Manager will facilitate the daily stretch and flex.

7.4.25 ***Daily JSA***

Contractor is responsible for pre-task planning, including filling out a daily Job Safety Analysis (JSA). The daily JSA is to be filled out each morning and reviewed with the Contractor's crew prior to the crew starting work. Contractor shall fill out additional JSA's during the day when conditions or tasks change. Contractor's foreman shall review the JSA each morning with the crew and obtain signatures. Contractor's foreman to keep JSA's clean and organized in Contractor's trailer or gang box. Construction Manager will review the daily JSA's with the foreman on a periodic basis.

7.4.26 ***Ladders Last Program***

Contractor shall comply with Construction Manager's Ladders Last program. This specifically includes all costs to furnish lifts/scaffolding, etc. as required to meet the program requirements.

Ladders are to be the last choice for accessing elevated work areas. Alternative means of access shall be used whenever feasible. Alternate means of access may include:

- Scissors life
- Aerial lift
- Scaffolding (Baker, Perry or other rolling scaffold)
- Rolling stairs
- Stair towers

Extension ladders may be set up in one location and used for access between elevations for a period of no more than one week. If long term access is required (more than one week), a stair tower, stairway or personnel hoist shall be utilized.

At no time will work be performed from an extension ladder without a permit. The cost of alternate means of accessing the work area is not to be a factor when determining whether to issue a permit for working from an extension ladder. 100% fall protection is required if work is to be performed at height of 6' or more from an extension ladder.

Step ladders 8' or less are allowed to be used without a permit.

When step ladders are used, platform style step ladders are the preferred ladder.

The ladder use permit must be completed and approved by the project team for requests to use step ladders greater than 8' in height or extension ladders for a duration of greater than one week.

The ladder Permit will be affixed to all ladders while in use. The inspection safety checklist (on the back of the permit) will be completed prior to use. The ladder and safety inspection checklist will be completed by a competent person.

7.4.27 ***Prime Contractor Executive Engagement***

Each month a Prime Contractor Executive will be asked to attend the morning stretch and flex, address the jobsite workers with a safety message and conduct a jobsite walk. This responsibility will rotate through the Prime Contractors on the project. The Construction Manager will coordinate with the Prime Contractors to set up a rotation.

7.4.28 ***Behavior Based Safety***

Contractor agrees to participate in the project Behavior Based Safety program that includes training and observations

7.4.29 ***Safety Meetings – Level 1, 2 and 3***

Contractor shall participate in Level 1, 2 and 3 safety meetings. Level 1 meetings are the standard preconstruction meetings. Level 2 meetings are only required if/when during the Level 1 meeting a scope of work is identified to have a High Risk Activity (HRA) associated with it. Level 2 meetings will be held two weeks prior to the scope of work beginning. Contractor will be required to develop a Method of Procedure (MOP) and Sequence of Steps (SOS) for these HRAs. Level 3 meetings take place in the field just prior to the scope of work beginning.

7.4.30 ***Site Supervision***

Contractor shall have supervision on site anytime that a Contractor is on site. This includes supervision of work that is taking place by subtier-contractor/supplier of Contractor.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Coordination
B. Pre-construction meeting
C. Progress meetings
D. Coordination Meetings
E. Requests for Interpretation (RFIs)
F. Background Checks
G. Notifications for Capitol Complex
H. Utility Locates/Ground Penetrations for Capitol Complex
I. Utility Locates/Ground Penetrations
J. Fire Watch for Capitol Complex

1.02 COORDINATION

A. Coordinate scheduling, submittals, and work of the various sections of the project manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
   1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.

B. Administrative procedures: The Trade Contractor will coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
   1. Preparation of Trade Contractor's Construction Schedule.
   2. Provide updated information for Construction Manager's Construction Schedule.
   3. Preparation of Schedule of Values.
   4. Delivery and processing of submittals.
   5. Progress meetings.
   6. Pre-installation conferences.
   7. Project closeout activities

C. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements, supports, and installation of mechanical and electrical work, which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. In finished areas except as otherwise indicated conceal pipes and wiring within the construction. Coordinate locations of piping with finish elements.

F. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.

G. After owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of owner's activities.

H. During construction coordinate use of site and facilities through Construction Manager.

I. Comply with Construction Manager and Owner's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
J. Make the following types of submittal to Architect through the Construction Manager via Procore:
   1. Request for Information/Interpretation.
   2. Request for substitution.
   3. Shop drawings, product data, and samples.
   4. Test and inspection reports.
   5. Design data.
   6. Manufacturer's instructions and field reports.
   7. Applications for payment and change order requests.
   8. Progress schedules.
   9. Coordination drawings.
   10. Correction punch list and final correction punch list for substantial completion
   11. Closeout submittals

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 PRE-CONSTRUCTION MEETING

A. The Construction Manager and Owner will schedule a meeting after Notice of Award.
B. Required: Design Professional, Owner, Construction Manager, Trade Contractor and any Sub Contractors.
C. Agenda:
   1. Execution of Owner-Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
   5. Designation of personnel representing the parties in Contract.
   6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, change orders, RFIs and contract closeout procedures
   7. Tentative construction schedule.
   8. Critical work sequencing and long-lead items.
   9. Procedures for testing and inspecting.
   10. Preparation of Record Documents.
   11. Safety Procedures.
   12. Owner's requirements.
   13. Security and housekeeping procedures.
   14. Background Checks.
   15. Responsibility for temporary facilities and controls.
   16. Construction waste management.
   17. Logistics (use of premise, parking, work restrictions, maintain egress, etc.)
D. The Construction Manager is to record minutes and distribute copies within two days after meeting to participants, with one copy to owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

A. The Construction Manager shall schedule and administer meetings throughout progress of the work. A weekly Prime Contractor Meeting will be held, and an Owner/Architect/Construction Manager (OAC) Meeting will be held every-other week.

B. The Construction Manager is to make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings, record minutes and distribute copies within two days to those affected by decisions made.
C. Attendees may include: Project superintendent, major subcontractors and suppliers, Owner, Construction Manager, Architect/Engineer, as appropriate to agenda topics for each meeting. All participants at the conference call shall be familiar with the Project and authorized to conclude matters relating to the Work.
D. Agenda:
    1. Review minutes of previous meetings.
    2. Review the Construction Manager's Construction Schedule.
    3. Field observations, problems, and decisions.
    4. Identification of problems that impede planned progress.
    5. Review of submittals schedule and status of submittals.
    6. Review of RFI's.
    7. Review of off-site fabrication and delivery schedules.
    8. Corrective measures to regain projected schedules.
    9. Planned progress during succeeding work period.
    10. Coordination of projected progress.
    11. Maintenance of quality and work standards.
    12. Effect of proposed changes on progress schedule and coordination.
    13. Other business relating to work.
    14. Access, temporary facilities and controls, housekeeping and progress cleaning.
    15. Safety.
    16. Status of proposal requests, pending changes, official Change Orders.
E. Minutes:
    1. Following the meeting, the meeting minutes will be published in Procore by the Construction Manager for all parties.

3.03 COORDINATION MEETINGS

A. Coordination meetings will be held at the discretion of the construction manager.

3.04 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, prepare and submit an RFI in Procore.
    1. RFIs shall originate with Trade Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
    2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in the Work.
B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
    1. Specification Section number and title and related paragraphs, as appropriate.
    2. Drawing number and detail references, as appropriate.
    3. Field dimensions and conditions, as appropriate.
    4. Trade Contractor's suggested solution(s). If Trade Contractor's solution(s) impact the Contract Time or the Contract Sum, Trade Contractor shall state impact in the RFI.
    5. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
C. Design Professional's Action: Design Professional will review each RFI, determine action required, and return it. Allow seven (7) working days for Design Professional's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day. The following RFIs will be returned without action:
    1. Requests for approval of submittals.
    2. Requests for approval of substitutions.
    3. Requests for coordination information already indicated in the Contract Documents.
    4. Requests for adjustments in the Contract Time or the Contract Sum.

5. Requests for interpretation of Design Professional's actions on submittals.
6. Incomplete RFIs or RFIs with numerous errors.
7. Design Professional's action may include a request for additional information, in which case Design Professional's time for response will start again.

D. Design Professional's action on RFIs that may result in a change to the Contract Time or the Contract Sum/Price.
1. If Trade Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Construction Manager in writing within ten (10) days of receipt of the RFI response.

E. On receipt of Design Professional's response in Procore, review the response and notify Design Professional within seven (7) days if Trade Contractor disagrees with response.

3.05 BACKGROUND CHECKS

A. Background checks must be performed on all on-site employees, including sub-contractors.
B. The Contractor hereby explicitly authorized the Iowa DAS to conduct criminal history and/or other background investigation(s) of the Contractor, its officers, supervisory personnel, employees, and other staff retained by the Contractor or their sub-contractors for the performance of the contract.
C. A state of Iowa record check request form will be provided, via a link, at the pre-construction meeting. Information required may include:
1. Last Name
2. First Name
3. Middle Name
4. Date of Birth
5. State Driver's License or State ID #
6. Social Security #

D. The Contractor is responsible for all associated fees with the background checks.
E. The Contractor is responsible for requesting the background checks timely so work on site is not delayed.
F. Contractor shall use the following link:
https://stateofiowa.seamlessdocs.com/f/DPS_DCI_Criminal_History_Billing_and_Request_Form

3.06 NOTIFICATIONS FOR CAPITOL COMPLEX

A. For work on Capitol Complex, notification requests must be provided to Construction Manager for work affecting the following:
1. Parking Access
2. Excessive Noise
3. Odors
4. Disruption of Equipment
5. Excessive Dust
6. Fire Alarm
7. HVAC System/Controls
8. Plumbing/Restrooms
9. Lighting
10. Power/Electrical

B. Information must be received on the form following this section
1. Notice for tunnel repairs must be received by the Construction Manager for forward to Owner's Representative a minimum of ten (10) working days before the work is to occur (for tunnel shut downs).
2. All other notices must be received by the Construction Manager for forward to Owner's Representative a minimum of three (3) working days prior to the work occurring.

3.07 UTILITY LOCATES/GROUND PENETRATIONS FOR CAPITOL COMPLEX

A. Call Iowa One Call at 800-292-8989 to request a Joint Meeting Locate.
   1. Requests must be least five (5) working days prior to ground penetration.
   2. A representative from the requesting group and DAS must be present for the Joint Meeting Locate.
B. Complete the Capitol Complex Digging Application online at https://das.iowa.gov/general-services/capitol-complex-events/digging-application-form.
C. Requesting groups will mark the area(s) intended to be penetrated with white spray paint or mark with white flags.
D. One Call and/or Vannguard must place their locate flags appropriately in the areas.
E. Contractor requesting the locate will be responsible for the locate charge.
F. Ground penetration on Capitol Complex is not allowed until the steps listed above have been taken and locations have been approved.

3.08 FIRE WATCH FOR CAPITOL COMPLEX

A. Fire watch is to be performed any time the fire alarm is disabled for more than four hours. This includes both when the system is in bypass and when any detectors are disabled by removal or covering.
B. When fire alarm is disabled for four hours or less it will be at the discretion of Owner to determine if fire watch must be provided.
C. Written notice must be received two (2) working days prior to scheduling of fire watch.

END OF SECTION

SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes commercial door hardware for the following:
   1. Swinging doors.
   2. Sliding doors.
   3. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:
   1. Mechanical door hardware.
   2. Electromechanical door hardware.
   3. Automatic operators.
   4. Cylinders specified for doors in other sections.

C. Related Sections:
   1. Division 08 Section “Hollow Metal Doors and Frames”.
   2. Division 08 Section “Stainless Steel Doors and Frames”.
   3. Division 08 Section “Flush Wood Doors”.
   4. Division 08 Section “Aluminum-Framed Entrances and Storefronts”.
   5. Division 28 Section “Access Control Hardware Devices”.

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
   2. ICC/IBC - International Building Code.
   3. NFPA 70 - National Electrical Code.
   4. NFPA 80 - Fire Doors and Windows.
   5. NFPA 101 - Life Safety Code.
   6. NFPA 105 - Installation of Smoke Door Assemblies.
   7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
   1. ANSI/BHMA Certified Product Standards - A156 Series.
   2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
   3. ANSI/UL 294 - Access Control System Units.
   4. UL 305 - Panic Hardware.
   5. ANSI/UL 437- Key Locks.

1.2 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate

the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
3. Content: Include the following information:
    a. Type, style, function, size, label, hand, and finish of each door hardware item.
    b. Manufacturer of each item.
    c. Fastenings and other pertinent information.
    d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    e. Explanation of abbreviations, symbols, and codes contained in schedule.
    f. Mounting locations for door hardware.
    g. Door and frame sizes and materials.
    h. Warranty information for each product.
    i. Operational narratives for electrified hardware.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:
1. Wiring Diagrams: As part of the hardware submittals, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
    a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
2. Point to Point Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
    a. Complete (risers, point-to-point) access control system block wiring diagrams.
    b. Wiring instructions for each electronic component scheduled herein.
3. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
4. Provide engineered diagrams specific to each opening. Individual wiring instructions shipped with devices are not considered a complete diagram.

D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and

special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Informational Submittals:
   1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

1.3 CLOSEOUT SUBMITTALS

A. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

B. Project Record Documents: Provide record documentation of as-built door hardware sets in digital format (.pdf, .docx, .xlsx, .csv) and as required in Division 01, Project Record Documents.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Automatic Operator Supplier Qualifications: Suppliers are to be factory trained, certified, and a direct purchaser of the specified power operators and be responsible for the installation and maintenance of the units and accessories indicated for the Project.

F. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
   2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

G. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.

H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
   1. Function of building, purpose of each area and degree of security required.
   2. Plans for existing and future key system expansion.
   3. Requirements for key control storage and software.
   4. Installation of permanent keys, cylinder cores and software.
   5. Address and requirements for delivery of keys.

I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
   1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
   2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
   3. Review sequence of operation narratives for each unique access controlled opening.
   4. Review and finalize construction schedule and verify availability of materials.
   5. Review threshold and sill details and coordinate threshold requirements prior to submitals.

J. Pre-Installation Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for installing door hardware.
   1. Prior to installation of door hardware, door hardware supplier shall conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
   2. Hardware supplier shall engage factory personnel for installation training on locks, exit devices and door closers.

K. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

D. Special Warranty Periods:
   1. Ten years for mortise locks and latches.
   2. Five years for exit hardware.
   3. Thirty years for manual overhead door closer bodies.
   4. Two years for electromechanical door hardware.

PART 2 - PRODUCTS

2.1 BUTT HINGES

A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
   1. Quantity: Provide the following hinge quantity:
      a. Two Hinges: For doors with heights up to 60 inches.

b. Three Hinges: For doors with heights 61 to 90 inches.
c. Four Hinges: For doors with heights 91 to 120 inches.
d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
   a. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.
   b. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.
3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
   a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
4. Hinge Options: Comply with the following:
   a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for all out-swinging lockable doors.
5. Manufacturers:
   a. Ives (IV).
   b. McKinney (MK).
   c. Hager (HA).

2.2 CONTINUOUS HINGES

A. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge. with minimum 0.120-inch thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
   1. Manufacturers:.
      a. Hager Companies (HA).
      b. Ives (IV).
      c. Pemko (PE).

2.3 POWER TRANSFER DEVICES

A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
   1. Manufacturers:
      a. Securitron (SU) - EL-CEPT Series.
      b. Von Duprin (VD) - EPT-10 Series.

B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking

devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

1. Provide one each of the following tools as part of the base bid contract:
    a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
    b. McKinney (MK) - Connector Hand Tool: QC-R003.
    c. Similar tools by selected hinge manufacturer are acceptable.
2. Manufacturers:
    a. McKinney (MK) - QC-C Series.
    b. Von Duprin (VD) - Connect.

C. Provide mortar guard enclosure on steel frames installed at masonry openings for each electrical hinge specified.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: Provide products conforming to ANSI/BHMA A156.3 and A156.16, Grade 1.
1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8” in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
5. Manufacturers:
    a. Ives (IV).
    b. Rockwood (RO).
    c. Trimco (TC).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Pulls, where applicable, shall be provided with a 10” clearance from the finished floor on the push side to accommodate wheelchair accessibility.
5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets. When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.
6. Manufacturers:
    a. Ives (IV).
    b. Rockwood (RO).
    c. Trimco (TC).

2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
   1. Threaded mortise cylinders with rings and cams to suit hardware application.
   2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
   4. Tubular deadlocks and other auxiliary locks.
   5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
   6. Keyway: Prior to the order of cylinders confirm required Medeco keyway with end user.

C. Large Format Interchangeable Cores: Provide removable cores (LFIC) as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.

D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1 Certified Products Directory (CPD) listed cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer’s United States patents.
   1. Patented key systems shall not be established with products that have an expired patent. Expired systems shall only be specified and supplied to support existing systems.
   2. Manufacturers:
      a. Medeco (MC).
      b. No Substitution.

E. Keying System: Each type of lock and cylinders to be factory keyed.
   1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
   2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
   3. Existing System: Field verify and key cylinders to match Owner's existing system.

F. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys: Ten (10).
   4. Construction Control Keys: Two (2).
   5. Permanent Control Keys: Two (2).

G. Construction Keying: Provide temporary keyed construction cores for all locks and cylinders.

H. Key Registration List (Bitting List):
   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

2.6 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
   1. Manufacturers:
      a. Lund Equipment (LU).
      b. MMF Industries (MM).
      c. Telkee (TK).

2.7 KNOX BOX

A. Provide type and quantity as required by the local fire department. Each Knox Box to store 1 key card and 1 building master key. Coordinate mounting locations with local fire department.

2.8 MORTISE LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): Provide ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed mortise locksets. Listed manufacturers shall meet all functions and features as specified herein.
   1. Electromechanical locksets shall have the following functions and features:
      a. Universal Molex plug-in connectors that have standardized color-coded wiring and are available in fail safe or fail secure and operate from 12vdc to 24vdc regulated.
      b. Motorized electric latch retraction where the latchbolt retracts in 0.5 seconds of power being applied; removing power allows the latch to project back to the extended position. Motorized latch retraction force exceeds ANSI/BHMA 50 lbs. warped door test.
      c. Options to be available for request-to-exit or enter signaling, latchbolt and deadbolt monitoring.
      d. Two-year limited warranty on electrified functions.
   2. Manufacturers:
      a. Corbin Russwin Hardware (RU) - ML2000 Series.
      b. Sargent Manufacturing (SA) - 8200 Series.
      c. Schlage (SC) - L9000 Series.

2.9 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
   2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
   3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.

B. Standards: Comply with the following:
   1. Strikes for Mortise Locks and Latches: BHMA A156.13.
   2. Strikes for Auxiliary Deadlocks: BHMA A156.36.

3. Dustproof Strikes: BHMA A156.16.

2.10 ELECTRIC STRIKES

A. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes conforming to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike. Strike requires no cutting to the jamb prior to installation.
   1. Manufacturers:
      a. HES (HS) - 9400/9500/9600/9700/9800 Series.
      b. Von Duprin (VD) - VD3146/6200/6300 Series.

2.11 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
   1. Exit devices shall have a five-year warranty.
   2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
   3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer’s catalog and template book for specific requirements.
   4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
   5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
   6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
      a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
      b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
   7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
   8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2” wide stiles.
   9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
   10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed exit devices. Listed manufacturers shall meet all functions and features as specified herein.
   1. Electromechanical exit devices shall have the following functions and features:
      a. Universal Molex plug-in connectors that have standardized color-coded wiring and are field configurable in fail safe or fail secure and operate from 12vdc to 24vdc regulated.
      b. Options to be available for request-to-exit or enter signaling, latchbolt and touchbar monitoring.
      c. Field configurable electrified trim to fail-safe or fail-secure that operates from 12-24VDC.
      d. Five-year limited warranty for electromechanical features.
   2. Manufacturers:
      a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
      b. Sargent Manufacturing (SA) - 80 Series.
      c. Von Duprin (VD) - 35A/98 XP Series.

C. Steel Removable Mullions: ANSI/BHMA A156.3 steel removable mullions with options for fire rating, locking, through-wire electrification and hurricane compliance as specified.
   1. Manufacturers:
      a. Same as exit device manufacturer.

2.12 SURFACE DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:
   1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
   2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
   3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
   4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
   5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
   6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
   1. Heavy duty surface mounted door closers shall have a 30-year warranty.
   2. Manufacturers:

a. Corbin Russwin Hardware (RU) - DC6000 Series.
b. LCN Closers (LC) - 4040 Series.
c. Norton Rixson (NO) - 7500 Series.
d. Sargent Manufacturing (SA) - 351 Series.

2.13 ELECTROMECHANICAL DOOR OPERATORS

A. Electromechanical Door Operators (High Traffic): Provide ANSI/BHMA A156.19 Certified Products Directory (CPD) listed low energy operators that are UL325/991 and UL10C certified and comply with requirements for the Americans with Disabilities Act (ADA). Operators shall accommodate openings up to 250 pounds and 48" wide.
1. Provide operators with features as follows:
a. Non-handed with push and pull side mounting.
b. Activation by push button, hands-free or radio frequency devices.
c. Adjustable opening force and closing power.
d. Two-year limited warranty.
e. Wi-Fi interface where the operator is a secure, password protected WiFi hot spot with no connection to building's IT required.
1) Simple setup with no app required.
2) View status and make adjustments without removing the cover.
3) Built-in logic to support single use restroom applications with no external relay boards, logic modules, position switches required.
f. Mounting backplate to simplify and speed up installation.
g. Integration with access control systems.
2. Operators shall have the following functionality:
a. Adjustable Hold Open: Amount of time a door will stay in the full open position after an activation.
b. Blow Open for Smoke Ventilation: Door opens when signal is received from alarm system allowing air or smoke to flow through opening. Door will stay open until signal from alarm system is stopped.
c. Emergency Interface Relay: Door closes and ignores any activation input until signal is discontinued.
d. Infinite Hold Open: Door will hold open at set position until power is turned off.
e. Latch Assist: At closed position, after an activation, the door is pulled in. After the door has closed, the door is pulled in to assist with latch release/engagement.
f. Obstruction Detection: Door closes if it hits an obstruction while opening; door will reverse to open position if it hits an obstruction while closing. Door will stop once it hits an obstruction and will rest against the obstruction until removed.
g. Open Delay: Delays operator opening for locking hardware.
h. Outside Wall Switch Disable: When contact is closed, outside wall switch is disabled.
i. On/Off/Hold switch mounted on operator or as wall mounted key switch.
j. Power Assist: Senses the door is being opened manually and applies small amount of power to assist the user in opening the door with force less than 5 lbs. The door opens only as far as it is moved manually, then closes once released.
k. Power Close: Additional force to assist door closing between 7° and 2°.
l. Presence Detector Input: Input for external sensor to detect presence at door open or close position only.

m. Push & Go: As the door is manually opened, the operator "senses" movement and opens door to the full-open position.
n. Selector Mode Switch: Off disables the signal inputs unless Blow Open is activated, on activates the signal inputs, hold open activates the unit (unless Blow Closed is activated) to the hold open position.
o. Vestibule Delay: When the wall switch is pressed, first door in vestibule will open. Second door will open once vestibule door delay has expired. Delay is adjustable.
p. Executive Mode Feature: When the door receives an activation signal it opens and remains open until either a second signal is received, or the door is manually moved in closing direction.

3. Manufacturers:
   a. ASSA ABLOY Entrance Systems (BE) - SW200 Series.
   b. Horton Automatics (HO) - S4100LE Series.
   c. **Record USA – 8100 Series (Addendum 01)**

2.14 SURFACE MOUNTED CLOSER HOLDERS

A. Electromagnetic Door Holders: ANSI A156.15, Grade 1 electromagnetic door holder/releases with a minimum 25 to 40 pounds holding power and fail-safe operation; power failure releases door to close.
   1. Manufacturers:
      a. LCN Door Closers (LC) - SEM7800 Series.
      b. Norton Rixson (RF) - 900 Series.

2.15 ARCHITECTURAL TRIM

A. Door Protective Trim
   1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
   2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1” LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
   3. Where plates are applied to fire rated doors with the top of the plate more than 16” above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer’s catalog and template book for specific requirements for size and applications.
   4. Protection Plates: ANSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:
      a. Stainless Steel: 300 grade, 050-inch thick.
   5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
   6. Manufacturers:
      a. Ives (IV).
      b. Rockwood (RO).
      c. Trimco (TC).

2.16 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
   1. Manufacturers:
      a. Ives (IV).
      b. Rockwood (RO).
      c. Trimco (TC).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
   1. Manufacturers:
      a. Norton Rixson (RF).
      b. Architectural Builders Hardware (AH).
      c. Glynn Johnson (GJ)

2.17 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
   1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:
   1. National Guard Products (NG).
   2. Pemko (PE).

3. Zero (ZE).

2.18 ELECTRONIC ACCESSORIES

A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide DPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
1. Manufacturers:
a. Edwards Signaling (ES) – 1076 Series

2.19 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.20 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
   3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
   4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Push Plates and Door Pulls: When through-bolt fasteners are in the same location as a push plate, countersink the fasteners flush with the door face allowing the push plate to sit flat against the door.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

F. Door Closers: Adjust closers at interior doors as indicated.

   1. Door-Opening Force. Fire doors shall have the minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open doors other than fire doors shall be as follows:

      a. Interior hinged door: 5.0 pounds (22.2 N) maximum.

   2. Door closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to an open position of 12 degrees shall be 5 seconds minimum.

G. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections “Closeout Procedures”. Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
   1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
   1. Quantities listed are for each pair of doors, or for each single door.
   2. The supplier is responsible for handing and sizing all products.
   3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

B. Manufacturer’s Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. SU - Securitron
4. RO - Rockwood
5. SA - SARGENT
6. MC - Medeco
7. AH - Architectural Builders Hardware
8. BM - Besam
9. RF - Rixson
10. ZE - Zero International
11. ES – Edwards Signaling
12. OT - Other

Hardware Sets

Set: 1.0
Doors: EXB176, EXB190
Description: Single Exterior Entry AL (CR)

1	Continuous Hinge	CFM-HD1 (SLF or SLI as Req'd)		PE
1	Rim Exit Device, Storeroom	LC 43 8804 Less Pull	US32D	SA
1	Electric Strike	9500 x LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Rim Cylinder Housing	31-0375S	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Door Pull	RM3311-60 Mtg-Type 12XHD	US32D	RO
1	Conc Overhead Stop	102_SA	US32D	AH
1	Surface Closer	351 P10 351D 581-2	EN	SA
1	Sweep	315CN		PE
1	Threshold	253X3AFG		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	Motion Sensor	XMS2		SU
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes: Perimeter seal by door supplier.

Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When devices are locked then the card reader grants access upon presentation of a valid credential. Electric strike mechanically locks during power failure with a mechanical key override entry.
2. Egress always free from the inside by depressing inside push pad.
3. Request to exit switch motion sensor to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 2.0 (Not Used)

Set: 3.0
Doors: EXB300A, EXB400
Description: Single Exterior Dock/ Biowaste (CR)

4	Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 5" x 4-1/2"	US32D	MK
1	Rim Exit Device, Storeroom	LC 43 8804 ETP	US32D	SA
1	Electric Strike	9500 x LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Rim Cylinder Housing	31-0375S	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC

1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 PD10	EN	SA
1	Gasketing	2891AS (Head & Jambs)		PE
1	Rain Guard	346C		PE
1	Sweep	315CN		PE
1	Threshold	253X3AFG		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	Motion Sensor	XMS2		SU
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT
1	Viewer	620	STNN	RO

Notes: Install perimeter seal prior to closer and exit device. Do not notch weatherstrip. Special templating required.

Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Electric strike mechanically locks during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch motion sensor to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 3.1
Doors: EXB310
Description: Single Exterior Dock (CR)

4	Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 5" x 4-1/2"	US32D	MK
1	Rim Exit Device, Storeroom	LC 43 8804 ETP	US32D	SA
1	Electric Strike	9500 x LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Rim Cylinder Housing	31-0375S	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Holder	901_A	US32D	AH
1	Surface Closer	351 PD10	EN	SA
1	Gasketing	2891AS (Head & Jambs)		PE
1	Rain Guard	346C		PE
1	Sweep	315CN		PE
1	Threshold	253X3AFG		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	Motion Sensor	XMS2		SU
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT
1	Viewer	620	STNN	RO

Notes: Install perimeter seal prior to closer and exit device. Do not notch weatherstrip. Special templating required.

Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Electric strikes mechanically lock during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit motion sensor to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 4.0
Doors: EXB145, EXB300B
Description: Single Exterior Sallyport/ Intake (CR)

4	Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 4-1/2" x 4-1/2"	US32D	MK
1	Rim Exit Device, Storeroom	LC 43 8804 ETP	US32D	SA
1	Electric Strike	9500 x LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Rim Cylinder Housing	31-0375S	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 PD10	EN	SA
1	Gasketing	2891AS (Head & Jambs)		PE
1	Rain Guard	346C		PE
1	Sweep	315CN		PE
1	Threshold	253X3AFG		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	Motion Sensor	XMS2		SU
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		YA
1	Viewer	620	STNN	RO

Notes: Install perimeter seal prior to closer and exit device. Do not notch weatherstrip. Special templating required.

Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Electric strike mechanically locks during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch motion sensor to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 5.0
Doors: EXB350A

Description: Pair Exterior Roof (CR, 4 Sided Frame)

8	Hinge, Full Mortise, Hvy Wt	T4A3386 5" x 4-1/2"	US32D	MK
2	Flush Bolt	555	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
2	Surf Overhead Stop	902_A	US32D	AH
2	Surface Closer	351 PD10	EN	SA
2	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Astragal	357SP		PE
1	Gasketing	2891AS (Head & Base)		PE
1	Gasketing	290AS (Jambs)		PE
1	Rain Guard	346C		PE
2	Sweep	315CN		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
2	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		YA

Notes: Install perimeter seal prior to closer. Do not notch weatherstrip. Special templating required. Mount cylinder on interior side, always free ingress from the roof.

Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 6.0
Doors: B177
Description: Single Stair (CR)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 5" x 4-1/2"	US26D	MK
1	Rim Exit Device, Storeroom	LC 43 8804 ETP	US32D	SA
1	Electric Strike	9500 x LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Rim Cylinder Housing	31-0375S	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 PH10	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO

1	Gasketing	S88D	PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)	MK
1	Motion Sensor	XMS2	SU
1	Position Switch	1076 Series	ES
1	Card Reader	By Security Integrator	OT
1	Power Supply	By Security Integrator	OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When devices are locked then the card reader grants access upon presentation of a valid credential. Electric strike mechanically locks during power failure with a mechanical key override entry.
2. Egress always free from the inside by depressing inside push pad.
3. Request to exit motion sensor to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 7.0
Doors: B146
Description: Single Evidence (CR, ADA)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 5" x 4-1/2"	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Latch Retraction Mortise Lock	LC RX 56 8204 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Door Operator	SW200i	AL	BM
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	Gasketing	S88D		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
1	Position Switch	1076 Series		ES
2	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked then the card reader grants access upon presentation of a valid credential. Outside lever mechanically locks during power failure with a mechanical key override entry.
2. Egress always free from inside by depressing inside lever.
3. Request to exit switch in the lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.
5. Presenting valid credential on either side switch powers the door operator.

Set: 8.0 (Not Used)

Set: 9.0
Doors: B139, B147
Description: Single Autopsy Tech/ Long Term Storage (CR)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Gasketing	S88D		PE
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 10.0
Doors: B194
Description: Single IDF (CR)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Door Stop	481H	US26D	RO
3	Silencer	608-RKW		RO
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
1	Position Switch	1076 Series		ES

1 Card Reader	By Security Integrator		OT
1 Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 11.0
Doors: B193
Description: Single Observation (CR)

3 Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Electric Power Transfer	EL-CEPT	630	SU
1 Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA
1 Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1 Permanent Core	32W0201	26	MC
1 Construction Core	320101CC	26	MC
1 Surface Closer	351 O	EN	SA
1 Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1 Wall Stop	406	US32D	RO
3 Silencer	608-RKW		RO
1 ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1 ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
1 Position Switch	1076 Series		ES
1 Card Reader	By Security Integrator		OT
1 Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 12.0
Doors: B176, B192
Description: Single Passage/ View Gallery (CR)

3 Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 4-1/2" x 4-1/2"	US26D	MK
1 Electric Power Transfer	EL-CEPT	630	SU
1 Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA

1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 P10	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.
2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 12.1
Doors: B147A
Description: Single Autopsy Tech (CR)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 4-1/2" x 4-1/2"	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 P10	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	Gasketing	S88D		PE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.

2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 13.0
Doors: B312
Description: Single Chem Storage (Monitor)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 5" x 4-1/2"	US26D	MK
1	Office/Entry Lock	LC 8255 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO
1	Position Switch	1076 Series		ES

Notes:
Operation:
1. Door position switch to signal door open/closed to the access control system.

Set: 14.0
Doors: B141
Description: Single Vest (SS)

3	Hinge, Full Mortise, Hvy Wt	T4A3386 4-1/2" x 4-1/2"	US32D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Surf Overhead Holder	901_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	Gasketing	S88D		PE

Set: 14.1
Doors: B132
Description: Single Tissue Recovery (SS)

3	Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 5" x 4-1/2"	US32D	MK
1	Classroom Lock	LC 8237 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 CPS	EN	SA
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	Gasketing	S88D		PE

Set: 15.0

Doors: B211
Description: Single Office Corridor

3	Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 4-1/2" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Surface Closer	351 P10	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO

Set: 16.0
Doors: B171
Description: Single Corridor (CR)

3	Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 4-1/2" x 4-1/2"	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit Device, Storeroom	LC 43 8804 ETP	US32D	SA
1	Electric Strike	9500 x LBM	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Rim Cylinder Housing	31-0375S	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 CPS	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Gasketing	S88D		PE
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	Motion Sensor	XMS2		SU
1	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes:
Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When devices are locked then the card reader grants access upon presentation of a valid credential. Electric strike mechanically locks during power failure with a mechanical key override entry.
2. Egress always free from the inside by depressing inside push pad.
3. Request to exit motion sensor to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 17.0 (Not Used)

Set: 18.0
Doors: B160
Description: Single Autopsy Corridor

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK

1	Rim Exit Device, Passage	43 8815 ETP	US32D	SA
1	Surface Closer	351 PH10	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
1	Gasketing	S88D		PE
1	Automatic Door Bottom	369AA w/ Z49PL		ZE

Set: 19.0
Doors: B300D
Description: Single Bio Waste

3	Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 5" x 4-1/2"	US26D	MK
1	Office/Entry Lock	LC 8255 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 PD10	EN	SA
1	Gasketing	S88D		PE

Set: 19.1
Doors: B316
Description: Single Storage

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Office/Entry Lock	LC 8255 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
3	Silencer	608-RKW		RO

Set: 20.0
Doors: B148, B180, B181, B182, B183, B184, B196, B198, B200, B202
Description: Single Office

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Office/Entry Lock	LB LC 8205 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO

Set: 20.1
Doors: B104

Description: Single Family Room

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Classroom Lock	LC 8237 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surface Closer	351 P10	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO

Set: 21.0
Doors: B170, B197
Description: Single Storage

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Classroom Lock	LC 8237 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO

Set: 21.1
Doors: B137
Description: Single Vestibule

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Classroom Lock	LC 8237 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Gasketing	S88D		PE
1	Automatic Door Bottom	369AA w/ Z49PL		ZE

Set: 21.2
Doors: B186
Description: Single Janitor

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Classroom Lock	LC 8237 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC

1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO
1	Sweep	315CN		PE
1	Half Saddle Threshold	273A		PE

Set: 21.3
Doors: B149
Description: Single Storage

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Classroom Lock	LC 8237 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Wall Stop	406	US32D	RO
1	Gasketing	S88D		PE
1	Automatic Door Bottom	369AA w/ Z49PL		ZE

Set: 22.0
Doors: B314
Description: Pair Storage Inswing (CR)

6	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Electric Power Transfer	EL-CEPT	630	SU
2	Flush Bolt	555	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Fail Secure Lock	LC RX 8271-24V LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
2	Surf Overhead Holder	901_A	US32D	AH
2	Surface Closer	351 O	EN	SA
2	Armor Plate	K1050 34" H x 2" LDW CSK BEV	US32D	RO
1	Astragal	357SP		PE
2	Silencer	608-RKW		RO
1	ElectroLynx Harness	QC-CP x Length as Req'd (Frame)		MK
1	ElectroLynx Harness	QC-CP x Length as Req'd (Door)		MK
2	Position Switch	1076 Series		ES
1	Card Reader	By Security Integrator		OT
1	Power Supply	By Security Integrator		OT

Notes: Mount astragal on push side of inactive leaf and size doors for 1/8" clearance between leaves. Paint astragal to match doors.

Operation:
1. Doors electrically unlocked or locked during established time zones as programmed by the access control system. When outside lever is locked the card reader grants access upon presentation of a valid credential. Locksets mechanically lock during power failure with a mechanical key override entry.

2. Lever is always operational from the inside and retracts latch.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 23.0
Doors: B189
Description: Pair Conference

6	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
2	Door Pull Set	RM3301-36 Mtg-Type 5HD	US32D	RO
2	Surface Closer	351 P10	EN	SA
2	Door Holder with Stop	494S	US32D	RO
1	Astragal	S771BL		PE
1	Gasketing	S88D		PE

Notes: Template closers for 180 degree swing.

Set: 24.0
Doors: B188
Description: Single Conference

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Door Pull Set	RM3301-36 Mtg-Type 5HD	US32D	RO
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Gasketing	S88D		PE

Set: 24.1
Doors: B217
Description: Single Conference

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Office/Entry Lock	LB LC 8205 LNP	US26D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Permanent Core	32W0201	26	MC
1	Construction Core	320101CC	26	MC
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Gasketing	S88D		PE

Set: 25.0
Doors: B175, B219
Description: Single Conference/ Team

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Wall Stop	406	US32D	RO
1	Gasketing	S88D		PE

Set: 26.0
Doors: B162, B166
Description: Single Locker

3	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1	Push Plate	70E	US32D	RO
1	Pull Plate	BF 110x70C	US32D	RO
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
3	Silencer	608-RKW		RO

Set: 27.0
Doors: B172, B173
Description: Single Mothers/ Respite

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Privacy Lock	LB V20 8265 LNP	US26D	SA
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
1	Gasketing	S88D		PE
1	Door Bottom	369AA Z49-PL		ZE

Set: 28.0
Doors: B164, B168
Description: Single Shower

3	Hinge, Full Mortise	TA2314 4-1/2" x 4-1/2"	US32D	MK
1	Privacy Lock	LB V20 8265 LNP	US26D	SA
1	Surface Closer	351 CPS	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
3	Silencer	608-RKW		RO

Set: 29.0 (Not Used)

Set: 30.0
Doors: B185, B187
Description: Single Toilet

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK
1	Privacy Lock	LB V20 8265 LNP	US26D	SA
1	Surface Closer	351 O	EN	SA
1	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Gasketing	S88D		PE

Set: 31.0

Doors: B165
Description: Single Laundry Rated

3	Hinge, Full Mortise, Hvy Wt	T4A3786 5" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Surface Closer	351 O	EN	SA
1	Armor Plate	K1050 F 34" H x 2" LDW CSK BEV	US32D	RO
1	Wall Stop	406	US32D	RO
1	Gasketing	S88D		PE

Set: 31.1
Doors: B142
Description: Single Laundry Rated

3	Hinge, Full Mortise, Hvy Wt	T4A3786 5" x 4-1/2"	US26D	MK
1	Passage Latch	8215 LNP	US26D	SA
1	Surf Overhead Stop	902_A	US32D	AH
1	Surface Closer	351 O	EN	SA
1	Armor Plate	K1050 F 34" H x 2" LDW CSK BEV	US32D	RO
1	Automatic Door Bottom	369AA w/ Z49PL		ZE
1	Gasketing	S88D		PE

Set: 32.0 (Not Used)

Set: 33.0
Doors: B351
Description: Pair Electrical/ Boilers Rated

6	Hinge, Full Mortise, Hvy Wt	T4A3786 NRP 4-1/2" x 4-1/2"	US26D	MK
1	Mullion	12-L980	PC	SA
1	Rim Exit Device, Storeroom	12 LC 43 8804 ETP	US32D	SA
1	Rim Exit Device, Exit Only	12 43 8810 EO	US32D	SA
1	Mortise Cylinder Housing	31-0175 x Cam as Req'd	26	MC
1	Rim Cylinder Housing	31-0375S	26	MC
2	Permanent Core	32W0201	26	MC
2	Construction Core	320101CC	26	MC
2	Surface Closer	351 CPS	EN	SA
2	Kick Plate	K1050 10" H x 2" LDW CSK BEV	US32D	RO
1	Astragal	18041CNB (Both Leaves)		PE
1	Gasketing	S88D		PE
1	Gasketing	5110BL		PE

Set: 34.0 (Not Used)

Set: 35.0
Doors: B143, B144, B145, B150, B150A, B153A, B153, B155, B158
Description: Automatic Sliding

Notes: All hardware by sliding door manufacturer.

Set: 35.1
Doors: B132A
Description: Automatic Sliding (Existing)

Notes: Replace gasketing system, type as required to match existing door/frame.

Set: 36.0
Doors: B101, B101A, B102, B103, B104A, B105, B106, B107, B108, B109, B111, B111A, B113, B114, B115, B116, B117, B120, B122, B123, B124, B125, B126, B127, B129, B131, B134, B135, B136, B136A, B138, B138A, B140, B204, B205, B206, B208, B209, B210, B212, B223, B229
Description: Existing Opening

Notes: Existing frame, door and hardware to remain.

Set: 36.1
Doors: B133
Description: Existing Opening

1	Automatic Door Bottom	369AA w/ Z49PL	ZE

Notes: Existing frame, door and balance of hardware to remain.

Set: 36.2 (Not Used)

Set: 36.3
Doors: B128
Description: Single Intake (Existing Door/Frame)

1	Sweep	315CN	PE
1	Gasketing	S88D	PE

Notes: At end of construction replace sweep, gasketing and any other hardware that is damaged.

Set: 36.4
Doors: EXB125, EXB223
Description: Single Exterior (Existing Door/Frame)

1	Gasketing	2891AS (Head & Jambs)	PE
1	Sweep	315CN	PE
1	Threshold	253X3AFG	PE

Notes: At end of construction replace threshold, sweep, gasketing and any other hardware that is damaged.

Set: 37.0
Doors: B300, B300A, B300B, B300C
Description: Overhead Door

Notes: All hardware by door manufacturer.

END OF SECTION 08 71 00