



Addendum #02 for RFB #942300-01

Project Name: DPS ANK Aircraft Hangar

DAS RFB #: 942300-01

DAS Project #: 9423.00

Date: December 13, 2024

Addendum #02:

This addendum is issued to modify, clarify, or amend the original Project Drawings and Specifications and is hereby made part of the Contract Documents. The Contractor shall be responsible for incorporating items in this Addendum to the Work. The following shall take precedence over anything to the contrary in the Drawings or Specifications. **This addendum shall also supersede any previous addenda.**

The receipt of this Addendum shall be acknowledged by inserting its number and date in the space provided on the Bid Form.

This Addendum consists of:

Contents

Typed Narrative Pages – 3 Pages

Drawings: G002, A101, A201, M600, E402 – 5 Pages

Specifications: 07 42 13, 07 42 13, 13 34 19 – 14 Pages

Meeting Minutes – 5 Pages

Prebid Attendance List – 1 Page

General information

1. All substitution requests must be submitted on the Substitution Request Form found in the Project Manual.
2. Clarifications to bid packages:
 - a. Bid package 01 will be responsible for supplying anchor bolts as stated in original documents. Bid Package 02 will be responsible for installing with assistance from Bid Package 01.
 - b. Revised Bid Package #03 Section 2 – Line d. to read: Contractor **shall provide**, install, and wire all non-integral disconnects for mechanical equipment.
3. Substitution Requests:
 - a. Alliance Steel Substitution Request – Approved, see supporting design documents.
 - b. 23 3300 UE Fire Dampers Substitution Request – Approved, see supporting design documents.
 - c. 23 3300 UE Manual Volume Dampers Substitution Request – Approved, see supporting design documents.

4. Revise Keynote #6 on drawing sheet T101. ~~PROVIDE ONE (1) CATEGORY 6 CABLE ROUTED IN A 1" CONDUIT TO THIS LOCATION. TERMINATE CABLE TO A SURFACE STYLE JACK INSIDE OF A 2-GANG DEEP JUNCTION BOX. PROVIDE ONE (1) 2 FOOT PRE-TERMINATED PATCH CABLE FOR THE FINAL CONNECTION.~~ CAMERA AND MOUNTING ACCESSORIES SHALL BE PROVIDED BY THE STATE OF IOWA'S TECHNOLOGY INTEGRATOR, COMMUNICATION INNOVATORS.
 - a. Contractor will still be responsible for routing 1" conduit and all other rough ins called out in the design documents.

Architectural

Architectural Drawings

1. Sheet G002 – Life Safety and Code Summary
 - a. DELETE Knox box on A2 – Level 1 Occupancy Plan
 - b. REVISE quantity and locations of fire extinguishers as indicted on A2 – Level 1 Occupancy Plan
 - c. REVISE Section 907 Fire Alarm / Detection System to: "Not Required / Not Provided"
2. Sheet A101 – Floor Plans & Reflected Ceiling Plan
 - a. DELETE knox box on A15 – Level 1 Floor Plan
 - b. REVISE quantity and locations of fire extinguishers as indicted on A15 – Level 1 Floor Plan
3. Sheet A201 – Exterior Elevations & Building Sections
 - a. DELETE knox box on A2 – Exterior Elevation - Northwest

Architectural Specifications

1. 07 41 13 – Metal Roof Panels
 - a. REPLACE original specification section with the revised specification included in this addendum
2. 07 42 13 – Metal Wall Panels
 - a. REPLACE original specification section with the revised specification included in this addendum
3. 13 34 19 – Metal Building Systems
 - a. REPLACE original specification section with the revised specification included in this addendum

MECHANICAL

Mechanical Drawings

1. Sheet M600 – MECHANICAL SCHEDULES
 - a. REVISE Manufacturer for Radiant Heaters to be Roberts Gordon in lieu of Reznor.

ELECTRICAL

Electrical Drawings

1. Sheet E402 – Electrical Details and Schedules – Phase 1
 - a. REVISE basis of design for fixture "F3" to Lithonia CPHB series.
 - b. REVISE reference to "X2" fixture in the description of "R1" to read "X1" instead.



Electrical – Approved Manufacturers:

The following shall be added to specifications as approved manufacturers:

<u>Light Fixture Type</u>	<u>Manufacturer</u>
F4	Lithonia
F5	Elite
R1	Lithonia
X1	Lithonia

Mechanical – Approved Manufacturers:

The following shall be added to specifications as approved manufacturers:

<u>Spec Section – Equipment</u>	<u>Manufacturer</u>
23 33 00/3.03 – Manual Volume Dampers	United Enertech
23 33 00/3.04 – Fire Dampers	United Enertech

Questions

Q1. Per sheet G002, **IBC Chapter 9 – Fire Protection Systems, 907** states that a fire alarm detection system is required for this project, but nothing is shown on the drawings or in the specifications. Can you please clarify if we are to provide a fire alarm system for this project? Here is a screenshot from sheet G002 for your convenience. I also seen on page T000 in the technology responsibility matrix it was left blank.

A1. Fire Alarm / Detection is not required as noted in revised Sheet G002. Any area left blank on the Technology Responsibility Matrix will not be a part of this project.

Q2. Are there any budget numbers for the bid packages for the project?

A2. Budgets for bid packages is not available. All in budget for Hangar is 1.8 million dollars.

Q3. For the project DPS ANK AIRCRAFT HANGAR- IOWA DEPARTMENT OF ADMNISTRATION SERVICES, it appears you are missing spec sections: 012 1202, 01 22 00, and 01 23 00. Do you have any information on this project?

A3. Spec Sections 01 1202, 01 2200, 01 2300 have been removed from the project manual.

APPLICABLE CODE INFORMATION

The project shall comply with the following codes:

- 2021 Ankeny Building and Energy Code, Municipal Code Chapter 175 - (based on International Building Code 2021 Edition)
- 2021 Ankeny Mechanical Code Chapter 176 - (based on International Mechanical Code)
- 2021 Ankeny Fire Code, Municipal Code Chapter 180 - (based on International Fire Code 2021 Edition)
- 2020 National Electrical Code (NFPA 70), Municipal Code Chapter 179 - Ordinance 1929 - (based on National Electrical Code)
- 2021 Ankeny Plumbing Code, Municipal Code Chapter 178 - (based on Uniform Plumbing Code)
- Accessibility - Division 7 of Iowa State Building Code, Iowa State Accessibility Code, 2015 IBC and ANSI A117.1 - 2009 Edition

Building Characteristics

Project description: New construction aircraft hangar located at the Ankeny Regional Airport. The project is planned in two phases: Phase 1 includes hangar space for four aircraft operated by the Department of Public Safety (DPS), as well as support spaces such as an office, restrooms, break rooms, and mechanical rooms. Phase 2 is planned to be a future addition for the Iowa Army National Guard (IANG), which will include hangar space for one aircraft, and support spaces such as offices, storage, restrooms, and mechanical space. Each hangar will also contain a storage mezzanine.

Building Area: Phase 1: 8,000 SF
Building Height: Phase 1: 26'-0"
Number of Stories: 1
Fully Sprinkled: No
Fire Alarm: Yes - Equipped with emergency voice/alarm communication system

IC Chapter 3 - Use and Occupancy Classification

Occupancy Group: B, S-1, Aircraft Hangar (storage and repair) - Must comply with Section 412.3. (Nonseparated occupancy use)

IBC Chapter 4 - Special Detailed Requirements Based on Use and Occupancy

- 412 Aircraft - Related Occupancies**
- 412.3 Aircraft hangars.** Aircraft hangars shall be in accordance with Sections 412.3.1 through 412.3.6.
- 412.3.1 Exterior walls.** Exterior walls located less than 30 feet from lot lines or a public way shall have a fire-resistance rating not less than 2 hours.
- 412.3.3 Floor surfaces.** Floors shall be graded and drained to prevent water of fuel from remaining on the floor. Floor drains shall discharge through an oil separator to the sewer or to an outside vented sump.
Exception: Aircraft hangars with individual lease spaces not exceeding 2,000 SF each in which servicing, repairing or washing is not conducted and fuel is not dispensed shall have floors that are graded toward the door, but shall not require a separator.
- 412.3.4 Heating equipment.** Heating equipment shall be placed in another room separated by 2-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. Entrance shall be from the outside or by means of a vestibule providing a two-doorway separation.
Exception:
1. Uril heaters and vented infrared radiant heating equipment suspended not less than 10 feet above the upper surface of wings or engine enclosures of the highest aircraft that are permitted to be housed in the hangar need not be housed in a separate room provided that the are mounted not less than 8 feet above the floor in the shops, offices and other sections of the hangar communicating with storage or service areas.
2. Entrance to the separated room shall be permitted by a single interior door provided that the sources of ignition in the appliances are not less than 18 inches above the floor.
- 412.3.5 Finishing.** The process of "doping," involving use of a volatile flammable solvent, or of painting, shall be carried on in a separate detached building equipped with automatic fire-extinguishing equipment in accordance with Section 903.
- 412.3.6 Fire suppression.** Aircraft hangars shall be provided with a fire suppression system designed in accordance with NFPA 409, based on the classification for the hangar given in Table 412.3.6.
- | Max. Single Fire Area (SF) | Type of Construction | Requirement |
|----------------------------|----------------------|---|
| 8,000 | IIB | Group III (Groups shall be as classified in accordance with NFPA 409) |
- 412.3.6.1 Hazardous operations.** Any Group III aircraft hangar according to Table 412.3.6 that contains hazardous operation including, but not limited to, the following shall be provided with a Group I or II fire suppression system in accordance with NFPA 409 as applicable:
1. Doping
2. Hot work including, but not limited to, welding, torch cutting and torch soldering.
3. Fuel transfer.
4. Fuel tank repair or maintenance not including defueled tanks in accordance with NFPA 409, inerted tanks or tanks that have never been fueled.
5. Spray finishing operations.
6. Total fuel capacity of all aircraft within the unsprinklered single fire area in excess of 1,600 gallons.
7. Total fuel capacity of all aircraft within the maximum single fire area in excess of 7,500 gallons for a hangar with an automatic sprinkler system in accordance with Sections 903.1.1.
- Commentary: The total fueling capacity of the designed plane are:**
Area 1: (DPS) Plane 1 - Cessna Grand Caravan: 332 gallons
Plane 2 - Cirrus SR-22: 092 gallons
Plane 3 - Cessna 182T: 092 gallons
Plane 4 - Cessna 182T: 092 gallons
Total Area 1: 608 gallons
Area 2: (IANG) Plane 1 - C12 King Air: 676 gallons
Total Area 2: 676 gallons
- 412.3.6.2 Separation of maximum single fire areas.** Maximum single fire areas established in accordance with hangar classification and construction type in Table 412.3.6 shall be separated by 2-hour fire walls constructed in accordance with Section 706. In determining the maximum single fire area as set forth in Table 412.3.6, ancillary uses that are separated from aircraft serving areas by a fire barrier of not less than 1 hour, constructed in accordance with Section 707, shall not be included in the area.

414 Hazardous Materials

414.2.5 Building designed with the intent that the owner storage does not exceed the allowable amount of any hazardous material per Table 414.2.5

IBC Chapter 5 - General Building Heights and Areas

Occupancy Group B
Building Height: Phase 1: 26'-8" Phase 2: 32'-0" (55'-0" max per IBC Table 504.3)
Number of Stories: 1 (3 max per IBC Table 504.4)
Building Area: Phase 1: 8,000 SF Phase 2: 6,400 SF (23,000 per IBC Section 507.5)

Occupancy Group S-1
Building Height: Phase 1: 26'-8" Phase 2: 32'-0" (55'-0" max per IBC Table 504.3)
Number of Stories: 1 (2 max per IBC Table 504.4)
Building Area: Phase 1: 8,000 SF Phase 2: 6,400 SF (23,000 per IBC Section 507.5)

508 Mixed Use and Occupancy

508.3 Nonseparated occupancies: Buildings or portions of buildings that comply with the provisions of this section shall be considered as nonseparated occupancies.

IBC Chapter 6 - Types of Construction

Construction Classification: Type IIB

Table 601 Fire Resistance Rating Required

Primary Structural Frame	0 HR
Bearing Walls	0 HR
Nonbearing Wall and Partition (Exterior)	0 HR
Nonbearing Wall and Partitions (Interior)	0 HR
Floor Construction and Secondary Members	0 HR
Roof Construction and Secondary Members	0 HR

IBC Chapter 7 - Fire and Smoke Protection Features

705 Exterior Walls

705.2 Projections extending beyond the exterior wall shall conform to the requirements of the section and Section 1405. Projections shall not extend any closer to the line used to determine the fire separation distance than shown in Table 705.2.

705.2.1 Projections from walls of Type I or II construction shall be of noncombustible materials or combustible materials as allowed by Sections 1406.3 and 1406.4.

705.5 Exterior walls shall be fire-resistance rated in accordance with Table 601, based on the type of construction, and Table 705.5, based on the fire separation distance. The required fire-resistance rating of exterior walls with a fire separation distance of less than or equal to 10 feet shall be rated for exposure from both sides.

Table 705.5:	5 <= X < 10	Type IIB Construction	Occupancy S-1 = 1 hour	Occupancy B = 1 hour
	10 <= X < 30	Type IIB Construction	Occupancy S-1 = 0 hour	Occupancy B = 0 hour

705.11 Parapets shall be provided on exterior walls of buildings.
Exception 1: The wall is not required to be fire-resistance rated in accordance with Table 705.5 because of fire separation distance.
Exception 3: Walls that terminate at roofs of not less than 2-hour fire-resistance-rated construction or where the roof, including the deck or slab and supporting construction, is constructed entirely of noncombustible materials.

IBC Chapter 9 - Fire Protection Systems

- 903** Automatic Sprinkler Systems Not Required / Not Provided
- 906** Portable Fire Extinguishers Required / Provided
1. In Group B and S occupancies
3. In areas where flammable liquids are stored, used or dispensed
4. On each floor of structures under construction, in accordance with Section 3315.1 of the *International Fire Code*
5. Where required by the *International Fire Code* sections indicated in Table 906.1
- 906.1** Additional Required Portable Fire Extinguishers in the *International Fire Code* 2005.2 Aircraft towing vehicles
- 906.3** Fire Extinguishers for Class A Fire Hazards Maximum distance of travel to extinguisher: 75 feet
- 907** Fire Alarm / Detection System Not Required / Not Provided

IBC Chapter 10 - Means of Egress

1004 Occupant Load (See Building Occupant Load Calculations for details)

Level 1 26 occupants

1005 Means of Egress Sizing

1005.3.1 & 1005.3.2 Means of Egress Capacity Factors

Stairs .37/Occupant (Minimum stair width 44" - 1011.2)
Other Elements .27/Occupant

Level 1 Egress Width	26 Occupants x .27/Occupant =	Egress Required	Egress Provided
		5.2'	102.0"

1006 Number of Exits and Exit Access Doorways

1006.2.1 Common Path of Egress Travel Distance

Group B (Without Sprinkler System) Group S (Without Sprinkler System)	Maximum Allowed	Maximum Actual
	100'-0" (CL<= 30)	13'-0"
	100'-0" (CL<= 30)	0'-0"

1006.3.1 Minimum Number of Exits or Access to Exits Per Story

Level 1	Number Required	Number Provided
	2	3

1017 Exit Access Travel Distance

Table 1017.2 Exit Access Travel Distance

Group B (Non-Sprinklered) Group S (Non-Sprinklered)	Maximum Allowed	Maximum Actual
	200'-0"	88'-0"
	200'-0"	30'-0"

International Energy Conservation Code

Section 101.4.6 Energy. The provisions of the International Energy Conservation Code as currently adopted and amended by the Iowa State Building Code Bureau shall apply to all matters governing the design and construction of buildings for energy efficiency. Administration shall be as prescribed in this code and these regulations shall be known as the Ankeny Energy Code. Construction or work for which a permit is required shall be subject to 3 party inspections. The Code Official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability. Any portion that does not comply shall be corrected and such portion shall not be covered or concealed until authorized by the Code Official.

Iowa Administrative Code, Chapter 16, Division VII - Accessibility Requirements For Facilities Used by the General Public:

Accessibility within the building will be maintained.

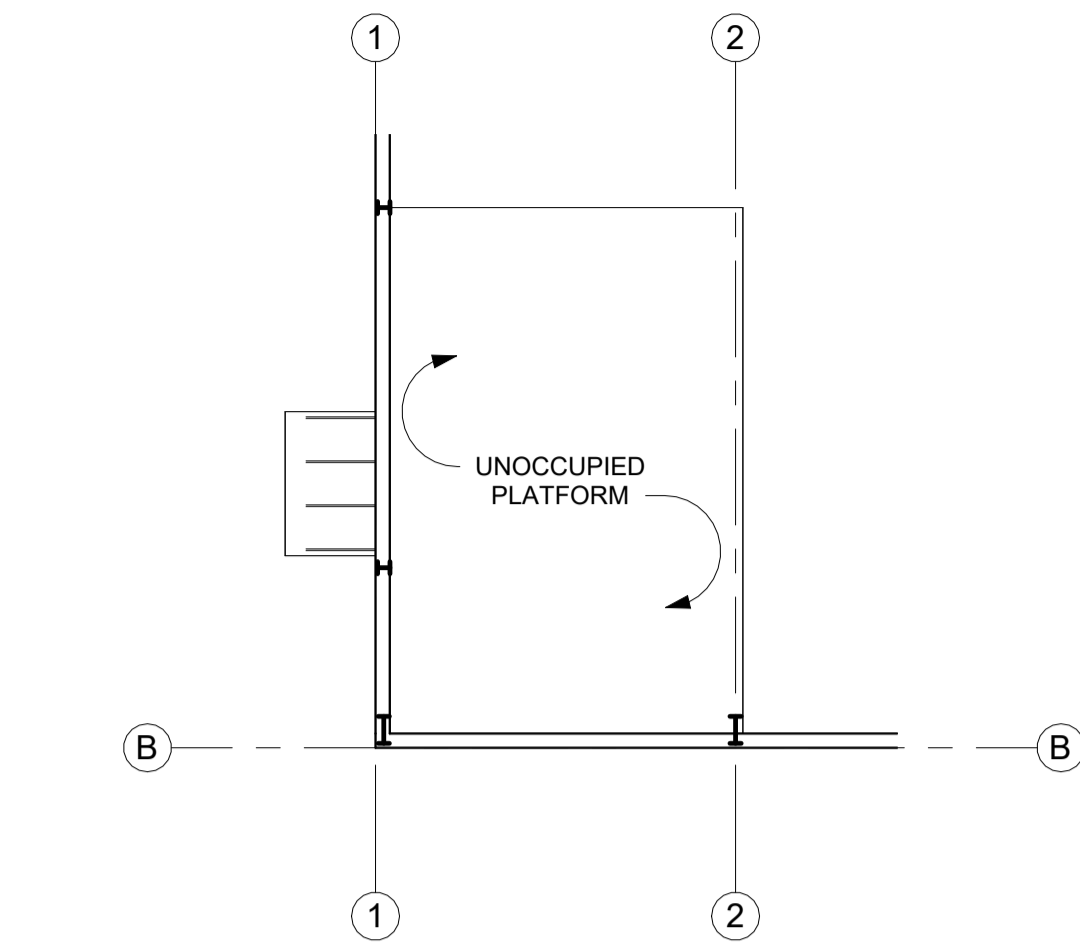
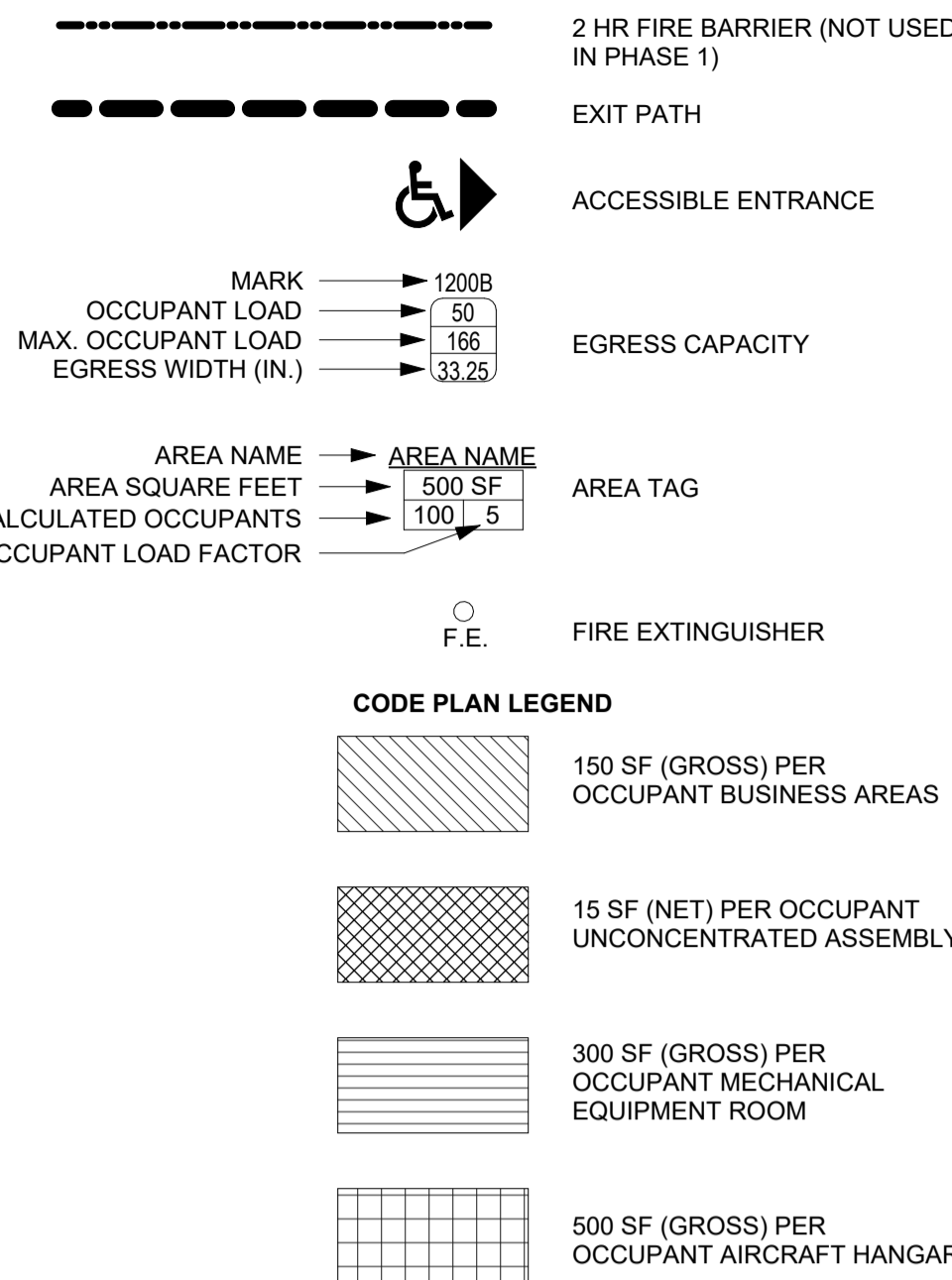
Plumbing Fixture Requirements per 2015 Uniform Plumbing Code (UPC)

Table 2902.1 Minimum Number of Required Plumbing Fixtures

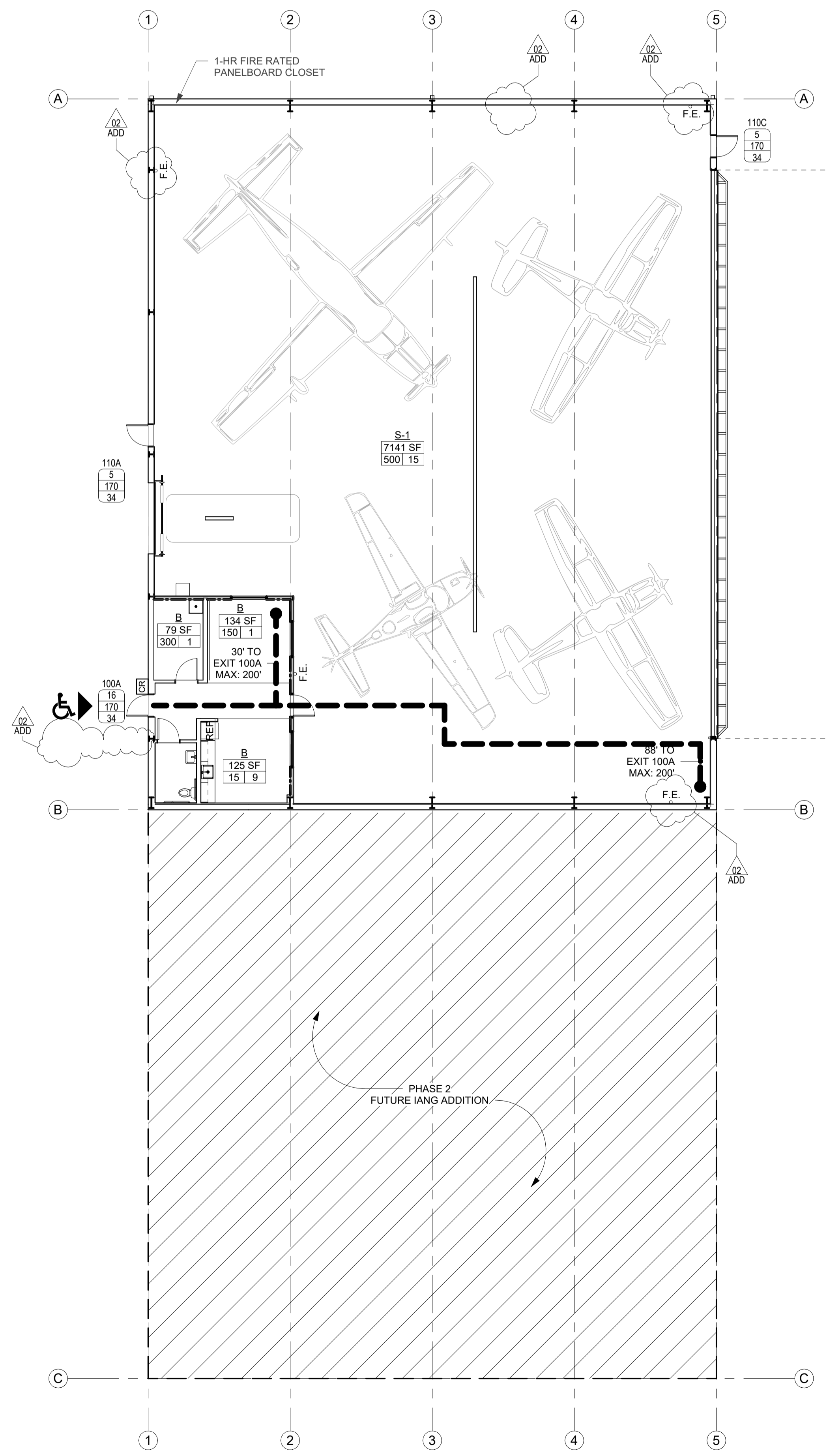
Occupancy	W.C.	Lavs	DF	Other	
B	M / F	1 per 25 for 50	1 per 40 for 80	1 per 1500	1 Service Sink
		1 per 50 after 50	1 per 80 after 80		
S1 / S2		1 per 100	1 per 100	1 per 1000	1 Service Sink

For each urinal added in excess of the maximum required, one water closet may be deducted. The number of water closets shall not be reduced to less than two-thirds (2/3) of the minimum.
Drinking fountain is not required per occupant load.

PLUMBING FIXTURE ANALYSIS						IBC 2021 Table 2902.1
REQUIRED	LAV	WC	BTH/SHR	SVC SINK	DR FNNTN	OCCUPANT LOAD
	1	1	0	1	--	TOTAL 26
PROVIDED	1	1	0	1	0	MEN 13 WOMEN 13



Q2 PLATFORM OCCUPANCY PLAN - PHASE 1
3/32" = 1'-0"



A2 LEVEL 1 OCCUPANCY PLAN - PHASE 1
3/32" = 1'-0"

GENERAL NOTES

- DIMENSIONS ARE MEASURED FACE-OF-FINISH TO FACE-OF-FINISH OR ROUGH MASONRY OPENING UNLESS NOTED OTHERWISE - TYPICAL FOR ALL DRAWINGS.
- FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS - TYPICAL FOR ALL DRAWINGS.
- IN THE EVENT OF A DISCREPANCY BETWEEN ARCHITECTURAL AND CONSULTANT DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING WORK - TYPICAL FOR ALL DRAWINGS.
- ALL PENETRATIONS IN FIRE RATED FLOORS AND WALLS MUST BE SEALED WITH APPROPRIATE FIRESTOPPING SYSTEM.
- PATCH AND REPAIR EXISTING FLOOR SLABS AND WALL SURFACES DAMAGED FROM DEMOLITION.

Owner
DEPT OF ADMINISTRATIVE SERVICES
 1305 E WALNUT ST.
 DES MOINES, IA 50319

Project
9423.00 - DPS ANK Aircraft Hangar
 3700 SE CONVENIENCE BLVD
 ANKENY, IA 50021

General Contractor
DCI Group
 220 SE 6th St. Ste. 200
 Des Moines, IA 50309
 P. 515-244-5043

Civil Engineer
Snyder & Associates
 2727 SW Snyder Blvd, PO BOX 1159
 Ankeny, IA 50023
 P. 515-964-2020

Structural Engineer
Raker Rhodes Engineering
 2717 Grand Ave
 Des Moines, IA 50309
 P. 515-277-0275

MEET Engineer
KCL
 300 4th St.
 West Des Moines, IA 50265
 P. 515-724-7938

GENERAL NOTES

- CEILING ARE TYPE A AND INSTALLED TO MATCH EXISTING ELEVATION (8'-2") UNLESS NOTED OTHERWISE.
- CEILING-MOUNTED FIXTURES, SPRINKLERS AND EQUIPMENT SHALL BE CENTERED IN CEILING PANELS OR GYPSUM BOARD SOFFITS AND EQUALLY SPACED UNLESS NOTED OTHERWISE.
- CENTER CEILING GRID IN ROOMS AS SHOWN UNLESS NOTED OTHERWISE.
- CONCEALED SPRINKLER HEAD COVERS SHALL BE PAINTED BY MANUFACTURER TO MATCH ADJACENT SOFFIT/ACP UNLESS NOTED OTHERWISE.
- COORDINATE LOCATIONS OF EXIT LIGHTS AND EMERGENCY LIGHTS SHOWN ON ARCHITECTURAL DRAWINGS. IN THE EVENT OF A DISCREPANCY, VERIFY WITH ARCHITECT PRIOR TO INSTALLATION.
- CEILING FIXTURE DIMENSIONS ARE TAKEN FROM CENTERLINE OF FIXTURE UNLESS NOTED OTHERWISE.
- REFER TO ARCHITECTURAL DRAWINGS (ELEVATIONS & REFLECTED CEILING PLANS) FOR ALL MECHANICAL AND ELECTRICAL DEVICE AND FIXTURE LOCATIONS & MOUNTING HEIGHTS. IF NOT CLEARLY SPECIFIED, CONTACT ARCHITECT FOR FURTHER CLARIFICATION. MECHANICAL & ELECTRICAL DRAWINGS ARE FOR FIXTURE TYPE REFERENCE ONLY.
- PAINT ALL EXPOSED STRUCTURE, DUCTWORK, CONDUIT, ETC. IN AREAS NOTED TO BE OPEN TO STRUCTURE PT-2 UNLESS NOTED OTHERWISE. PAINTING OF EXPOSED STRUCTURE TO BE DONE AFTER ALL UTILITIES ARE INSTALLED.

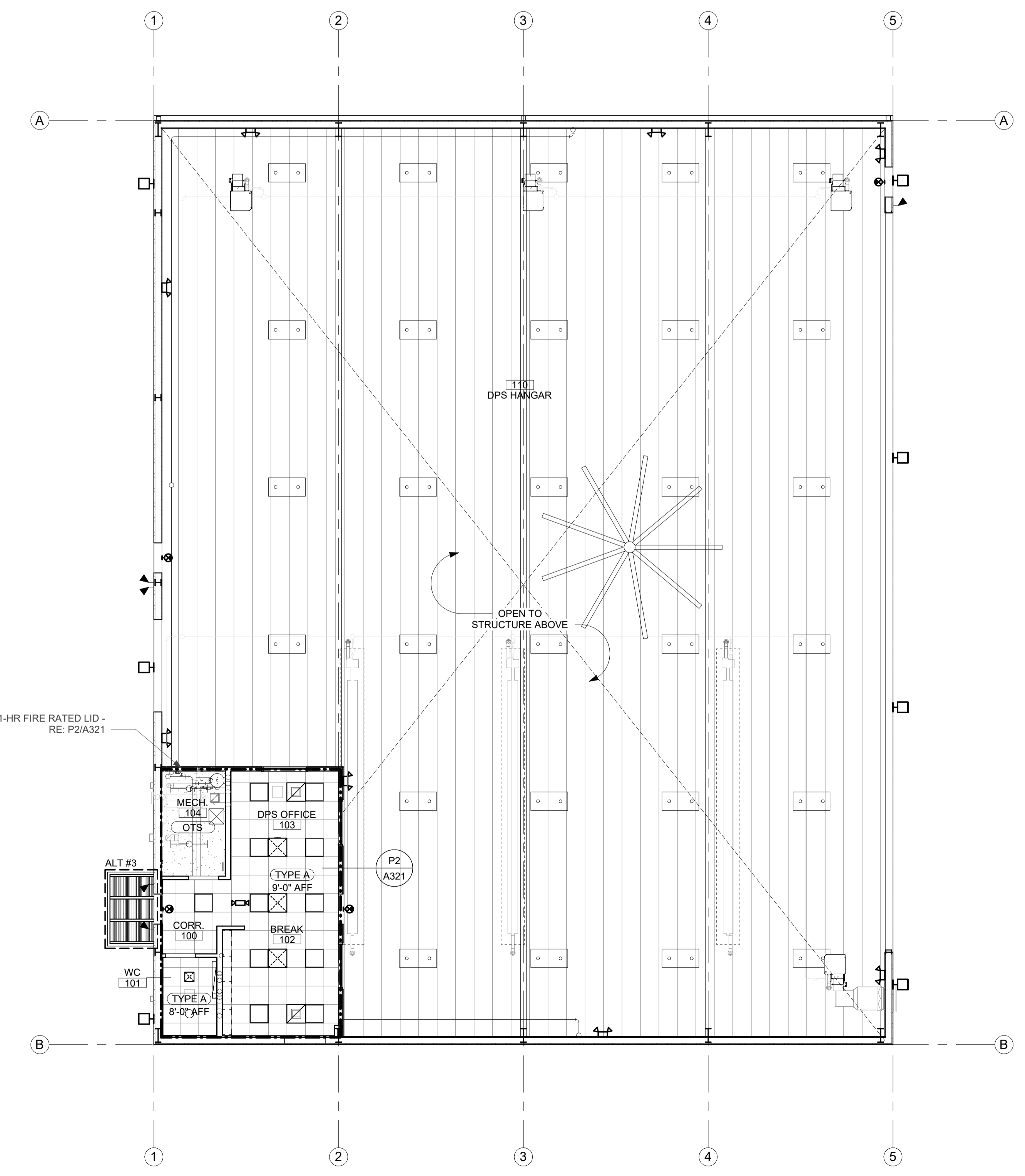
CEILING LEGEND

DASHED LINE DENOTES LOCATIONS OF ACOUSTIC PARTITIONS TO RECEIVE ACOUSTICAL BATT
 --- INSULATION AND SOUND SEALANT AT PERIMETER AND PENETRATIONS. REFER TO FLOOR PLANS FOR WALL TYPES.

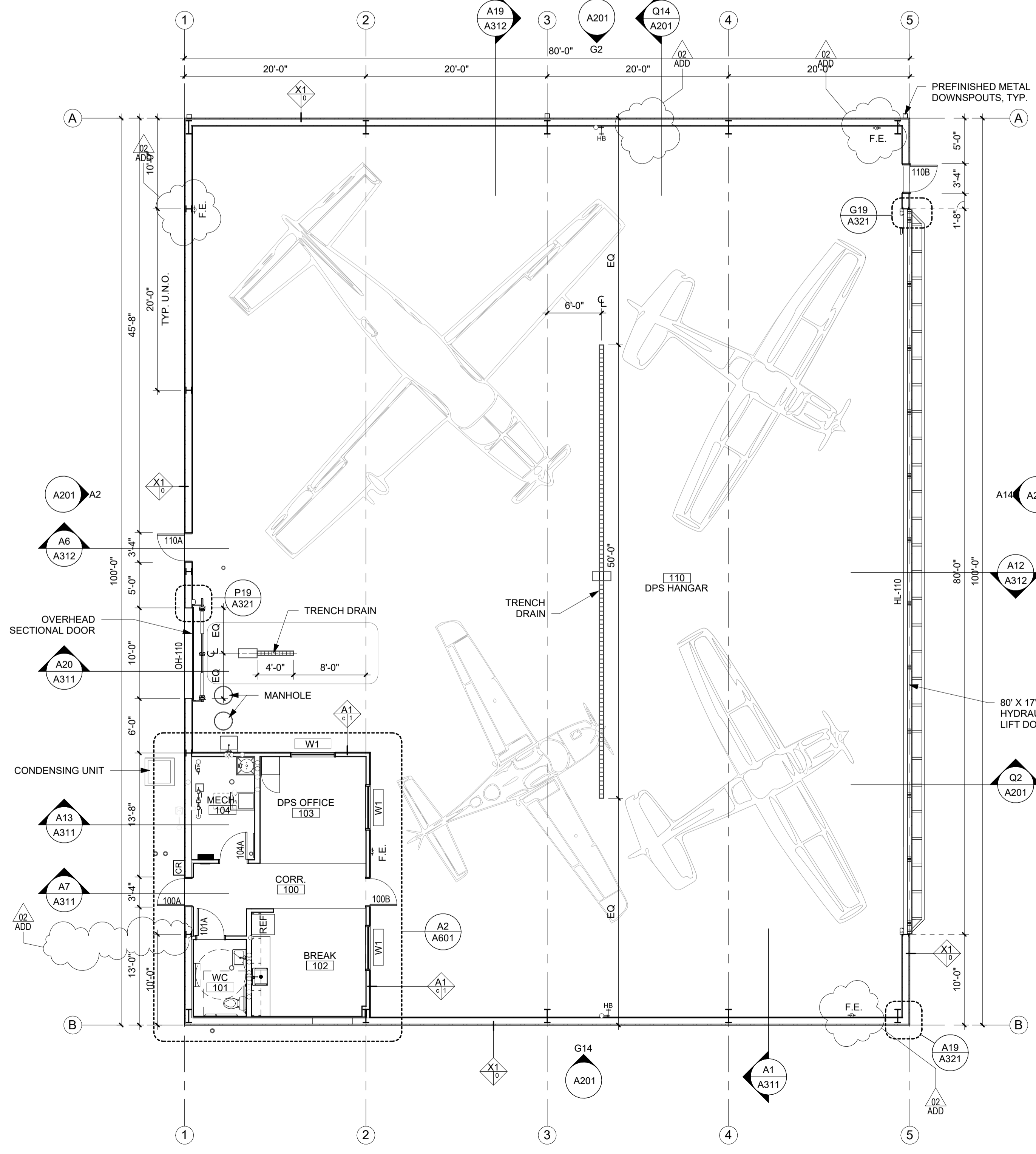
- ACCESS PANEL
- RECTANGULAR FIXTURE
- SQUARE FIXTURE
- UTILITY LIGHTS
- CEILING & WALL MOUNT EXIT SIGNS
- HVAC SUPPLY DIFFUSER
- HVAC RETURN DIFFUSER
- HVAC EXHAUST DIFFUSER
- HVAC SUPPLY DIFFUSER
- HVAC EXHAUST DIFFUSER
- OCCUPANCY SENSOR
- SPEAKER
- WIRELESS ACCESS POINT
- SMOKE DETECTOR
- CEILING & WALL MOUNT CAMERA
- DATA & POWER

CEILING TYPES

- TYPE A
- ACP-1



LEVEL 1 RCP - PHASE 1
 1/8" = 1'-0"



LEVEL 1 FLOOR PLAN
 1/8" = 1'-0"

Key Plan

Revision	Description	Date
ADD 02	ADD 02	11/22/2024

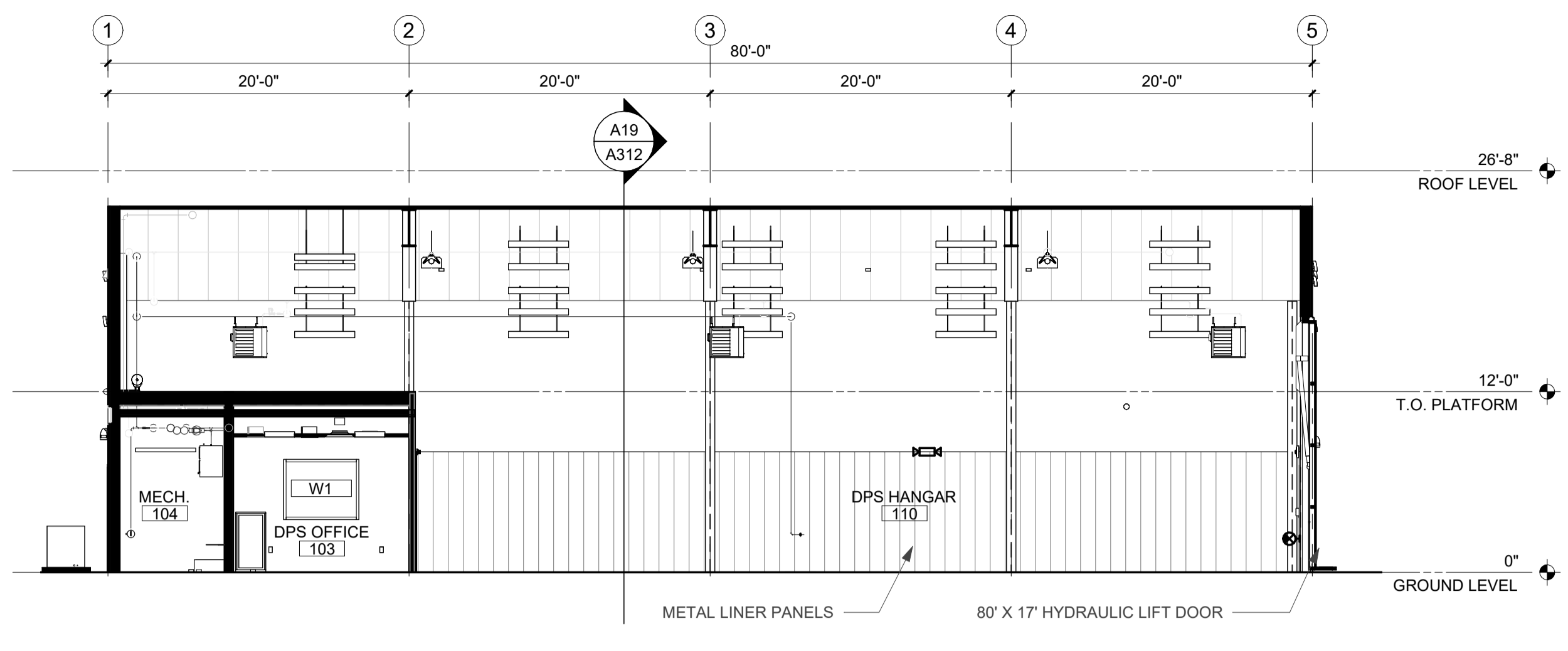
OPN Project No.
24827000

Sheet Issue Date
100% CONSTRUCTION DOCUMENTS 11/22/2024

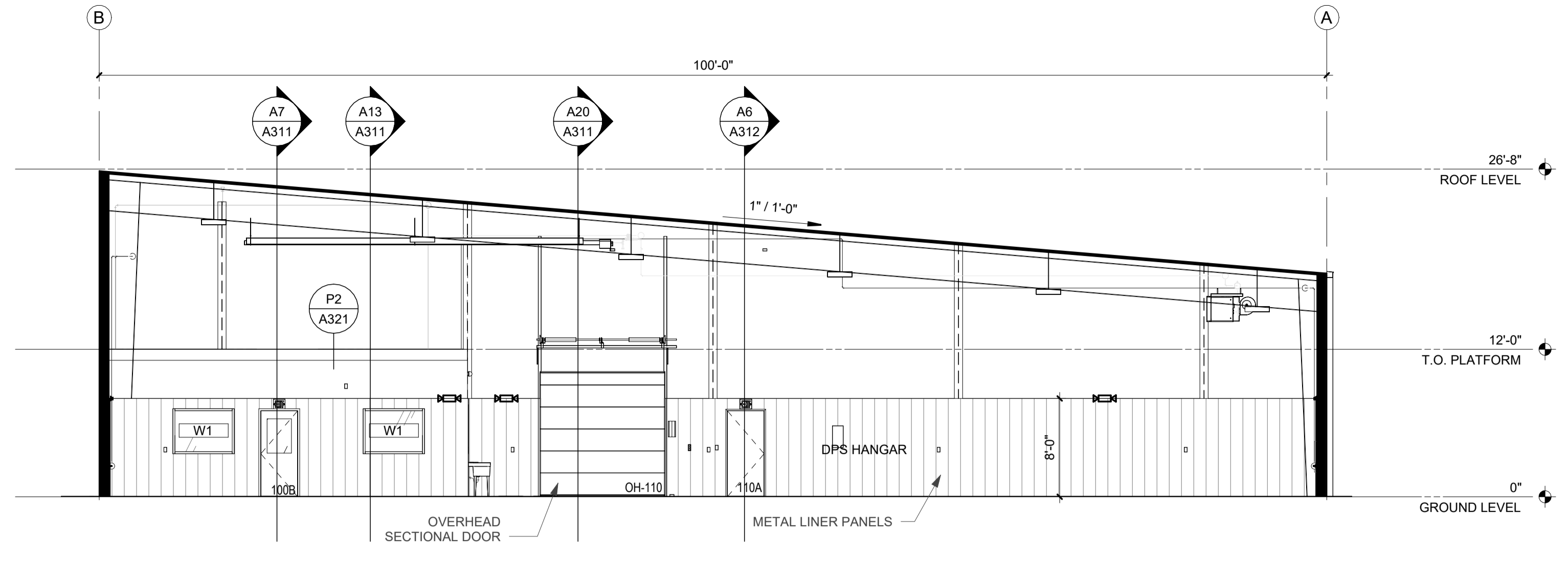
Sheet Name
FLOOR PLANS & REFLECTED CEILING PLAN - PHASE 1

Sheet Number
A101

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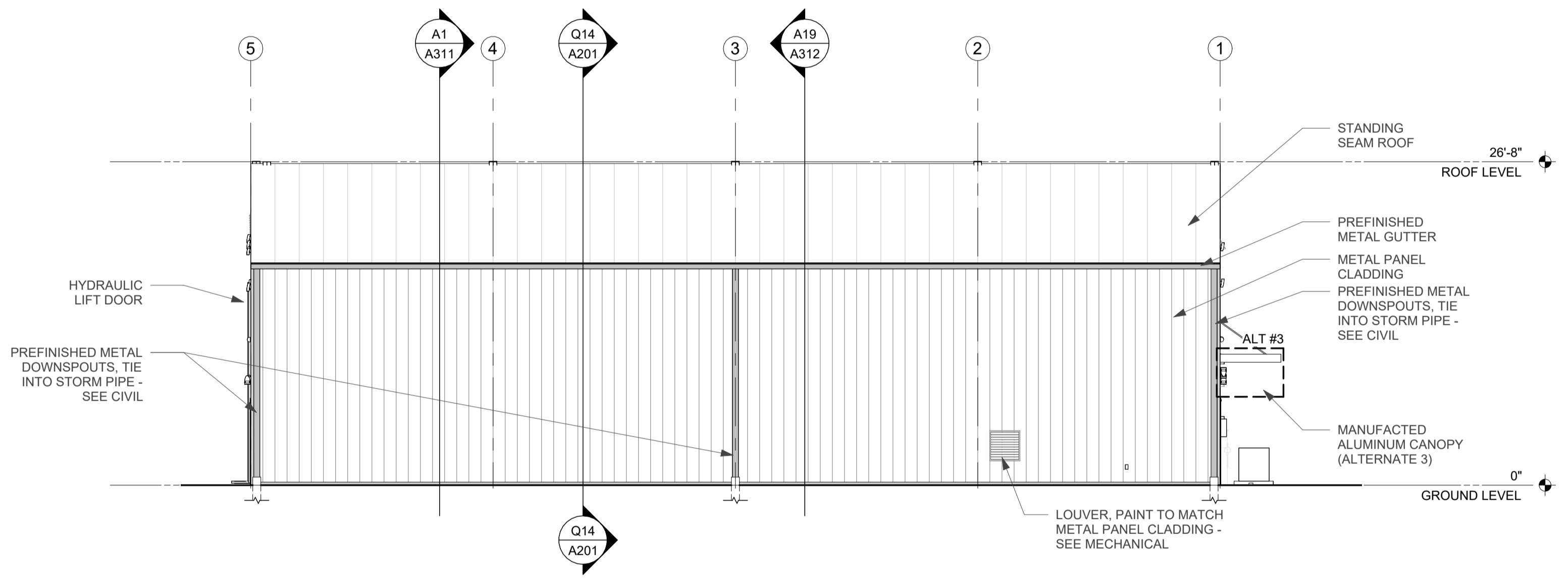


Q2 BUILDING SECTION - TRANSVERSE - PHASE 1
1/8" = 1'-0"

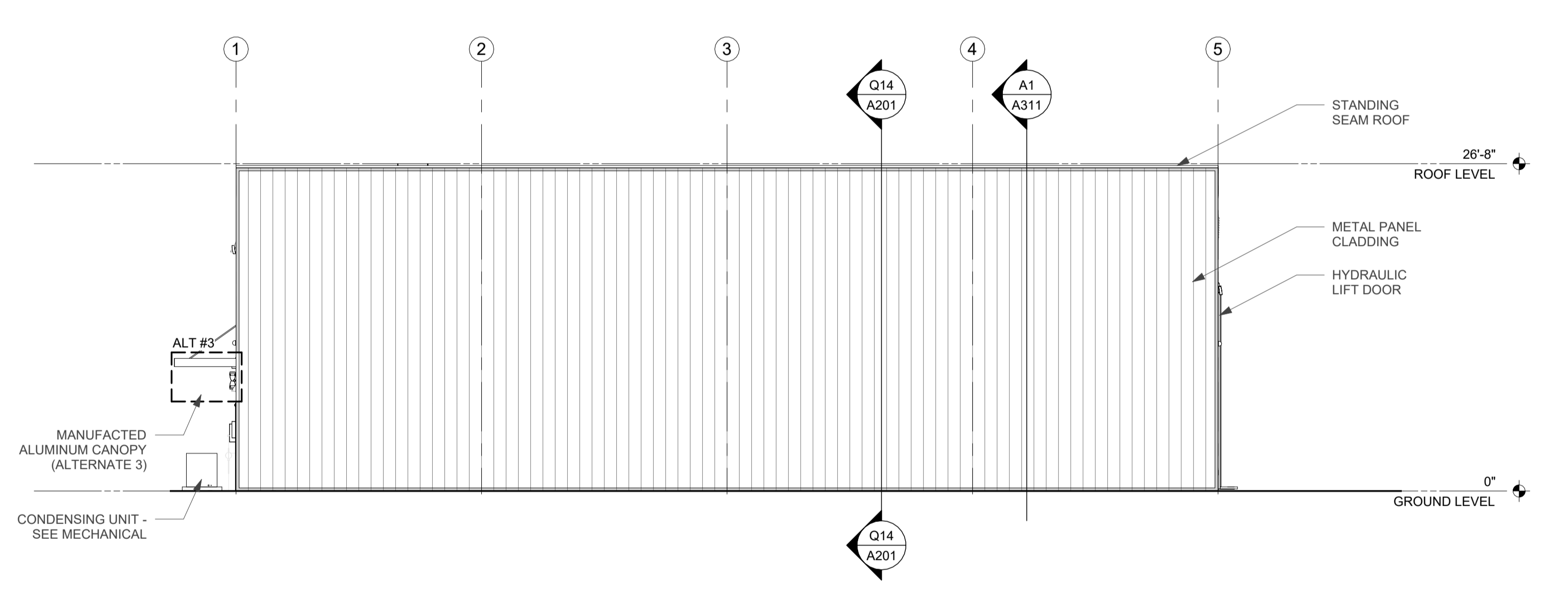


Q14 BUILDING SECTION - LONGITUDINAL - PHASE 1
1/8" = 1'-0"

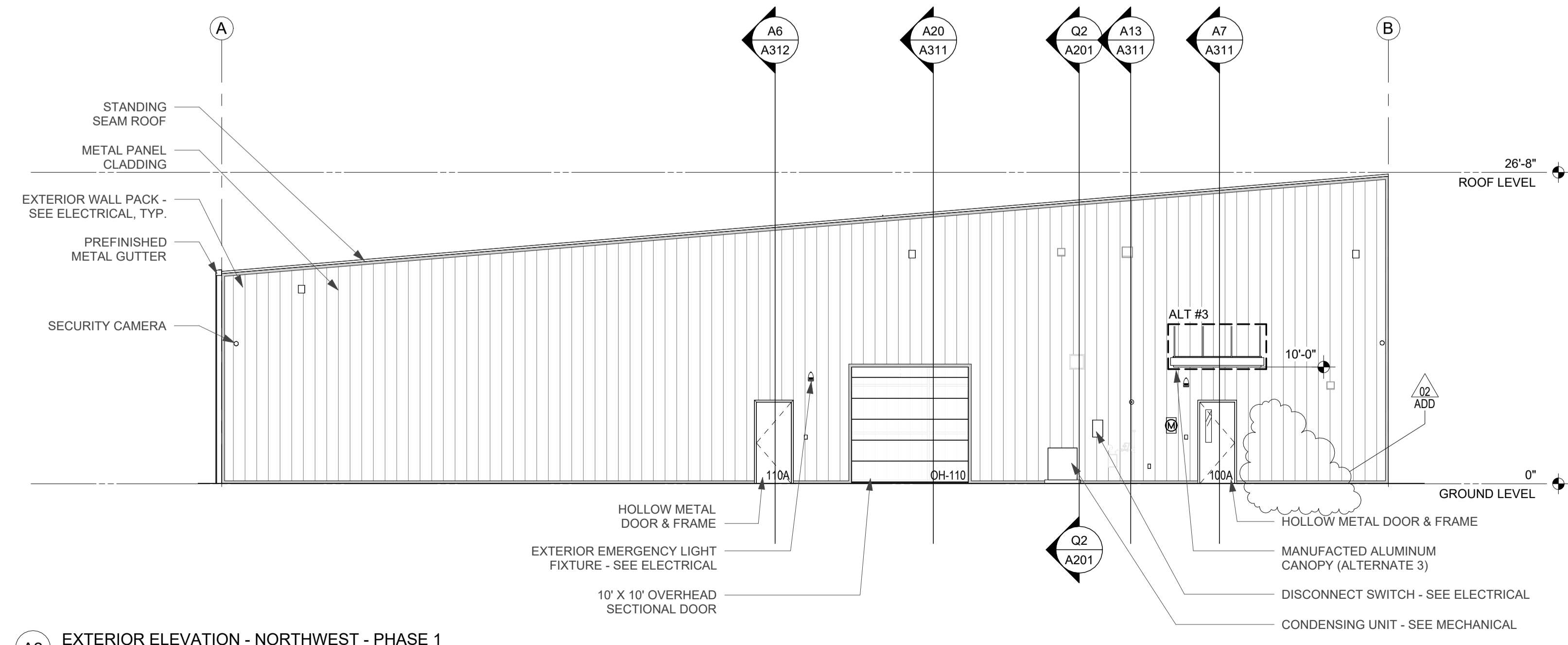
- EXTERIOR MATERIALS LEGEND**
- PREFINISHED PROFILED METAL WALL PANELS:
PROFILE: AP PANEL WITH RIBS FACING INWARD
EXTERIOR COLOR: WHITE / OFFWHITE
INTERIOR COLOR: WHITE POLYESTER
 - PREFINISHED METAL TRIM, FLASHING, AND MISC. COMPONENTS:
EXTERIOR COLOR: GRAY
INTERIOR COLOR: WHITE
 - STANDING SEAM ROOF
COLOR: GRAY



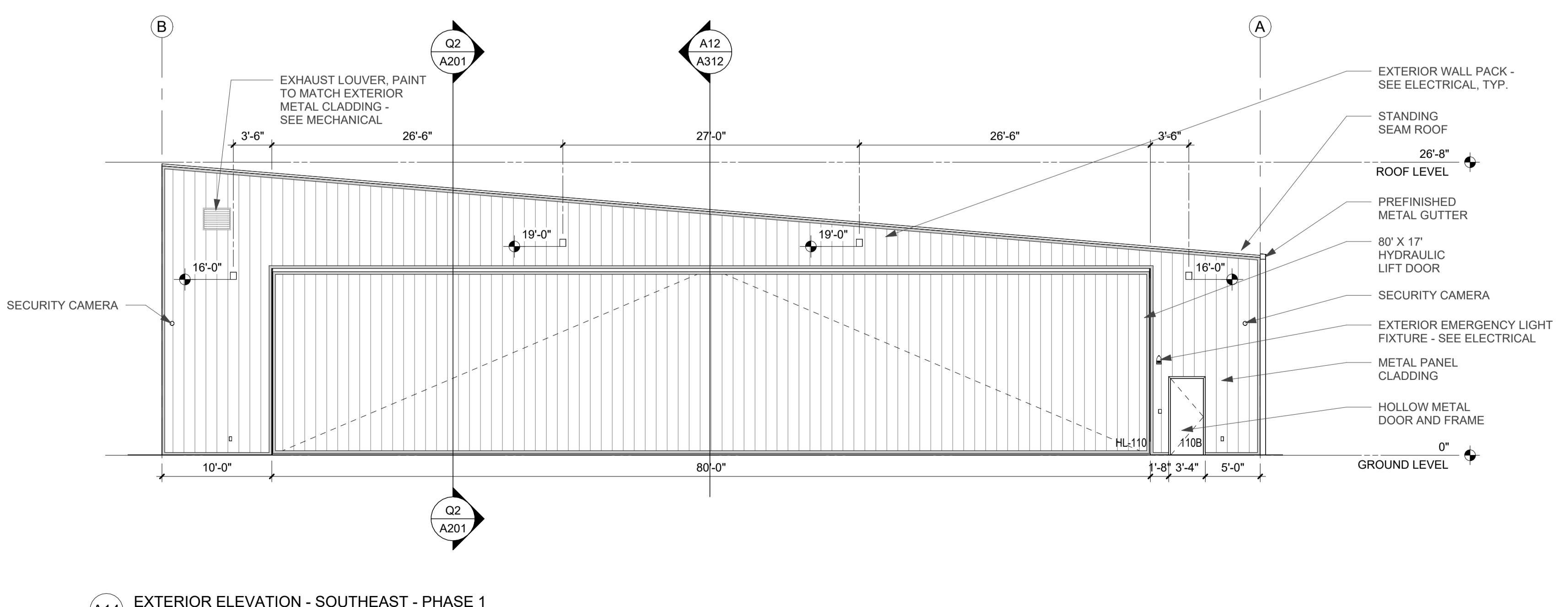
G2 EXTERIOR ELEVATION - NORTHEAST - PHASE 1
1/8" = 1'-0"



G14 EXTERIOR ELEVATION - SOUTHWEST - PHASE 1
1/8" = 1'-0"



A2 EXTERIOR ELEVATION - NORTHWEST - PHASE 1
1/8" = 1'-0"



A14 EXTERIOR ELEVATION - SOUTHEAST - PHASE 1
1/8" = 1'-0"

Key Plan

Revision	Description	Date
ADD 02	ADD 02	11/22/2024

OPN Project No.
24827000

Sheet Issue Date
100% CONSTRUCTION DOCUMENTS 11/22/2024

Sheet Name
EXTERIOR ELEVATIONS & BUILDING SECTIONS - PHASE 1

Sheet Number
A201

CEILING FAN SCHEDULE	
REFERENCE	CF-1
MANUFACTURER	MACROAIR
MODEL #	AVDX
SERVES	DPS HANGAR 110
HANGING WEIGHT (LBS)	242
DIMENSION - DIAMETER (FT)	20
BLADE (AIRFOILS)	6
MAX SPEED (RPM)	75
FAN HP	2.0
SPEED CONTROL	YES
SOUND dBA (MAX. SPEED)	57
VOLTAGE - PHASE	240/1
MCA	10.5
NOTES	1,2,3,4,5,6

NOTES:

- PROVIDE WITH DIGITAL WALL MOUNTED CONTROLLER.
- PROVIDE 24V WIRING FROM CONTROLLER TO FAN.
- FURNISH MOUNTING HARDWARE, DROP LENGTH AND APPURTENANCES. MOUNT AT RECOMMENDED MFR. HEIGHT. COORDINATE FINAL HEIGHT/CLEARANCES WITH AIRCRAFT TAIL HEIGHTS.
- PROVIDE UNIT WITH FACTORY DISCONNECT SWITCH.
- TCC / EC TO PROVIDE WIRING BETWEEN CONTROLLER AND FANS PER MANUFACTURER.

CABINET UNIT HEATER SCHEDULE	
REFERENCE	CUH-1
MANUFACTURER	INDEECO
MODEL #	WAI
SERVES	VEST. 215
WEIGHT (LBS)	24
DIMENSIONS - L x W x D (INCHES)	23 x 16 x 4-5/16
TYPE	SEMI RECESSED
HEATING	ELECTRIC
AIRFLOW (CFM)	160
KILOWATTS	1.5
AMPS	6.6
VOLTAGE - PH	240/1
NOTES	1, 2

NOTES:

- PROVIDE UNIT WITH INTEGRAL THERMOSTAT AND DISCONNECT.
- UNIT COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD AND CUSTOM COLOR CHART.

ELECTRIC BASEBOARD HEATER	
REFERENCE	EBH-1
MANUFACTURER	RUNTAL
MODEL	EB3-120D
TYPE	WALL MOUNT
DIMENSIONS (LxWxH)	36"x2.5"x10.5"
HEATING	ELECTRIC
SERVES	WC 101
KW	1.5
VOLTAGE - PH	120/1

NOTES:

- PROVIDE UNIT WITH LINE VOLTAGE THERMOSTAT AND DISCONNECT.
- UNIT COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD AND CUSTOM COLOR CHART.

FAN SCHEDULE				
REFERENCE	EF-1	EF-2	EF-3	EF-4
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK
MODEL #	SP-B110ES	SP-A200	SP-B110ES	SE1-14-440-VG
TYPE	IN-CEILING	CEILING	IN-CEILING	SIDEWALL
SERVES	WC 214	MECH 213	DATA RACK	LV-2
WEIGHT (LBS)	10	24	10	43
DIMENSIONS - L x W x H (INCHES)	12"x14"x7"	12"x14"x11"	12"x14"x7"	20"x20"x11"
AIRFLOW (CFM)	70	100	50	1,200
ESP (IN. W.C.)	0.50	0.61	0.63	0.50
FAN SPEED (RPM)	650	900	650	1592
DRIVE TYPE	DIRECT	DIRECT	DIRECT	DIRECT
SPEED CONTROL	NO	NO	NO	NO
SONES	2.5	4.0	3.5	14.2
DAMPER TYPE	GRAV. BACKDRAFT	GRAV. BACKDRAFT	GRAV. BACKDRAFT	MOTORIZED
MOTOR HP	FHP	FHP	FHP	0.5
VOLTAGE - PHASE	115/1	115/1	115/1	115/1
NOTES	1,4	4,5,8	4,6	2,3,4,7,9

NOTES:

- FAN TO BE CONNECTED TO ROOM LIGHT SWITCH.
- PROVIDE WITH DAMPER AND 24 VAC ACTUATOR WITH UNIT.
- EC TO POWER MOTORIZED DAMPER TO OPEN/CLOSE WITH FAN START OR STOP. FAN TO OPERATE BASED ON LOCAL SWITCH.
- PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION AND DISCONNECT. EC TO PROVIDE DISCONNECT.
- PROVIDE WALL MOUNTED THERMOSTAT FOR FAN OPERATION.
- FAN OPERATION TO BE CONTINUOUS.
- PROVIDE SIDEWALL HOUSING, SCREEN GUARD, EXTEND MOTOR LUBE TUBES, WALL COLLAR AND MOUNTING BRACKET.
- PROVIDE MOUNTING HARDWARE AND ACCESSORIES.
- FAN TO OPERATE AS PART OF A GAS DETECTION PURGE SYSTEM. REFER TO MECHANICAL DETAILS FOR OPERATION.

GAS UNIT HEATER SCHEDULE				
REFERENCE	UH-1	UH-2	UH-3	UH-4
MANUFACTURER	REZNOR	REZNOR	REZNOR	REZNOR
MODEL #	UBXC 150	UBXC 150	UBXC 150	UBXC 150
TYPE	CEILING MOUNT	CEILING MOUNT	CEILING MOUNT	CEILING MOUNT
WEIGHT (LBS.)	300	300	300	300
SERVES	DPS HANGAR 110	DPS HANGAR 110	DPS HANGAR 110	DPS HANGAR 110
AIRFLOW (CFM)	2,562	2,562	2,562	2,562
INPUT (MBH)	150	150	150	150
OUTPUT (MBH)	124	124	124	124
FAN MOTOR HP	0.25	0.25	0.25	0.25
KW	36.4	36.4	36.4	36.4
FULL LOAD AMPS	5.9	5.9	5.9	5.9
VOLTAGE - PHASE	115/1	115/1	115/1	115/1
MOCP	15	15	15	15
COMBUSTION AIR INLET DIAMETER	5"	5"	5"	5"
FLUE DIA.	5"	5"	5"	5"
THERMAL EFFICIENCY	83	83	83	83
NOTES	1,2,3,4,5,6,7	1,2,3,4,5,6,7	1,2,3,4,5,6,7	1,2,3,4,5,6,7

NOTES:

- PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION. DISCONNECT BY ELECTRICAL CONTRACTOR.
- PROVIDE UNIT WITH INTEGRAL THERMOSTAT.
- UNIT TO INCLUDE ALL MOUNTING BRACKETS, HARDWARE, ETC. FOR COMPLETE INSTALL.
- COORDINATE DISCONNECT WITH ELECTRICAL CONTRACTOR.
- REFER TO MANUFACTURERS RECOMMENDATIONS FOR CLEARANCE TO COMBUSTIBLES.
- PROVIDE MANUFACTURERS FACE LOUVERS.
- PROVIDE MANUFACTURERS VENT/COMBUSTION KITS, ACCESSORIES, AND MOUNTING HARDWARE.

MOTORIZED DAMPERS		
REFERENCE	MD-1	MD-2
MANUFACTURER	TAMCO	TAMCO
MODEL	9000	9000
SERVES	LV-1	LV-2
DIMENSIONS - W x H (INCHES)	30x24	30x24
AIRFLOW (CFM)	1,200	1,200
BLADE STYLE	OPPOSED	OPPOSED
BLADE DIRECTION	HORIZONTAL	HORIZONTAL
INSULATED	YES	YES
THERMALLY BROKEN	YES	YES
ACTUATOR TYPE	ELECTRIC	ELECTRIC
ACTUATOR STYLE	2 POSITION	2 POSITION
POWER FAILURE POSITION	CLOSED	CLOSED
NOTES	1,2,3,4	1,2,3,4

NOTES:

- M.C. TO POWER LOW VOLTAGE MOTORIZED DAMPERS FOR OPEN/CLOSE OPERATION.
- DAMPER SHOULD BE ULTRA LOW LEAK TYPE WITH INSULATED BLADES, BLADE AND SIDE SEALS.
- ACTUATOR FURNISHED AND INSTALLED BY MC. ACTUATOR TO BE LOW VOLTAGE.
- DAMPERS TO OPERATE WITH EF-4 START/STOP OPERATION AND INTERLOCKED DETECTION SYSTEM.

LOUVER SCHEDULE												
REFERENCE	SERVES	TYPE	MATERIAL	DIMENSIONS	CFM	F.A.	FPM	FREE AREA (SF)	PD (IN WC)	MFR	MODEL	NOTES
LV-1	DPS HANGAR	FIXED INTAKE	HEAVY GA / ALUMINUM	30Wx30Hx12D	1200	450		2.67	0.1	GREENHECK	ESD-635	1,2,3,4
LV-2	DPS HANGAR	FIXED EXHAUST	HEAVY GA / ALUMINUM	30Wx24Hx12D	1200	800		1.50	0.11	GREENHECK	ESD-635	1,2,3,4,5
LV-3	F-1	FIXED INTAKE	HEAVY GA / ALUMINUM	12Wx12Hx6D	100	500		0.20	-	GREENHECK	ESD-635	1,2,3,4

NOTES:

- PROVIDE WITH STANDARD COLOR FINISH. FINAL COLOR SELECTION BY ARCHITECT.
- PROVIDE UNIT LISTED ABOVE OR EQUAL BY RUSKIN, NCA, GREENHECK, SAFE-AIR DOWCO, ARROW, UNITED ENERTECH OR ENGINEER PRE-APPROVED EQUAL.
- REFER TO SPECIFICATIONS FOR FINISH. FINAL COLOR SELECTION BY ARCHITECT.
- PROVIDE WITH BIRD SCREEN.
- LOUVER SIZED FOR SCHEDULED WALL FAN. COORDINATE FINAL.

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE								
REFERENCE	MATERIAL	MARGIN (IN)	INLET (IN)	FACE (IN)	DAMPER	MFR	MODEL	NOTES
CD-1 (SUPPLY DIFFUSER)	ALUMINUM	NA	SEE DWG	24x24	YES	TITUS	OMNI-AA	1,2,3,4,5
CD-2 (SUPPLY DIFFUSER)	ALUMINUM	NA	SEE DWG	12x12	YES	TITUS	OMNI-AA	1,2,3,4,5
SG-1 (SUPPLY GRILLE)	ALUMINUM	1 1/4"	SEE DWG	INLET +2"	YES	TITUS	300FL	1,2,3,5
RG-1 (RETURN GRILLE)	ALUMINUM	NA	SEE DWG	24x24	NO	TITUS	PAR-AA	1,2,3

NOTES:

- REFER TO ARCH DRAWINGS FOR FINAL CEILING TYPE FOR DIFFUSER MOUNTING TYPE.
- PROVIDE WITH WHITE FINISH.
- VERIFY WITH ARCH ON FINAL COLOR.
- REFER TO FLOOR PLANS FOR ADDITIONAL VARIOUS GRILLE SIZES.
- PROVIDE OPPOSED BLADE BALANCING DAMPER OR ASD ACCESSIBLE THROUGH FACE OF GRILLE.

FURNACE & CONDENSING UNIT SCHEDULE	
REFERENCE	F-1 / CU-1
FURNACE MODEL#	R96VA-0402317
CONDENSER MODEL#	RA1618AJ1
	SUPPLY FAN
CFM	650
ESP (IN. W.C.)	1.0
MOTOR HP	0.50
	HEATING
TYPE	NATURAL GAS
AFUE	96
INPUT (MBH)	42
OUTPUT (MBH)	41
GAS OPERATING PRESSURE (IN. W.C.)	7 TO 14
	COOLING
REFRIGERANT	R-410A
EER/SEER (@ AHRI)	13/16
NET TOTAL CAPACITY (MBH)	18
NOMINAL TONNAGE	1.5
COMPRESSOR TYPE	SCROLL
	FURNACE UNIT DATA
VOLTAGE/PH	115/1
MOCP	15
	CONDENSER UNIT DATA
VOLTAGE/PH	230/1
MCA	12
MOCP	20

NOTES:

- SIDE INLET FURNACE WITH FILTER. REFER TO SPECIFICATIONS FOR FILTER TYPES.
- CONTRACTOR SHALL PROVIDE SPRING HINGED, GASKETED ENCLOSURE FOR FILTER ACCESS.
- PROVIDE 24/7 PROGRAMMABLE TOUCH SCREEN WALL THERMOSTAT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
- PROVIDE 2" CONCENTRIC VENT KIT. ROUTE AS SHOWN ON PLANS AND TERMINATE PER MANUFACTURER'S RECOMMENDATIONS.
- ROUTE LINE SETS FROM CONDENSING UNIT PER MANUFACTURERS RECOMMENDATIONS.
- PROVIDE HOUSE KEEPING PADS FOR FURNACES AND ASSOCIATED CONDENSING UNITS.
- DIFFUSER AIRFLOW SHALL BE ADJUSTED BASED ON SUBMITTED AIRFLOW CAPACITY. PROVIDE EQUIPMENT BASED ON NOMINAL COOLING AND HEATING CAPACITY.
- PROVIDE TWO STAGE GAS VALVE. LISTED CAPACITY BASED ON HIGH FIRE / LOW FIRE.

GAS FIRED RADIANT HEATER SCHEDULE			
REFERENCE	RAD-1	RAD-2	RAD-3
MANUFACTURER	ROBERTS GORDON	ROBERTS GORDON	ROBERTS GORDON
MODEL #	BH-100	BH-100	BH-100
SERVES	DPS HANGAR 110	DPS HANGAR 110	DPS HANGAR 110
TUBE CONFIGURATION	S-30 STRAIGHT TUBE	S-30 STRAIGHT TUBE	S-30 STRAIGHT TUBE
INPUT (MBH) HIGH	100	100	100
VENT / COMB	4"	4"	4"
INPUT GAS PRESSURE	4.6"-14" WC	4.6"-14" WC	4.6"-14" WC
VOLTAGE - PHASE	120/1	120/1	120/1
NOTES	1,2,3,4,5,6,7	1,2,3,4,5,6,7	1,2,3,4,5,6,7

NOTES:

- PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION. DISCONNECT BY ELECTRICAL CONTRACTOR.
- PROVIDE UNITS WITH REMOTE THERMOSTAT.
- UNIT TO INCLUDE ALL MOUNTING BRACKETS, HARDWARE, ETC. FOR COMPLETE INSTALL.
- COORDINATE AND VERIFY CLEARANCES TO COMBUSTIBLES. PROVIDE MANUFACTURERS LOWER CLEARANCE SHIELD IF REQUIRED TO MAINTAIN RECOMMENDED CLEARANCES.
- COORDINATE DISCONNECT WITH ELECTRICAL CONTRACTOR.
- PROVIDE VERTICAL COMBUSTION AIR/VENT KIT (CATEGORY 3 VENT PIPE).
- PROVIDE HIGH EFFICIENCY REFLECTORS.

EQUIPMENT CONNECTION SCHEDULE													
ABBREVIATIONS:			NOTES:										
1R NEMA 1 ENCLOSURE	INT INTEGRAL WITH EQUIPMENT FROM FACTORY	MMS MANUAL MOTOR STARTER W/ THERMAL OVERLOAD	NFD NON-FUSED DISCONNECT SWITCH, HEAVY DUTY	PFS PLUG FUSE WITH INTEGRATED SWITCH	RF RETURN AIR DUCT DETECTOR	RSR RUN STATUS RELAY, NORMALLY OPEN	SD SUPPLY AIR DUCT DETECTOR	SSP START/STOP PUSHBUTTON WITH PILOT	SS START/STOP PUSHBUTTON	ST SHUNT TRIP	TOR TIME DELAY OFF RELAY	TF TOGGLE SWITCH	VFD VARIABLE FREQUENCY DRIVE
3R NEMA 3R ENCLOSURE													
4 NEMA 4 ENCLOSURE													
4X NEMA 4X ENCLOSURE													
BO PROVIDED BY OTHERS													
CB CIRCUIT BREAKER IN PANEL													
CSD COMBO STARTER/DISCONNECT													
CP CORD AND PLUG													
ECB ENCLOSED CIRCUIT BREAKER													
FAR FIRE ALARM SHUTDOWN RELAY													
FDS FUSED DISCONNECT SWITCH													
GF GROUND FAULT													
HOA HAND-OFF-AUTO													

TAG	ELECTRICAL CHARACTERISTICS			ELECTRICAL CHARACTERISTICS			DISCONNECT			REMARKS	
	VOLTAGE	PHASE		MOTOR HP	KW	MCA	TYPE	SIZE (AMPS)	NEMA RATING		FUSE SIZE (AMPS)
CF-1	240 V	1				10	NFD	30	1		COORDINATE CONTROL LOCATION WITH MC AND OWNER.
CP-1	120 V	1		1/10	-		PFS	20	1	15	
CJ-1	240 V	1				12	NFD	30	3R		
CUH-1	240 V	1			1.5		INT				
EBH-1	120 V	1			1.5		INT				
EF-1	120 V	1	1/10				INT				
EF-2	120 V	1	1/10				INT				CONTROL VIA ROOM LIGHT SWITCH
EF-3	120 V	1	1/10				INT				
EF-4	120 V	1	1/2				INT / HOA	30	1	15	CONNECT FAN TO LOCAL DAMPER TO OPENCLOSE WITH FAN CONTROLS. PROVIDE HAND/OFF/AUTO SWITCH AS SHOWN ON FLOOR PLANS
F-1	120 V	1			12		TS	20	1		
MD-1	120 V	1			1		CB				OPERATE DAMPER WITH EF-4.
MD-2	120 V	1	1/10				INT				OPERATE DAMPER WITH EF-4.
OVERHEAD DOOR	240 V	1			30		NFD	100	1		VERIFY EXACT SIZE OF DISCONNECT WITH DOOR SHOP DRAWINGS.
RAD-1	120 V	1			4		INT				
RAD-2	120 V	1			4		INT				
RAD-3	120 V	1			4		INT				
UH-1	120 V	1			6		TS	20	1		
UH-2	120 V	1			6		CB				
UH-3	120 V	1			6		CB				
UH-4	120 V	1			6		NFD	30	1		
WH-1	240 V	1			2.5		NFD	30	1		

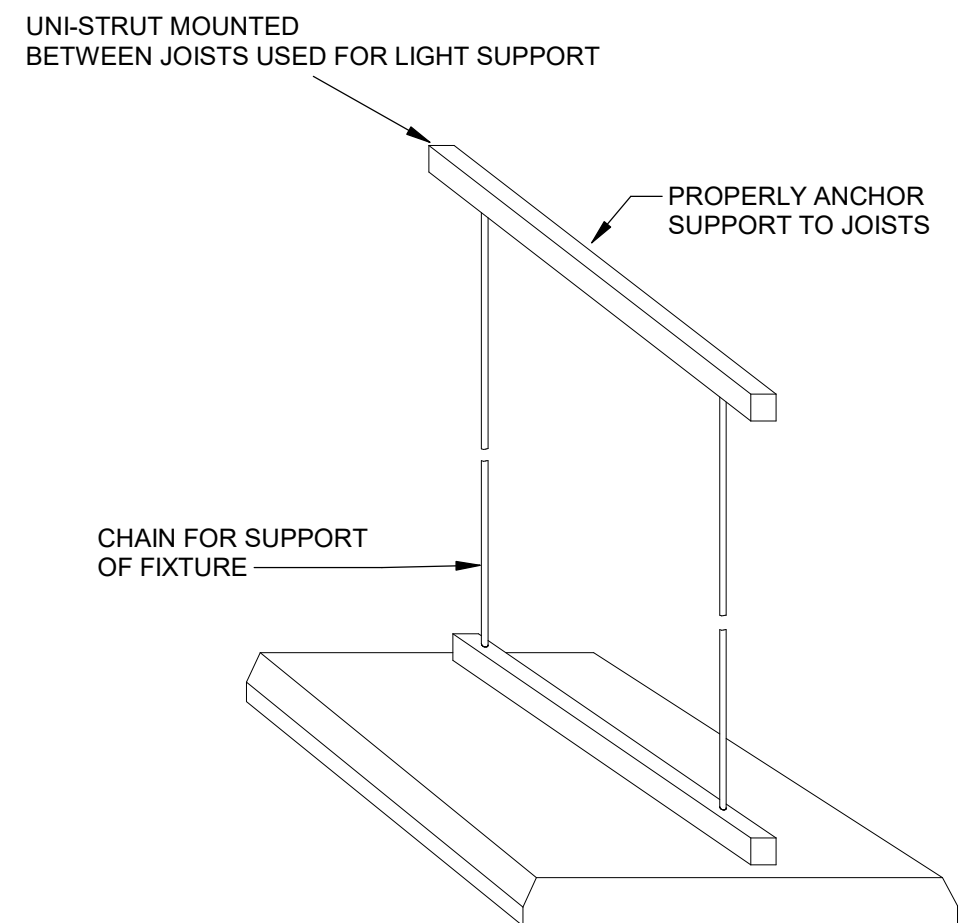
BRANCH PANEL: A										
LOCATION:		VOLTAGE: 120/240 SINGLE φ			SCCR RATING: 22,000					
SUPPLY FROM:		PHASES: 1			MAINS TYPE: MCB					
MOUNTING: SURFACE		WIRES: 3			MAINS RATING: 200 A					
ENCLOSURE: TYPE 1					MCB RATING: 200 A					
NOTES: INTEGRAL SPD IN PANEL.										
CIRCUIT DESCRIPTION	P	AMP	CKT NO	A	B	CKT NO	AMP	P	CIRCUIT DESCRIPTION	
CUH-1	2	20 A	1	750	576	2	20 A	1	UH-1	
			3			750	540	4	RECEPTACLE	
FURNACE	1	20 A	5	480	720	6	20 A	1	RECEPTACLE	
CU-1	2	20 A	7		1152	720	8	20 A	1	RECEPTACLE
			9	1152	576			10	RAD-4-6	
WH-1	2	20 A	11		1250	1152	12	20 A	1	RAD-1-3
			13	1250	0			14	20 A -- 1	
RECEPTACLE	1	20 A	15			540	0	16	20 A -- 1	
RECEPTACLE DATA RACK	1	20 A	17	360	0			18	20 A 2	
EF-1, EF-2, EF-3	1	20 A	19			768	0	20	20 A 1	
BASE HEATER	1	20 A	21	1500	750			22		
RECEPTACLE	1	20 A	23			720	750	24	20 A 2	
RECEPTACLE	1	20 A	25	180	750			26		
RECEPTACLE	1	20 A	27			180	750	28	20 A 2	
FRIDGE (GFCI)	1	20 A	29	180	576			30	20 A 1	
RECEPTACLE	1	20 A	31			360	576	32	20 A 1	
RECEPTACLE	1	20 A	33	540	960			34	20 A 2	
UH-2	1	20 A	35			576	960	36	20 A 2	
RECEPTACLE	1	20 A	37	720	0			38	20 A -- 1	
DOOR OPERATOR (VERIFY SIZE WITH MANUFACTURER)	2	80 A	39			2880	0	40	20 A -- 1	
EMERGENCY LIGHTING	1	20 A	41	2880	0			42	20 A -- 1	
OFFICE LIGHTING	1	20 A	43			16	0	44	20 A -- 2	
EXTERIOR LIGHTING-CONTROL VIA RELAY	1	20 A	45	536	0			46	20 A -- 1	
ACCESS CONTROL PANEL	1	20 A	47			256	0	48	20 A -- 1	
	1	20 A	49	0	0			50	20 A -- 1	
	1	20 A	51			750	0	52	20 A -- 1	
HIGH BAY LIGHTING	2	20 A	53	750	0			54	20 A -- 1	
				16,188 VA		15,648 VA				
				135 A		130 A				

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
LIGHTING	5,311 VA	125.00%	6,638 VA	
Other	0 VA	0.00%	0 VA	TOTAL CONN. LOAD: 31,835 VA
POWER	20,764 VA	100.00%	20,764 VA	TOTAL EST. DEMAND: 33,162 VA
RECEPTACLE	5,760 VA	100.00%	5,760 VA	TOTAL CONN.: 133 A
				TOTAL EST. DEMAND: 138 A

LEGEND:
 "G" INDICATES GFCI TYPE BREAKER, "L" INDICATES PROVIDE LOCKABLE HASP
 "F" INDICATES RED LOCK-ON HASP

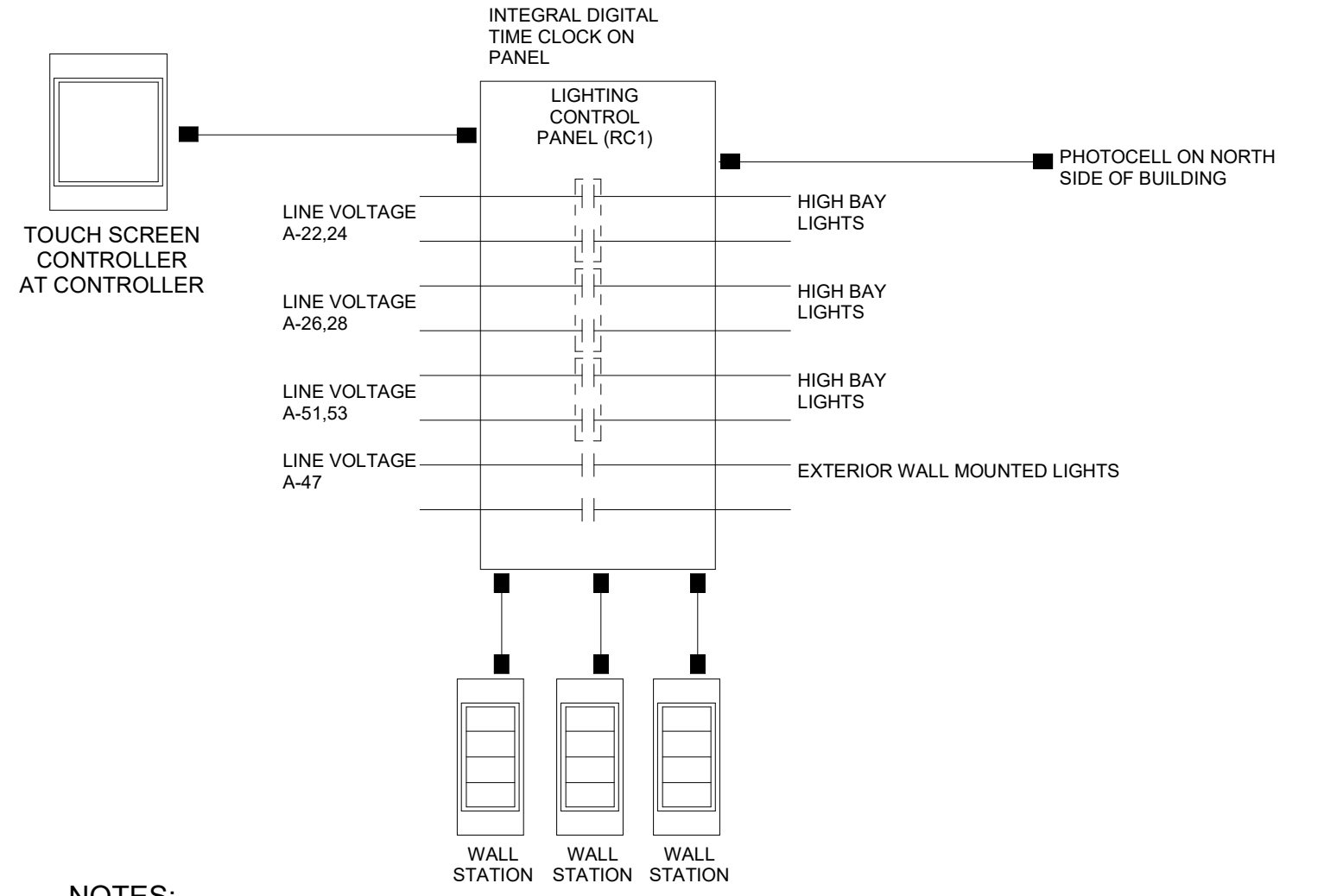
LIGHTING FIXTURE SCHEDULE										
NOTES:										
1. ALL FIXTURES SHALL BE U.L. OR SIMILARLY LISTED.										
2. INCLUDE A MINIMUM 5 YEAR WARRANTY FOR LIGHTING FIXTURES, WHERE NOT OTHERWISE SPECIFIED.										
3. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS, DETAILS, AND CONFIGURATIONS OF ALL LUMINAIRES. IF ARCHITECTURAL DRAWINGS DO NOT CLARIFY EXACT MOUNTING LOCATION OR DETAIL, ISSUE AN RFI FOR ARCHITECT TO SPECIFICALLY CLARIFY PRIOR TO FIXTURE PURCHASE.										
4. VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH ARCHITECTURAL CEILING PLAN, MATERIALS, ADJACENT CONSTRUCTION, AND ADJACENT FINISHES PRIOR TO SHOP DRAWINGS SUBMITTAL. ADJUST FIXTURE TYPE, CONSTRUCTION, FLANGE, AND OTHER COORDINATION DETAILS AS REQUIRED FOR CEILING TYPE. NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.										
5. CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL AND SUPPORT THE LUMINAIRES.										
6. AIM AND TARGET ADJUSTABLE INTERIOR AND EXTERIOR LIGHT FIXTURES UNDER THE OBSERVATION AND IN COMPLIANCE WITH RECOMMENDATIONS OF THE ARCHITECT. INCLUDE LABOR AND MATERIAL COSTS MADE NECESSARY BY THIS REQUIREMENT.										
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FILLING OUT ALL UTILITY REBATE FORMS FOR OWNER.										
TYPE	MANUFACTURER	MODEL	DESCRIPTION	FINISH	LUMENS	DRIVER TYPE	SOURCE-CCT	VOLTAGE	LOAD-VA	APPROVED EQUALS
E1	DUAL-LITE	CU2HLHO	EMERGENCY LIGHT, WALL OR CEILING MOUNTED, THERMOPLASTIC HOUSING, 2 LED ADJUSTABLE LAMP HEADS, LEAD-CALCIUM MAINTENANCE FREE BATTERY, SELF-DIAGNOSTICS	WHITE	1200	LED		120 V	2 VA	SURE-LITES, LIGHTALARMS
E2	DUAL-LITE	EV2	EMERGENCY LIGHT, WALL OR CEILING MOUNTED, THERMOPLASTIC HOUSING, 2 LED ADJUSTABLE LAMP HEADS, LEAD-CALCIUM MAINTENANCE FREE BATTERY, SELF-DIAGNOSTICS	WHITE	200	LED		120 V	2 VA	SURE-LITES, LIGHTALARMS
F1	LITHONIA	CPX-2X2-3200LM-80CRI-40K-SWL-MIN10-LUMVLT	RECESSED TROFFER 2X2, CONFIGURABLE CCT AND LUMENS	WHITE	3200	0-10V DIMMING	LED - 4000K	120 V	35 VA	COOPER, CURRENT
F2	LITHONIA	CSS L48 4000LM MVOLT 40K 80CRI	UTILITY STRIP FIXTURE 4', CHAIN HUNG AT 9' AFF.	WHITE	4000	LED	LED - 4000K	120 V	43 VA	COOPER, CURRENT
F3	LITHONIA	CPHB 1800QLM SEF GCL MD MVOLT G210 40K 80CRI DW/H HC36	PENDANT FIXTURE - RECTANGULAR 2X4, CHAIN HUNG AT HEIGHT OF ADJACENT BOTTOM OF JOIST. COORDINATE EXACT LOCATIONS WITH JOIST AND REVISE UP TO 4" TO BE CENTER IN JOIST SPACE.	WHITE	18000	LED	LED - 4000K	240 V	150 VA	COOPER, CURRENT
F4	COLUMBIA	W3B-4-TP-40-MV-SFP	VANITY FIXTURE, 1' ABOVE MIRROR, POLYCARB LENS, SQUARE LENS	WHITE	3500	LED	LED - 4000K	120 V	35 VA	LITHONIA, COOPER
F5	JUNO	JSF 7LM SWW5 90CRI 120 WH	SURFACE MOUNTED FIXTURE - 7" ROUND	WHITE	900	LED	LED - 4000K	120 V	12 VA	COOPER, GREEN CREATIVE
R1	DUAL-LITE	CORS	SINGLE LED REMOTE HEAD, FULLY ADJUSTABLE LAMP HEAD, CONNECTS TO TYPICAL 3/8" DIA. PORTION OR PROVIDE PANELING TO HAVE FLUSH FACE TO MOUNT TO	WHITE	300	LED	LED	3 V	1 VA	LITHONIA
W1	NLS	NV-W-T3-16L-53-40K7-UNV-WM-BLK	EXTERIOR WALL PACK, 20' AFF, MOUNT ON FLAT PANEL	WHITE	3600	LED	LED - 4000K	120 V	37 VA	COOPER, CURRENT
X1	COMPASS	CERRC	EXIT SIGN, UNIVERSAL MOUNTING, REMOTE CAPACITY	WHITE	-	LED	RED LED	120 V	5 VA	SURE-LITES, LIGHTALARMS, LITHONIA

LIGHTING CONTROLS SCHEDULE									
NOTES:									
1. PROVIDE LIGHTING CONTROLS AS A COMPLETE SYSTEM AND INCLUDE MATERIAL AND INSTALLATION FOR ALL POWER PACKS, ACCESSORIES, CONTROLLERS, AND WIRING REQUIRED FOR OPERATION.									
2. ALL DEVICES SHALL BE U.L. OR SIMILARLY LISTED.									
3. ALL DEVICES PROVIDED WITH MANUFACTURER LIMITED 5 YEAR WARRANTY.									
4. PROVIDE LIGHTING CONTROLS WITH MANUFACTURER COMPLIANT POWER PACKS AND LOW VOLTAGE ROOM CONTROLLERS IN QUANTITY REQUIRED TO INSTALL A COMPLETE AND OPERATIONAL SYSTEM. MANUFACTURER OR MANUFACTURERS REP TO PROVIDE DEVICE QUANTITIES, LAYOUTS AND TYPICAL WIRING DETAILS DURING SHOP SUBMITTAL PROCESS. PROVIDE DIMMING COMPATIBLE DEVICES WHERE DIMMING CONTROLS ARE SHOWN. COORDINATE DIMMING TYPE WITH LIGHTING FIXTURES SHOWN. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE DIMMING TYPE.									
5. WHERE WIRELESS LIGHTING CONTROLS ARE PROVIDED, POWERPACKS SHALL BE PROVIDED AND INSTALLED WITHIN MANUFACTURER RECOMMENDED DISTANCES TO ENSURE CONTROLLER OPERATION.									
6. INSTALL LOW VOLTAGE POWER PACKS AND ROOM CONTROLLERS ABOVE NEARBY ACCESSIBLE CEILING TILES OR IN MECHANICAL/STORAGE SPACES ADJACENT TO CONTROLLED FIXTURES. DO NOT INSTALL POWERPACKS EXPOSED IN COMMON SPACES OR IN INACCESSIBLE LOCATIONS.									
7. PROVIDE FACTORY AUTHORIZED REPRESENTATIVE TO DEMONSTRATE TYPICAL INSTALLATION AND COMMISSIONING OF EQUIPMENT.									
8. WHERE APPROVED EQUAL MANUFACTURER PRODUCTS SENSOR COVERAGE OR LOAD RATINGS DIFFER FROM BASIS OF DESIGN, CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PROVIDING ADDITIONAL DEVICES AS NECESSARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.									
9. ETD'S AND ALL EMERGENCY LIGHTING CONTROLS COMPONENTS SHALL BE TESTED AND LISTED AS COMPATIBLE BY MANUFACTURER WITH NORMAL LIGHTING CONTROLS IN ALL AREAS.									
10. UNLESS INDICATED OTHERWISE, LIGHTING CONTROL SCHEMES/OPERATION SHALL BE AS FOLLOWS:									
CORRIDORS, VESTIBULES, COMMON SPACES	SENSORS PROGRAMMED FOR OCCUPANCY MODE, AUTOMATIC ON/OFF OPERATION, 20 MINUTES MINIMUM, 30 MINUTES MAXIMUM. DIMMING CONTROL OF FIXTURES WITHIN DAYLIGHT ZONES SHALL BE BY ALWAYS ON DAYLIGHT SENSOR.								
ALL OTHER SPACES	SENSORS PROGRAMMED FOR VACANCY MODE, MANUAL ON/AUTOMATIC OFF OPERATION 20 MINUTES MINIMUM, 30 MINUTES MAXIMUM DIMMING CONTROL OF FIXTURES WITHIN DAYLIGHT ZONES SHALL BE BY ALWAYS ON DAYLIGHT SENSOR.								
DESIGNED BY: Eric Heynen									
TYPE	DESCRIPTION	ELECTRICAL RELAYS	MOUNTING	SENSOR TYPE	COVERAGE	APPROVED MANUFACTURERS			
PC	LOW VOLTAGE EXTERIOR PHOTOCELL INTEGRATED INTO RELAY PANEL RC1, WET LOCATION LISTED, ADJUSTABLE SWIVEL MOUNTING, FAIL-ON OPERATION, UNIVERSAL 120-277V RATED, 1800VA RATED.	120/277V	WALL	N/A	N/A	ACUITY ARPA PC PANEL, OR EQUALS FROM HUBBELL OR COOPER			
RC1	8-RELAY UNIVERSAL VOLTAGE 120-277V ROOMZONE CONTROLLER, CATEGORY CABLING PER MANUFACTURER STANDARD, INTERFACES WITH LOW VOLTAGE SWITCHES AND SENSORS TO PROVIDE DIMMING/SWITCHING CONTROL AND ASSOCIATED FIXTURES. UL AND PLENUM LISTED, MANUFACTURER FURNISHED FIVE YEARS WARRANTY. REFER TO DETAIL ON THIS SHEET FOR MORE INFORMATION.		8' AFF			ACUITY ARP8 PANEL, OR EQUALS FROM HUBBELL OR COOPER			
S3	THREE ZONE CONTROL LIGHT SWITCH, NON-DIMMING LIGHTING CONTROL, LIGHTING CONTROLS NETWORK COMPATIBLE DEVICE, ROOM CONTROLLER COMPATIBLE, ENABLING MULTI-ZONE SWITCHING CONTROL AND MULTI-SOURCE DIMMING, PROVIDED WITH MANUFACTURER DECORATIVE WALLPLATE, DEVICE FINISH MATCHING WIRING DEVICES SPEC.	LOW VOLTAGE	WALL SWITCH / SINGLE GANG	N/A	N/A	HUBBELL, CRESTRON, ACUITY, WATTSTOPPER, AS APPROVED BY ENGINEER.			
OS 1	CEILING MOUNTED OCCUPANCY/VACANCY SENSOR, WHITE FINISH, AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION, 8-30 MINUTE TIMER SETTINGS, INDOOR USE.	LOW VOLTAGE	CEILING / 8-12" MH	DUAL-TECH	1000 SQ FT / 360 DEG	HUBBELL, CRESTRON, ACUITY, WATTSTOPPER, GREENGATE, AS APPROVED BY ENGINEER.			
OS 2	WALL SWITCH OCCUPANCY SENSOR, DEVICE FINISH MATCHING WIRING DEVICES SPEC, RATED FOR MIN 1/8 HP MOTOR, INTEGRAL, AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION, 8-30 MINUTE TIMER SETTINGS.	120V / 0-10V DIMMING	WALL SWITCH / SINGLE GANG	DUAL-TECH	1000 SQ FT / 180 DEG	HUBBELL, CRESTRON, ACUITY, GREENGATE, AS APPROVED BY ENGINEER.			



GENERAL NOTES:
 1. PROVIDE ADEQUATE ANCHOR SUPPORT TO BOTTOM OF ROOF BEAMS.
 2. PRIME AND PAINT SUPPORT CHANNELS, FITTINGS AND CONDUITS WHITE.

① HIGH BAY MOUNTING NOT TO SCALE



NOTES:
 1. DIAGRAM SYSTEM COMPONENTS ARE BASED ON ACUITY NLIGHT SYSTEM, APPROVED EQUAL MANUFACTURER NETWORK LAYOUT MAY DIFFER IN COMPONENT QUANTITY AND TYPE.
 2. REFER TO MANUFACTURER SUBMITTALS FOR CATEGORY CABLING REQUIREMENTS, ZONE CONTROLLER AMPERAGE LIMITATIONS, MAXIMUM CABLE LENGTH, AND SYSTEM PROGRAMMING REQUIREMENTS.

② DIGITAL LIGHTING CONTROLS NETWORK NOT TO SCALE

Key Plan

Revision	Description	Date
ADDEN - 02		12/13/24

**SECTION 07 41 13
METAL ROOF PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal roof panel system of preformed steel panels and accessory components.

1.02 RELATED REQUIREMENTS

- A. Section 05 12 00 - Structural Steel Framing: Roof framing and purlins.
- B. Section 06 10 00 - Rough Carpentry: Roof sheathing.
- C. Section 07 21 00 - Thermal Insulation: Rigid roof insulation.
- D. Section 07 42 13 - Metal Wall Panels: Preformed wall panels.
- E. Section 07 92 00 - Joint Sealants: Sealing joints between metal roof panel system and adjacent construction.
- F. Section 09 91 13 - Exterior Painting: Field priming and painting roofing panels.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix).
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- C. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
 - 3. Specimen warranty.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
- D. Verification Samples: For each roofing system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.
- G. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- H. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 74 19 - Construction Waste Management and Disposal for packaging waste requirements.
- B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

1.06 FIELD CONDITIONS

- A. Do not install metal roof panels, eave protection membrane, underlayment, or _____ when surface, ambient air, or wind chill temperatures are below 45 degrees F.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Finish Warranty: Provide 5-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.
- C. Weather-tightness Warranty: Provide Standard Level 1 Warranty

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Architectural Metal Roof Panel Manufacturers:
 - 1. Basis of Design: Chief Building; MSC (Mechanically Seamed Construction) Panels
 - 2. Berridge Manufacturing Company: www.berridge.com/#sle.
 - 3. Metal Roofing Systems, Inc: www.metalroofingsystems.biz/#sle.
 - 4. Morin Corporation: www.morincorp.com/#sle.
 - 5. Petersen Aluminum Corporation: www.pac-clad.com/#sle.
 - 6. Sheffield Metals International; SMI 2.0" Mechanical Seam Standing Seam: www.sheffieldmetals.com/#sle.
 - 7. Taylor Metal Products: www.taylormetal.com/#sle.
 - 8. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 - 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
 - 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 - 3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

2.03 METAL ROOF PANELS

- A. Metal Roof Panels: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Profile: Standing seam, with minimum 2-inch seam height; concealed fastener system for field seaming with special tool.
 - 2. Texture: Smooth.
 - 3. Width: Maximum panel coverage of 24 inches.

2.04 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.05 FABRICATION

- A. Panels: Provide factory or field fabricated panels with applied finish and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
- B. Joints: Provide captive gaskets, sealants, or separator strips at panel joints to ensure weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

2.06 FINISHES

- A. Fluoropolymer Coil Coating System: Polyvinylidene fluoride (PVDF) multi-coat superior performing organic coatings system complying with AAMA 2605, including at least 70 percent PVDF resin, and at least 80 percent of coil coated metal surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss as selected by Architect from manufacturer's standard line.
 - 1. Products:
 - a. Arkema, Inc; Kynar 500: www.arkema.com/#sle.
 - b. PPG; Duranar: www.ppgmetalcoatings.com/#sle.
 - c. Sherwin-Williams Company; Fluropon: www.coil.sherwin.com/#sle.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Siliconized Polyester Coating: Epoxy primer and silicone-modified polyester (SMP) enamel topcoat with minimum dry film thickness (DFT) of 0.8 mil; color and gloss as indicated on drawings.

2.07 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, and caps of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
 - 1. Downspouts: Open face, rectangular profile.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
 - 3. Seam Sealant: Factory-applied, non-skinning, non-drying type.
- D. Thermal Insulation: Provide flexible blanket, rigid, or semi-rigid type, faced with white, flexible, non-dusting vapor retarder tested for maximum flame spread index of 50, per ASTM E84; for installation using spacer blocks.
 - 1. Thermal Resistance: Minimum, R-value of R-19 + R-11.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to ensure that completed roof will be free of leaks.
- B. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by metal roof panel manufacturer.
- C. At locations where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and metal roof panel manufacturer's instructions and recommendations, as applicable to specific project

conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.

1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.
- B. Accessories: Install necessary components that are required for complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- C. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.
1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by panel manufacturer.
- D. Insulation: Install insulation between roof covering and supporting members to present a neat appearance; fold, staple, and tape seams unless otherwise approved by Architect.

3.04 CLEANING

- A. See Section 01 70 00 - Execution and Closeout Requirements for additional requirements.
- B. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

END OF SECTION

**SECTION 07 42 13
METAL WALL PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured metal panels for walls, with related flashings and accessory components.

1.02 RELATED REQUIREMENTS

- A. Section 07 21 00 - Thermal Insulation.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between metal wall panel system and adjacent construction.
- C. Section 13 34 19 - Metal Building Systems

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

1.04 SUBMITTALS

- A. Shop Drawings: Indicate dimensions, layout, joints, construction details, and methods of anchorage.
- B. Samples: Submit two samples of wall panel, 8 inch by 12 inch in size illustrating finish color, sheen, and texture.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

1.06 WARRANTY

- A. Correct defective work within a ten year period after Date of Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather.
- B. Correct defective work within a five year period after Date of Substantial Completion, including defects in water tightness.
- C. Installation Warranty for Building Rainscreen Assembly: Installer of exterior rainscreen assembly (including air/vapor barrier and attachments, framing, and exterior panels) to provide Standard Level 1 20-year warranty that includes coverage for defective materials and/or workmanship. This warranty will also clearly include materials, labor, necessary activity to access these areas, and removal of any materials to effect repairs and restore to watertight conditions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Wall Panels - Exposed Fasteners:
 - 1. Basis of Design: AP Wall Panel manufactured by Chief Building.
 - 2. Berridge Manufacturing Company: www.berridge.com/#sle.
 - 3. Morin Corporation: www.morincorp.com/#sle.
 - 4. Petersen Aluminum Corporation: www.pac-clad.com/#sle.
 - 5. Sheffield Metals International: www.sheffieldmetals.com
 - 6. Taylor Metal Products: www.taylormetal.com/#sle
 - 7. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 MANUFACTURED METAL PANELS

- A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.

1. Provide exterior wall panels, interior liner panels, and subgirt framing assembly.
 2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
 3. Design Pressure: In accordance with applicable codes.
 4. Maximum Allowable Deflection of Panel: $L/180$ for length(L) of span.
 5. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
 6. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 7. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
 8. Corners: Factory-fabricated in one continuous piece with minimum 2 inch returns.
- B. Exterior Metal Wall Panels:**
1. Profile: Vertical; AP style.
 2. Side Seams: Interlocked, tight-fitting, sealed with continuous bead of sealant.
 3. Material: Precoated steel sheet, 22 gage, 0.0299 inch minimum thickness.
 4. Panel Width: 36 inches or manufacturer's standard.
 5. Color: As selected by Architect from manufacturer's standard line.
- C. Interior Liner Panels:**
1. Profile: Vertical.
 2. Side Seams: Interlocking, unsealed.
 3. Panel Width: 1 inch.
 4. Color: White polyester coating from manufacturer's standard line.
- D. Subgirt Framing Assembly:**
1. Galvanized steel subgirts, sized as required to support panel system.
 2. 16 gage, 0.0598 inch thick formed non-precoated steel sheet.
 3. Profile as indicated; to attach panel system to thermally isolated clip system.
- E. Internal and External Corners:** Same material, thickness, and finish as exterior sheets; profile to suit system; brake formed to required angles.
- F. Trim:** Same material, thickness and finish as exterior sheets; brake formed to required profiles.

2.03 MATERIALS

- A. Precoated Steel Sheet:** Hot-dipped galvanized steel sheet, ASTM A653/A653M, Structural Steel (SS) or Forming Steel (FS), with G90/Z275 coating; continuous coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

2.04 FINISHES

- A. Exposed Surface Finish:** Panel manufacturer's standard polyvinylidene fluoride (PVDF) coating, top coat over epoxy primer.
- B. Interior Application, Panel Finish:** Panel manufacturer's standard siliconized polyester coating, top coat over recommended primer.
- C. Custom Fluoropolymer Coating System:** Polyvinylidene fluoride (PVDF) multi-coat thermoplastic fluoropolymer coating system, including minimum 70 percent PVDF color topcoat and minimum total dry film thickness (DFT) of 0.9 mil; color and gloss as selected from manufacturer's standard line.

2.05 ACCESSORIES

- A. Concealed Sealants:** Non-curing butyl sealant or tape sealant.
- B. Fasteners:** Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.

- C. Field Touch-up Paint: As recommended by panel manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that framing members are ready to receive panels.
- B. Verify that weather barrier has been installed over substrate completely and correctly.

3.02 PREPARATION

- A. Install subgirts perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at 24 inches on center, maximum.

3.03 INSTALLATION

- A. Install panels on walls in accordance with manufacturer's instructions.
- B. Fasten panels to structural supports; aligned, level, and plumb.
- C. Locate joints over supports.
- D. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.04 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch.
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/8 inch.

3.05 CLEANING

- A. Remove site cuttings from finish surfaces.
- B. Remove protective material from wall panel surfaces.

END OF SECTION

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**SECTION 13 34 19
METAL BUILDING SYSTEMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufacturer-engineered, shop-fabricated structural steel building frame and related components.

1.02 RELATED REQUIREMENTS

- A. Section 05 50 00 - Metal Fabrications.
- B. Section 07 21 00 - Thermal Insulation
- C. Section 07 41 13 - Metal Roof Panels
- D. Section 07 42 13 - Metal Wall Panels
- E. Section 07 92 00 - Joint Sealants: Sealing joints between accessory components and wall system.
- F. Section 08 11 13 - Hollow Metal Doors and Frames.
- G. Section 08 36 13 - Sectional Doors.
- H. Section 08 26 17 - Hydraulically Operated Doors

1.03 REFERENCE STANDARDS

- A. AISC 360 - Specification for Structural Steel Buildings.
- B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
- C. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- D. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
- E. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- F. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- G. ASTM A529/A529M - Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality.
- H. ASTM A992/A992M - Standard Specification for Structural Steel Shapes.
- I. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- J. ASTM C991 - Standard Specification for Flexible Fibrous Glass Insulation for Metal Buildings.
- K. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
- L. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- M. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials.
- N. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
- O. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength.
- P. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.

- Q. AWS D1.1/D1.1M - Structural Welding Code - Steel.
- R. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems.
- S. MBMA (MBSM) - Metal Building Systems Manual.
- T. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic").

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on profiles, component dimensions, fasteners.
- C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections; wall and roof system dimensions, panel layout, general construction details, anchors and methods of anchorage, and installation; framing anchor bolt settings, sizes, locations from datum, and foundation loads; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and signature.
- D. Design Documents: Calculations signed and sealed by Design Professional.
- E. Samples: Submit two samples of precoated metal wall panels, roof panels, and trim for each color selected, 12 by 12 inch in size illustrating color and texture of finish.
- F. Designer's Qualification Statement.
- G. Manufacturer's Qualification Statement: Provide documentation showing metal building manufacturer is accredited under IAS AC472.

1.05 QUALITY ASSURANCE

- A. Designer Qualifications: Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of this type of work.
 - 1. Design Engineer Qualifications: Licensed in the State in which the Project is located.
 - 2. Comply with applicable code for submission of design calculations as required for acquiring permits.
 - 3. Cooperate with regulatory agency or authorities having jurisdiction (AHJ), and provide data as requested.

1.06 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty for steel rigid frame and accessory components.
 - 1. Include coverage for exterior pre-finished surfaces to cover pre-finished color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading. Include coverage for weather tightness of building enclosure elements after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Buildings Systems:
 - 1. Chief Buildings: www.chiefbuildings.com/#sle.
 - 2. Nucor Building Systems: www.nucorbuildingsystems.com/#sle.
 - 3. Alliance Steel Building Systems.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 ASSEMBLIES

- A. Single span rigid frame.
- B. Bay Spacing: 20 ft.
- C. Primary Framing: Rigid frame of rafter beams and columns, canopy beams, and wind bracing.

- D. Secondary Framing: Purlins, and other items detailed.
- E. Wall System: See Section 07 42 13 - Metal Wall Panels for preformed metal panels of vertical profile, with sub-girt framing/anchorage assembly, insulation, and liner sheets, and accessory components.
- F. Roof System: See Section 07 41 13 - Metal Roof Panels for reformed metal ribbed standing seam panels oriented parallel to slope, with sub-girt framing/anchorage assembly, insulation, liner panels, and thermal blocks, and accessory components.
- G. Roof Slope: 1 inches in 12 inches.

2.03 PERFORMANCE REQUIREMENTS

- A. Installed Thermal Resistance of Wall System: R-value of R-30.
- B. Installed Thermal Resistance of Roof System: R-value of R-19 + R-11.
- C. Design structural members to withstand dead load, applicable snow load, and design loads due to pressure and suction of wind calculated in accordance with applicable code.
- D. Design structural members to withstand live loads,, and positive and negative wind loads as indicated on drawings.
- E. Provide drainage to exterior for water entering or condensation occurring within wall or roof system.
- F. Permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of ____ degrees F.
- G. Size and fabricate wall and roof systems free of distortion or defects detrimental to appearance or performance.

2.04 MATERIALS - FRAMING

- A. Structural Steel Members: ASTM A36/A36M.
- B. Structural Tubing: ASTM A500/A500M Grade B cold-formed.
- C. Plate or Bar Stock: ASTM A529/A529M, Grade 50.
- D. Anchor Bolts: ASTM A307, Grade A, with no preference for protective coatings.
- E. Anchor Bolts: ASTM F1554, Grade 36, Class 1A, with no preference for protective coating.
- F. Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1; galvanized to ASTM A153/A153M.
- G. Welding Materials: Perform in accordance with AWS D1.1/D1.1M.
- H. Primer: SSPC-Paint 20 zinc rich.
- I. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
 - 1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
 - 2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

2.05 MATERIALS - WALLS AND ROOF

- A. Metal Building Type, Factory Applied, Vapor-Barrier Insulation Facings: Water vapor permeance no greater than 0.10 perm when tested in accordance with ASTM E96/E96M; flame spread index of 25 or less, and smoke developed index of 40 or less when tested in accordance with ASTM E84.
 - 1. Manufacturers:
 - a. Basis of Design: Thermal Design; Simple Saver.
 - b. Therm-All; Opti-Liner.
 - c. Rhino Steel Building Systems; Pro-Value
- B. Joint Seal Gaskets: Manufacturer's standard type.
- C. Fasteners: Manufacturer's standard type, galvanized to comply with requirements of ASTM A153/A153M, finish to match adjacent surfaces when exterior exposed.

- D. Sealant: ASTM C920, elastomeric sealant with movement capability of at least plus/minus 50 percent; 100 percent silicone; for exposed applications, match adjacent colors as closely as possible.
- E. Trim, Closure Pieces, Caps, Flashings, Gutters, Downspouts, Rain Water Diverter, Fascias, and Infills: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

2.06 COMPONENTS

- A. Doors and Frames: See Section 08 11 13.
- B. Overhead Doors: See Section 08 36 13.
- C. Hydraulically Operated Doors: See Section 08 36 17.
- D. Wall Louvers: same finish as adjacent material, with steel mesh bird screen and frame.

2.07 FABRICATION - FRAMING

- A. Fabricate members in accordance with AISC 360 for plate, bar, tube, or rolled structural shapes.
- B. Anchor Bolts: Formed with bent shank, assembled with template for casting into concrete.
- C. Provide wall opening framing for doors, windows, and other accessory components.

2.08 FABRICATION - WALL AND ROOF PANELS

- A. Siding: AP profile with ribs facing inward, 1-1/8" inch deep, lapped edges fitted with continuous gaskets.
- B. Roofing: Standing Seam profile, lapped edges fitted with continuous gaskets.
- C. Liner: Minimum 1 inch metal thickness, flat profile indicated, lapped V edges fitted with continuous gaskets and manufacturer's standard edge trim. Height as indicated on drawings.
- D. Girts/Purlins: Rolled formed structural shape to receive siding, roofing and liner sheet.
- E. Internal and External Corners: Same material thickness and finish as adjacent material, profile brake formed to required angles. Back brace mitered internal corners.
- F. Expansion Joints: Same material and finish as adjacent material where exposed, manufacturer's standard brake formed type, of profile to suit system.
- G. Flashings, Closure Pieces, Fascia: Same material and finish as adjacent material, profile to suit system.
- H. Fasteners: To maintain load requirements and weather tight installation, same finish as cladding, non-corrosive type.

2.09 FABRICATION - GUTTERS AND DOWNSPOUTS

- A. Fabricate of same material and finish as roofing metal.
- B. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion at joints.
- C. Fabricate support straps of same material and finish as roofing metal, color as selected.

2.10 FINISHES

- A. Framing Members: Clean, prepare, and shop prime. Do not prime surfaces to be field welded.
- B. Exterior Surfaces of Wall Panels: Precoated enamel on steel of modified silicone finish, white color as selected from manufacturer's standard range.
- C. Exterior Surfaces of Wall and Roof Trim, Components, and Accessories: Precoated enamel on steel of modified silicone finish, gray color as selected from manufacturer's standard range.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position

3.02 ERECTION - FRAMING

- A. Erect framing in accordance with AISC 360.
- B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated.
- C. Set column base plates with non-shrink grout to achieve full plate bearing.
- D. Do not field cut or alter structural members without approval.
- E. After erection, prime welds, abrasions, and surfaces not shop primed.

3.03 ERECTION - WALL AND ROOF PANELS

- A. Install in accordance with manufacturer's instructions.
- B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.
- C. Fasten cladding system to structural supports, aligned level and plumb.
- D. Locate end laps over supports. End laps minimum 2 inches. Place side laps over bearing.
- E. Provide expansion joints where indicated.
- F. Use concealed fasteners.
- G. Install sealant and gaskets, providing weather tight installation.

3.04 ERECTION - GUTTERS AND DOWNSPOUTS

- A. Rigidly support and secure components. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts.
- B. Slope gutters minimum 1/4 inch/10 ft.
- C. Connect downspouts to storm sewer system.

3.05 INSTALLATION - ACCESSORY COMPONENTS IN WALL SYSTEM

- A. Install door frames, doors, overhead doors, and windows and glass in accordance with manufacturer's instructions.

3.06 TOLERANCES

- A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.
- B. Siding and Roofing: 1/8 inch from true position.

END OF SECTION

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RFB 942300-01 Pre-Bid Minutes: Meeting #1

Meeting Date	Dec 4, 2024	Meeting Time	3:30 PM - 4:30 PM Central Time (US & Canada)
Meeting Location	215 East 7th St. Des Moines, Iowa 50319	Video Conferencing Link	https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZTYzNjl1MWQtY2JmNC00MDQzLWFkMmltZGE1NWwRiNzU5MDhl%40thread.v2/0?context=%7b%22Tid%22%3a%2253f2f9ee-ba23-4c21-ac85-5776fb004a49%22%2c%22Oid%22%3a%2225d7c00d-f30a-4397-acfe-752a9c17700b%22%7d

Overview Meeting to allow prospective bidders to visit the site, when possible, and learn more about the project.

Notes

Attachments [Hangar Prebid 12-4 Atten. List.pdf](#)

Scheduled Attendees

Name	Company	Phone Number	Email	Attendance
Barbara Bendon	DAS Space Management & Leasing Division	P: (515) 281-8887	barbara.bendon@iowa.gov	Absent
Jarrad Boever	DCI Group	P: (515) 244-5043	jarradb@dcigroup-us.com	Present
Sam Escherich	DCI Group	P: (515) 244-5043	same@dcigroup-us.com	Absent
Michael Steen	DCI Group	P: (515) 244-5043	michaels@dcigroup-us.com	Present
Jim Wittenwyler	Department of Public Safety - District 15	P: (515) 725-6048	wittenwy@dps.state.ia.us	Present
Chris Davis	KCL Engineering	P: (515) 724-7938	cdavis@kclengineering.com	Absent
Eric Heynen	KCL Engineering	P: (515) 724-7938	eheyne@kclengineering.com	Present
Jon LaCroix	KCL Engineering	P: (515) 339-7800	jlacroix@kclengineering.com	Absent
Nick Christensen	OPN Architects	P: (515) 309-0722	nchristensen@opnarchitects.com	Present
Ruth Kuswara	OPN Architects	P: (515) 724-5493	rkuswara@opnarchitects.com	Absent
Nate Stieler	OPN Architects	P: (515) 309-0722	nstieler@opnarchitects.com	Absent
John Rhodes	Raker Rhodes Engineering LLC	P: (515) 277-0275	jrhodes@rakerrhodes.com	Absent
Justin Strom	Snyder & Associates, Inc.		jstrom@snyder-associates.com	Present
Brandon Adams	State of Iowa - Department of Administrative Services		brandon.adams@iowa.gov	Present

Introduction

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
1.1	1	Introductions				Open
<p>Description DAS</p> <ul style="list-style-type: none"> • Brandon Adams - Owners Rep. • Barb Bendon - Bureau Chief - Space Management & Leasing <p>DCI Group - Construction Manager</p> <ul style="list-style-type: none"> • Michael Steen - Vice President • Jarrad Boever - Project Manager • Sam Escherich - Superintendent <p>DPS</p> <ul style="list-style-type: none"> • Jim Wittenwyler - Director • Nathan Andrews - Captain <p>Design Team</p> <ul style="list-style-type: none"> • OPN <ul style="list-style-type: none"> ◦ Nate Stieler - Architect ◦ Nick Christensen - Architect ◦ Ruth Kuswara • KCL <ul style="list-style-type: none"> ◦ Chris Davis - Associate Principle / Chief Technology Engineer ◦ Eric Heynen - Associate Principle / Senior Electrical Engineer ◦ Jon LaCroix - Principle / Senior Electrical Engineer ◦ Scott Hinshaw • Snyder & Associates <ul style="list-style-type: none"> ◦ Justin Strom - Civil Engineer • Raker Rhodes Engineering LLC <ul style="list-style-type: none"> ◦ John Rhodes - Structural Engineer <p>Present for meeting - not noted above in attendance.</p> <p>Official Documented Meeting Minutes See attendance list attached.</p>						

Project Overview

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
2.1	1	Project Description				Open
<p>Description DPS Ankeny Aircraft Hangar</p> <ul style="list-style-type: none"> • Base bid <ul style="list-style-type: none"> ◦ Bid Package #01 - General Construction ◦ Bid Package #02 - Site Improvements ◦ Bid Package #03 - Electrical, Low Voltage, Access Controls & Security 						

- Bid Package #04 - Mechanical and Plumbing
- Bid Package #05 - Complete Scope of Project?
- Alternates
 - Alternate #01 - Interior Liner Wall Panel (07 4213)
 - Alternate #02 - Epoxy Floor in Lou of Sealed Concrete (03 3511, 09 6710)
 - Alternate #03 - Prefabricated Metal Canopy (10 7316)

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
2.2	1	Project Schedule				Open
<p>Description</p> <ul style="list-style-type: none"> • Contract(s) Issued: 01/02/2025 • Submittals: 01/30/2025 • Construction: 03/25/2025 • Closeout: 10/23/2025 <p>A pull-plan session will be held with the successful bid package contractors to finalize the construction schedule.</p> <p>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</p> <p>Official Documented Meeting Minutes No questions.</p>						

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
2.3	1	Site Rules				Open
<p>Description</p> <ul style="list-style-type: none"> • 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. • Construction progress meeting will be established once construction starts. • Clean all debris and materials. Maintain a clean worksite. • No smoking, vaping or smokeless tobacco use onsite. • All Bid Packages shall maintain a full set of redlined as-built drawings onsite at all times. As-built drawings shall be updated throughout construction and will be reviewed with the Construction Manager on a routine basis. • Work hours - abide by local codes. No airport restrictions. • Construction Operations: Limited to areas noted on Drawings. • Provide access to and from site as required by law and Owner: <ul style="list-style-type: none"> ◦ Do not obstruct roadways, sidewalks, or other public ways without permission of Owner and permit if required. • The staff of the State of Iowa has a responsibility to protect the public by providing a secure environment. All work site rules must be followed to the letter, at all times. • All construction workers must have a background check completed prior to entering the campus to perform work. • Hot Work Permit Processes and Fire Watch, when necessary, will be adhered to for this project. • You are permitted access only to the work site and no other area of the institution. • No drugs, alcohol, or firearms are allowed on the work site. • Company and personal vehicles are to be parked and locked in designated or authorized area of the work. • Maintain control of all tools, supplies, and debris at all times during the work. • Secure all tools at the end of each day. 						

- All delivery vehicles must go directly to the job site. Extra time should be anticipated for all deliveries. Provide 24-hour notice to the facility of deliveries.
- During an emergency, follow the instructions of the airport staff.
- Ankeny Airport Rules

- View Specification 01 1200 - Contract Summary for more information.

Official Documented Meeting Minutes
 No questions.

RFB Overview

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.1	1	Bid Submission				Open
Description						
<ul style="list-style-type: none"> • Bids are due December 17th, 2024 by 2:00pm. • The Bid shall be submitted to the Issuing Officer through the IMPACS Electronic Procurement System. <ul style="list-style-type: none"> ◦ Link and information is in the project manual ◦ Contractors will need to register prior to bidding ◦ Bidders will need to register regardless of whether it has already done business 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 December 17th, 2024 at 3:30pm. • Contractor shall reference section 00 0116 for the bid submittal checklist <ul style="list-style-type: none"> ◦ 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						
No questions.						

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.2	1	Bid Schedule				Open
Description						
<ul style="list-style-type: none"> • Questions/Substitutions Due in Writing to Construction.Procurement@iowa.gov: December 10th, 2024 by 4:00pm • Addendum Issued: Addendum #01 posted on December 2nd, 2024 • Bids Due: December 17th, 2024 by 2:00pm • Tentative NOI Issued: December 20th, 2024 						
Official Documented Meeting Minutes						
Contractors feel schedule seems reasonable.						

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.3	1	Administrative Details				Open
Description <ul style="list-style-type: none"> • 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. • 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. <ul style="list-style-type: none"> ◦ 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. <ul style="list-style-type: none"> ◦ 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. 						

No.	Mtg Origin	Title	Assignment	Due Date	Priority	Status
3.4	1	Pre-Bid Site Visits				Open
Description <i>Discuss if needed.</i>						
Official Documented Meeting Minutes N/A						

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 by December 10th, 2024 by 4:00pm.						
Official Documented Meeting Minutes Q1. Will the guard hangar happen during the timeframe of the DPS Hangar? A1. Unknow at this time. The IAANG Hangar will be a complete separate project. Q2. Are there any concerns with the lead time of the prefab metal building? A2. Currently estimated lead times are around 8 to 12 weeks. Selected contractor will be responsible for providing a schedule once lead times are known.						

These meeting minutes are believed to be an accurate reflection of those items discussed and the conclusions that were reached during the referenced meeting. Please contact State of Iowa - Department of Administrative Services if there are any discrepancies or questions with the content of these minutes.



Project: 942300

Date: Dec 04, 2024

PLEASE PRINT CLEARLY

Name	Company	Phone #	Email
Matt K Grabau	Baker Group	515 344 1274	grabau@thebakergroup.com
Damon Moran	Baker Group	515-514-4508	dmoran@thebakergroup.com
Logan Schumacher	Baker Group	515-318-8179	SchumacherL@thebakergroup.com
PICK CHRISTENSEN	OPN ARCHITECTS	515-309-0726	PKCHRISTENSEN@OPNARCHITECTS.COM
ROBERT MORRIS	AIRCONMECHANICAL	515-243-5500	Rmorris@airconmechanical.com
Jon Rorda	Cunningham Inc	641 660 5397	birds@cunninghaminc.com
CHARLIE DUNN	JENSEN BUILDERS	515-219-0223	charlie@jensenbuilders.com
Kevin Day	Commonwealth Electric	515-681-0127	Kday@commonwealthelectric.com
Tim Grubb	Baker Group	515-399-1769	grubbt@thebakergroup.com
Nick Yeast	Estimator / Project ^{Estimator} Manager	515-402-5427	Nick.yeast@elder.com
Michael Steen	DCI Group	_____	_____
Jarrad Boever	DCI Group	_____	_____
Matthew Hartman	Roofing Representatives	_____	Matthew@roofingrepresentatives.com
Justin Strom	Snyder & Assoc.	319-330-0308	jstrom@snyder-associates.com
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END OF ADDENDUM #02