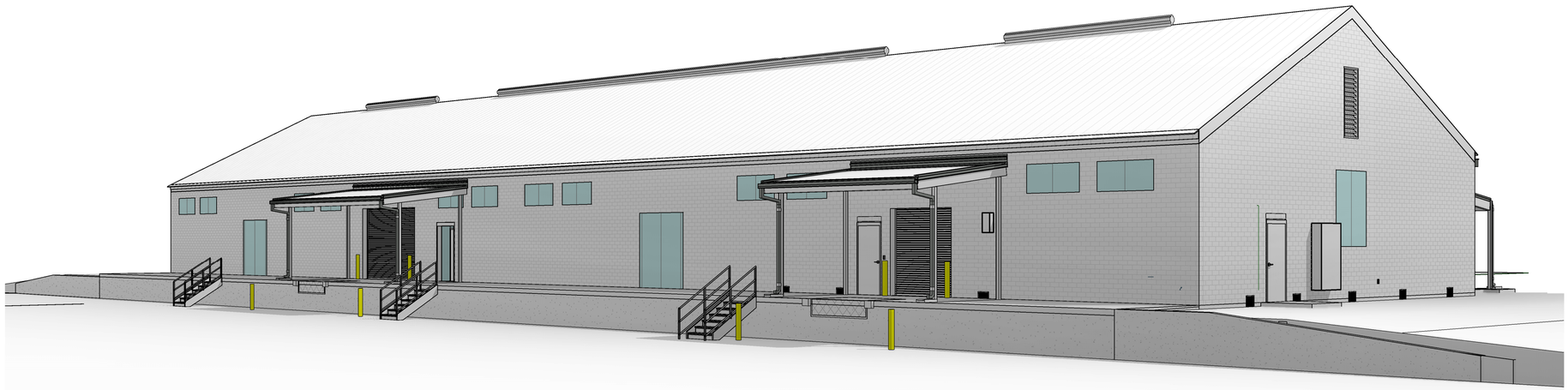

AEROJET
BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

CROMWELL

1300 East 6th Street Little Rock, AR 72202
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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC.
C-98
REGISTERED ARCHITECTS
ARKANSAS

REGISTERED ARCHITECT
DANIEL K. FOWLER
No. 3339
ARKANSAS

10-09-2024

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Project Number **2024-079**

Issue Date **10-09-2024**

Sheet Title

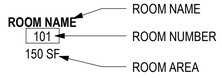
TITLE SHEET

Sheet Number

G-001

SYMBOLS LEGEND

ROOM LABEL



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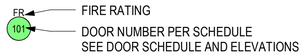

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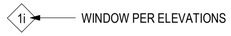
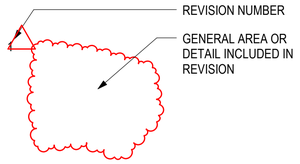


REVISION IDENTIFICATION



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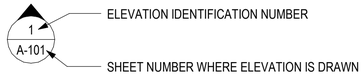

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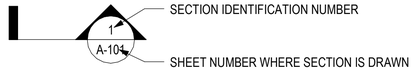

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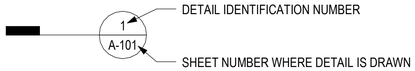

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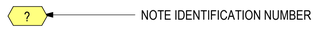

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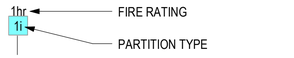

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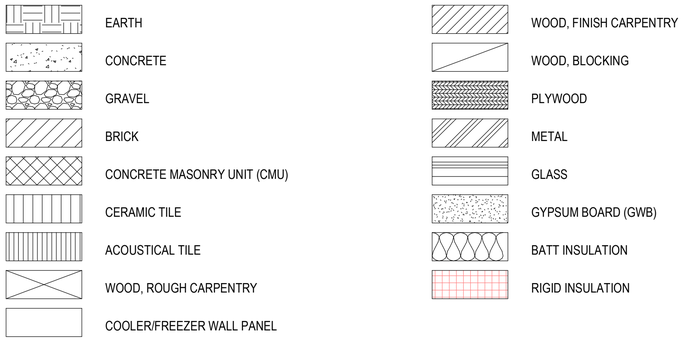

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Project

AEROJET BUILDING 2SH8
COLD BOX
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ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description
1	03-03-2025	RB 001

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

10-09-2024

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Issue Date **10-09-2024**

Sheet Title

INDEX, SYMBOLS & ABBREV.

Sheet Number

G-002

NOTES

A. GENERAL SITE VERIFICATION REQUIREMENTS:

A1. EXISTING CONDITIONS SHOWN IN THESE PLANS ARE BASED ON LIMITED FIELD OBSERVATIONS BY THE ARCHITECT AND ORIGINAL DESIGN DRAWINGS. ALL EXISTING MATERIAL, DIMENSIONS, ELEVATIONS, AND GENERAL CONDITIONS OF THE BUILDING SHALL BE VERIFIED BEFORE PURCHASE OF MATERIAL AND CONSTRUCTION. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS IMMEDIATELY.

A2. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES (WHETHER SHOWN OR NOT) PRIOR TO THE SUBMISSION OF HIS BID OR THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE DISCOVERY OF EXISTING UTILITIES NOT SHOWN OR NOTED ON DRAWINGS. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTHS OF UNDERGROUND UTILITY SERVICES PRIOR TO ANY EXCAVATION.

B. GENERAL CONSTRUCTION REQUIREMENTS:

B1. ALL WORK SHALL BE DONE IN A SAFE AND WORKMANLIKE MANNER AND IN STRICT ACCORDANCE WITH THE GOVERNING BUILDING CODES, NATIONAL ELECTRIC CODE, AND ALL APPLICABLE REGULATIONS AND ORDINANCES HAVING JURISDICTION.

B2. THE CONTRACTOR IS TO UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS COMPLETELY. EACH ASPECT OF THE WORK MAY BE INDICATED IN ONE DISCIPLINE OR INDICATED IN MULTIPLE DISCIPLINES. REVIEW ALL INFORMATION FROM ALL DISCIPLINES AND COMPLETELY FIELD VERIFY ALL CONDITIONS BEFORE IMPACTING EXISTING CONDITIONS OR PROVIDING NEW WORK.

B3. EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO DO SO DOES NOT RELIEVE ANY RESPONSIBILITY FOR PERFORMING THIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE.

B4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF ALL ITEMS, AND IF ANY DISCREPANCIES ARE FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT EXISTS IN THE FIELD, CONTACT THE ARCHITECT TO DETERMINE THE PROPER COURSE OF ACTION. THE CONTRACTOR'S APPROVAL FOR FABRICATION INDICATES THE ACCEPTANCE OF EXISTING CONDITIONS.

B5. THE OWNER SHALL OCCUPY PORTIONS OF THE FACILITY DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ALL CONSTRUCTION PROCEDURES WHICH WILL INTERFERE WITH THE NORMAL DAILY OPERATIONS OF THE FACILITY. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE OWNER FOR ALL INTERRUPTIONS OF UTILITY SERVICES TO THE EXISTING BUILDING PRIOR TO THE INTERRUPTION. ACCIDENTAL INTERRUPTIONS SHALL BE REMEDIED IMMEDIATELY WITH APPROPRIATE FORCES.

B6. THE EXISTING BUILDING SHALL BE PROTECTED AT ALL TIMES FROM MOISTURE, DUST AND DEBRIS. INSTALL DUST PARTITIONS AS REQUIRED AND/OR AS SHOWN TO KEEP THE EXISTING PREMISES FREE FROM DUST AND DEBRIS. PROVIDE BARRICADES SEPARATING THE PUBLIC FROM CONSTRUCTION ACTIVITY.

B7. ANY DAMAGE TO THE OWNER'S PROPERTY OR OWNER'S EMPLOYEES CAUSED BY THE CONSTRUCTION PROCESS SHALL BE REPAIRED/REPLACED AT NO COST TO THE OWNER OR OWNER'S EMPLOYEES.

B8. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE SECURITY SYSTEM OF THE EXISTING FACILITY AT ALL TIMES. THIS INCLUDES KEEPING THE FACILITY SECURE FROM PERSONS, ENVIRONMENTAL ELEMENTS, OR HAZARDS. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE OWNER PRIOR TO THE MODIFICATION OF ANY SECURITY SYSTEM OR THE DISABLING OF SUCH.

B9. THE CONTRACTOR SHALL KEEP THE CONSTRUCTION AREA FREE AND CLEAR OF DEBRIS. REMOVE TRASH AND DEBRIS FROM CONSTRUCTION AREA AND DO NOT ALLOW TO ACCUMULATE. NO FLAMMABLE MATERIALS/LIQUIDS MAY BE STORED IN THE EXISTING BUILDING OR THE EXPANSION DURING CONSTRUCTION. PROVIDE EXTINGUISHERS AS REQUIRED BY LOCAL AND STATE AUTHORITIES, UL LISTED 2A:20BC DRY CHEMICAL FIRE EXTINGUISHERS, ACCESSIBLE AT ALL TIMES WITHIN ALL CONSTRUCTION AREAS.

B10. THE CONTRACTOR SHALL MAINTAIN THE REQUIRED NUMBER OF EXITS FROM THE FACILITY. MAINTAIN EXITS, EXIT SIGNS AND EMERGENCY LIGHTING AT ALL TIMES AS REQUIRED BY THE GOVERNING AUTHORITIES.

B11. REMOVE ANY EXISTING ITEMS, SERVICES, FINISHES/OR SURFACES AS REQUIRED FOR THE INSTALLATION OF NEW CONSTRUCTION.

B12. REPAIR, RE-ROUTE AND EXTEND ALL SERVICES, PIPING, CONDUIT OF EXISTING ITEMS AND EQUIPMENT AS REQUIRED DURING THE CONSTRUCTION PROCESS FOR THE COMPLETE INSTALLATION AND OPERATIONS OF NEW EQUIPMENT. THIS INCLUDES ALL ITEMS SHOWN OR NOT SHOWN ON THE DRAWINGS. RESET EXISTING EQUIPMENT OR RELATED ITEMS AS REQUIRED FOR PROPER OPERATION.

B13. PATCH, REPAIR, AND REFINISH CONSTRUCTION AT INTERFACE OF NEW AND EXISTING FINISHES. FINISH NEW SURFACES AT INTERFACE TO MATCH EXISTING.

B14. ALL QUESTIONS RELATING TO THE CONSTRUCTION OF THIS PROJECT SHALL BE DONE IN WRITTEN FORM USING THE "REQUEST FOR INFORMATION" FORM, INCLUDED IN THE SPECIFICATIONS, THROUGH THE GENERAL CONTRACTOR ONLY. FOLLOW INSTRUCTIONS WHEN COMPLETING AND SENDING THIS FORM.

C. GENERAL FLOOR PLAN NOTES:

REFER TO ARCH PLAN SHEETS (A-101)

C1. ALL DIMENSIONS ARE TO FACE OF CMU OR METAL WALL PANEL UNLESS NOTED OTHERWISE.

C2. CLEAN, PATCH AND REPAIR EXISTING WALL SURFACES SCHEDULED TO BE REFINISHED.

C3. ALL NEW FLOORING SHALL BE PROTECTED FROM SCRATCHING, MARKING, STAINING, ETC. DURING CONSTRUCTION. ANY FLOORING THAT IS DAMAGED BY CONSTRUCTION AND DOES NOT APPEAR IN NEW CONDITION AT THE TIME OF POSSESSION WILL BE REPLACED BY THE GENERAL CONTRACTOR AT HIS EXPENSE. INSTALL SEALED CONCRETE TRANSITION STRIP WHERE FLOORING ABUTS EXPOSED CONCRETE FLOOR.

C4. CLEAN ALL EXISTING HVAC GRILLES WHICH REMAIN, PRIOR TO CONTRACT COMPLETION.

D. GENERAL DEMOLITION REQUIREMENTS:

REFER TO ARCH DEMO SHEETS (AD101)

D1. ALL DEMOLITION SHALL BE CARRIED OUT IN A SAFE MANNER AND IN STRICT ACCORDANCE WITH OSHA REGULATIONS.

D2. THE CONTRACTOR SHALL FIELD VERIFY THE EXTENT OF DEMOLITION. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE DEMOLITION AND REMOVAL OF WALLS, CEILINGS, ROOFING, DOORS, FIXTURES, PLUMBING, MECHANICAL AND ELECTRICAL ITEMS INCLUDING CONDUITS AND DUCTWORK AS SHOWN ON DRAWING OR AS REQUIRED FOR THE INSTALLATION OF THE NEW WORK FOR A COMPLETE JOB. THE CONTRACTOR SHALL REPLACE ANY/ALL FLOOR, WALL, OR CEILING FINISHES DAMAGED AS A RESULT OF DEMOLITION. MATCH EXISTING ADJACENT FINISHES.

D3. WHEN UTILITIES ARE REMOVED, CAP AND SEAL A MINIMUM OF 8" BELOW FINISH FLOOR OR A MINIMUM OF 6" ABOVE FINISH CEILING.

D4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING AND SUPPORT SYSTEMS FOR EXISTING STRUCTURE AND TO KEEP THE EXISTING STRUCTURE INTACT AND IN A SAFE CONDITION DURING DEMOLITION AND NEW CONSTRUCTION. THE CONTRACTOR SHALL RETAIN A REGISTERED PROFESSIONAL ENGINEER TO DESIGN THE SHORING OR BRACING AND SPECIFY DEMOLITION PROCEDURES. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR MEANS AND METHODS OF DEMOLITION AND NEW CONSTRUCTION.

D5. DURING DEMOLITION AND RECONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ANY REQUIRED SAFETY BARRIERS OR BARRICADES. PROVIDE BARRICADES SO AS TO PRECLUDE INTRUSION OF PUBLIC INTO CONSTRUCTION AREAS.

D6. REFER TO THE OWNER APPROVED CONSTRUCTION PHASING SCHEDULE FOR PHASING OF DEMOLITION AND NEW CONSTRUCTION. COORDINATE DEMOLITION WITH NEW CONSTRUCTION IN ORDER THAT THE FACILITY WILL HAVE UNINTERRUPTED WATER, SEWER, ELECTRICAL, GAS AND FIRE PROTECTION SERVICE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ALL NECESSARY TEMPORARY UTILITY PROVISIONS REQUIRED.

D7. ALL DEMOLITION MATERIALS NOT SALVAGED BY THE OWNER SHALL BE REMOVED BY THE CONTRACTOR. COORDINATE WITH THE OWNER REGARDING MATERIALS TO BE SALVAGED BY THE OWNER. REFER ALSO TO DRAWINGS AND SPECIFICATIONS FOR SALVAGED ITEMS.

D8. REMOVE EXISTING RESILIENT FLOORING SYSTEM AT EXISTING BUILDING FLOOR AREAS AND REPAIR CONCRETE SUBSTRATE FOR NEW FLOORING SYSTEM.

D9. REFER TO MECHANICAL, PLUMBING, FIRE PROTECTION, AND ELECTRICAL DRAWINGS FOR NECESSARY FLOOR SLAB DEMOLITION FOR THE INSTALLATION OF NEW PIPING OR CONDUITS.

D10. THE CONTRACTOR SHALL USE A WET SAW FOR SLAB SAWING. NO JACK HAMMERS WILL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE OWNER. REMOVE EXISTING CERAMIC TILE/QUARRY TILE AT AREAS TO RECEIVE NEW FLOOR FINISH. PREPARE CONCRETE SUBSTRATE, CEMENT GROUT INFILL DEPRESSED AREAS. FLUSH AND LEVEL FOR NEW FLOOR FINISH FOR SMOOTH TRANSITION TO ADJACENT FLOOR AREAS.

D11. PROTECT ALL WATER PIPING AT AREAS OF DEMOLITION, EXPANSION AND REMODEL, WHERE EXISTING PIPING IS SUBJECT TO FREEZING. PROTECT PIPING SO AS NOT TO FREEZE.

ARCHITECTURAL ABBREVIATIONS

AB	ANCHOR BOLT
ACOUST.	ACOUSTICAL
AD	AUXILIARY DRAIN
ADJ.	ADJUSTABLE
ADMIN.	ADMINISTRATION
A.F.F.	ABOVE FINISH FLOOR
AGGRE.	AGGREGATE
ALUM.	ALUMINUM
BD	BOARD
B.F.F.	BELOW FINISH FLOOR
BLKG	BLOCKING
BM	BEAM
B.O.	BOTTOM OF
BPL	BASE PLATE
BS	BOTH SIDES
BTWN.	BETWEEN
B.U.R.	BUILT-UP ROOF
CAL.	CALIPER
CC	COLUMN COVER
CL	CENTERLINE
CFC	COMBINED FACILITIES COMPLEX
CSF	COMBINED SHARED FACILITIES
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONC. BLK	CONCRETE BLOCK
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CT	CERAMIC TILE
DB	DECK BEARING
DIM.	DIMENSION
DR	DOOR
DTL	DETAIL
DWG	DRAWING
EA	EACH
E.B.	EXPANSION BOLT
EF	EXHAUST FAN
E.I.F.S.	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQ	EQUAL
EQUIP.	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP	EXPANSION
EXT.	EXTERIOR
F	FEMALE
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
F.F.E.	FINISH FLOOR ELEVATION
FIN.	FINISH
FLR	FLOOR
FND	FOUNDATION
F.O.C.	FACE OF CONCRETE
FRP	FIBERGLASS REINFORCED PANEL
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GR	GUARD RAIL
GP	GUARD POST
GYP	GYPSUM
GYP.BD.	GYPSUM BOARD
H	HIGH
HD	HANDICAP
HC	HOLLOW CORE
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HT	HEIGHT
INFO.	INFORMATION
INSUL.	INSULATION
INT	INTERIOR
JAN	JANITOR.
JT	JOINT
JST	JOIST
KCJ	KEYED CONTROL JOINT
LAV.	LAVATORY
KG	KILOGRAM
LCB	LIQUID CHALK BOARD
LM	LINEAL METER
LG	LONG
MAS	MASONRY
MATL.	MATERIAL
MAX	MAXIMUM
MB	MINI-BLINDS
M.D.	METAL DECK
MECH.	MECHANICAL
MEMB.	MEMBRANE
MEZZ.	MEZZANINE
MFR	MANUFACTURER
MISC.	MISCELLANEOUS
MO	MASONRY OPENING
M.S.	METAL STUD
MTL.	METAL
N.I.C.	NOT IN CONTRACT
NS	NON-SHRINK
N.T.S.	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFW	OUTSIDE FACE OF WALL
OPNG	OPENING
OPP.	OPPOSITE
PB	PIPE BOLLARD
P.LAM	PLASTIC LAMINATE
PL	PLATE
PLYWD.	PLYWOOD
PNL	PANEL
PROD	PRODUCE
KG/SQM	KILOGRAMS PER SQUARE METER
KG/SQCM	KILOGRAMS PER SQUARE CENTIMETER
QTY	QUANTITY
R	RISER
R	RADIUS
RD	ROOF DRAIN
REFRIG	REFRIGERATION
REINF	REINFORCING
REQD	REQUIRED
RM	ROOM
RPP	RACK POST PROTECTOR
SC	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SPECS	SPECIFICATIONS
SMFE	SURFACE MOUNTED FEC
SRFE	SEMI-RECESSED FEC
S	SEWER
SS	SANITARY SEWER
S.S.	STAINLESS STEEL
SSC	STAINLESS STEEL CLOSURE
SST	STAINLESS STEEL THRESHOLD
STB	STAFF TRAINING BUILDING
STL	STEEL
STO.	STORAGE
STRUCT.	STRUCTURAL
SYM.	SYMBOL
T	TREAD
T & B	TOP AND BOTTOM
THK	THICK
THRESH.	THRESHOLD
TJ	TOOLED JOINT
TO	TOP OF
T.O.S.	TOP OF STEEL
T.O.P.	TOP OF PANEL
TS	TUBE STEEL
TYP	TYPICAL
T.O.M.	TOP OF MASONRY
U.N.O.	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
W	WIDE
W/	WITH
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WG	WALL GUARD
W/O	WITHOUT
WP	WATERPROOFING
WT	WEIGHT
WWF	WELDED WIRE FABRIC

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORNER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

Issue Date **10-09-2024**

Sheet Title

GENERAL NOTES & DETAILS

Sheet Number

G-003

APPLICABLE CODES AND STANDARDS

CODE	EDITION	DESCRIPTION
AFPC	2021	ARKANSAS FIRE PREVENTION BUILDING CODE
NFPA 1	2021	FIRE CODE
NFPA 10	2022	STANDARD FOR PORTABLE FIRE EXTINGUISHERS
NFPA 13	2019	INSTALLATION OF SPRINKLER SYSTEMS
NFPA 24	2019	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
NFPA 25	2020	STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS
NFPA 70	2020	NATIONAL ELECTRIC CODE
NFPA 72	2019	NATIONAL FIRE ALARM CODE
NFPA 90A	2021	STANDARD INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
NFPA 101	2021	LIFE SAFETY CODE

EXISTING STRUCTURE - CLASSIFICATION OF WORK

PER INTERNATIONAL EXISTING BUILDING CODE

- ☐ REPAIRS
- ☐ ALTERATION LEVEL 1
- ☐ ALTERATION LEVEL 2
- ☐ ALTERATION LEVEL 3
- ☒ CHANGE OF OCCUPANCY
- ☐ ADDITIONS
- ☐ HISTORIC BUILDING
- ☐ RELOCATED BUILDING

OCCUPANCY CLASSIFICATION

☒ SINGLE
☐ MIXED
☐ SEPARATED ☐ NON SEPARATED

OCCUPANCY CLASSIFICATION(S): H-2
ACCESSORY OCCUPANCIES: N/A

CONSTRUCTION CLASSIFICATION: IIB

HEIGHT AND AREA - ACTUAL

BUILDING HEIGHT	HEIGHT IN FEET 28' - 9"	HEIGHT IN STORIES 1
BUILDING AREA	10,374.00 SF	

HEIGHT AND AREA- ALLOWABLE

		TABULAR AREA (TABLE 506.2)		TABULAR HEIGHT (TABLE 504.3-4)		
OCCUPANCY CLASSIFICATION	TYPE OF CONSTRUCTION	AREA FACTOR	AREA	AREA FACTOR	FEET	STORIES
H-2	IIB	S1	7000	S	55	1

UNLIMITED AREA ☐ YES ☒ NO
QUALIFY FOR FRONTAGE INCREASE? ☒ YES ☐ NO
FRONTAGE INCREASE FACTOR (TABLE 506.3.3): 0.75

ALLOWABLE AREA $A_A = [A_T + (NS \times I_F)]$ (506.2)

12250 = [7000 + (7000 X 0.75)]

ALLOWABLE AREA | TABULAR ALLOWABLE AREA FACTOR | TABULAR ALLOWABLE AREA FACTOR FOR NS | FACTOR INCREASE DUE TO FRONTAGE

INTERIOR FINISH REQUIREMENTS

	EXITS	EXIT ACCESS CORRIDORS	OTHER SPACES
WALL & CEILING FINISH	B	B	C
FLOOR COVERINGS	II	II	II

(TABLE 803.13)

INCIDENTAL USES

- ☐ FURNACE ROOM
- ☐ ROOMS WITH BOILERS
- ☐ REFRIGERANT MACHINERY ROOM
- ☐ HYDROGEN FUEL GAS ROOMS
- ☐ INCINERATOR ROOMS
- ☐ PAINT SHOPS IN OTHER THAN F
- ☐ GROUP E LABORATORIES AND VOCATIONAL SHOPS
- ☐ GROUP I-2 LABORATORIES
- ☐ AMBULATORY CARE FACILITIES LABORATORIES
- ☐ LAUNDRY ROOMS OVER 100 SQFT
- ☐ GROUP I-2 LAUNDRY ROOMS OVER 100 SQFT
- ☐ GROUP I-3 CELLS AND GROUP I-2 PATIENT ROOMS
- ☐ GROUP I-2 PHYSICAL PLANT MAINTENANCE SHOPS
- ☐ AMBULATORY CARE FACILITIES OR GROUP I-2 WASTE AND LINEN COLLECTION ROOM WITH AGGREGATE VOLUME OF 10CF
- ☐ OTHER THAN AMBULATORY AND GROUP I-2 WASTE AND LINEN COLLECTION ROOMS OVER 100 SQFT
- ☐ AMBULATORY CARE FACILITIES OR GROUP I-2 STORAGE ROOMS OVER 100 SQFT
- ☐ ELECTRICAL INSTALLATIONS AND TRANSFORMERS

IF APPLICABLE, SEPARATION AND/OR PROTECTION: N/A (TABLE 509.1)

FIRE PROTECTION SYSTEMS

FIRE PROTECTION SYSTEM	REQUIRED	PROVIDED	SECTION
AUTOMATIC SPRINKLER	●	●	903
ALTERNATIVE AUTO FIRE EXT			904
STANDPIPE			905
PORTABLE FIRE EXTINGUISHERS	●	●	906
FIRE ALARM AND DETECTION			907
EMERGENCY ALARM			908
SMOKE CONTROL			909
SMOKE & HEAT REMOVAL			910
FIRE COMMAND CENTER			911
FIRE DEPT. CONNECTIONS	●	●	912
FIRE PUMPS	●	●	913
EMERGENCY RESPONDER FEATURES			914
CARBON MONOXIDE DETECTION			915
GAS DETECTION SYSTEMS			916
MASS NOTIFICATION SYSTEMS			917
EMERGENCY RESP. COMM COVERAGE			918

FIRE RESISTANCE OF BUILDING ELEMENTS

	REQUIRED	SECTION
STRUCTURAL FRAME	0	601
BEARING WALLS (EXTERIOR)	0	601
BEARING WALLS (INTERIOR)	0	601
NON-BEARING WALLS (EXTERIOR)	0	601
NON-BEARING WALLS (INTERIOR)	0	601
FLOOR CONSTRUCTION	0	601
ROOF CONSTRUCTION	0	601
INTERIOR EXIT STAIRWAYS	N/A	1023
SHAFT ENCLOSURE	N/A	713
CORRIDORS	N/A	1020

MEANS OF EGRESS

MEANS OF EGRESS ELEMENT	REQUIRED	PROVIDED	SECTION
NUMBER OF EXITS	2	5	1006.3.3
EXIT ACCESS TRAVEL DISTANCE	100 ft	100 ft	1017.2
DEAD-END LIMIT	20 ft	0 ft	1020.5
COMMON PATH OF TRAVEL LIMIT	25 ft	25 ft	1006.2.1

TOTAL OCCUPANT LOAD: 31
EGRESS WIDTH: 0.2" PER PERSON FOR LEVEL COMPONENTS/ 0.3" STAIRS AND RAMPS
MINIMUM CORRIDOR WIDTH: 44"
CLEAR OPENING DOOR WIDTH: 32"
ILLUMINATION OF EGRESS: 1 FT-CANDLE AT THE FLOOR AND 0.2 FT-CANDLE FOR A SINGLE LIGHT FAILURE.
EMERGENCY EGRESS LIGHTING: EXIT ACCESS AND DISCHARGE ONLY. ACCESS INCLUDES DESIGNATED CORRIDORS, AISLES, AND PASSAGEWAYS. DISCHARGE INCLUDES DESIGNATED DOORS, WALKWAYS, AND RAMPS LEADING TO A PUBLIC WAY. PERFORMANCE PER NFPA 101 7.9.
EXIT MARKING: MARKING OF EXITS AND THE MEANS OF EGRESS SHALL BE PER NFPA 101 7.10

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Project
AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase
CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19823
JOHN WOOSLEY
10-09-2024

Notes

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Project Number 2024-079
Issue Date 10-09-2024
Sheet Title
LIFE SAFETY CODE ANALYSIS
Sheet Number
G1001

EGRESS SYMBOLS

EGRESS SPACE TAG:

OFFICE — SPACE NAME
101 — SPACE NUMBER
100 SF — SPACE AREA
1 Occupant(s) — SPACE OCCUPANCY LOAD

PATH OF EGRESS
COMMON PATH OF TRAVEL
TOTAL TRAVEL DISTANCE

COL / TEC — EGRESS DOOR LOAD TAG: CALCULATED OCCUPANT LOAD / TOTAL EXITING CAPACITY

COL / TEC — EGRESS STAIR DOOR LOAD TAG: CALCULATED OCCUPANT LOAD / TOTAL EXITING CAPACITY

LIFE SAFETY EQUIPMENT

FE — FIRE EXTINGUISHER - HOOK MOUNTED
FEC — FIRE EXTINGUISHER IN CABINET
FHV — FIRE HOSE VALVE CABINET
75' TRAVEL DISTANCE FOR FIRE EXTINGUISHERS

WALL SEPERATIONS

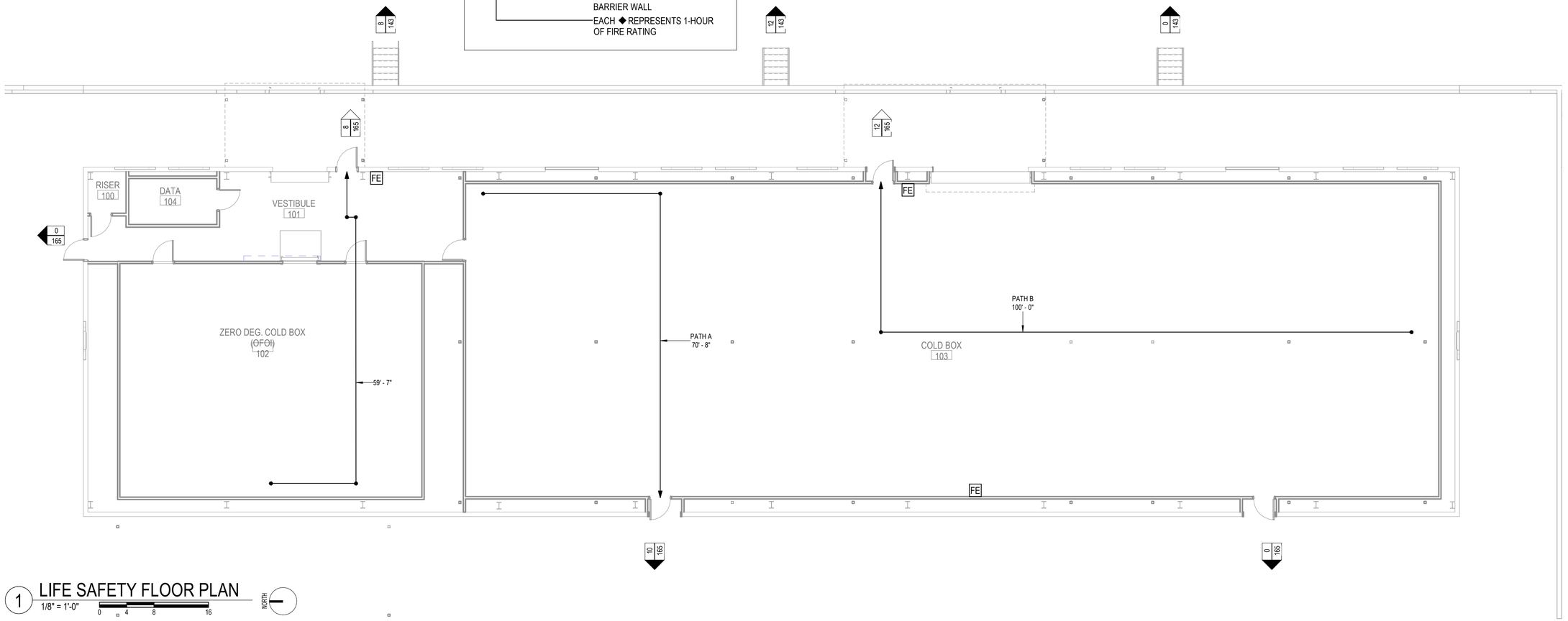
HALF-HOUR FIRE WALL
45-MINUTE FIRE WALL
1 HOUR FIRE WALL
2 HOUR FIRE/SMOKE WALL
"S" REPRESENTS SMOKE BARRIER WALL
EACH ◆ REPRESENTS 1-HOUR OF FIRE RATING

LIFE SAFETY SCHEDULE

NAME	NUMBER	SPACE AREA	AREA PER PERSON	OCCUPANT LOAD
RISER	100	34 SF	100 SF	0
VESTIBULE	101	578 SF	300 SF	2
ZERO DEG. COLD BOX (OFOI)	102	1523 SF	300 SF	5
COLD BOX	103	6600 SF	300 SF	22
DATA	104	87 SF	300 SF	0
		8822 SF		30

LIFE SAFETY - PATH OF TRAVEL

TRAVEL PATH					
FROM ROOM	TO ROOM	Egress Path Type	Mark	EXIT TRAVEL TYPE	LENGTH
COLD BOX 103		TOTAL TRAVEL	PATH A	TOTAL TRAVEL	70' - 8"
					70' - 8"
COLD BOX 103		TOTAL TRAVEL	PATH B	TOTAL TRAVEL	100' - 0"
					100' - 0"
ZERO DEG. COLD BOX (OFOI) 102	VESTIBULE 101	TOTAL TRAVEL		TOTAL TRAVEL	59' - 7"
					59' - 7"



1 LIFE SAFETY FLOOR PLAN
1/8" = 1'-0"
0 4 8 16
NORTH

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CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 19823 — JOHN W. OBSTARCZYK

10-09-2024

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Project Number **2024-079**

Issue Date **10-09-2024**

Sheet Title

LIFE SAFETY FLOOR PLAN

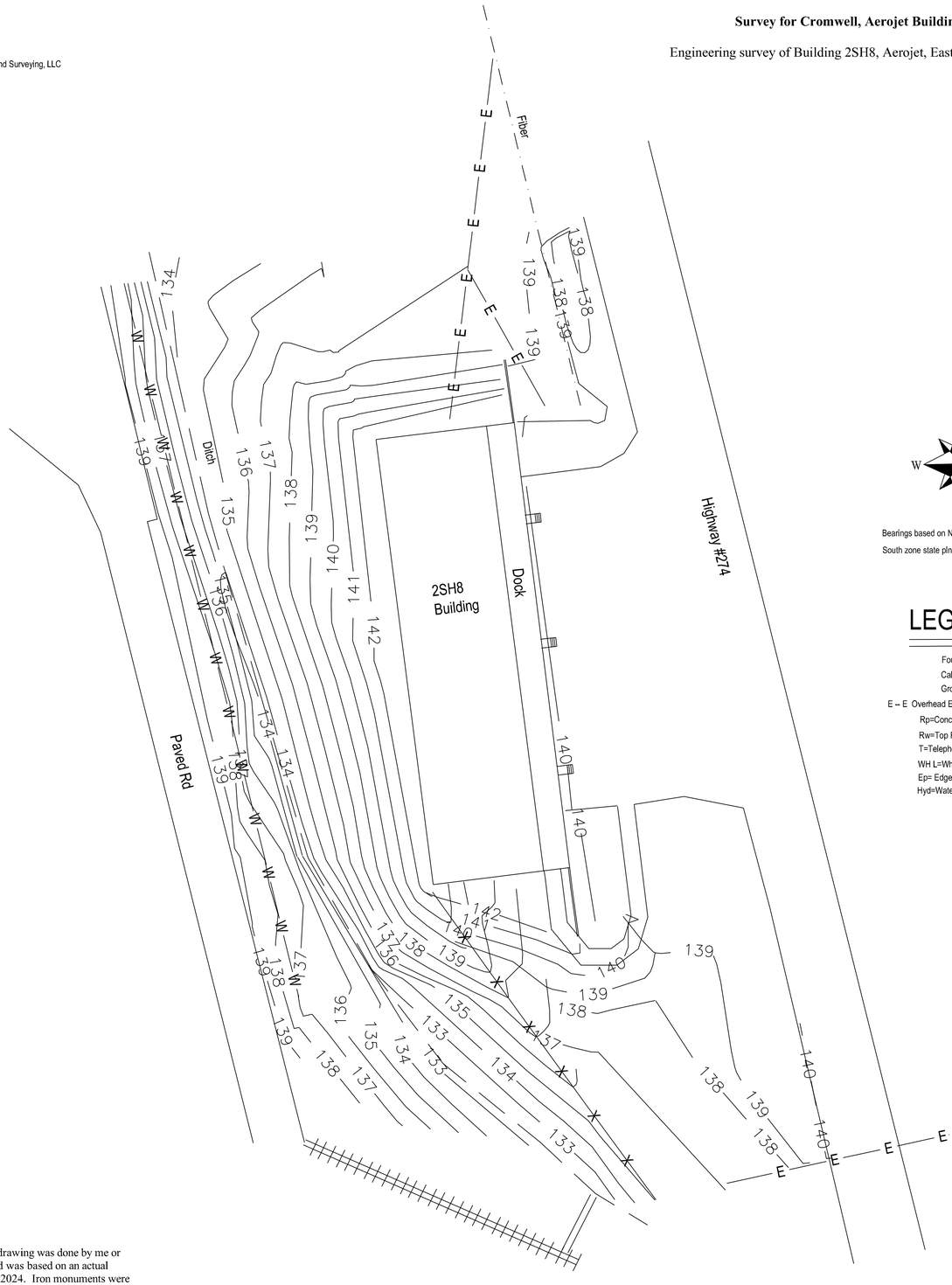
Sheet Number

GI101

Survey for Cromwell, Aerojet Building 2SH8

Engineering survey of Building 2SH8, Aerojet, East Camden, Arkansas.

Joshua Nix Surveying dba Nix Land Surveying, LLC
P.O. Box 175
Hampton, AR 71744
870-918-5918
August 27, 2024



Bearings based on NAD 83, AR
South zone state pln, GPS obs.

LEGEND

- Found Monument
- Calculated Point
- Ground Shots (G)
- E -- E Overhead Electric
- Rp=Conc. Ramp
- Rw=Top Ret. Wall
- T=Telephone Box
- WH L=White line on highway
- Ep= Edge of Pavement
- Hyd=Water Hydrant

0' 50' 100' 150'

NORTH

1 SITE SURVEY

0 30' 60'

SCALE:1"= 30'

I certify that this survey drawing was done by me or under my supervision and was based on an actual ground survey on July 8, 2024. Iron monuments were found or set as shown on this drawing. This survey is correct to the best of my knowledge. This survey is subject to visible and invisible easements, setbacks, and right of ways, shown or otherwise. This is a boundary survey only, utilities not shown.

10/9/2017 1:59:37 PM

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Issue Date **10-09-2024**

Sheet Title **SITE SURVEY**

Sheet Number

VF101

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL, IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING ALL DEBRIS FROM THE SITE IN A LAWFUL MANNER. CONTRACTOR SHALL PROVIDE MANIFEST OF ALL ITEMS REMOVED FROM THE PREMISES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
3. THE CONTRACTOR MUST PROTECT THE PUBLIC FROM CONSTRUCTION ACTIVITIES AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. TO THE BEST PRACTICES AND APPROVED BY THE OWNER.
4. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
5. PRIOR TO CLEARING, VEGETATION TO REMAIN SHALL BE PROTECTED FROM DAMAGE AND THE CONTRACTOR SHALL INSTALL EROSION CONTROL STRUCTURES AND DEVICES AND TREE PRESERVATION FENCING.
6. CONTRACTOR SHALL NOTIFY GOVERNING AUTHORITY PRIOR TO ANY WORK IN PUBLIC RIGHT-OF-WAY AND OBTAIN ANY NECESSARY PERMITS.
7. ANY DAMAGE TO THE EXISTING PUBLIC STREET OR OTHER PUBLIC INFRASTRUCTURE DUE TO THE CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL SAW CUT IMPROVEMENTS AT REMOVAL LINES. THE CONTRACTOR SHALL PROTECT SAW CUT EDGE OF ASPHALT FROM RAVELING DURING CONSTRUCTION. WHERE RAVELING OCCURS PRIOR TO NEW PAVEMENT BEING PLACED THE CONTRACTOR MAY BE REQUIRED TO PROVIDE ADDITIONAL SAW CUT, AT THE CONTRACTOR'S EXPENSE, TO PROVIDE A CLEAN EDGE.
9. ALL PAVEMENT OR STRUCTURE DEMOLITION INCLUDES ASSOCIATED FOUNDATIONS AND/OR BASE COURSE LAYERS.
10. THERE ARE NUMEROUS PUBLIC AND PRIVATE UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO INDICATE THEIR PRESENCE ON THE PLAN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR LOCATION OF THE UTILITY ON THE GROUND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NEEDED. EXISTING AND ABANDONED UTILITY LOCATIONS ARE UNKNOWN. SURVEY MARKERS ARE APPROXIMATE LOCATIONS ONLY. ALL UTILITIES ARE TO BE RELOCATED PRIOR TO CONSTRUCTION.
11. ALL UTILITIES SHOWN FOR REMOVAL BACK TO MAIN SHALL BE REMOVED AND CAPPED PER UTILITY STANDARD REQUIREMENTS. UTILITY REMOVAL SHALL BE COORDINATED WITH THE UTILITY AND THE OWNER. 72 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE OWNER AND UTILITY PRIOR TO DEMOLISHING ANY UTILITY.
12. EXISTING UTILITIES TO REMAIN ARE TO BE PROTECTED.
13. SEE ELECTRICAL SITE PLAN FOR ADDITIONAL ELECTRIC SERVICE REMOVAL.
14. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL EXISTING SITE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES BACK TO EXISTING OR BETTER CONDITIONS.
15. ANY ITEMS SHOWN TO BE SALVAGED SHALL BE STORED AND REUSED AS SHOWN ON OTHER PLAN DRAWINGS OR RETURNED TO THE OWNER AND STORED AT THE OWNER'S DIRECTION.
16. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, SIDEWALKS, LIGHTING, STORM INLET STRUCTURES, ETC. THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIAL/STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNATED TO BE RELOCATED ON THIS PLAN, ALL CONSTRUCTION MATERIALS SHALL BE NEW.
17. ANY CONSTRUCTION ACTIVITIES THAT WILL REQUIRE ROAD OR LANE CLOSURES SHALL BE COORDINATED WITH THE APPROPRIATE ORGANIZATION PRIOR TO CLOSURE AND APPROPRIATE PERMITS OBTAINED BY THE CONTRACTOR.
18. CONTRACTOR SHALL PAY FOR ALL TRAFFIC CONTROL DEVICES AND PERSONNEL FOR ROAD CLOSURES AND DETOURS.
19. ALL EXISTING SIGNS AND POSTS TO BE REMOVED SHALL BE RELOCATED, STOCKPILED, OR REMOVED AS DIRECTED.
20. **DIG CAREFULLY.** STATE LAWS GENERALLY PROHIBIT THE USE OF MECHANIZED EQUIPMENT WITHIN 18-24 INCHES OF A MARKED UTILITY, WHICH IS CALLED THE "TOLERANCE ZONE". CONTACT THE PROPER LOCAL AGENCY PRIOR TO DIGGING.

SITE LAYOUT NOTES :

1. CONTRACTOR SHALL BE CONFINED TO THE LIMITS OF CONSTRUCTION SHOWN UNLESS OTHER PROVISIONS HAVE BEEN MADE WITH THE OWNER. THIS INCLUDES STAGING AND LAYDOWN AREAS.
2. CONTRACTOR SHALL NOTIFY OWNER PRIOR TO WORK BEGINNING. A PRE-CONSTRUCTION MEETING IS REQUIRED WITH AEROJET (AR) FIELD COORDINATOR, AR SAFETY, AR FACILITIES ENGINEERS AND HIGHLAND INDUSTRIAL PARK REPRESENTATIVES.
3. DIMENSIONS TO CURBS ARE TO BACK OF CURB. DIMENSIONS TO BUILDINGS ARE TO OUTSIDE FACE OF BUILDING WALL.
4. THE CONTRACTOR SHALL LAYOUT AND VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR DIRECTION AND RESOLUTION PRIOR TO PROCEEDING.
5. PROVIDE EXPANSION JOINTS IN ALL CASES WHERE CONCRETE SURFACE MEETS VERTICAL STRUCTURES OR WHERE NEW CONCRETE SURFACE ABUTS EXISTING CONCRETE SURFACE.
6. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL EXISTING SITE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES BACK TO EXISTING OR BETTER CONDITIONS. RESTORATION AND CLEANUP SHALL BE COMPLETE PRIOR TO ACCEPTANCE OF THE JOB.
7. ALL WORK DONE IN PUBLIC RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING AUTHORITY.
8. THE CONTRACTOR IS RESPONSIBLE FOR ANY STREET SIGNS OR SIGNS IN RIGHT-OF-WAY THAT WERE REMOVED DURING CONSTRUCTION SHALL REPLACE/REINSTALL AS SOON AS PRACTICAL. TEMPORARY SIGNS SHALL BE INSTALLED DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING NEWLY PAVED AREAS THAT SHOW DIFFERENTIAL SETTLEMENT OR RANDOM CRACKING AT ENGINEER'S DISCRETION.

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR SHALL MODIFY THE EROSION CONTROL PLAN AS NEEDED TO ELIMINATE SEDIMENTATION FROM LEAVING THE SITE AS SITE CONDITIONS CHANGE.
2. EXISTING UTILITIES TO REMAIN ARE TO BE ADJUSTED TO MATCH PROPOSED GRADE.
3. CONTRACTOR SHALL SPREAD 4" TOPSOIL AND INSTALL SEED AND FERTILIZER ON ALL DISTURBED EARTH SURFACES RESULTING FROM THE CONTRACTOR'S OPERATIONS, UNLESS SHOWN OTHERWISE. RE-SEED AND MAINTAIN UNTIL THE SEED HAS TAKEN ROOT.
4. AREAS THAT ARE TO BE SEEDED SHALL BE RELATIVELY FREE OF WEEDS AT TIME OF FINAL ACCEPTANCE.
5. ALL IMPORTED FILL SHALL BE FREE OF ORGANIC MATERIAL.
6. MAXIMUM LAWN GRADE SLOPE SHALL BE 3:1, UNLESS SHOWN OTHERWISE.
7. MAXIMUM WALK CROSS SLOPE SHALL BE 2%. MAXIMUM LINEAR GRADE SHALL BE 5%.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING SWPPP AND KEEPING STORM WATER SYSTEM CLEAN DURING CONSTRUCTION. COMPLY WITH AEROJET STORMWATER POLLUTION PREVENTION PLAN - AVAILABLE UPON REQUEST.
9. CONTRACTOR IS RESPONSIBLE FOR PURSUING AND OBTAINING ALL NECESSARY STORM WATER PERMITS AND FOLLOWING ALL LOCAL STORM WATER DETENTION/RETENTION AND OUTFALL REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION
10. CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS AND/OR COMPARABLE OSHA-APPROVED STATE PLAN REQUIREMENTS FOR TRENCHING AND EXCAVATION.

UTILITY NOTES:

1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
2. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING AUTHORITY.
3. THERE ARE NUMEROUS PUBLIC AND PRIVATE UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO INDICATE THEIR PRESENCE ON THE PLAN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR LOCATION OF THE UTILITY ON THE GROUND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NEEDED. EXISTING AND ABANDONED UTILITY LOCATIONS ARE UNKNOWN. SURVEY MARKERS ARE APPROXIMATE LOCATIONS ONLY. ALL UTILITIES ARE TO BE RELOCATED PRIOR TO CONSTRUCTION.
4. ALL UTILITIES SHOWN FOR REMOVAL BACK TO MAIN SHALL BE REMOVED AND CAPPED PER UTILITY STANDARD REQUIREMENTS. UTILITY REMOVAL SHALL BE COORDINATED WITH THE UTILITY AND THE OWNER. 72 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE OWNER AND UTILITY PRIOR TO DEMOLISHING ANY UTILITY.
5. CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.
6. EXISTING UTILITIES THAT ARE TO REMAIN ARE TO BE PROTECTED AND ADJUSTED TO MATCH NEW GRADE.
7. ANY MAJOR REVISION TO LOCATION OF WATER OR SANITARY SEWER TIE-INS, MANHOLES, METERS, ETC. NEED TO HAVE DRAWINGS RE-SUBMITTED TO ARKANSAS DEPARTMENT OF HEALTH AND HIGHLAND INDUSTRIAL PARK FOR RE-APPROVAL.
8. **DIG CAREFULLY.** STATE LAWS GENERALLY PROHIBIT THE USE OF MECHANIZED EQUIPMENT WITHIN 18-24 INCHES OF A MARKED UTILITY, WHICH IS CALLED THE "TOLERANCE ZONE". CONTACT THE PROPER LOCAL AGENCY PRIOR TO DIGGING.
9. CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS AND/OR COMPARABLE OSHA-APPROVED STATE PLAN REQUIREMENTS FOR TRENCHING AND EXCAVATION.

SEDIMENTATION AND EROSION CONTROL NOTES:

1. ALL AREAS OF THE SITE EXPOSED BY CONSTRUCTION ACTIVITY AND LEFT UNDISTURBED FOR 21 DAYS MUST BE MULCHED WITHIN 14 DAYS OF LAST DISTURBANCE.
2. PRIOR TO CLEARING, THE CONTRACTOR SHALL INSTALL EROSION CONTROL STRUCTURES AND DEVICES AND TREE PRESERVATION FENCING.
3. ALL AREAS WITHIN THE PARKING LOT ARE TO RECEIVE A GRAVEL BASE TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 135 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
4. ALL AREAS NOT WITHIN THE PARKING LOT ARE TO RECEIVE LOOSE STRAW TO PROVIDE EROSION CONTROL IF WORK IS NOT PROGRESSING IN AN ORDERLY MANNER. A RATE OF 2 TONS/ACRE IS TO BE APPLIED WITHIN TWO WEEKS OF FINAL GRADING.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING BMP'S, POSTING SWPPP ON SITE AND MONITORING/MAINTAINING EROSIONS CONTROL MEASURES.
6. ANY DAMAGE TO PUBLIC STORM WATER SYSTEM DUE TO LACK OF MAINTAINING BMP'S WILL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN OR REPAIR TO THE SATISFACTION OF THE ENGINEER OR LOCAL AUTHORITY.
7. CONTRACTOR SHALL MODIFY THE EROSION CONTROL PLAN AS NEEDED TO ELIMINATE SEDIMENTATION FROM LEAVING THE SITE AS SITE CONDITIONS CHANGE.
8. CONTRACTOR SHALL PREVENT OFF-SITE TRACKING OF CONSTRUCTION SEDIMENT AND RUNOFF TO ADJACENT PROPERTY AND PUBLIC ROADS.
9. THE CONTRACTOR OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR CONTROLLING EROSION AND DISCHARGE OF SEDIMENT FROM THE SITE AT ALL TIMES DURING CONSTRUCTION. THE PERMITTEE OR THEIR REPRESENTATIVE SHALL PROVIDE NECESSARY MEASURES DURING ALL PHASES OF CONSTRUCTION AND SHALL MAINTAIN AND REPLACE CONTROLS AS NECESSARY DURING CONSTRUCTION TO PREVENT THE MOVEMENT OF SEDIMENT DOWNSTREAM.
10. THE CONTRACTOR OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR INFORMING ALL PARTIES ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE SWPPP.
11. THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE, AS SHOWN ON THE PLAN(S), SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL REMAIN TOTALLY UNDISTURBED. PHASING SHALL BE USED TO MINIMIZE THE AMOUNT OF DISTURBED AREA AT ANY GIVEN TIME.
12. A COPY OF THE SWPPP AND INSPECTION REPORTS MUST BE DISPLAYED AT THE CONSTRUCTION SITE.
13. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE CLEANED AND SWEPT AT THE END OF EACH WORKING DAY AT A MINIMUM, MORE FREQUENTLY IF SEDIMENT TRACK OUT IS HEAVY. WASHING OF ACCUMULATED SEDIMENT INTO THE STORM DRAIN OR WATERWAYS IS PROHIBITED.
14. DUST SHALL BE CONTROLLED DURING CONSTRUCTION AND CONSTRUCTION AREAS SHALL BE WATERED WHENEVER CONDITIONS WARRANT.
15. SEDIMENT REMOVED FROM EROSION AND SEDIMENT CONTROLS AND FACILITIES SHALL NOT BE PLACED ON STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND SHALL BE IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
16. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH AN APPROVED SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON DISTURBED AREAS.
17. THE CONTRACTOR OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS OFF-SITE BORROW AND FILL AREAS.
18. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT DEPOSITION, THE CONTRACTOR OR THEIR REPRESENTATIVE SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT DEPOSITION.
19. THE CONTRACTOR OR THEIR REPRESENTATIVE SHALL STABILIZE ALL DISTURBED AREAS NOT SUBJECT TO CONSTRUCTION ACTIVITY WITHIN 14 CALENDAR DAYS AFTER ACTIVITY HAS CEASED. HOWEVER WITHIN THE RIPARIAN AREA, BANKS, ETC., SEEDING, MULCHING AND NEEDED FERTILIZATION SHOULD BE WITHIN THREE DAYS OF FINAL CONTOURING.
20. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN 7 CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED MEASURES.
21. ALL DISTURBED AREAS NOT RECEIVING OTHER PERMANENT STABILIZATION SUCH AS PAVEMENT, ROOFS,SOD, ETC., SHALL BE SEEDED AND MULCHED, AS SPECIFIED IN THE SWPPP BEFORE TEMPORARY SEDIMENT CONTROLS CAN BE REMOVED AND PRIOR TO FINAL APPROVAL OF CONSTRUCTION.
22. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
23. AFTER FINAL STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS SHALL BE STABILIZED IMMEDIATELY.
24. SILT AND DEBRIS MUST BE REMOVED FROM STORM DRAINS, CONVEYANCE CHANNELS, BASINS OR ANY PART OF THE STORMWATER SYSTEM PRIOR TO FINAL SITE STABILIZATION APPROVAL.
25. THE FOLLOWING WILL BE IMPLEMENTED ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS: LIQUID AND SOLID WASTE MANAGEMENT, CHEMICAL AND MATERIAL DELIVERY AND STORAGE, CONCRETE WASTE, PAINTING AND DRYWALL WORK, VEHICLE FUELING, MAINTENANCE AND CLEANING, ASPHALT, SAWCUTTING, CORING, AND GRINDING ACTIVITIES, BUILDING BLASTING AND CLEANING, CEMENT, GROUT AND MORTAR WORK, SANITARY AND SEPTIC WASTES, WATER LINE DISINFECTION, FLUSHING, DEWATERING, AND OTHER NON-STORMWATER DISCHARGES, HAZARDOUS WASTE MANAGEMENT, AND PROHIBITED DISCHARGES.
26. CONTRACTOR OR THEIR REPRESENTATIVE SHALL MEET ALL OTHER STATE AND FEDERAL CLEAN WATER REQUIREMENTS.

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Project

AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS-ENGINEER

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 15927 — CHARLES WISE — 10-09-2024

Notes

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Project Number **2024-079**

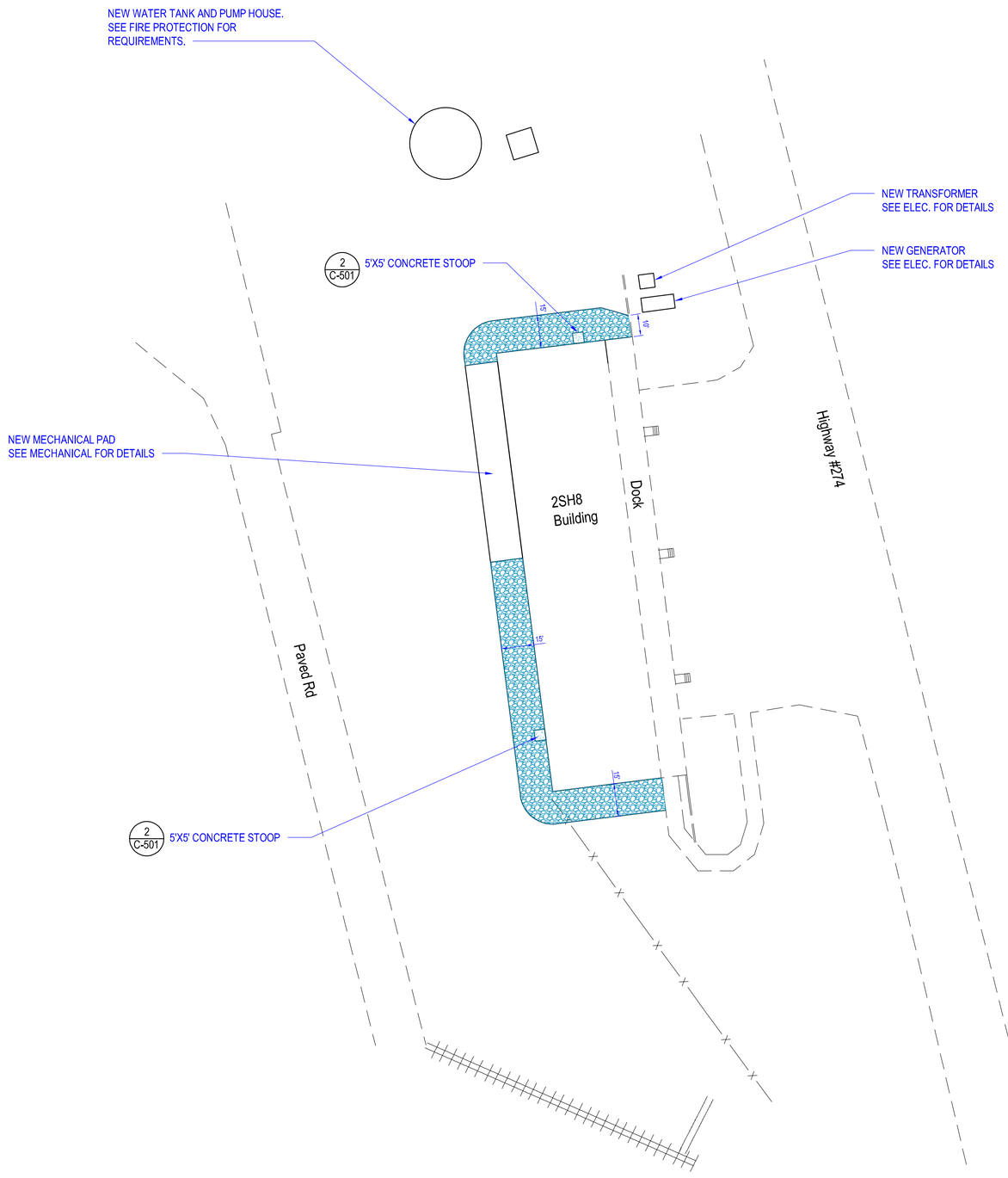
Issue Date **10-09-2024**

Sheet Title

SITE GENERAL NOTES

Sheet Number

C-001



LEGEND

NEW GRAVEL PAVEMENT

DETAIL REFERENCE

1
C-501

NORTH

1 SITE LAYOUT PLAN

0 30' 60'

SCALE:1"= 30'

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

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ARKANSAS-ENGINEER

STATE OF ARKANSAS
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CHARLES WISE
10-09-2024

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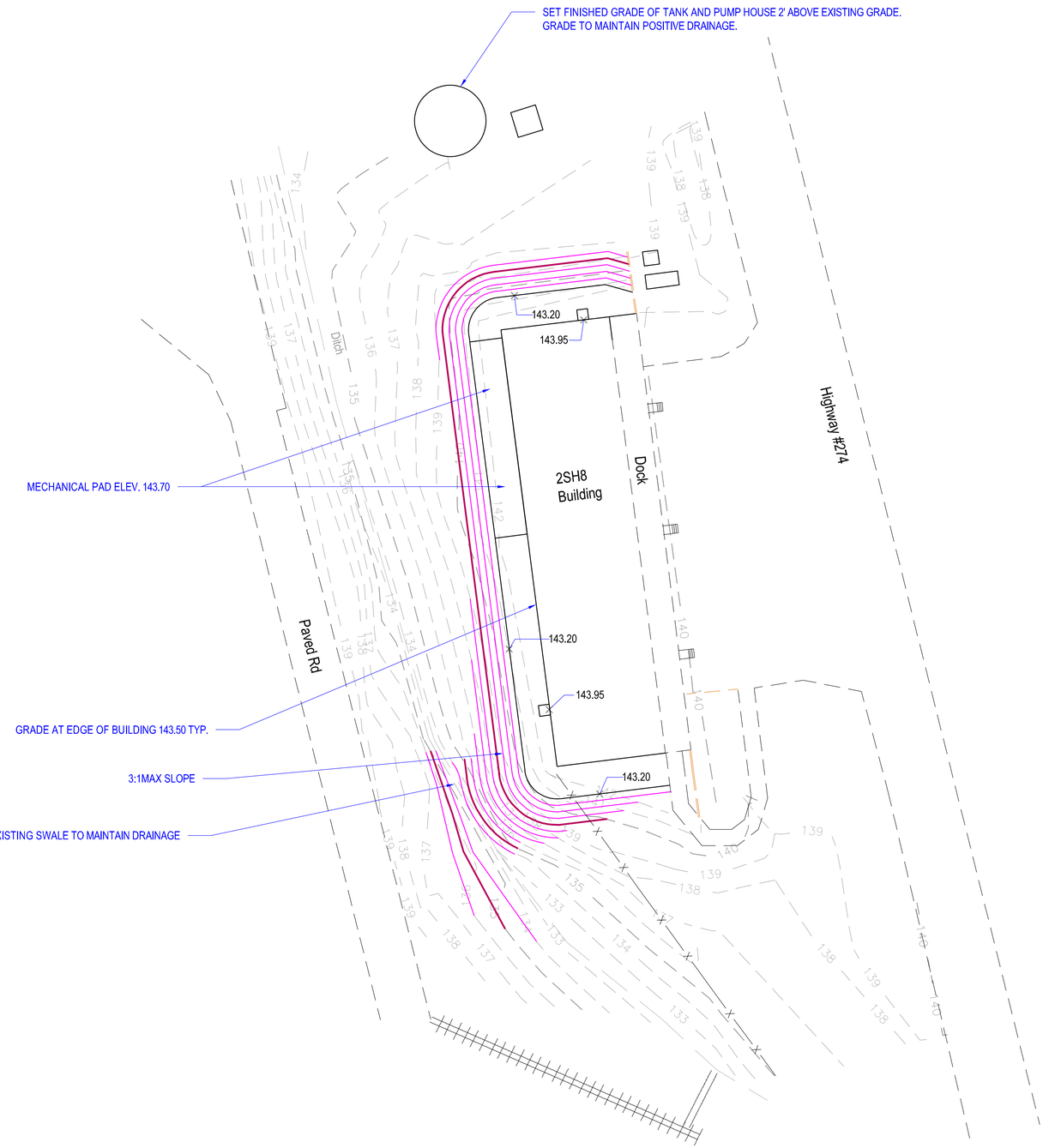
Issue Date **10-09-2024**

Sheet Title **SITE LAYOUT PLAN**

Sheet Number **CS101**



LEGEND

	DETAIL REFERENCE
EXISTING GRADE CONTOUR (1 FOOT INTERVAL)	382
EXISTING GRADE CONTOUR (5 FOOT INTERVAL)	375
FINISHED GRADE CONTOUR (1 FOOT INTERVAL)	382
FINISHED GRADE CONTOUR (5 FOOT INTERVAL)	380
FINISHED SPOT ELEVATION (T.C.=TOP OF CURB)	T.C.384.00

NORTH

1 SITE GRADING AND DRAINAGE PLAN

0 30' 60'

SCALE:1"= 30'

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

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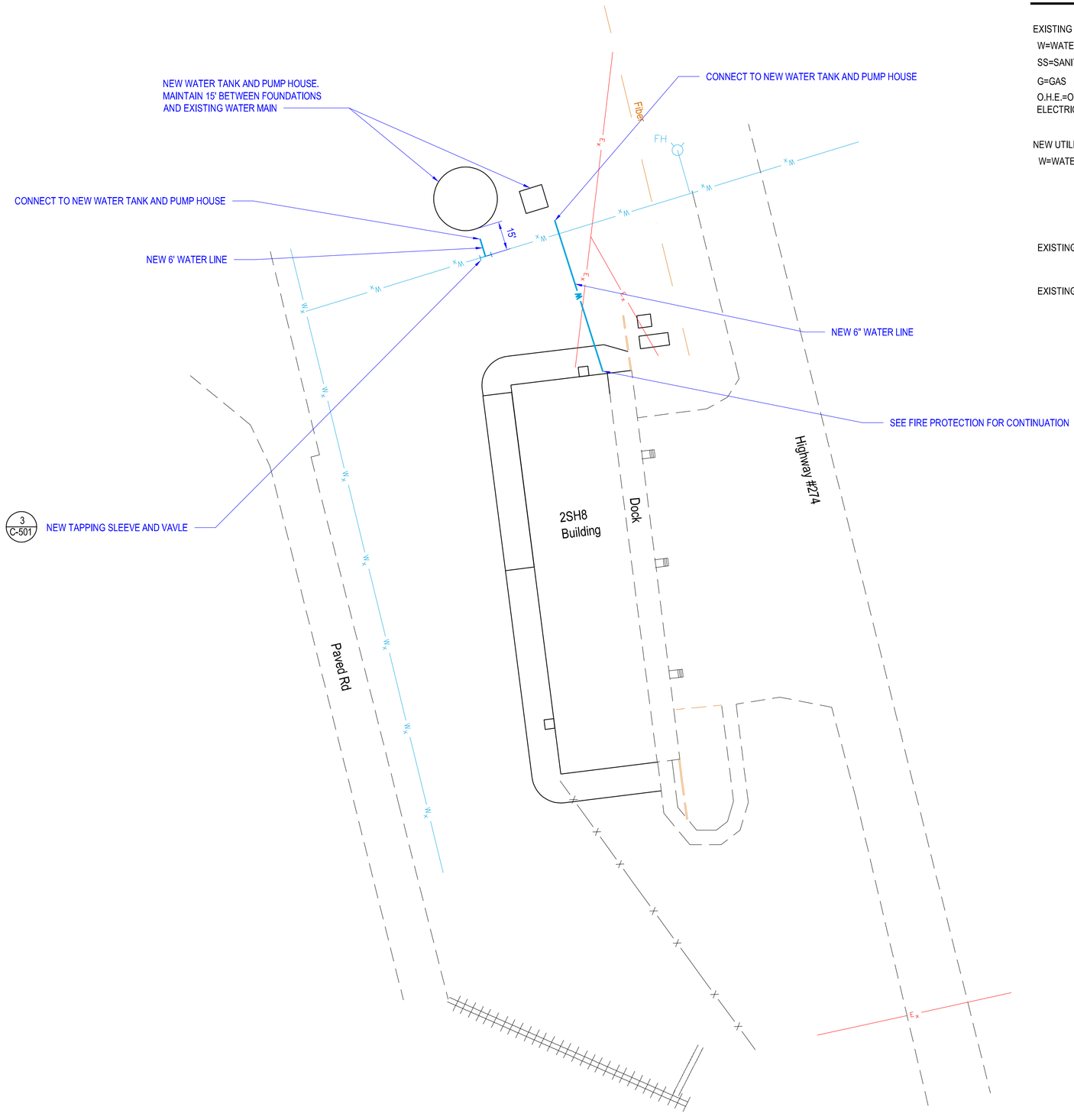
Sheet Title

SITE GRADING AND DRAINAGE PLAN

Sheet Number

CG101



LEGEND

DETAIL REFERENCE

EXISTING UTILITY LINE
- W=WATER — W_x
- SS=SANITARY SEWER — $S\ S_x$
- G=GAS — G_x
- O.H.E.=OVERHEAD ELECTRIC — E_x

NEW UTILITY LINE
- W=WATER — W

EXISTING WATER VALVE — WV

EXISTING FIRE HYDRANT — FH

1 / CG702

NORTH

1 SITE UTILITY PLAN

0 30' 60'

SCALE:1"= 30'

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COLD BOX
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
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Sheet Title

SITE UTILITY PLAN

Sheet Number

CU101

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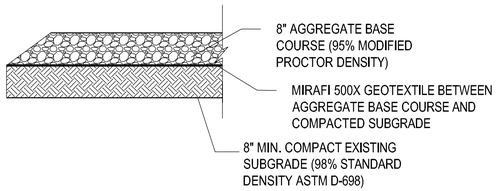
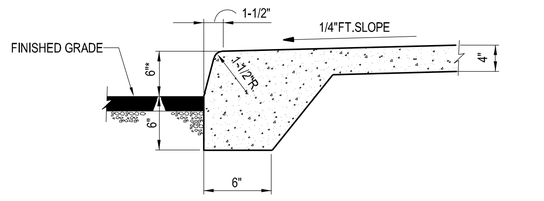


NOTE: WHERE FILL IS TO BE PLACED ON EXISTING SUBGRADE, FULL DEPTH COMPACTION OF SELECT MATERIAL IS REQUIRED (SEE EARTHWORK SECTION OF SPECS.)

1 ROCK PAVING DESIGN SECTION

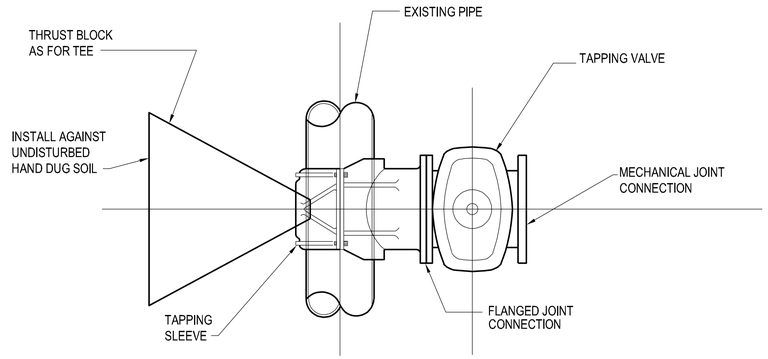
NOT TO SCALE



*-UNLESS SHOWN OTHERWISE ON CG101

2 TURN DOWN WALK DETAIL

NOT TO SCALE



NOTE:
PRESSURE TEST TAPPING SLEEVE & VALVE IN PLACE PRIOR TO MAKING TAP.

3 TAPPING SLEEVE & VALVE DETAIL

NOT TO SCALE

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AEROJET BUILDING 2SH8
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Sheet Title

SITE DETAILS

Sheet Number

C-501

ABBREVIATIONS

(NOT ALL USED)

#XX	NUMBER
A.F.F.	ABOVE FINISHED FLOOR
ADD'L	ADDITIONAL
ADJ	ADJACENT
ARCH.	ARCHITECTURAL
B.F.F.	BELOW FINISHED FLOOR
BLDG.	BUILDING
BOT	BOTTOM
BTWN	BETWEEN
CJ	CONTROL/ CONSTRUCTION/ CONTRACTION JOINT
CL	CENTER LINE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
DBA	DEFORMED BAR ANCHOR
DIA	DIAMETER
DTL	DETAIL
E.F.	EACH FACE
EA.	EACH
ELEV.	ELEVATION
EW	EACH WAY
FF	FINISHED FLOOR
FLR	FLOOR
FS	FAR SIDE
FTG	FOOTING
G.C.	GENERAL CONTRACTOR
GA.	GAUGE
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
JT.	JOINT
K or k	KIP (1,000 LBS)
KCJ	KEYED CONTROL JOINT
KSI	KIPS PER SQUARE INCH
L	ANGLE
LBS	POUNDS
LF	LINEAL FOOT
MANUF.	MANUFACTURER
MATL.	MATERIAL
MAX.	MAXIMUM
MBS	METAL BUILDING SUPPLIER
MECH.	MECHANICAL
MIN.	MINIMUM
MISC	MISCELLANEOUS
N.T.S.	NOT TO SCALE
NS	NEAR SIDE
Ø	DIAMETER
O.C.	ON CENTER
OPP	OPPOSITE
PL	PLATE
PLBG	PLUMBING
PSF	POUNDS PER SQ FOOT
PSI	POUNDS PER SQ INCH
REINF.	REINFORCEMENT
REQ'D.	REQUIRED
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SJ	SAWN JOINT
SPA.	SPACE
STD.	STANDARD
T&B	TOP AND BOTTOM
T.O.F.	TOP OF FOOTING
T.O.S.	TOP OF STEEL or TOP OF SLAB
THRU	THROUGH
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT. OR V	VERTICAL
W.W.R.	WELDED WIRE REINF.
w/	WITH
WP	WORK POINT
X/S-YYY	SECTION/DETAIL "X" ON SHEET "S-YYY"

STRUCTURAL DESIGN CRITERIA

BUILDING CODE: 2021 ARKANSAS FIRE PREVENTION CODE (BASED ON 2021 IBC)

RISK CATEGORY (2021 IBC TABLE 1604.5): II

GRAVITY LOADS (REFERENCE: 2021 IBC & ASCE 7-16):

DEAD LOADS:	UNIFORM
COLD BOX CEILING:	3 PSF
CANOPY:	5 PSF
COLLATERAL:	2 PSF
FLOOR LIVE LOADS:	UNIFORM
TYPICAL	150 PSF
ROOF LIVE LOADS:	
COLD BOX CEILING:	20 PSF (REDUCIBLE)
CANOPY:	20 PSF (NON-REDUCIBLE)
RAIN LOADS:	
15 MINUTE DURATION / 100 YR RETURN PERIOD	i15 = 6.75 IN./H
60 MINUTE DURATION / 100 YR RETURN PERIOD	i60 = 3.60 IN./H
SNOW LOADS:	
GROUND SNOW LOAD	Pg = 10 PSF
FLAT ROOF SNOW LOAD	Pf = 9 PSF
SLOPED ROOF SNOW LOAD	Ps = 9 PSF
SNOW LOAD IMPORTANCE FACTOR	Is = 1.00
SNOW EXPOSURE FACTOR	Ce = 1.0
THERMAL FACTOR	Ct = 1.3

LATERAL LOADS (REFERENCE: 2021 IBC & ASCE 7-16):

WIND:	
ULTIMATE WIND SPEED	Vult = 104 MPH
NOMINAL WIND SPEED	Vasd = 81 MPH
TERRAIN EXPOSURE	C
INTERNAL PRESSURE COEFFICIENTS	+/- 0.18
COMPONENTS & CLADDING WIND LOAD	SEE SHEET S-002
SEISMIC:	
SEISMIC IMPORTANCE FACTOR	Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS	Ss = 0.187 S1 = 0.098
SITE CLASS	D
DESIGN SPECTRAL RESPONSE ACCELERATIONS	SDS = 0.200 SD1 = 0.156
SEISMIC DESIGN CATEGORY	C
SEISMIC FORCE RESISTING SYSTEM	STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR	V = 0.066W
SEISMIC RESPONSE COEFFICIENT	Cs = 0.066
RESPONSE MODIFICATION COEFFICIENT	R = 3
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
NON-STRUCTURAL COMPONENT	
IMPORTANCE FACTOR	Ip = 1.00

SYSTEMS AND COMPONENTS REQUIRING SPECIAL INSPECTION: SEE SPECIFICATION SECTION 014533

STRUCTURAL DESIGN APPROACH:

THIS PROJECT CONSISTS OF AN INTERIOR FRAMING SYSTEM TO SUPPORT INSULATED PANELS INSIDE AN EXISTING BUILDING. THE CEILING CONSISTS OF INSULATED PANELS SUPPORTED BY HANGER RODS SUSPENDED FROM STEEL BEAMS SPANNING BETWEEN STEEL GIRDERS. GIRDERS ARE SUPPORTED BY STEEL COLUMNS. LATERAL STABILITY IS PROVIDED BY THE INSULATED PANELS AND STEEL STRUCTURE. THE EXTERIOR CANOPIES CONSIST OF A METAL DECK SPANNING BETWEEN STEEL TUBE GIRDERS. THE GIRDERS ARE SUPPORTED BY STEEL COLUMNS. LATERAL STABILITY FOR THE CANOPIES IS PROVIDED BY STEEL MOMENT FRAMES. THE ENTIRE STRUCTURE USES A SHALLOW FOUNDATION SYSTEM.

STRUCTURAL GENERAL NOTES

A. CONTRACTOR DELEGATED DESIGN COMPONENTS:

1. THE FOLLOWING ITEMS ARE NOTED AS A DELEGATED DESIGN COMPONENT AND SHALL BE DESIGNED BY THE CONTRACTOR. THE CONTRACTOR SHALL EMPLOY A SPECIALTY STRUCTURAL ENGINEER LICENSED IN THE STATE OF ARKANSAS TO DESIGN THE FOLLOWING ITEMS:
   a. SHORING AND TEMPORARY STRUCTURES
   b. SUBFLOOR INJECTION GROUTING
   c. FOUNDATIONS FOR FIRE PUMP AND WATER STORAGE TANK
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR EACH DELEGATED DESIGN COMPONENT. ALL STRUCTURAL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE SPECIALTY STRUCTURAL ENGINEER. THE DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR AND THE DESIGN ENGINEER PRIOR TO SUBMITTAL. INCOMPLETE SHOP DRAWINGS AND SHOP DRAWINGS THAT HAVE NOT BEEN REVIEWED BY THE CONTRACTOR AND THE SPECIALTY STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT/ENGINEER.
3. THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ALL DELEGATED DESIGN COMPONENTS AND THEIR ACCESSORIES WITH OTHER TRADES TO AVOID CONFLICTS, e.g., JOIST BRIDGING AND FIRE SUPPRESSION SYSTEMS.

STRUCTURAL GENERAL NOTES

B. SPECIAL INSPECTIONS:

1. QUALIFIED INSPECTORS SHALL CONDUCT SPECIAL INSPECTIONS AND TESTS AND FURNISH REPORTS AS SPECIFIED IN SECTION 014533 AND IN ACCORDANCE WITH CHAPTER 17, INTERNATIONAL BUILDING CODE.
2. THE CONTRACTOR SHALL COORDINATE THE SPECIAL INSPECTIONS AND TESTING SERVICES WITH THE PROGRESS OF THE WORK, PROVIDE THE APPROPRIATE DOCUMENTATION AND PERFORM OTHER TASKS AS SPECIFIED IN SECTION 014533.
3. CONSTRUCTION THAT REQUIRES CONTINUOUS INSPECTION PER SECTION 014533 CAN NOT PROGRESS WITHOUT INSPECTORS PRESENT.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER INSPECTIONS OR TESTS IN THE SPECIFICATIONS NOT LISTED IN THE SCHEDULE OF SPECIAL INSPECTION SERVICES IN SECTION 014533.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIR, REINSPECTION AND RETESTING FOR ITEMS THAT DO NOT PASS THE INSPECTIONS OR TESTS.
6. SPECIAL INSPECTION SERVICES DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH OTHER CONSTRUCTION DOCUMENT REQUIREMENTS OR REGULATORY REQUIREMENTS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF DEMOLITION, RECONSTRUCTION, INSPECTION AND TESTING OF ANY WORK COMPLETED WITHOUT INSPECTION AND TESTING AS SPECIFIED IN SECTION 014533.

C. STABILITY DURING CONSTRUCTION, SHORING, & TEMPORARY STRUCTURES:

1. PERMANENT STABILITY OF THE BUILDING AND COMPONENTS IS NOT PROVIDED UNTIL ALL THE STRUCTURAL ELEMENTS ARE INSTALLED AS SHOWN ON THE CONTRACT DRAWINGS.
2. PROVIDE STABILITY TO ALL NON-SELF SUPPORTING ELEMENTS UNTIL PERMANENT STRUCTURAL SUPPORTS ARE INSTALLED. PROVIDE BRACING, SHORING, AND/OR TEMPORARY STRUCTURES AS REQUIRED IN ORDER TO SATISFY THE CONTRACT REQUIREMENTS. TEMPORARY STRUCTURES SHALL BE DESIGNED AND BUILT BY THE CONTRACTOR.
3. PROVIDE ALL BRACING NECESSARY TO STABILIZE THE BUILDING DURING THE ERECTION PROCESS. BRACING SHALL BE DESIGNED AND INSTALLED SUCH THAT IT DOES NOT TWIST OR DISTORT MEMBERS. BRACING SHALL BE DESIGNED FOR LOADS AS REQUIRED BY APPLICABLE CODES. THE DESIGN OF THE BRACING SHALL TAKE INTO ACCOUNT FORCES DUE TO THERMAL EXPANSION AND CONTRACTION OF THE BUILDING FRAME AND BRACES.
4. ANCHOR RODS FOR STEEL COLUMNS ARE NOT DESIGNED TO STABILIZE STRUCTURE BY PROVIDING FIXITY OF THE COLUMN BASE. PROVIDE TEMPORARY BRACING FOR STABILITY DURING THE ERECTION PHASE UNTIL ALL LATERAL LOAD RESISTING ELEMENTS ARE IN PLACE AND WELDING AND/OR BOLTING INSPECTIONS ARE COMPLETE.
5. COMPLY WITH ALL APPLICABLE OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.

D. RENOVATIONS AND ADDITIONS TO EXISTING BUILDINGS:

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT/ENGINEER IF THE EXISTING CONDITIONS AND DIMENSIONS ARE DIFFERENT FROM THOSE INDICATED OR SHOWN ON THE CONTRACT DRAWINGS. INCORPORATE NECESSARY CHANGES INTO THE CONTRACT DOCUMENTS.
2. SCHEDULE AND COORDINATE WORK TO PREVENT DAMAGE TO THE BUILDING OUTSIDE THE LIMITS OF THE CONTRACT. REPAIR AT NO ADDITIONAL COST TO THE OWNER ANY DAMAGE CAUSED BY THE CONSTRUCTION.
3. FIELD VERIFY SIZES AND LAYOUT OF EXISTING STRUCTURAL MEMBERS NOTED ON THE STRUCTURAL DRAWINGS. NOTIFY ARCHITECT/ENGINEER IF SIZES OR LAYOUT DIFFERS. INCORPORATE NECESSARY CHANGES INTO THE CONTRACT DOCUMENTS.

E. GENERAL REQUIREMENTS:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH DRAWINGS RELATING TO OTHER TRADES. CHECK AND COORDINATE DIMENSIONS, CLEARANCES, OPENINGS, PIPE SLEEVES, CURBS, ETC. WITH THE WORK OF OTHER TRADES.
2. WORK NOT INDICATED ON A PART OF THE DRAWING BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
3. DETAILS DESIGNATED AS "TYPICAL" APPLY TO ALL AREAS WHERE THE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAIL.
4. THE PLANS AND DETAILS IN THE CONTRACT DRAWINGS SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL BY THE ARCHITECT/ENGINEER.
5. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
6. SPLICING OF STRUCTURAL MEMBERS WHERE NOT DETAILED IS PROHIBITED WITHOUT PRIOR APPROVAL OF ARCHITECT/ENGINEER. IF APPROVED, ADDITIONAL TESTING AND INSPECTION SHALL BE AS SPECIFIED BY THE ARCHITECT/ENGINEER AND PAID FOR BY THE CONTRACTOR.
7. NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE: HOLES, SLOTS, CUTS, ETC., ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE DETAILED ON THE APPROVED SHOP DRAWINGS.
8. FRAMING TO SUPPORT MECHANICAL EQUIPMENT IS BASED ON THE WEIGHTS OF ASSUMED EQUIPMENT AS INDICATED ON THE MECHANICAL DRAWINGS. ANY CHANGES IN TYPE, SIZE, OR NUMBER OF PIECES OF EQUIPMENT SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR VERIFICATION OF THE ADEQUACY OF SUPPORTING MEMBERS PRIOR TO THE PLACEMENT OF SUCH EQUIPMENT.
9. ENSURE THAT ALL CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT PUT ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT THE CONCRETE REACHES THE FULL DESIGN STRENGTH AND ALL FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE ADEQUACY OF SLABS ON GRADE FOR SUPPORTING ALL CONSTRUCTION EQUIPMENT, INCLUDING AREAL LIFTS.
10. CEILING PANELS OF WALK-IN COOLERS/FREEZERS SHALL BE SUSPENDED FROM ROOF STRUCTURAL MEMBERS BY HANGER SUPPORTS ONLY AT LOCATIONS SHOWN ON DRAWINGS. VERIFY SUPPORT DETAILS AND LOADS WITH COOLER MANUFACTURER. ANY ADDITIONAL STEEL REQUIRED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

F. SHOP DRAWINGS:

1. SUBMIT SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT/ENGINEER FOR THE FOLLOWING ITEMS. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:
   a. CONCRETE REINFORCING STEEL
      1. INDICATE ALL REINFORCING STEEL IN FOUNDATIONS AND SLABS ON GRADE
      2. INDICATE ALL HORIZONTAL, VERTICAL, AND TIE REINFORCING
      3. INDICATE TYPE AND LOCATION OF ALL REINFORCING STEEL SPLICES
   b. STRUCTURAL STEEL
   c. COLD-FORMED STEEL FRAMING
   d. SUBFLOOR INJECTION GROUTING
2. SUBMIT OTHER SHOP DRAWINGS FOR REVIEW BY ARCHITECT/ENGINEER AS REQUIRED BY PROJECT SPECIFICATIONS.
3. DETAILS FOR SOME SPECIAL CONDITIONS WILL NEED TO BE DEVELOPED BY THE DETAILER DURING THE DETAILING PROCESS. FINAL REVIEW OF THE DETAILS WILL BE AT THE DISCRETION OF THE ENGINEER OF RECORD. NO ADDITIONAL CHARGES FOR MAKING CORRECTIONS, CHANGES, OR ADDITIONS TO THE SHOP DRAWINGS ("RE-DETAILING COST") WILL BE ALLOWED. CONTRACTOR SHALL MAKE PROVISIONS FOR DETAILING CORRECTIONS AND MISCELLANEOUS MATERIAL IN THE BID PRICE. ADJUSTMENTS TO THE CONTRACT WILL ONLY BE MADE FOR CHANGE ORDERS APPROVED PRIOR TO THE COMMENCEMENT OF ANY ACTION ON THE CHANGES.
4. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR / CONSTRUCTION MANAGER PRIOR TO SUBMITTAL. INCOMPLETE SHOP DRAWINGS AND SHOP DRAWINGS THAT HAVE NOT BEEN REVIEWED BY THE CONTRACTOR WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT/ENGINEER.
5. VERIFY AND COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. IN CASE OF CONFLICTS, THE ARCHITECT/ENGINEER IS TO BE NOTIFIED AND WILL PROVIDE THE CORRECT ELEVATIONS AND DIMENSIONS FOR WHICH SHALL BE INCORPORATED INTO THE SHOP DRAWINGS AT NO EXTRA COST.

G. EARTHWORK:

1. FOUNDATION DESIGN IS BASED ON SOIL INVESTIGATION AND REPORT BY GRUBBS, HOSKYN, BARTON & WYATT, LLC, dba UES (JOB NO.: A24184.00248).
2. FOUNDATION DESIGN IS BASED ON THE FOLLOWING MINIMUM NET ALLOWABLE BEARING PRESSURE:
   a. EXTERIOR INDIVIDUAL PAD FOOTINGS: 1750 PSF
   b. INTERIOR FOOTINGS ON EXISTING SLAB: 800 PSF
      • MODULUS OF SUBGRADE: 275 PSI/IN

   BEARING PRESSURE AND MODULUS OF SUBGRADE FOR EXISTING SLAB IS BASED ON MINIMUM 4 INCHES HIGH-MOBILITY POLYURETHANE GROUTING BELOW SLAB, SEE S-101. ALL FOUNDATION BEARING CONDITIONS SHALL BE VERIFIED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
3. BOTTOM OF FOUNDATION ELEVATIONS ARE GIVEN FOR BIDDING PURPOSES ONLY. ALL FOUNDATIONS SHALL BE FOUNDED A MINIMUM OF 1 FOOT BELOW EXISTING GRADE IN PROPERLY COMPACTED ON-SITE FILL OR SELECT FILL.
4. THE SITE SHALL BE PROOF ROLLED, COMPACTED FILL PLACED, AND EXCAVATED AS REQUIRED FOR FOUNDATION. SEE SPECIFICATION DIVISION 31 FOR EARTHWORK REQUIREMENTS.
6. POSITIVE SURFACE DRAINAGE AND SUBSURFACE DRAINAGE SHOULD BE ESTABLISHED AT THE START OF CONSTRUCTION, MAINTAINED DURING THE WORK, AND INCORPORATED INTO FINAL DESIGN TO PREVENT SURFACE WATER PONDING AND SUBSEQUENT SATURATION OF SUBGRADE SOILS. DENSITY AND WATER CONTENT OF ALL EARTHWORK SHOULD BE MAINTAINED UNTIL THE FOUNDATIONS ARE COMPLETED. SUBGRADE SOILS THAT BECOME SATURATED BY PONDING WATER OR RUNOFF SHOULD BE EXCAVATED TO SUITABLE MATERIAL.
7. TAKE ADEQUATE MEASURES TO ALLOW FOR WORKING SURFACE DURING CONSTRUCTION OF FOUNDATIONS AND SLAB-ON-GRADE, SUCH AS GRAVEL BED OF ADEQUATE DEPTH, ETC.
8. PROVIDE EARTH RETENTION SYSTEMS AND TEMPORARY BRACING OR SHORING (INCLUDING UNDERPINNING) AS REQUIRED TO SUPPORT EXCAVATIONS AND TO PROTECT EXISTING STRUCTURES DURING CONSTRUCTION. TRENCHING AND EXCAVATIONS SHALL MEET ALL OSHA REQUIREMENTS.
9. WATER ACCUMULATION IS ANTICIPATED IN FOOTING EXCAVATIONS; PROVIDE DRAINAGE OF EXCAVATIONS FROM SURFACE WATER AND SEEPAGE. EXCAVATIONS SHALL BE DRAINED OR PUMPED DRY BEFORE POURING CONCRETE.
10. PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.
11. NO BACKFILLING SHALL BE DONE AGAINST FOUNDATION WALLS UNTIL CONCRETE HAS ATTAINED ITS FULL DESIGN STRENGTH. BEFORE BACKFILLING, PROVIDE BRACING FOR WALLS OR GRADE BEAMS SUSTAINING MORE THAN 3'-0" OF EARTH PRESSURE. THIS BRACING SHALL REMAIN IN PLACE UNTIL SLAB ON GRADE AND/OR FLOOR SLAB HAVE BEEN PLACED AND CURED.
12. IN NO CASE SHALL BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY FOUNDATION WALL.

H. CONCRETE AND REINFORCING STEEL:

1. THE DESIGN OF THE CONCRETE STRUCTURE IS BASED ON ACI318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. CAST IN PLACE CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS (f'c):

COMPONENT	COMPRESSIVE STRENGTH
INTERIOR FOOTINGS	3500 PSI
EXTERIOR SLABS, PADS, AND FOOTINGS	3500 PSI

   SEE SPECIFICATION SECTION 033000 FOR ADDITIONAL MIX DESIGN REQUIREMENTS.
3. ALL DEFORMED REINFORCING STEEL SHALL BE A615 GRADE 60 STEEL, U.N.O.
4. ALL WELDED WIRE REINFORCING STEEL SHALL BE A1064. ALL WELDED WIRE REINFORCEMENT SHALL BE PROVIDED IN SHEETS.
5. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ACI CODE AND ACI DETAILING MANUAL.
6. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE:

CONCRETE CAST AGAINST EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#5 BARS AND SMALLER:	1 ½"
#6 BARS AND LARGER:	2"
SLABS, WALLS, AND JOISTS:	1"
BEAMS AND COLUMNS:	1 ½"

7. ALL CONCRETE CONSTRUCTION AND MATERIALS SHALL BE PLACED ACCORDING TO ACI 117 TOLERANCES.
8. ALL CONCRETE REINFORCING STEEL SHALL BE SPLICED USING TENSION SPLICES:
   a. UNLESS NOTED OTHERWISE, LAP SPLICE ALL CONCRETE REINFORCING STEEL:

BARS #6 AND SMALLER:	48 BAR DIAMETERS
BARS #7 AND LARGER:	60 BAR DIAMETERS
WELDED WIRE REINFORCING:	ONE MESH PLUS 2"

   b. ONLY APPROVED MECHANICAL SPLICE SYSTEMS SHALL BE USED TO PROVIDE TENSION SPLICES. MECHANICAL SPLICES SHALL DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR.
9. ALL CONCRETE REINFORCING SHALL BE SPLICED WHERE DETAILED ON THE DRAWINGS. STAGGER ALL TENSION LAP SPLICE LOCATIONS UNLESS NOTED OTHERWISE.
10. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS END WITH STANDARD HOOKS.
11. PROVIDE CORNER BARS IN ALL CONCRETE MEMBERS AT INTERSECTIONS. MATCH SIZE AND SPACING OF HORIZONTAL BARS IN THOSE MEMBERS.
12. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED AS REQUIRED TO FURNISH SUPPORT FOR ALL REINFORCING STEEL.
13. PROVIDE SUPPORT FOR ALL CONCRETE REINFORCING (INCLUDING SLABS ON GRADE) AS REQUIRED TO MAINTAIN CLEAR COVER DIMENSIONS. SPACING SHALL NOT EXCEED 3'-0".
14. SUBMIT DRAWINGS SHOWING INTENDED POURING SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE ARCHITECT/ENGINEER FOR APPROVAL.
15. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. HORIZONTAL OR NEAR HORIZONTAL JOINTS SHALL BE PREPARED BY ROUGHENING THE SURFACE IN AN APPROVED MANNER SO THAT THE AGGREGATE IS EXPOSED UNIFORMLY, LEAVING NO LAITANCE, LOOSENED PARTICLES, OR DAMAGED CONCRETE.
16. PIPES OR CONDUITS PLACED IN FOUNDATIONS AND SLABS SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTERS. PIPES AND CONDUITS PLACED IN SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 OF SLAB THICKNESS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUIT SHALL BE PLACED WITHIN 24" OF COLUMN FACE.
17. LOCATION OF SLOTTED INSERTS, WELD PLATES AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
18. REINFORCING BARS SHALL NOT BE WELDED.
19. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVE CURBS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.
20. AGGREGATE FOR CONCRETE SHALL NOT CONTAIN LIGNITE, STEEL, OR OTHER MATERIALS THAT MAY BE DETRIMENTAL TO THE CONCRETE. ALKALI-SILICA REACTIVE (ASR) AGGREGATES ARE NOT ALLOWED.
21. MAXIMUM TOLERANCE FOR SLAB EDGES IS 1/2" +/- EXCEPT WHERE TIGHTER TOLERANCE IS REQUIRED FOR ARCHITECTURAL REASONS.
22. CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH THE SPECIFICATIONS. WHEN THE AIR TEMPERATURE IS OVER 85 DEGREES FOLLOW THE RECOMMENDATIONS OF ACI 305R. WHEN THE AIR TEMPERATURE IS BELOW 40 DEGREES FOLLOW THE RECOMMENDATIONS OF ACI 306R.

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN

10-09-2024

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Sheet Title

STRUCTURAL DESIGN CRITERIA AND GENERAL NOTES

Sheet Number

S-001

STRUCTURAL GENERAL NOTES (cont'd)

I. STRUCTURAL STEEL:

1. THE DESIGN OF STRUCTURAL STEEL IS BASED ON AISC 360-16, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
2. ALL STEEL MEMBERS SHALL CONFORM TO:

SECTION	ASTM STANDARD	YIELD STRENGTH
WIDE FLANGE AND CHANNELS	A992	50 KSI
ANGLES, PLATES, AND BARS	A572	50 KSI
RECTANGULAR AND SQUARE HSS	A500 GRADE C OR A1085	50 KSI

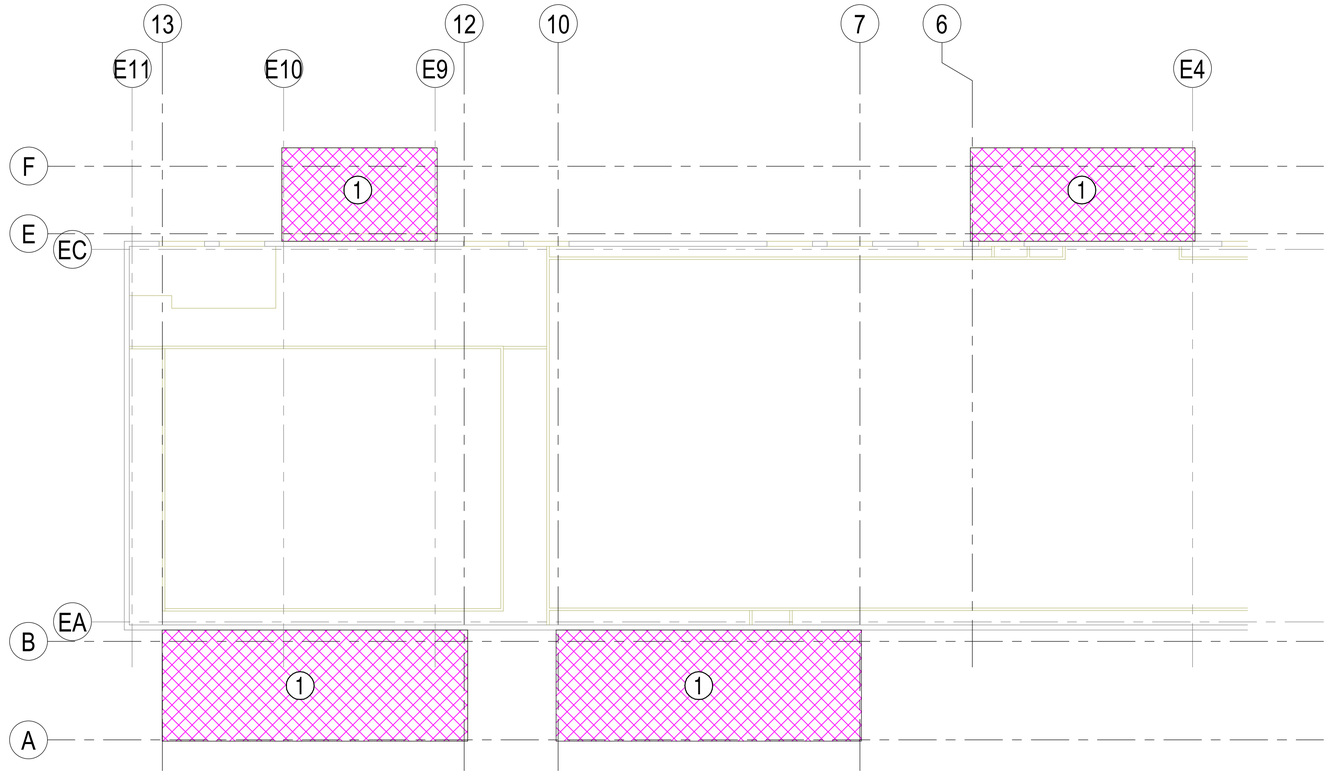
3. ALL BOLTED CONNECTIONS FOR STRUCTURAL STEEL TO STEEL SHALL BE ASTM F3125, GRADE F1852 "TWIST-OFF" STYLE TENSION CONTROL BOLT ASSEMBLIES (SHOP AND FIELD), UNLESS NOTED OTHERWISE. "H.S. BOLTS" DESIGNATES F1852 BOLT ASSEMBLIES.
4. ALL WELDING ELECTRODES FOR STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO AWS A5.1 GRADE E-70 BARE ELECTRODES.
5. COLUMN ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36. ANCHOR RODS SHALL HAVE A PLATE WASHER PER AISC TABLE 14-1 AND ONE HEAVY HEX NUT AT THE TOP AND ONE HEAVY HEX NUT AT THE BOTTOM TACK WELDED TO THE ROD, UNLESS NOTED OTHERWISE.
6. PLACE AND SECURE ANCHOR RODS IN FOOTING EXCAVATION PRIOR TO POURING CONCRETE FOR FOOTING. DO NOT PLACE ANCHOR RODS IN WET CONCRETE.
7. PROVIDE LEVELING NUTS OR SHIM PACKS AS REQUIRED TO LEVEL COLUMN BASE PLATES. IF SHIM PACKS ARE USED, ENCASE SHIM PACKS WITH 1" MIN COVER OF NON-SHRINK GROUT WHEN PLACING GROUT UNDER BASE PLATE.
8. CONNECTION DETAILING:
   a. CONNECTIONS SHALL BE DETAILED AS INDICATED IN THE DRAWINGS, UNO.
   b. THE FABRICATOR'S STEEL DETAILER SHALL SELECT AND COMPLETE TYPICAL CONNECTIONS BASED ON THE PLANS AND THE FOLLOWING:
      1. TYPICAL STEEL GIRDER TO COLUMN CONNECTIONS: DETAIL 3/S-401.
      2. TYPICAL STEEL BEAM-TO-BEAM CONNECTIONS: DETAIL 2/S-401.
      3. TYPICAL CONNECTIONS SHALL USE, AS A MINIMUM, THE NUMBER OF BOLTS INDICATED IN THE TYPICAL DETAILS.
      4. IF BEAM END REACTIONS ARE LARGER THAN THE CAPACITY INDICATED IN THE SCHEDULES THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR GUIDANCE.
   c. ANY NON-TYPICAL CONNECTIONS THAT ARE NOT DETAILED IN THE DRAWINGS SHALL BE DESIGNED BY THE FABRICATOR FOR THE LOADS INDICATED IN THE DRAWINGS. THE DESIGN SHALL BE DONE BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF ARKANSAS. THE CONNECTION DETAILS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL.
9. ALL STEEL FABRICATION AND ERECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE.
10. THE STRUCTURAL STEEL FRAMING FABRICATOR SHALL BE AN AISC CERTIFIED BUILDING FABRICATOR (BU).
11. ALL STEEL DETAILS SHALL BE IN ACCORDANCE WITH THE REQUIREMENT OF THE LATEST AISC SPECIFICATIONS WITH LATEST REVISIONS.
12. SUPPLY STRUCTURAL STEEL FRAMING CONNECTIONS THAT COMPLY WITH OSHA STANDARDS. IF MEETING THESE STANDARDS CONFLICTS WITH ANYTHING SHOWN IN THESE DRAWINGS THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING ADVISING OF ANY REQUIRED REVISIONS AND ACQUIRE THE ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE WORK.
13. THE MINIMUM PLATE THICKNESS SHALL BE 1/4", THE MINIMUM WELD SHALL HAVE A 1/4" THICK THROAT, THE MINIMUM BOLT DIAMETER SHALL BE 3/4", AND THE MINIMUM CONNECTION SHALL BE TWO BOLTS, U.N.O.
14. ALL COLUMN BEARING PLATES SHALL BE SIZED AS SHOWN ON DETAIL 4/S-301 AND SHALL HAVE ROLLED OR GAS CUT EDGES. MINIMUM EDGE DISTANCE TO CENTER OF BOLT HOLE, SPACING OF HOLES, AND SIZES OF HOLES SHALL BE AS PER AISC MANUAL UNLESS NOTED OTHERWISE.
15. PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS AT POINTS OF CONCENTRATED LOAD. MINIMUM STIFFENER PLATE THICKNESS TO BE 1/2" OR FLANGE THICKNESS OF COLUMNS ABOVE OR BELOW, WHICHEVER IS GREATER, U.N.O.
16. PROVIDE 1/2" MINIMUM THICKNESS STIFFENERS ON ALL BEAMS RUNNING OVER TOPS OF COLUMNS. MINIMUM SIZE OF WELD TO BE 1/4" FILLET WELD, U.N.O.
17. THE STEEL FABRICATOR MAY SPLICE THE COLUMNS EITHER AT EACH FLOOR OR AT ANY FLOOR AS LONG AS THE COLUMN SIZE REMAINS AS SHOWN ON THE LOWER LEVEL.
18. ALL STEEL NOT REQUIRED TO BE SHOP PAINTED (SEE SPECIFICATIONS) SHALL BE CLEANED OF OIL, GREASE, DIRT, RUST, LOOSE MILL SCALE, ETC. AND ALL OTHER FOREIGN MATERIALS.
19. GALVANIZING OF ALL STEEL MEMBERS SHALL CONFORM TO ASTM A123. ALL GALVANIZED STEEL REQUIRED TO BE PAINTED SHALL BE CLEANED AND PREPPED ACCORDING TO ASTM D6386.
20. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS LATEST EDITIONS. WELDING SHALL BE INSPECTED AND TESTED AS NOTED IN THE SPECIFICATIONS. WELDING INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELDING INSPECTOR.
21. FINAL BOLTING OR WELDING SHALL NOT BE PERFORMED UNTIL THE STRUCTURE HAS BEEN PROPERLY ALIGNED.

J. COLD-FORMED STEEL FRAMING:

1. THE DESIGN OF THE COLD FORMED STEEL FRAMING IS BASED ON AISI S100-16 w/S2-20, NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
2. ALL MATERIAL SHALL BE COLOR CODED TO INDICATE THE GAUGE OF THE MATERIAL.

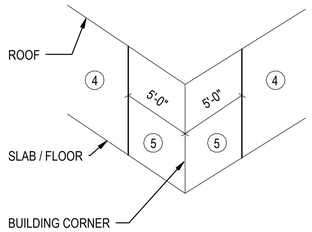
K. POST-INSTALLED ANCHORS IN CONCRETE:

1. POST-INSTALLED ANCHORS (MECHANICAL OR ADHESIVE) SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER–OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS OR DOWELS. POST-INSTALLED ANCHORS SHALL BE BUILDING CODE COMPLIANT, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND INSPECTED PER THE APPLICABLE ICC-ES OR IAPMO UES EVALUATION REPORT. SEE SPECIFICATIONS SECTION 033000 FOR ADDITIONAL INFORMATION.



1 COMPONENTS AND CLADDING WIND PRESSURES ROOF PLAN

NOT TO SCALE



ZONE	TRIBUTARY AREA (SQ. FT.)		
	10	50	100
2	-27/+25 PSF	-25/+23 PSF	-24/+22 PSF
3	-34/+25 PSF	-29/+23 PSF	-26/+22 PSF

GROSS WIND UPLIFT
(STRENGTH DESIGN)

ZONE	TRIBUTARY AREA (SQ. FT.)		
	10	50	100
1	-95/+16 PSF	-65/+16 PSF	-52/+16 PSF

NOTES:
1. ULTIMATE WIND SPEED: 104 MPH
2. NOMINAL WIND SPEED: 81 MPH
3. WIND PRESSURES ARE BASED ON ASCE 7-16 STRENGTH DESIGN (ULTIMATE).
4. POSITIVE / NEGATIVE VALUES INDICATE FORCES ARE ACTING TOWARDS / AWAY FROM ELEMENT, RESPECTIVELY.
5. COMPONENTS SUBJECTED TO PARAPET WIND FORCE ON BOTH SIDES (e.g. WALL PANELS) SHALL BE DESIGNED FOR CUMULATIVE FORCES.
6. SERVICE LEVEL LOADS MAY BE CALCULATED BY MULTIPLYING THE NUMBERS ABOVE BY 0.6.

COMPONENTS AND CLADDING WALL WIND PRESSURES ***COMPONENTS AND CLADDING ROOF WIND PRESSURES***

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

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Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN

10-09-2024

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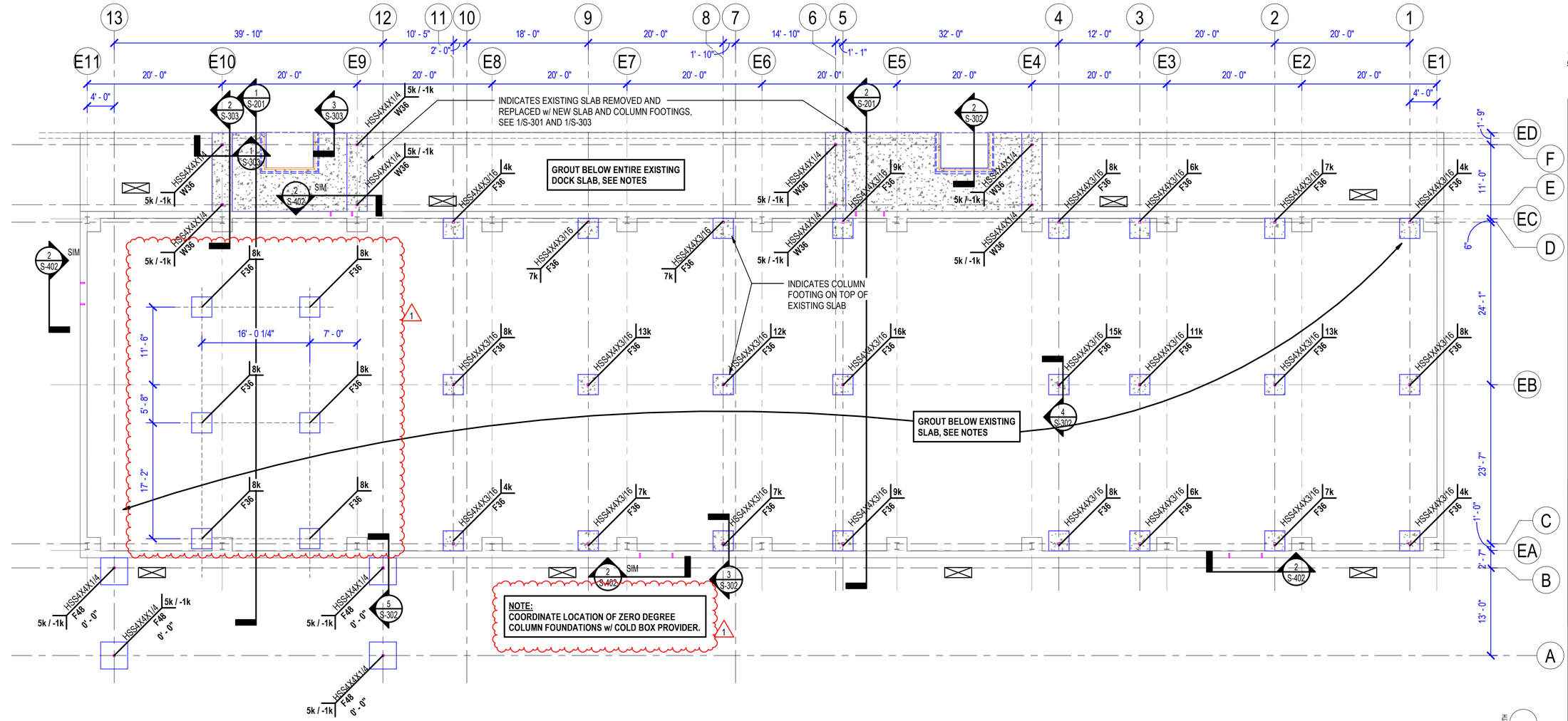
Sheet Title
STRUCT. GEN. NOTES CONT'D AND COMPONENTS AND CLADDING WIND PRESSURES

Sheet Number
S-002

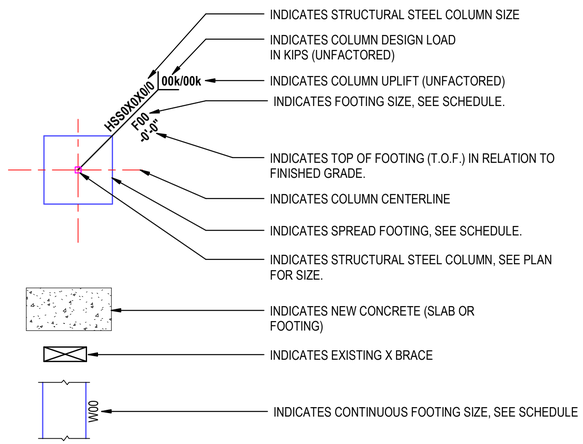


1 FOUNDATION AND SLAB PLAN

1/8" = 1'-0"

FINISHED FLOOR ELEVATION TO MATCH EXISTING BUILDING FLOOR ELEVATION

FOUNDATION AND SLAB LEGEND



FOUNDATION SCHEDULE				
MARK #	L	W	T	REINFORCING
F36	3' - 0"	3' - 0"	1' - 0"	#5 AT 9" O.C. BOT EA WAY
F48	4' - 0"	4' - 0"	1' - 6"	#5 AT 9" O.C.TOP AND BOT EA WAY
W36	CONT.	3' - 0"	1' - 6"	SEE DETAIL 1/S-303

GROUT NOTES:

1. INSTALL HIGH-MOBILITY POLYURETHANE GROUT BELOW SLAB IN EXISTING BUILDING AND BELOW EXTERIOR DOCK SLAB USING A REGULAR PATTERN OF INJECTION HOLES.
2. INSTALL GROUT BELOW DOCK SLAB PRIOR TO DEMOLITION OF SLAB WHERE SHOWN ON PLANS.
3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 38 PSI AND PLACED IN HARD CONTACT WITH SUBGRADE.
4. APPLY GROUT AT LOW PRESSURE AND TERMINATE WHEN GROUT IS NOTED IN ADJACENT INJECTION POINTS OR WHEN MOVEMENT OF FLOOR SLAB OR OTHER FIXED FEATURES IS OBSERVED.
5. ALL OPENINGS AND JOINTS SHALL BE THOROUGHLY SEALED PRIOR TO GROUTING.
6. GROUT TAKE SHALL BE MEASURED DURING GROUTING.
7. GROUT MIX DESIGN AND APPLICATION METHOD SHALL BE DEVELOPED BY A COMPETENT AND EXPERIENCED GROUTING CONTRACTOR.
8. SEE SPECIFICATION SECTION 03 64 00 AND THE SLAB SURVEY REPORT BY GRUBBS, HOSKYN, BARTON & WYATT, LLC, dba UES FOR ADDITIONAL INFORMATION.

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Project

AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

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CONSTRUCTION DOCUMENTS

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CROMWELL ARCHITECTS/ ENGINEERS #5
CERTIFICATE OF AUTHORIZATION
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN
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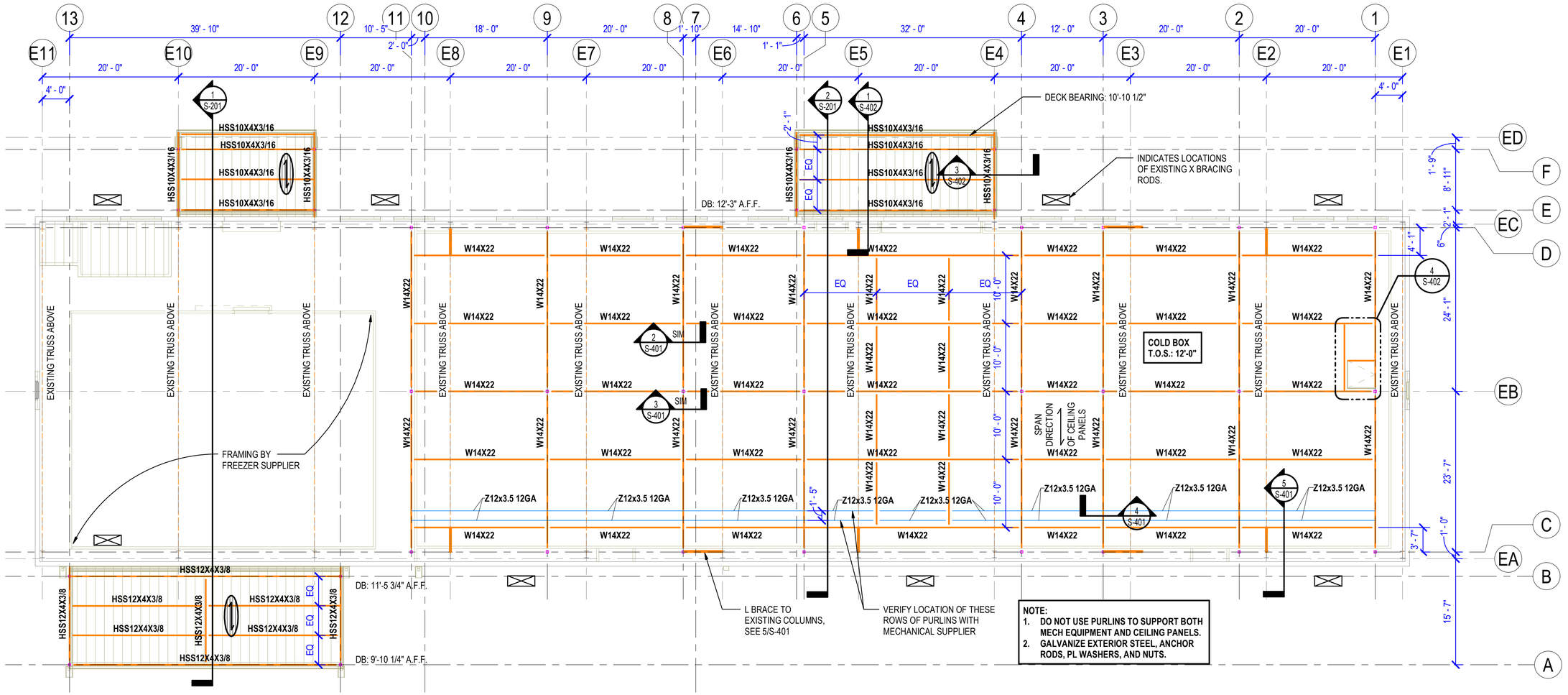
Sheet Title

FOUNDATION AND SLAB PLAN

Sheet Number

S-101



NOTE:
1. **DO NOT USE PURLINS TO SUPPORT BOTH MECH EQUIPMENT AND CEILING PANELS.**
2. **GALVANIZE EXTERIOR STEEL, ANCHOR RODS, PL WASHERS, AND NUTS.**

1 COLD BOX SUPPORT FRAMING AND CANOPY PLAN

1/8" = 1'-0"

FRAMING LEGEND

W00X00 or HSS00x00x0/0 — INDICATES WIDE FLANGE BEAM SIZE OR HSS BEAM SIZE

Z00X0.0 00GA — INDICATES CFS PURLIN SIZE AND SHAPE

INDICATES SPAN DIRECTION OF METAL DECK, SEE 1/S-401

INDICATES EXPECTED SPAN DIRECTION OF METAL PANELS BY OTHERS

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AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

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STATE OF ARKANSAS — MICHAEL CALLAHAN — PROFESSIONAL ENGINEER — No. 9668

10-09-2024

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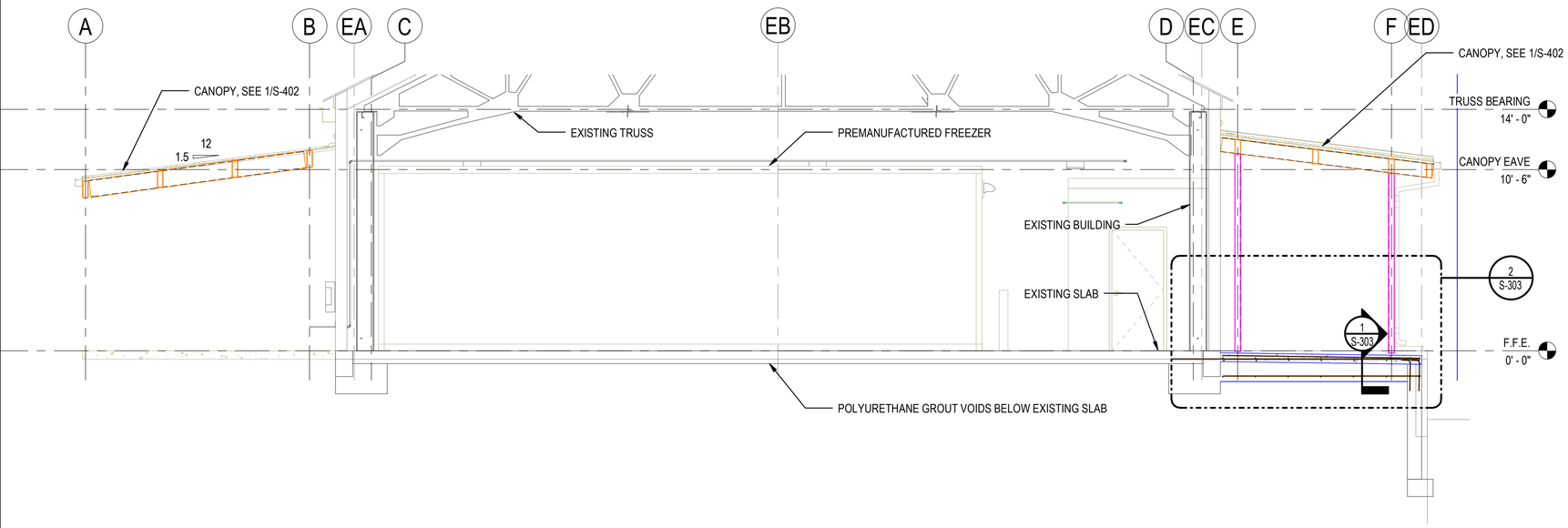
Sheet Title

COLD BOX FRAMING PLAN

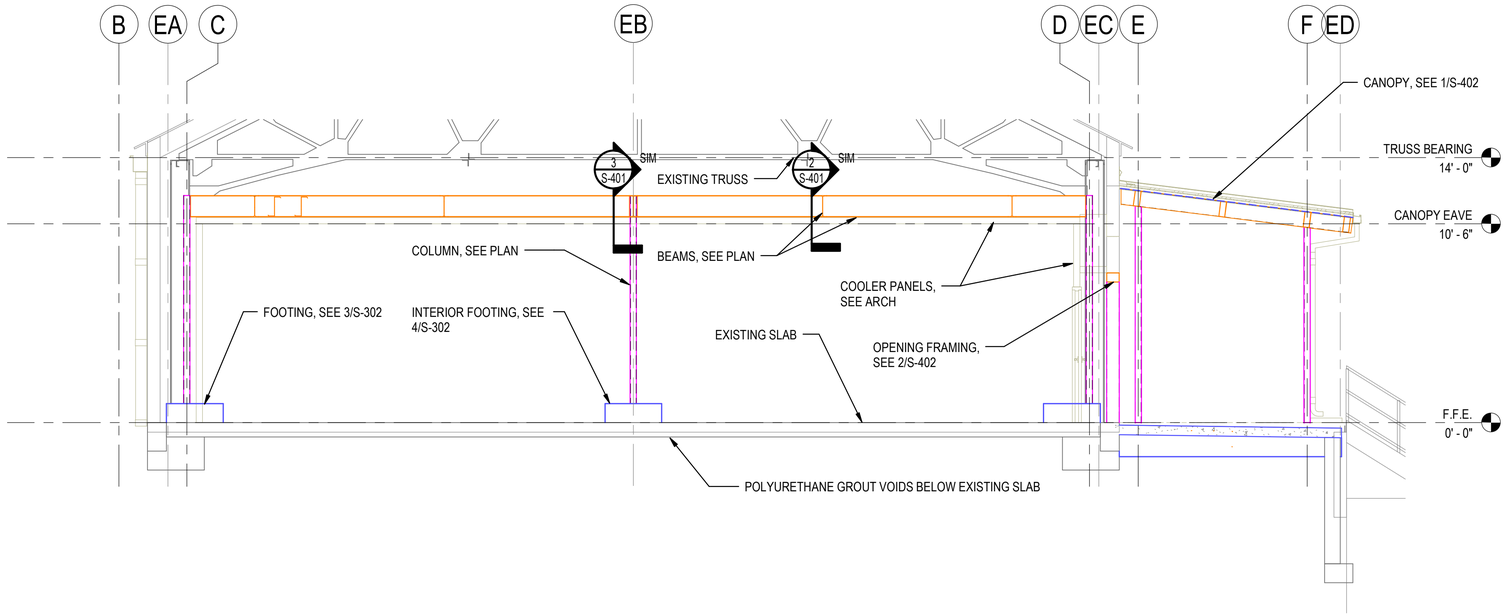
Sheet Number

S-102



1 SECTION AT FREEZER AREA

1/4" = 1'-0"



2 SECTION AT COOLER AREA

1/4" = 1'-0"

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STATE OF ARKANSAS
MICHAEL CALLAHAN
PROFESSIONAL ENGINEER
No. 9668
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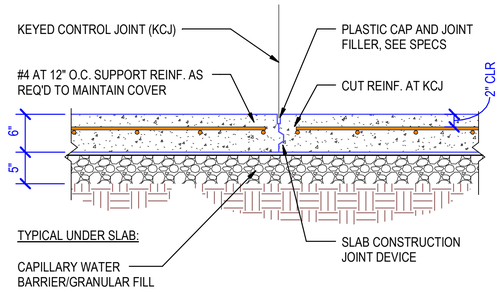
Sheet Title

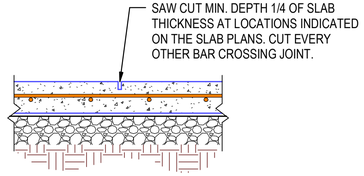
BUILDING SECTIONS

Sheet Number

S-201



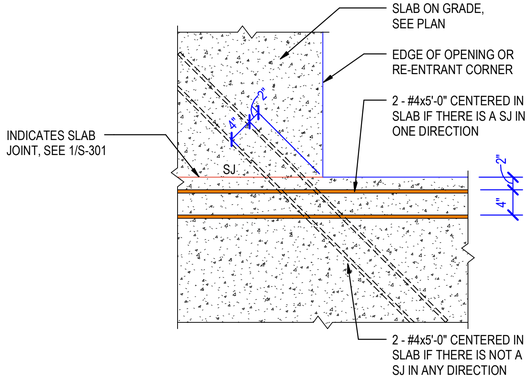
A KCJ (KEYED CONSTRUCTION JOINT)



B SAWN JOINT (SJ)

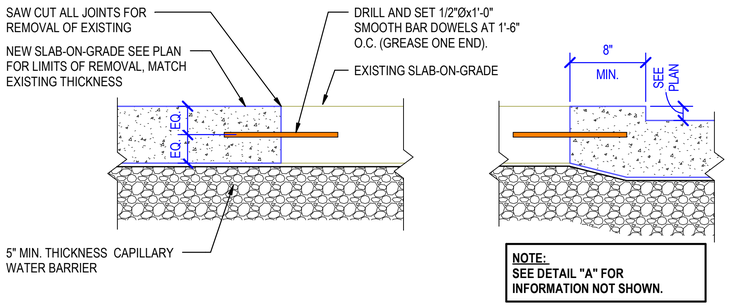
1 TYPICAL SLAB ON GRADE REINFORCING AND JOINT DETAILS

NOT TO SCALE



2 TYPICAL SLAB OPENINGS AND REENTRANT CORNERS

NOT TO SCALE



A SAME DEPTH

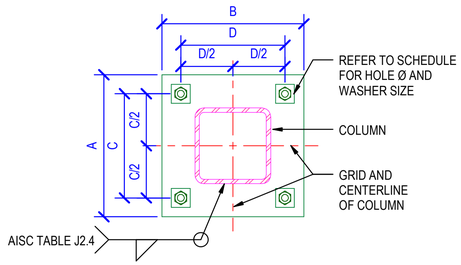
B DEEPER OR w/DEPRESSION

NOTE:
SEE DETAIL "A" FOR INFORMATION NOT SHOWN.

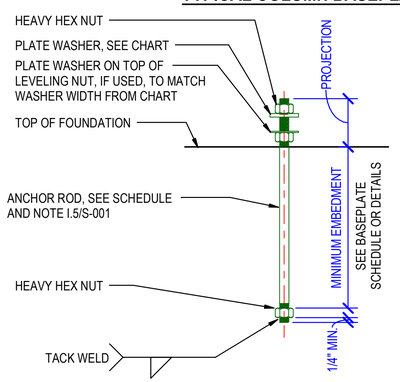
NOTE:
SAW CUT CONTROL JOINT PATTERN AT ALL INFILL AREAS WHERE AREA OF INFILL EXCEEDS 200 SQ. FT. OR WHERE ANY SIDE EXCEEDS 12'-0" (EXCEPT INFILL FOR TRENCHES).

3 TYPICAL SLAB INFILL DETAIL

NOT TO SCALE



TYPICAL COLUMN BASEPLATE



TYPICAL ANCHOR ROD DETAIL

TYPICAL BASE PLATE SCHEDULE

COL SIZE	PLATE THICKNESS	A	B	C	D	ANCHOR ROD Ø	MIN. EMBEDMENT
HSS4X4	1/2"	1'-0"	1'-0"	8"	8"	3/4"	8"

ANCHOR ROD WASHERS AND HOLES SIZE

ANCHOR ROD Ø	MAX HOLE Ø	MIN. WASHER SIZE	MIN. WASHER THICKNESS
3/4	1 5/16"	2"	1/4"

NOTES:
1. THIS CHART IS TAKEN FROM AISC TABLE 14-1. LATEST VERSION OF AISC TABLE 14-1 TAKES PRECEDENCE.
2. CIRCULAR OR SQUARE WASHERS ARE ACCEPTABLE.
3. ADEQUATE CLEARANCE MUST BE PROVIDED FOR THE WASHER SIZE SELECTED

4 BASEPLATE SCHEDULE AND DETAILS

NOT TO SCALE

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS
#5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN
10-09-2024

Notes

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Project Number **2024-079**

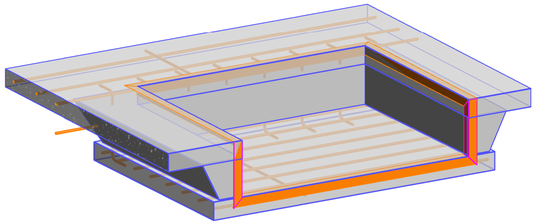
Issue Date **10-09-2024**

Sheet Title

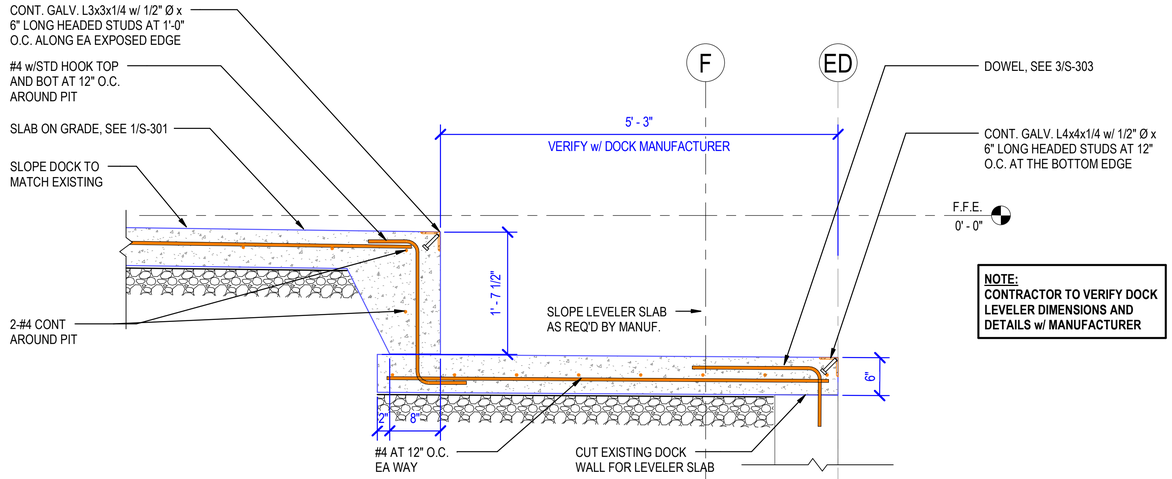
FOUNDATION AND SLAB DETAILS

Sheet Number

S-301



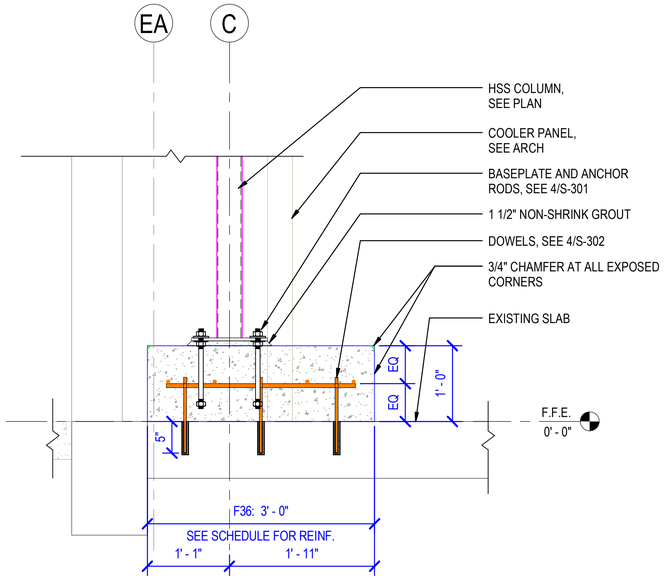
1 DOCK LEVELER PIT AT DOCK



2 SECTION AT DOCK LEVELER

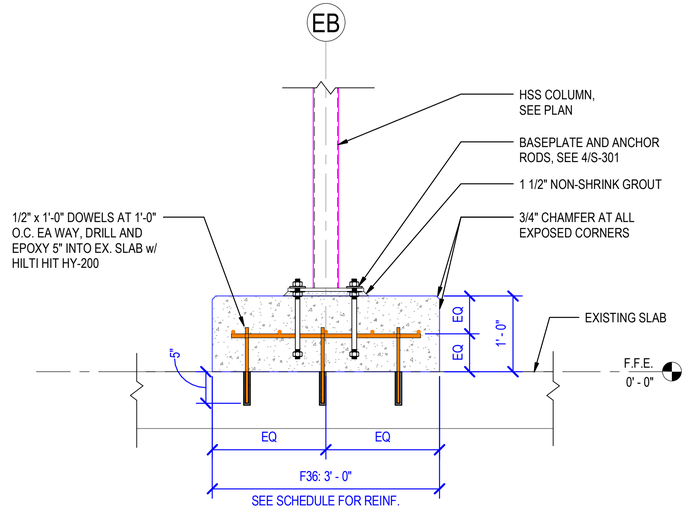
1" = 1'-0"

NOTE: DO NOT UNDERMINE EXISTING FOUNDATIONS



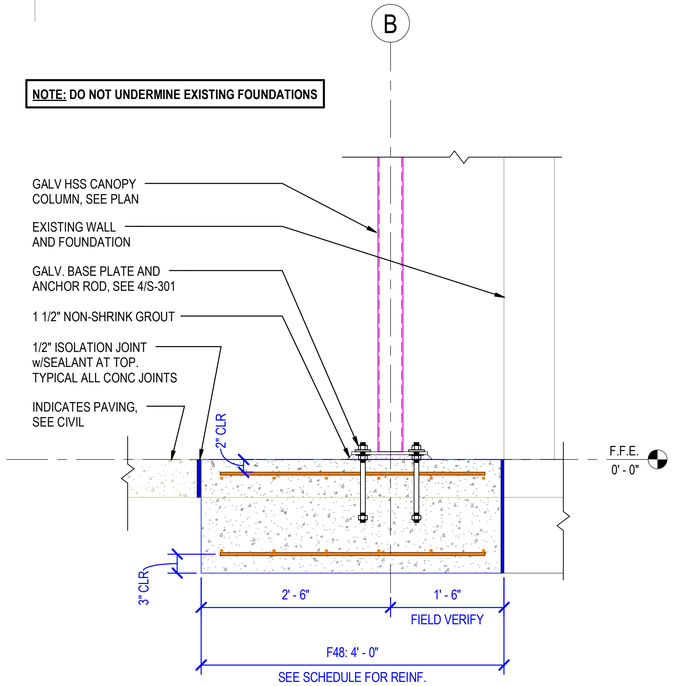
3 TYPICAL INTERIOR COLUMN FOOTING NEAR EXISTING WALL

1" = 1'-0"



4 TYPICAL INTERIOR COLUMN

1" = 1'-0"



5 TYPICAL CANOPY COLUMN FOOTING

1" = 1'-0"

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AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

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Revisions

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CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
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STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CAVANAH

10-09-2024

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Project Number **2024-079**

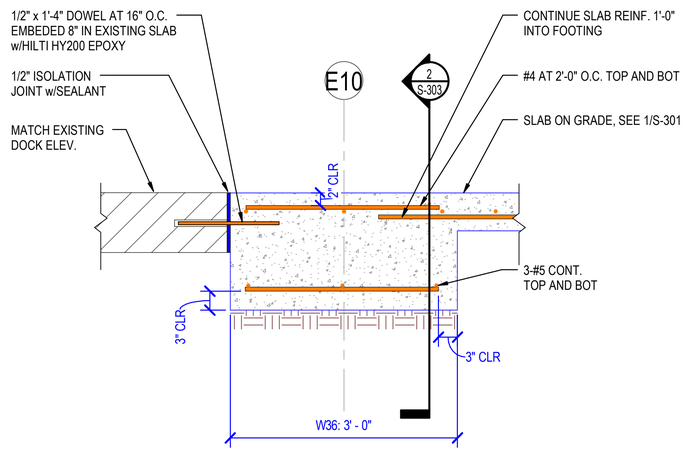
Issue Date **10-09-2024**

Sheet Title

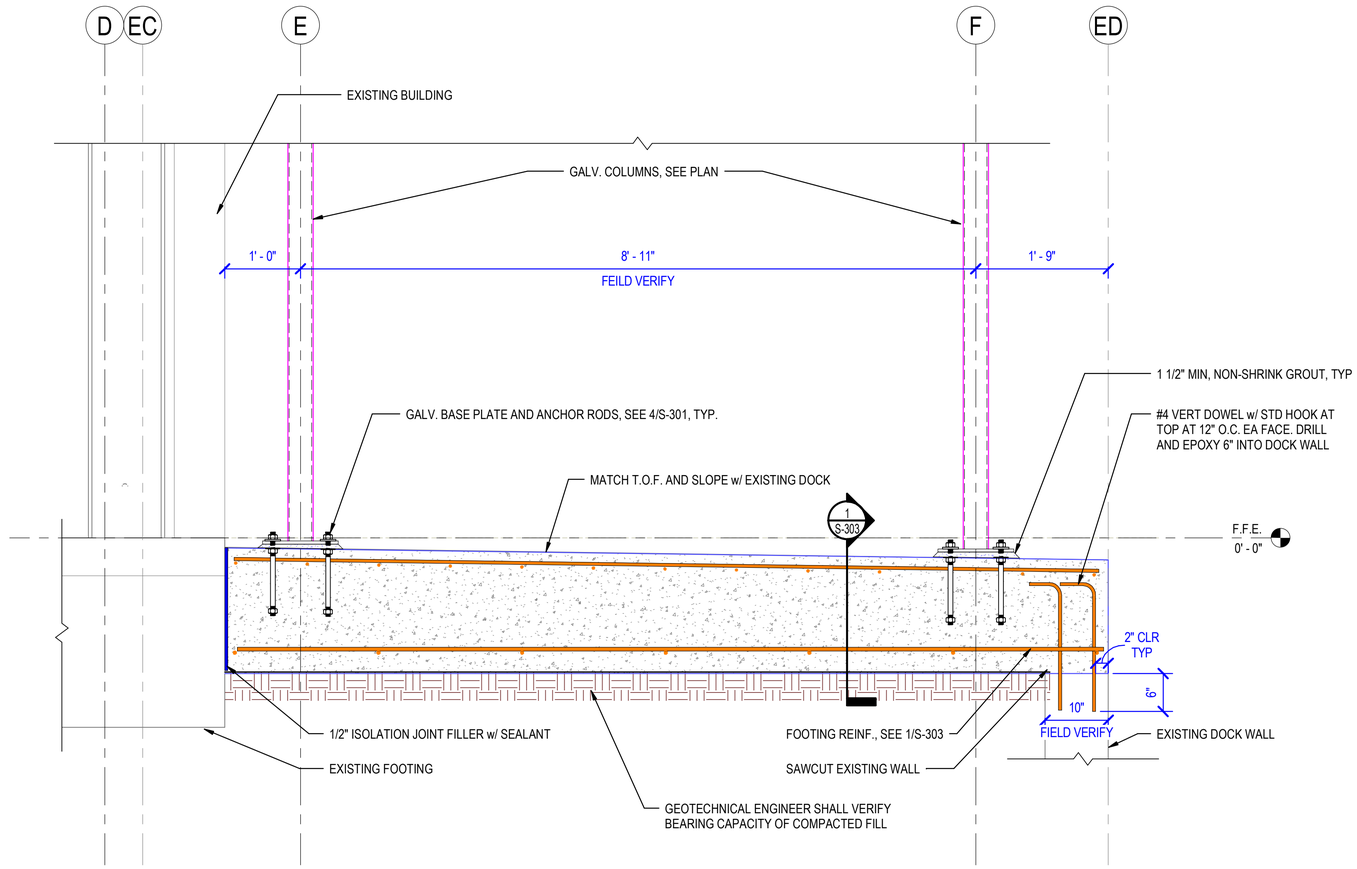
FOUNDATION AND SLAB DETAILS

Sheet Number

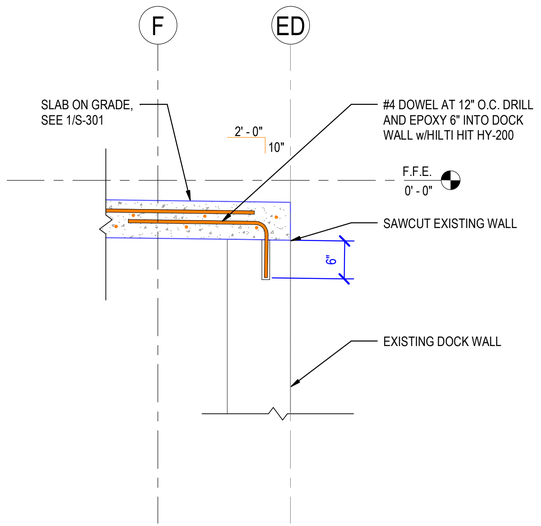
S-302



1 TYPICAL FOOTING AT DOCK
1" = 1'-0"



2 TYPICAL CANOPY FOUNDATION AT DOCK
1" = 1'-0"



3 TYPICAL SLAB TO EXISTING DOCK CONNECTION
1" = 1'-0"

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AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

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No.	Date	Description

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CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
MICHAEL CALLAHAN
PROFESSIONAL ENGINEER
No. 9668
10-09-2024

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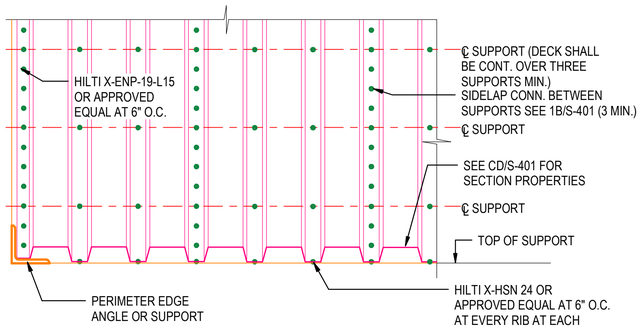
Issue Date **10-09-2024**

Sheet Title

FOUNDATION AND SLAB DETAILS

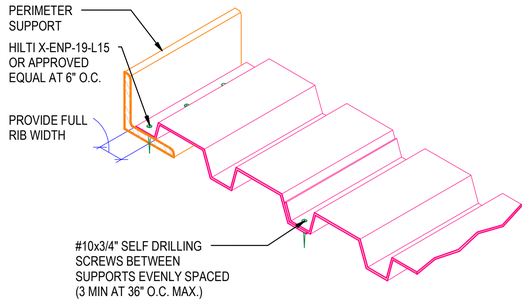
Sheet Number

S-303

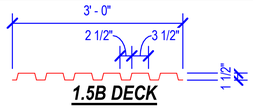


A TYPICAL DECK FASTENING PATTERN PLAN

1. EDGES OF SHEET SHALL BE COMPLETELY ENGAGED.
2. DECK GALVANIZING SHALL CONFORM TO ASTM a653 G60



B ISOMETRIC AT TYPICAL SIDE LAP



1.5B DECK

LOCATION	DEPTH	GAGE	ALLOWABLE DIAPHRAGM SHEAR VALUE	WEIGHT LBS./SQ. FT. GALVANIZED	I (IN^4) FT.	Sp (IN^3) FT.	Sn (IN^3) FT.
CANOPY DECK	1.5"	20	430 PLF AT 6'-0" SPAN	2.14	0.211	0.234	0.247

NOTES:
1.SECTION PROPERTIES SHOWN MAY VARY 10%.
2. DECK Fy = 33 ksi MIN.

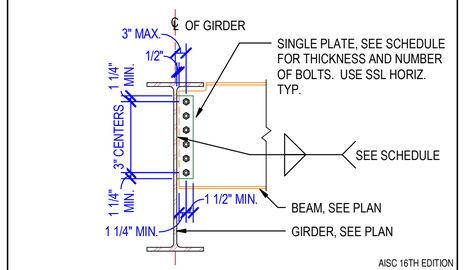
C DECK NOTES

D SECTION PROPERTIES

1 TYPICAL 1.5B ROOF DECK ANCHORAGE

NOT TO SCALE

SINGLE-PLATE CONNECTION DETAIL



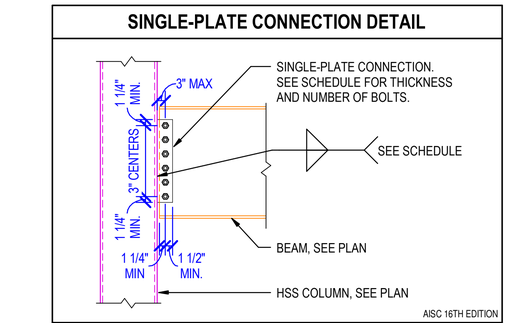
BOLT SCHEDULE				
BEAM SIZE	**ROWS OF 3/4" Ø H.S. BOLTS**	**MIN. PLATE THICKNESS**	**MIN. FILLET WELD SIZE**	**CAPACITY**
W14 & W12	3	1/4"	3/16"	43k

NOTES:
1. CAPACITY IS BASED ON LRFD DESIGN WITH STANDARD OR SHORT HORIZONTAL SLOTTED HOLES. OVERSIZE OR VERTICAL SLOTTED HOLES ARE NOT ALLOWED. FOR STANDARD HOLES MINIMUM PLATE THICKNESS SHALL BE USED.
2. NUMBER OF BOLTS SHOWN IS THE MINIMUM REQUIRED FOR CONNECTIONS
3. PREHEAT WELDS AS REQUIRED BY AISC.
4. BEAMS WITH LARGE COPES MAY REQUIRE WEB STIFFENER.

2 TYPICAL SINGLE PLATE BEAM TO GIRDER CONNECTION

NOT TO SCALE

SINGLE-PLATE CONNECTION DETAIL

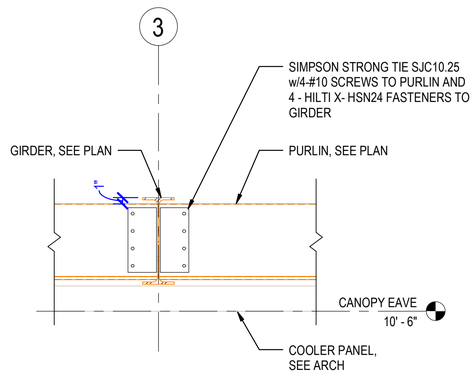


BOLT SCHEDULE				
BEAM SIZE	**ROWS OF 3/4" Ø H.S. BOLTS**	**MIN. PLATE THICKNESS**	**MIN. FILLET WELD SIZE**	**CAPACITY**
W14 & W12	3	1/4"	3/16"	43k

NOTES:
1. CAPACITY IS BASED ON LRFD DESIGN WITH STANDARD OR SHORT HORIZONTAL SLOTTED HOLES AND A MAXIMUM HSS WIDTH TO THICKNESS RATIO OF 33.7. OVERSIZE OR VERTICAL SLOTTED HOLES ARE NOT ALLOWED. FOR STANDARD HOLES MINIMUM PLATE THICKNESS SHALL BE USED.
2. NUMBER OF BOLTS SHOWN IS THE MINIMUM REQUIRED FOR CONNECTIONS
3. PREHEAT WELDS AS REQUIRED BY AISC.
4. USE STANDARD HOLES ALONG BRACED FRAME OR MOMENT FRAME GRID LINES.

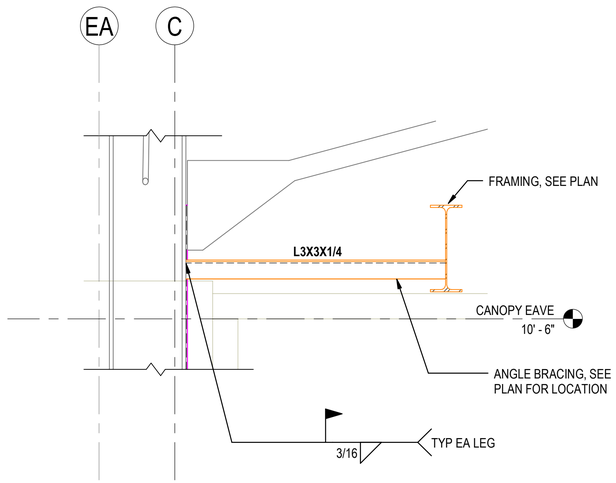
3 TYPICAL BEAM TO HSS COLUMN CONN. SCHEDULE

NOT TO SCALE



4 TYPICAL PURLIN TO GIRDER CONNECTION

1" = 1'-0"



5 TYPICAL ANGLE BRACE CONNECTION

1" = 1'-0"

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COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

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CONSTRUCTION DOCUMENTS

Revisions

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CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
PROFESSIONAL ENGINEER
No. 9668
MICHAEL CALLAHAN

10-09-2024

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Project Number **2024-079**

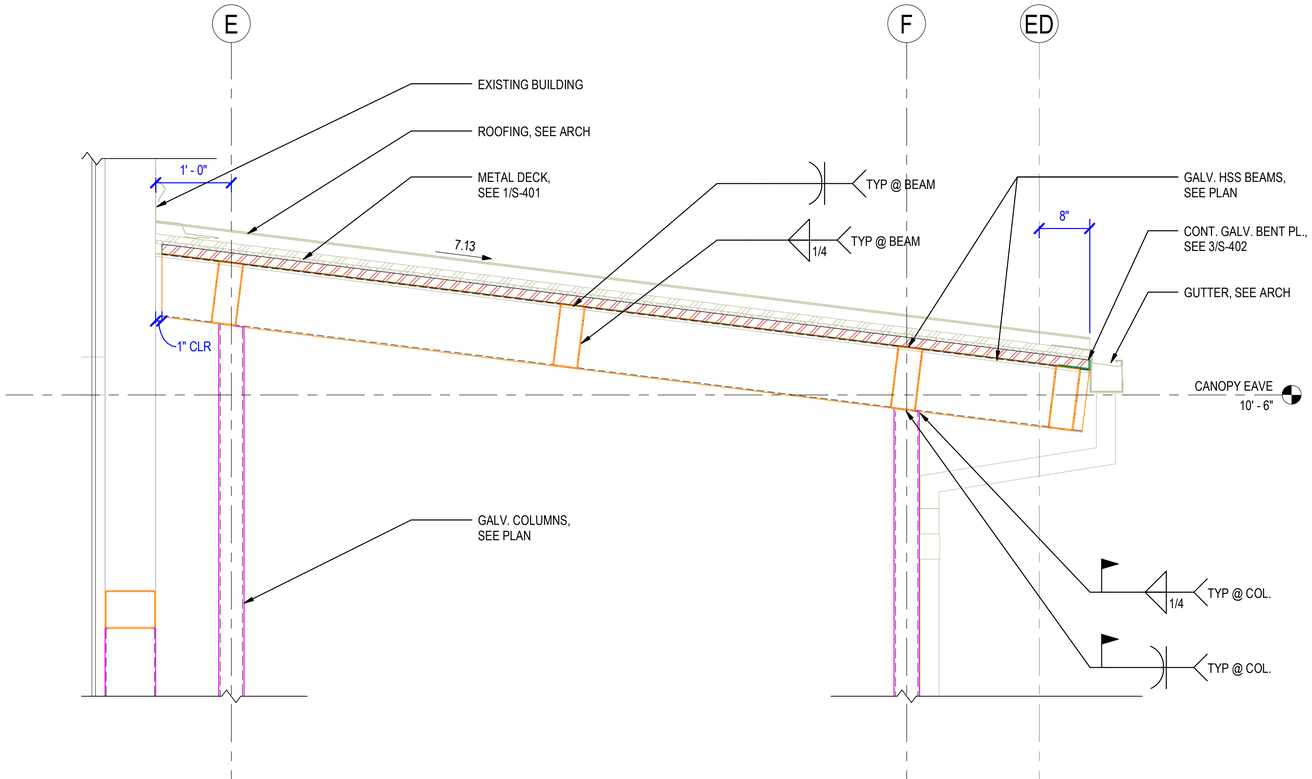
Issue Date **10-09-2024**

Sheet Title

FRAMING DETAILS

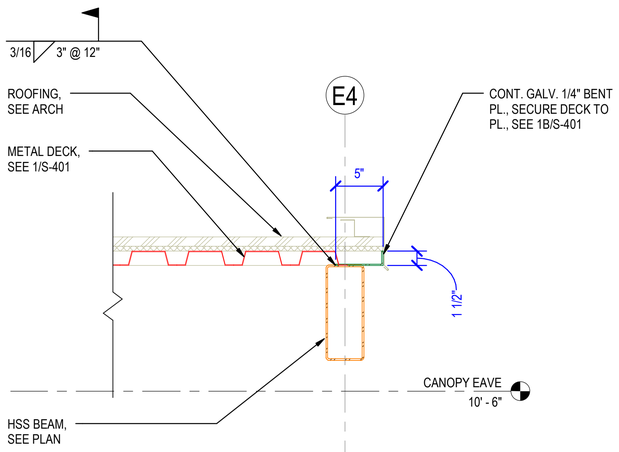
Sheet Number

S-401



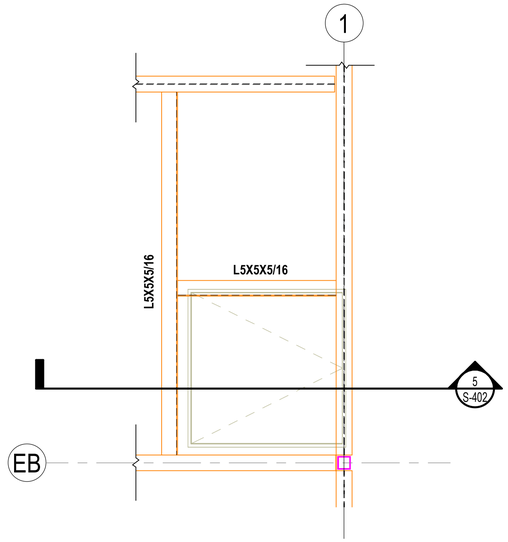
1 TYPICAL CANOPY CONNECTIONS

1" = 1'-0"



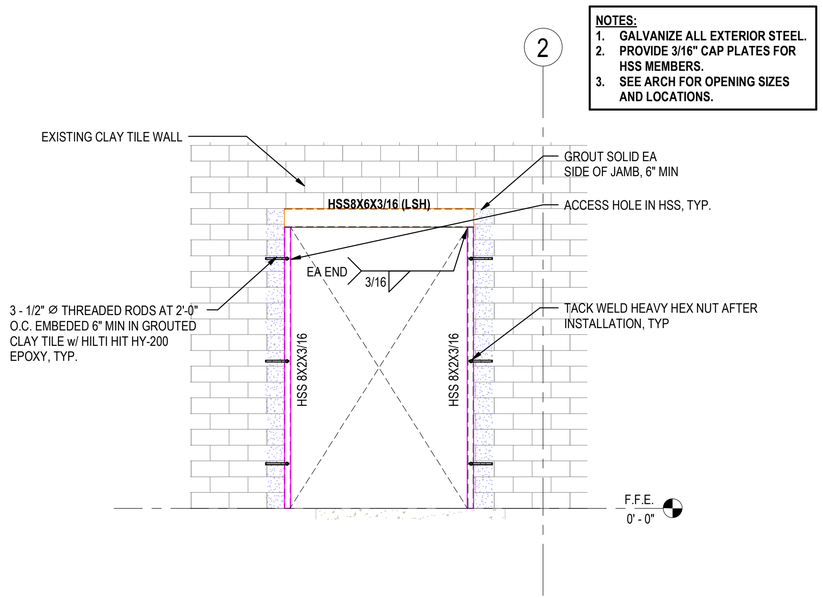
3 TYPICAL CANOPY EDGE

1 1/2" = 1'-0"



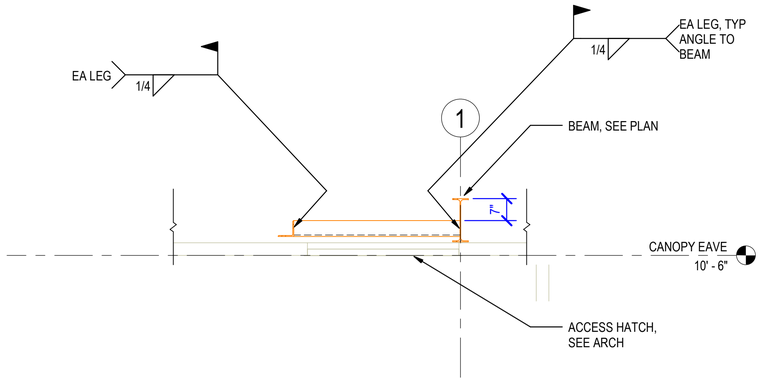
4 FRAMING AT ACCESS HATCH

1/2" = 1'-0"



2 TYPICAL OPENING FRAMING IN EXISTING WALL

1/2" = 1'-0"



5 SECTION AT ACCESS HATCH

1/2" = 1'-0"

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AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
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Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

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STATE OF ARKANSAS — PROFESSIONAL ENGINEER — No. 9668 — MICHAEL CALLAHAN

10-09-2024

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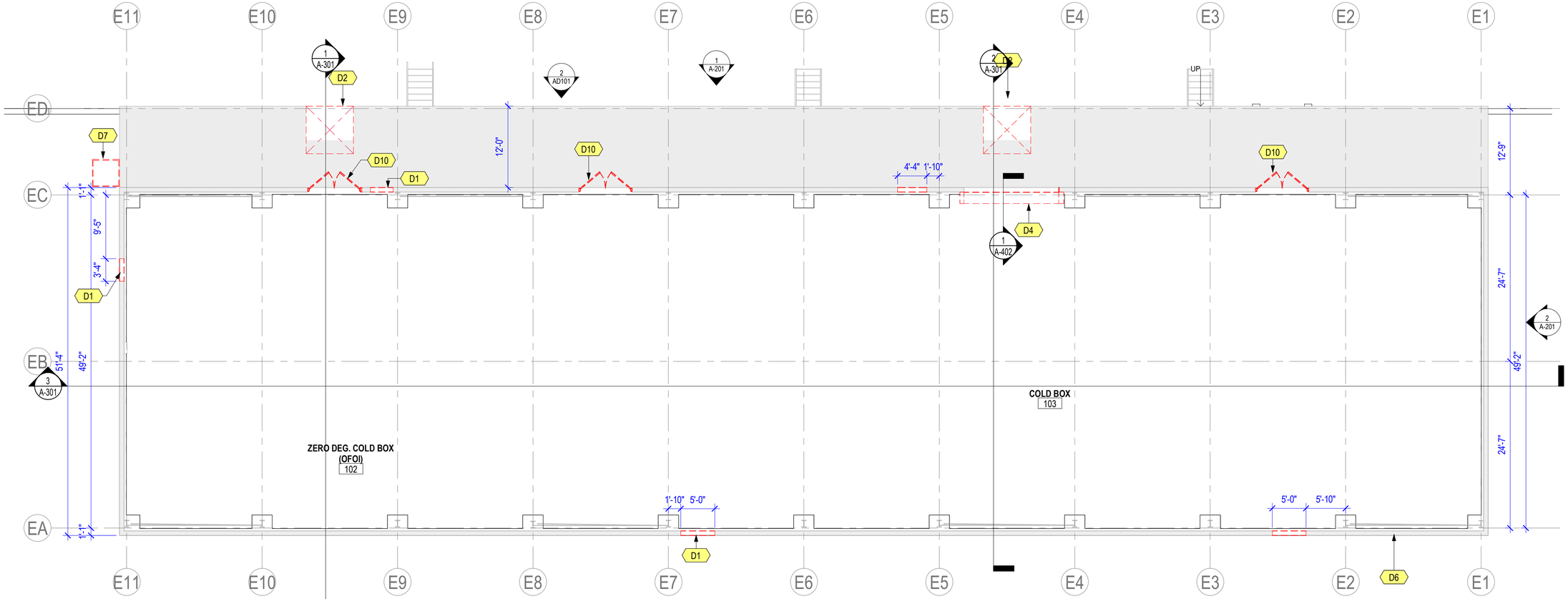
Project Number: 2024-079

Issue Date: 10-09-2024

Sheet Title: FRAMING DETAILS

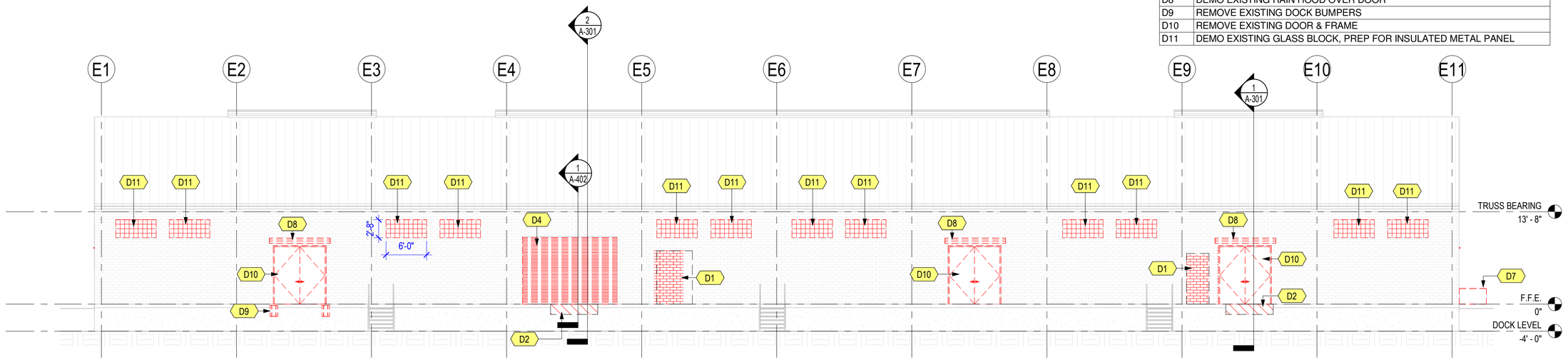
Sheet Number: S-402



1 DEMOLITION PLAN

1/8" = 1'-0"

DEMO KEYNOTE LEGEND	
KEY	DESCRIPTION
D1	SAWCUT WALL AS NEEDED FOR NEW DOOR
D2	SAWCUT CONC. SLAB AS NEEDED FOR NEW DOCK LEVELER (SEE STRUCT)
D4	REMOVE EXISTING OVERHEAD DOOR, REMIT TO OWNER.
D6	DEMO EXISTING GUTTER & DOWNSPOUT
D7	DEMO EXISTING WOOD TRASH ENCLOSURE
D8	DEMO EXISTING RAIN HOOD OVER DOOR
D9	REMOVE EXISTING DOCK BUMPERS
D10	REMOVE EXISTING DOOR & FRAME
D11	DEMO EXISTING GLASS BLOCK, PREP FOR INSULATED METAL PANEL



2 EAST ELEVATION - DEMO

1/8" = 1'-0"

0 4 8 16

SCALE : 1/8" = 1'-0"

NORTH

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AEROJET BUILDING 2SH8
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No.	Date	Description

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CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DONALD K. FOWLER No. 3339 ARKANSAS

10-09-2024

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Project Number 2024-079

Issue Date 10-09-2024

Sheet Title

DEMOLITION PLAN

Sheet Number

AD101

REMOVE AND REPLACE MTL. GUTTER OVER DOOR

REMOVE STL. DOOR., REMIT TO OWNER. INFILL WITH INSULATED METAL WALL PANEL

1 EXISTING CONDITION

DEMO GLASS BLOCK WINDOWS. INFILL WITH INSULATED METAL WALL PANEL

2 EXISTING CONDITION

REMOVE STL. DOOR., REMIT TO OWNER. INFILL WITH INSULATED METAL WALL PANEL

SAWCUT EXISITING CONC. SLAB FOR NEW DOCK LEVELER

3 EXISTING CONDITION

REMOVE AND REPLACE GUTTER & DOWNSPOUT W/ SIMILAR SIZE AND CONSTRUCITON. RETAIN BRACKETS FOR REUSE.

4 EXISTING CONDITION

REMOVE EXISTING LOUVER. REPLACE WITH PREFIN. MLT. LOUVER (SEE MECH FOR NOTES)

REMOVE STL. DOOR., REMIT TO OWNER. INFILL WITH INSULATED METAL WALL PANEL

NOTE: WEST ELEVATION SIMILAR

5 EAST ELEVATION EXISTING CONDITION

DEMO GLASS BLOCK WINDOWS. IN FILL WITH INSULATED METAL WALL PANEL

REMOVE MTL. RAIN HOOD OVER DOOR (TYP)

SAWCUT EXISTING WALL AS NEEDED FOR NEW DOOR

REMOVE OVERHEAD DOOR REMIT TO OWNER FOR REUSE

SAWCUT SLAB FOR NEW DOCK LEVELER

6 EXISTING CONDITION

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AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

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CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DONALD K. FROMER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

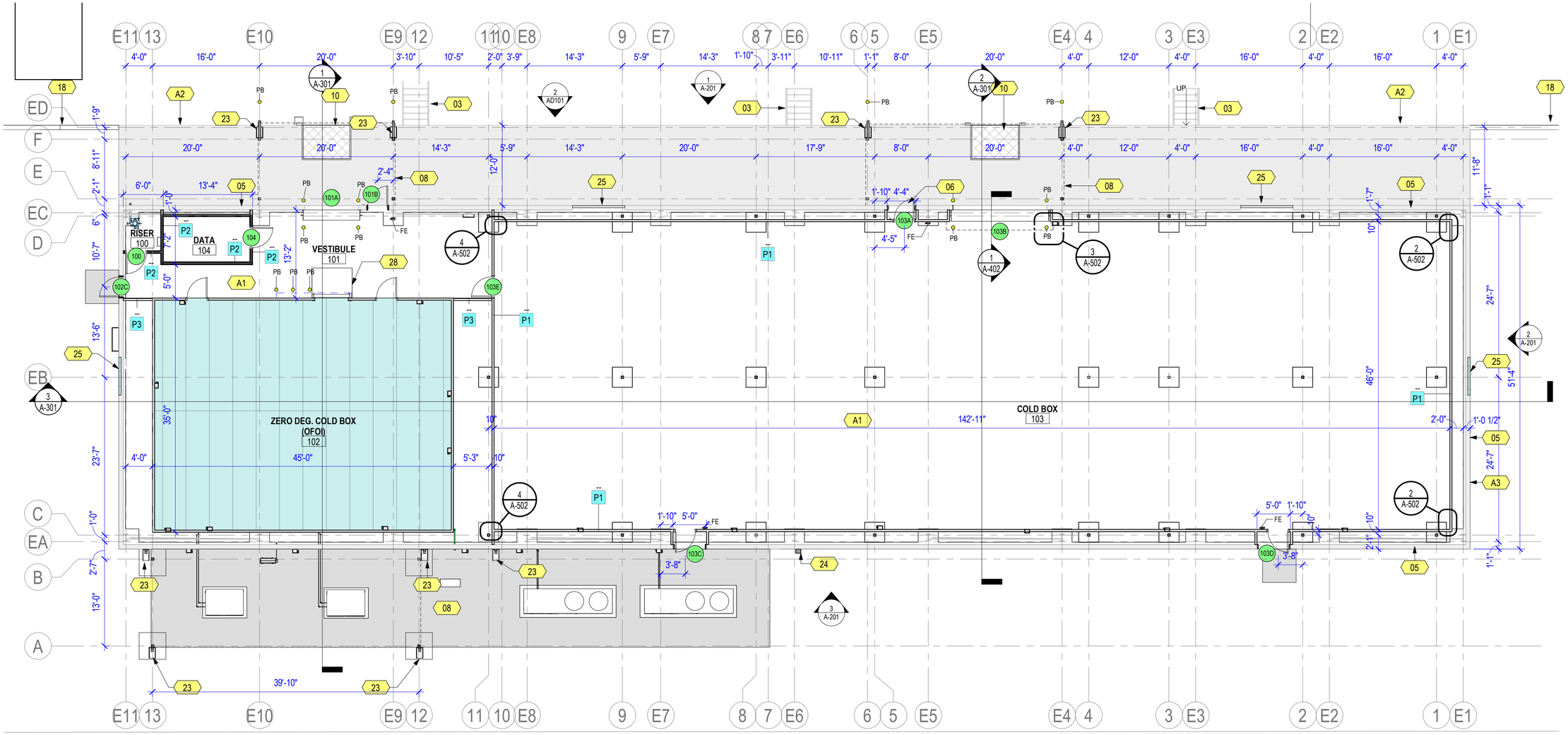
Issue Date **10-09-2024**

Sheet Title

EXISTING CONDITIONS

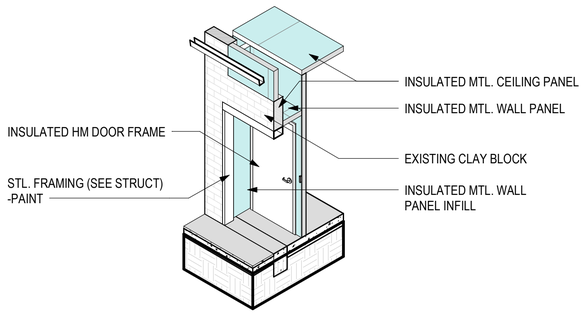
Sheet Number

AD102



1 FLOOR PLAN

1/8" = 1'-0"



2 DOOR DIAGRAM AT RECESSED DOOR

SCALE : 1/4" = 1'-0"

PARTITION TYPES				
TYPE MARK	DESCRIPTION	FIRE RATED	STC	R-VALUE
P1	4" INSULATED MTL. WALL PANEL	--	--	R-28
P2	GYP. BD. ON 3-5/8" METAL STUD W/ BATT INSULATION	--	--	R-13 MIN.
P3	5/8" GYP. FURRING ON 3 5/8" MTL. STUDS (8' TALL)	--	--	

SCALE : 1/8" = 1'-0"

NORTH

KEYNOTE LEGEND	
KEY	DESCRIPTION
01	PREFIN. INSULATED MTL. WALL PANEL
02	EXISTING ROOF (DO NOT DISTURB)
03	EXISTING STAIR & RAIL TO REMAIN
05	EXISTING CLAY BLOCK WALL
06	NEW INSULATED HM DOOR & FRAME
08	NEW PREFIN. METAL ROOF ON PAINTED STEEL FRAMING
09	NEW SHEET METAL GUTTER (5X5)
10	NEW DOCK LEVELER W/ DOK-LOK AND DOCK BUMPERS
14	CLEAN, PREP & PAINT ALL EXISTING EXTERIOR STEEL DOORS TO REMAIN
18	NEW CONC. RETAINING WALL (SEE CIVIL)
19	NEW INSULATED SUSP. CEILING PANELS
20	NEW 6" DIA. CONC. FILLED BOLLARD - PAINT
21	REPLACE EXISTING LOUVER WITH NEW PREFIN. LOUVER. SEE MECHANICAL FOR ADDITIONAL NOTES.
22	EXISTING RIDGE VENT (NO WORK)
23	NEW (3X4) MTL. DOWNSPOUT
24	REPLACE EXISTING GUTTER AND DOWNSPOUT. MATCH EXISTING SIZE AND CONSTRUCTION. REUSE EXISTING BRACKETS. CLEAN, PREP AND PAINT BRACKETS.
25	INFILL EXISTING DOOR/WINDOW WITH INSULATED MTL. WALL PANEL (REF: DET. 5/A-501)
27	48 X 48 INSULATED CEILING ACCESS HATCH
28	RAMP (OFOI)
29	CAP ROOM @ 10'-0" AFF. W/ 3/4" MTL. DECK ON 6" MTL. JOIST @ 24" O.C. W/ R-19 BATT INFILL AND 5/8" GYP. TAPE AND FLOATED FINISH BELOW
30	NEW PREFIN. MTL. LOUVER (SEE MECH FOR NOTES)
31	12X12 PREFIN. MTL. VENT (SEE MECH FOR NOTES)
A1	ADD ALT #1: CLEAN, PREP EXISTING CONCRETE FLOOR AND APPLY SEALER
A2	ADD ALT #2: CLEAN, PREP AND PAINT EXISTING CONCRETE DOCK WALLS WITH ELASTOMETRIC WALL COATING
A3	ADD ALT #3: CLEAN, PREP AND PAINT EXISTING CLAY BLOCK WALL.

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Project

AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT TOMMIE K. POWER No. 3339 ARKANSAS

10-09-2024

Notes

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Project Number **2024-079**

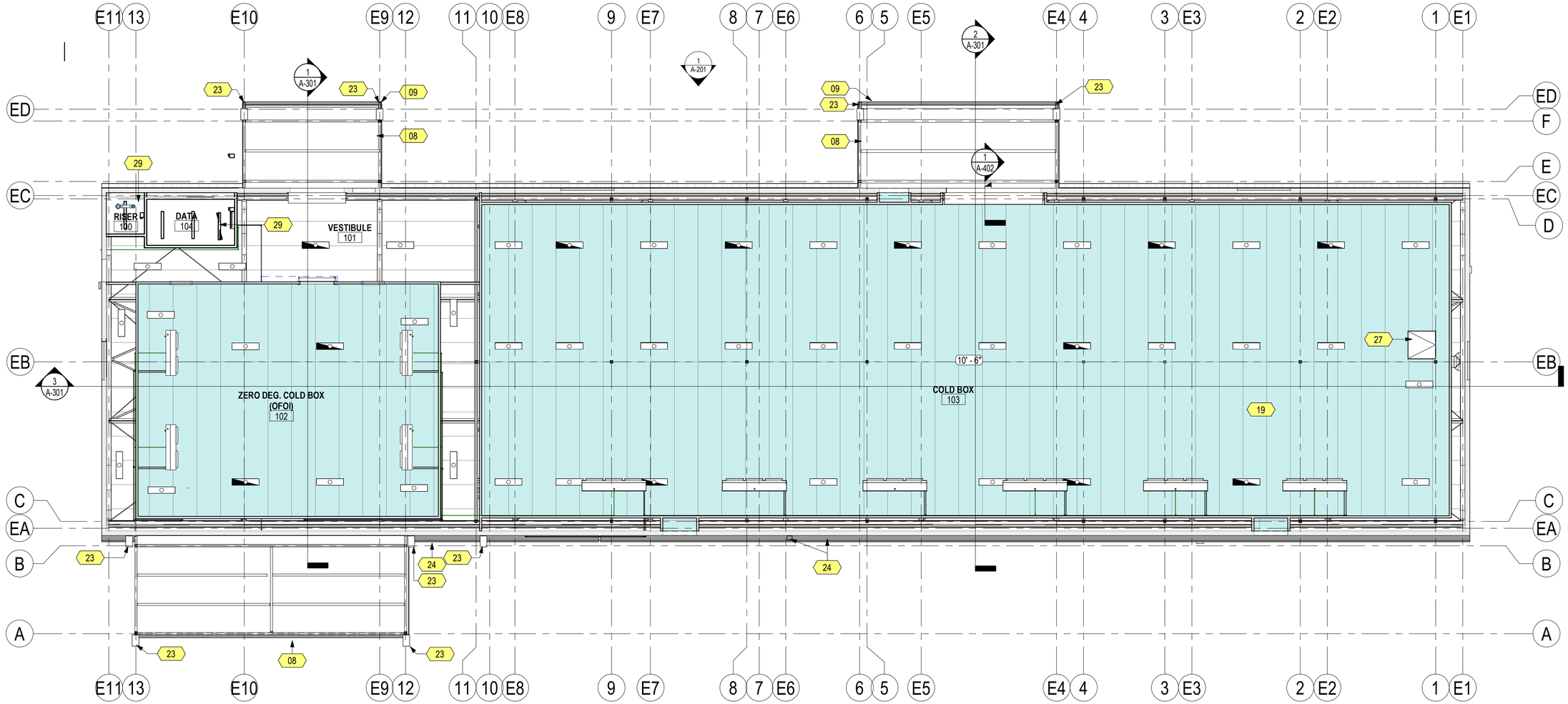
Issue Date **10-09-2024**

Sheet Title

FLOOR PLAN

Sheet Number

A-101



1 REFLECTED CEILING PLAN

1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

0 4 8 16 NORTH

KEYNOTE LEGEND

KEY	DESCRIPTION
01	PREFIN. INSULATED MTL. WALL PANEL
02	EXISTING ROOF (DO NOT DISTURB)
03	EXISTING STAIR & RAIL TO REMAIN
05	EXISTING CLAY BLOCK WALL
06	NEW INSULATED HM DOOR & FRAME
08	NEW PREFIN. METAL ROOF ON PAINTED STEEL FRAMING
09	NEW SHEET METAL GUTTER (5X5)
10	NEW DOCK LEVELER W/ DOK-LOK AND DOCK BUMPERS
14	CLEAN, PREP & PAINT ALL EXISTING EXTERIOR STEEL DOORS TO REMAIN
18	NEW CONC. RETAINING WALL (SEE CIVIL)
19	NEW INSULATED SUSP. CEILING PANELS
20	NEW 6" DIA. CONC. FILLED BOLLARD - PAINT
21	REPLACE EXISTING LOUVER WITH NEW PREFIN. LOUVER. SEE MECHANICAL FOR ADDITIONAL NOTES.
22	EXISTING RIDGE VENT (NO WORK)
23	NEW (3X4) MTL. DOWNSPOUT
24	REPLACE EXISTING GUTTER AND DOWNSPOUT. MATCH EXISTING SIZE AND CONSTRUCTION. REUSE EXISTING BRACKETS. CLEAN, PREP AND PAINT BRACKETS.
25	INFILL EXISTING DOOR/WINDOW WITH INSULATED MTL. WALL PANEL (REF: DET. 5/A-501)
27	48 X 48 INSULATED CEILING ACCESS HATCH
28	RAMP (OFOI)
29	CAP ROOM @ 10'-0" AFF. W/ 3/4" MTL. DECK ON 6" MTL. JOIST @ 24" O.C. W/ R-19 BATT INFILL AND 5/8" GYP. TAPE AND FLOATED FINISH BELOW
30	NEW PREFIN. MTL. LOUVER (SEE MECH FOR NOTES)
31	12X12 PREFIN. MTL. VENT (SEE MECH FOR NOTES)
A1	ADD ALT #1: CLEAN, PREP EXISTING CONCRETE FLOOR AND APPLY SEALER
A2	ADD ALT #2: CLEAN, PREP AND PAINT EXISTING CONCRETE DOCK WALLS WITH ELASTOMETRIC WALL COATING
A3	ADD ALT #3: CLEAN, PREP AND PAINT EXISTING CLAY BLOCK WALL.

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORKER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

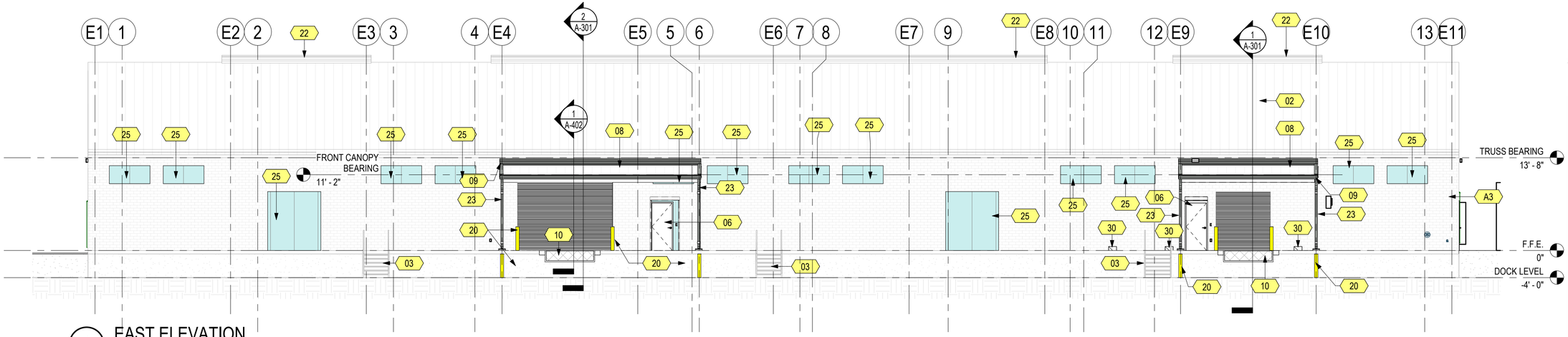
Issue Date **10-09-2024**

Sheet Title

REFLECTED CEILING PLAN

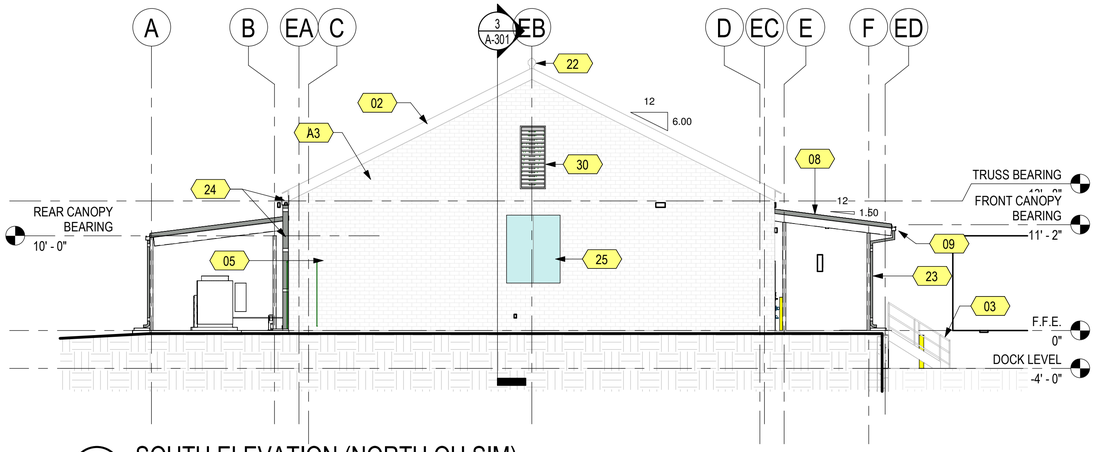
Sheet Number

A-101R



1 EAST ELEVATION

1/8" = 1'-0"



2 SOUTH ELEVATION (NORTH OH SIM)

1/8" = 1'-0"

KEYNOTE LEGEND	
KEY	DESCRIPTION
01	PREFIN. INSULATED MTL. WALL PANEL
02	EXISTING ROOF (DO NOT DISTURB)
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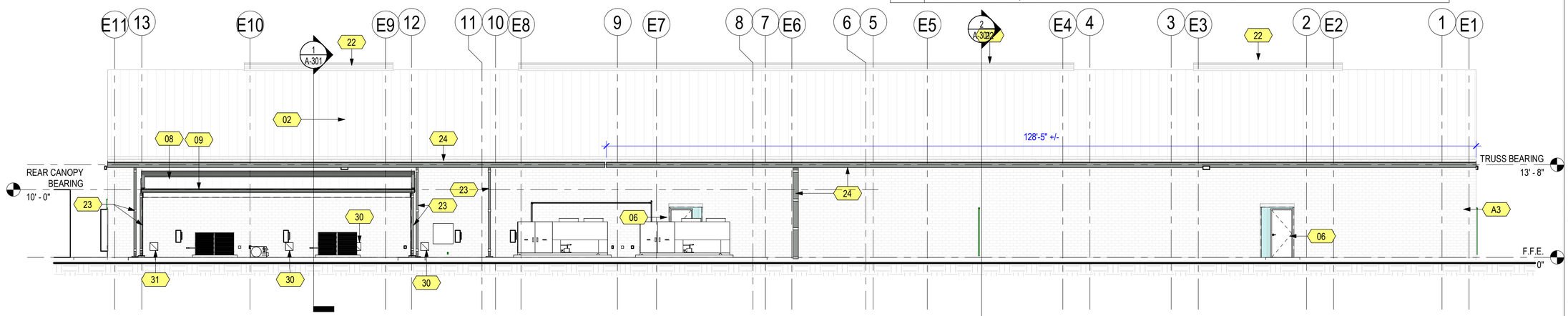
A1	ADD ALT #1: CLEAN, PREP EXISTING CONCRETE FLOOR AND APPLY SEALER
A2	ADD ALT #2: CLEAN, PREP AND PAINT EXISTING CONCRETE DOCK WALLS WITH ELASTOMETRIC WALL COATING
A3	ADD ALT #3: CLEAN, PREP AND PAINT EXISTING CLAY BLOCK WALL.



3 WEST ELEVATION

1/8" = 1'-0"

SCALE : 1/8" = 1'-0"

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORKER No. 3339 ARKANSAS

10-09-2024

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Project Number 2024-079

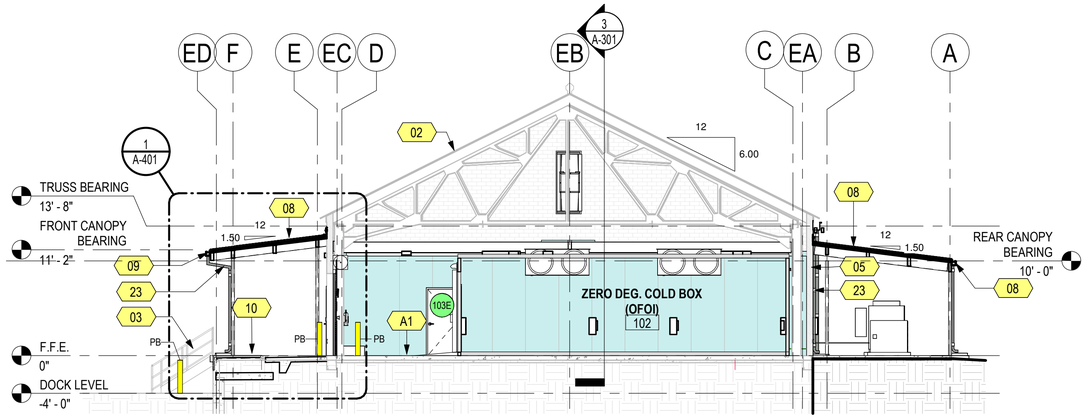
Issue Date 10-09-2024

Sheet Title

EXTERIOR ELEVATIONS

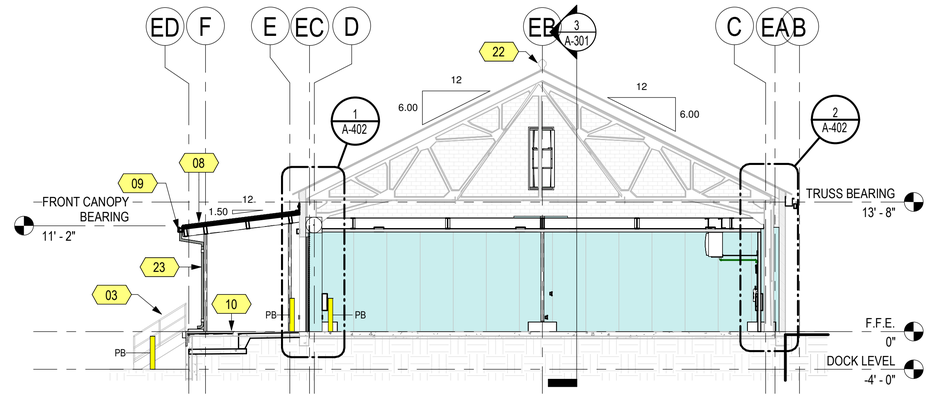
Sheet Number

A-201



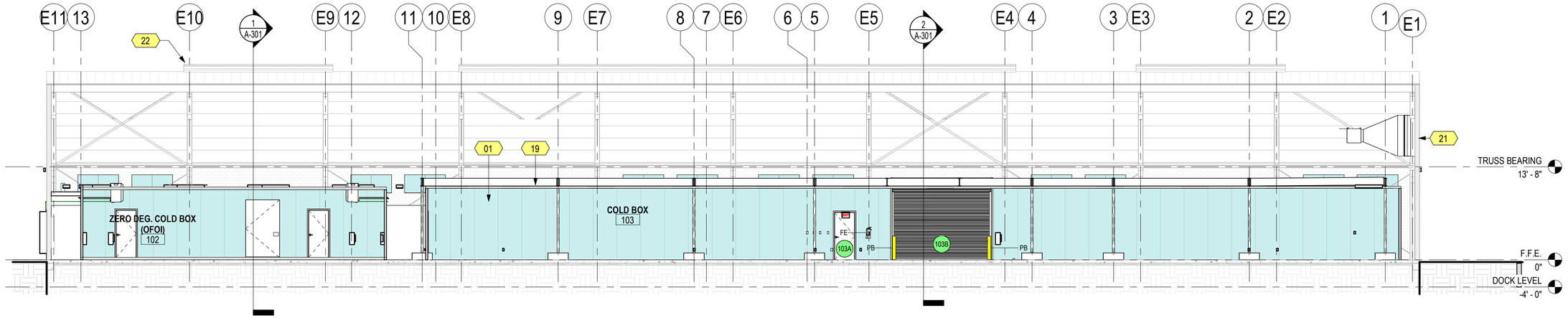
1 BUILDING SECTION

1/8" = 1'-0"



2 BUILDING SECTION

1/8" = 1'-0"



3 BUILDING SECTION

1/8" = 1'-0"

KEYNOTE LEGEND	
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02	EXISTING ROOF (DO NOT DISTURB)
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A3	ADD ALT #3: CLEAN, PREP AND PAINT EXISTING CLAY BLOCK WALL.

0 2 4 8

SCALE : 1/4" = 1'-0"

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AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DONALD K. FOWLER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

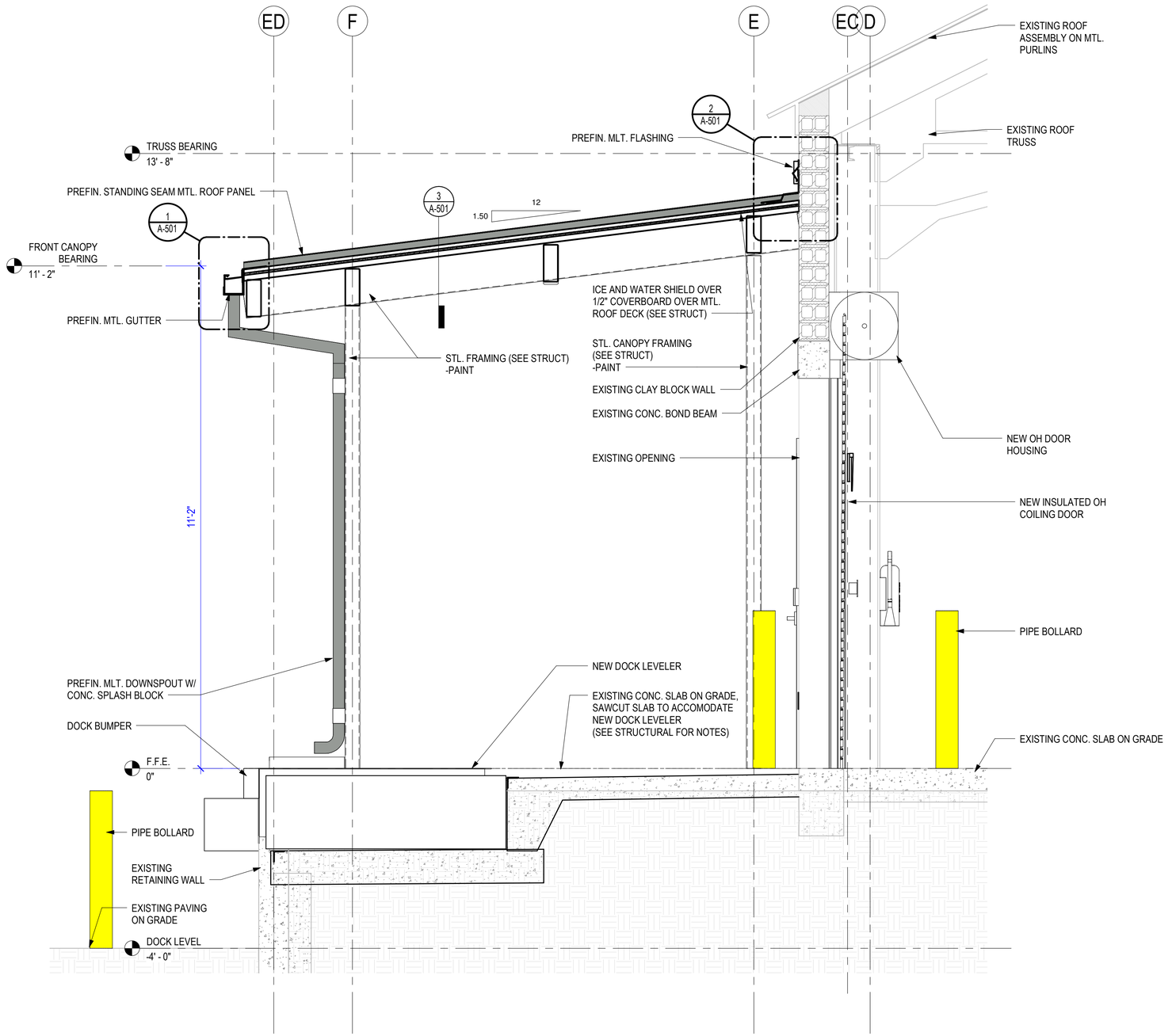
Issue Date **10-09-2024**

Sheet Title

BUILDING SECTIONS

Sheet Number

A-301



1 CANOPY SECTION

3/4" = 1'-0"

0 1 2 4

SCALE : 3/4" = 1'-0"

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AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FOWLER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

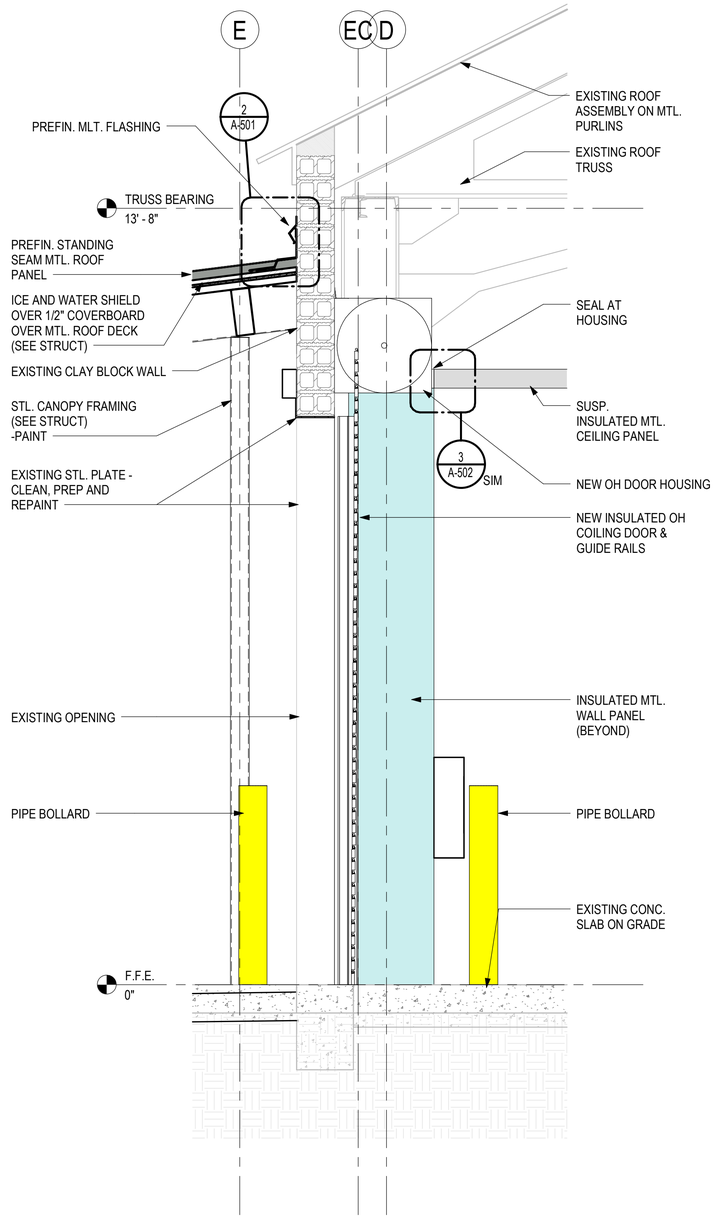
Issue Date **10-09-2024**

Sheet Title

WALL SECTIONS

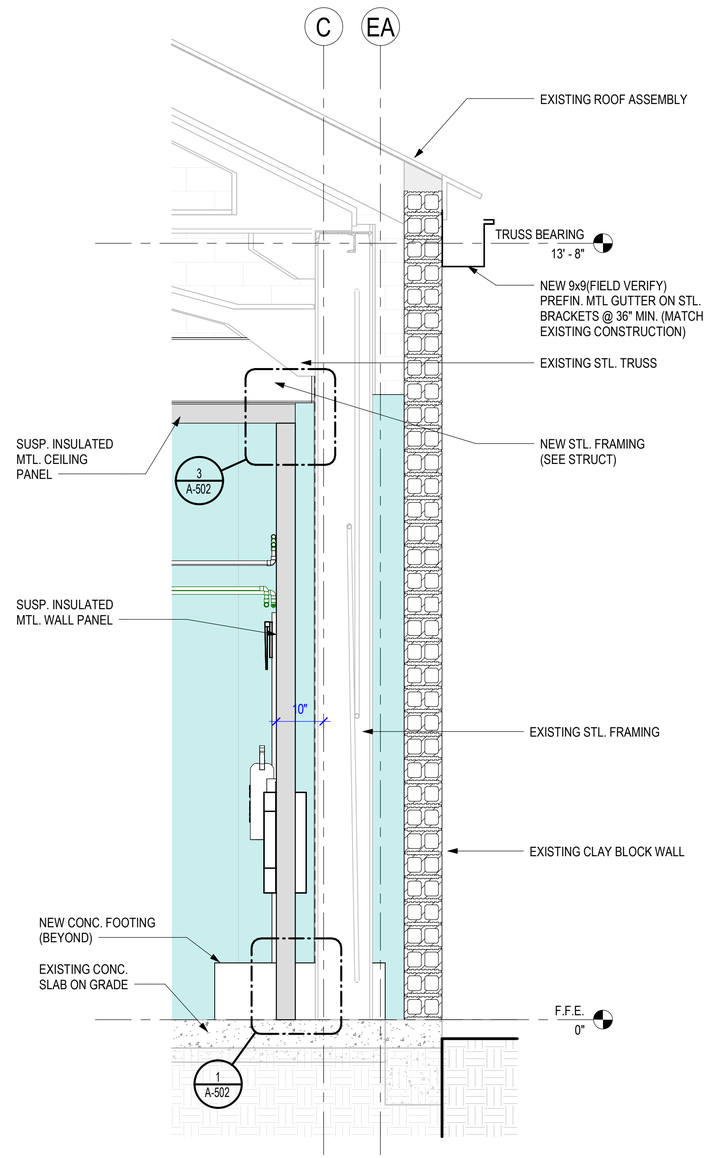
Sheet Number

A-401



1 WALL SECTION AT OH DOOR

3/4" = 1'-0"



2 WALL SECTION AT COLD BOX

3/4" = 1'-0"

0 1 2 4

SCALE : 3/4" = 1'-0"

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AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. FORKER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

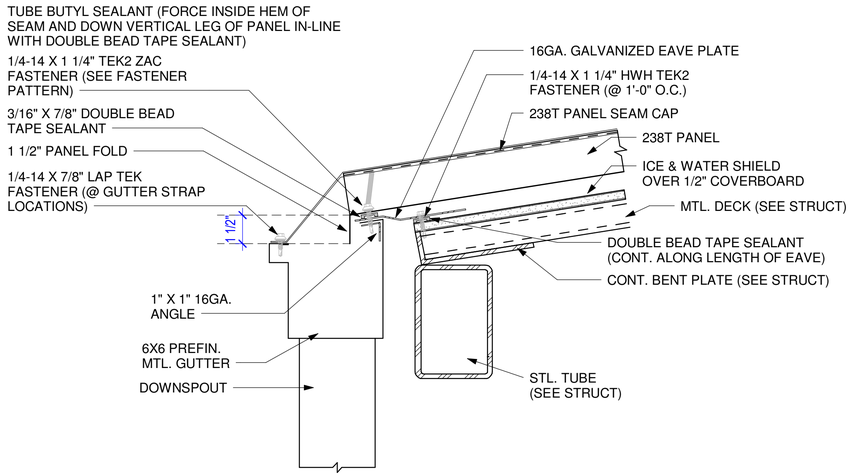
Issue Date **10-09-2024**

Sheet Title

WALL SECTIONS

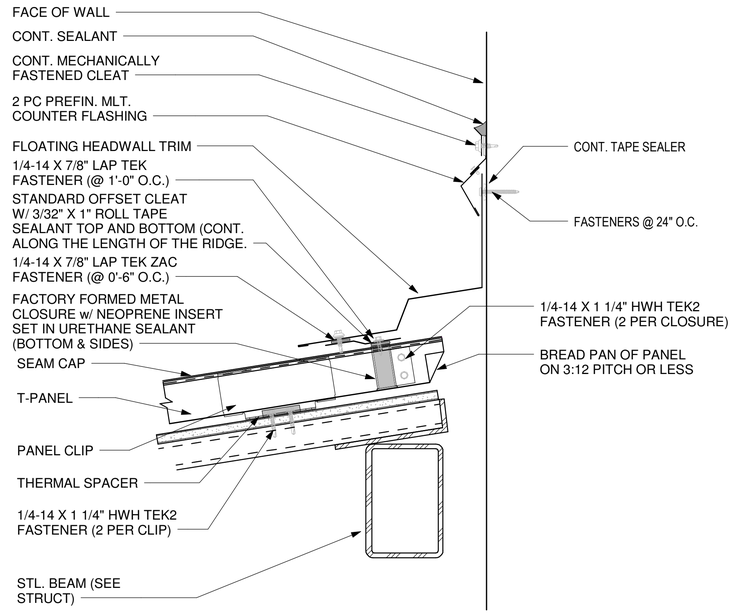
Sheet Number

A-402



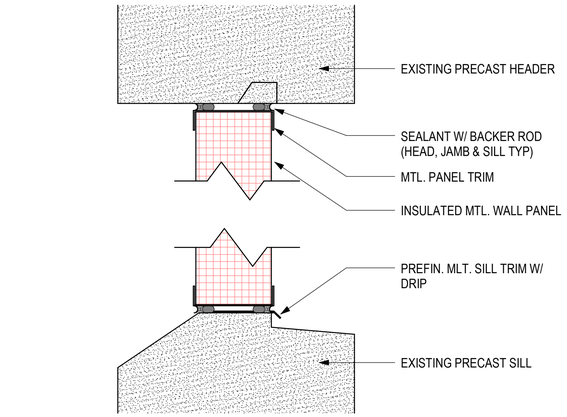
1 T-PANEL GUTTER DETAIL

3" = 1'-0"



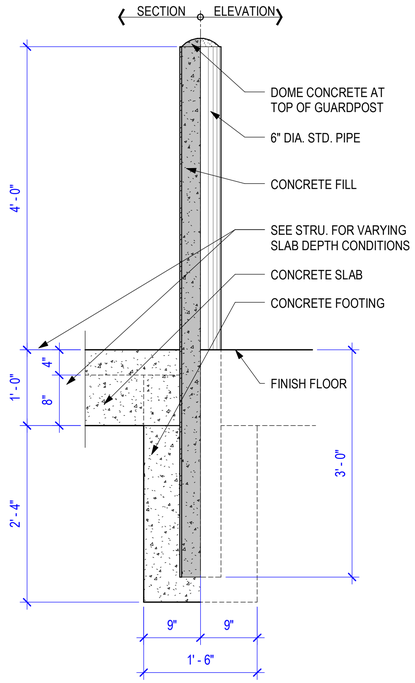
2 T-PANEL ROOF TO WALL DETAIL

3" = 1'-0"



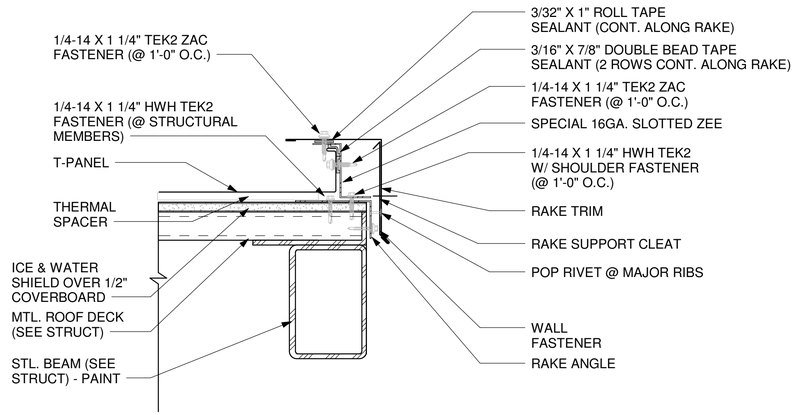
5 INFLL DETAIL @ WINDOW

3" = 1'-0"



4 PIPE BOLLARD

1" = 1'-0"



3 T-PANEL RAKE DETAIL

3" = 1'-0"

0 3" 6" 1'

SCALE : 3" = 1'-0"

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT JOANIE K. FOWLER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

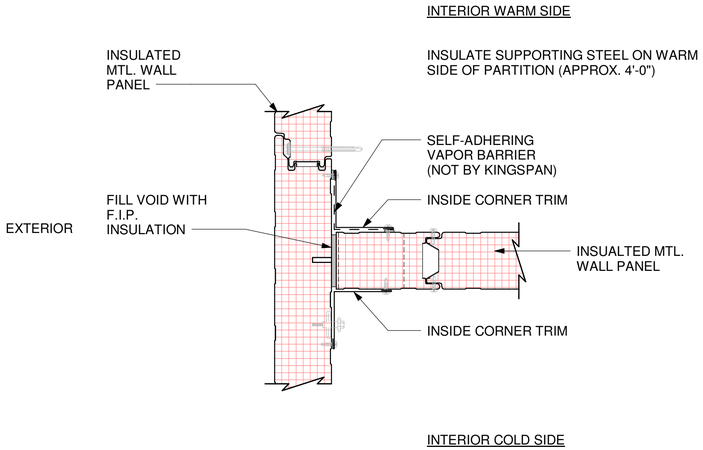
Issue Date **10-09-2024**

Sheet Title

DETAILS

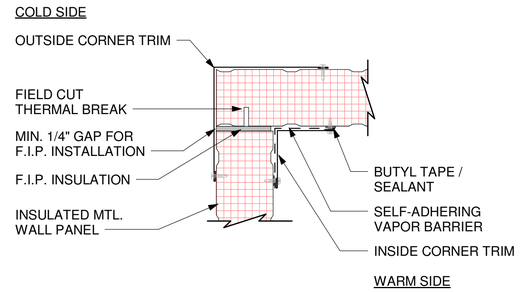
Sheet Number

A-501



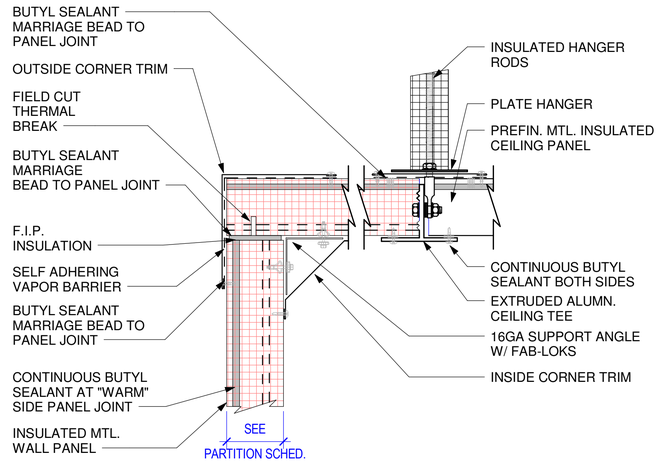
4 IMP DETAIL

3" = 1'-0"



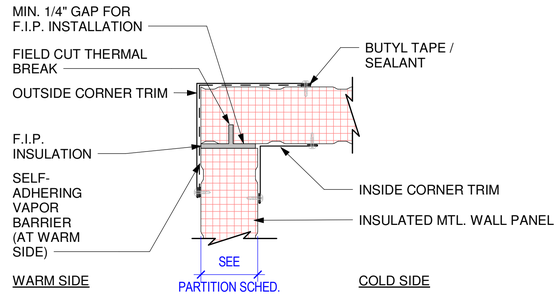
5 IMP OUTSIDE CORNER DETAIL

3" = 1'-0"



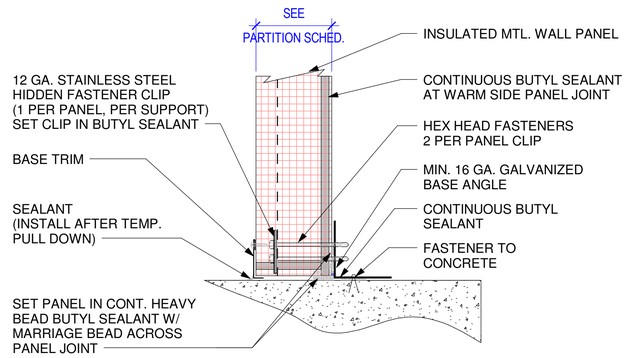
3 IMP CEILING DETAIL

3" = 1'-0"



2 IMP CORNER DETAIL

3" = 1'-0"



1 IMP BASE DETAIL

3" = 1'-0"

0 3" 6" 1'

SCALE : 3" = 1'-0"

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DONALD K. FOWLER No. 3339 ARKANSAS

10-09-2024

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Project Number **2024-079**

Issue Date **10-09-2024**

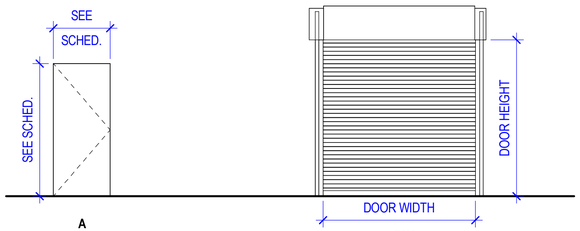
Sheet Title

INSULATED METAL PANEL DETAILS

Sheet Number

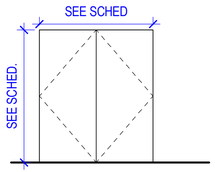
A-502

DOOR TYPES LEGEND



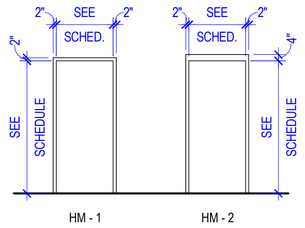
A
SOLID DOOR
PANEL

OH1
INSULATED
OVERHEAD
COILDING DOOR



AA
DOUBLE SOLID
DOOR PANELS

FRAME TYPES LEGEND

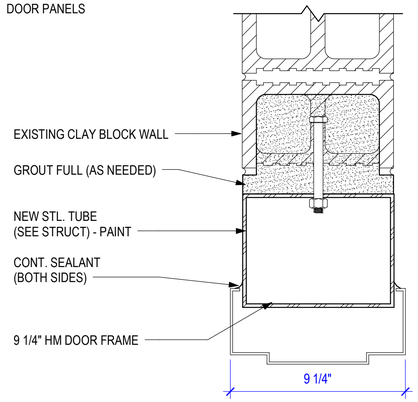


HM - 1 HM - 2

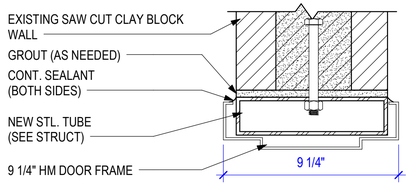
DOOR SCHEDULE

DOOR NO.	DOOR TYPE	DOOR SIZE W	DOOR SIZE HT	DOOR SIZE THK	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS THRSHLD.	FIRE RATING IN MINUTES	HARDWARE SET NO.	DOOR NO.	COMMENTS
100	A	3' - 0"	7' - 0"	1 3/4"	GHM	HM-1	GHM	PT	5/A-601	5/A-601			201N	100	
101A	OH1	14' - 0"	10' - 0"		INS. STL.			PREFIN.	1/A-401(SIM)				001	101A	
101B	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM	HM-2	GHM	PT	1/A-601	2/A-601	6/A-601		C715	101B	SUPPLY BADGE READER
102C	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM	HM-2	GHM	PT	1/A-601	2/A-601	6/A-601		725	102C	
103A	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM	HM-1	GHM	PT	3/A-601	4/A-601	6/A-601		C715	103A	SUPPLY BADGE READER
103B	OH1	14' - 0"	10' - 0"		INS. STL.			PREFIN.	2/A-401				001	103B	
103C	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM	HM-1	GHM	PT	3/A-601	4/A-601	6/A-601		725	103C	
103D	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM	HM-1	GHM	PT	3/A-601	4/A-601	6/A-601		725	103D	
103E	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM		GHM	PT	3/A-601	4/A-601	6/A-601		701	103E	
104	A	3' - 0"	7' - 0"	1 3/4"	INS. GHM	HM-1	GHM	PT	5/A-601	5/A-601			201C	104	

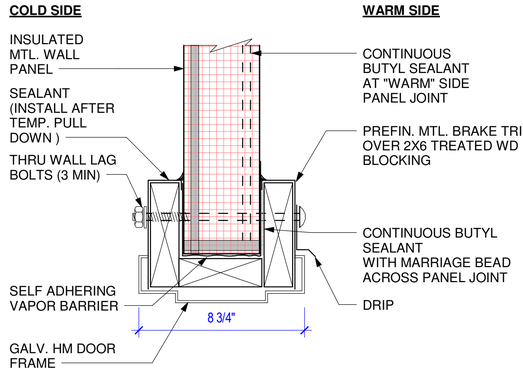
DOOR MATERIALS LEGEND	
GHM	GALVANIZED HOLLOW METAL
INS	INSULATED
STL	STEEL
MATERIALS	
PT	PAINT



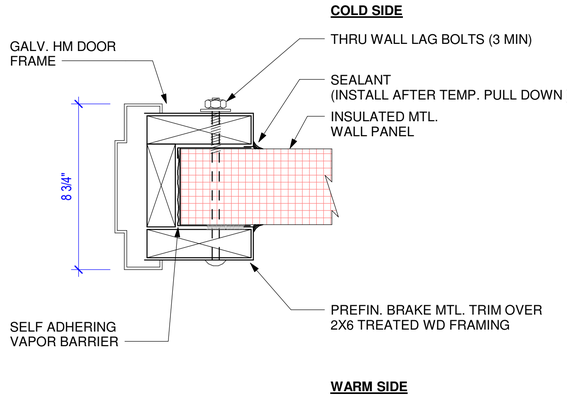
1 EXTERIOR DOOR HEAD DETAIL
3" = 1'-0"



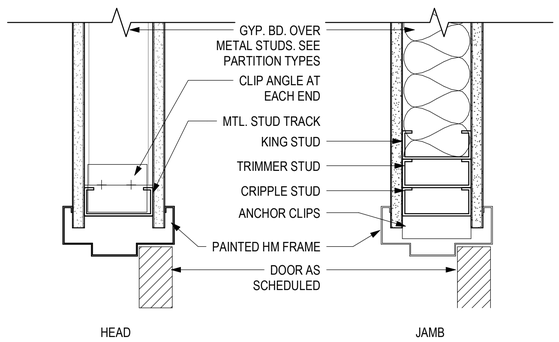
2 EXTERIOR DOOR JAMB DETAIL
3" = 1'-0"



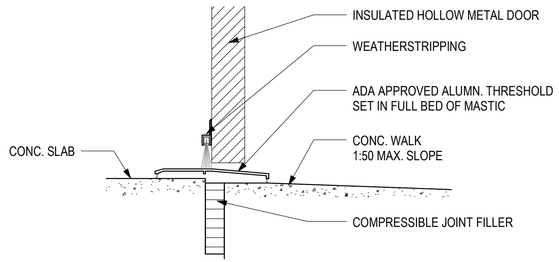
3 IMP DOOR HEAD
3" = 1'-0"



4 IMP DOOR JAMB
3" = 1'-0"



5 HM KD DR FRAME-MTL STUD-LESS THAN 4'-0"
3" = 1'-0"



6 HOLLOW METAL THRESHOLD
3" = 1'-0"

0 3" 6" 1'
SCALE : 3" = 1'-0"

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1300 East 6th Street Little Rock, AR 72202
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Project
AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase
CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CROMWELL ARCHITECTS ENGINEERS, INC. C-98 REGISTERED ARCHITECTS ARKANSAS

REGISTERED ARCHITECT DANIEL K. TOMLEY No. 3339 ARKANSAS
10-09-2024

Notes

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Project Number **2024-079**
Issue Date **10-09-2024**
Sheet Title
DOOR AND FINISH SCHEDULE
Sheet Number
A-601

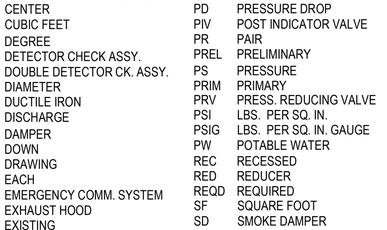
ABBREVIATIONS

&	AND	GPM	GALLONS PER MINUTE
Ø	ROUND	HD	HEAD
/R	ON ROOF	H.P.	HIGH PRESSURE
A	AIR	HTG	HEATING
AB	ABOVE BASE	IN	INCH
ABV	ABOVE	INL	INLET
ACOUS	ACOUSTICAL	INSUL	INSULATION
ADD	ADDENDUM	INWG	INCHES WATER GAUGE
ADDL	ADDITIONAL	ITC	INSPECTOR TEST CONNECT
AFF	ABOVE FINISHED FLOOR	JT	JOINT
AG	ABOVE GROUND	LAB	LABORATORY
AHJ	AUTHORITY HAVING JURISDICTION		
ALT	ALTERNATE	LB	POUND
ALV	ALARM VALVE	LB/HR	POUNDS PER HOUR
ALUM	ALUMINUM	LF	LINEAL FOOT
AP	ACCESS PANEL	LOC	LOCATION
ARCH	ARCHITECT/ARCHITECTURAL	LP	LOW PRESSURE
AUTO	AUTOMATIC	MA	MIXED AIR
AUX	AUXILLARY DRAIN	MAN	MANUAL
BFF	BELOW FINISHED FLOOR		
BFV	BUTTERFLY VALVE	MAX	MAXIMUM
BSMT	BASEMENT	MCW	MAKE-UP COLD WATER
BTWN	BETWEEN	MD	MOTORIZED DAMPER
CAP	CAPACITY	MFR	MANUFACTURER
CFCV	CONSTANT FLOW CNTRL. VL.	MIN	MINIMUM
CFM	CUBIC FEET PER MINUTE	MISC	MISCELLANEOUS
CI	CAST IRON	MRA	MOST HYDRAULICALY DEMANDING AREA
CIS	COMMON INTELLIGEBELITY SYS.		
CEG	CEILING	NFPA	NOT IN CONTRACT
COL	COLUMN		NATIONAL FIRE PROTECTION ASSOCIATION
COMB	COMBINATION		
CONC	CONCRETE	NP	NOT POTABLE
CONT	CONTINUE/CONTINUATION	NTS	NOT TO SCALE
COORD	COORDINATE	O	OXYGEN
COR	CONTRACTOR OFFICES REP.	OPNG	OPENING
CTR	CENTER	PD	PRESSURE DROP
CUFT	CUBIC FEET	PIV	POST INDICATOR VALVE
D/°	DEGREE	PR	PAIR
DCA	DETECTOR CHECK ASSY.	PREL	PRELIMINARY
DCDA	DOUBLE DETECTOR CK. ASSY.	PS	PRESSURE
DIA	DIAMETER	PRIM	PRIMARY
DI	DUCTILE IRON	PRV	PRESS. REDUCING VALVE
DISCH	DISCHARGE	PSI	LBS. PER SQ. IN.
DMPR	DAMPER	PSIG	LBS. PER SQ. IN. GAUGE
DN	DOWN	PW	POTABLE WATER
DWG	DRAWING	REC	RECESSED
EA	EACH	RED	REDUCER
ECS	EMERGENCY COMM. SYSTEM	REQD	REQUIRED
EAH	EXHAUST HOOD	SF	SQUARE FOOT
EX	EXISTING	SD	SMOKE DAMPER
EXP	EXPANSION	SIM	SIMILAR
EXPJT	EXPANSION JOINT	SLV	SLEEVE
ESP	EXTERNAL STATIC PRESSURE	SP	STATIC PRESSURE
F°	DEGREES FAHRENHEIT	SPS	STATIC PRESSURE STATION
FD	FIRE DAMPER	SQ	SQUARE
FDV	FIRE DEPARTMENT VALVE	SS	STAINLESS STEEL
FHR	FIRE HOSE STATION	STD	STANDARD
FHV	FIRE HOSE VALVE	T	THERMOSTAT
FPI	FINS PER INCH	SYS	SYSTEM
FLEX	FLEXIBLE	TCP	TEMP. CONTROL PANEL
FLG	FLANGE	TD	TEMPERATURE DROP
FT	FOOT/FEET	TEMP	TEMPERATURE
FTG	FOOTING	TSP	TOTAL STATIC PRESSURE
FUT	FUTURE	TYP	TYPICAL
GAL	GALLON	U/G	UNDER GROUND
GALV	GALVANIZED	U/S	UNDER SLAB
GEN	GENERATOR	UNO	UNLESS NOTED OTHERWISE
GENL	GENERAL	VL	VALVE
		VOL	VOLUME

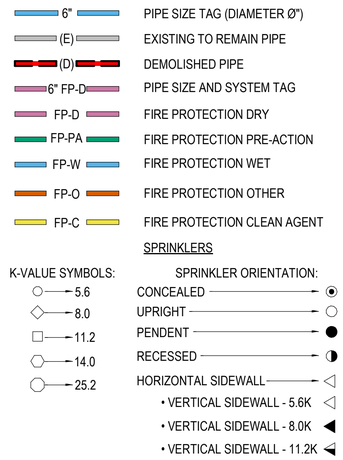
EQUIPMENT ABBREVIATIONS

AFMS	AIR FLOW MEASURING STATION	FDC	FIRE DEPARTMENT CONTROL
CF	CABINET FAN	FDCP	F.A. ACCESS PANEL
CF	CHEMICAL FEEDER	FMCP	F.A. MASS NOTIFICATION PNL.
DBP	DOMESTIC WATER BOOST PUMP	FAA	F.A. ANNUNCIATOR PNL.
DCA	DETECTOR CHECK ASSY.	LOC	LOCAL OPERATOR CONSOLE
DDCA	DOUBLE DETECTOR CHECK ASSY.	NRSV	NON-RISING STEM VALVE
FHR	FIRE HOSE STATION	ITC	INSPECTOR'S TEST
F.A.	FIRE ALARM	PNL	PANEL
FPU	FIRE PUMP		

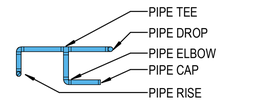
FIRE PROTECTION PHASING



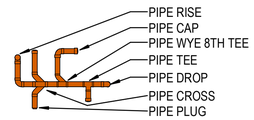
FIRE PROTECTION PIPING LEGEND



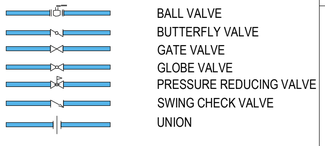
METALLIC PIPE SYMBOLS



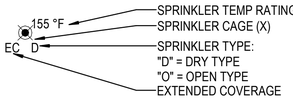
PLASTIC PIPE SYMBOLS



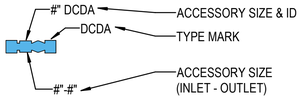
PIPE ACCESSORIES



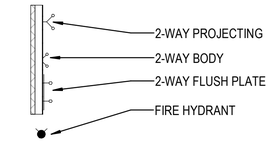
SPRINKLER TAGS



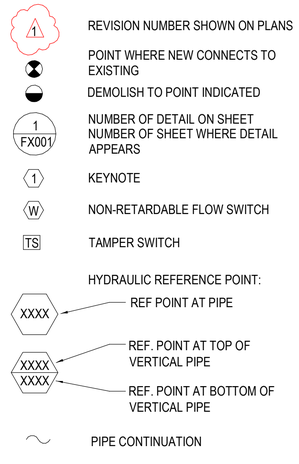
PIPE ACCESSORY TAGS



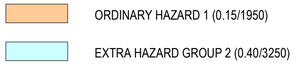
FIRE DEPARTMENT CONNECTIONS



GENERAL SYMBOLS



FIRE PROTECTION HAZARD LEGEND



FIRE PROTECTION SHEET SET NOTE

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.

GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN AUTOMATIC FIRE SPRINKLER SYSTEM TO FULLY PROTECT THIS FACILITY. THE FIRE SPRINKLER SYSTEM SHOWN THESE DRAWINGS IS BASED ON PRESCRIPTIVE DESIGN AND CONCEPTUAL ONLY.
2. THE SPRINKLER CONTRACTOR SHALL SUBMIT COMPLETE FIRE SPRINKLER SYSTEM SHOP DRAWINGS BASED ON NFPA 13 AND SPECIFICATION REQUIREMENTS AND SUBMIT FOR APPROVAL PRIOR TO INSTALLATION.
3. THE EQUIPMENT SHOWN ARE SUGGESTED LOCATIONS HOWEVER FINAL LAYOUT SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS, AND EQUIPMENT LISTINGS. CONTRACTOR SHALL COORDINATE BRANCH LINE AND SPRINKLER HEAD LOCATIONS WITH CEILING PANELS, LIGHTING FIXTURES, HVAC DUCTS AND AIR DEVICES, PLUMBING AND OTHER TRADES NOT SPECIFICALLY NAMED.
4. ALL EQUIPMENT SHALL BE UL LISTED AND FM APPROVED IN ACCORDANCE WITH NFPA 13 AND PROJECT SPECIFICATIONS.
5. CONTRACTOR SHALL SUBMIT SETS OF FIRE SUPPRESSION PLANS, DATA CUT-SHEETS, AND HYDRAULIC CALCULATIONS TO A/E AND AHJ FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY WORK ON THE FIRE SUPPRESSION SYSTEM.
6. THE CONTRACTOR SHALL CONDUCT WATER SUPPLY HYDRANT TEST FOR THIS PROJECT BASED ON NFPA 291 REQUIREMENTS AND UTILIZE THIS DATA TO DESIGN THE SPRINKLER SYSTEM. THE HYDRANT LOCATIONS, FLOW TESTS, AND DATE SHALL BE INDICATED ON THE SHOP DRAWINGS. AUTOMATIC SPRINKLER PROTECTION SYSTEM IS REQUIRED TO PROTECT THIS ENTIRE FACILITY. A MINIMUM 10% SAFETY FACTOR IS REQUIRED BETWEEN THE AVAILABLE WATER SUPPLY AND THE SPRINKLER SYSTEM DEMAND.
7. PROVIDE EARTHQUAKE PROTECTION (SWAY BRACING), END OF BRANCH LINE AND SEISMIC BRACING CALCULATION IN ACCORDANCE WITH NFPA 13 REQUIREMENTS . MINIMUM Cp TO BE DETERMINED BASED ON STRUCTURAL DESIGN DOCUMENTS OR USGS DATA FOR SITE SPECIFIC SHORT PERIOD SPECTRAL RESPONSE (Ss).
8. FIRE PROTECTION DEVICES AND PIPING ON PLANS ARE NOT FOR CONSTRUCTION, THEY ARE FOR COST ESTIMATING ONLY.
9. THE CONTRACTOR SHALL CONFORM TO THE SYMBOLS INDICATED IN NFPA 170 TO DEVELOP THE AS-BUILT DRAWINGS FOR THIS PROJECT.
10. ALL AUTOMATIC SPRINKLER DRAIN VALVES FOR FIRE DEPARTMENT CONNECTIONS SHALL BE INSTALLED IN THE HORIZONTAL POSITION.
11. FLEXIBLE COUPLINGS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13.
12. ALL DRAIN PIPING SHALL BE COORDINATED WITH AND APPROVED BY A/E FOR ARRANGEMENT, LOCATION (DOWNSPOUT, DOCK PARKING LOT, ETC.) AND APPROPRIATENESS OF THE MEANS OF DISCHARGE (STORM SEWER, SANITARY SEWER, BIOSWALE, ETC.) THAT WILL HANDLE THE FULL FLOW OF THE DRAIN WITHOUT SPECIAL TOOLS OR EQUIPMENT AND WITH DAMAGE TO LANDSCAPING OR PAVEMENT.
13. INSPECTOR'S TEST CONNECTION SHALL BE NOT LARGER THAN 1/2" ORIFICE AND BE LOCATED ON THE REMOTE BRANCH LINE.

SYSTEM NOTES

1. ALL SYSTEM PIPING SHALL BE HYDROSTATICALLY TESTED @ 200 PSI FOR TWO HOURS OR AT 50 PSI ABOVE THE OPERATIONAL STATIC PRESSURE OF THE SYSTEM, WHICHEVER IS GREATER.
2. EACH VALVE SHALL HAVE A PERMANENTLY AFFIXED SIGN INDICATING ITS FUNCTION. ALL VALVE HANDLES MUST BE ACCESSIBLE.
3. A STOCK OF SPARE SPRINKLERS, NOT LESS THAN 6, CONSISTING OF A REPRESENTATIVE MIX OF EACH STYLE AND TEMPERATURE RATING SHALL BE PROVIDED WITH A WRENCH AND BE LOCATED NEAR THE RISER. SPARE SPRINKLER CABINET WILL BE MOUNTED WHERE THE SPRINKLERS WILL NOT BE SUBJECTED TO TEMPERATURES ABOVE 100 DEG. F.
4. SPRINKLERS SHALL BE A MINIMUM OF 1/2" NPT 1/2" ORIFICE K-5.6 QUICK RESPONSE. PENDENT SPRINKLERS SHALL BE INSTALLED IN THE CENTER POINTS OF THE CEILING TILES. CONCEALED SPRINKLERS WITH WHITE COVER PLATES SHALL BE INSTALLED THROUGHOUT FINISHED CEILINGS. OTHER SPRINKLERS SHALL BE GLASS BULB, BRONZE FINISHED WITH AN ORIFICE AND THREAD SIZE APPROPRIATE FOR THE HAZARD AND DENSITY.
5. BRANCH LINE CONNECTIONS TO THE MAIN SHALL BE PRE-DRILLED, SHOP WELDED OUTLETS OR OTHER CONNECTIONS AS APPROVED, MECHANICAL TEES SHALL NOT BE USED ON NEW SYSTEMS. MAIN PIPING FOR THE SYSTEMS SHALL BE SCHEDULE 40. BRANCH LINE PIPING FOR THIS PROJECT SHALL BE SCHEDULE 40 PIPE WITH SCREWED AND/OR WELDED FITTINGS. IF A HISTORY OF CORROSION IS KNOWN TO EXIST, SCHEDULE 10 PIPING MAY BE USED.
6. THREADABLE THINWALL, ENGINEERED PIPE SIZING, IE DYNATHREAD/DYNAFLOW, AND CPVC MAY NOT BE USED.
7. ALL MATERIALS USED IN THE INSTALLATION OF THIS SYSTEM(S) SHALL BE NEW AND OF CURRENT ISSUE. ALL MATERIALS SHALL BE APPROVED BY UL AND BE IN CONFORMANCE WITH SPECIFICATIONS, CURRENT EDITION OF NFPA-13 AS WELL AS THE AUTHORITY HAVING JURISDICTION.
8. SYSTEM PIPING WILL BE SUPPORTED AND BRACED WITH HANGERS AND LISTED EARTHQUAKE BRACE ASSEMBLIES IN ACCORDANCE PER NFPA-13.
9. PAINTING OF THE SYSTEM PIPING AND COMPONENTS SHALL BE DONE PER A/E SPECIFICATIONS.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE INTEGRITY OF THE SPRINKLER SYSTEM DURING CONSTRUCTION.
11. ELEVATIONS AND DIMENSIONS SHOWN ON THESE DRAWINGS ARE NOMINAL.
12. THE VERTICAL DISTANCE BETWEEN THE SPRINKLER DEFLECTOR AND THE CEILINGS AND/OR ROOF DECK SHALL BE A 1" MIN AND 12" MAX PER NFPA 13.
13. THE SMALL-ROOM RULE MAY BE USED IN ROOMS UNDER 800 SQUARE FEET. THIS RULE ALLOWS THAT SPRINKLERS TO BE SPACED UP TO 9' FROM ONE WALL, UP TO 225sq ft PER SPRINKLER, PROVIDED THERE IS AN 8" LINTEL AT THE DOORS/OPENINGS.
14. WATER VELOCITIES SHALL NOT EXCEED 20-FPS.
15. SPRINKLER AREAS WILL BE LIMITED IN ACCORDANCE WITH NFPA 13.
16. ALL PIPE UP TO 4" SHALL HAVE AN ANTIBACTERIAL PROTECTIVE COATING EQUIVALENT TO ALLIED TUBE AND CONDUIT M-COTE, AND BE SHOWN TO NOT BE INCOMPATIBLE WITH CPVS. CONTRACTOR TO VERIFY.
17. AUTOMATIC SPRINKLER SYSTEMS SHALL BE SUPERVISED AND INTERFACE WITH NEW FIRE ALARM SYSTEM.
18. THE CONTRACTOR SHALL PROVIDE THE INSPECTOR WITH COPY OF: THE "CONTRACTOR'S MATERIAL & TEST CERTIFICATE FOR ABOVEGROUND PIPING" IN ACCORDANCE WITH NFPA 13; AND THE "RECORD OF COMPLETION" FOR FIRE ALARM SYSTEMS IN ACCORDANCE WITH NFPA 72. THESE DOCUMENTS SHALL BE PRESENTED UPON SUCCESSFUL COMPLETION ON THE SYSTEM TEST AND PRIOR TO ACCEPTANCE OF THE SYSTEM.
19. ONE SET OF STAMPED, APPROVED DRAWINGS SHALL BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO INSPECTORS ON DEMAND.
20. FIRE DEPARTMENT VEHICLE ACCESS ROADWAYS SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION. REQUIRED WATER FLOW SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION AND PRIOR TO ANY COMBUSTIBLES BEING BROUGHT ON SITE.
21. FIRE PROTECTION SYSTEMS SHALL BE INSTALLED BY A CONTRACTOR LICENSED TO PERFORM SUCH WORK IN THE PROJECT JURISDICTION.

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1300 East 6th Street Little Rock, AR 72202
501.372.2900 cromwell.com

Project

AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19823
TIMOTHY W. OSBORN

10-09-2024

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Project Number **2024-079**

Issue Date **10-09-2024**

Sheet Title

FIRE PROTECTION LEGEND AND NOTES

Sheet Number

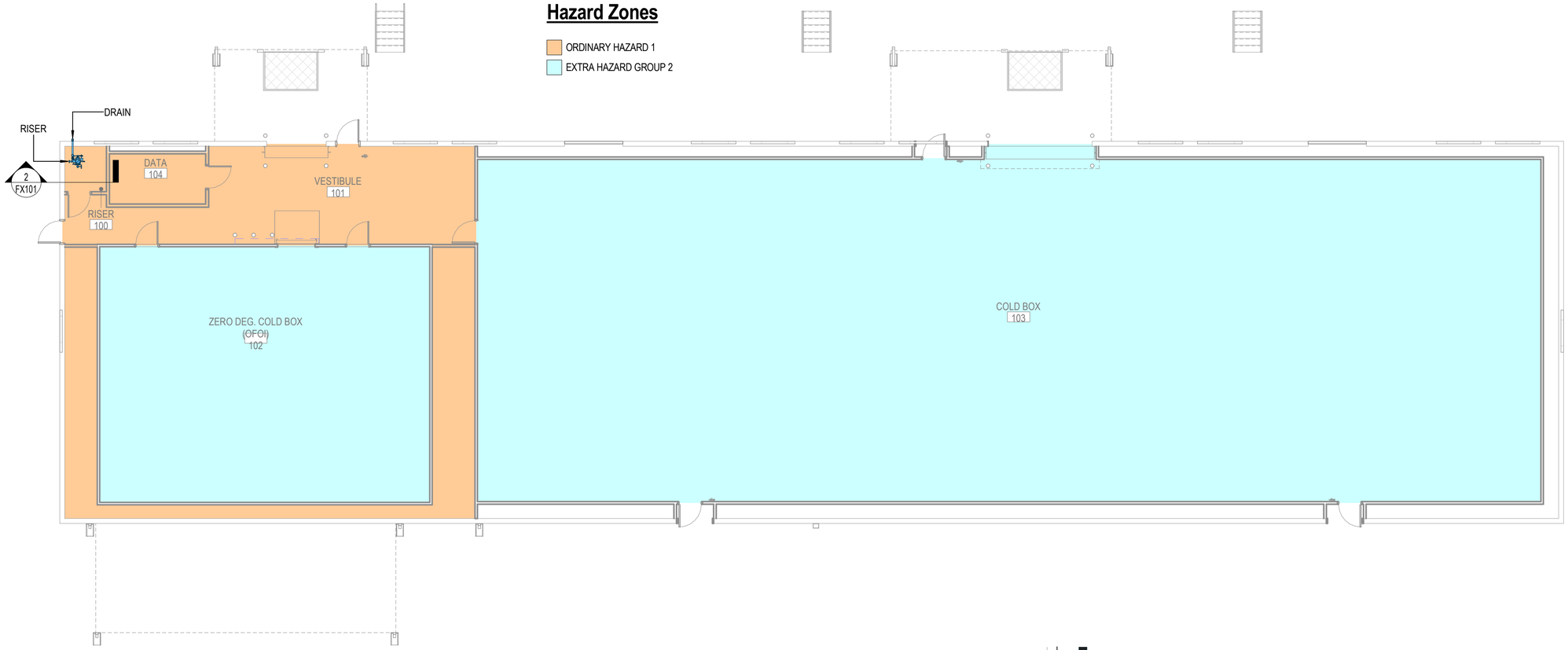
FX001

NOTE:

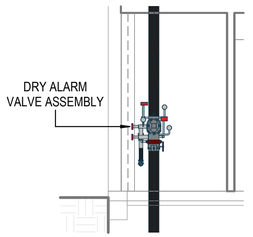
1. THIS BUILDING SHALL BE PROVIDED WITH A DRY PIPE SYSTEM AND A NITROGEN GENERATOR TO PRESSURIZE THE SYSTEM IN ACCORDANCE WITH 2019 NFPA 13.
2. SPRINKLERS MUST PENETRATE INSULATED CEILING PANELS.
3. PROVIDE A HAZARD CLASSIFICATION OF ORDINARY HAZARD GROUP 1 FOR AREA ABOVE ZERO DEG. COLD BOX (OFCI) 102 AND COLD BOX 103.
4. PROVIDE A PACKAGED DIESEL DRIVEN HORIZONTAL SPLIT CASE FIRE PUMP WITH A RATED CAPACITY OF 1500 GPM AT A TOTAL HEAD RATING OF 70 PSI AT 85 HP. THE FIRE PUMP SHALL BE INSTALLED IN ACCORDANCE WITH 2019 NFPA 20 AND 2020 NFPA 70.
5. PROVIDE A WATER STORAGE TANK WITH A CAPACITY OF 187,200 GALLONS SIZED AND INSTALLED IN ACCORDANCE WITH 2018 NFPA 22 AND 2019 NFPA 72. THE WATER TANK SHALL BE A BOLTED TANK PROVIDED WITH A TANK HEATER AND AUTOMATIC REFILL.
6. PACKAGED FIRE PUMP HOUSING AND WATER STORAGE TANK SHALL BE LOCATED AS SHOWN ON CIVIL SHEET CS101. THE CONSTRUCTION OF THE PACKAGED FIRE PUMP HOUSING AND WATER STORAGE TANK SHALL BE A DELEGATED DESIGN PROVIDED BY THE CONTRACTOR. SEE ELECTRICAL SHEETS E-601 AND E-602 FOR ADDITIONAL REQUIREMENTS THAT ARE INCLUDED IN THE DELEGATED DESIGN.

Hazard Zones

- ORDINARY HAZARD 1
- EXTRA HAZARD GROUP 2



1 FIRE PROTECTION FLOOR PLAN
1/8" = 1'-0"
0 4 8 16
NORTH



2 RISER DETAIL
1/4" = 1'-0"
0 2 4 8

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS #5
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19823
JOHN WORSHAM

10-09-2024

Notes

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Project Number **2024-079**

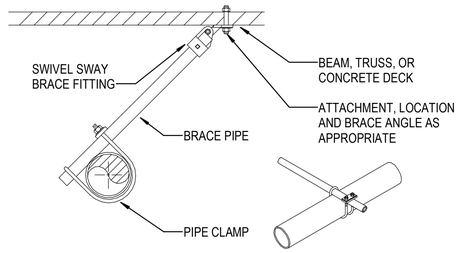
Issue Date **10-09-2024**

Sheet Title

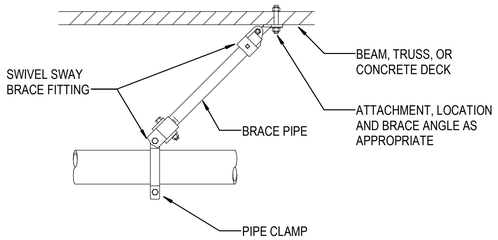
FIRE PROTECTION FLOOR PLAN

Sheet Number

FX101



1 LATERAL SWAY BRACE
NOT TO SCALE



2 LONGITUDINAL SWAY BRACE DETAIL
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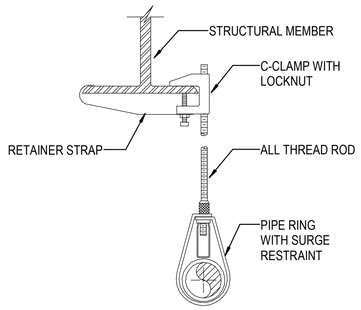
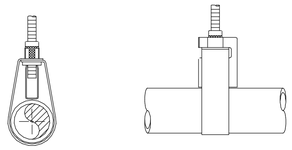
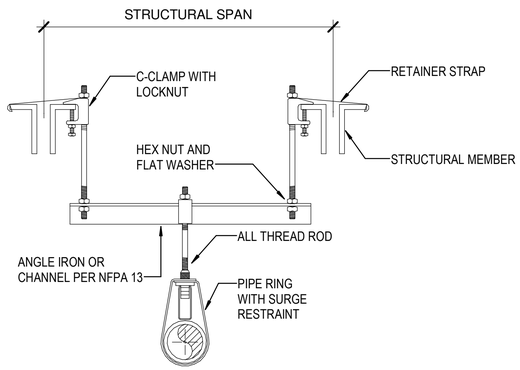


3 BEAM CLAMP HANGER
NOT TO SCALE

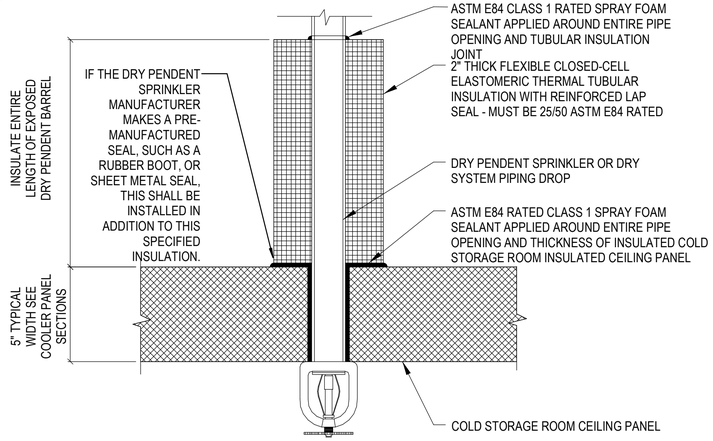


NOTE: SURGE RESTRAINERS ARE TO BE USED ONLY WITH BAND HANGERS TO RESTRAIN THE UPWARD MOVEMENT OF PIPE AS IT OCCURS DURING SPRINKLER HEAD ACTIVATION OR SEISMIC ACTIVITY. INSTALL AT ENDS OF LINES AND AT 30' INTERVALS ON BRANCH LINES.

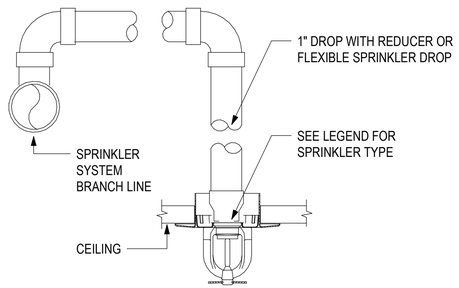
4 HANGER SURGE
NOT TO SCALE



5 TRAPEZE HANGER
NOT TO SCALE



6 SPRINKLER COLD STORAGE
NOT TO SCALE



7 RETURN BEND
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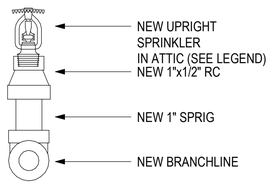
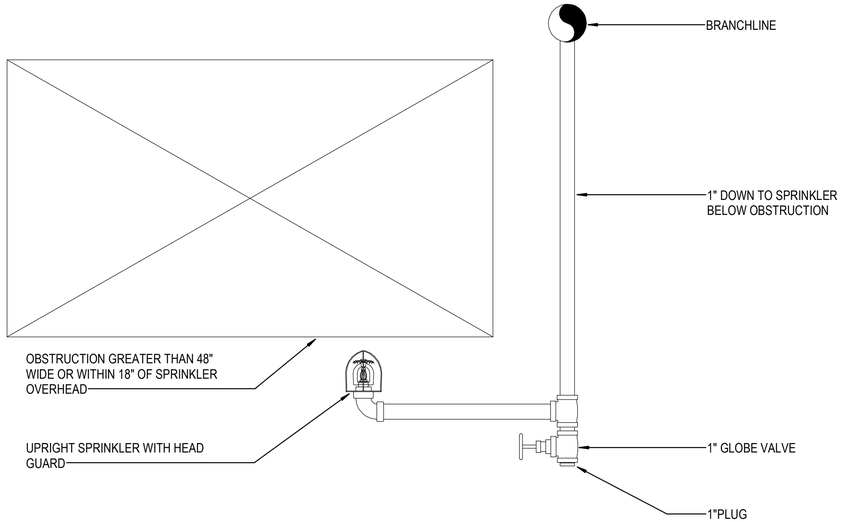


8 UPRIGHT SPRINKLER DETAIL
NOT TO SCALE



9 SPRINKLER UNDER OBSTRUCTION
NOT TO SCALE

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ARKANSAS-ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 19823
JOHN WOSSUM
10-09-2024

Notes

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Project Number **2024-079**

Issue Date **10-09-2024**

Sheet Title

FIRE PROTECTION DETAILS

Sheet Number

FX501

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MBH	THOUSAND BTUs PER HOUR
AHU	AIR HANDLING UNIT	MCA	MINIMUM CIRCUIT AMPS
BHP	BRAKE HORSE POWER	MOCP	MAXIMUM OVER CURRENT PROTECTION
BTU	BRITISH THERMAL UNIT	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NO	NORMALLY OPENED
CV	CONSTANT VOLUME	NTS	NOT TO SCALE
CU	CONDENSING UNIT	OA	OUTSIDE AIR
DB	DRY BULB TEMPERATURE (°F)	OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
DDC	DIRECT DIGITAL CONTROLS	PSI	POUNDS PER SQUARE INCH
DOAS	DEDICATED OUTSIDE AIR SYSTEM	PSIG	PSI GAUGE
DN	DOWN	PVC	POLYVINYL CHLORIDE PIPE
EAT	ENTERING AIR TEMPERATURE	RA	RETURN AIR
EF	EXHAUST FAN	RH	RELATIVE HUMIDITY
ESP	EXTERNAL STATIC PRESSURE	RHC	REHEAT COIL
EWT	ENTERING WATER TEMPERATURE	RLA	RUNNING LOAD AMPS
FCU	FAN COIL UNIT	RPM	REVOLUTIONS PER MINUTE
FD	FIRE DAMPER	RS/RL	REFRIGERANT SUCTION & LIQUID LINES
FLA	FULL LOAD AMPS	RTU	ROOFTOP AIR HANDLING UNIT
FPI	FINS PER INCH	SA	SUPPLY AIR
FPM	FEET PER MINUTE	SF	SUPPLY FAN
GPM	GALLONS PER MINUTE	SP	STATIC PRESSURE
IV	INTAKE VENTILATOR	TSP	TOTAL STATIC PRESSURE
KW	KILOWATT	VAV	VARIABLE AIR VOLUME
LAT	LEAVING AIR TEMPERATURE	VRF	VARIABLE REFRIGERANT FLOW
LRA	LOCKED ROTOR AMPS	VFD	VARIABLE FREQUENCY DRIVE
LWT	LEAVING WATER TEMPERATURE	WB	WET BULB TEMPERATURE (°F)

GENERAL MECHANICAL SYMBOLS

1 — REVISION NUMBER SHOWN ON PLANS

POINT WHERE NEW CONNECTS TO EXISTING

DEMOLISH TO POINT INDICATED

1 / M-001 — NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS

1 — KEYNOTE

CONTINUATION SYMBOLS:

ROUND DUCT

RECTANGULAR DUCT

SPACE TAG:

OFFICE — SPACE NAME

101 — SPACE NUMBER

100 SF — SPACE AREA

AREA NOT IN CONTRACT

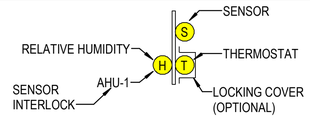
NEW OF/CI EQUIPMENT

NEW MECHANICAL EQUIPMENT

HVAC DUCTWORK LEGEND

22/14	SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
22Ø	ROUND DUCT SIZE TAG (DIAMETER)
S/A	SUPPLY AIR
O/A	OUTSIDE AIR
R/A	RETURN AIR
E/A	EXHAUST AIR

MECHANICAL DATA DEVICES



MECHANICAL SHEET SET NOTE

* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2021 EDITION OF THE "ARKANSAS MECHANICAL CODE", THE 2014 EDITION OF THE "ARKANSAS ENERGY CODE", NFPA 90A, AND ALL CITY, STATE, AND LOCAL REQUIREMENTS.
2. REFER TO THE PROJECT MANUAL FOR ALL REQUIREMENTS.
3. ALL DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION.
4. DUCTWORK TO BE COORDINATED WITH STRUCTURAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, COMPONENTS AND SYSTEMS. ALL DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE SLOPED WITH 2-30° ELBOWS UNLESS OTHERWISE NOTED.
5. REFER TO THE STRUCTURAL DRAWINGS FOR DETAILS OF ALL CONCRETE MECHANICAL PADS. PADS SHALL EXTEND BEYOND THE FOOTPRINT OF THE MECHANICAL EQUIPMENT MINIMUM 6" ON ALL SIDES.
6. CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.
7. PROVIDE FLEXIBLE CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING UNITS, MAKE-UP AIR UNITS, FURNACES, AND/OR EXHAUST FANS.
8. CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.
9. ALL PIPING SUSCEPTIBLE TO FREEZING, SUCH AS CONDENSATION PIPING IN WALK-IN FREEZER AND ON THE EXTERIOR OF THE BUILDING, SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET AND HEAT TRACED AT 5 WATTS/FOOT. SEAL JACKET WATER-TIGHT.
10. ALL WALL-MOUNTED, OCCUPANT-CONTROLLED HVAC DEVICES, I.E., THERMOSTATS, HUMIDISTAT, CO2 CONTROLLERS, CONTROL PANELS, ETC., SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR. CONTROLS LOCATED IN PUBLIC AREAS SHALL HAVE CLEAR PLASTIC LOCKING COVERS.
11. SLEEVE AND SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED AND NON-RATED SLABS AND PARTITIONS.
12. REFRIGERATION PIPING LAYOUT IS FOR CLARIFICATION ONLY. IT IS THE RESPONSIBILITY OF THE REFRIGERATION CONTRACTOR TO VERIFY PIPING LAYOUT PRIOR TO FABRICATION.
13. ENSURE REFRIGERATION EQUIPMENT HAS SUFFICIENT ACCESSIBILITY FOR ROUTINE MAINTENANCE AND SERVICE. VERIFY UNIT SIZES PRIOR TO INSTALLATION AND COORDINATE WITH OTHER TRADES AS NECESSARY TO AVOID CONFLICTS.
14. EQUIPMENT LABELED "OF" WILL BE OWNER FURNISHED. ALL OTHER EQUIPMENT, MATERIALS, SUPPLIES, LABOR, ETC NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. PROVIDE ALL NECESSARY: CONTROL POWER, CONTROL POWER WIRING, VALVES, ACTUATORS, CONDUIT, WIRING, CONTROLLERS, INTERFACE, SWITCHES, CIRCUIT BOARDS, SENSORS, GATEWAYS, PROGRAMMING, LABOR, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE FINAL CONNECTION TO DRY CONTACTS AS REQUIRED FOR A COMPLETE AND OPERATION SYSTEM. FOLLOW MANUFACTURER RECOMMENDATIONS AND APPLICABLE CODES FOR CONTROL WIRING AND ASSOCIATED CONDUITS. VERIFY LOCATION OF NETWORK TIE-IN, TIE-IN INSTALLED SYSTEM TO CAMPUS NETWORK, AND ENSURE OWNER SUPPLIED EQUIPMENT IS COMPATIBLE WITH CAMPUS WIDE MONITORING SYSTEM.

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 12375 — SAMUEL L. GUIDRY

10-09-2024

Notes

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Project Number **2024-079**

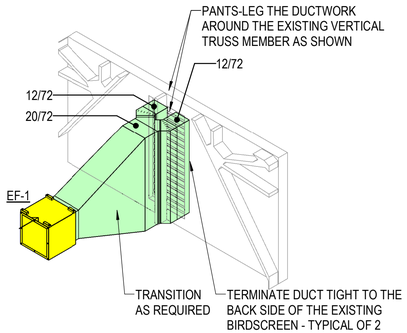
Issue Date **10-09-2024**

Sheet Title

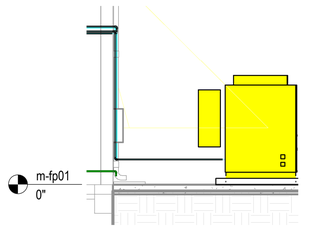
MECHANICAL LEGEND AND SYMBOLS

Sheet Number

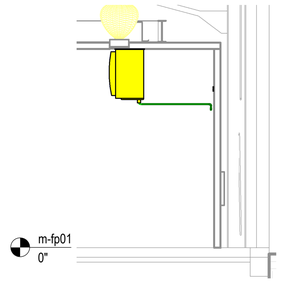
M-001



2 EF-1 ISOMETRIC
NOT TO SCALE



3 OUTSIDE PIPING SECTION
1/4" = 1'-0"
0 2 4 8



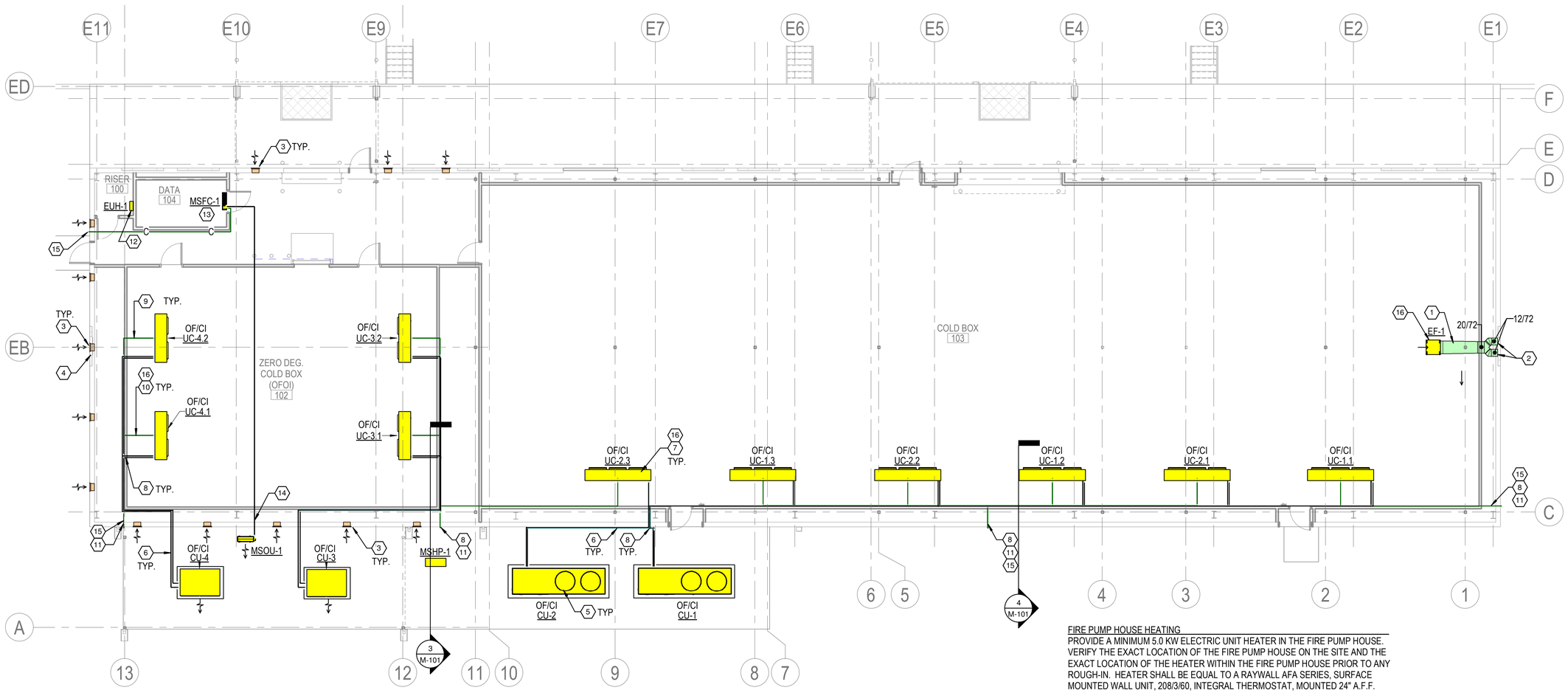
4 INSIDE PIPING SECTION
1/4" = 1'-0"
0 2 4 8

GENERAL NOTES

1 REFER TO SHEET M-001 FOR MECHANICAL NOTES, ABBREVIATIONS, AND LEGEND SYMBOLS.

KEYED NOTES

1 TRANSITION AS REQUIRED FOR THE FULL SIZE CONNECTIONS AT THE FAN DISCHARGE TO THE PANTS-LEG FITTING.
2 TERMINATE DUCT TIGHT THE BACK SIDE OF THE EXISTING BIRDSCREEN AT THE EXISTING LOUVER.
3 PROVIDE BRICK VENT IN THE EXISTING 12x6 BLOCK WALL. BRICK VENT SHALL BE EQUAL TO A GREENHECK BVF-12x12 WITH INTEGRAL OPPOSED BLADE DAMPER OPERABLE FROM FACE OF BRICK VENT, INSECT SCREEN, AND DARK BRONZE ANODIZED FINISH. BRICK VENT IS SIZED TO COURSE OUT IN THE EXISTING BLOCK WALL. INSTALL AT APPROXIMATELY 24" A.F.F.
4 EXISTING GABLE LOUVER TO REMAIN. INVESTIGATE AND THOROUGHLY CLEAN THE INSECT SCREEN. REPLACE IF IT HAS SUFFICIENT CORROSION OR IS DAMAGED.
5 CONDENSING UNITS TO BE PLACED ON CONCRETE EQUIPMENT PAD AND ANCHORED PER MANUFACTURER RECOMMENDATIONS.
6 ROUTE REFRIGERANT LINES FROM EACH CONDENSING UNIT THROUGH EXTERIOR WALL. ATTACH REFRIGERANT LINES TO INTERIOR WALL ABOVE DOORWAYS, AT ELBOWS, AND EVERY 5' O.C. ENSURE LINES SLOPE TOWARDS ASSOCIATED CONDENSERS. REFRIGERANT PIPE SIZING, TRAP LOCATIONS, TERMINATIONS, AND INSULATION SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE CONDENSER MANUFACTURER'S RECOMMENDATIONS
7 LOCATE EACH UNIT COOLER IN THE SPACE ABOVE PROPOSED STORAGE RACKS.
8 ADD SLEEVE AT EACH WALL PENETRATION. SEAL PENETRATIONS AIR TIGHT.
9 HEAT TRACE CONDENSATE PIPING IN THE WALK-IN FREEZER AND ON THE EXTERIOR OF THE WALK-IN BOXES AND BUILDING AT 5 WATTS/FOOT, COORDINATE WITH ELECTRICAL.
10 FOLLOW MANUFACTURER RECOMMENDATIONS FOR CONDENSATE SIZING AND P-TRAP LOCATION. ROUTE CONDENSATE MAIN ALONG INTERIOR WALL OF COLD BOX AND EXTERIOR WALL OF FREEZER BOX, SLOPE AT 4" PER FOOT TOWARDS DRAIN TERMINATION. ATTACH CONDENSATE LINE TO WALL AT ELBOWS AND EVERY 5'. PROVIDE UNION CONNECTIONS AND FULL-SIZED P-TRAP AT EVERY UNIT COOLER. TERMINATE IN DESIGNATED DRAIN TO AVOID DRAINING INTO DRIVEWAY. CONDENSATE LINE TO BE TYPE M COPPER, INSULATE CONDENSATE LINE AND P-TRAP WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET. SEAL JACKET WATER-TIGHT.
11 PROVIDE FRENCH DRAIN OR ROUTE TO DESIGNATED AREA TO AVOID RUNOFF INTO DRIVEWAY.
12 INSTALL THE HEATER AT 24" A.F.F. MEASURED TO THE BOTTOM OF THE CABINET.
13 INSTALL THE FAN COIL UNIT ABOVE THE DOOR HEADER AT APPROX. 8' A.F.F.
14 RISE WITH INSULATED REFRIGERANT LINE SET UP ALONG THE INSIDE SURFACE OF THE EXTERIOR WALL AND CONTINUE AS SHOWN OVER THE ZERO DEGREE COLD BOX.
15 DROP WITH THE CONDENSATE DRAIN LINE DOWN ALONG THE EXTERIOR WALL AND TERMINATE 6" A.F.G. SECURE THE PIPE RISER RIGID TO THE WALL AT 5' O.C.
16 PROVIDE ALL NECESSARY: CONTROL POWER WIRING , VALVES, ACTUATORS, CONDUIT BOARDS, SENSORS, GATEWAYS, PROGRAMMING, LABOR, ECT.FOR COMPLETE AND OPERATIONAL SYSTEM. FOLLOW MANUFACTURER RECOMMENDATIONS AND APPLICABLE CODES FOR CONTROL WIRING AND ASSOSEATED CONDUITS. VARIFY LOCATION OF NETWORK TIE-IN, TIE-IN INSTALLED INSTALLED SYSTEM TO CAMPUS NETWORK, AND ENSURE OWNER SUPPLIEDEQUIPMENT IS COMPATABLE WITH CAMPUS WIDE MONITORING SYSTEM.



1 MECHANICAL PLAN
1/8" = 1'-0"
0 4 8 16

NORTH

FIRE PUMP HOUSE HEATING
PROVIDE A MINIMUM 5.0 KW ELECTRIC UNIT HEATER IN THE FIRE PUMP HOUSE. VERIFY THE EXACT LOCATION OF THE FIRE PUMP HOUSE ON THE SITE AND THE EXACT LOCATION OF THE HEATER WITHIN THE FIRE PUMP HOUSE PRIOR TO ANY ROUGH-IN. HEATER SHALL BE EQUAL TO A RAYWALL AFA SERIES, SURFACE MOUNTED WALL UNIT, 208/3/60, INTEGRAL THERMOSTAT, MOUNTED 24" A.F.F.

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Project
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Design Phase
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Revisions

No.	Date	Description

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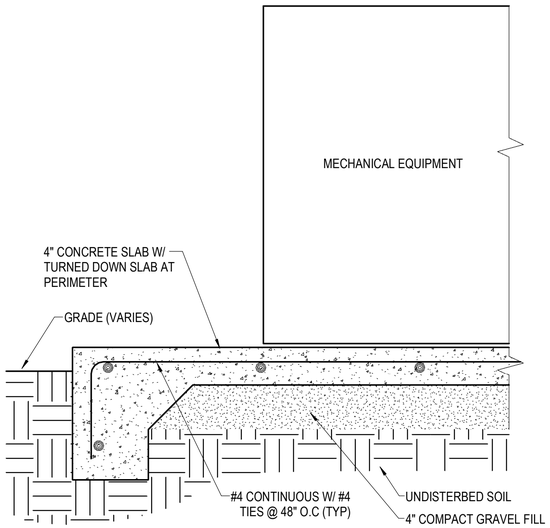
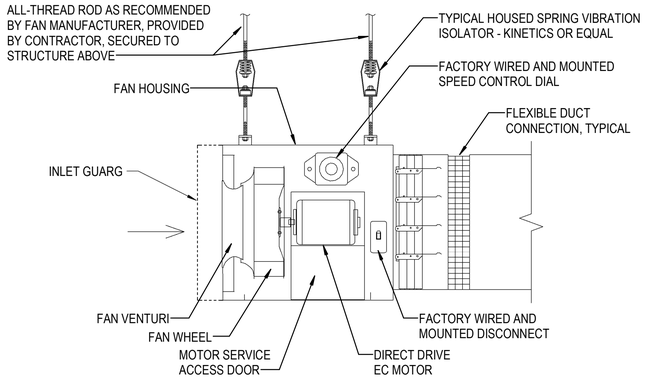
CERTIFICATE OF AUTHORIZATION CROMWELL ARCHITECTS/ ENGINEERS #5 ARKANSAS-ENGINEER
ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 12375 JAMIE L. GUIDRY
10-09-2024

Notes

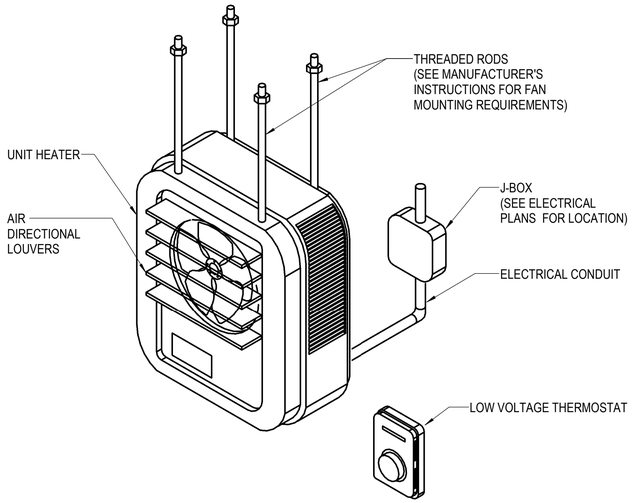
Project Number 2024-079
Issue Date 10-09-2024
Sheet Title MECHANICAL PLAN
Sheet Number M-101



1 CONCRETE EQUIPMENT PAD DETAIL
NOT TO SCALE



2 EXHAUST FAN - INLINE DIRECT DRIVE
NOT TO SCALE



3 ELECTRIC UNIT HEATER
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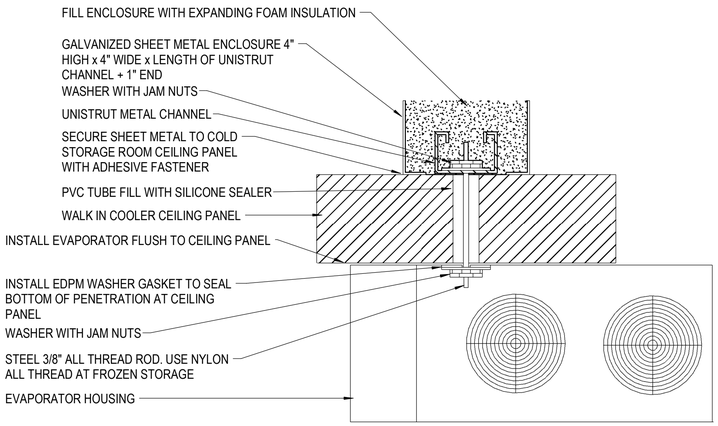
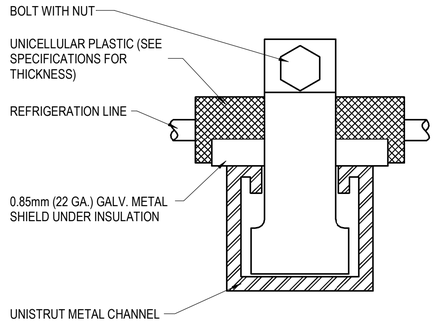
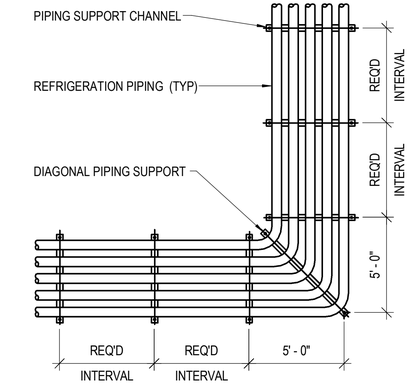


4 COOLER TOP MOUNTING DETAIL
1/4" = 1'-0"

0 8 16 32



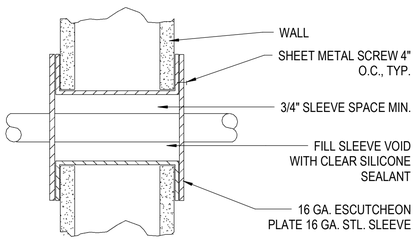
5 CLAMP ASSEMBLY DETAIL
NOT TO SCALE



SUPPORT INTERVAL SCHEDULE		
REFRIGERATION PIPE SIZE	MAXIMUM INTERVAL	ROD DIAMETER
UP TO 7/8	5'-0"	3/4"
1 1/8 TO 1 5/8	8'-0"	3/4"
2 1/8 TO 2 5/8	10'-0"	3/4"
3 1/8 TO 3 5/8	12'-0"	3/4"
4 1/8	14'-0"	3/4"
NOTE		

1. SMALLEST LINE IN THE REFRIGERANT PIPING SHALL DETERMINE SUPPORT INTERVAL.
2. THIS DETAIL DOES NOT INCLUDE SEISMIC SUPPORT INFORMATION. PROVIDE SEISMIC EQUIPMENT WITH ALL APPLICABLE CODES AND MANUFACTURING RECOMMENDATIONS.

6 REFRIGERATION PIPING SUPPORT DETAIL
NOT TO SCALE



7 EXTERIOR PIPE SLEEVE DETAIL
NOT TO SCALE

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Project

AEROJET BUILDING 2SH8 COLD BOX CONVERSION EAST CAMDEN, ARKANSAS

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CERTIFICATE OF AUTHORIZATION — CROMWELL ARCHITECTS/ ENGINEERS #5 — ARKANSAS ENGINEER

ARKANSAS REGISTERED PROFESSIONAL ENGINEER — No. 12375 — JAMIE L. GUIDRY

10-09-2024

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Project Number **2024-079**

Issue Date **10-09-2024**

Sheet Title

MECHANICAL DETAILS

Sheet Number

M-501

REFRIGERATION UNIT COOLER SCHEDULE

UNIT COOLER										ELECTRICAL - DEFROST			ELECTRICAL - FANS				ELECTRICAL - UNIT POWER SUPPLY	LOCATION	NOTES
TAG	MANUFACTURER	MODEL	CFM	CAPACITY (kBTU)	ROOM TEMP (F)	EVAP TEMP (F)	REF. TYPE	WEIGHT (LBS)	DEFROST TYPE	Volt/Ph/Hz	AMPS	WATTS	Volt/Ph/Hz	RLA	MCA	MOP	Volt/Ph/Hz		
UC-1.1,2,3	RUSSELL	RM6A549DDA	9580	64.2	40	30	R448A	316	AIR	N/A	N/A	N/A	208-230/1/60	5.7	15	20	208-230/1/60	COOLER	1,2,3,4,5,6,7
UC-2.1,2,3	RUSSELL	RM6A549DDA	9580	64.2	40	30	R448A	316	AIR	N/A	N/A	N/A	208-230/1/60	5.7	15	20	208-230/1/60	COOLER	1,2,3,4,5,6,7
UC-3.1,2	RUSSELL	RM6E374EDA	4180	42.9	0	-10	R448A	220	ELECTRIC	208-230/3/60	22.2	8860	208-230/1/60	3.8	15	20	208-230/3/60	FREEZER	1,2,3,4,5,6,7
UC-4.1,2	RUSSELL	RM6E374EDA	4180	42.9	0	-10	R448A	220	ELECTRIC	208-230/3/60	22.2	8860	208-230/1/60	3.8	15	20	208-230/3/60	FREEZER	1,2,3,4,5,6,7

NOTES:
1. 6 FPI
2. R-448A
3. INSULATED DRAIN PAN
4. ECM MOTORS
5. KE2 CONTROLLER WITH FACTORY INSTALLED ELECTRONIC EXPANSION VALVE (EEV)
6. LIQUID LINE SOLENOID VALVE
7. FOR INFORMATION ONLY, EQUIPMENT IS PART OF AN OWNER FURNISHED/CONTRACTOR INSTALLED PACKAGED COOLER/FREEZER SYSTEM.

REFRIGERATION CONDENSING UNIT SCHEDULE

CONDENSING UNIT										ELECTRICAL								
										COMPRESSOR			FANS		UNIT TOTAL		ELECTRICAL - UNIT POWER SUPPLY	NOTES
TAG	MANUFACTURER	MODEL	RATING (HP)	CAPACITY (kBTU)	CONDENSER AMB. TEMP. (F)	SST (F)	REF TYPE	WEIGHT (LBS)	COMPRESSOR TYPE	Volt/Ph/Hz	RLA	LRA	QTY	FLA/Fan	MCA	MOP		
CU-1,2	RUSSELL	RFDV020M4SEA	20	185.3	100	30	R448A	1940	DISCUSS	208-230/3/60	64.7	374	2	13	95.9	150	208-230/3/60	1,2,3,4,5,6,7,8,9,10,12
CU-3,4	RUSSELL	RFDS22L4SEA	22	88.7	100	-10	R448A	1420	DISCUSS	208-230/3/60	57.7	374	2	7.5	80.6	150	208-230/3/60	1,2,3,4,5,6,7,8,9,10,11,12

NOTES:
1. COMPRESSOR CRANKCASE HEATER
2. ANTI-SHORT CYCLING TIME DELAY
3. ADJUSTABLE FLOODED HEAD PRESSURE CONTROL
4. ADJUSTABLE HIGH AND LOW PRESSURE CONTROLS
5. REFRIGERANT PRESSURE RELIEF VALVES
6. REPLACEABLE CORE SUCTION FILTER
7. PHASE/VOLTAGE MONITOR
8. OIL SEPARATOR WITH OIL FILTER AND SOLENOID
9. NON-FUSED DISCONNECT SWITCH
10. 5 YEAR COMPRESSOR WARRANTY
11. HAIL GUARDS
12. FOR INFORMATION ONLY, EQUIPMENT IS PART OF AN OWNER FURNISHED/CONTRACTOR INSTALLED PACKAGED COOLER/FREEZER SYSTEM.

DUCTLESS SPLIT-SYSTEM HEAT PUMP SCHEDULE

INDOOR UNIT				OUTDOOR UNIT		COOLING					HEATING			ELECTRICAL			REMARKS
MARK	*MANUF'R./ MODEL	SERVES	FAN CFM (HI/MED/LO)	MARK	*MANUF'R./ MODEL	TOT. CAP. (BTUH)	EDB (F)	EWB (F)	AMB (F)	SEER	TOT. CAP. (BTUH)	AMB (F)	HSPF	VOLTAGE	MCA	BKR	
MSFC-1	LG LSN180HSV5	DATA/WORK ROOM 104	706/530/477/371	MSOU-1	LG LSU180HSV5	18,000	80.0	67.0	95.0	21.5	21,600	47.0	10.2	208/1/60	13.0	20A	SEE NOTES

* OR APPROVED EQUAL
NOTES:
1. SYSTEM SHALL BE COMPLETE WITH INDOOR AND OUTDOOR UNIT FROM SAME MANUFACTURER
2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT
3. VARIABLE SPEED INVERTER SCROLL COMPRESSOR
4. ELECTRICALLY COMMUTATED INDOOR FAN MOTOR
5. ELECTRICALLY COMMUTATED OUTDOOR FAN MOTOR
6. WALL THERMOSTAT
7. AUTO RESTART
8. 24-HOUR ON/OFF TIMER
9. LOW AMBIENT TO 14-DEGREES F
10. CONDENSATE SENSOR CONNECTION
11. COOLING ONLY FUNCTION
12. FIVE YEAR COMPRESSOR WARRANTY
13. TWO YEAR FUNCTIONAL PARTS WARRANTY
14. PROVIDE WALL MOUNTED CONDENSATE PUMP AS RECOMMENDED BY THE FAN COIL UNIT MANUFACTURER (120/1/60).

EXHAUST FAN SCHEDULE

GENERAL			FAN						ELECTRICAL			REMARKS
MARK	MANUF'R./MODEL	SERVES	DRIVE	TYPE	CFM	ESP	RPM	SONES	VOLTAGE	MOTOR	CONTROL	
EF-1	GREENHECK SQ-15-VG	GENERAL BUILDING VENTILATION	DIRECT	CENT.	3,000	1/4"	1,275	14.3	120/1/60	1 HP	RELATIVE HUMIDITYSENSOR	SEE NOTES

* OR APPROVED EQUAL
NOTES:
1. FACTORY MOUNTED INTEGRAL DISCONNECT AND BACKDRAFT DAMPER.
2. FAN SPEED CONTROL DIAL FACTORY WIRED AND MOUNTED ON FAN HOUSING.
3. 1" SPRING ISOLATION HANGERS.
4. WALL MOUNTED RELATIVE HUMIDITY SENSOR PROVIDED BY FAN MANUFACTURER (SETPOINT = 60% ADJ.)

ELECTRIC UNIT HEATER SCHEDULE

MARK	MANUF'R/MODEL*	SERVES	TYPE	S.A.	KW	FLA	POWER	REMARKS
EUH-1	RAYWALL AFA110D	F.S. RISER ROOM	SURFACE MOUNT	175 CFM	1.0	8.3	120/1/60	SEE NOTES

* OR APPROVED EQUAL
NOTES:
1. LOW SPEED VANE AXIAL BLOWER
2. BUILT-IN TAMPER-PROOF THERMOSTAT
3. INTEGRAL DISCONNECT SWITCH
4. POWDER COATED 18-GAUGE STEEL FRONT GRILLE WITH ALUMINUM FRAME
5. SEALED TUBULAR HEATING ELEMENTS WITH PARALLEL STEEL FINS
6. AUTOMATIC RESET THERMAL OVERLOAD CUT-OFF SAFETY SWITCH
7. AUTOMATIC FAN DELAY CIRCUIT
8. MANUFACTURER'S 1-YEAR HEATING ELEMENT WARRANTY

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Project
AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase
CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

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CROMWELL ARCHITECTS/ ENGINEERS
#5
ARKANSAS ENGINEER

ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 12375
JAMIE L. GUIDRY
10-09-2024

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Project Number 2024-079
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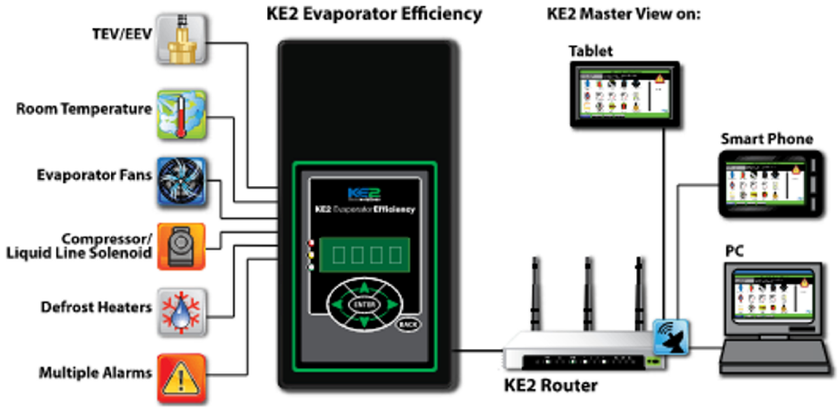
Sheet Title
MECHANICAL SCHEDULES
Sheet Number
M-601

KE2 Evaporator Efficiency - Controls and Communicates



General Control Notes:

1. PROVIDE COMPLETE CONTROL SYSTEM CONSISTING OF A HIGH-SPEED, PEER-TO-PEER NETWORK OF APPLICATION CONTROLLERS RESIDING ON A CONTROL SYSTEM'S SUB-NETWORK WITH A LOCAL (CONFIRM LOCATION WITH USER) AND WEB-BASED OPERATOR INTERFACE.
2. INCLUDE ALL PROGRAMMING, OBJECTS, AND SERVICES REQUIRED TO MEET THE SEQUENCE OF CONTROL.
3. PROVIDE AN OPERATION WORKSTATION ON SITE, COMPLETE WITH SOFTWARE CAPABLE OF PROGRAMMING, CONFIGURING, AND MONITORING THE SYTEM.
4. INSTALL THE ELECTRICAL EQUIPMENT, CONDUCTORS, AND ALL OTHER RELATED ITEMS IN ACCORDANCE WITH NFPA 70.
5. INSTALL ANY FIRE ALARM DEVICES AND RELATED EQUIPMENT IN ACCORDANCE WITH NFPA 72, NFPA 90a, NFPA 101, SBCCI, AND ANY APPLICABLE ANSI STANDARDS.
6. PROVIDE ALL NECESSARY: CONTROL POWER, CONTROL POWER W IRING, VALVES, ACTUATORS, CONDUIT, WIRING, CONTROLLERS, INTERFACE, SWITCHES, CIRCUIT BOARDS, SENSORS, GATEWAYS, PROGRAMMING, LABOR, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE FINAL CONNECTION TO DRY CONTACTS AS REQUIRED FOR A COMPLETE AND OPERATION SYSTEM.
7. PROVIDE 8 HOURS OF ONSITE OWNER TRAINING PRIOR TO THE TURNOVER OF EQUIPMENT TO THE OWNER.

Sequence of Operation: Refrigeration System - Condensing Units and Unit Coolers

General Description:
Both the freezer and cooler boxes consist of two (2) fully redundant refrigeration systems. The systems for both the freezer and cooler shall operate in a lead/lag schedule of 7 days (adjustable). Each unit cooler is equipped with a factory installed KE2 Evaporator Controller that will control each individual system. Each individual KE2 controller shall be daisy-chained to a lead controller for each system, which shall be connected to a common KE2 router via ethernet cable. The router shall be networked with the campus wide control system for user access and control, a local workstation shall be supplied. The lead/lag schedule shall be implemented using individual system controllers and owner approved 3rd party control components.

Room Temperature Control:
Cooler: The lead cooler refrigeration system shall be enabled when the temperature rises 1 F (adj.) above the box temperature setpoint of 40 F (adj). The system shall disable when the temperature falls 1 F (adj.) below the box temperature setpoint, and minimum compressor runtime is achieved.
Freezer: The lead freezer refrigeration system shall be enabled when the temperature rises 1 F (adj.) above the box temperature setpoint of 0 F (adj). The system shall disable when the temperature falls 1 F (adj.) below the box temperature setpoint, and minimum compressor runtime is achieved.

System Defrost:
Cooler: The cooler system is air defrost, defrost shall be enabled on a set schedule (adj.) controlled by the KE2 controller.
Freezer: The cooler system is electric defrost, defrost shall be enabled on a set schedule (adj.) controlled by the KE2 controller.

Lead/Lag Operation:
During normal operation, the lead/lag system will rotate on 7-day (adj.) schedule for both the freezer and cooler box. The runtime and rotation of each system shall be logged.
n the event of a high or low temperature alarm the lag system shall automatically be enabled and will become the lead system.

Alarms:
Each alarm shall be logged and stay in place until manually cleared from the alarm log. A notification shall be generated for each alarm.
High Temperature Alarm:
- Cooler: 50 F (adj.)
  - Time Delay: 60 minutes (adj.)
- Freezer: 10 F (adj.)
  - Time Delay: 60 minutes (adj.)

Low Temperature Alarm:
- Cooler: 36 F (adj.)
  - Time Delay: 10 minutes (adj.)
- Freezer: -4 F (adj.)
  - Time Delay: 10 minutes (adj.)

Door Alarm:
- Cooler: 30 minutes (adj.)
- Freezer: 30 minutes (adj.)

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Sheet Title
MECHANICAL CONTROLS
Sheet Number
M-701

ELECTRICAL SYMBOLS

RECEPTACLES (MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)

- DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R) MOUNT 4" ABOVE COUNTER TOP, SINK, OR BACKSPLASH (IF PRESENT)
- SINGLE RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- FLOOR RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- SINGLE RECEPTACLE OUTLET (50A, 250V, 3 POLE, 3 WIRE, NEMA 10-50R)
- SINGLE RECEPTACLE OUTLET (20A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-20R)
- SINGLE RECEPTACLE OUTLET (30A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-30R)
- SINGLE RECEPTACLE OUTLET (30A, 250V, 3 POLE, 4 WIRE, TWIST-LOCK, GROUNDING TYPE, NEMA L15-30R)
- $_{1}$ SINGLE SPECIAL-PURPOSE RECEPTACLE OUTLET; NUMBER CORRESPONDS TO THE SPECIAL-PURPOSE RECEPTACLE SCHEDULE
- $_{R}$ SINGLE RECEPTACLE FOR ELECTRIC RANGE (50A, 125/250V, 3 POLE, 4 WIRE, GROUNDING TYPE, NEMA 14-50R)
- DUPLEX RECEPTACLE MOUNTED IN CEILING (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- TWO (2) DUPLEX RECEPTACLES MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- TWO (2) DUPLEX RECEPTACLES FLOOR MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)

LIGHT FIXTURES (SEE FIXTURE SCHEDULE ON E-601 FOR TYPE)

- LIGHT FIXTURE, CEILING MOUNTED
- LIGHT FIXTURE, CEILING MOUNTED, ON EMERGENCY CIRCUIT
- LIGHT FIXTURE, CEILING MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, WALL MOUNTED
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED, ON EMERGENCY CIRCUIT
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, CEILING MOUNTED
- LIGHT FIXTURE, CEILING MOUNTED, ON EMERGENCY CIRCUIT
- LIGHT FIXTURE, CEILING MOUNTED, WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, WALL MOUNTED
- EMERGENCY BATTERY POWERED LIGHTING UNIT, WITH SELF CONTAINED BATTERY, CHARGER, ETC. (REFER TO FIXTURE SCHEDULE FOR BATTERY TYPE, VOLTAGE, LAMP TYPE, WATTAGE, ETC.) TRIANGLES DEPICT QUANTITY AND AIMING OF LAMP HEADS
- EXIT SIGN, LIGHTED, CEILING MOUNTED. SHADED AREA INDICATES FACE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
- EXIT SIGN, LIGHTED, WALL MOUNTED AT 7'-6" AFF (TO BOTTOM OF SIGN) UNLESS INDICATED OTHERWISE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
- FLOOD LIGHT, ARROW INDICATES DIRECTION OF BEAM
- DOCK LIGHT
- PARKING AREA LIGHT FIXTURE, POLE MOUNTED

ELECTRICAL SYMBOLS

TELEPHONE/COMMUNICATIONS/DATA (OUTLETS SHALL BE MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)

- TELEPHONE OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD. SUBSCRIPT: W - WALL MOUNTED AT 54" AFF;
- TELEPHONE FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- COMBINATION VOICE/DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- COMBINATION VOICE/DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE AND PULL CORD.
- 4'-0" HIGH x 3/4" THICK FIRE-RETARDANT PLYWOOD BACKBOARD. SEE PLANS FOR LENGTH.
- 2 WIRELESS ACCESS POINT OUTLET CEILING MOUNTED. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESS CEILING SPACE AND PULL CORD. NUMBER INDICATES QUANTITY OF DATA JACKS. ABSENCE OF A NUMBER INDICATES ONE DATA JACK.
- CABLE TRAY

LIGHT FIXTURE IDENTIFICATION

LOWER CASE LETTER BESIDE FIXTURE DENOTES SWITCH CONTROL (WHERE APPLICABLE)

UPPER CASE LETTER BESIDE EACH FIXTURE DENOTES FIXTURE TYPE.

SWITCHGEAR

- MAGNETIC MOTOR STARTER (FURNISHED BY DIVISION 23, UNLESS NOTED OTHERWISE)
- ELECTRICAL PANELBOARD, FLUSH MOUNTED
- ELECTRICAL PANELBOARD, SURFACE MOUNTED
- EXISTING ELECTRICAL PANELBOARD, FLUSH MOUNTED
- EXISTING ELECTRICAL PANELBOARD, SURFACE MOUNTED
- SAFETY SWITCH; 30A CURRENT RATING UNLESS NOTED OTHERWISE. +4'-0" TO HANDLE
- 30 F20 FUSIBLE SAFETY SWITCH; CURRENT RATING AND FUSE RATING NOTED. +4'-0" TO HANDLE
- CB CIRCUIT BREAKER IN WALL MOUNTED ENCLOSURE
- T ELECTRICAL TRANSFORMER, FLOOR MOUNTED UNLESS INDICATED OTHERWISE

SWITCHES (MOUNTED AT 46", UNLESS INDICATED OTHERWISE) (LOWER CASE LETTER INDICATES DEVICES CONTROLLED)

- S_a SWITCH, SINGLE POLE, 20A
- S_2 SWITCH, DOUBLE POLE, 20A SWITCH
- S_3 3-WAY, 20A SWITCH
- S_4 4-WAY, 20A SWITCH
- S_K KEY OPERATED
- S_P SINGLE POLE SWITCH, WITH PILOT LIGHT
- S_M SINGLE POLE MANUAL MOTOR STARTING SWITCH, WITH THERMAL OVERLOAD ELEMENT AND PROVISIONS FOR LOCKING OPEN
- S_D SWITCH, DIMMING (COORDINATE WITH FIXTURE MANUFACTURER)
- S_X SWITCH, MULLION SWITCH
- S_{LV} LOW VOLTAGE WITH MOMENTARY CONTACTS SWITCH
- S_O OCCUPANCY SENSOR, WALL MOUNTED, DUAL TECHNOLOGY
- OS OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY
- PC PHOTOCELL
- +6' AFF MULTIPLE DEVICES LOCATED SIDE BY SIDE (OR ABOVE AND BELOW, IF DIFFERENT ELEVATIONS ARE SHOWN) AT THE LOCATION INDICATED)

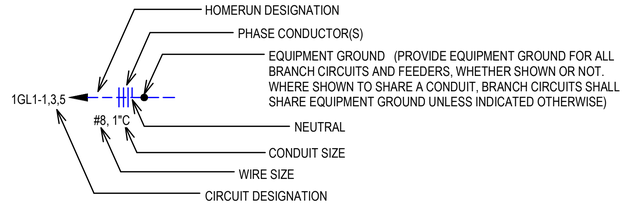
ELECTRICAL SYMBOLS

WALL MOUNTED VISUAL DEVICES TO BE LOCATED SUCH THAT THE ENTIRE LENS OF THE STROBE IS BETWEEN 80" AND 96" AFF. ALL WALL MOUNTED NOTIFICATION DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT AFF TO ACHIEVE A UNIFORM APPEARANCE OR AS DIRECTED BY THE A/E.

MISCELLANEOUS

- J JUNCTION BOX, WALL MOUNT AS INDICATED
- J JUNCTION BOX, CEILING MOUNT AS INDICATED
- C CLOCK OUTLET, WALL MOUNTED 7'-6" AFF
- M MOTOR
- 10' BARE #6 COILED & EXOTHERMICALLY WELDED TO COLUMN
- TV CABLE TELEVISION OUTLET BOX MOUNTED 18" AFF WITH CONDUIT STUBBED ABOVE CEILING. PROVIDE PULL CORD.
- CONDUIT RUN, EXPOSED
- CONDUIT RUN, CONCEALED
- FLEXIBLE CONDUIT

CIRCUIT INFORMATION



- CIRCUIT DESIGNATION INDICATES PANELBOARD AND CIRCUIT(S) TO WHICH HOMERUN IS CONNECTED.
- WIRE SIZE SHALL BE NO. 12, UNLESS INDICATED OTHERWISE.
- CONDUIT SIZE SHALL BE MINIMUM ALLOWED BY SPECIFICATIONS FOR NO. 12 SIZE WIRE, 3/4" FOR NO. 10, UNLESS INDICATED OTHERWISE.
- CIRCUIT INFORMATION PROVIDED AT THE HOMERUN SYMBOL SHALL APPLY THE ENTIRE LENGTH OF THE CIRCUIT (FROM PANELBOARD TO LAST LOAD).
- WHEN NO PHASE CONDUCTOR OR NEUTRAL IS INDICATED AT THE HOMERUN SYMBOL, PROVIDE ONE PHASE CONDUCTOR AND ONE NEUTRAL, BOTH NO. 12.
- SWITCHING CONDUCTORS, CONDUCTORS FOR NIGHT LIGHT CIRCUITS (UNSWITCHED), ETC. ARE NOT SHOWN, BUT SHALL BE PROVIDED AS NECESSARY.
- WIRE SIZE INDICATED ON THESE DOCUMENTS AS INDICATED BY "NO." OR "#" HAS THE SAME MEANING AS "AWG" (N.E.C. NOMENCLATURE). (I.E."NO. 12" OR "# 12" MEANS "12AWG" IN N.E.C. NOMENCLATURE.)

SECURITY

- M MAGNETIC ALARM SWITCH
- D DURESS ALARM SWITCH
- MD MOTION DETECTOR
- CD CAPACITIVE DETECTOR
- CCTV CAMERA LOCATION, CEILING MOUNTED UNLESS INDICATED OTHERWISE
- KS KEYPAD ACCESS ALARM OVERRIDE CONTROL
- ELECTRIC PUSH-BUTTON
- CARD READER
- ES ELECTRIC STRIKE
- REX REQUEST TO EXIT PUSH BUTTON

ELECTRICAL SYMBOLS

ABBREVIATIONS:

AFF = ABOVE FINISHED FLOOR
AFL = ABOVE FINISHED LANDING
GFI = GROUND FAULT INTERRUPTER
IG = ISOLATED GROUND
UIO = UNLESS INDICATED OTHERWISE
WP = WEATHERPROOF CONSTRUCTION
OF/OI = OWNER FURNISHED / OWNER INSTALLED
CF/CI = CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
TYP = TYPICAL
NIC = NOT IN CONTRACT

GENERAL SYMBOLS NOTES:

1. ALL SYMBOLS MAY NOT BE USED.
2. MOUNTING HEIGHTS ARE ABOVE FINISHED FLOOR OR GRADE TO THE CENTER LINE OF THE OUTLET, DEVICE, ETC. UNLESS INDICATED OTHERWISE.
3. LARGE AMPACITY CIRCUIT DESIGNATION EXAMPLE: 4 SETS OF 3#500, #250, #1/0G, 4"C MEANS IN EACH OF FOUR 4" CONDUITS INSTALL THREE 500 kCM CONDUCTORS, ONE 250 kCM NEUTRAL AND ONE #1/0 GROUND.
4. FOR CONCRETE SLAB PENETRATIONS WITH PVC, SEE DETAIL x, SHEET E-50x.

SINGLE LINE

- CIRCUIT BREAKER, TRIP RATING AS INDICATED, 3 POLE OR AS INDICATED
- 60A DISCONNECT SWITCH OR LOAD INTERRUPTER SWITCH, CURRENT RATING AS INDICATED, 3 POLE OR AS INDICATED
- GFI SWITCH WITH GROUND FAULT INTERRUPTER
- F30 FRS FUSE, CURRENT RATING AND TYPE WHEN INDICATED
- TRANSFORMER, DESCRIPTION AS NOTED OR PER SCHEDULE
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- SS PHASE SELECTOR SWITCH
- A AMMETER
- V VOLTMETER
- WH WATT-HOUR METER
- SPD SURGE PROTECTIVE DEVICE
- AUTOMATIC TRANSFER SWITCH
- G GENERATOR

COLOR LEGEND:

- EXISTING TO REMAIN
- DEMOLISH
- NEW CONSTRUCTION

LINESTYLE LEGEND:

- DEMOLISH
- EXISTING TO REMAIN
- NEW

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Project

AEROJET BUILDING 2SH8
COLD BOX CONVERSION
EAST CAMDEN, ARKANSAS

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STATE OF ARKANSAS
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No. 22761
ALBERT OSENCHE
10-09-2024

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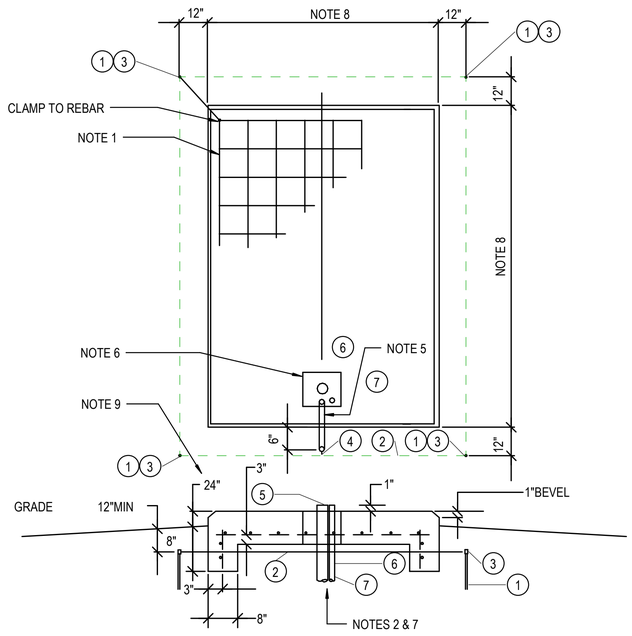
ELECTRICAL LEGEND

Sheet Number

E-001



SECTIONAL VIEW

1 GENERATOR PAD

N.T.S.

NOTES:

1. #4 REINFORCING BARS, 12" CENTER TO CENTER BOTH WAYS.

2. WHEN INTALLING CONDUIT, DISTURB GROUND IN FOUNDATION AREA AS LITTLE AS POSSIBLE.

3. TOP OF FOUNDATION TO BE SMOOTH AND LEVEL. FINAL GRADE SHALL SLOPE AWAY FROM PAD.

4. CONCRETE SHALL BE 3500 PSI AT 28 DAYS.

5. CONTRACT OR SHALL FURNISH 1" CONDUIT UNDER PAD FOR GROUND WIRE.

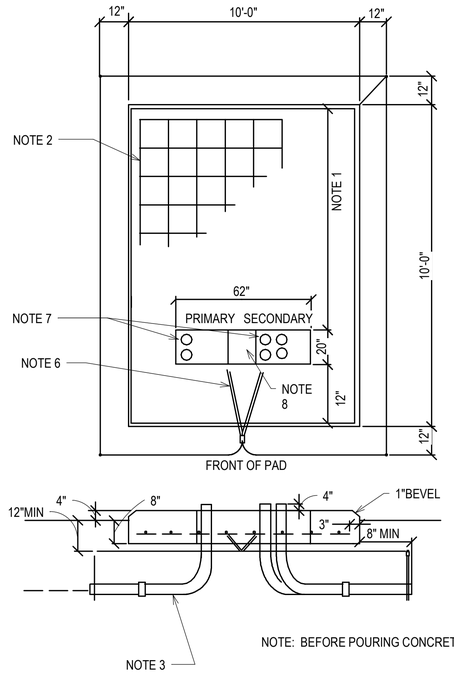
6. OPENING SHALL BE PROVIDED FOR CONDUIT AS SHOWN. CONDUIT SHALL NOT BE CONCRETED IN. CONTRACTOR SHALL VERIFY DIMENSIONS OF OPENINGS AND REQUIRED LOCATIONS.

7. STUB OUT 2'-0" BEYOND PAD.

8. PAD TO BE 4'-0" GREATER IN WIDTH AND LENGTH THAN OUTSIDE DIMENSIONS OF GENERATOR HOUSING. VERIFY DIMENSIONS OF GENERATOR HOUSING WITH EQUIPMENT MANUFACTURER.

9. PAD TO BE RAISED TO PREVENT FLOODING IN CASE OF PUMP FAILURE. DIMENSION SHOULD BE MEASURED ABOVE TOP OF RIM OF DRAIN BASIN.

ITEM	DESCRIPTION	QUANTITY
1	ROD, GROUND,3/4" X 10'-0"	4
2	CONDUCTOR, COPPER #1/0 BARE	
3	CLAMP GROUND ROD	4
4	CONNECTOR, COMPRESSION #1/0 COPPER	1
5	CONDUIT BUSHING	7
6	CONDUIT, 2" RGS	1
7	CONDUIT, 3/4" RGS	1



NOTES:
1. WHERE POSSIBLE DO NOT PLACE CONDUIT UNDER THIS SECTION OF FOUNDATION.

2. REINFORCING - #4 BARS 12" C.C. BOTH WAYS.

3. WHEN INSTALLING CONDUIT DISTURB GROUND IN FOUNDATION AREA AS LITTLE AS POSSIBLE. EXTEND CONDUIT 1" ABOVE FOUNDATION.

4. TOP OF FOUNDATION TO BE SMOOTH AND LEVEL. FINAL GRADE SHALL SLOPE AWAY FORM PAD.

5. CONCRETE SHALL BE 3500 PSI AT 28 DAYS AND 1:2:4 MIXTURE WITH 6 GAL. MAX WATER CONTENT PER SACK OF CEMENT.

6. CONTRACTOR TO FURNISH 1" CONDUIT UNDER PAD FOR GROUND WIRE.

7. LOCATE CONDUITS UNDER PRIMARY & SECONDARY BUSHINGS.

8. PRIMARY AND SECONDARY CONDUITS AT LEAST 18" APART.

9. TRANSFORMER LOCATION:
* TRANSFORMER PAD REQUIRES A MIN. 3'-0" CLEARANCE AROUND EACH SIDE AND BACK OF PAD FOR NON-FLAMMABLE (BRICK) BUILDING AND 10' FOR FLAMMABLE MATERIALS (WOOD).
* A 15'-0" CLEARANCE IS REQUIRED ON FRONT SIDE OF PAD.
* THE TRANSFORMER SHALL BE INSTALLED SO THAT THE FRONT OF THE UNIT DOES NOT FACE THE BUILDING.
* THE TRANSFORMER MUST BE INSTALLED 10' AWAY FROM ANY DOORS AND WINDOWS.
* THERE MUST BE A 20' MIN. DIMENSION TO FIRE HYDRANT/ FIRE ESCAPES / FUEL STORAGE TANKS.

NOTE: BEFORE POURING CONCRETE, AN ENTERGY REP MUST INSPECT PAD FRAMING

2 DT161 - THREE PHASE TRANSFORMER PAD FOUNDATION 150KVA - 2500KVA

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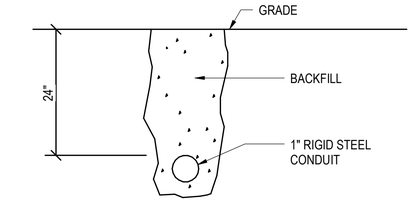
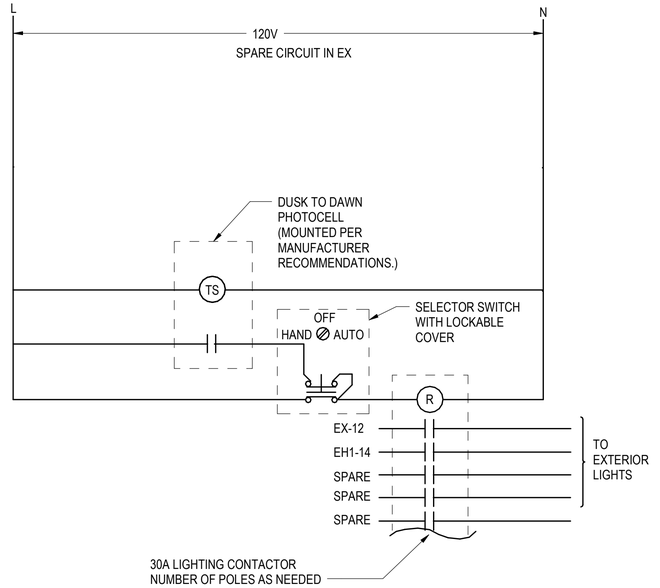


3 TYPICAL UNDERGROUND RACEWAY

N.T.S.



4 TIME SWITCH SCHEMATIC DIAGRAM

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CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

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ARKANSAS-ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OGECHE

10-09-2024

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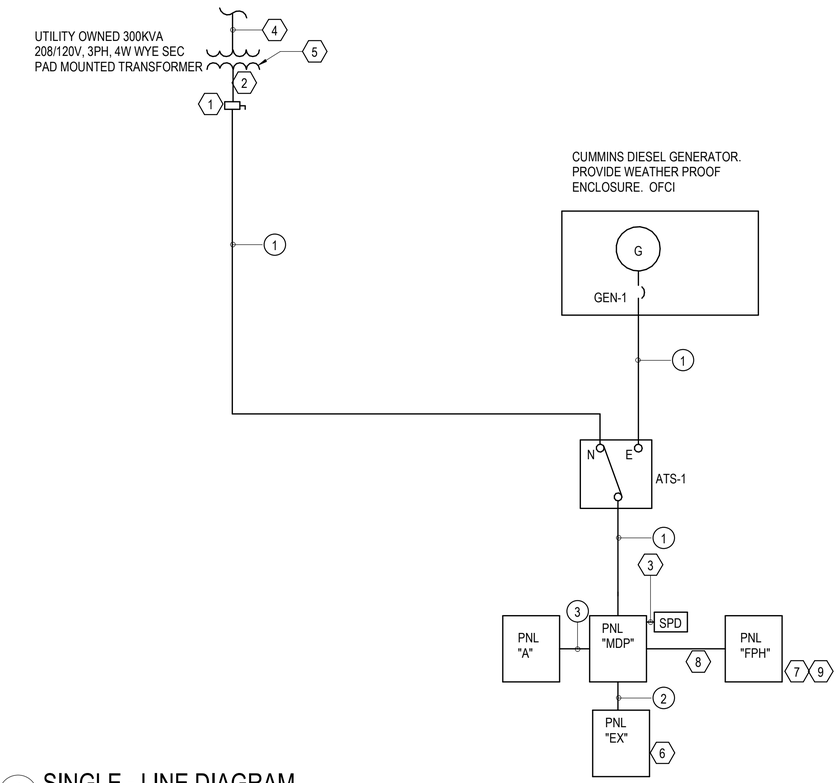
Sheet Title

ELECTRICAL DETAILS

Sheet Number

E-501



1 SINGLE - LINE DIAGRAM

N.T.S.

GENERAL NOTES:

A. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL HAVE A NEMA 3R ENCLOSURE.

B. SPD'S BREAKER AND CABLE SIZES SHALL BE PER MANUFACTURER RECOMMENDATIONS.

C. PROVIDE CONCRETE PADS FOR ALL GROUND MOUNTED ELECTRICAL EQUIPMENT.

D. PROVIDE ARC FLASH LABELS ON ALL PANELBOARDS, ALL SAFETY SWITCHES AND TRANSFORMERS.

KEYED NOTES:

1. PROVIDE 480V,1200AMP, 3PHASE, NEMA 3R DISCONNECT SWITCH TO DISCONNECT POWER PER UTILITY REQUIREMENTS.
2. PROVIDE THREE SETS OF 4#400 KCMIL IN 3" CONDUIT. PROVIDE A SPARE 3" CONDUIT.
3. SIZE PER MANUFACTURERS RECOMMENDATIONS.
4. ROUTE UNDERGROUND CONDUITS TO UTILITY TIE IN LOCATION.
5. UTILITY OWNED PAD MOUNTED TRANSFORMER, COORDINATE WITH UTILITY ON REQUIREMENTS. PROVIDE PAD PER UTILITY REQUIREMENTS REFER TO E-501 DETAIL 2 FOR REQUIREMENTS.
6. PANEL EX IS EXISTING TO REMAIN. THIS PANEL WAS NOT LABELED AND WAS REFERRED TO AS "EX" FOR CLARIFICATION PURPOSES. PROVIDE NEW NAMEPLATE WITH NAME "EX", VOLTAGE, SOURCE AND PROVIDE NEW TYPEWRITTEN PANELBOARD SCHEDULE.
7. PANELBOARD FPH SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ELECTRICAL ENGINEER AS PART OF THE FIRE PUMP HOUSE DELEGATED DESIGN. PANEL SHALL HAVE COPPER BUSSES INCLUDING NEUTRAL AND GROUND, BE NEMA 3R RATED IF LOCATED OUTDOORS OR IN A DAMP OR WET LOCATION. LOAD CENTER TYPE PANELBOARD SHALL NOT BE ACCEPTABLE. PANEL SHALL HAVE AIC RATING THAT EXCEEDS AVAILABLE FAULT CURRENT AS DETERMINED BY A STUDY COMPLETED BY A REGISTERED PROFESSIONAL ELECTRICAL ENGINEER (STUDY IS ALSO PART OF THE DELEGATED DESIGN). SERIES RATING IS NOT ACCEPTABLE. PANEL SHALL HAVE BRANCH BREAKERS TO FEED ALL LOADS IN/NEAR FIRE PUMP HOUSE BUILDING, INCLUDED BUT NOT LIMITED TO: DIESEL FIRE PUMP ACCESSORIES (BLOCK HEATER, BATTERY CHARGER, ETC), CONTROLS, JOCKEY PUMP, UNIT HEATER, LIGHTING FIXTURES, MAINTENANCE RECEPTACLES, AND A MINIMUM OF THREE SPARE 20 AMP SINGLE POLE BREAKERS. PANEL BUS AND MAIN CIRCUIT BREAKER SIZE SHALL BE BASED ON FULL LOAD OF ALL CONNECTED DEVICES PLUS 25% SPARE CAPACITY THEN ROUNDED UP TO THE NEXT STANDARD SIZE. EXACT LOCATION OF PANELBOARD FPH IS TO BE DETERMINED BY THE DELEGATED DESIGN REGISTERED PROFESSIONAL ELECTRICAL ENGINEER CONSIDERING ALL NEC REQUIREMENTS. IF PANELBOARD IS LOCATED OUTDOORS, IN ADDITION TO BEING NEMA 3R, PROVIDE LOCKABLE COVER. PANELBOARD SHALL HAVE A NAMEPLATE WITH PANELBOARD NAME, VOLTAGE, SOURCE. PANELBOARD SHALL HAVE A TYPEWRITTEN PANELBOARD SCHEDULE. SEE CIVIL FOR APPROXIMATE LOCATION OF FIRE PUMP HOUSE.
8. FEEDER SIZE (CONDUCTORS AND CONDUIT) SHALL BE DESIGNED BY A REGISTRED PROFESSIONAL ELECTRICAL ENGINEER AS PART OF THE FIRE PUMP HOUSE DELEGATED DESIGN. FEEDER SHALL BE ROUTED UNDERGROUND FROM MDP TO THE PANELBOARD LOCATION AND SHALL CONSIST OF COPPER CONDUCTORS (INCLUDING GROUND) IN CONDUIT. CONDUIT SHALL NOT BE USED AS A GROUND CONDUCTOR. FEEDER SIZE SHALL BE BASED ON MAIN CIRCUIT BREAKER SIZE AND SHALL BE INCREASED IN SIZE AS REQUIRED TO ACHIEVE LESS THAN 2 PERCENT VOLTAGE DROP FROM MDP TO PANELBOARD FPH.
9. DESIGN OF BRANCH CIRCUIT BREAKERS, BRANCH CIRCUITS, AND ELECTRICAL DEVICES, INCLUDING LIGHT FIXTURES, LIGHT FIXTURE CONTROL DEVICE(S), RECEPTACLE(S) FOR MAINTENANCE, DISCONNECTING MEANS FOR MOTORS, CONDUITS, CONDUCTORS, ETC, AND ALL ACCESSORIES ARE REQUIRED AS PART OF THE DELEGATED DESIGN AND SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ELECTRICAL ENGINEER. ALL CIRCUIT BREAKERS SHALL BE SIZED PER NEC, ALL CONDUCTORS SHALL BE COPPER (INCLUDING GROUND) IN CONDUIT. LIGHT FIXTURES SHALL BE LED AND APPROPRIATE FOR THE SPACE. LIGHT FIXTURE CONTROLS SHALL MEET THE ENERGY CODE. RECEPTACLES SHALL BE GFI FOR INTERIOR AND GFI WITH WEATHERPROOF WHILE IN USE COVERS FOR EXTERIOR. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC.

FEEDER SCHEDULE

NUMBER	SETS	PHASE CONDUCTORS (PER SET)	NEUTRAL CONDUCTORS (PER SET)	GROUND CONDUCTORS (PER SET)	CONDUIT SIZE (PER SET)	NOTES
1	3	3#400	1#400	1#2/0	3.5"	
2	1	3#1	1#1	1#8	2"	
3	1	3#4/0	1#4/0	1#4	2.5"	

GENERAL NOTES-
1. ELECTRICAL CONTRACTOR TO COORDINATE THE MAXIMUM NO. OF SETS OF SERVICE ENTRANCE CONDUCTORS WITH UTILITY AND SWITCHBOARD EQUIPMENT PROVIDER.
2. ELECTRICAL CONTRACTOR TO COORDINATE AND PROVIDE APPROPRIATE LUG SETS AS REQUIRED FOR ALL TERMINATIONS SUITABLE TO CONDUCTOR TYPE, WIRE SPACE, AND ALL OTHER REQUIREMENTS.
3. FIELD CONDITIONS OF ACTUAL INSTALLATION MAY REQUIRE ELECTRICAL CONTRACTOR TO ADJUST CONDUCTOR AND CONDUIT SIZES UPWARD PER NEC REQUIREMENTS FOR DERATINGS, VOLTAGE DROP, ETC.
4. ALL RACEWAY SIZES (EMT/GRSC/PVC) AND ARE TO BE BASED ON THE NEC TABLE 4 (CHAPTER 9), 40% FILL COLUMN.

2 FEEDER SCHEDULE

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ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OSBENCHIK
10-09-2024

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Issue Date **10-09-2024**

Sheet Title

ELECTRICAL
SINGLE-LINE DIAGRAM

Sheet Number

E-601

PANEL MDP | MOUNTING SURFACE | LOCATION EXT | MAIN BUS RATING 1200 AMPS
MAIN CB | POLES 3 | FRAME 1200 | TRIP 1000
VOLTAGE 208Y/120 | PHASE 3 | MINIMUM BREAKER INTERRUPTING CAPACITY 35KAIC
ACCESSORIES SN + EQP GND + SPD

DEVICE AMPS TRIP	POLES	TYPE	BRANCH CIRCUIT LOAD	DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT AMPS A	B	C	NO	VOLT AMPS	BRANCH CIRCUIT DESCRIPTION	LOAD	DEVICE TYPE	POLES	AMPS TRIP
150	3		H	CU-1	12735	1	23437			2	10702	CU-03	H		3	150
-	-		H	-	12735	3		23437		4	10702	-	H		-	-
-	-		H	-	12735	5			23437	6	10702	-	H		-	-
150	3		H	CU-2	12735	7	23437			8	10702	CU-04	H		3	150
-	-		H	-	12735	9		23437		10	10702	-	H		-	-
-	-		H	-	12735	11			23437	12	10702	-	H		-	-
200	3		S	PANEL A	18099	13	18099			14		PANEL FPH	S		3	
-	-		S		17099	15		17099		16			S		-	-
-	-		S		16310	17			16310	18			S		-	-
100	3		S	PANEL EX	5419	19	5419			20		SPACE				
-	-		S		4705	21		4705		22		SPACE				
-	-		S		5175	23			5175	24		SPACE				
				SPACE		25				26		SPACE				
				SPACE		27				28		SPACE				
				SPACE		29				30		SPACE				
				SPACE		31				32		SPACE				
				SPACE		33				34		SPACE				
				SPACE		35				36		SPACE				
				SPACE		37				38		SPACE				
				SPACE		39				40		SPACE				
				SPACE		41				42		SPACE				
				TOTAL			70392	68678	68359		207 KVA (CONNECTED)				576 AMPS (CONNECTED)	
											141 KVA (DEMAND)				390 AMPS (DEMAND)	

PANEL EX | MOUNTING SURFACE | LOCATION HALLWAY | MAIN BUS RATING 100 AMPS
MAIN LO | POLES | FRAME | TRIP
VOLTAGE 208Y/120 | PHASE 3 | MINIMUM BREAKER INTERRUPTING CAPACITY 10KA
ACCESSORIES SN + EQP GND

DEVICE AMPS TRIP	POLES	TYPE	BRANCH CIRCUIT LOAD	DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT AMPS A	B	C	NO	VOLT AMPS	BRANCH CIRCUIT DESCRIPTION	LOAD	DEVICE TYPE	POLES	AMPS TRIP
20	1		L	LTS GRID 9.5-11	1017	1	1807			2	790	OVERHEAD DOOR	M		2	15
20	1		L	LTS GRID 7.5-9	1017	3		1807		4	790	-	M			-
20	1		L	LTS GRID 5.5-7.5	1017	5			1377	6	360	RECEPTACLES	R	G	1	20
20	1		L	LTS GRID 4-5.5	1017	7	1557			8	540	RECEPTACLES	R	G	1	20
20	1		L	LTS GRID 2-3	678	9		1038		10	360	RECEPTACLES	R	G	1	20
20	1		L	LTS GRID 1-2	678	11			938	12	260	EXT LIGHTS	L		1	20
20	1		R	EXT RECEPTS	360	13	555			14	195	EXT LIGHTS	L		1	20
20	1		R	EXT RECEPTS	360	15		860		16	500	HVAC CONTROL PANEL	M		1	20
20	1		R	EXT RECEPTS	360	17			1860	18	1500	L630R IT ROOM			2	30
20	1					19	1500			20	1500	-				-
20	1					21		1000		22	1000	IT ROOM RECEPT			1	20
20	1					23			1000	24	1000	IT ROOM RECEPT			1	20
20	1					25				26					1	20
20	1					27				28					1	20
20	1					29				30					1	20
20	1					31				32					1	20
20	1					33				34					1	20
20	1					35				36					1	20
20	1					37				38					1	20
20	1					39				40					1	20
20	1					41				42					1	20
				TOTAL			5419	4705	5175		15 KVA (CONNECTED)				42 AMPS (CONNECTED)	
											10 KVA (DEMAND)				29 AMPS (DEMAND)	

PANEL A | MOUNTING SURFACE | LOCATION HALLWAY | MAIN BUS RATING 225 AMPS
MAIN LO | POLES | FRAME | TRIP
VOLTAGE 208Y/120 | PHASE 3 | MINIMUM BREAKER INTERRUPTING CAPACITY 10KA
ACCESSORIES SN + EQP GND

DEVICE AMPS TRIP	POLES	TYPE	BRANCH CIRCUIT LOAD	DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT AMPS A	B	C	NO	VOLT AMPS	BRANCH CIRCUIT DESCRIPTION	LOAD	DEVICE TYPE	POLES	AMPS TRIP
20	2		H	UC1.1	656	1	2008			2	1352	MSFC-1	H		2	20
-	-		H		656	3		2008		4	1352		H		-	-
20	2		H	UC2.3	656	5			1656	6	1000	EF-1	H		1	40
-	-		H		656	7	1656			8	1000	UH-1	H		1	20
20	2		H	UC1.3	656	9		1093		10	437	UC3.1	H		2	20
-	-		H		656	11			1093	12	437		H		-	-
20	2		H	UC2.2	656	13	1093			14	437	UC4.1	H		2	20
-	-		H		656	15		1093		16	437		H		-	-
20	2		H	UC1.2	656	17			3609	18	2953	UC3.1 DEFROST HTR	H		3	30
-	-		H		656	19	3609			20	2953		H		-	-
20	2		H	UC2.1	656	21		3609		22	2953		H		-	-
-	-		H	-	656	23			1093	24	437	UC3.2	H		2	20
3	30		H	UC4.1 DEFROST HTR	2953	25	3390			26	437		H		-	-
-	-		H	-	2953	27		5906		28	2953	UC3.2 DEFROST HTR	H		3	30
-	-		H	-	2953	29			5906	30	2953		H		-	-
3	30		H	UC4.2 DEFROST HTR	2953	31	5906			32	2953		H		-	-
-	-		H	-	2953	33		2953		34		SPARE	H		1	20
-	-		H	-	2953	35			2953	36		SPARE	H		1	20
2	20		H	UC 4.2	437	37	437			38		SPARE	H		1	20
-	-		H		437	39		437		40		SPARE	H		1	20
1	20			SPARE		41				42		SPARE	H		1	20
				TOTAL			18099	17099	16310		52 KVA (CONNECTED)				143 AMPS (CONNECTED)	
											52 KVA (DEMAND)				143 AMPS (DEMAND)	

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	VOLTAGE	SOURCE	TOTAL FIXTURE LUMENS	MAXIMUM FIXTURE WATTAGE	DESCRIPTION	KEYED NOTES
A	COOPER LIGHTING	4-ILED-16-W-FL-UV-L840	UNV	LED	9000	113	4 STRIP LIGHT	
AE	COOPER LIGHTING	4-ILED-16-W-FL-UV-L840-EL14W	UNV	LED	9000	113	5 STRIP LIGHT	1
X	COOPER LIGHTING	EDG-1-R-EL	120/277	LED	N/A	3.1	EXIT LIGHT, ARROWS AND FACES PER PLANS	1
W1	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK	UNV	LED	4000	59	EXTERIOR WALL PACK	
S1	COOPER LIGHTING	4VT3-LD5-5-W-UNV-L835-CD1	UNV	LED	5000	44	STRIP LIGHT	
S1E	COOPER LIGHTING	4VT3-LD5-5-W-UNV-EL10W-L835-CD1	UNV	LED	5000	44	STRIP LIGHT	1

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

1. PROVIDE FLANGE KIT AS REQUIRED

LIGHTING FIXTURE SCHEDULE KEYED NOTES:

1. BATTERY BACK UP. ARROWS AND FACES PER PLANS
2. CHAIN MOUNT AT 9'-0" AFF UNLESS NOTED OTHERWISE

KEYED NOTES:

(1) CIRCUIT BREAKER SIZE IS PART OF THE FIRE PUMP HOUSE DELEGATED DESIGN. SIZE SHALL BE DETERMINED BY REGISTERED PROFESSIONAL ELECTRICAL ENGINEER BASED ON FIRE PUMP, ACCESSORIES, AND JOCKEY PUMP. SEE E-601, FX101, PROJECT MANUAL/SPECIFICATIONS, ETC FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

PANEL SCHEDULE LEGEND

MAIN
CB = CIRCUIT BREAKER
LO = LUGS ONLY

BRANCH CIRCUIT BREAKER TYPE
A = ARC FAULT CIRCUIT INTERRUPTER
G = GROUND FAULT CIRCUIT INTERRUPTER
S = SHUNT TRIP
V = VARIABLE (ADJUSTABLE TRIP)
E = EQUIPMENT GROUND FAULT PROTECTION
L = LOCKOUT DEVICE
O = LOCK ON DEVICE OR BREAKER
R = RED MARKING ON BREAKER

LOAD TYPE
L = LIGHTING
R = RECEPTACLE
H = HVAC
M = MISCELLANEOUS
V = VARIOUS
S = SUBFED

MISCELLANEOUS
SN = SOLID NEUTRAL
EQP GND = EQUIPMENT GROUND BUS
IG = INSULATED GROUND BUS
SPD = SURGE PROTECTIVE DEVICE
AIC = AMPERE INTERRUPTING CAPACITY
KAIC = KILO AMPERE INTERRUPTING CAPACITY

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STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — No. 22761 — ALBERT OSENGHE
10-09-2024

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ELECTRICAL SCHEDULES
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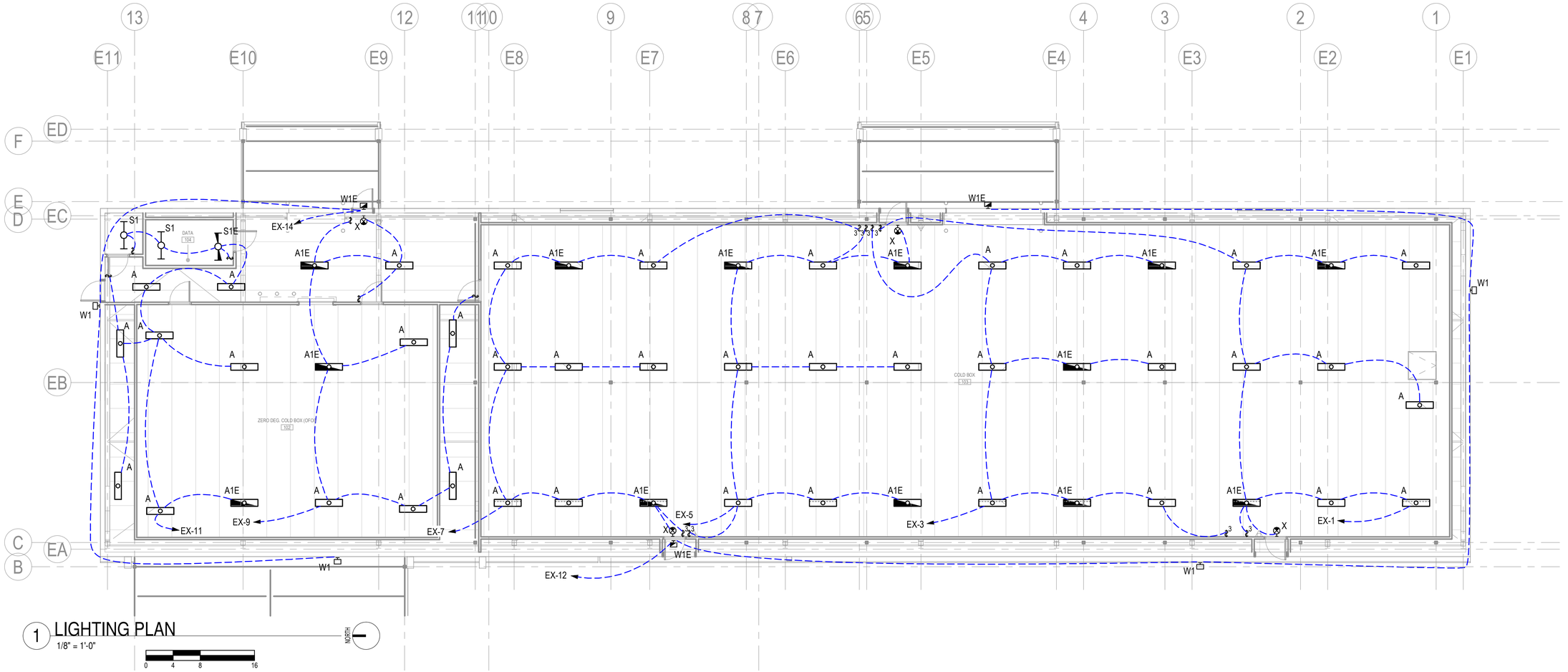
E-602



1 LIGHTING PLAN

1/8" = 1'-0"

NORTH

0 4 8 16

SCALE : 1/8" = 1'-0"

GENERAL NOTES:

A. ALL EXIT LIGHTS AND EMERGENCY LIGHTING UNIT TYPE EL SHALL BE POWERED FROM UNSWITCHED LIGHTING CIRCUIT INDICATED.

B. MOUNT ALL EXIT LIGHTS 1' ABOVE DOOR JAMB.

C. MOUNT TYPE W1 & W1E 8'-0" ABOVE FINISHED GRADE.

D. ALL EXTERIOR LIGHTING SHALL BE POWERED THROUGH A LIGHTING CONTACTOR. REFER TO E-501 DETAIL 4.

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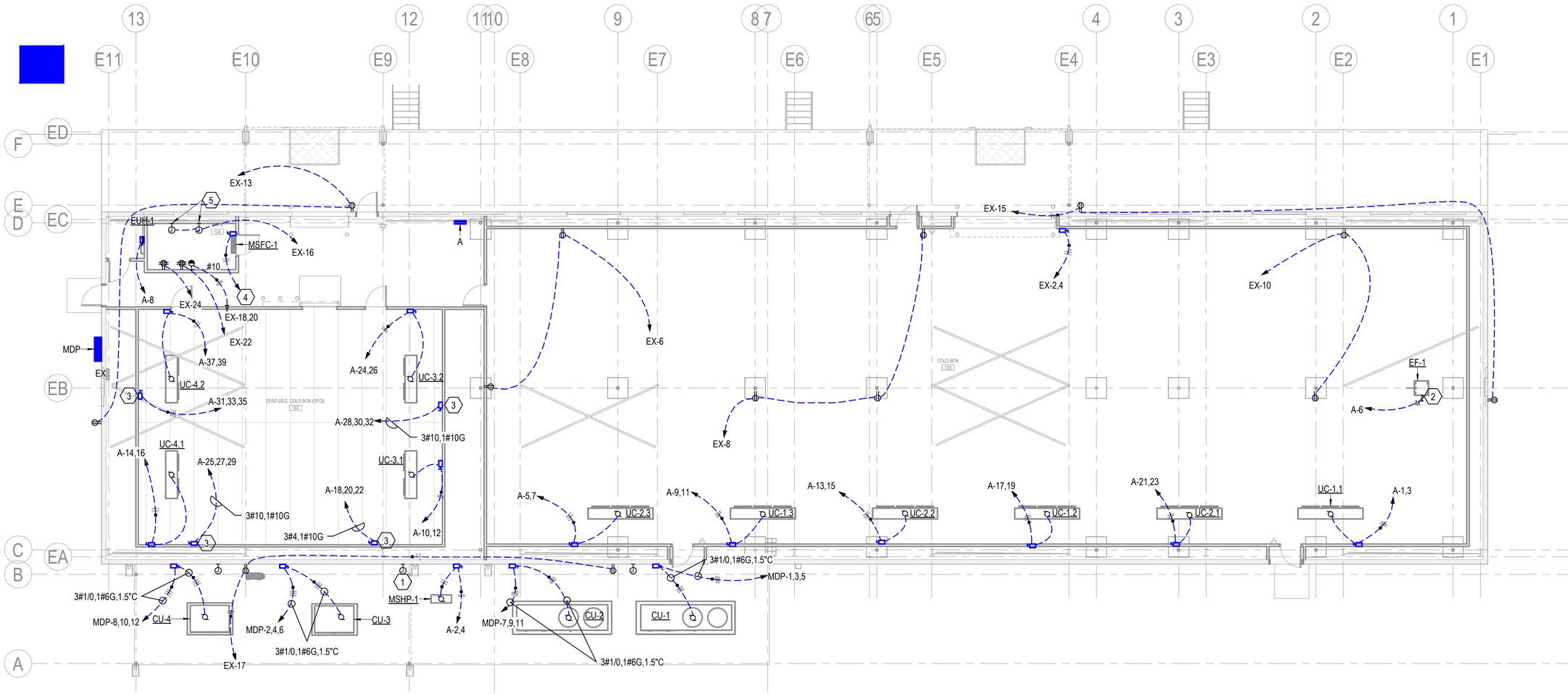
Sheet Title

LIGHTING PLAN

Sheet Number

EL101



1 POWER PLAN

1/8" = 1'-0"

0 4 8 16 NORTH

SCALE : 1/8" = 1'-0"

GENERAL NOTES:

A. COORDINATE EXACT LOCATION OF DISCONNECTS POWERING MECHANICAL EQUIPMENT WITH INSTALLER. MAKE FINAL CONNECTIONS TO EQUIPMENT.

B. CONTRACTOR SHALL WIRE EQUIPMENT PER MANUFACTURER INSTRUCTIONS. ALL WIRING AND CONNECTIONS SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

C. COORDINATE ALL CONDUIT LOCATIONS WITH OTHER DISCIPLINES.

D. ALL EXTERIOR RECEPTACLES SHALL BE GFI TYPE WITH HEAVY DUTY WEATHERPROOF IN USE COVER.

E. POWER INDICATED ON PLANS IS BASED ON BASIS OF DESIGN. IF DIFFERENT EQUIPMENT IS USED CONTRACTOR SHALL PROVIDE POWER PER MANUFACTURER'S RECOMMENDATIONS AT NO EXTRA CHARGE.

F. ALL ELECTRICAL DISCONNECTS SHALL BE NEMA 3R RATED.

KEYED NOTES:

1. JUNCTION BOX FOR HEAT TRACING. COORDINATE EXACT LOCATION WITH INSTALLER. VERIFY POWER REQUIREMENTS AND CIRCUIT PER CODE.
2. MANUAL MOTOR STARTER TO POWER FAN, COORDINATE EXACT LOCATION WITH INSTALLER.
3. 240V,60A,3POLE NEMA 3R NON FUSED DISCONNECT TO POWER DEFROST HEATER.
4. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT. COORDINATE WITH INSTALLER ON EXACT LOCATION.
5. CONTROL PANEL FOR HVAC CONTROL UNIT. COORDINATE EXACT LOCATION WITH INSTALLER.

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Project

AEROJET BUILDING 2SH8
COLD BOX
CONVERSION
EAST CAMDEN,
ARKANSAS

Design Phase

CONSTRUCTION DOCUMENTS

Revisions

No.	Date	Description

Stamp

CERTIFICATE OF AUTHORIZATION
CROMWELL ARCHITECTS/ ENGINEERS
#5
ARKANSAS-ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 22761
ALBERT OSENICHE
10-09-2024

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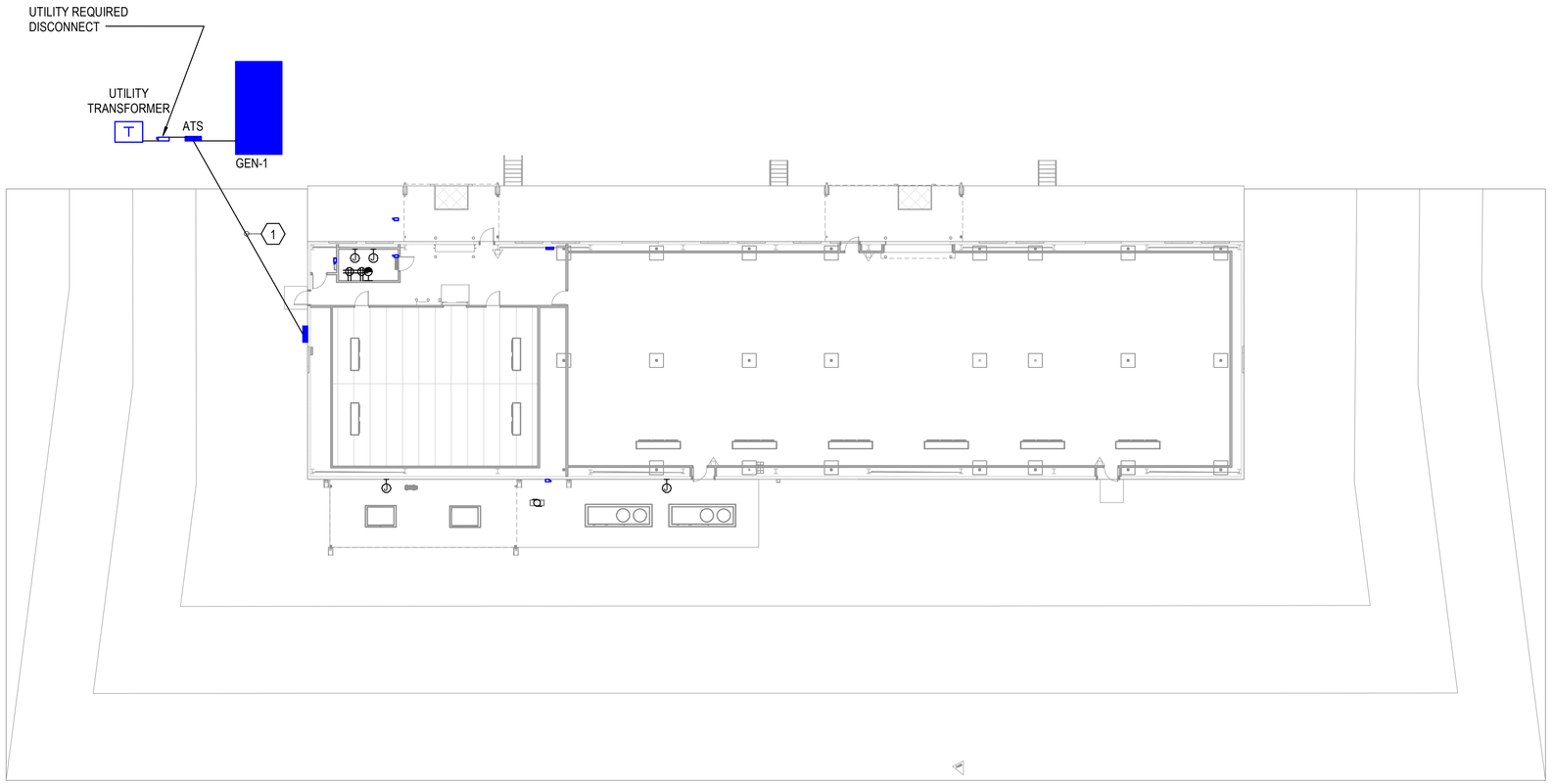
Sheet Title

POWER PLAN

Sheet Number

EP101



1 ELECTRICAL SITE PLAN

1/16" = 1'-0"

0 8 16 32

SCALE : 1/16" = 1'-0"

NORTH

GENERAL NOTES:

A. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE

B. COORDINATE WITH EACH LOCAL UTILITY COMPANY FOR CONNECTION OF NEW LINES AND METERS. PAY COSTS IF ANY.

C. ALL UTILITIES ROUTED UNDERGROUND MAY REQUIRE SAW CUTTING EXISTING PAVEMENTS AND ROAD. PATCH ALL PAVEMENTS AND ROAD TO MATCH EXISTING.

D. REFER TO E-501 DETAIL 1 & 2 FOR GENERATOR AND TRANSFORMER PAD DETAIL.

E. REFER E-501 DETAIL 3 FOR UNDERGROUND CONDUIT.

KEYED NOTES:

1 UNDERGROUND CONDUITS FROM EXTERIOR ATS-1. MINIMUM BURY DEPTH IS 3'-0" BELOW GRADE.

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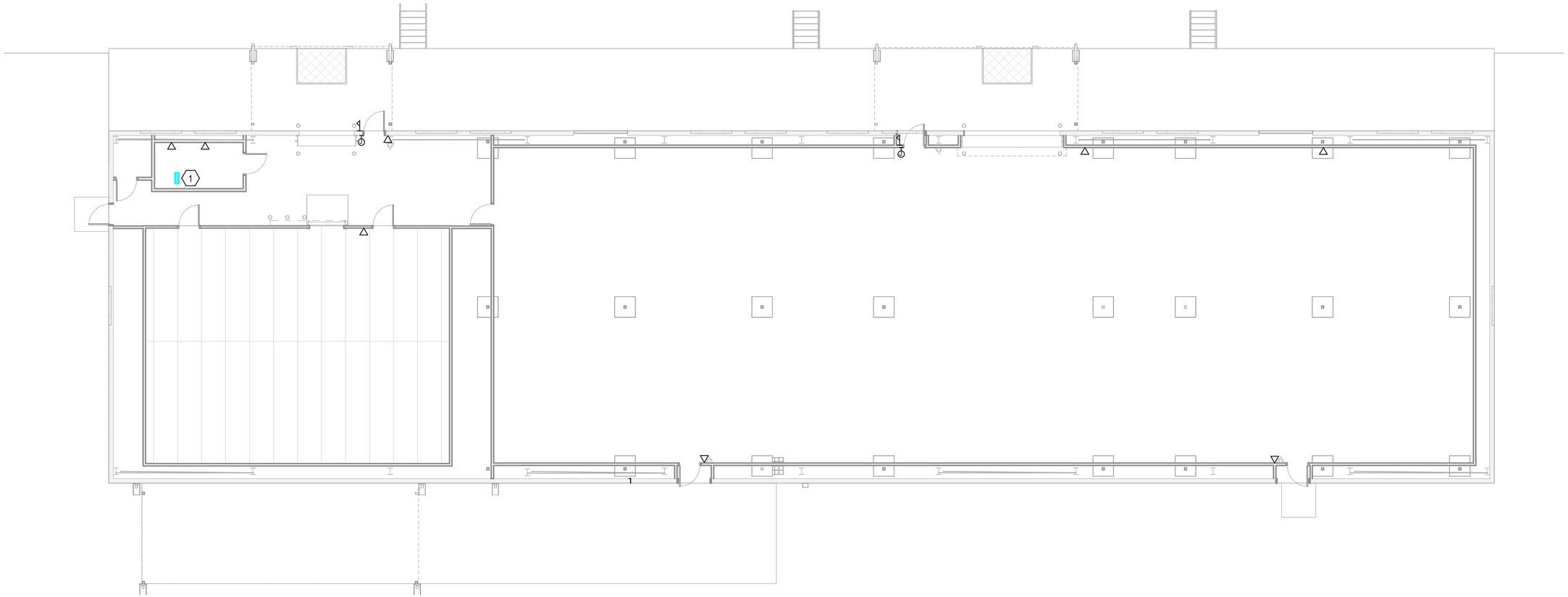
ELECTRICAL SITE PLAN

Sheet Number

ES101



1 SYSTEMS PLAN
1/8" = 1'-0"

NORTH

0 4 8 16

SCALE : 1/8" = 1'-0"

KEYED NOTES:

1 PROVIDE 4 POST RACK PER AEROJET STANDARDS FOR TERMINATING ALL IT TERMINATIONS.

GENERAL NOTES:

A. PROVIDE 2 DATA DROPS FOR EACH DATA OUTLET INDICATED IN THE DRAWINGS.

B. ROUTE ALL DATA AND ACCESS CONTROL CABLES IN CONDUITS BACK TO DATA ROOM.

C. PROVIDE 24 PORT FIBER OPTIC AND COPPER PATCH PANEL IN THE 4 POST PATCH PANEL. TERMINATE ALL COPPER TO THE COPPER PATCH PANEL. ALL INCOMING FIBER SHALL BE TERMINATED IN THE FIBER OPTIC PATCH PANEL. ALL EQUIPMENT SHALL BE PER AEROJET IT STANDARDS.

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SYSTEMS PLAN

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