

AEROJET BUILDING 66B CURE OVEN BUILDING

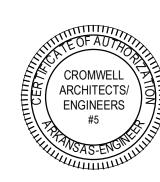
EAST CAMDEN, ARKANSAS



AEROJET BUILDING 66B
CURE OVEN BUILDING
EAST CAMDEN,
ARKANSAS

CONSTRUCTION DOCUMENTS

Revisio	ns ——	
No.	Date	Description





Notes _

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2024-045

07-31-2024

Project Nur

Issue Date

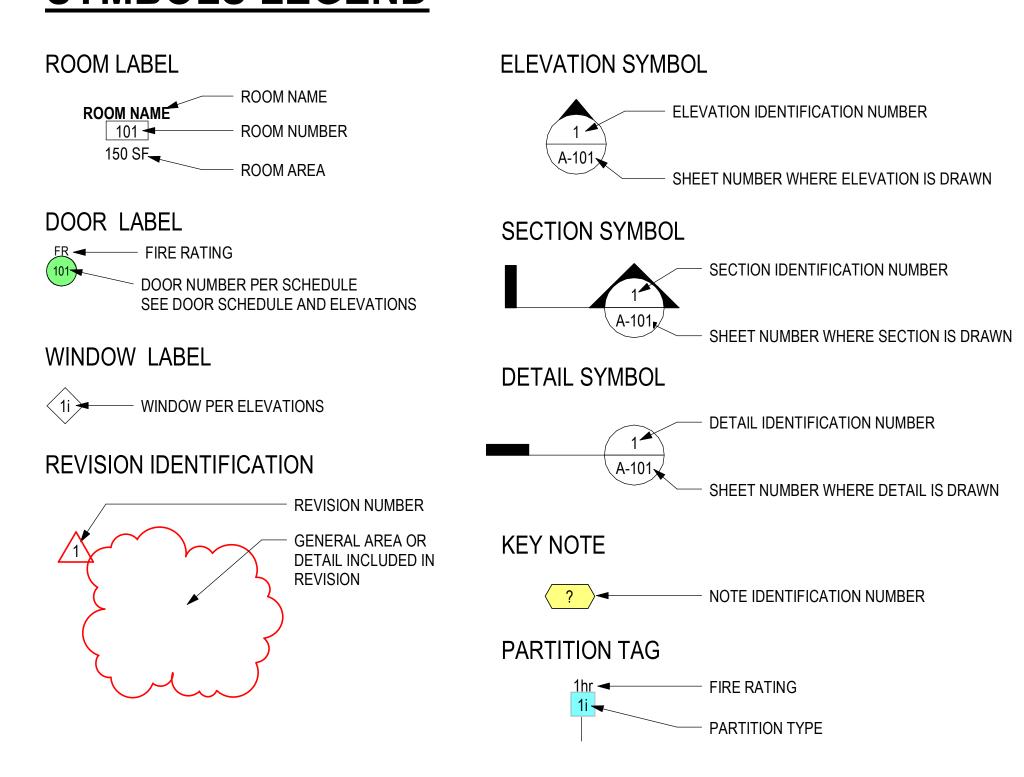
Sheet Title

TITLE SHEET

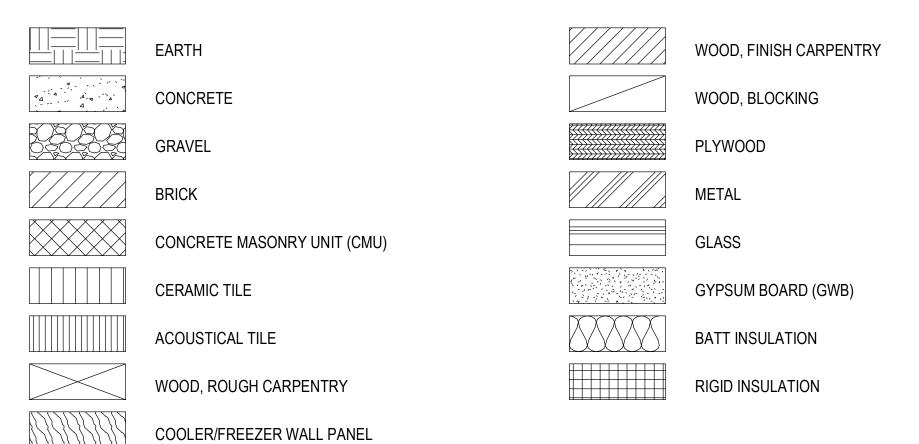
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G-001

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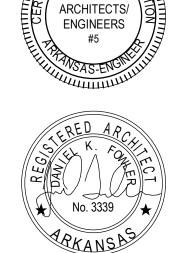
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1300 East 6th Street Little Rock, AR 72202 501.372.2900 cromwell.com

66B EN BUILDING BUILDING CONSTRUCTION **DOCUMENTS** Date Description CROMWELL



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INDEX, SYMBOLS & ABBREV.

2024-045

Sheet Number —

G-002

NOTES

A. GENERAL CONSTRUCTION REQUIREMENTS:

A1. 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.

A2. 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.

A3. 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.

A4. 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.

A5. 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.

A6. 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.

A7. 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.

A8. 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. THE OWNER REQUIRES A MANIFEST OF EVERYTHING LEAVING THE SITE -SUBMIT TO AEROJET ROCKETDYNE PROJECT MANAGER. 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.

A9. 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.

A10. 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.

B. GENERAL SITE VERIFICATION REQUIREMENTS:

B1. 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.

B2. 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.

C. GENERAL FLOOR PLAN NOTES:

REFER TO ARCH PLAN SHEETS (A-101)

C1. ALL DIMENSIONS ARE TO FACE OF GIRT OR GYP. UNLESS NOTED OTHERWISE.

C2. 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 TRANSITION STRIP WHERE FLOORING ABUTS EXPOSED CONCRETE FLOOR.

ARCHITECTURAL ABBREVIATIONS

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



1300 East 6th Street Little Rock, AR 72202 501.372.2900

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CONSTRUCTION **DOCUMENTS**

Design Phase

No.	Date	Description
Stam	np ———	

CROMWELI ARCHITECTS/ **ENGINEERS**



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2024-045

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Sheet Title —

GENERAL NOTES &

DETAILS

Sheet Number

66B

BUIL

BUILI

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CONSTRUCTION

DOCUMENTS

Date Description

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

NOTE:

A VERBAL AGREEMENT HAS BEEN MADE WITH THE ARKANSAS STATE FIRE MARSHAL. CODE EXEMPTIONS WERE MADE FOR THIS FACILITY. OFFICIAL DOCUMENTATION IS EXPECTED TO BE RECEIVED.

THE EXEMPTIONS ARE AS FOLLOWS:

- 1. DEFLAGRATION VENTING IN ACCORDANCE WITH SECTION 414.5.1 IS NOT REQUIRED.
- 2. AUTOMATIC FIRE SUPPRESSION SYSTEMS FOR H OCCUPANCIES IN ACCORDANCE

WITH SECTION 903.2.5 IS NOT REQUIRED.

ALL ABOVE CODE REFERENCES ARE FROM THE 2021 ARKANSAS FIRE PREVENTION CODE VOLUME II.

OCCUPANCY CLASSIFICATION

XSINGLE \square MIXED

☐ SEPARATED ☐ NON SEPARATED

OCCUPANCY CLASSIFICATION(S): H-1 ACCESSORY OCCUPANCIES: N/A

CONSTRUCTION CLASSIFICATION: IIB

HEIGHT AND AREA - ACTUAL

BUILDING HEIGHT	HEIGHT IN FEET 27' - 0"	HEIGHT IN STORIES 1
BUILDING AREA	8,641	.00 SF

HEIGHT AND AREA- ALLOWABLE

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

UNLIMITED AREA \square YES X NO lacktriangleq YES \Box NO QUALIFY FOR FRONTAGE INCREASE?

FRONTAGE INCREASE FACTOR (TABLE 506.3.3): 0.75

ALLOWABLE AREA $A_A = [A_T + (NS X I_F)]$

(506.2)

FACTOR

INCREASE DUE

TO FRONTAGE

12250 7000 + (7000 X 0.75)]

AREA FACTOR FACTOR FOR NS

TABULAR

ALLOWABLE

INTERIOR FINISH REQUIREMENTS

	EXITS	EXIT ACCESS CORRIDORS	OTHER SPACES
WALL & CEILING FINISH	Α	Α	В
FLOOR COVERINGS	II	II	II

TABULAR

ALLOWABLE AREA

(TABLE 803.13)

INCIDENTAL USES

ALLOWABLE

AREA

- ☐ FURNACE ROOM
- X 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: ONE HOUR

(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	7	1006.3.3
EXIT ACCESS TRAVEL DISTANCE	75 ft	75 ft	1017.2
DEAD-END LIMIT	20 ft	0 ft	1020.5
COMMON PATH OF TRAVEL LIMIT	25 ft	25 ft	1006.2.1

FAILURE.

NFPA 101 7.10

0.2" PER PERSON FOR LEVEL COMPONENTS/ 0.3" STAIRS AND RAMPS

1 FT-CANDLE AT THE FLOOR AND 0.2 FT-CANDLE FOR A SINGLE LIGHT

DESIGNATED CORRIDORS, AISLES, AND PASSAGEWAYS. DISCHARGE

INCLUDES DESIGNATED DOORS, WALKWAYS, AND RAMPS LEADING

EXIT ACCESS AND DISCHARGE ONLY. ACCESS INCLUDES

TOTAL OCCUPANT LOAD: 77

EGRESS WIDTH:

MINIMUM CORRIDOR WIDTH: CLEAR OPENING DOOR WIDTH:

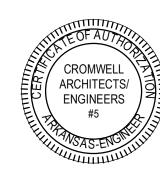
ILLUMINATION OF EGRESS:

EMERGENCY EGRESS LIGHTING:

EXIT MARKING:

TO A PUBLIC WAY. PERFORMANCE PER NFPA 101 7.9. MARKING OF EXITS AND THE MEANS OF EGRESS SHALL BE PER

Stamp





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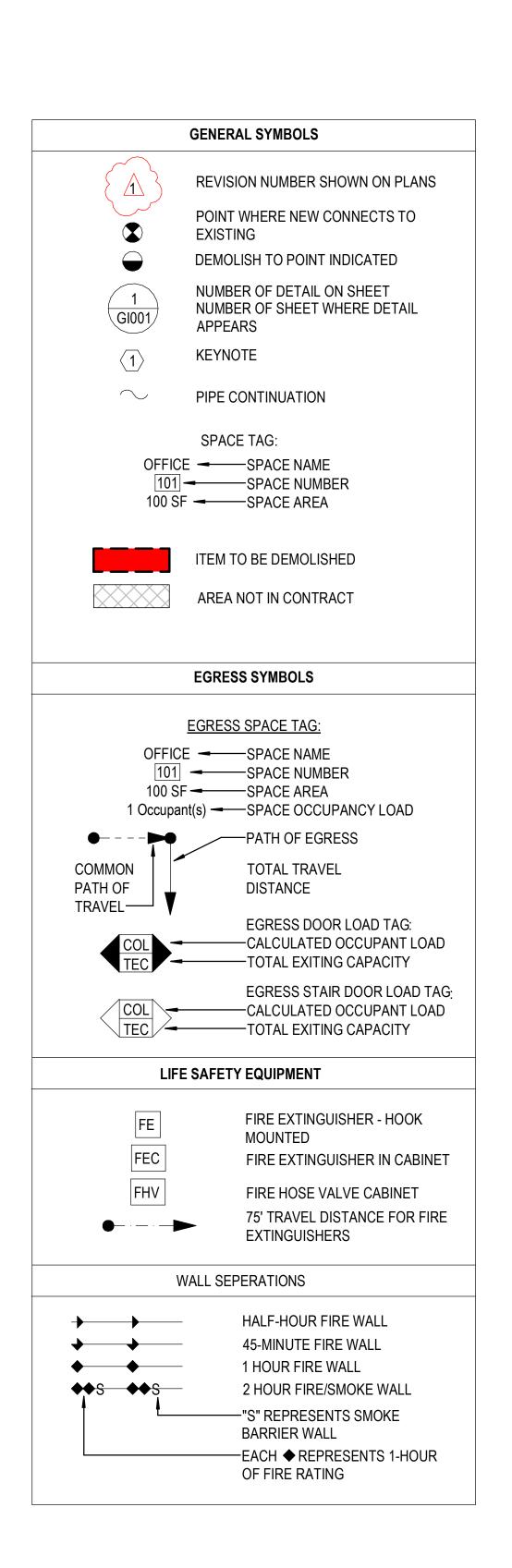
LIFE SAFETY CODE

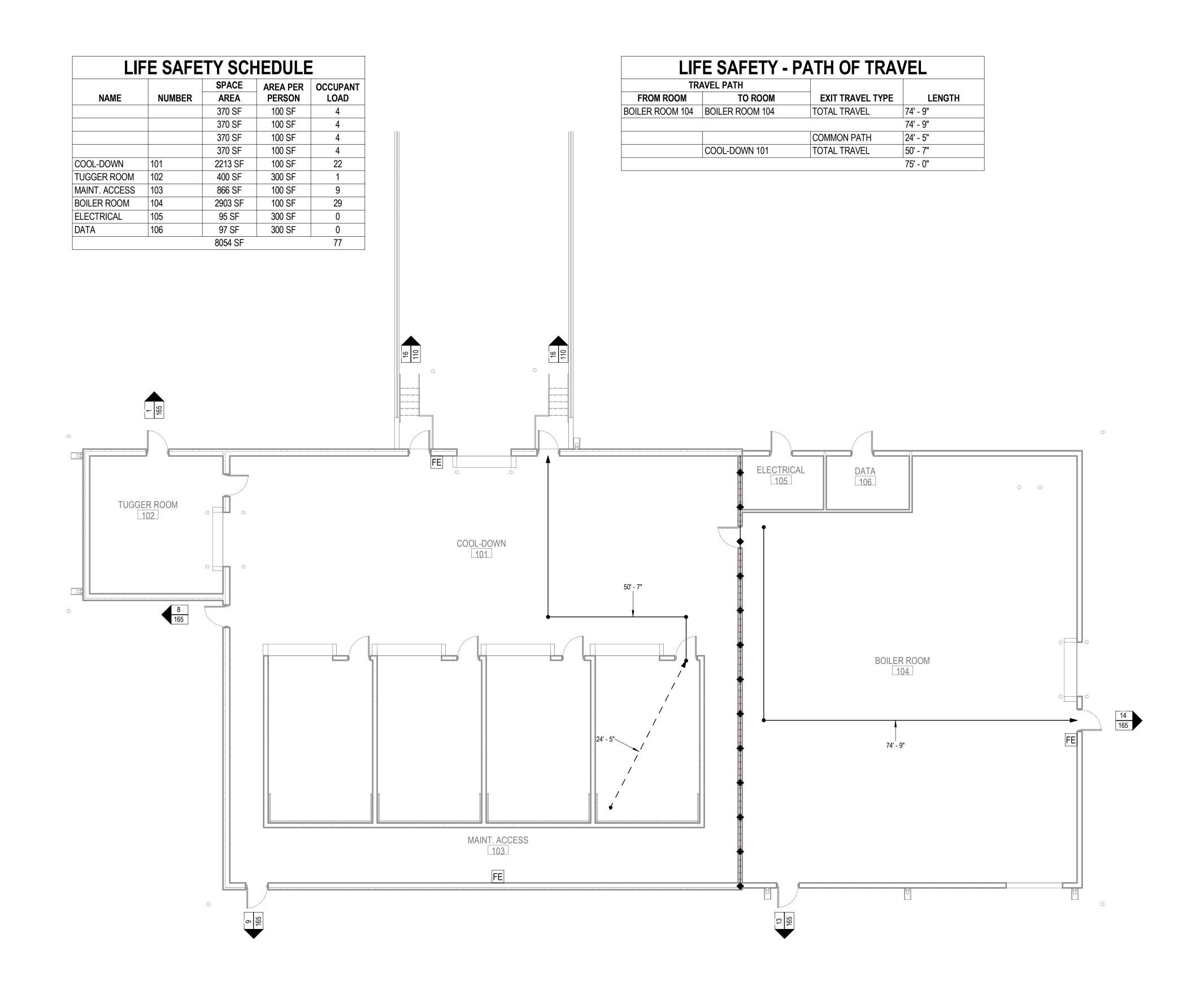
ANALYSIS

2024-045

07-31-2024

Sheet Number -



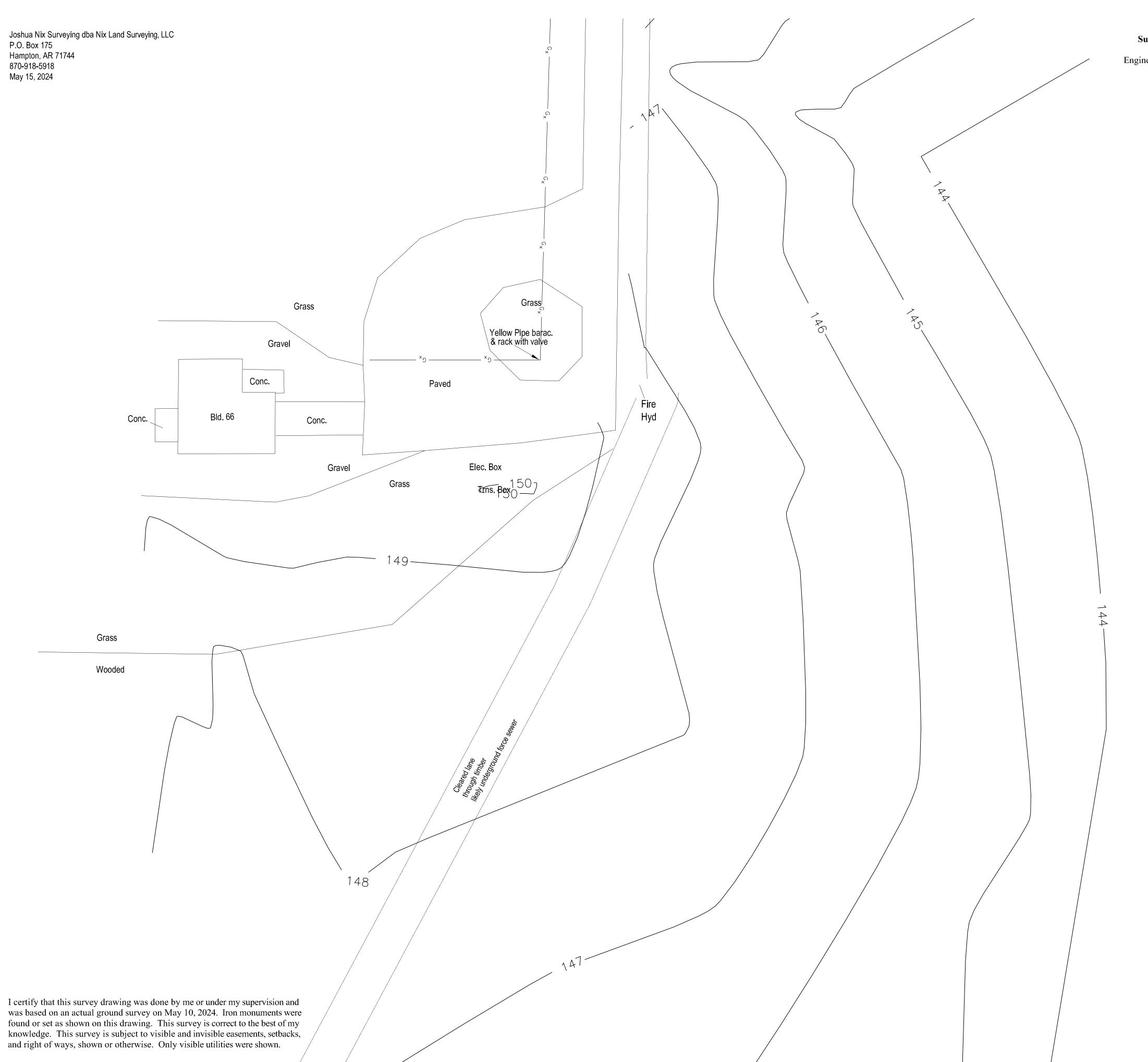






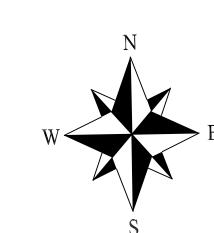
66B BUILDING EN BUILI Z 山 ERO CONSTRUCTION **DOCUMENTS** Date Description Stamp CROMWELL ARCHITECTS/ **ENGINEERS** 1. CROMWELL ARCHITECTS ENGINEERS, INC. **ALL RIGHTS RESERVED** 2. THIS SHEET DESIGNED FOR COLOR PRINTING. CRITICAL INFORMATION MAY BE LOST WITH BLACK AND WHITE PRINTING. Project Number — 2024-045 07-31-2024 Sheet Title — LIFE SAFETY FLOOR PLAN

Sheet Number -



Survey for Cromwell, Aerojet Building 66 Oven Project

Engineering survey of the area of building 66, Aerojet Rocketdyne, East Camden, Arkansas.



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

LEGEND

4' Round well
Found Monument
tile w/lift pump Rim=143.29'
4" pvc freading Rie* = 141.91'
Ground Shots (G)

E -- E Overhead Electric
Ep=Edge of pavement

OHE=Overhead Electric
Bc=Bottom of culvert

W=Water Valve
CC = Concrete

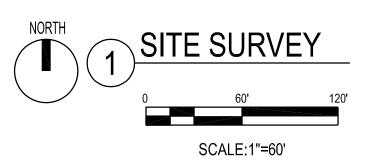
LN=Lane ground shots

SITE SURVEY NOTES:

1. THIS SHEET IS TAKEN FROM A SURVEY PROVIDED BY:

JOSH NIX SURVEYING PO BOX 175 HAMPTON, AR 71744 1-870-918-5918

- 2. THIS SHEET IS A PRESENTATION DRAWING FOR INFORMATION ONLY TO SHOW THE EXISTING CONDITIONS OF THE SITE .
- 3. THE ORIGINAL FULL SURVEY WAS STAMPED AND SEALED BY JOSH NIX (AR, PLS 1628).





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AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN,

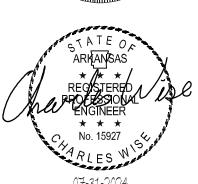
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Sheet Title

Issue Date — 2024-045 07-31-2024

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 THE OWNER A 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. SITE HAS BEEN CLEARED BY THE OWNER. 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. 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.
- 16. 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.
- 17. CONTRACTOR SHALL PAY FOR ALL TRAFFIC CONTROL DEVICES AND PERSONNEL FOR ROAD CLOSURES AND DETOURS.
- 18. **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. MINIMUM CURB RADIUS SHALL BE 2'.
- 5. 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.
- 6. PROVIDE EXPANSION JOINTS IN ALL CASES WHERE CONCRETE SURFACE MEETS VERTICAL STRUCTURES OR WHERE NEW CONCRETE SURFACE ABUTS EXISTING CONCRETE SURFACE.
- 7. 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.
- 8. ALL WORK DONE IN PUBLIC RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING AUTHORITY.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING NEWLY PAVED AREAS THAT SHOW DIFFERENTIAL SETTLEMENT OR RANDOM CRACKING AT ENGINEERSS 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 SODDED OR 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.
- SITE HAS BEEN CLEARED BY THE OWNER. IF ADDITIONAL CLEARING IS NECESSARY, THE CONTRACTOR SHALL INSTALL EROSION CONTROL STRUCTURES AND DEVICES AND TREE PRESERVATION FENCING.
- 3. ALL AREAS WITHIN PAVED AREAS 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. A COPY OF THE SWPPP AND INSPECTION REPORTS MUST BE DISPLAYED AT THE CONSTRUCTION SITE.
- 12. 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.
- 13. DUST SHALL BE CONTROLLED DURING CONSTRUCTION AND CONSTRUCTION AREAS SHALL BE WATERED WHENEVER CONDITIONS WARRANT.
- 14. 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.
- 15. 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.
- 16. 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.
- 17. 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.
- 18. THE CONTRACTOR OR THEIR REPRESENTATIVE SHALL STABILIZE ALL DISTURBED AREAS NOT SUBJECT TO CONSTRUCTION ACTIVITY WITHIN 14 CALENDAR DAYS AFTER ACTIVITY HAS CEASED.
- 19. 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.
- 20. 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.
- 21. 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.
- 22. 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.
- 23. 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.
- 24. 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.
- 25. CONTRACTOR OR THEIR REPRESENTATIVE SHALL MEET ALL OTHER STATE AND FEDERAL CLEAN WATER REQUIREMENTS.



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Project —

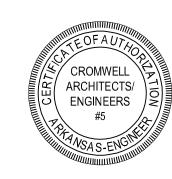
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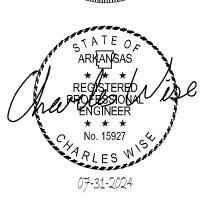
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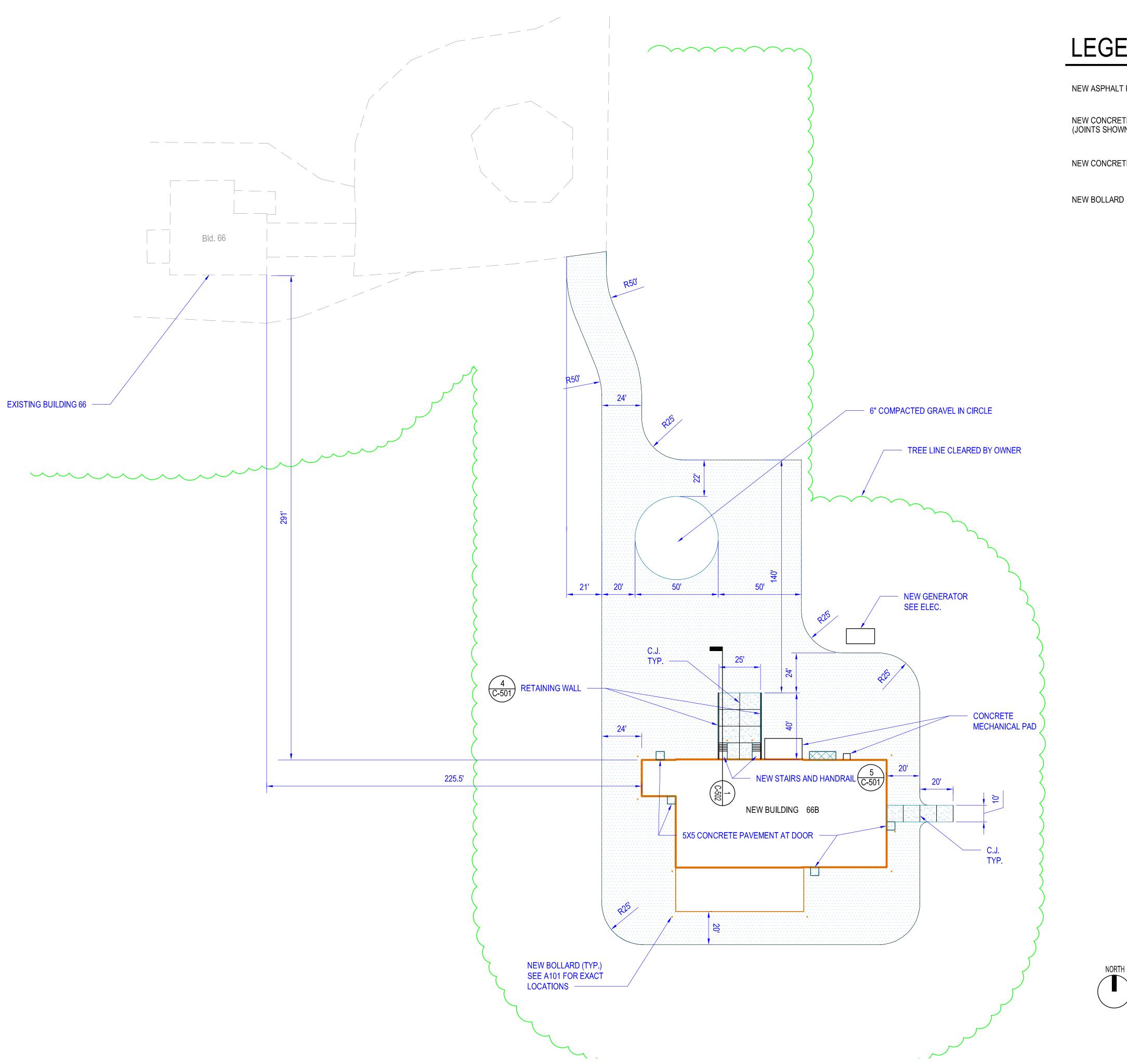
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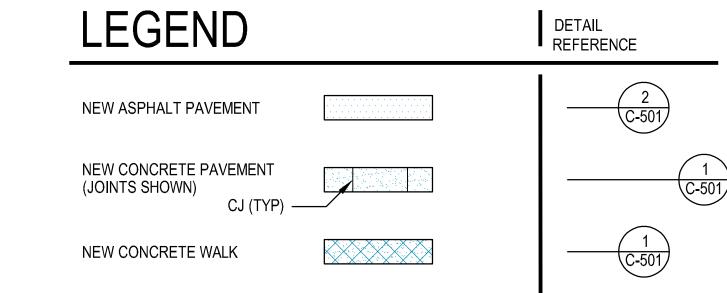
2024-045

07-31-2024

Sheet Number

C-001





SITE LAYOUT PLAN

SCALE:1"= 30'



3 C-501

AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN,

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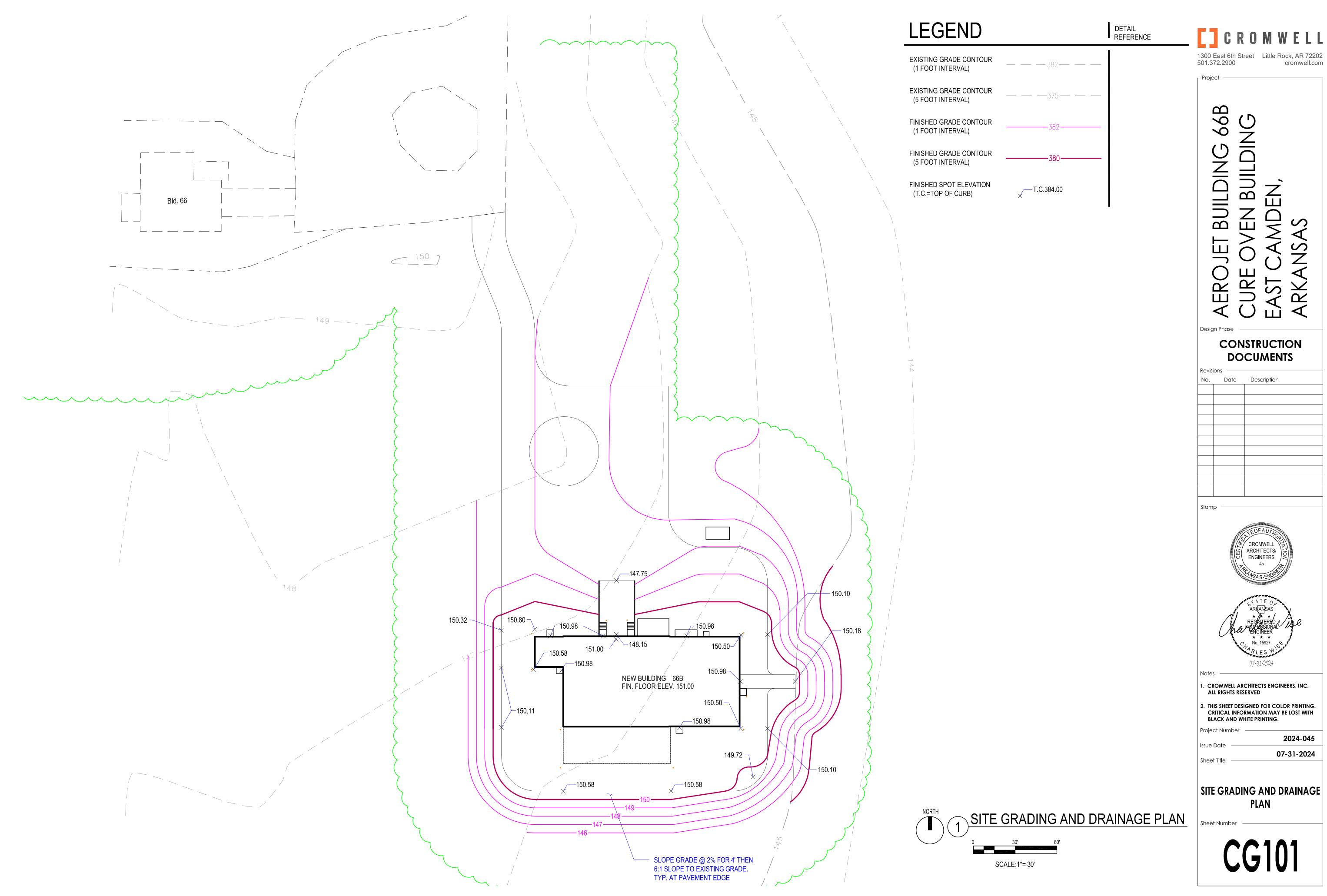
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SITE LAYOUT PLAN

2024-045

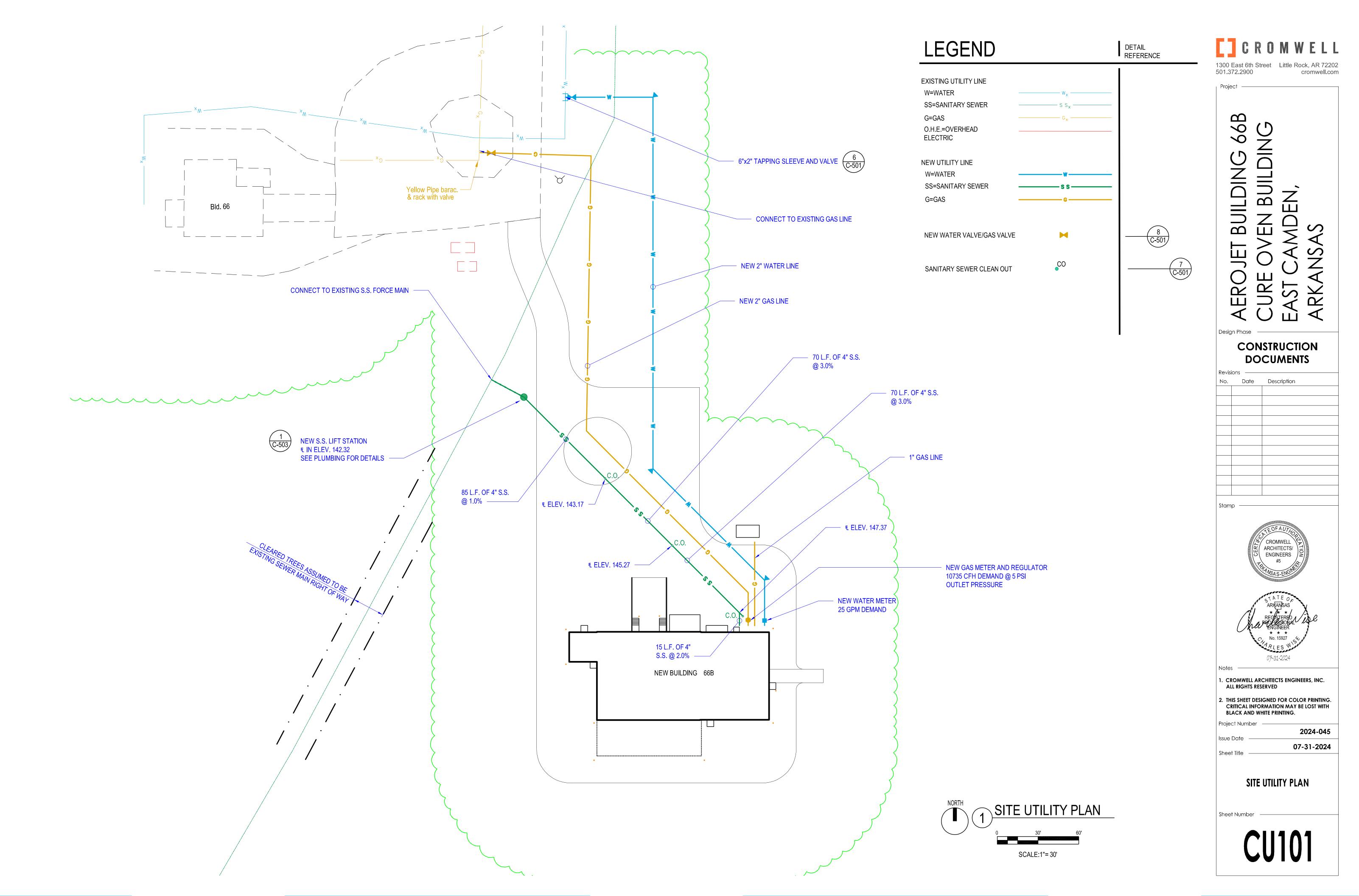
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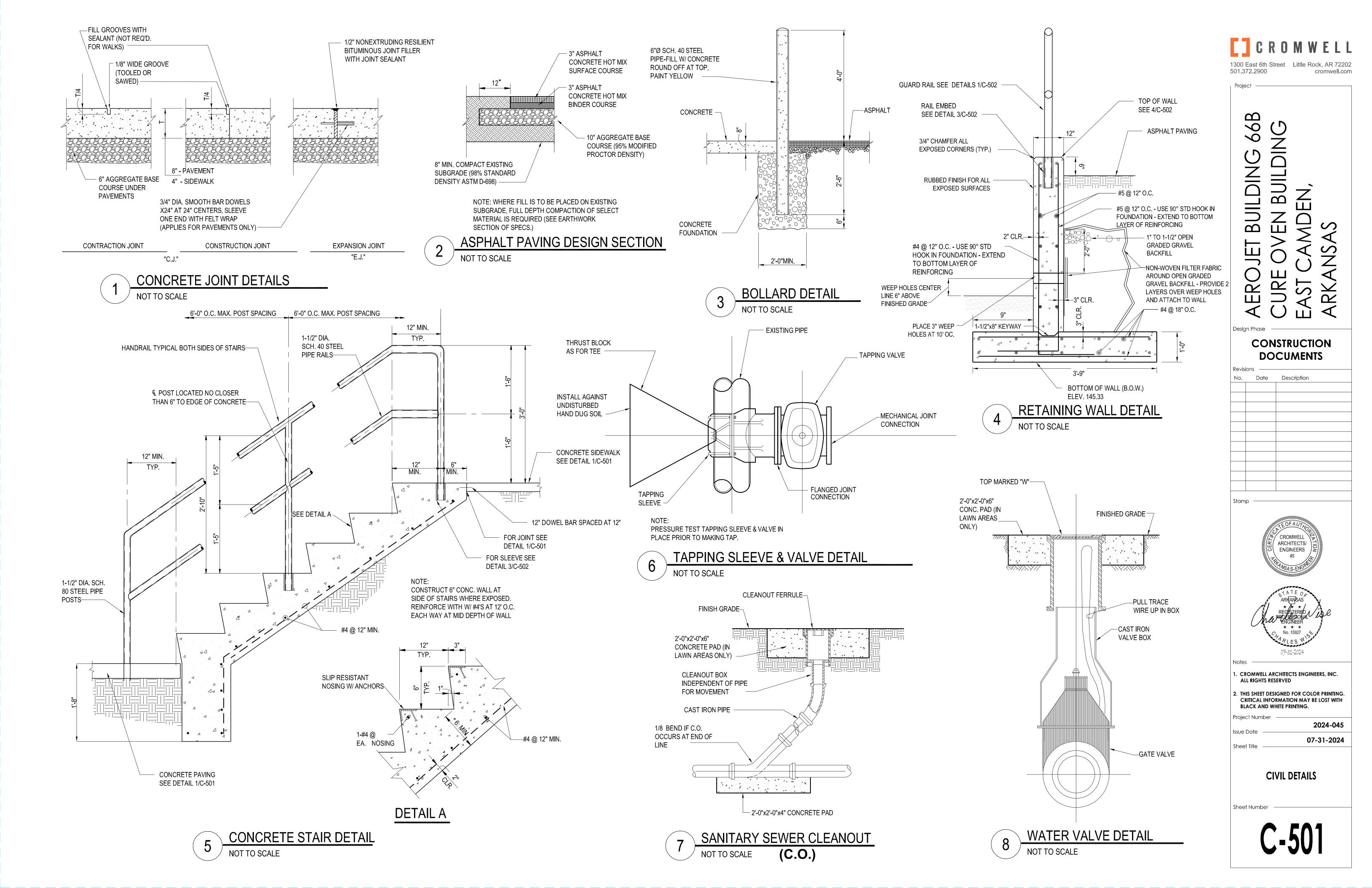
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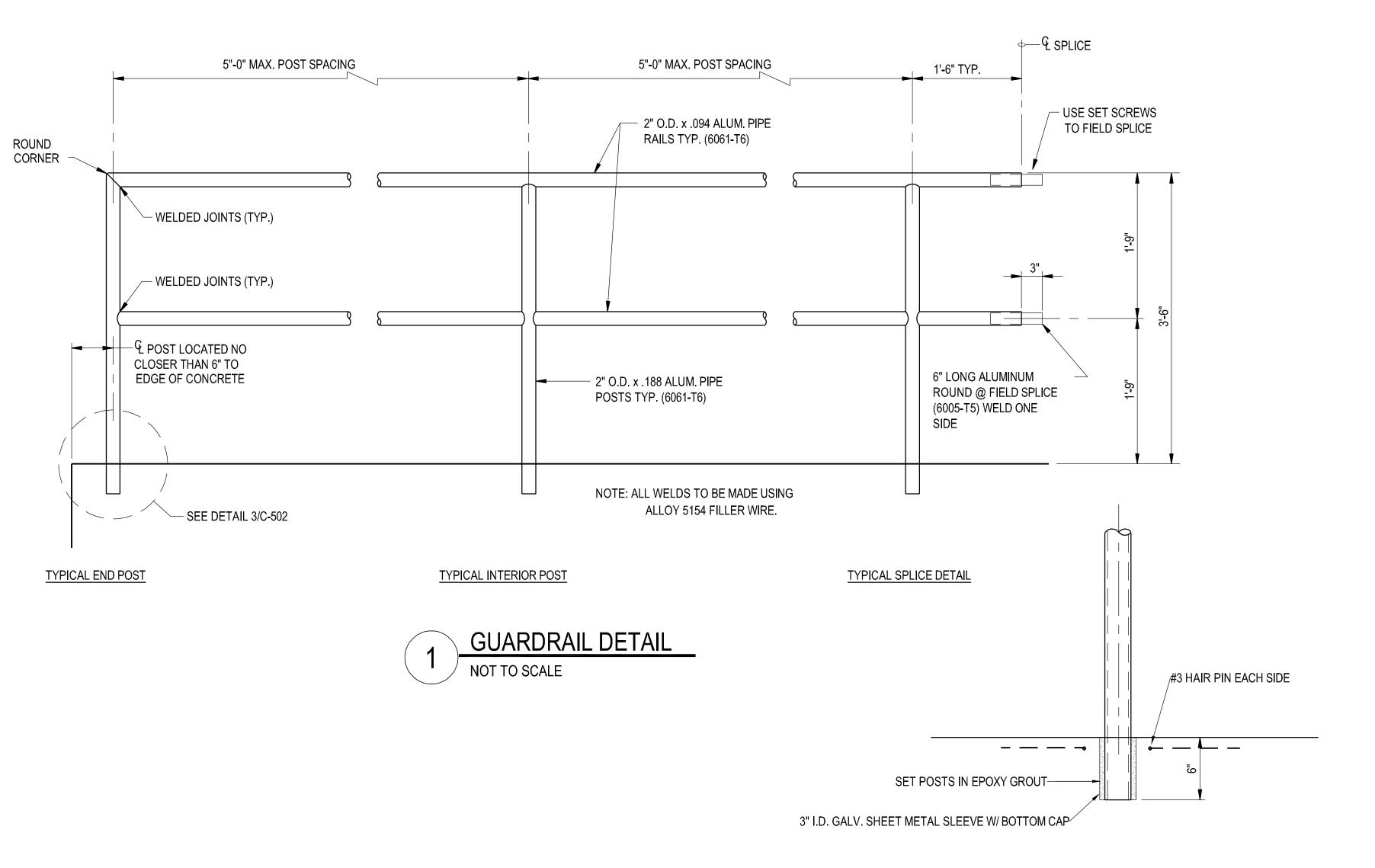


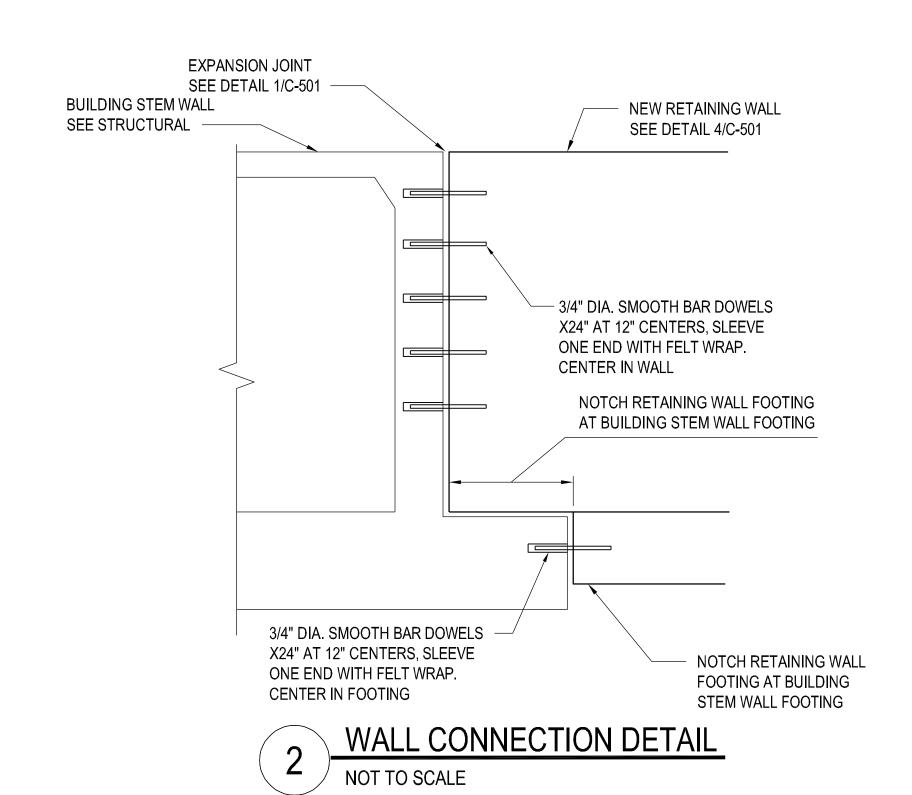
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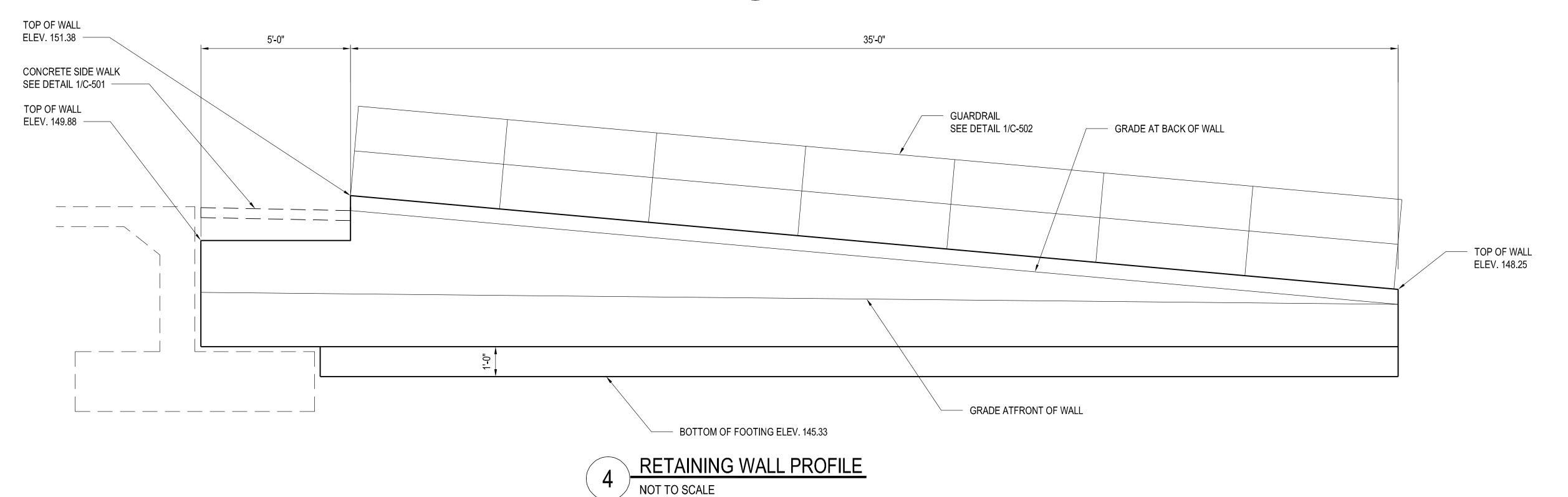






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Project

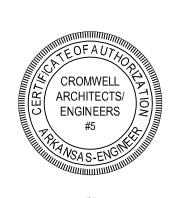
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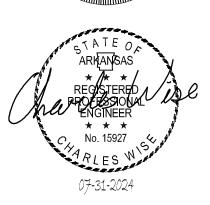
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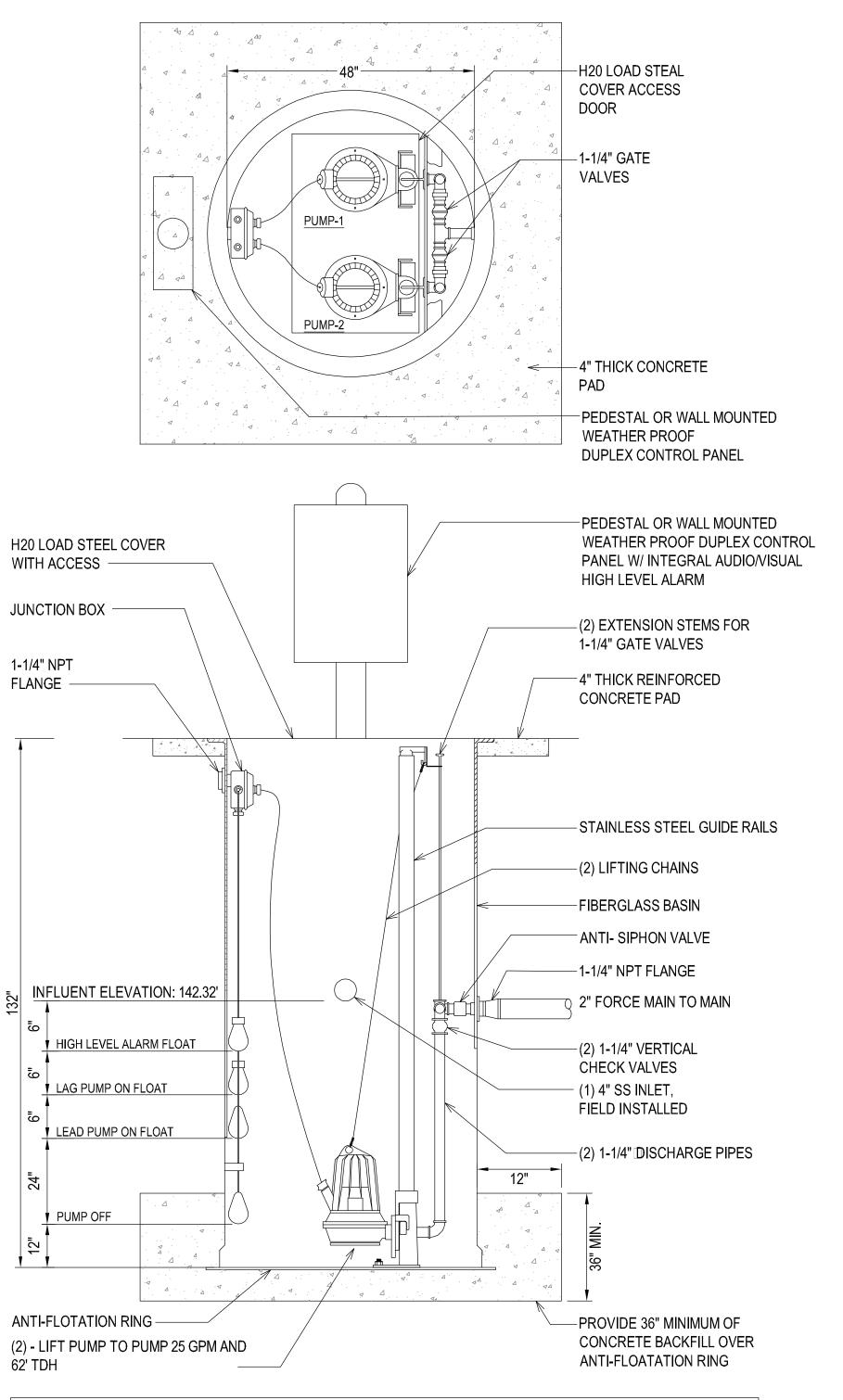
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CIVIL DETAILS

2024-045

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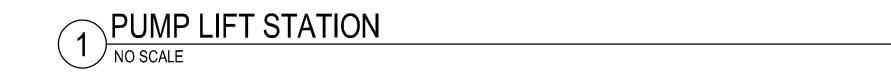
C-502



NOTES:

1. PUMP AND SUMP PIT IS BASED ON LIBERTY PUMP COMPANY.

2. CONTRACTOR TO MAKE FLOAT ADJUSTMENTS AS DIRECTED BY OWNER'S REQUIREMENTS.





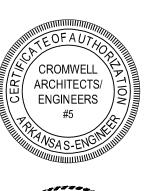
AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN,

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CIVIL DETAILS

2024-045

Sheet Number -

C-503

EXTRA COST.

STRUCTURAL GENERAL NOTES

F. EARTHWORK:

FOUNDATION DESIGN IS BASED ON SOIL INVESTIGATION AND REPORT BY GRUBS, HOSKYN, BARTON, & WYATT,

2. FOUNDATION DESIGN IS BASED ON THE FOLLOWING MINIMUM NET ALLOWABLE BEARING PRESSURE:

2.25 KSF a. CONTINUOUS FOOTINGS: b. INDIVIDUAL PAD FOOTINGS:

2.75 KSF

ALL FOUNDATION BEARING CONDITIONS SHALL BE VERIFIED AND APPROVED BY THE GEOTECHNICAL ENGINEER

3. BOTTOM OF FOUNDATION ELEVATIONS ARE GIVEN FOR BIDDING PURPOSES ONLY. ALL FOUNDATIONS SHALL BE FOUNDED A MINIMUM OF 1.5 FEET BELOW EXISTING GRADE IN PROPERLY COMPACTED STRUCTURAL FILL OR THE STIFF TO VERY STIFF FINE SANDY CLAY.

4. REMOVE APPROXIMATELY 2 TO 4 FEET OF EXISTING SUB GRADE UNDER THE BUILDING AS DIRECTED BY THE GEOTECHNICAL ENGINEER (EXTENDING 5 FEET BEYOND THE BUILDING PERIMETER) AND BACKFILL AS PER THE GEOTECHNICAL REPORT AND SPECIFICATION DIVISION 31, EARTHWORK, USING SPECIFIED MATERIAL

THE SANDY CLAY SOILS ENCOUNTERED BENEATH THE FILL AT THE SURFACE OF THE SITE ARE SUBJECT TO STRENGTH LOSS UPON SATURATION, THUS CREATING POTENTIAL CONSTRUCTION DIFFICULTIES. THEREFORE, IT IS RECOMMENDED THAT DISTURBANCE OF THESE UPPER SOILS BE KEPT TO A MINIMUM WHENEVER POSSIBLE. EXCAVATION SHOULD BE INITIATED DURING DRIER SEASONS OF THE YEAR. POSITIVE SURFACE DRAINAGE IS IMPORTANT DURING THE INITIAL PHASES OF SITE GRADING AND SHOULD BE MAINTAINED DURING CONSTRUCTION AND FOLLOWING COMPLETION OF THE STRUCTURE TO PREVENT SURFACE PONDING AND SUBSEQUENT SATURATION OF THE SUB GRADE SOILS. IF CONSTRUCTION IS INITIATED DURING WETTER SEASONS OF THE YEAR. IT IS LIKELY THAT A PERCHED GROUND WATER CONDITION WILL EXIST AND MINOR SEEPAGE INTO EXCAVATIONS MAY OCCUR IN LOCALIZED AREAS.

TAKE ADEQUATE MEASURES TO ALLOW FOR WORKING SURFACE DURING CONSTRUCTION OF FOUNDATIONS AND SLAB-ON-GRADE, SUCH AS GRAVEL BED OF ADEQUATE DEPTH, ETC

7. 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.

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

9. PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.

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 **FOOTINGS** 4500 PSI WALLS AND EXTERIOR SLABS

INTERIOR SLABS ON GRADE SEE SPECIFICATION SECTION 033000 FOR ADDITIONAL MIX DESIGN REQUIREMENTS

ALL DEFORMED REINFORCING STEEL SHALL BE A615 GRADE 60 STEEL, U.N.O. ALL WELDED WIRE REINFORCING STEEL SHALL BE A1064. ALL WELDED WIRE REINFORCEMENT SHALL BE PROVIDED IN SHEETS

ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ACI CODE AND ACI DETAILING MANUAL

MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE: CONCRETE CAST AGAINST EARTH CONCRETE EXPOSED TO EARTH OR WEATHER: **#5 BARS AND SMALLER:** #6 BARS AND LARGER:

ALL CONCRETE CONSTRUCTION AND MATERIALS SHALL BE PLACED ACCORDING TO ACI 117 TOLERANCES.

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.

TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS END WITH STANDARD HOOKS.

10. PROVIDE CORNER BARS IN ALL CONCRETE MEMBERS AT INTERSECTIONS. MATCH SIZE AND SPACING OF HORIZONTAL BARS IN THOSE MEMBERS.

11. 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.

12. PROVIDE SUPPORT FOR ALL CONCRETE REINFORCING (INCLUDING SLABS ON GRADE AND ELEVATED COMPOSITE SLABS) AS REQUIRED TO MAINTAIN CLEAR COVER DIMENSIONS. SPACING SHALL NOT EXCEED

13. 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.

14. 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.

15. LOCATION OF SLOTTED INSERTS, WELD PLATES AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

16. REINFORCING BARS SHALL NOT BE WELDED.

17. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVE CURBS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.

18. 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.

19. MAXIMUM TOLERANCE FOR SLAB EDGES IS 1/2" +/- EXCEPT WHERE TIGHTER TOLERANCE IS REQUIRED FOR ARCHITECTURAL REASONS.

20. 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.

[] C R O M W E L L

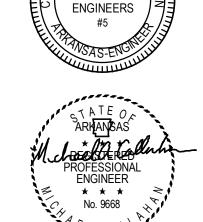
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DOCUMENTS

Revisions

No.	Date	Description

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07-31-2024

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Project Number — 2024-045 Issue Date 07-31-2024

Sheet Title — STRUCTURAL DESIGN CRITERIA AND

GENERAL NOTES

Sheet Number

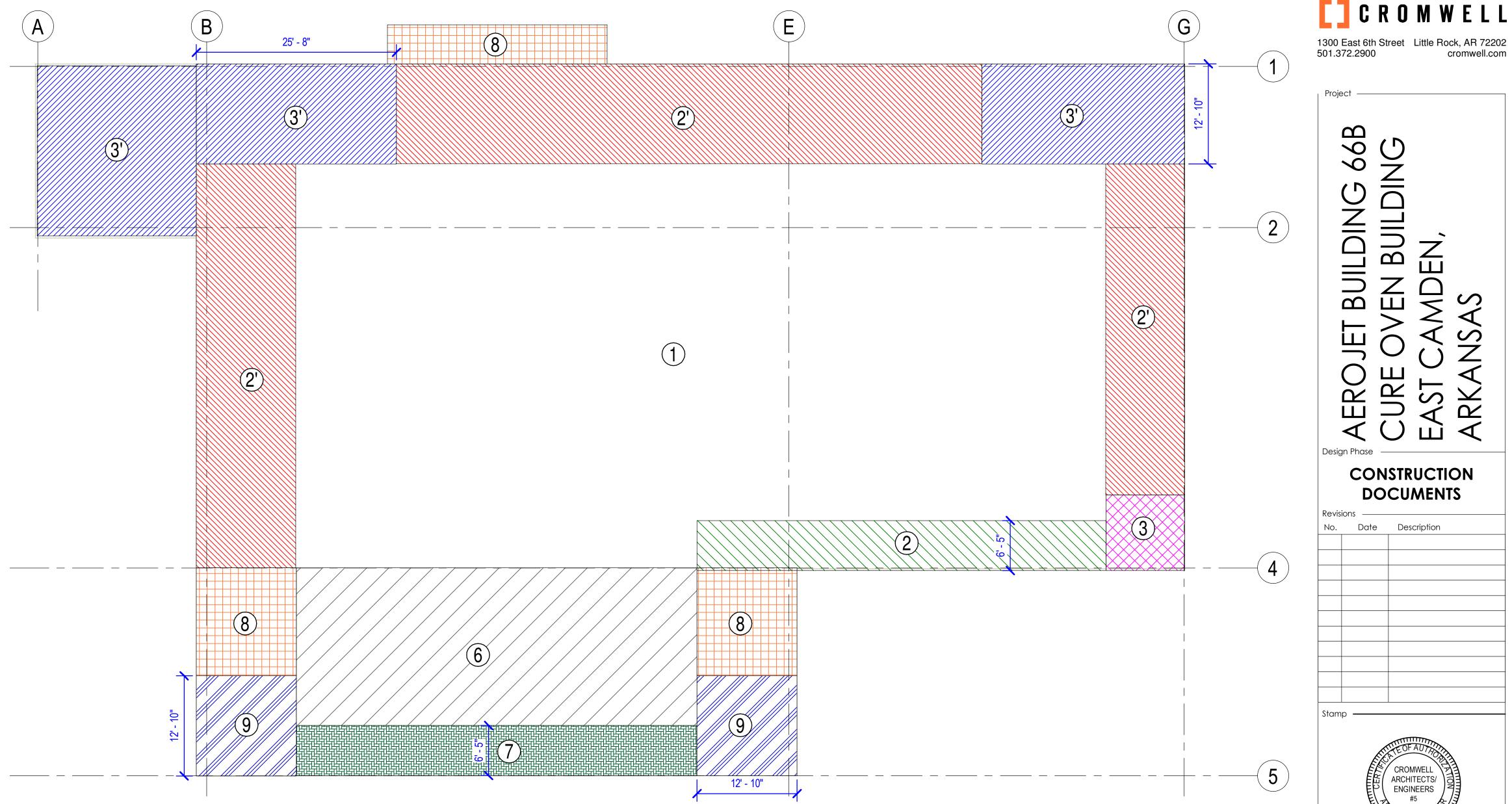
STRUCTURAL GENERAL NOTES CONT'D

H. METAL BUILDING SYSTEMS:

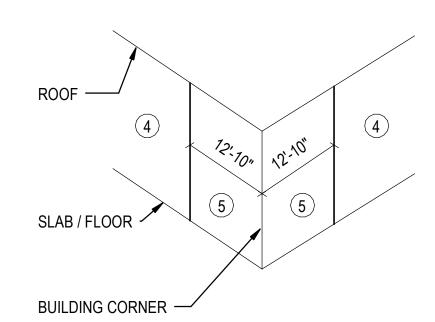
- 1. THE METAL BUILDING SYSTEM MANUFACTURER SHALL BE IAS AC472 ACCREDITED AND A MEMBER OF MBMA.
- 2. THE METAL BUILDING SYSTEM MANUFACTURER SHALL:
- a. DESIGN THE METAL BUILDING SYSTEM FOR THE LOADS AND DESIGN CRITERIA SHOWN ON THE PLANS AND IN SPECIFICATIONS.
- b. DESIGN THE BUILDING FOR A MAXIMUM DRIFT OF H/200 UNDER THE NOMINAL WIND SPEED INDICATED UNDER THE STRUCTURAL DESIGN CRITERIA. SEISMIC DRIFT SHALL BE LIMITED BASED ON ASCE 7 ASSUMING ACCOMMODATIONS FOR STORY DRIFTS HAVE NOT BEEN INCORPORATED INTO THE DESIGN. COLUMN BASES SHALL BE ASSUMED TO BE PINNED CONDITION.
- c. CHECK THE FOUNDATION DESIGN LOADS SHOWN ON THE DRAWINGS AND NOTIFY THE ENGINEER/ARCHITECT IF ANY OF THE LOADS FROM THE BUILDING WILL EXCEED THE LOADS SHOWN ON THE DRAWINGS.
- 3. DO NOT CONSTRUCT FOUNDATIONS UNTIL THE ENGINEER/ARCHITECT HAS APPROVED THE METAL BUILDING SYSTEM SUBMITTAL AND MADE ANY NECESSARY CHANGES TO THE FOUNDATION DRAWINGS.
- 4. PLACE AND SECURE ANCHOR RODS IN FOOTING EXCAVATION PRIOR TO POURING CONCRETE FOR FOOTING. DO NOT PLACE ANCHOR RODS IN WET CONCRETE.
- 5. ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED BY AWS TO PERFORM THE WELDING IN ACCORDANCE WITH AWS.
- 6. FINAL BOLTING OR WELDING SHALL NOT BE PERFORMED UNTIL THE STRUCTURE HAS BEEN PROPERLY ALIGNED.
- 7. THE METAL BUILDING SYSTEM MANUFACTOR SHALL PROVIDE ADEQUATE CLEARANCE FOR INDEPENDENT OVEN SYSTEMS

I. POST-INSTALLED ANCHORS IN CONCRETE:

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(S) 03 30 00 FOR ADDITIONAL INFORMATION.



COMPONENTS & CLADDING WIND PRESSURES ROOF PLAN NOT TO SCALE



70NE	TRIBUTARY AREA (SQ. FT.)				
ZONE	10	50	100		
4	-32/+29 PSF	-29/+26 PSF	-27/+25 PSF		
5	-39/+29 PSF	-33/+26 PSF	-31/+25 PSF		

- NOTES:
 1. ULTIMATE WIND SPEED: 116 MPH
- NOMINAL WIND SPEED: 89.9 MPH
- WIND PRESSURES ARE BASED ON ASCE 7-16 STRENGTH DESIGN (ULTIMATE).
- 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.

GROSS WIND UPLIFT (STRENGTH DESIGN)

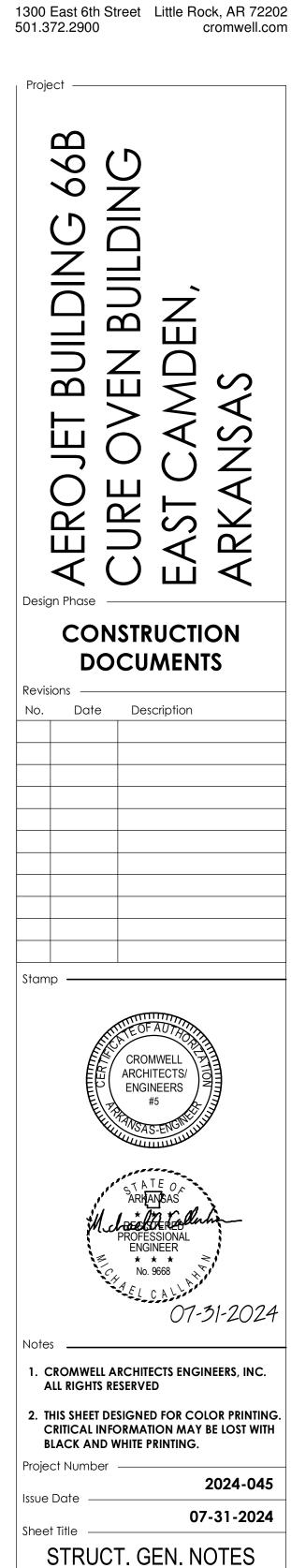
ZONE		TRIBUTARY AREA (SQ. FT.)			
		10	50	100	
	1	-35/+16 PSF	-35/+16 PSF	-35/+16 PSF	
	2	-40/+16 PSF	-38/+16 PSF	-38/+16 PSF	
	2'	-48/+16 PSF	-47/+16 PSF	-46/+16 PSF	
\longrightarrow	3	-54/+16 PSF	-42/+16 PSF	-38/+16 PSF	
	3'	-76/+16 PSF	-57/+16 PSF	-48/+16 PSF	

OVERHANG/SOFFIT UPLIFT (STRENGTH DESIGN)

ZONE		TRIBUTARY AREA (SQ. FT.)		
		10	50	100
	6	-67/+45 PSF	-64/+42 PSF	-62/+41 PSF
	7	-72/+45 PSF	-67/+42 PSF	-65/+41 PSF
	8	-88/+45 PSF	-80/+42 PSF	-76/+41 PSF
	9	-101/+48 PSF	-82/+44 PSF	-74/+43 PSF

COMPONENTS AND CLADDING WALL WIND PRESSURES

COMPONENTS AND CLADDING ROOF WIND PRESSURES

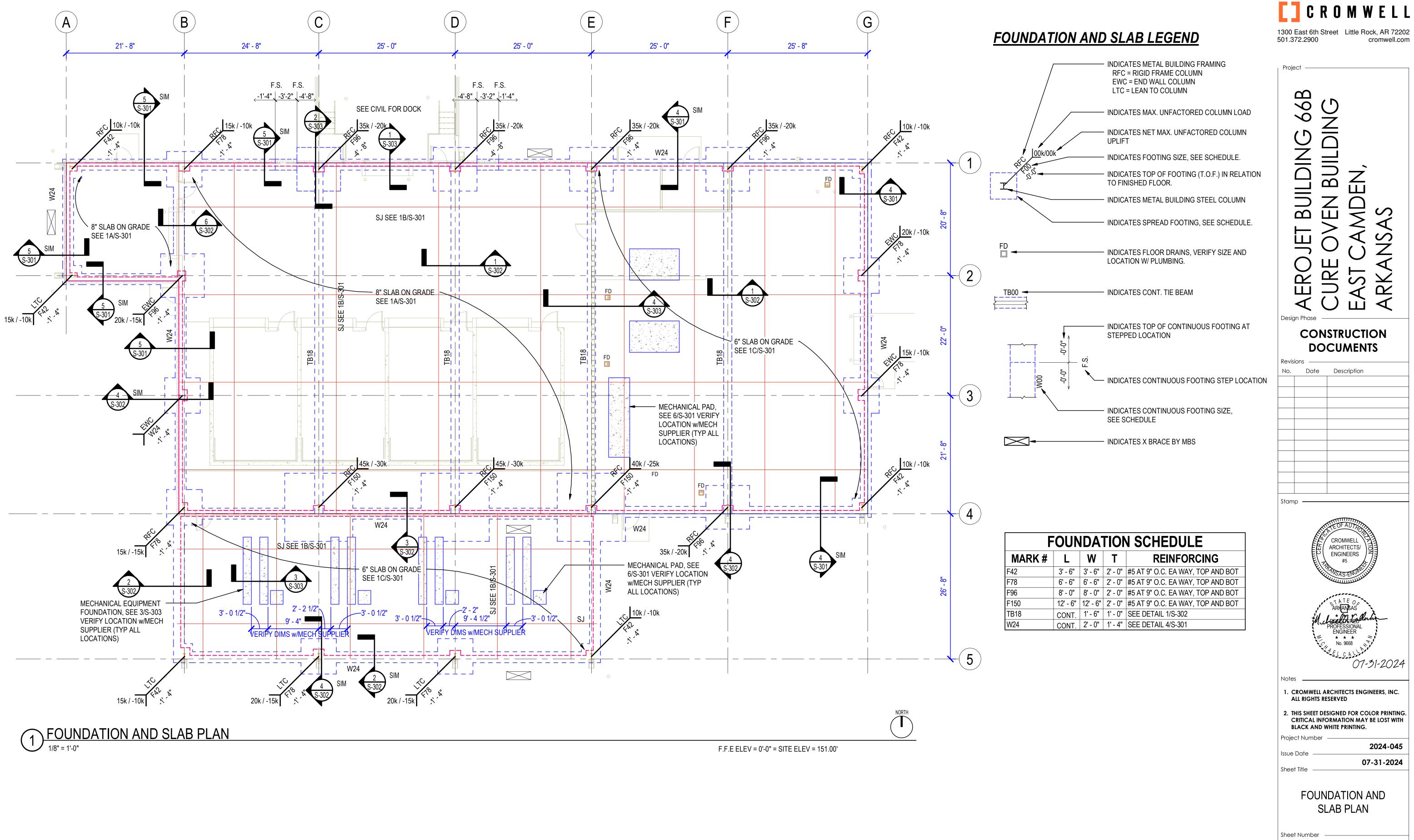


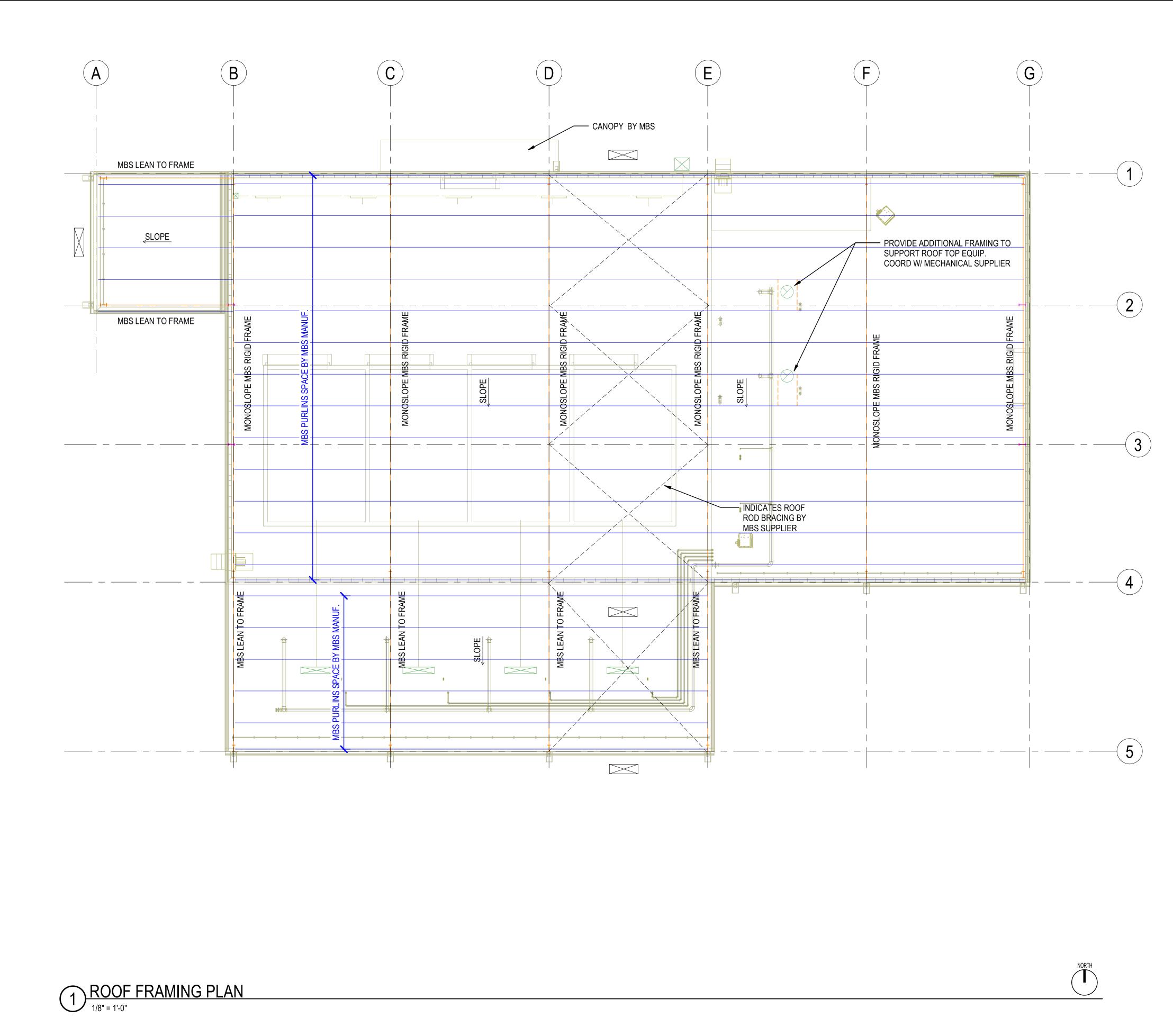
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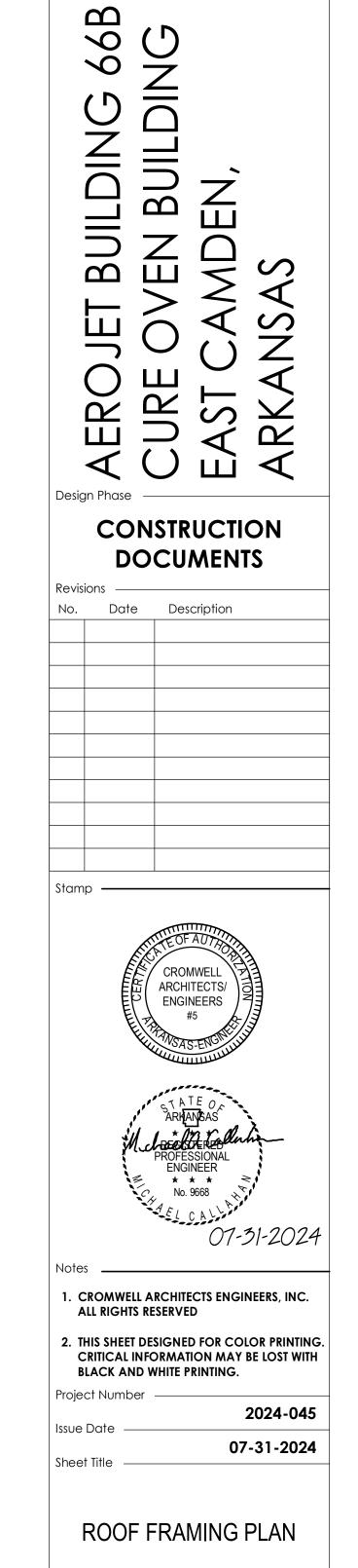
AND CLADDING WIND

PRESSURES

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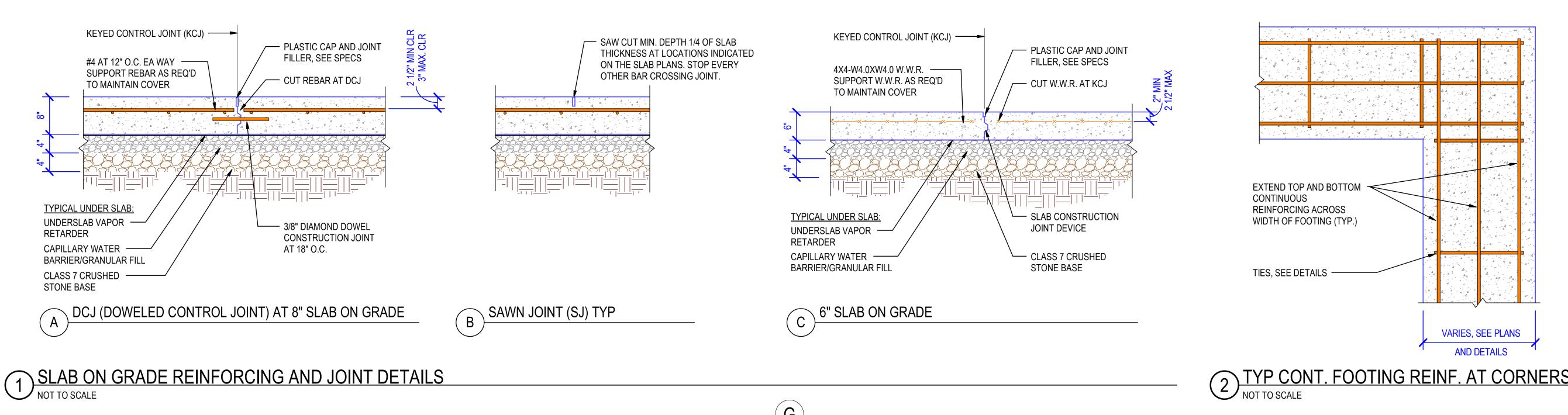




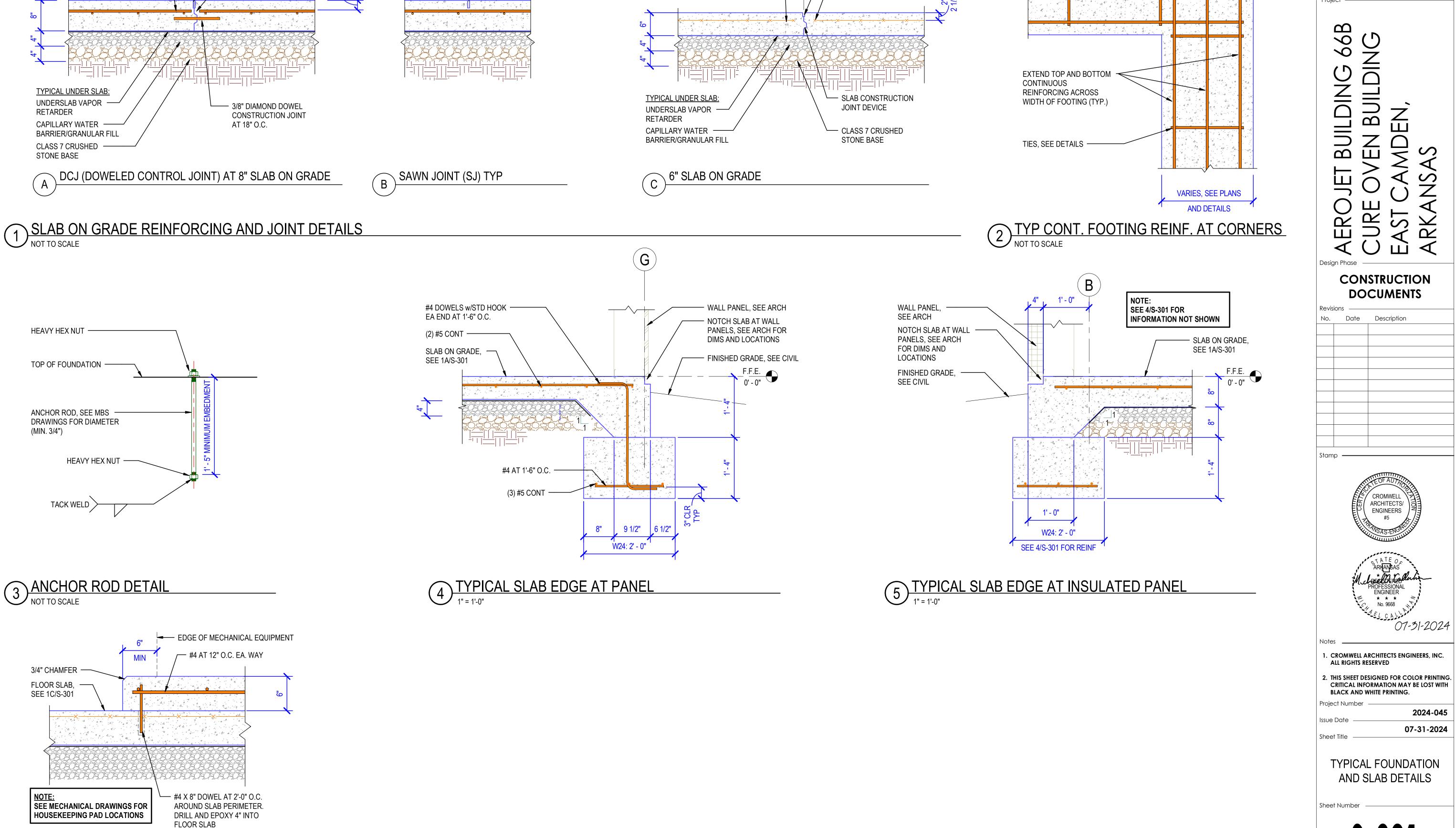
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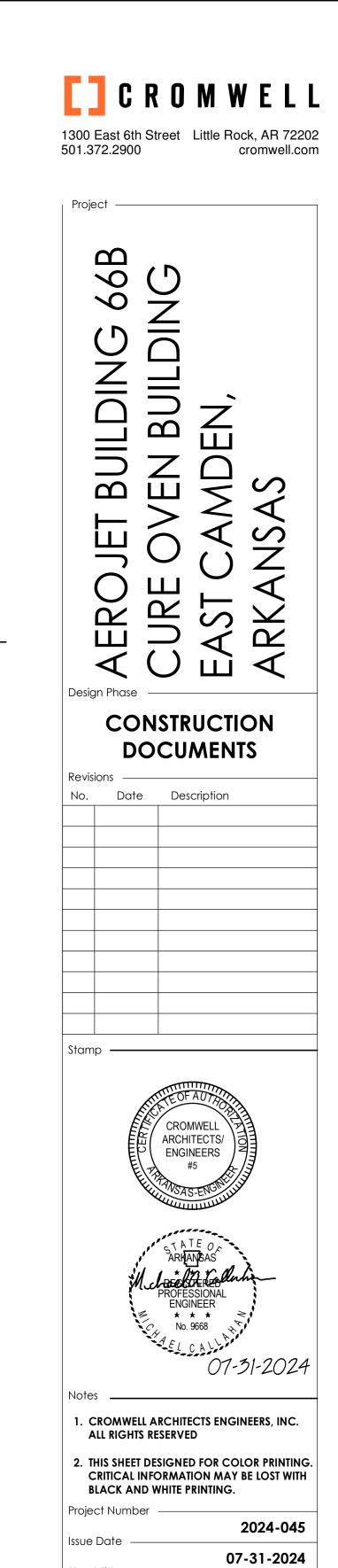
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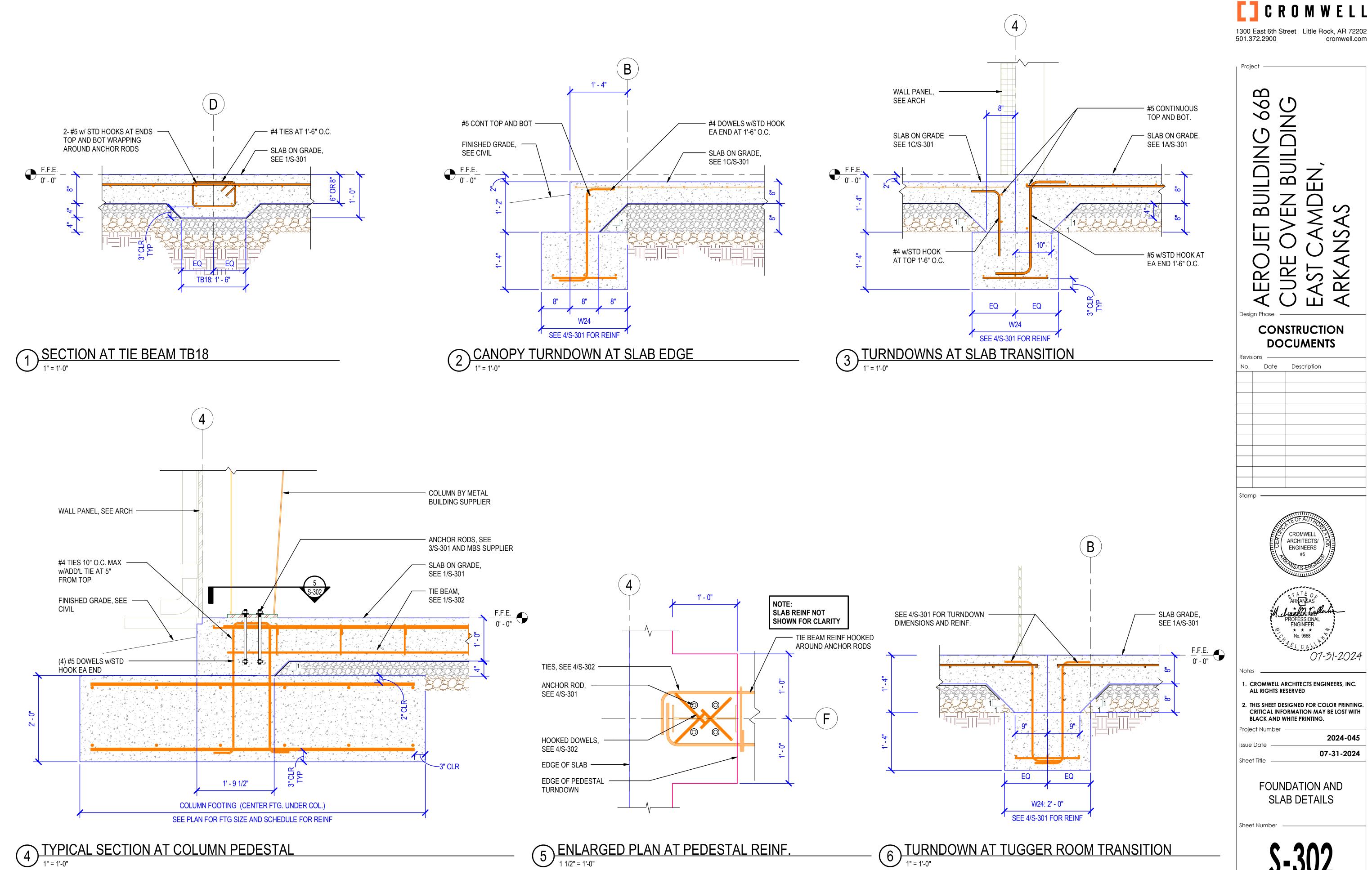
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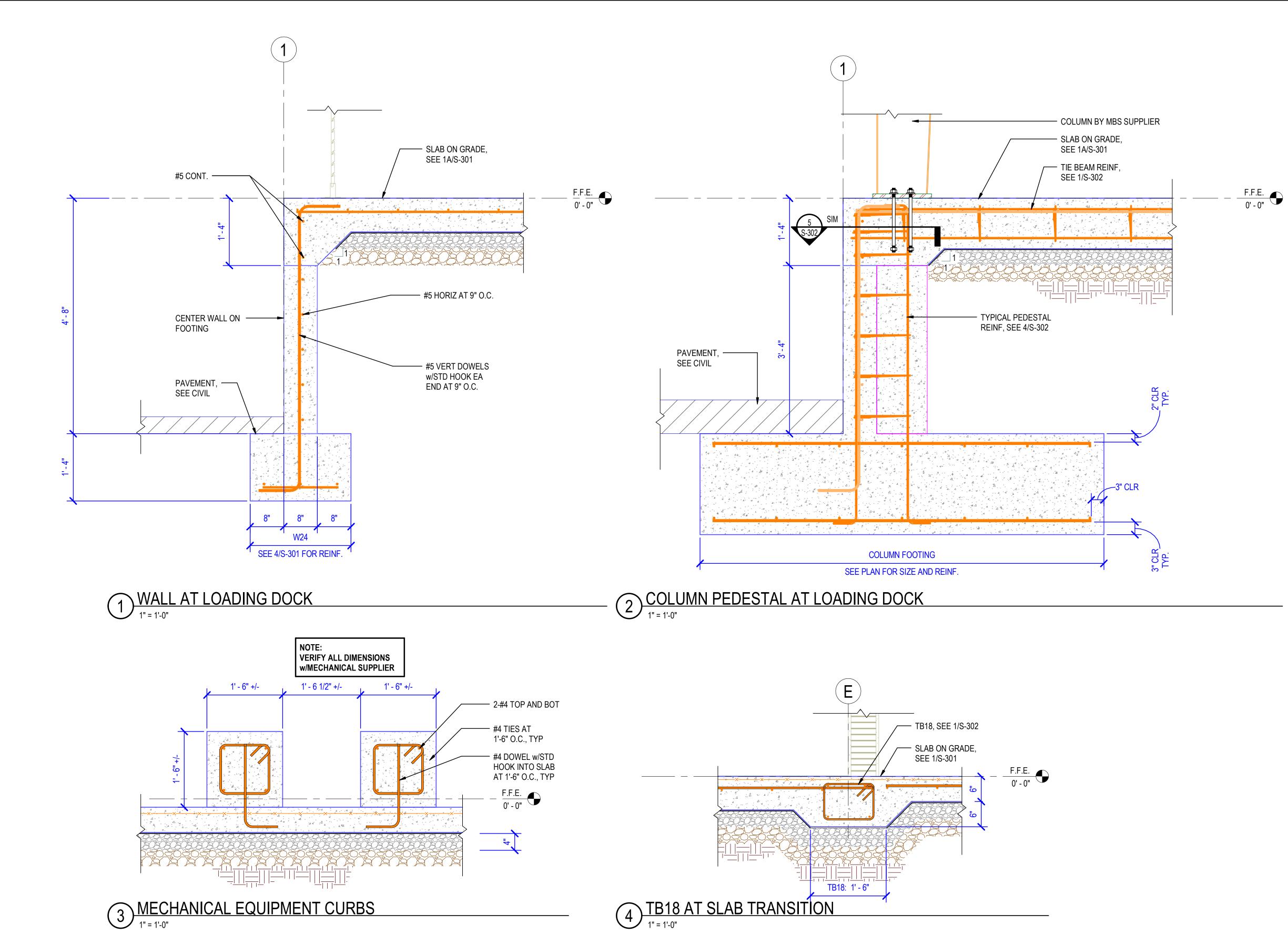


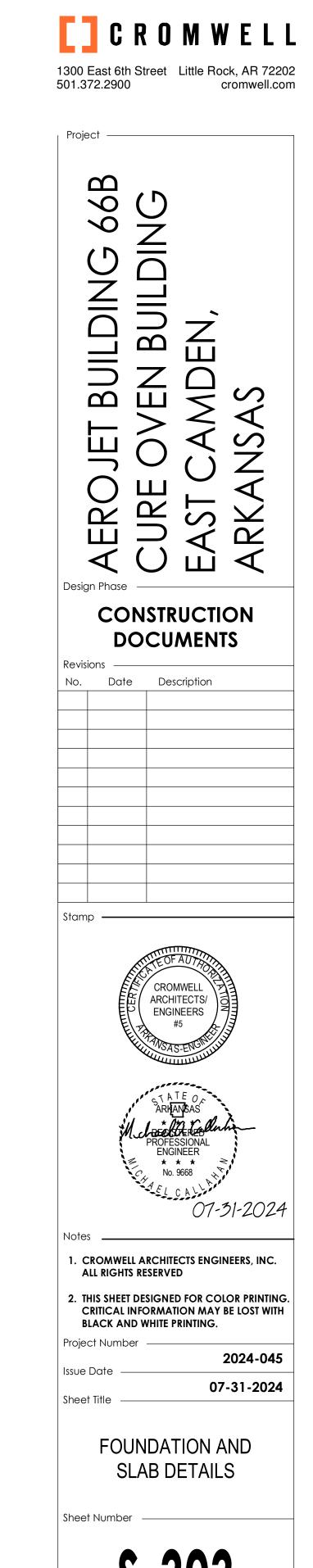
6 TYPICAL MECHANICAL HOUSEKEEPING SLAB
NOT TO SCALE

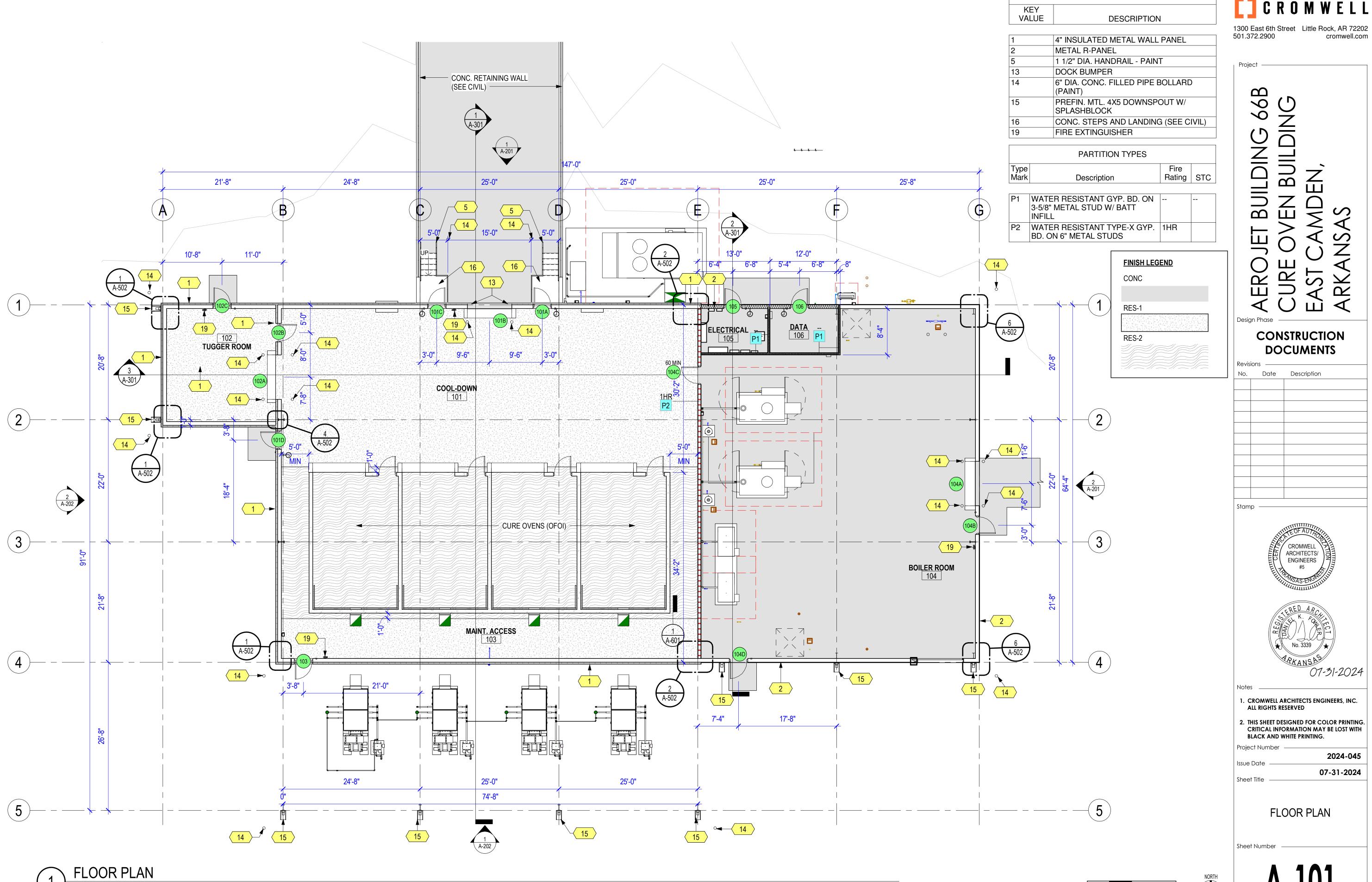








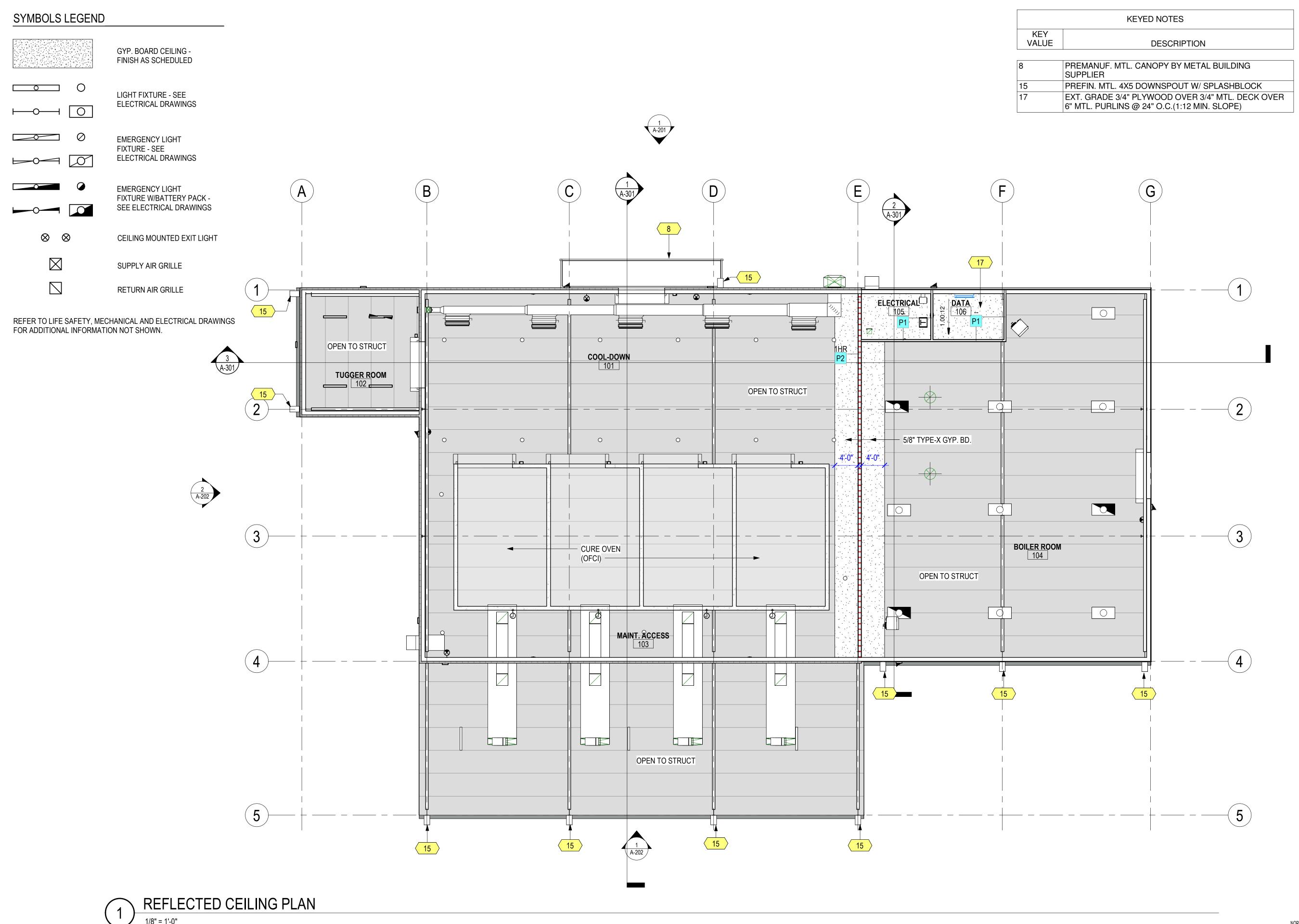




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KEYED NOTES

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





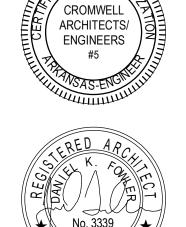
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CONSTRUCTION **DOCUMENTS**

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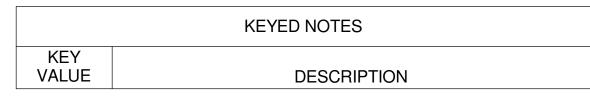
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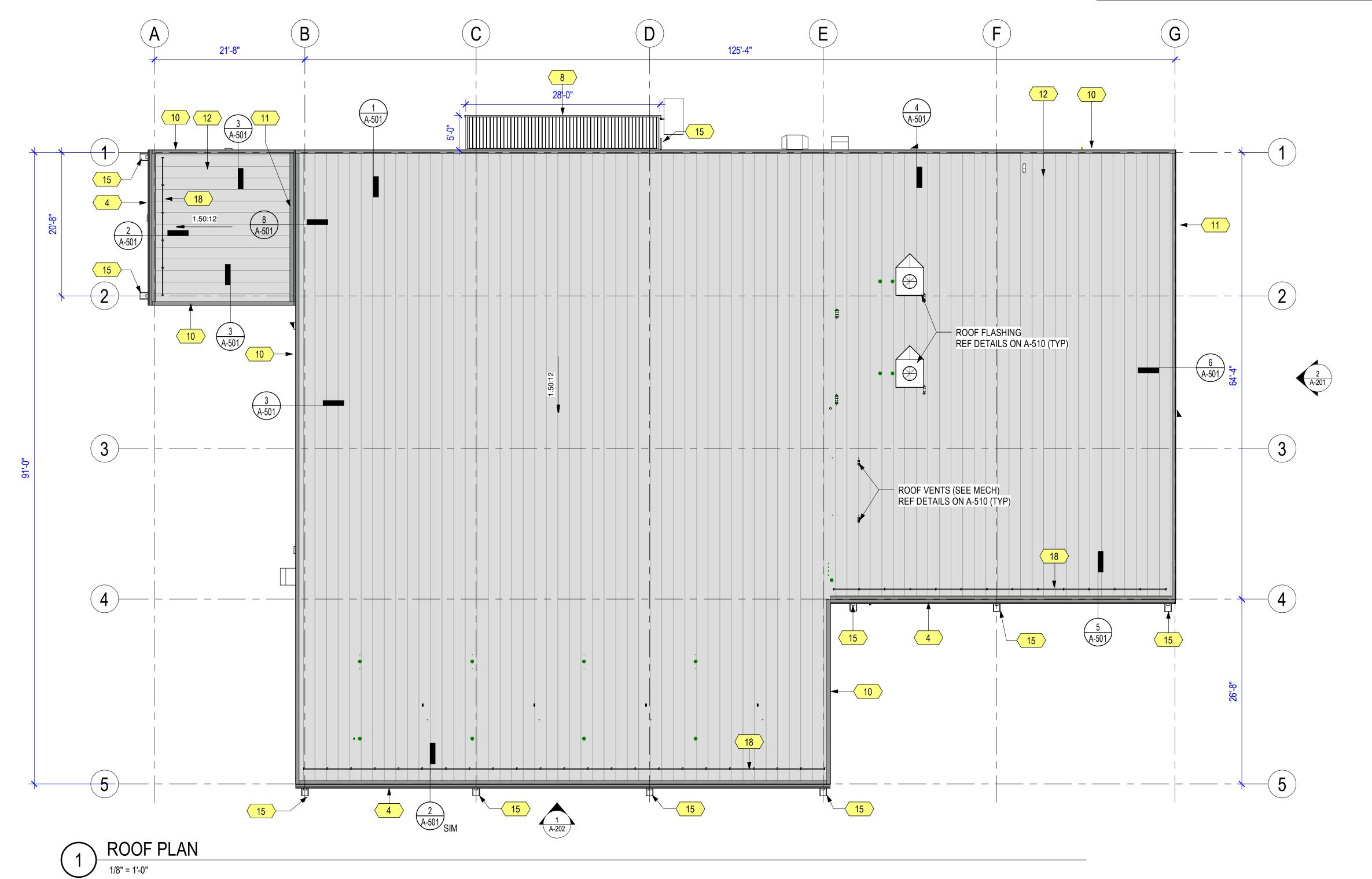
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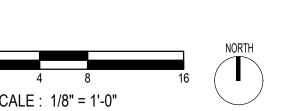
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SCALE: 1/8" = 1'-0"



PREFINISHED 6X6 MTL. GUTTER
PREMANUF. MTL. CANOPY BY METAL BUILDING SUPPLIER
PREFIN. MTL. TRIM
PREFIN. MTL. FLASHING
INSULATED METAL ROOF PANEL, R-30 MIN.
PREFIN. MTL. 4X5 DOWNSPOUT W/ SPLASHBLOCK
ICE & SNOW GUARD





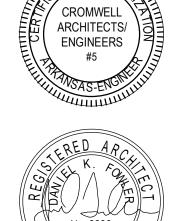


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AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN,

CONSTRUCTION DOCUMENTS

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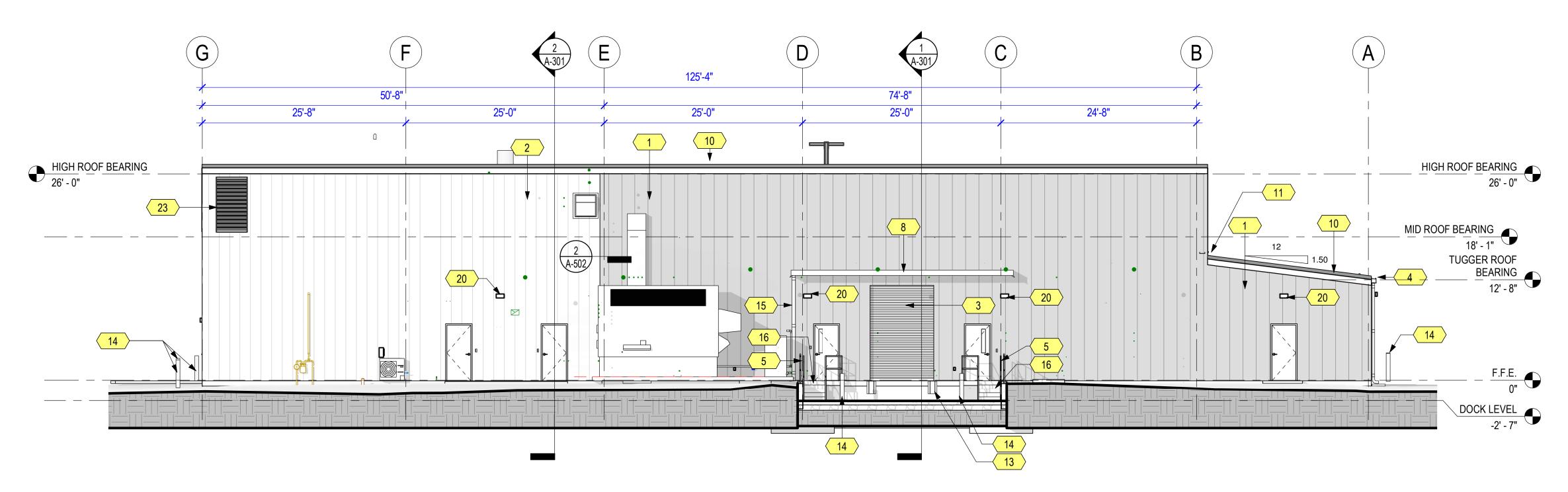
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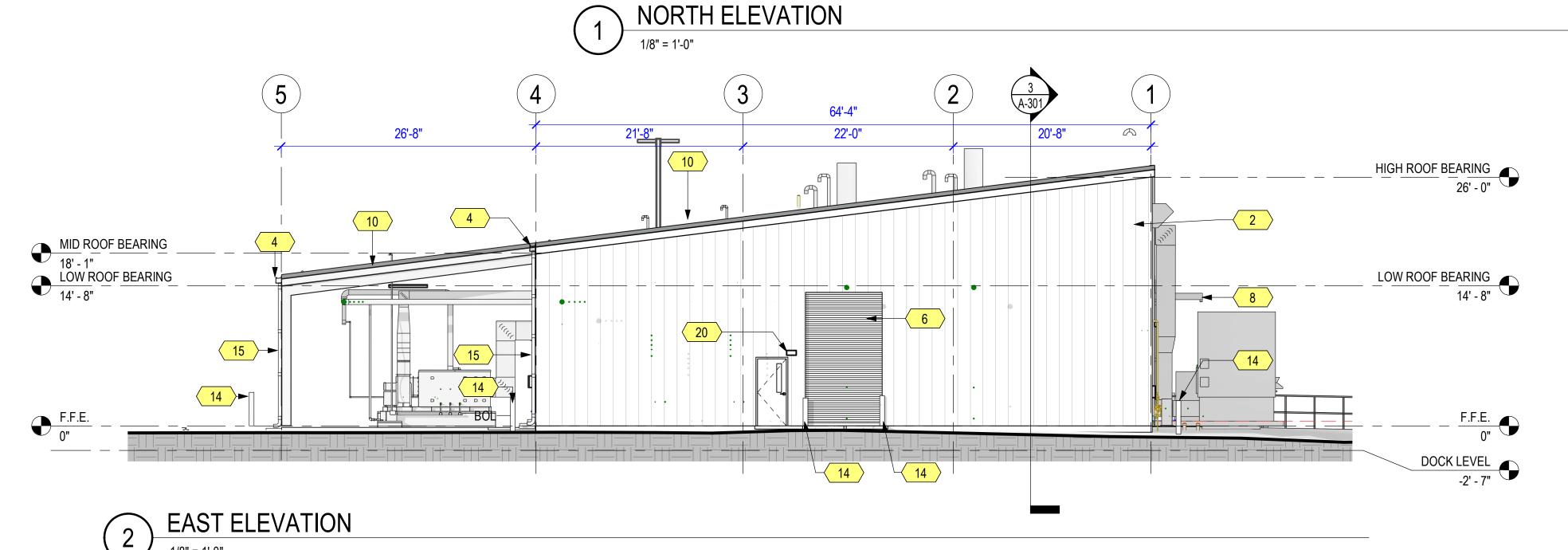
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Sheet Title

ROOF PLAN

Sheet Number —





	KEYED NOTES
KEY VALUE	DESCRIPTION
1	4" INSULATED METAL WALL PANEL
<u>1</u> 2	METAL R-PANEL
3	INSULATED OH COILING DOOR
4	PREFINISHED 6X6 MTL. GUTTER
<u>.</u> 5	1 1/2" DIA. HANDRAIL - PAINT
6	OH COILING DOOR
8	PREMANUF. MTL. CANOPY BY METAL BUILDING SUPPLIER
10	PREFIN. MTL. TRIM
11	PREFIN. MTL. FLASHING
13	DOCK BUMPER
14	6" DIA. CONC. FILLED PIPE BOLLARD (PAINT)
15	PREFIN. MTL. 4X5 DOWNSPOUT W/ SPLASHBLOCK
16	CONC. STEPS AND LANDING (SEE CIVIL)
20	LIGHT - SEE ELECTRICAL
23	PREFINISHED MTL. ARCHITECTURAL LOUVER (SEE MECH FOR NOTES)

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

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

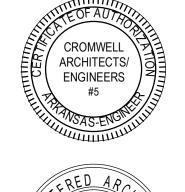


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AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN, ARKANSAS

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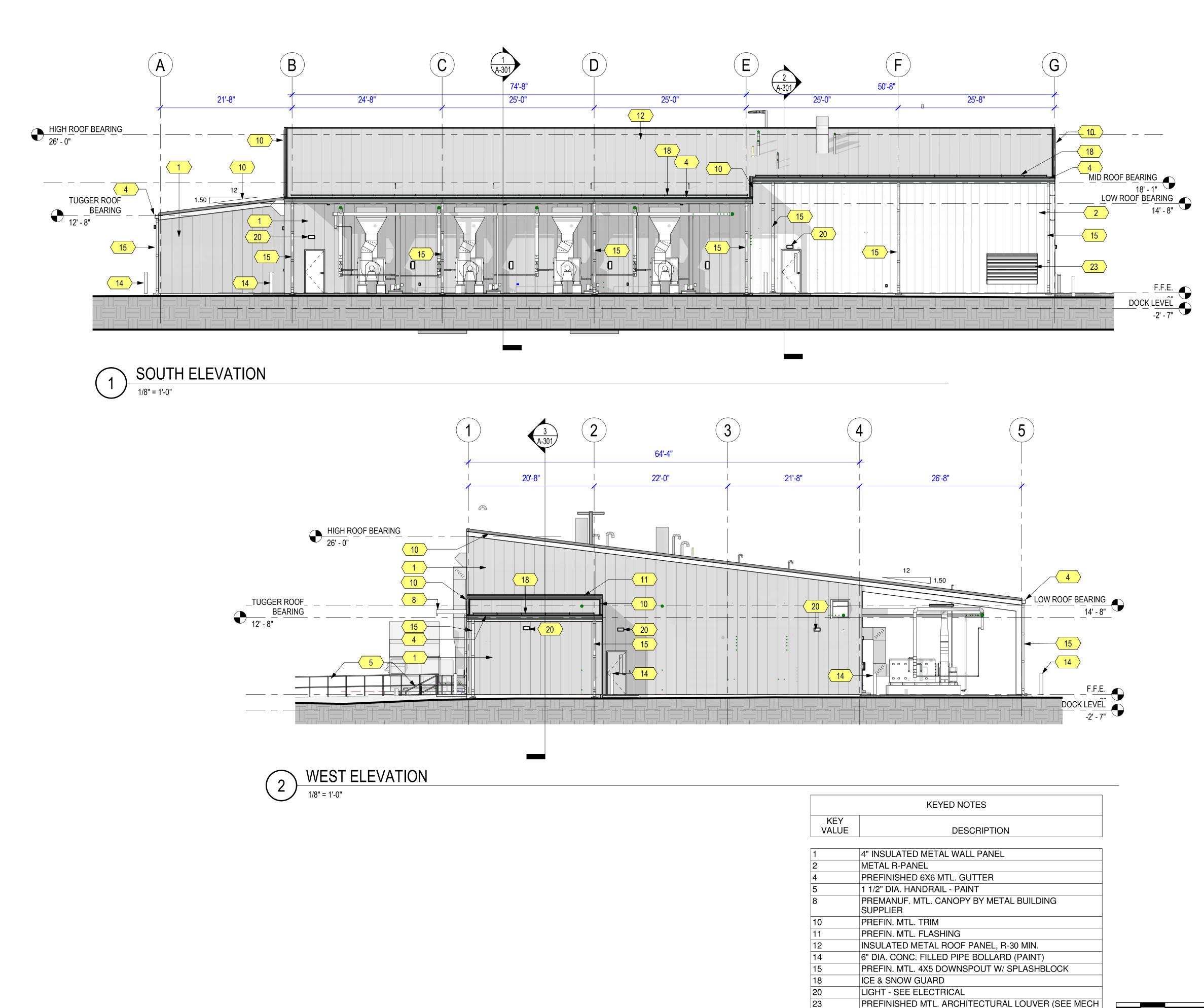
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EXTERIOR ELEVATIONS

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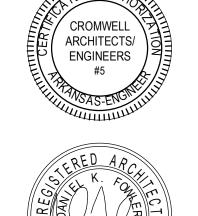
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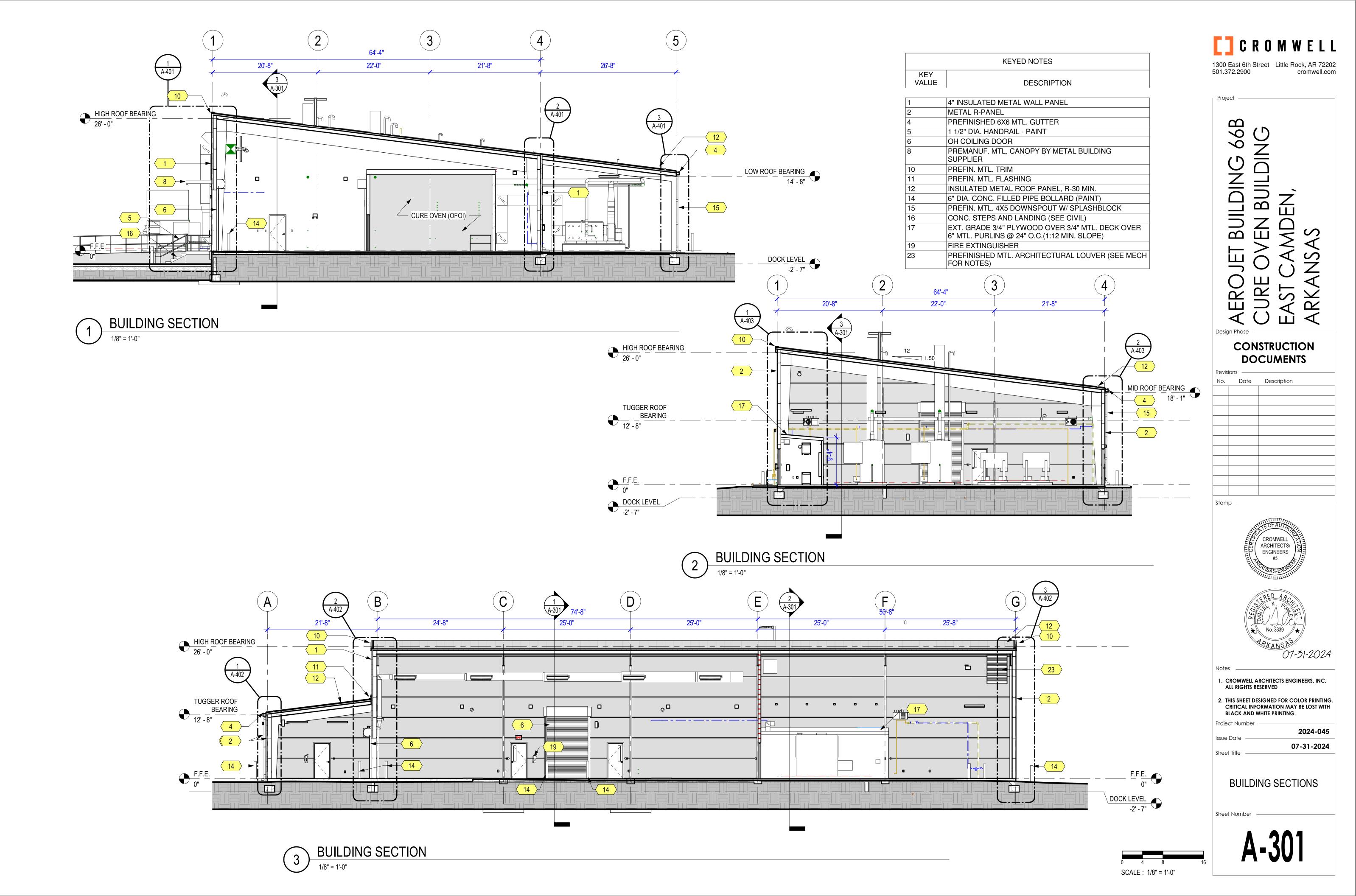
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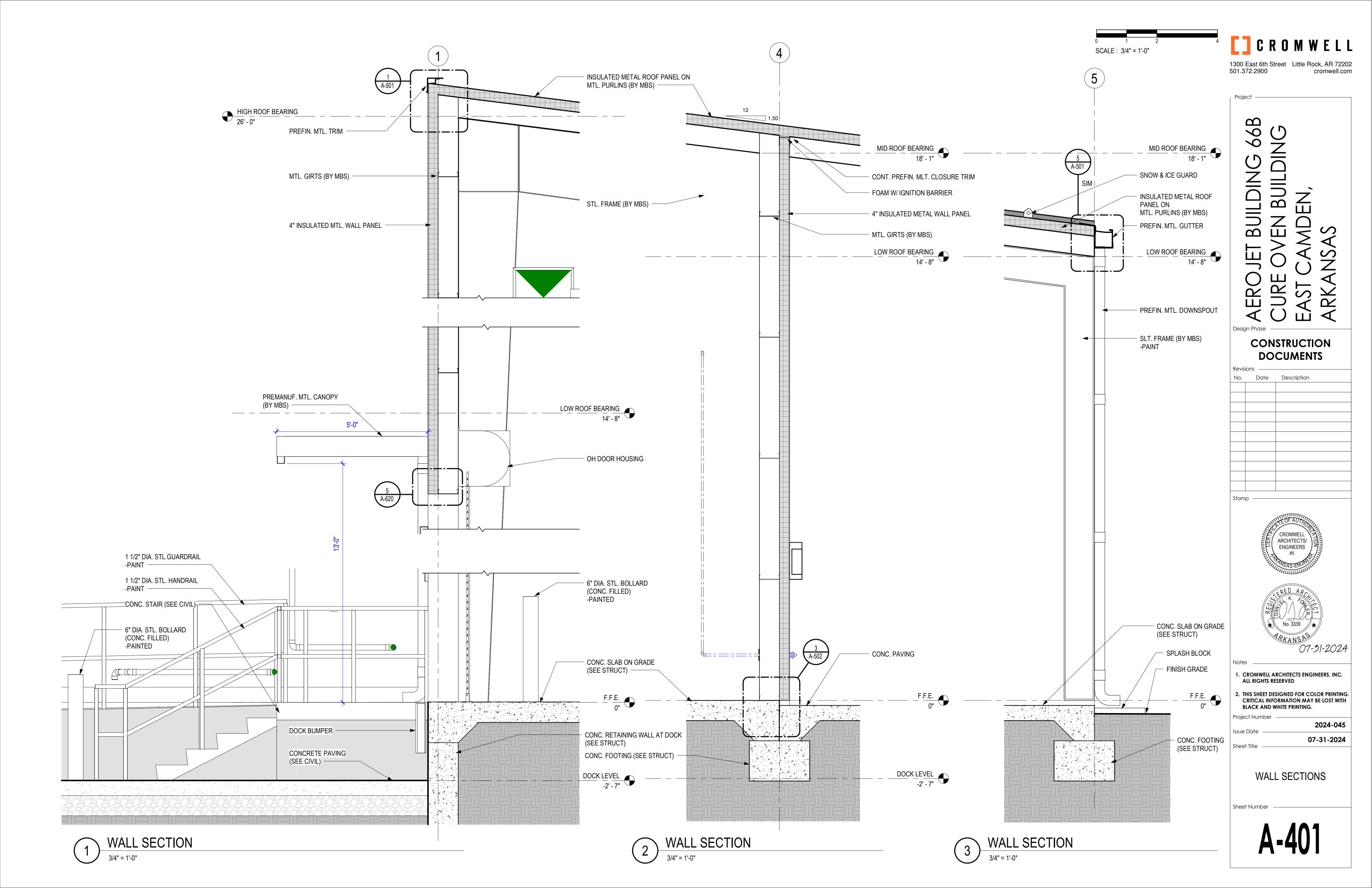
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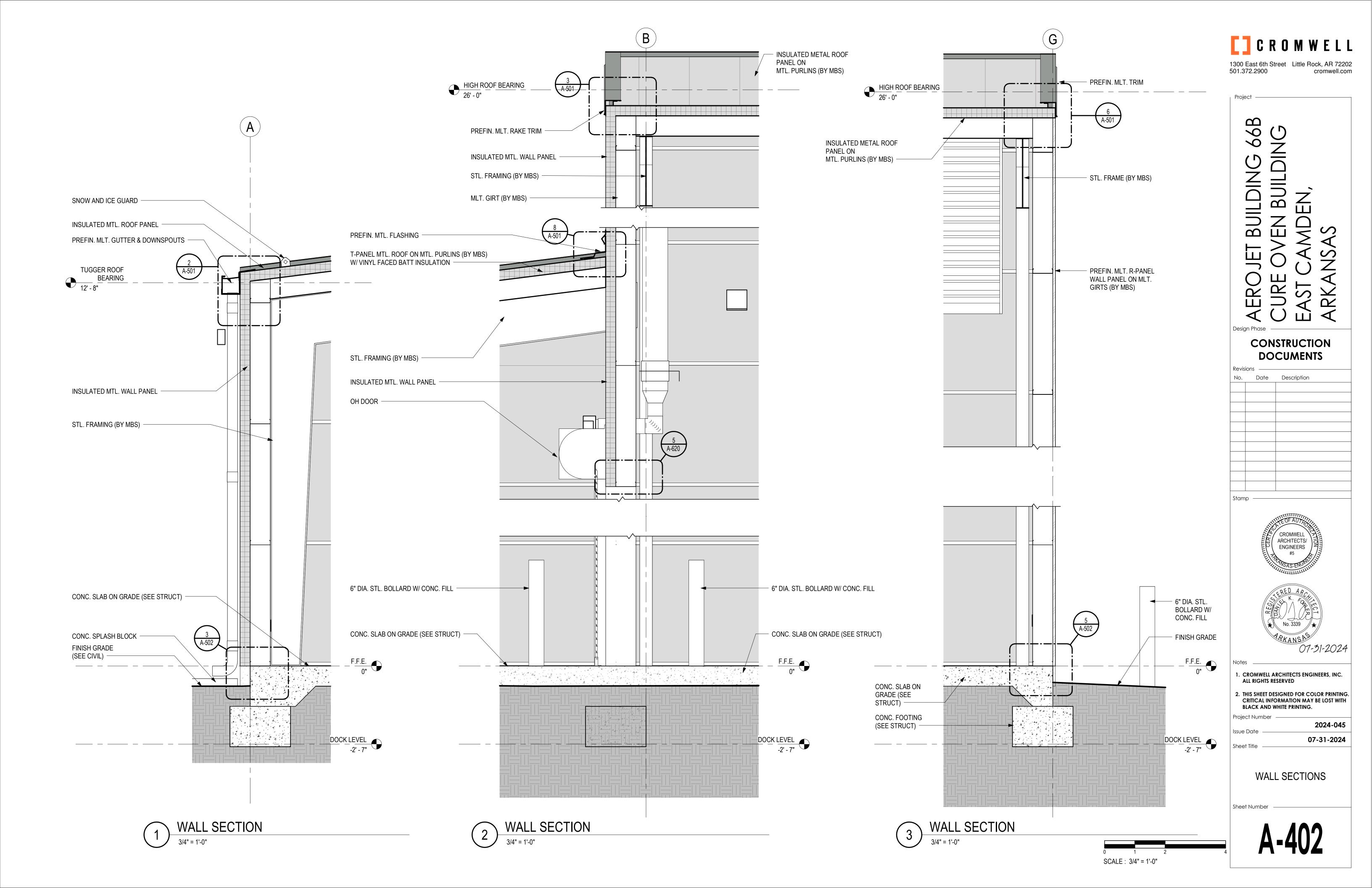
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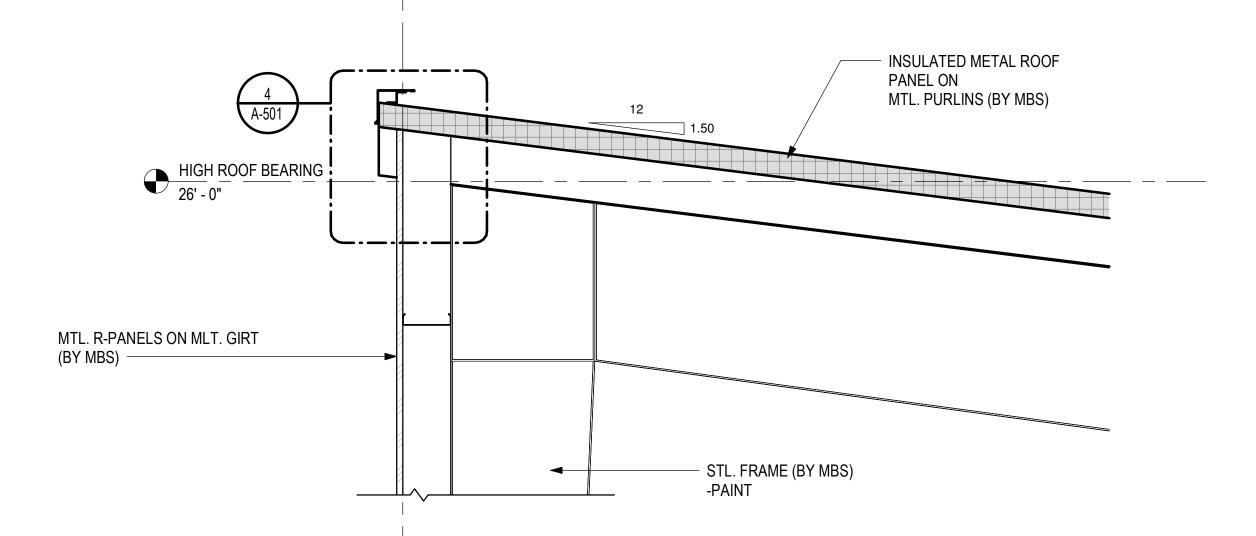
FOR NOTES)

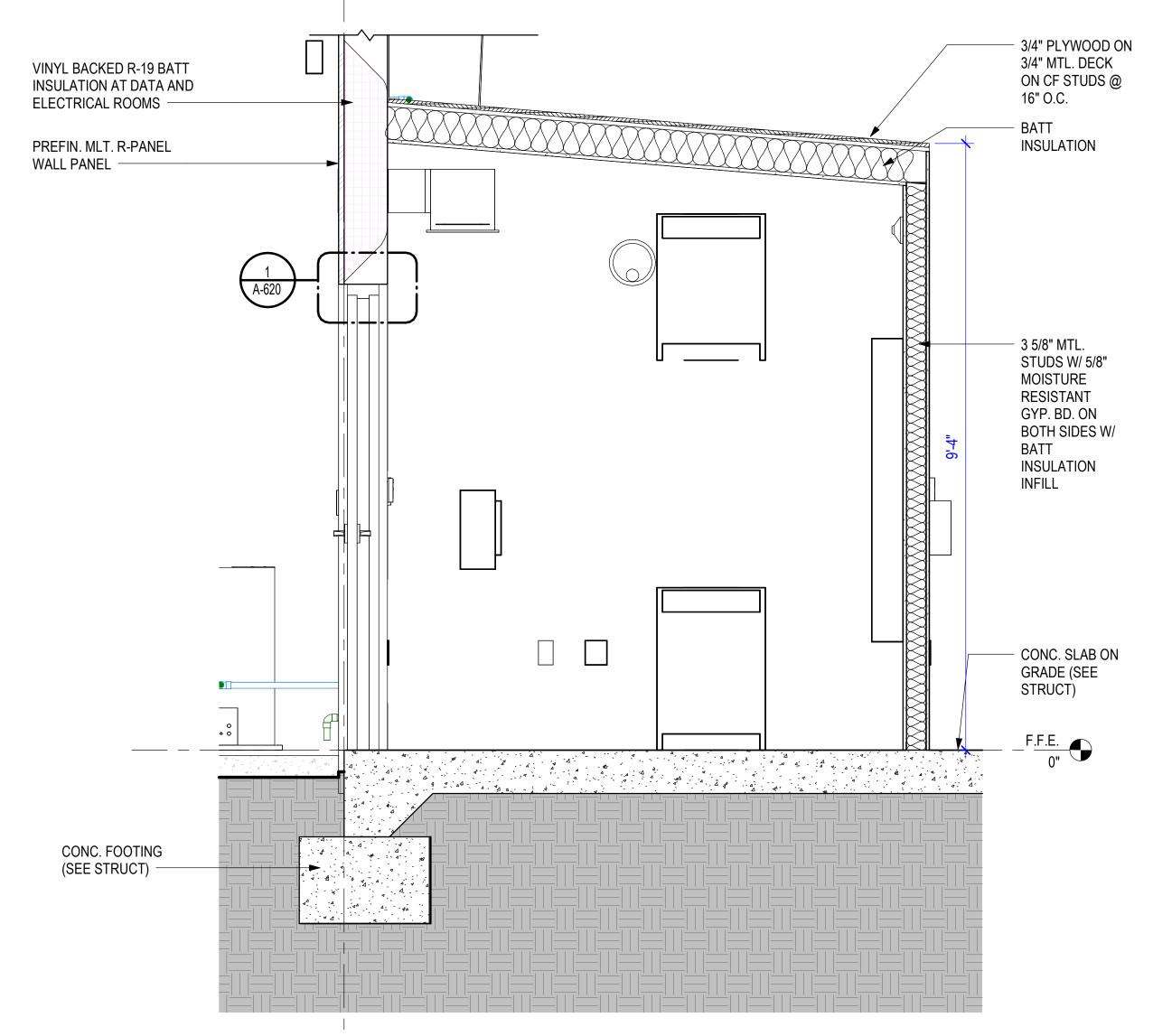
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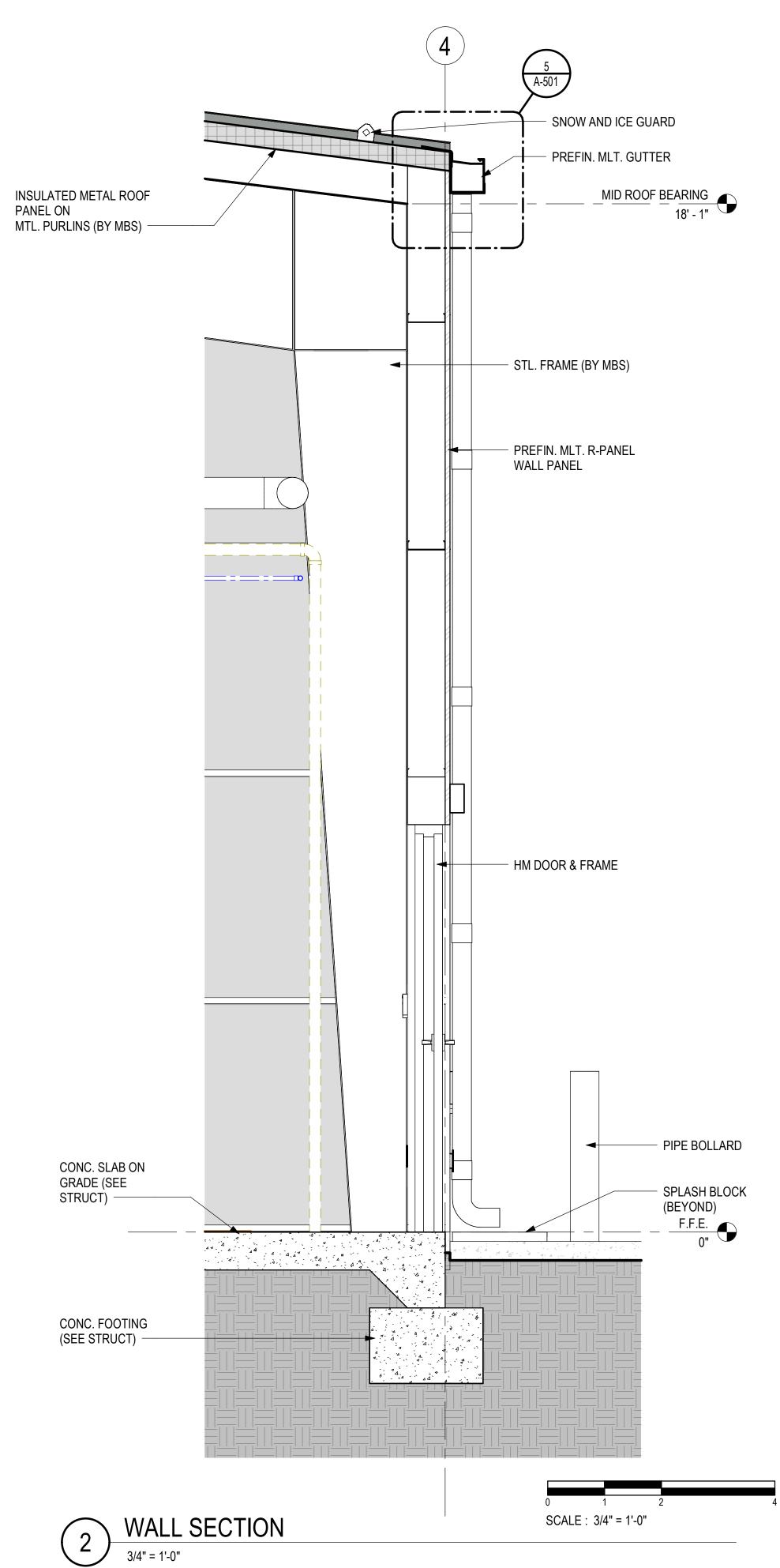






WALL SECTION

3/4" = 1'-0"



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Project

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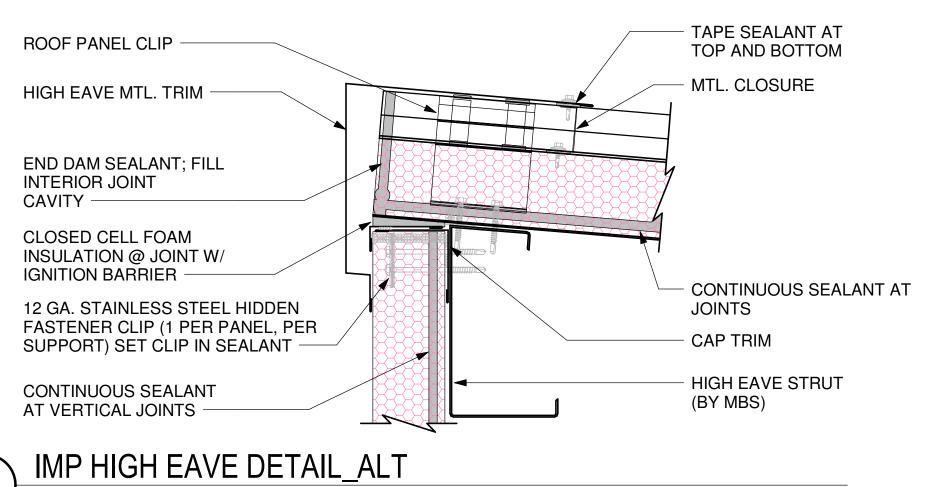
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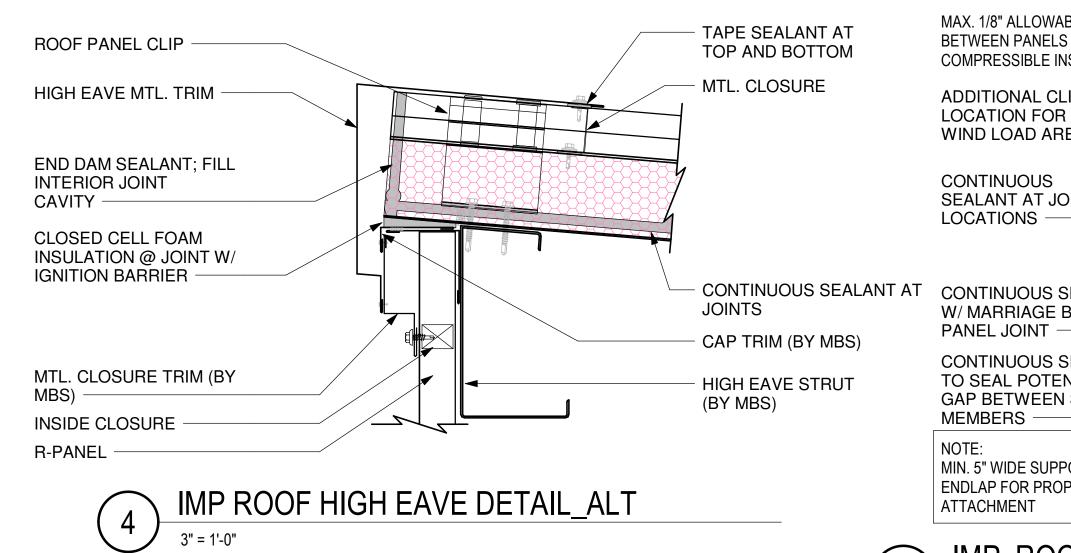
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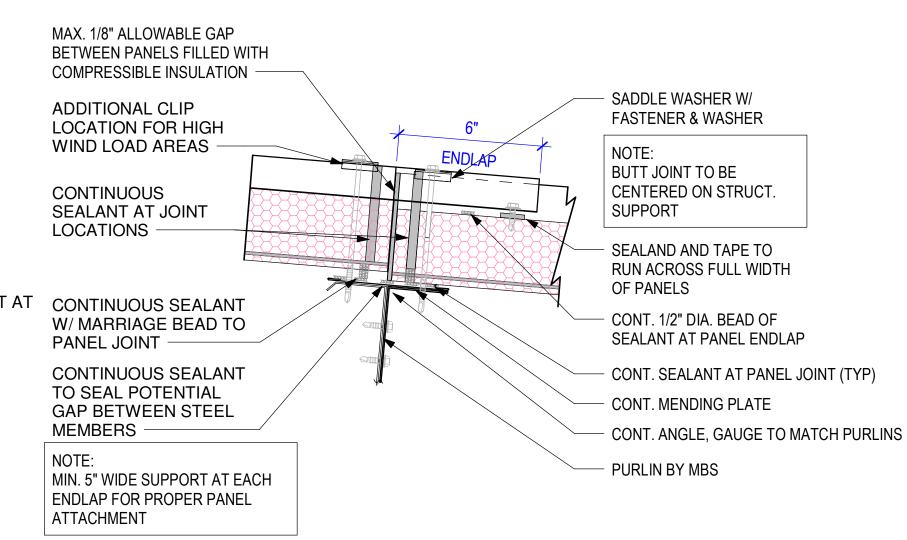
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Sheet Title

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IMP. ROOF ENDLAP DETAIL

BUTYL SEALANT

(BY MBS)

PREFIN. MLT. CAP TRIM INSULATION BY PANEL MANUF.

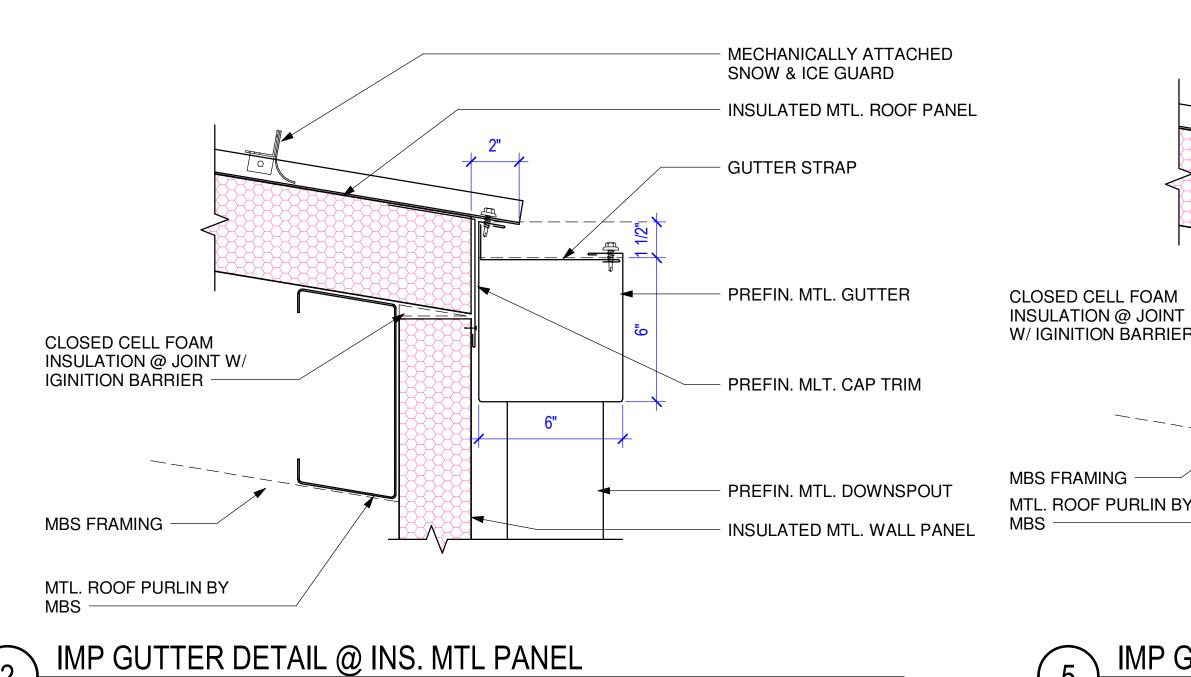
TRANSITION

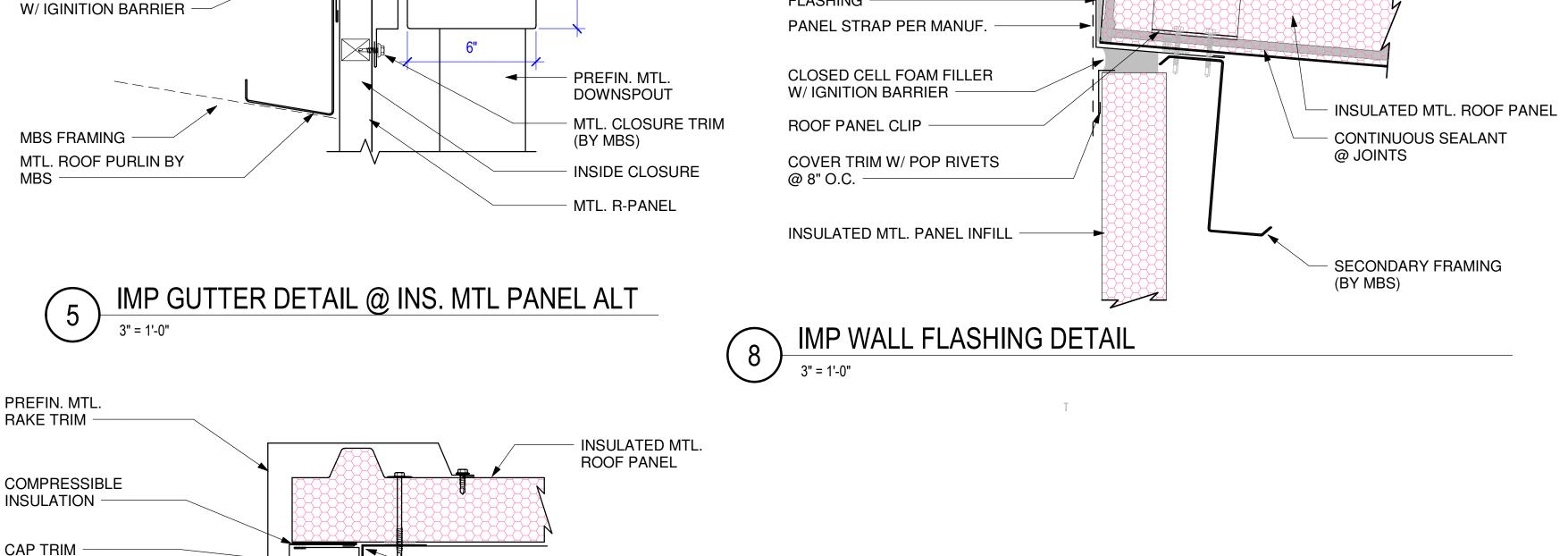
FLASHING

AT VERTICAL JOINT

SECONDARY FRAMING

FIELD FILL W/ EXPANDABLE





RAKE ANGLE

STRUCTURAL MEMBER BY MBS

CAP TRIM

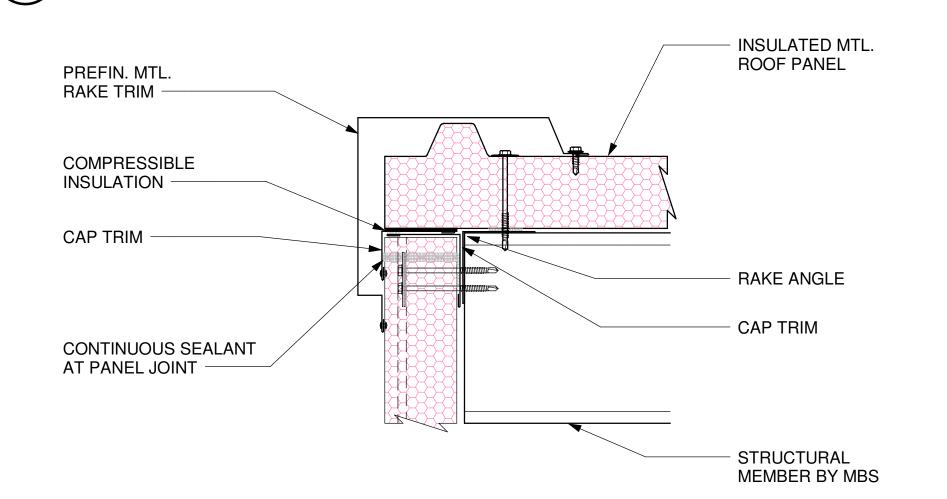
MECHANICALLY ATTACHED

INSULATED MTL. ROOF PANEL

GUTTER STRAP

PREFIN. MTL. GUTTER

SNOW & ICE GUARD



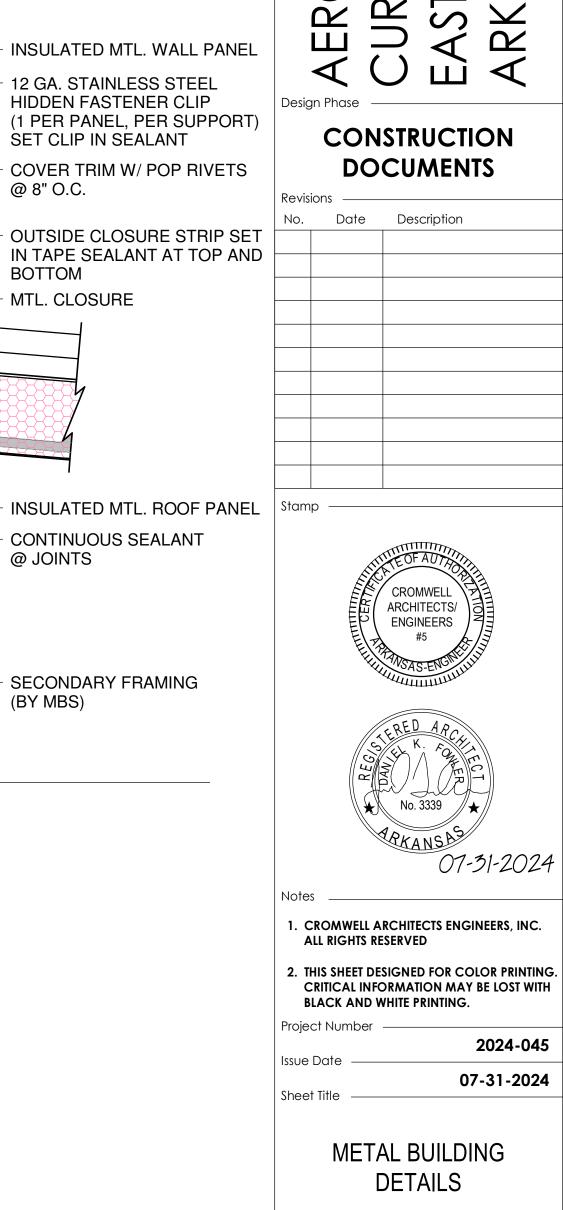


SCALE: 3" = 1'-0"

@ 8" O.C.

BOTTOM

MTL. CLOSURE



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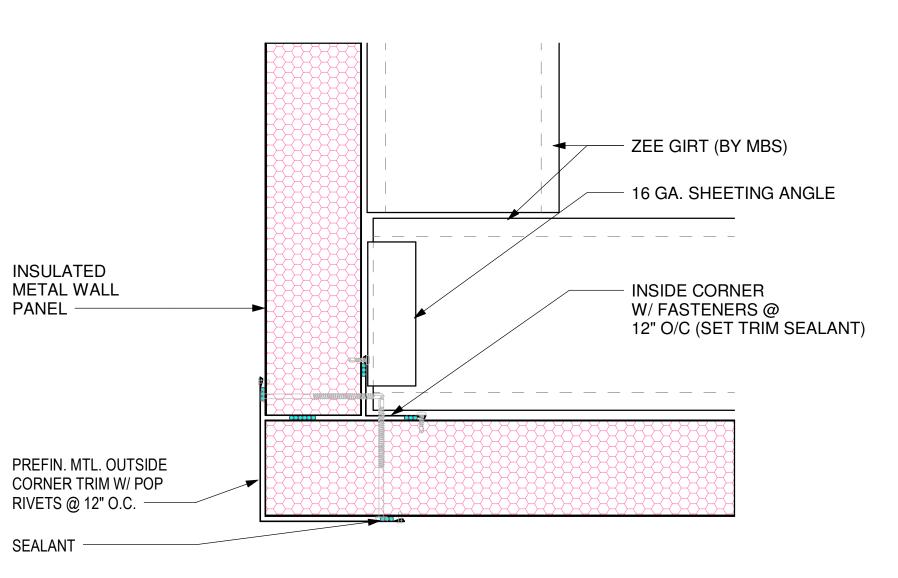
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IMP RAKE TRIM DETAIL

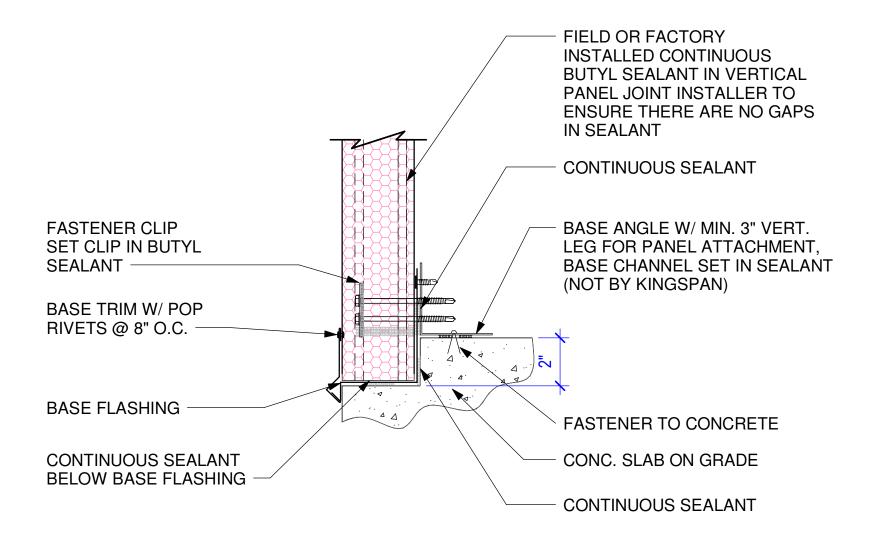
MTL. CLOSURE TRIM

INSIDE CLOSURE

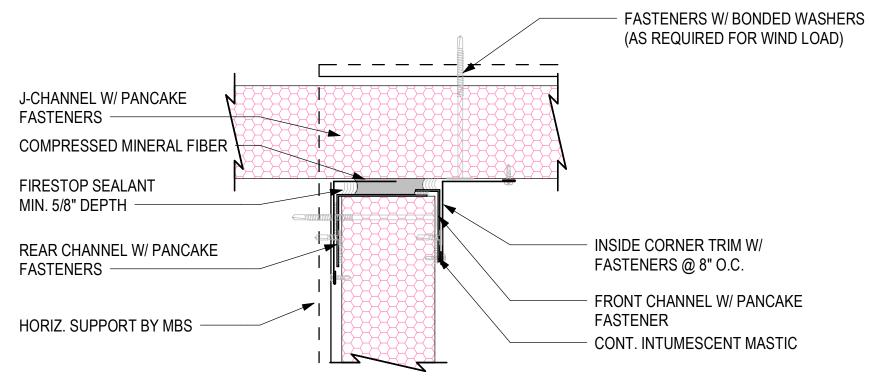
R-PANEL



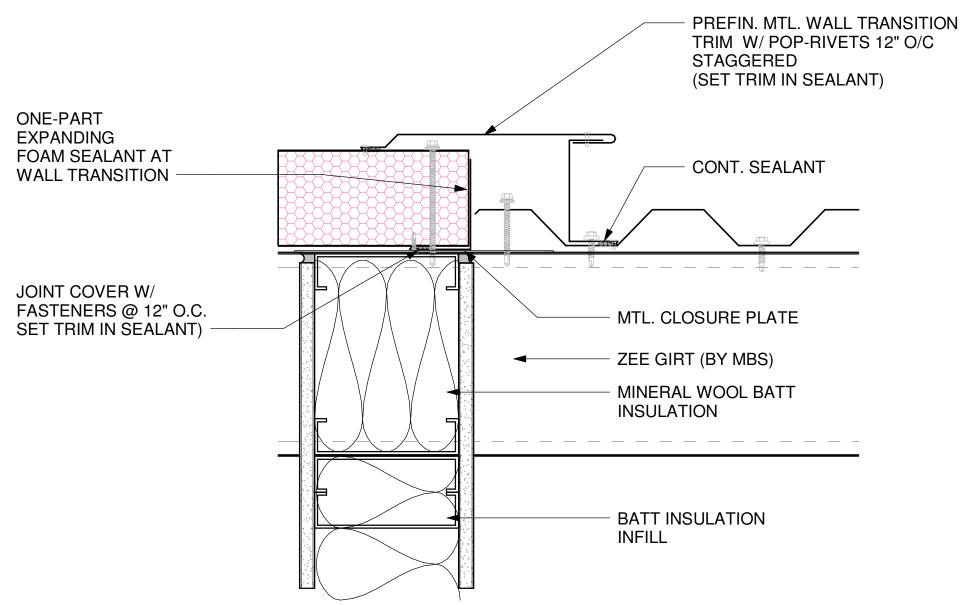






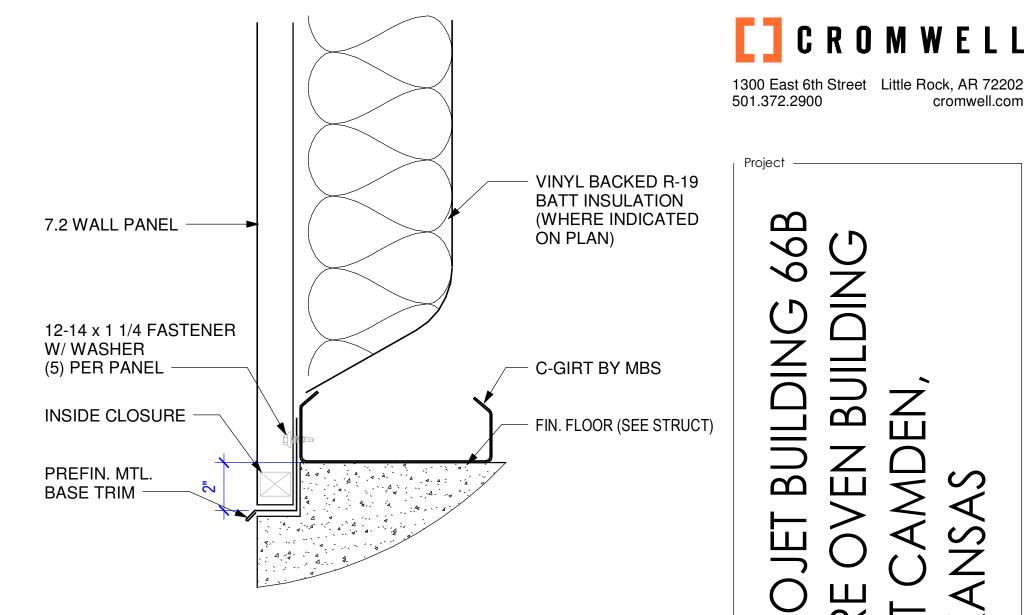


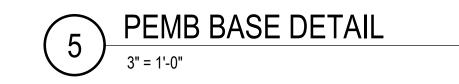




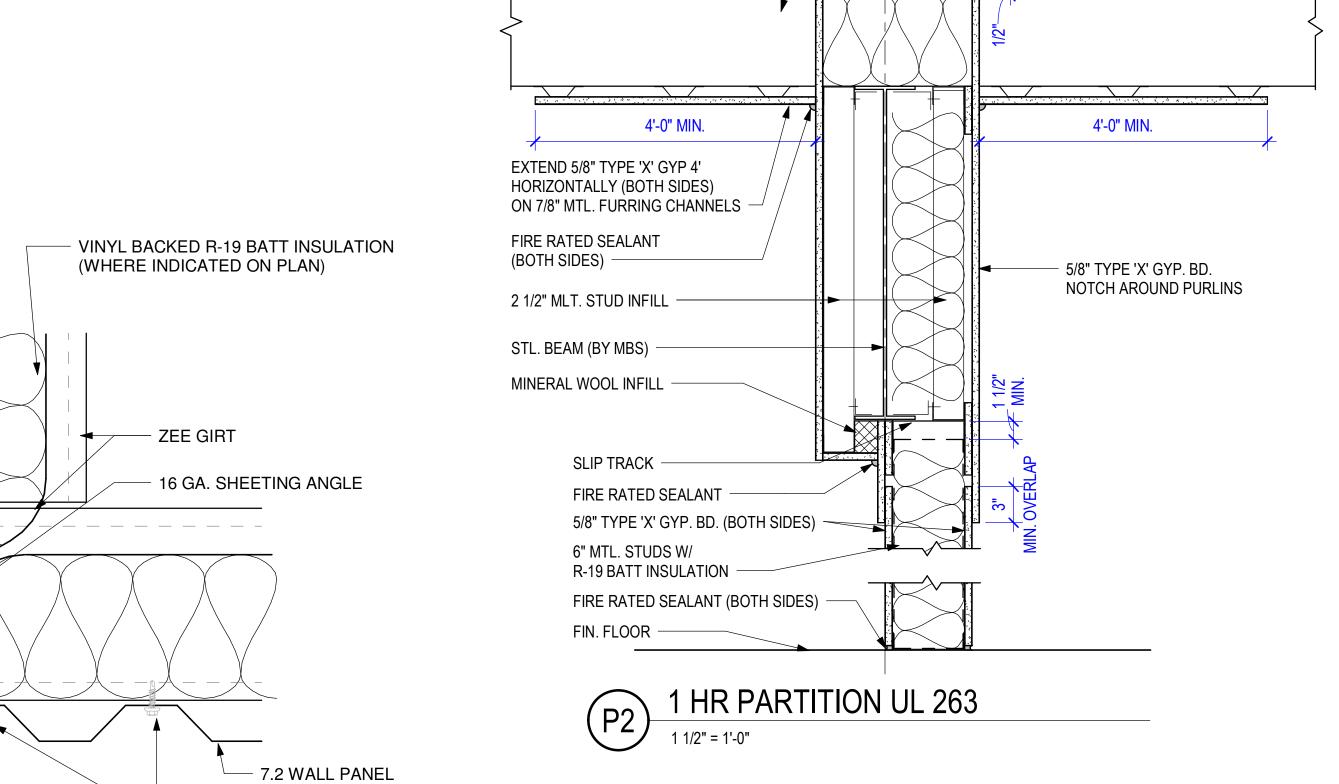
IMP TRANSITION DETAIL

PREFIN. MTL. OUTSIDE CORNER





COL



ROOF ASSEMBLY -

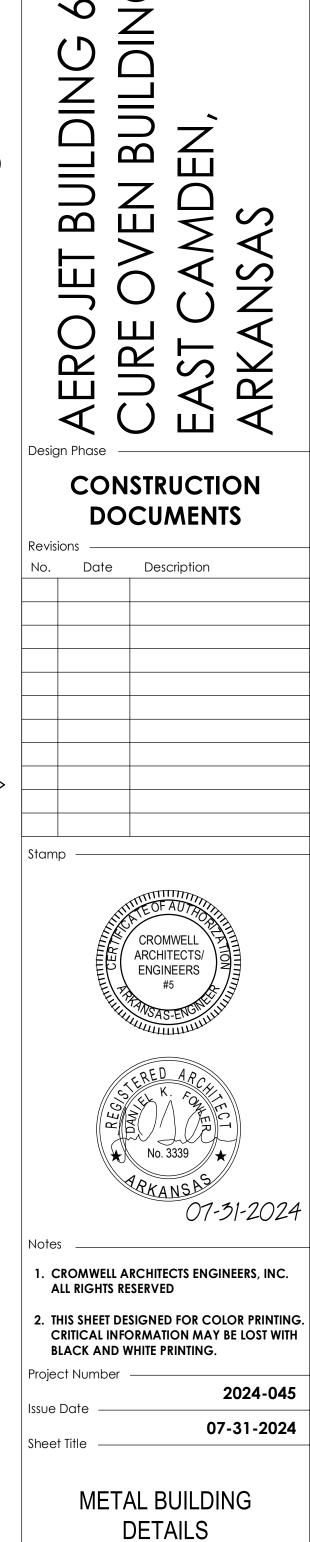
INFILL

MINERAL WOOL INSULATION

MTL. PURLIN (BY MBS)

@ 20" O.C. BETWEEN SUPPORTS SCALE: 1-1/2" = 1'-0" R-PANEL CORNER DETAIL SCALE: 3" = 1'-0"

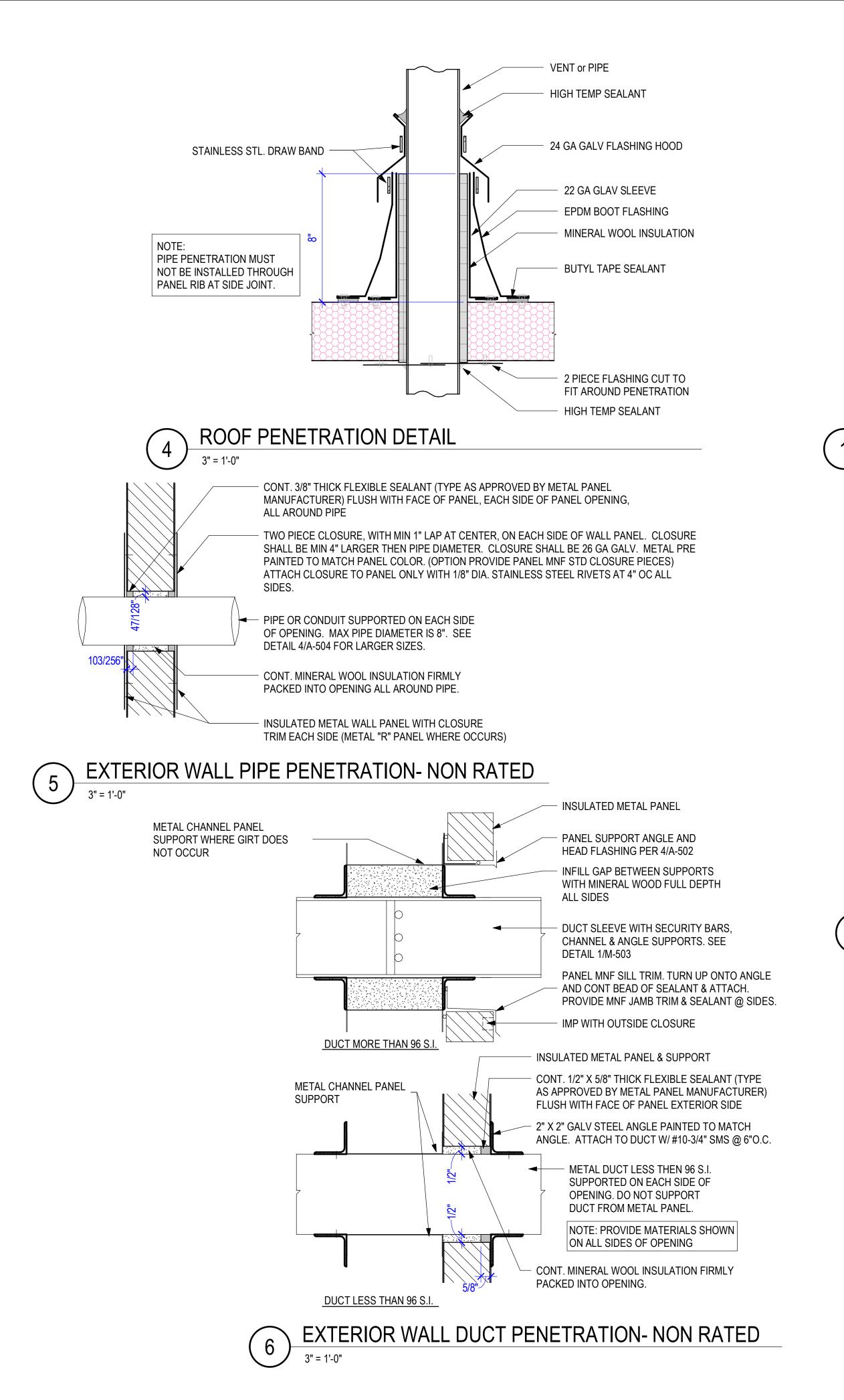
1/4-14 x 7/8 FASTENER W/ WASHER



Sheet Number

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9 9



DIRECTION OF \wedge DIRECTION OF \uparrow PANEL INSTALL PANEL INSTALL PANEL INSTALL TYP MTL. RIB CLOSURES CINCH STRAP STEP 1 STEP 2 STEP 3 INSTALL PANELS UP TO CURB LOCATION. INSTALL INSTALL CURB ON TOP OF BOTTOM PANELS AND INSTALL TOP RUN OF PANELS CUTTING THE PANELS AT EACH SIDE TO FIT. INSTALL CINCH BOTTOM RUN OF PANELS UP TO ONE RUN SUPPORT FRAMING (NOT SHOWN). APPLY TAPE SEALER TO SIDES AND UPSLOPE SIDE OF CURB. STRAPS AT EACH SIDE TO FORM COMPRESSION BEYOND CURB LOCATION. INSTALL BACK-UP PLATES AND TAPE SEALER TO BOTTOM PANELS. ROOF FLASHING @ PANEL SEAM CUT FOR CURB INSTALLATION CINCH STRAP PIPE OR DUCT SUPPORTED FROM BELOW METAL RIB CLOSURE Design Phase PRE FINISHED METAL COLLAR WITH CONT. CRICKET BEAD OF SILICONE SEALANT PREFABRICATED METAL ROOF CURB w/ CRICKET MIN. INSULATED METAL PANEL OR STANDING SEAM PANEL WHERE OCCURS PREFABRICATED RIB CAPS AT DOWNSLOPE OF CURB SUPPORT FRAMING. (BY MBS) -**ROOF PURLIN** BACK-UP PLATE TRIPLE BEAD TAPE SEALER SELF-DRILLING FASTENERS TO METAL SUPPORT METAL ROOF PURLIN ROOF CURB PARALLEL TO SLOPE PIPE OR DUCT SUPPORTED FROM BELOW PRE-FINISHED METAL COLLAR WITH CONT. BEAD OF SILICONE SEALANT PRE FINISHED INSULATED ALUMINUM ROOF CURB. FASTENERS AND BUTYL TAPE AS -RECOMMENDED BY PANEL MNF. CINCH STRAP -INSULATED METAL PANEL OR STANDING SEAM PANEL WHERE OCCURS Sheet Title METAL ROOF PURLINS SELF-DRILLING FASTENERS TO - METAL SUPPORT. SEE STRUCTURAL DETAILS METAL SUPPORT AS RECOMMENDED BY PANEL MNF Sheet Number ROOF CURB PERPENDICULAR TO SEAMS

BACK-UP PLATE

— ROOF SLOPE

TRIPLE BEAD TAPE SEALER

TRIPLE BEAD TAPE SEALER

BACK-UP PLATE

ROOF SLOPE

WELDED CAPS AT DOWNSLOPE
SIDE OF CURB

PREFABRICATED MTL. ROOF CURB

CRICKET

ROOF SLOPE

DIRECTION OF
PANEL INSTALL

CINCH STRAP

AEROJET BUILDIN CURE OVEN BUIL EAST CAMDEN,

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C R O M W E L L

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501.372.2900

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CONSTRUCTION DOCUMENTS

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Revisions

No. Date Description

CROMWELL

ARCHITECTS/
ENGINEERS
#5

RED ARCHITECTS/
ENGINEERS
#5

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#5

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ROOF DETAILS

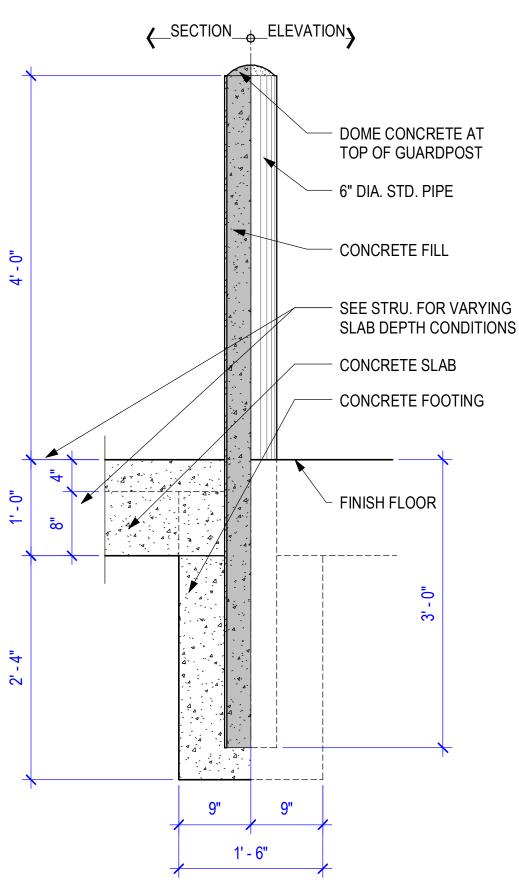
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	ROOM FINISH SCHEDULE														
	ROOM			NORTH V	VALL	SOUTH V	VALL	EAST W	ALL	WEST W	ALL	CEILIN	IG	ROOM	
NUMBER	NAME	FLOOR	BASE	MATERIAL	COLOR	NUMBER	REMARKS								
		·													
101	COOL-DOWN	RES-1/RES-2	RESB-1/RESB-2	IMP		CONC-1		IMP		IMP		EXP/GWB	P-1/EPT-1	101	
102	TUGGER ROOM	RES-1	RESB-1	IMP		IMP		IMP		IMP		EXP	P-1	102	
103	MAINT. ACCESS	RES-1	RESB-1	CONC-1		IMP		IMP		IMP		EXP/GWB	P-1/EPT-1	103	
104	BOILER ROOM	CONC		IMP		IMP		IMP		MRGWB	EPT-1	EXP/GWB	P-1/EPT-1	104	
105	ELECTRICAL	CONC		IMP		MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	105	
106	DATA	CONC		IMP		MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	MRGWB	EPT-1	106	

MATERIAL LEGEND				
-	"NO" OR "NONE"			
CONC	SEALED CONCRETE			
CONC-1	PAINTED CONCRETE			
EPT	EPOXY PAINT			
EXP	EXPOSED STRUCTURE			
IMP	INSULATED METAL PANEL			
MRGWB	MOISTURE RESISTANT GYPSUM WALL BOARD			
Р	PAINT			
RES	RESINOUS FLOORING			
RESB	RESINOUS BASE			

GENERAL NOTES:

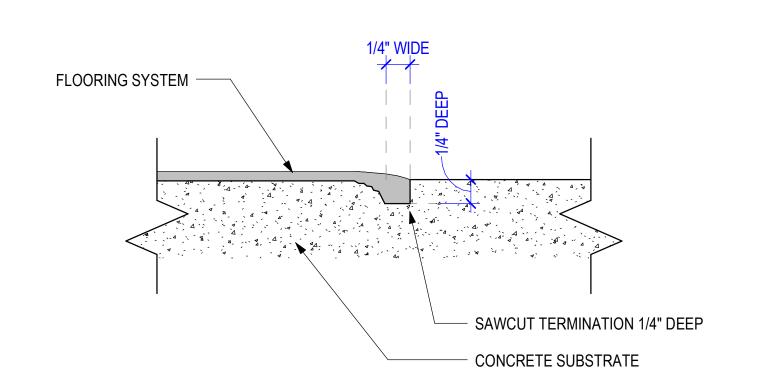
- 1. GALVANIZED HOLLOW METAL DOORS AND FRAMES TO BE PAINTED. COLOR: P-2.
- 2. RES-1 FLOOR TEXTURE TO BE SELECTED BY OWNER.
- 3. RES-2 RESINOUS FLOORING SYSTEM FOR OVEN AREA ONLY. SEE EXTENTS ON SHEET A-101.
- 4. FINAL COLOR SELECTIONS FOR RES, EPT, P, AND ALL METAL PANELS TO BE SELECTED BY OWNER.

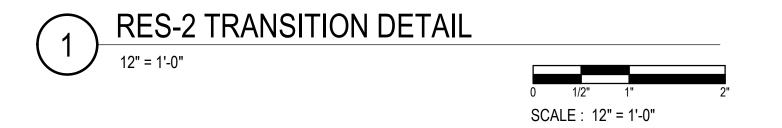


PIPE BOLLARD 1" = 1'-0"

FINISHES LEGEND

FLOO	FLOORS					
CONC	CONCRETE WITH SEALER					
RES-1	SHERWIN WILLIAMS, PRIMER: RESUFLOR MPE CLEAR APPIED 6-8 MILS TOPCOAT: RESUTILE HTS 100 CLEAR SATIN URETHANE. 3 MILS					
RES-2	SHERWIN WILLIAMS, BASE COAT: FASTOP SL45 SLURRY APPLIED. GROUT AND SEAL COATS: ELLADUR 4850 PIGMENTED POLYASPARTIC 15-20 MILS					
BASE						
RESB-1	8"H MONOLITHIC INTEGRAL COVE BASE TO MATCH RES-1					
RESB-2	8"H MONOLITHIC INTEGRAL COVE BASE TO MATCH RES-2					
WALL	S					
CONC-1	PAINTED CONCRETE; EPOXY PAINT; SEMI-GLOSS FINISH					
IMP	INSULATED METAL PANEL. FACTORY FINISH SELECTED FROM MANUFACTURER'S STANDARD OFFERING					
EPT-1	SHERWIN WILLIAMS, COLOR: SW7757 HIGH REFLECTIVE WHITE, WATER BASED EPOXY PAINT WITH SEMI GLOSS FINISH					
P-2	SHERWIN WILLIAMS, COLOR: AEROJET GRAY, SEMI-GLOSS FINISH (H.M. FRAMES/DOORS)					
CEILIN	NGS					
IMP	INSULATED METAL PANEL. FACTORY FINISH SELECTED FROM MANUFACTURER'S STANDARD OFFERING					
P-1	DRYFALL PAINT, COLOR: TO BE SELECTED BY OWNER.					





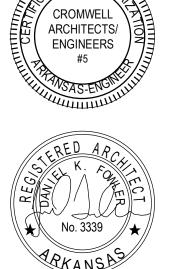


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CONSTRUCTION **DOCUMENTS**

Revisions —				
No.	Date	Description		

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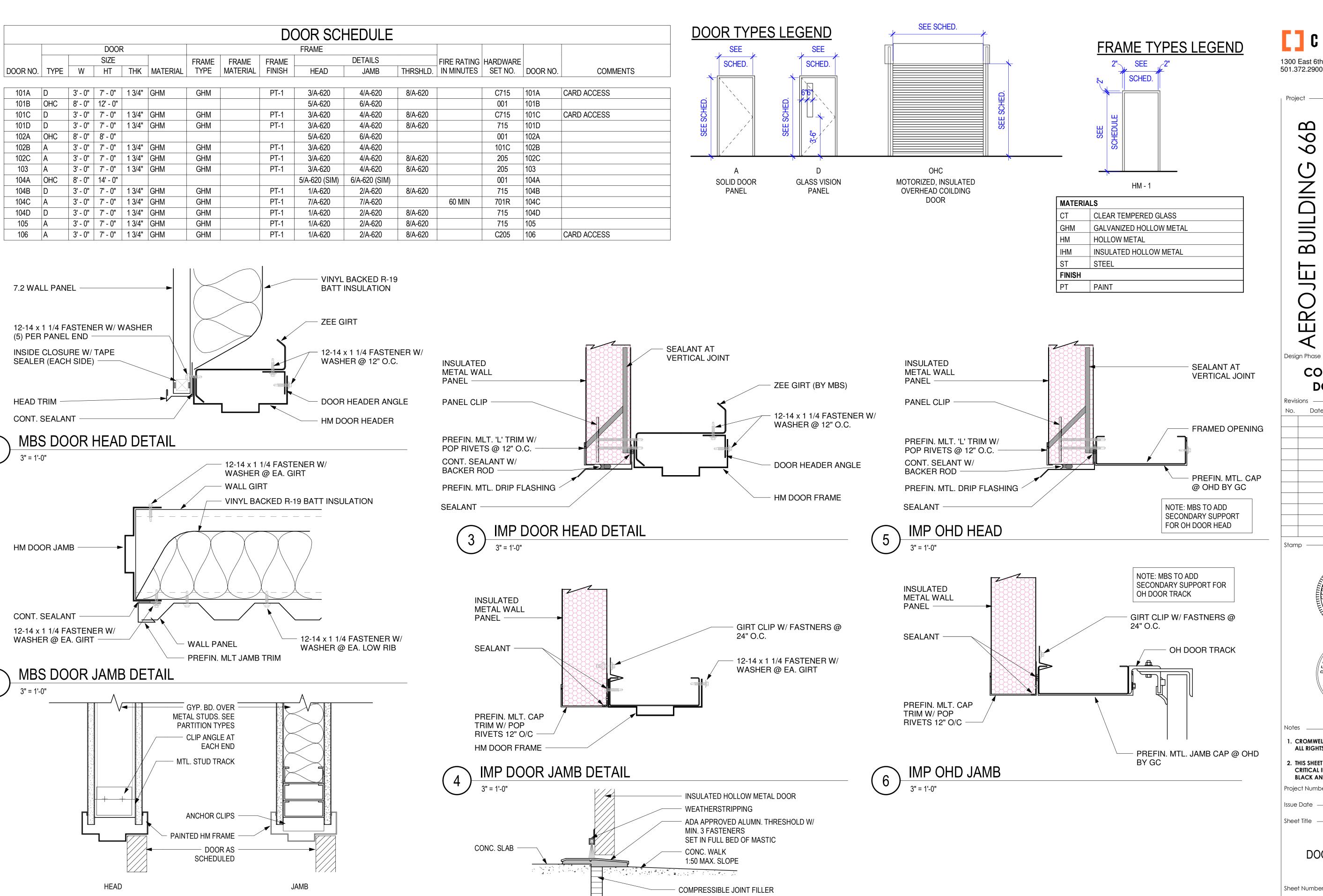
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Project Number -

2024-045 07-31-2024 Sheet Title

> **ROOM FINISH NOTES** AND LEGENDS

Sheet Number



HOLLOW METAL THRESHOLD

HM SINGLE SWINGING DOOR LESS THAN 4'-0" WIDE

HM KD DR FRAME-MTL STUD-LESS THAN 4'-0"

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CONSTRUCTION

DOCUMENTS Date Description Stamp CROMWELL ARCHITECTS/ **ENGINEERS**



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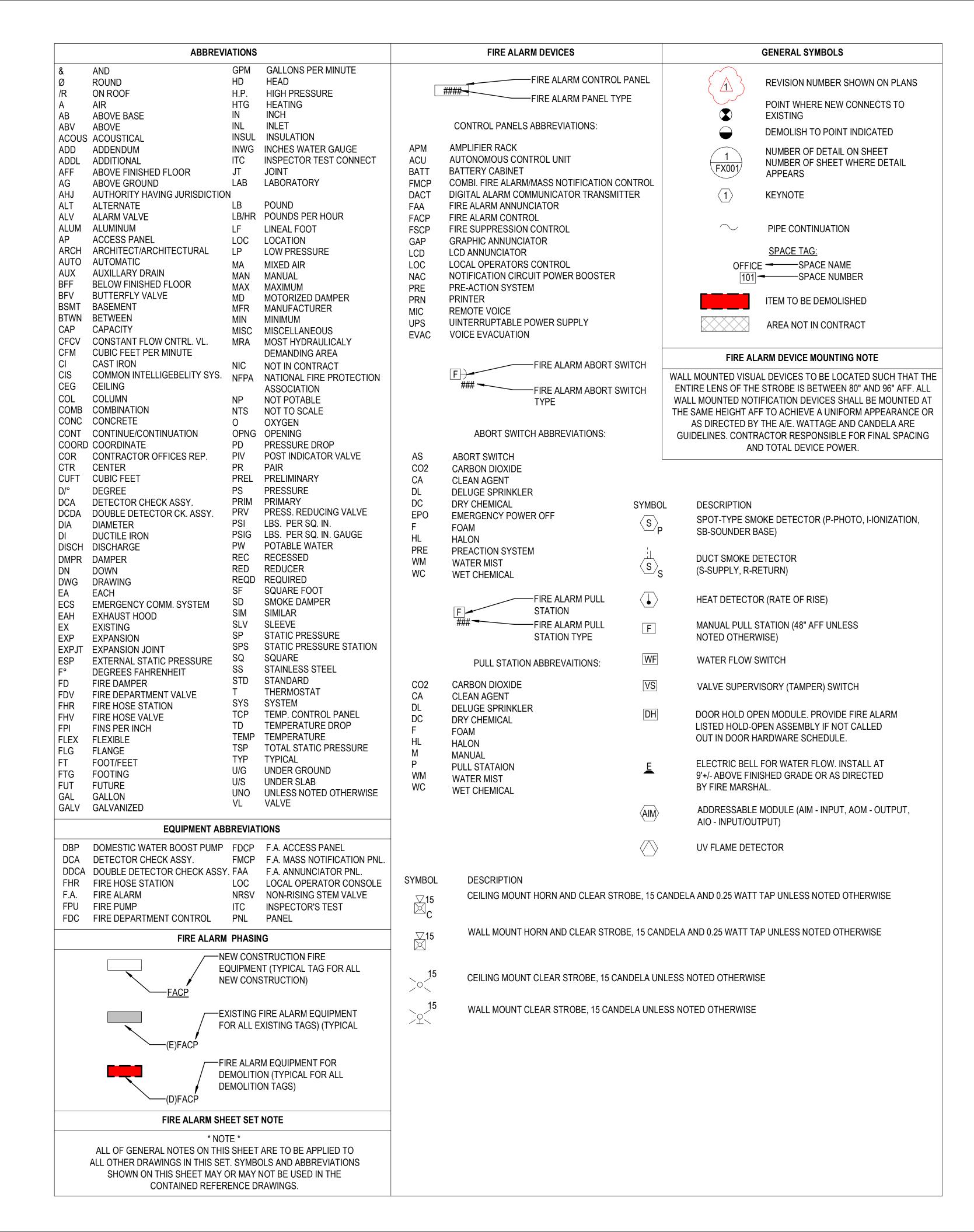
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2024-045 Issue Date 07-31-2024 Sheet Title

DOOR SCHEDULE

Sheet Number

SCALE: 3" = 1'-0"



GENERAL

- FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED TO THE LATEST EDITION OF NFPA 72, NFPA 70, AND LOCAL REQUIRMENTS.
- ALL FIRE ALARM INSTALLATIONS, INCLUDING PULLING OF WIRE AND MOUNTING OF DEVICES, SHALL HAVE OVERSIGHT OF A NICET LEVEL II FIRE ALARM TECHNICIAN OR HIGHER.
- STROBES SHALL BE SYNCHRONIZED PER NFPA 72
- ALL FIRE ALARM CABLE SHALL BE RUN IN RED FACTORY COLORED CONDUIT
- THESE DESIGN DOCUMENTS PROVIDE GENERAL SPACING, LOCATION, AND COORDINATION CRITERIA. CONTRACTOR SHALL BE RESPONSIBLE FOR CIRCUIT CONFIGURATION, SYSTEM PERFORMANCE, SOFTWARE CONFIGURATION, DEVICE PROGRAMMING, SYSTEM COMMISSIONING, AND SYSTEM WARRANTY.
- CONTRACTOR SHALL SUBMIT FIRE ALARM, DATA CUT-SHEETS, AND VOLTAGE DROP CALCULATIONS TO AHJ AND A/E FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY WORK ON THE FA SYSTEM.
- NO FA DOCUMENTS/PLANS SHALL BE USED FOR INSTALLATION OF THIS SYSTEM UNLESS THEY CONTAIN A REVIEW AND APPROVAL STAMP FROM THE AHJ AND THE A/E. THE LOCAL AHJ HAS THE AUTHORITY TO STOP ANY WORK UNTIL SUCH PLANS ARE ON SITE AND IN USE
- SEPARATE FIRE ALARM SPECIFICATIONS CONTAIN VERY DETAILED INFORMATION ABOUT THIS SYSTEM AND SHALL BE FOLLOWED, ON-SITE AND AVAILABLE DURING ANY CONSTRUCTION
- SECONDARY POWER PERFORMANCE TO MEET NFPA 72. 24 HOURS OF STANDBY POWER FOLLOWED BY 15 MINUTES OF ALARM FOR ALL CONNECTED DEVICES AT MAXIMUM LOAD. SECONDARY POWER FOR THE SYSTEM SHALL ALSO BE DESIGNED TO OPERATE MAXIMUM CONNECTER ALARM LOAD FOR 60 MINUTES IMMEDIATELY FOLLOWING DISCONNECTION OF PRIMARY POWER.
- CIRCUITS TO BE 24V TYPICAL

LOCATION / SPACING

- IN ACCORDANCE WITH 2019 NFPA 72, STROBES MAY BE MORE THAN 15 FEET FROM THE END OF A CORRIDOR WHEN ROOM SPACING CRITERIA APPLIES USING THE APPROPRIATE CANDELA
- WALL MOUNTED SPEAKER, STROBES, OR SPEAKER/STROBES SHALL BE AT 96" OR 6" BELOW THE CEILING, WHICHEVER IS LOWER.
- ALL SMOKE DETECTORS SHALL BE LOCATED WHERE THEY CAN BE READILY SERVICED.
- ALL SMOKE DETECTORS SHALL BE CEILING MOUNTED OR WITHIN 12" OF THE CEILING.
- SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 3' OF AN AIR-SUPPLY OR RETURN GRILLE PER MFG CRITERIA AND APPENDIX 'A' OF NFPA 72.
- EACH POWER BOOSTER PANEL OR FIRE ALARM PANEL SHALL BE PROTECTED BY A SMOKE DETECTOR. WHEN PROVIDED, AREA DETECTORS WITHIN THE SAME SPACE WILL SATISFY THIS
- AIR HANDLER SYSTEMS OVER 2,000 CFM SHALL BE PROVIDED WITH MEANS TO SHUT DOWN UPON THE DETECTION OF SMOKE. THESE DETECTORS SHALL NOT INITIATE A GENERAL FIRE ALARM.
- DAMPER AND HVAC SMOKE DETECTORS SHALL BE PROVIDED BY THE FIRE ALARM CONTRACTOR, LISTED WITH THE FIRE ALARM SYSTEM, AND INCORPORATE ADDRESSABLE MODULES.
- WHERE APPLICABLE, SMOKE DETECTORS FOR AIR-HANDLER SHUT DOWN SHALL BE ON BOTH SUPPLY AND RETURN DUCTS.
- 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. WATTAGE AND CANDELA ARE GUIDELINES. CONTRACTOR RESPONSIBLE FOR FINAL SPACING AND TOTAL DEVICE POWER.

PERFORMANCE

- ANY SMOKE DETECTOR THAT HAS BEEN INSTALLED PRIOR TO THE CONSTRUCTION CLEANUP OF ALL TRADES AND WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER AND LOCAL AHJ SHALL BE MARKED IN A MANNER THAT WILL IDENTIFY IT FROM RE-USE AND SHALL BE REPLACED PRIOR TO COMMISSIONING OF THE SYSTEM OR TURNING OVER TO THE OWNER. SUCH DETECTORS SHALL BE REPLACED AT THE SOLE EXPENSE OF THE INSTALLING CONTRACTOR.
- DUCT DETECTORS SHALL BE MONITORED FOR INTEGRITY AND PROVIDE A SUPERVISORY SIGNAL AT THE FIRE ALARM PANEL. AIR HANDLER SYSTEMS SHALL BE RAN AND BLOWN OUT PRIOR TO INSTALLATION OF SMOKE DETECTORS.
- FIRE ALARM AUDIBLE ALERT SIGNALS SHALL BE SET TO TEMPORAL CODE PER NFPA 72.
- UNLESS OTHERWISE NOTED THE FOLLOWING MINIMUM SURVIVABILITY CRITERIA SHALL BE MET: SIGNALING LINE CIRCUITS CLASS "B", AND NOTIFICATION CIRCUITS CLASS "B"
- INITIATING DEVICES SHALL BE INDIVIDUALLY ADDRESSABLE.

ACCEPTANCE TESTING

- 1. A COMPLETED AND SIGNED RECORD (CERTIFICATE) OF COMPLETION FORM SHALL BE PROVIDED BY THE CONTRACTOR TO THE AHJ, OWNER, AND A/E PRIOR TO COMMISSION TESTING. THIS CERTIFICATE SHALL CERTIFY THAT THE CONTRACTOR HAS PRE-TESTED EVERY DEVICE AND FUNCTION OF THE SYSTEM AND REPAIRED ANY DEFICIENCIES PRIOR TO THE COMMISSIONING TEST.
- ALL SMOKE DETECTORS SHALL BE COMMISSIONED USING CANNED SMOKE OR A METHOD THAT WILL FUNCTIONALLY TEST THE SMOKE CHAMBER. THE USE OF MAGNETS FOR COMMISSION TESTING OF SMOKE DETECTORS IS STRICTLY PROHIBITED.
- EACH AND EVERY DEVICE SHALL BE TESTED DURING COMMISSIONING AND PRIOR TO BEING TURNED OVER TO THE OWNER.
- EACH NOTIFICATION CIRCUIT SHALL BE TESTED UNDER STANDBY/BATTERY POWER. ANY CIRCUIT THAT MEASURES LESS THAN 20 VOLTS DC OR THE NAMEPLATE VOLTAGE, WHICHEVER IS HIGHER, SHALL BE CONSIDERED AS FAILING THE DESIGN. NOTE: SOME SYSTEMS INCORPORATING SYNCHRONIZING MODULES CAN IMPAIR RESULTS. IF THE MODULE CANNOT BE BYPASSED FOR VOLTAGE READINGS, THE MANUFACTURER SHOULD BE CONTACTED FOR GUIDANCE. WHEN VOLTAGE CANNOT BE MEASURED, CIRCUIT WIRE RESISTANCE READINGS AND DEVICE LOAD MAY BE COMPARED TO DESIGN CALCULATIONS (MAKE SURE CIRCUIT IS REMOVED FROM POWER SUPPLY WHEN OBTAINING WIRE RESISTANCE). ONLY A QUALIFIED TECHNICIAN EMPLOYED BY THE INSTALLING CONTRACTOR SHOULD PERFORM THIS FUNCTION.
- EACH CIRCUIT'S END-OF-LINE VOLTAGE SHALL BE DOCUMENTED FOR COMPARISON TO THE DESIGN **END-OF-LINE CALCULATIONS.**



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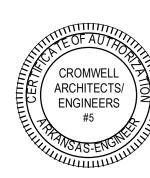
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Design Phase

CONSTRUCTION **DOCUMENTS**

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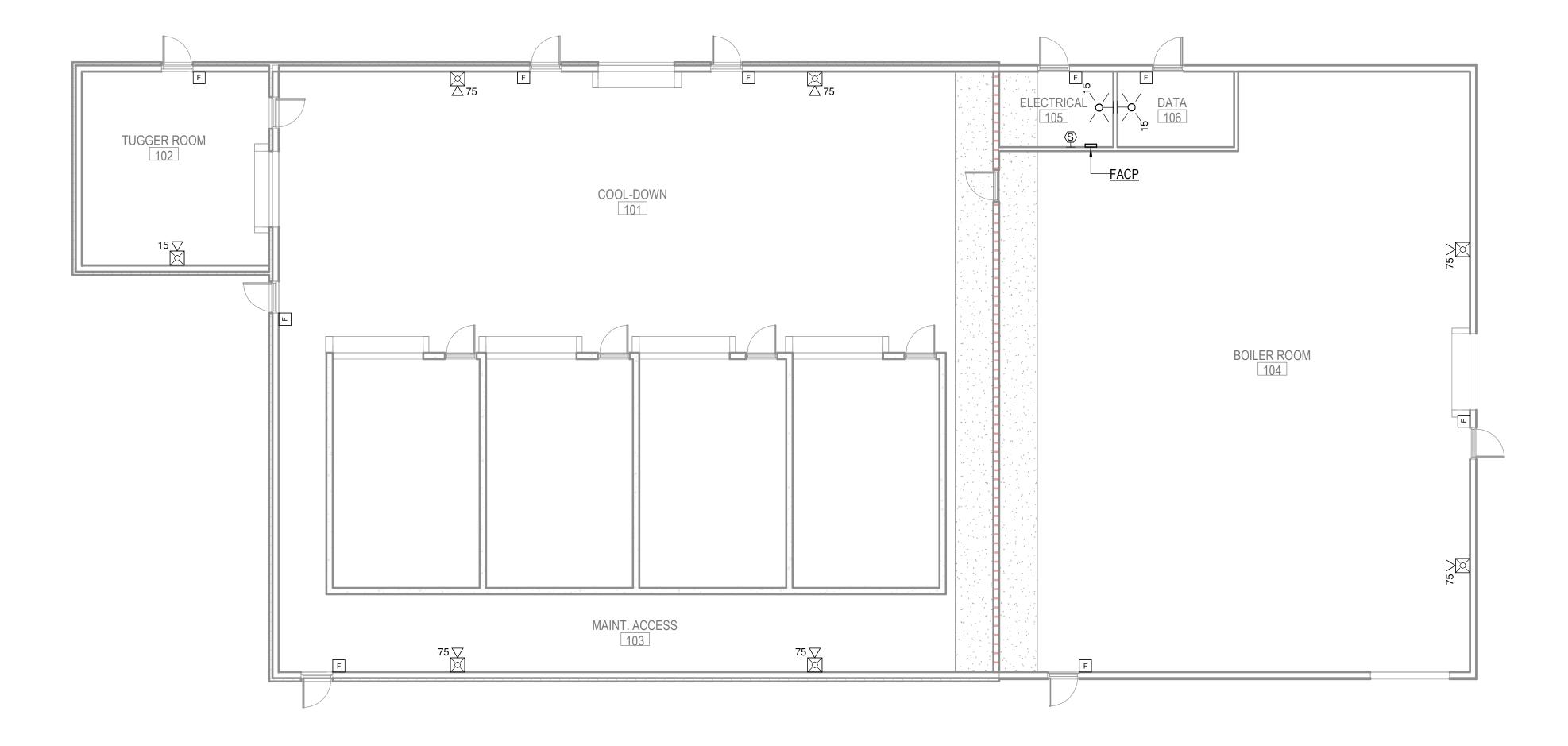
2024-045 Issue Date 07-31-2024 Sheet Title -

> FIRE ALARM LEGEND AND NOTES

Sheet Number

NOTE:

COOL-DOWN 101 AND MAINTENANCE ACCESS 103 ARE CLASS II DIVISION 1 LOCATIONS. ALL ELECTRICAL FIXTURES AND DEVICES PROVIDED IN THESE AREAS SHALL BE LISTED AND INSTALLED IN ACCORDANCE WITH 2020 NFPA 70.





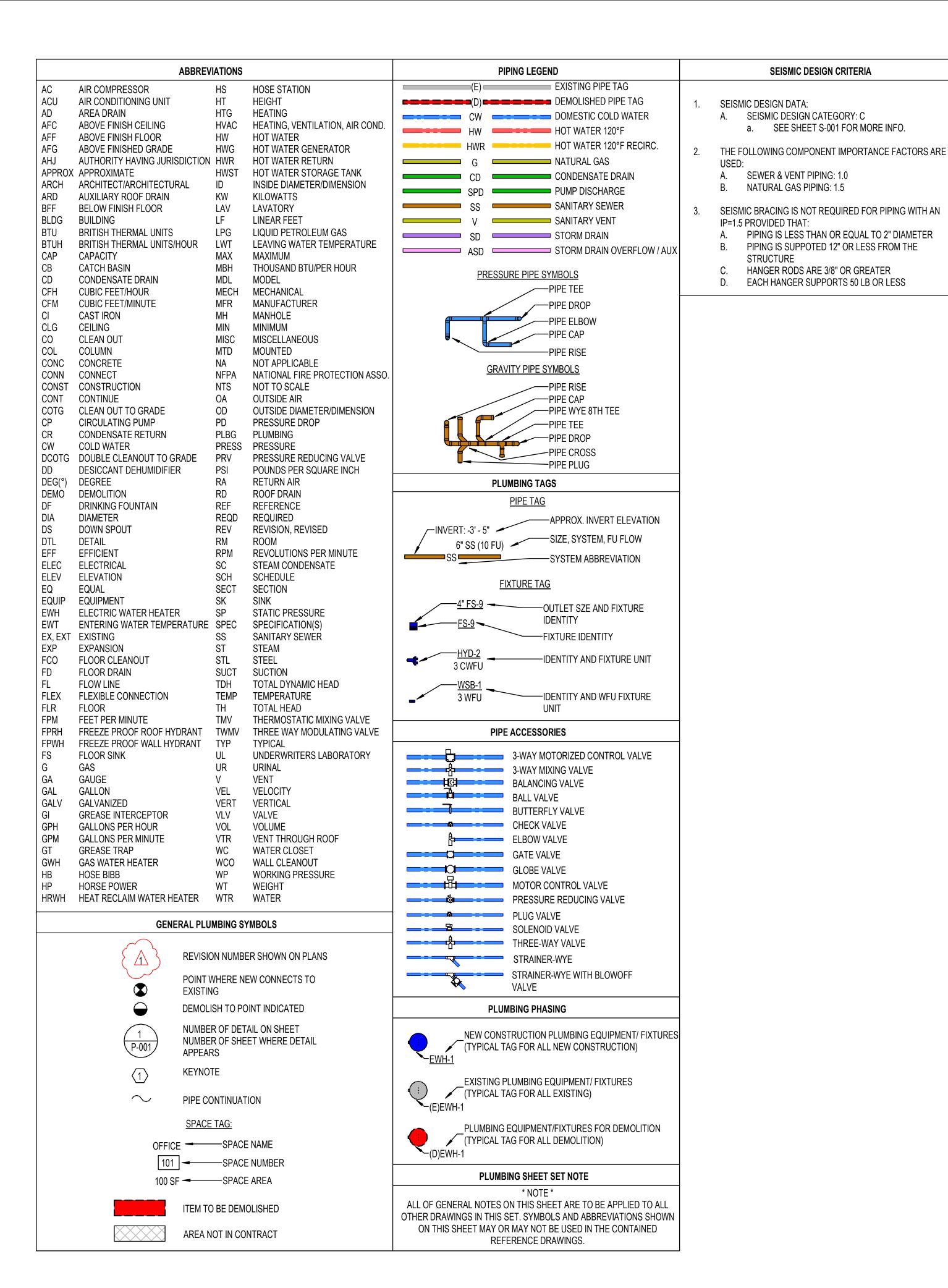


66B BUILDING 66B FN BUILDING Z H AEROJET CURE OV CURE CONSTRUCTION **DOCUMENTS** Date Description No. CROMWELL ARCHITECTS/ ENGINEERS CROMWELL ARCHITECTS ENGINEERS, INC. ALL RIGHTS RESERVED 2. THIS SHEET DESIGNED FOR COLOR PRINTING. CRITICAL INFORMATION MAY BE LOST WITH BLACK AND WHITE PRINTING. Project Number — 2024-045 07-31-2024 Sheet Title -

FIRE ALARM CEILING

PLAN

Sheet Number -



PLUMBING GENERAL NOTES

1 ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES

SEISMIC DESIGN CRITERIA

SEE SHEET S-001 FOR MORE INFO.

- 2 ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) IF INFORMATION CONFLICTS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS FOR COMPLETE INFORMATION
- BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (HVAC, ELECTRICAL, STRUCTURAL, ETC.). IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.
- 4 EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
- 5 CONTRACTOR SHALL PAY ALL UTILITY FEES & CHARGES AS PART OF BASE BID IN THE CONTRACT
- 6 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES; i.e., ARCHITECTURAL, HVAC, ELECTRICAL, STRUCTURAL, FIRE PROTECTION AND CIVIL PRIOR TO CONSTRUCTION
- 7 THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS, SIZES AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION; i.e., SANITARY SEWER, FIRE PROTECTION, DOMESTIC WATER AND NATURAL GAS. ALL SERVICES SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING, EXCEPT WHERE SHOWN OTHERWISE. SEE SITE UTILITY DRAWINGS FOR CONTINUATION OF ALL SERVICE LINES
- 8 PROVIDE ISOLATION VALVES AT EACH FIXTURE GROUP OR BATTERY OF FIXTURES IN THE DOMESTIC CW, HW, HWR AND GAS PIPING. VALVES SHALL BE EASILY ACCESSIBLE. WHERE HARD CEILINGS ARE LOCATED. VALVES SHALL BE ACCESSED THROUGH ACCESS PANELS. ACCESS PANELS SHALL BE COORDINATED WITH ARCHITECT PRIOR TO CONSTRUCTION
- 9 PROVIDE STOP VALVES AT ALL PLUMBING FIXTURES ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC., SHALL BE CHROME PLATED AND INSTALLED TIGHT TO WALL. WHERE PIPING IS EXPOSED, CHROME PLATED PIPE SHALL BE USED.
- 10 ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- 11 SLOPE 2-1/2" AND SMALLER DRAIN WASTE AND VENT (DWV) LINES AT MIN, (2%) 1/4" FALL PER FT., 3" TO 6" DWV LINES AT MIN. (1%) 1/8" FALL PER FT. SANITARY SEWER AND WATER SHALL BE A MINIMUM OF 10' APART OR THE DOMESTIC WATER SERVICE SHALL BE 12" ABOVE THE TOP OF THE SEWER LINE, AT ITS HIGHEST POINT, IF PLACED IN SAME TRENCH.
- 12 PROVIDE ALL FITTINGS, TRANSITIONS, COUPLINGS, ADAPTERS, UNIONS, AND OTHER ACCESSORIES NEEDED TO COMPLETE CONNECTIONS AND PROPER OPERATIONS OF PLUMBING FIXTURES AND PLUMBING EQUIPMENT
- 13 REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF
- 14 PROVIDE CLEANOUTS IN ALL SEWERS, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 100 FEET, AT EACH CHANGE OF DIRECTION GREATER THAN 45°, AND ALL VERTICAL STACKS AT A HEIGHT OF 30" ABOVE FINISH FLOOR AT THE BASE OF EACH STACK.
- 15 WHERE WATER PRESSURES EXCEED 80 PSI, PROVIDE WATER PRESSURE REDUCING VALVES (PRV) CONFORMING TO ASSE 1003 WITH STRAINER IN WATER SUPPLY LINES, SETTING AT 80 PSI. SEE CODE AND MANUFACTURER INFORMATION FOR ACCEPTABLE PRESSURE REQUIREMENTS.
- 16 ALL PIPING PENETRATIONS OF THE RATED CEILING AND WALL MUST BE MADE WITH METAL PIPE OR UL LISTED APPROVED DEVICES. FIRE STOP ALL PIPE PENETRATIONS THRU RATED WALLS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, RATINGS AND FIRE STOPPING DETAILS
- 17 DO NOT ROUTE ANY PIPING OVER ELEC. ROOMS, COMPUTER ROOMS, OR ELEC. PANELS
- 18 INSTALL AN AGA LISTED NATURAL GAS COCK, DIRT LEG AND UNION IMMEDIATELY UPSTREAM OF EQUIPMENT CONNECTIONS. AS NOTED ON DRAWINGS PROVIDE AN AGA LISTED VENT LIMITING GAS REGULATOR. GAS REGULATORS SHALL NOT BE INSTALLED IN AIR PLENUMS (SEE HVAC PLANS FOR AIR PLENUM LOCATIONS). PAINT ALL NATURAL GAS PIPING WITH TWO COATS OF OIL BASED YELLOW PAINT IN ALL LOCATIONS NOT SPECIFIED BY ARCHITECT.
- 19 ALL DOMESTIC WATER PIPING ROUTED IN AREAS SUBJECT TO FREEZING TEMPERATURES SHALL BE ROUTED BELOW INSULATION AND WITHIN THE HEATED ENVELOPE OF THE BUILDING. WHERE PIPING CAN NOT BE ROUTED BELOW INSULATION, PIPING SHALL HAVE 5 WATT/FT HEAT TRACING ATTACHED. SEE ARCHITECTURAL DRAWINGS FOR INSULATION PLACEMENT AND DETAILS. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND ENGINEER
- 20 UNLESS OTHERWISE INDICATED, DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS. WHEN ROUTED IN EXTERIOR WALLS, CAREFULLY POSITION WATER PIPING ON THE HEATED SIDE (INTERIOR SIDE) OF THE WALL INSULATION.
- 21 MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES, OPERABLE WINDOWS AND FLUES, PLUMBING VENTS AND GAS
- 22 ALL CONDENSATE DRAIN, SEWER & VENT PIPING SHALL BE RODDED AND CLEANED AT END OF CONSTRUCTION. ALL TRAPS SHALL BE CLEANED AND PRIMED AT END OF CONSTRUCTION.
- 23 ALL PIPE DROPS FROM CEILING PLENUM TO FLOOR SHALL BE MADE IN FURROUTS AT COLUMNS, IN WEB OF BEAMS AT COLUMNS OR IN WALLS. PIPING SHALL BE CONCEALED UNLESS APPROVED BY ARCHITECT.
- 24 PROVIDE WATER HAMMER ARRESTORS IN FIXTURE BRANCHES WHERE QUICK CLOSING VALVES ARE INSTALLED; i.e., FLUSH VALVES, ICE MAKERS, DISHWASHERS, ETC.
- 25 BELOW SLAB WATER PIPE TO BE TYPE K SOFT DRAWN COPPER WITHOUT FITTINGS OR JOINTS. SLEEVE IN ENTIRETY WITH ARMAFLEX OR APPROPRIATE POLYETHYLENE SLEEVE MATERIAL
- 26 PROVIDE APPROVED BACKFLOW PREVENTION OR ANTI-SIPHON DEVICES AT ALL FIXTURES THAT COULD CONTAMINATE THE POTABLE WATER SYSTEM.
- 27 INSULATE ALL WATER AND CONDENSATE, ABOVE FINISH FLOOR. SEE SPECIFICATIONS FOR THICKNESS SCHEDULE.
- 28 FLOOR DRAINS IN MECHANICAL ROOMS ARE SHOWN FOR GENERAL LOCATION ONLY. FLOOR DRAINS SHALL BE ACCESSIBLE AND SHALL BE VERIFIED WITH EQUIPMENT LAYOUT FOR INTERFERENCES.
- 29 AN APPROVED TRAP SEAL DEVICE CONFORMING TO ASSE 1072 SHALL BE INSTALLED AT ALL FLOOR AND HUB DRAINS. ALL DRAINS SHALL HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM. INSTALL TRAP GUARD DEVICES PER MANUFACTURER'S INSTRUCTIONS.
- 30 DOMESTIC WATER SERVICE PIPING AND FITTINGS; E.G., CHECK VALVES, RPZA, SHUT-OFF VALVES, STRAINERS, PRESSURE REGULATORS, ETC. SHALL COMPLY WITH NSF 61 CRITERIA. ALL CAST IRON EQUIPMENT IS TO BE INTERNALLY EPOXY COATED.



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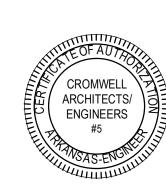
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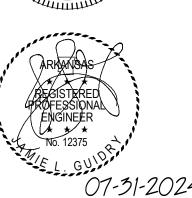
Design Phase

CONSTRUCTION **DOCUMENTS**

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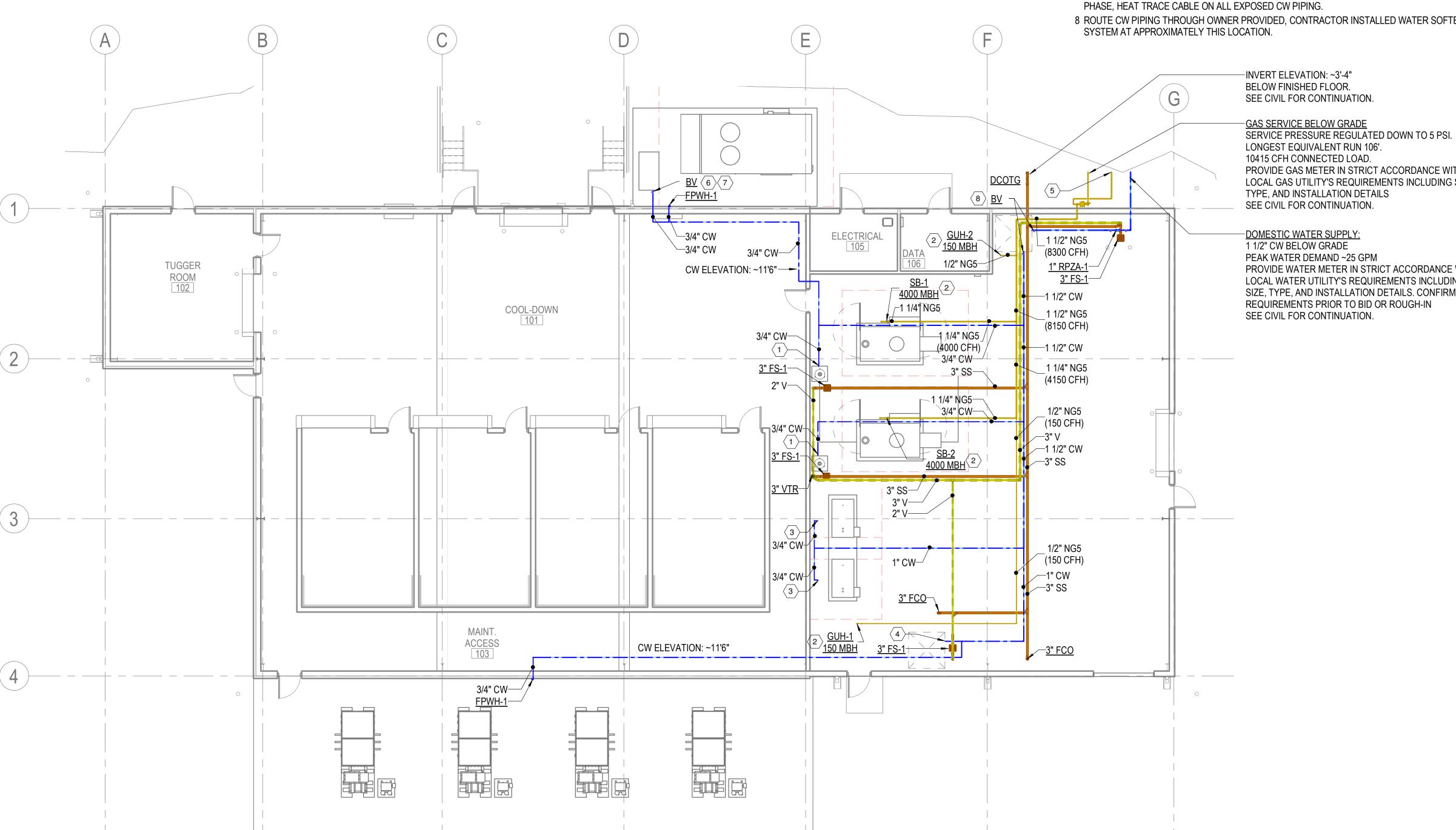
07-31-2024 Sheet Title

> PLUMBING LEGEND AND NOTES

- 1 REFER TO SHEET P-001 FOR LEGEND AND NOTES.
- 2 ALL CW PIPING IS TO BE IDENTIFIED AS NON-POTABLE WATER (NPW)

KEYED NOTES

- 1 3/4" CW TO BLOW DOWN SEPARATOR AT APPROXIMATELY THIS LOCATION.
- 2 CONNECT GAS PIPING TO MECHANICAL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ISOLATION VALVE, DIRT LEG, AND PRESSURE REGULATOR AT POINT OF CONNECTION. REGULATE TO 11" WC. ROUTE REGULATOR VENTS TO EXTERIOR AS REQUIRED.
- 3 3/4" CW TO BOILER FEEDWATER SYSTEM AT APPROXIMATELY THIS LOCATION.
- 4 3/4" CW TO CHEMICAL TREATMENT AREA AT APPROXIMATELY THIS LOCATION.
- 5 1" NG BELOW GRADE SERVING GENERATOR ON SITE (2115 CFH). SEE CIVIL FOR CONTINUATION. PROVIDE ISOLATION VALVE, DIRT LEG, AND REGULATE TO 11" WC AT POINT OF CONNECTION TO EQUIPMENT. CONNECT PER MANUFUACTURER'S INSTRUCTIONS.
- 6 3/4" CW WITH ISOLATION BALL VALVE TO OUTDOOR HUMIDIFIER AT APPROXIMATELY THIS LOCATION. COORDINATE WITH MANUFACTURER'S CUT SHEET FOR FINAL CONNECTION LOCATION AND REQUIREMENTS.
- 7 PROVIDE EXTERIOR RATED INSULATION AND 5 WATT/FT, SELF REGULATING, 120V SINGLE
- 8 ROUTE CW PIPING THROUGH OWNER PROVIDED, CONTRACTOR INSTALLED WATER SOFTENER



5

OVERALL PLUMBING PLAN

1/8" = 1'-0"

0

4

8

16

10415 CFH CONNECTED LOAD. PROVIDE GAS METER IN STRICT ACCORDANCE WITH LOCAL GAS UTILITY'S REQUIREMENTS INCLUDING SIZE, TYPE, AND INSTALLATION DETAILS SEE CIVIL FOR CONTINUATION.

DOMESTIC WATER SUPPLY: 1 1/2" CW BELOW GRADE

PEAK WATER DEMAND ~25 GPM PROVIDE WATER METER IN STRICT ACCORDANCE WITH LOCAL WATER UTILITY'S REQUIREMENTS INCLUDING SIZE, TYPE, AND INSTALLATION DETAILS. CONFIRM ALL REQUIREMENTS PRIOR TO BID OR ROUGH-IN



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CONSTRUCTION **DOCUMENTS**

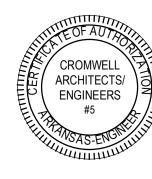
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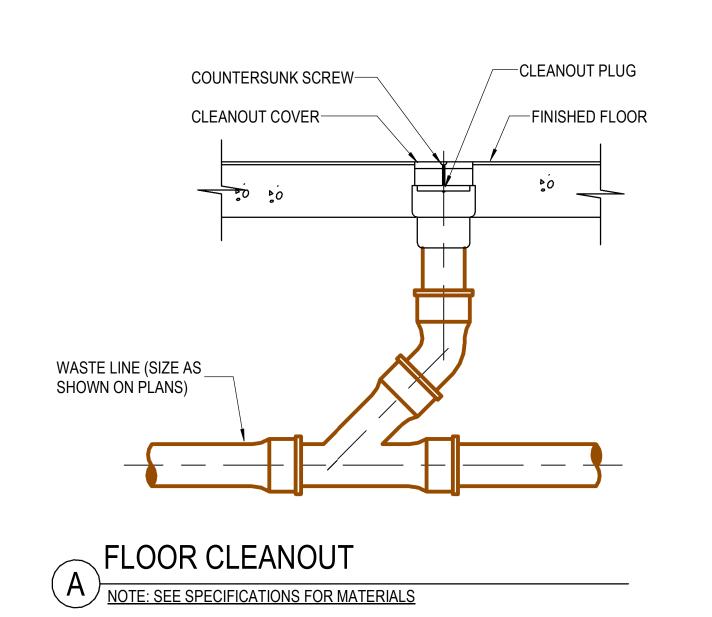
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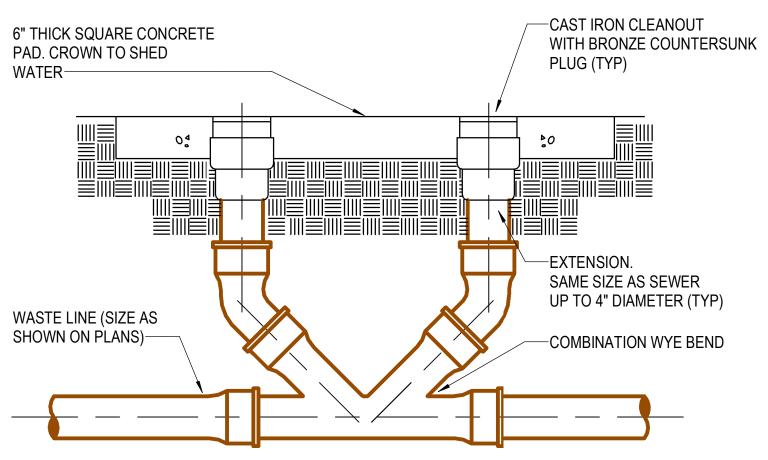
Project Number

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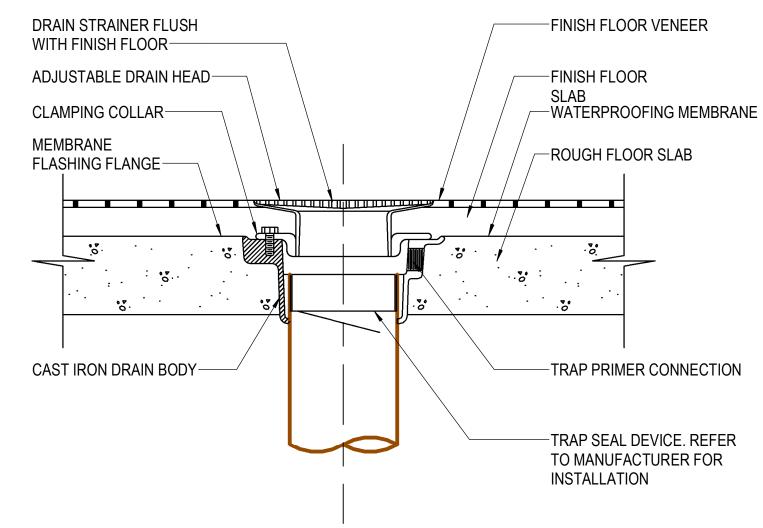
PLUMBING PLAN





DOUBLE CLEANOUT-TO-GRADE

NOTE: SEE SPECIFICATIONS FOR MATERIALS



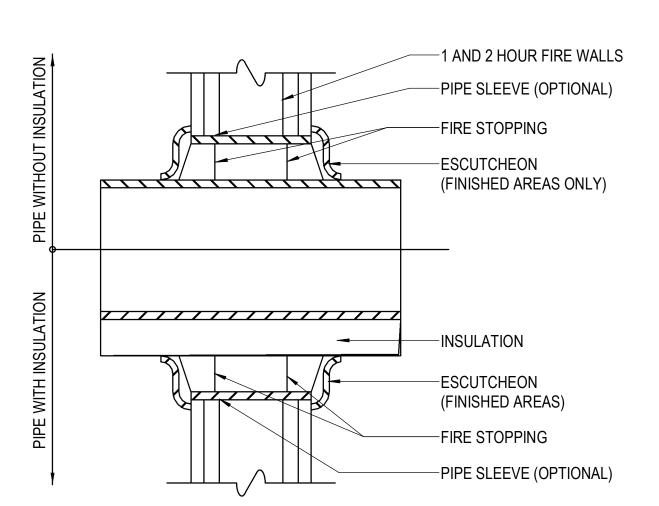
TRAP SEAL DEVICE INSTALLATION

NOT TO SCALE

DRAIN FROM EQUIPMENT OR APPLIANCE AS SHOWN ON PLANS FLOOR FLOOR DRAIN

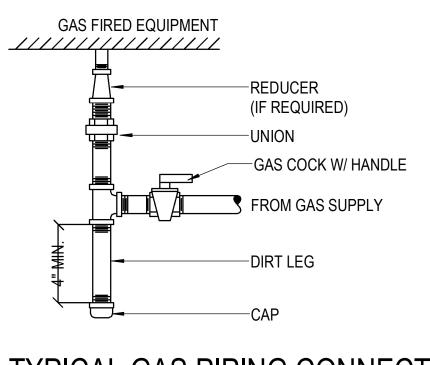
3 INDIRECT WASTE DRAIN
NOT TO SCALE

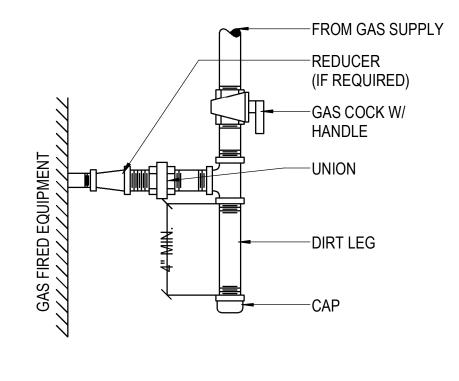
TYPICAL CLEANOUTS
NOT TO SCALE

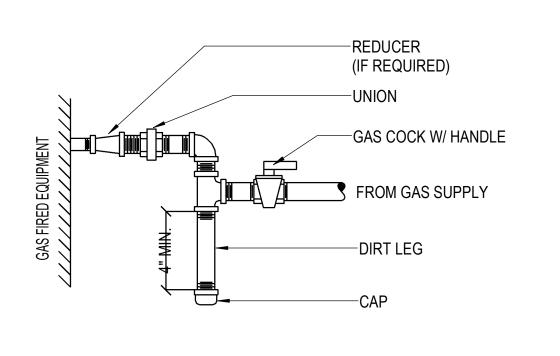


NOTE:
 FIRE STOPPING MATERIAL SHALL COMPLY WITH SECTION 07 84 00 OF THE SPECIFICATIONS.
 THIS DETAIL REPRESENTS ONE MANUFACTURER'S RECOMMENDATION FOR A WALL TYPE.
 THE CONTRACTOR SHALL CONSULT THE FIRE STOPPING MATERIALS MANUFACTURER FOR
 SPECIFIC INFORMATION AND SPECIFIC INSTALLATION INSTRUCTIONS FOR THE WALLS AND
 PARTITIONS APPLICABLE TO THIS PROJECT.

INTERIOR PIPE THRU FIRE RATED WALL

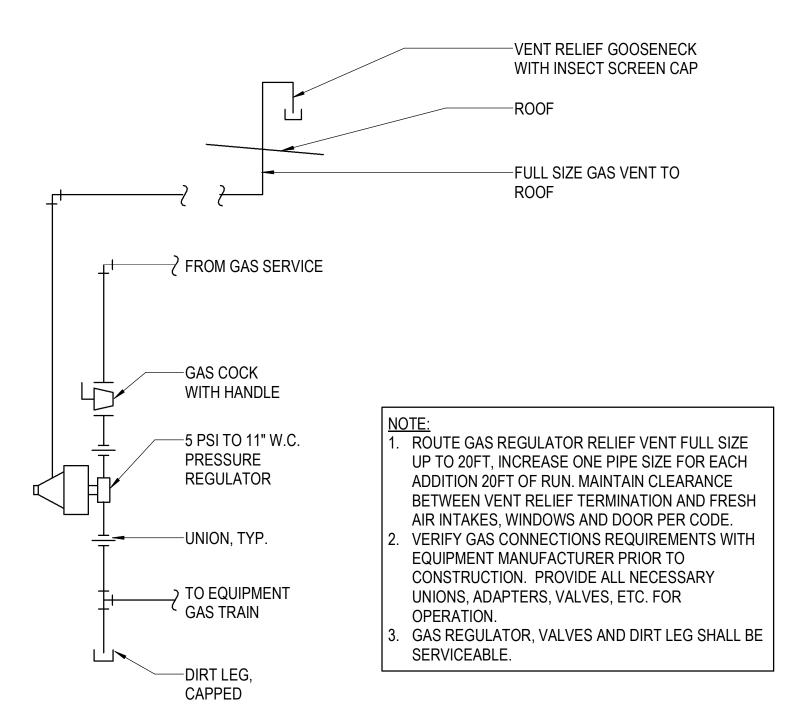




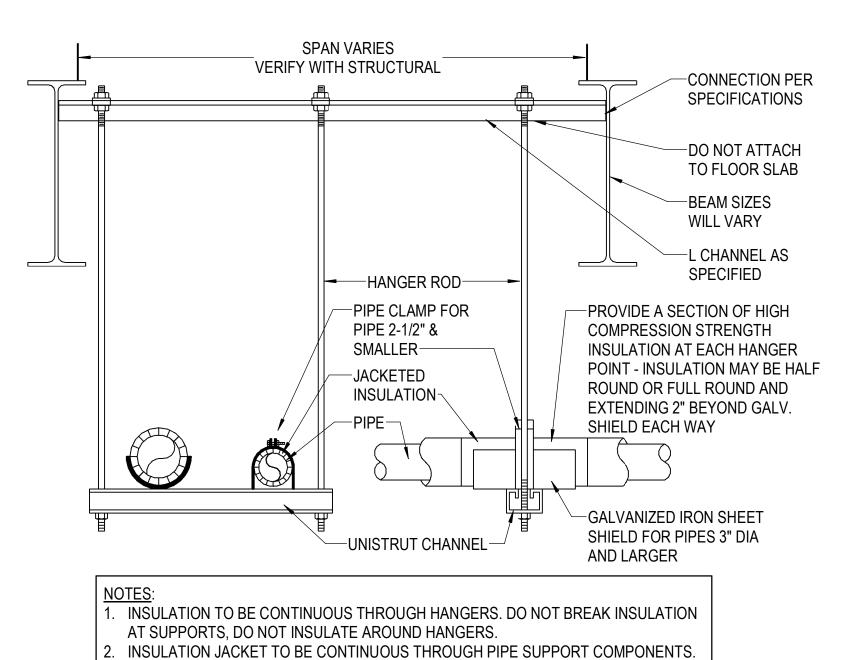


TYPICAL GAS PIPING CONNECTIONS

NOT TO SCALE



GAS REGULATOR VENTING

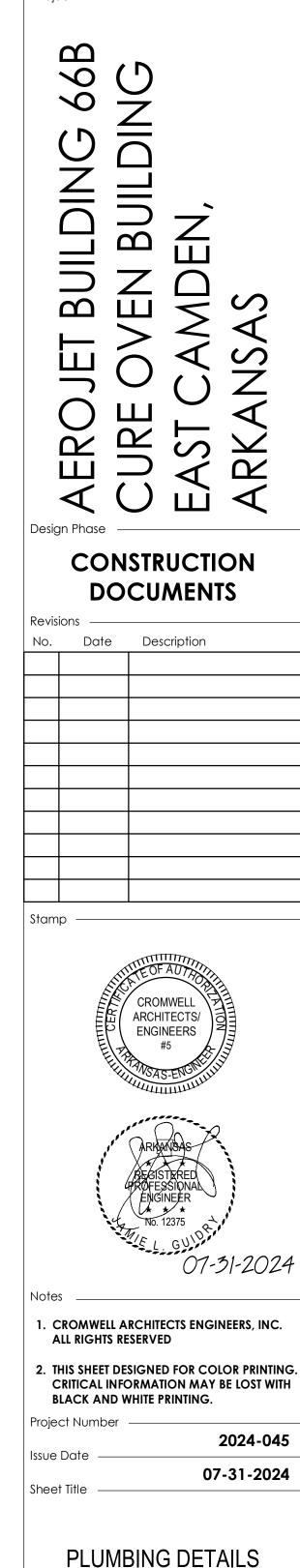


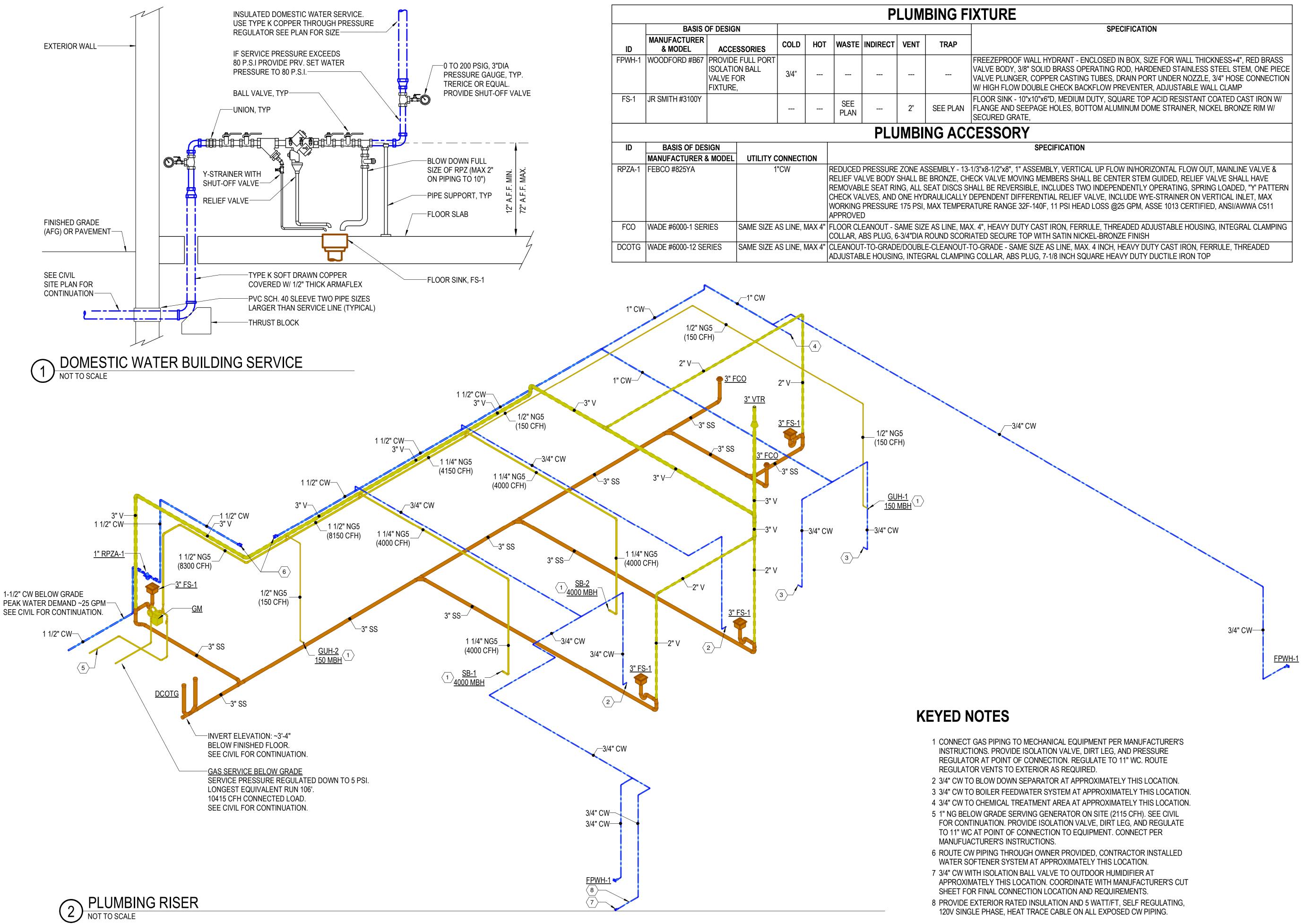
USE CLEVIS HANGERS FOR SINGLE PIPE RUNS, USE TRAPEZE HANGERS TO GROUP

7 TRAPEZE PIPE HANGER
NOT TO SCALE

AS MUCH PIPING AS POSSIBLE PER HANGER.







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Project —

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EROJET BUILDING 66 SURE OVEN BUILDING AST CAMDEN,

CONSTRUCTION DOCUMENTS

No.	Date	Description	
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CROMWELL ARCHITECTS/ ENGINEERS #5



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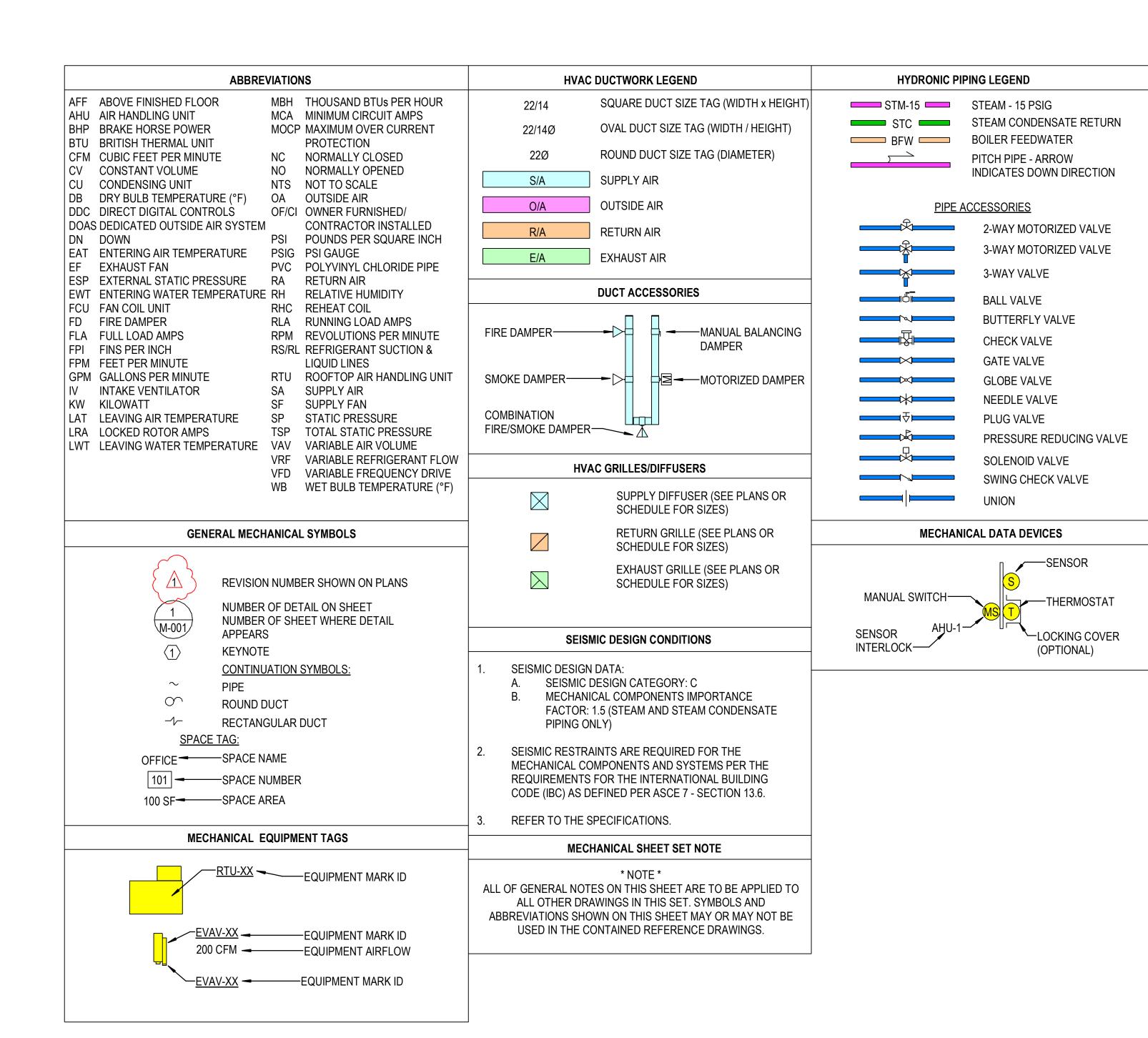
PLUMBING RISER, SCHEDULES, & DETAILS

2024-045

07-31-2024

Sheet Number

P-901



- 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. REFER TO ARCHITECTURAL PLANS FOR:
- A. REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES AND CEILING TYPES.
- B. EXACT LOCATIONS AND MOUNTING HEIGHTS OF EXTERIOR LOUVERS
- C. FIRE RATED WALLS AND PARTITIONS. PROVIDE FIRE DAMPERS IN DUCT PENETRATIONS OF ALL FIRE RATED WALLS AND PARTITIONS AS NECESSARY TO MEET CITY AND STATE REQUIREMENTS.
- D. ALL WALL AND ROOF PENETRATIONS AND EQUIPMENT MOUNTING DETAILS.
- 4. ALL DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS." LATEST EDITION.
- 5. DUCT FITTINGS:
 - A. SUPPLY TAKE-OFFS TO CEILING SUPPLY DIFFUSERS TO BE 45° SIDE TAP.
 - B. ALL DUCT RUN-OUTS TO HAVE LOCKING QUADRANT VOLUME DAMPERS. PROVIDE STAND-OFF BRACKET TO ACCOMMODATE INSULATION THICKNESS.
 - C. ALL 90° ROUND ELBOWS TO HAVE R/D=1.5 (UNLESS OTHERWISE NOTED)
 - D. ALL 90° RECTANGULAR ELBOWS TO HAVE TURNING VANES (UNLESS OTHERWISE NOTED).
- 6. 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.
- 7. 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.
- 8. CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.
- 9. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL EXHAUST FANS, FLUES, PLUMBING VENTS, ETC.
- 10. PROVIDE FLEXIBLE CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING UNITS, MAKE-UP AIR UNITS, FURNACES, AND/OR EXHAUST FANS.
- 11. CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.
- 12. ALL EXTERIOR EXPOSED PIPING SUSCEPTIBLE TO FREEZING, SUCH AS CONDENSATE PIPING, SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET AND HEAT TRACED AT 5 WATTS/FOOT. SEAL JACKET WATER-TIGHT.
- 13. 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.
- 14. COORDINATE WORK CLOSELY WITH CONTROL CONTRACTOR. PROVIDE ALL NECESSARY DUCT, PIPE TAPS, TEES, WELLS, CONTROL DAMPERS, AIR MEASURING STATIONS, AND OTHER ACCESSORIES REQUIRED BY CONTROL SYSTEM
- 15. SLEEVE AND SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED AND NON-RATED SLABS AND PARTITIONS.
- 16. STEAM AND STEAM CONDENSATE PIPING SHALL BE PITCHED TO DRAIN AS SPECIFIED.



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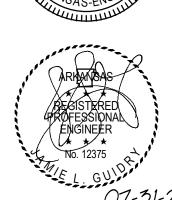
LEROJET BUILDING 66 CURE OVEN BUILDING AST CAMDEN, RRKANSAS

CONSTRUCTION DOCUMENTS

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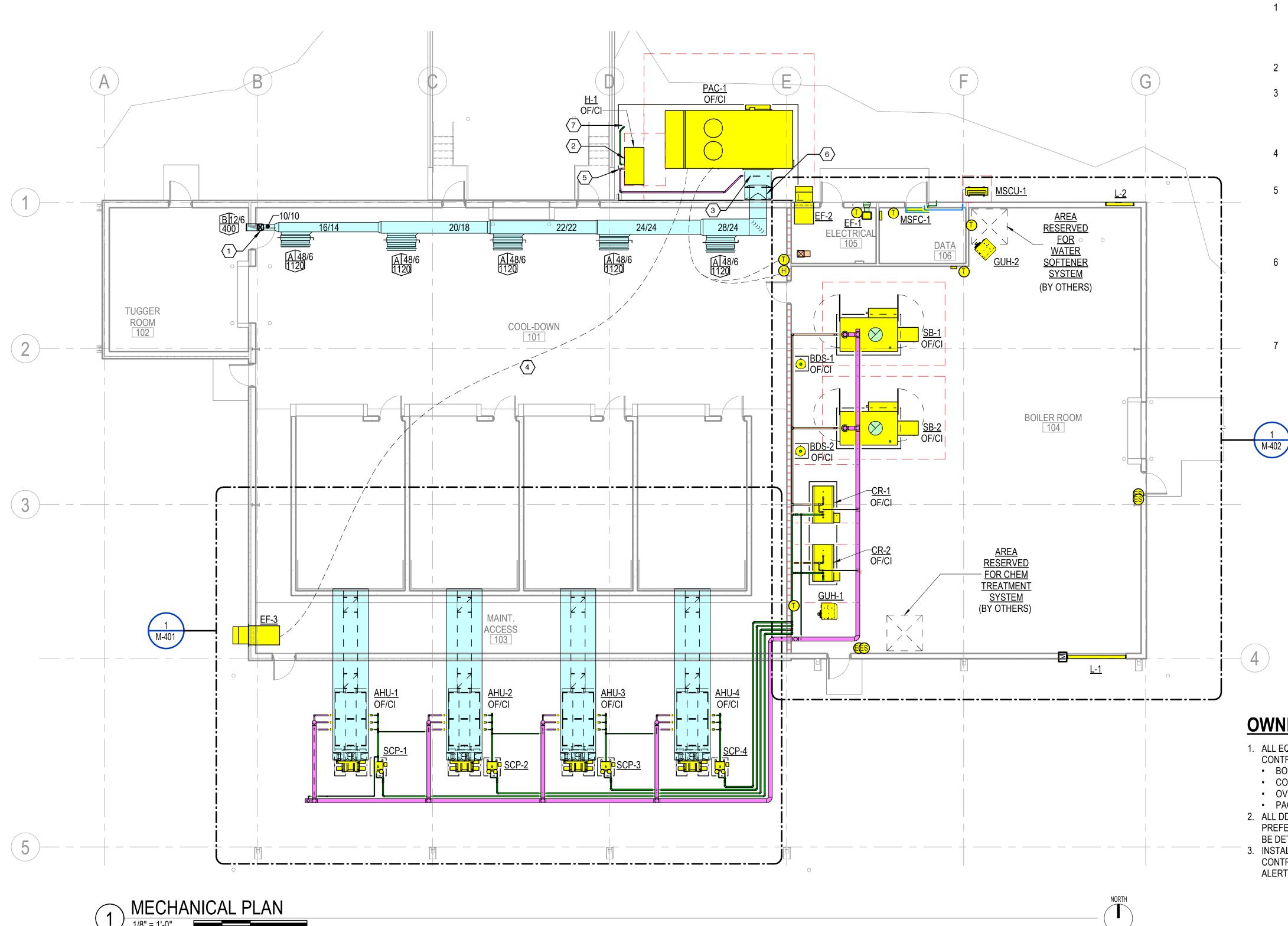
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Sheet Title — 07-31-2024

MECHANICAL LEGEND AND SYMBOLS

Sheet Number

M-001



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

KEYED NOTES

- DROP WITH THE DUCT ALONG THE WALL AND TRANSITION AS REQUIRED TO CONNECT FULL SIZE THE SUPPLY DIFFUSER SERVING TUGGER ROOM 102. THE SUPPLY DIFFUSER SHALL BE INSTALLED APPROXIMATELY 10' A.F.F. PROVIDE A MANUAL BALANCING DAMPER IN THE 10/10 DUCT RISER.
- 2 INSTALL THE HUMIDIFIER IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 3 INSTALL THE STEAM DISPERSION TUBE ASSEMBLY IN THE DUCTWORK AND ROUTE THE 2" INSULATED STEAM TUBING FROM THE HUMIDIFIER TO THE DISPERSION ASSEMBLY IN STRICT ACCORDANCE WITH THE HUMIDIFIER MANUFACTURER'S INSTRUCTIONS.
- 4 OF/CI "PAC-1" AND CONTRACTOR PROVIDED "EF-3" SHALL HAVE CONTROLS INTERLOCKED TO OPERATE SIMULTANEOUSLY.
- DISPERSION ASSEMBLY IS AT AN ELEVATION LOWER THAN THE STEAM GENERATOR DISCHARGE. DROP WITH THE STEAM TUBING ALONG THE SIDE OF THE HUMIDIFIER AND PROVIDE A TEE WITH A DRIP LEG WHERE THE TUBING TURNS HORIZONTAL TO ROUTE TO THE DUCT MOUNTED DISPERSION ASSEMBLY.
- 6 RISE WITH S.A. DUCT UP ALONG THE EXTERIOR WALL APPROXIMATELY 20' A.F.F. PENETRATE THROUGH THE EXTERIOR WALL AND CONTINUE AS SHOWN. CONFIRM THE EXACT DUCT HEIGHT WITH THE OWNER PRIOR TO BID AND ROUGH-IN. COORDINATE THE EXACT DUCT PENETRATION LOCATION WITH THE BUILDING STRUCTURAL CROSS-BRACING.
- ROUTE THE 1" HUMIDIFIER BLOW-DOWN DRAIN TO THE HUB DRAIN IN THE MECHANICAL PAD AND TERMINATE AS DETAILED.

OWNER FURNISHED SCOPE OF WORK

- 1. ALL EQUIPMENT NOTED AS "OF/CI" SHALL BE OWNER FURNISHED AND CONTRACTOR INSTALLED. THIS INCLUDES:
- BOILERS
- CONDENSATE RECOVERY SYSTEMS
- OVEN AIR HANDLING UNITS
- PACKAGED 100% OUTSIDE AIR UNIT WITH SEPARATE HUMIDIFIER
- 2. ALL DDC CONTROLS SHALL BE PROVIDED BY THE OWNER'S PREFERRED ALERTON CONTROLS VENDOR. EXACT POINTS LIST TO BE DETERMINED BY THE OWNER.
- 3. INSTALLATION, START-UP, AND COMMISSIONING OF ALL DDC CONTROLS SHALL BE PROVIDED BY THE OWNER'S PREFERRED ALERTON CONTROLS VENDOR.

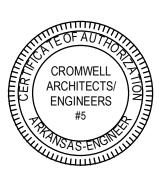


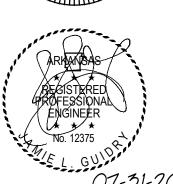
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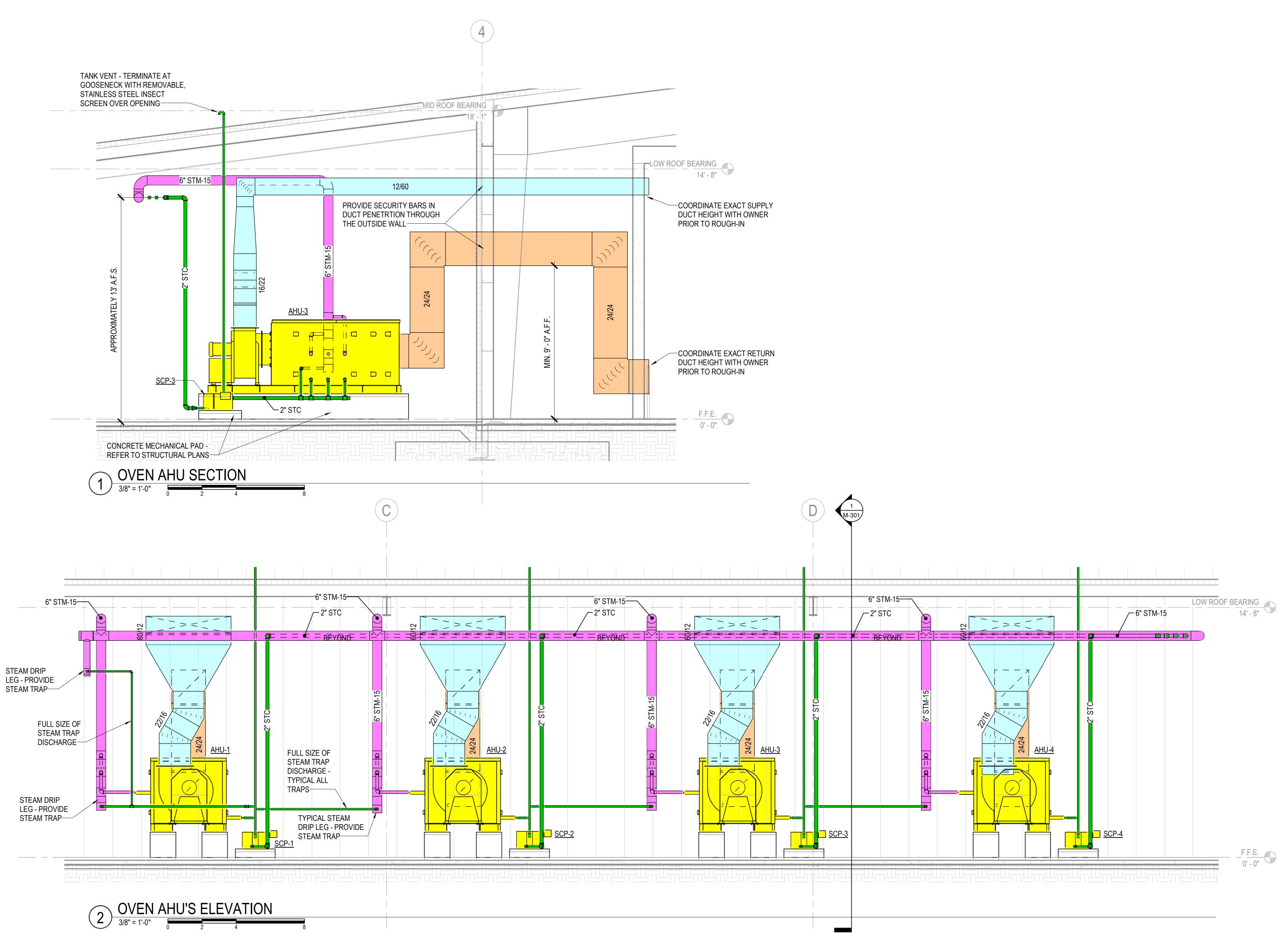
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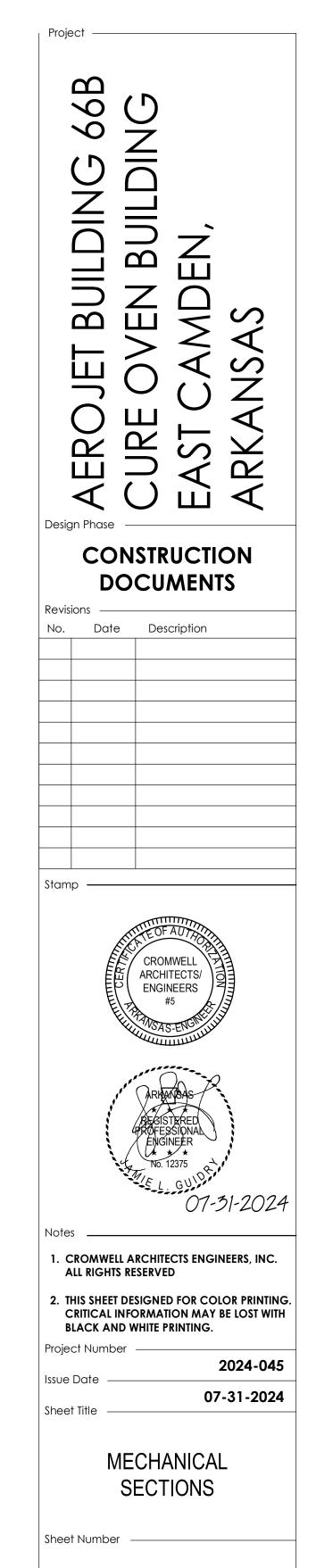
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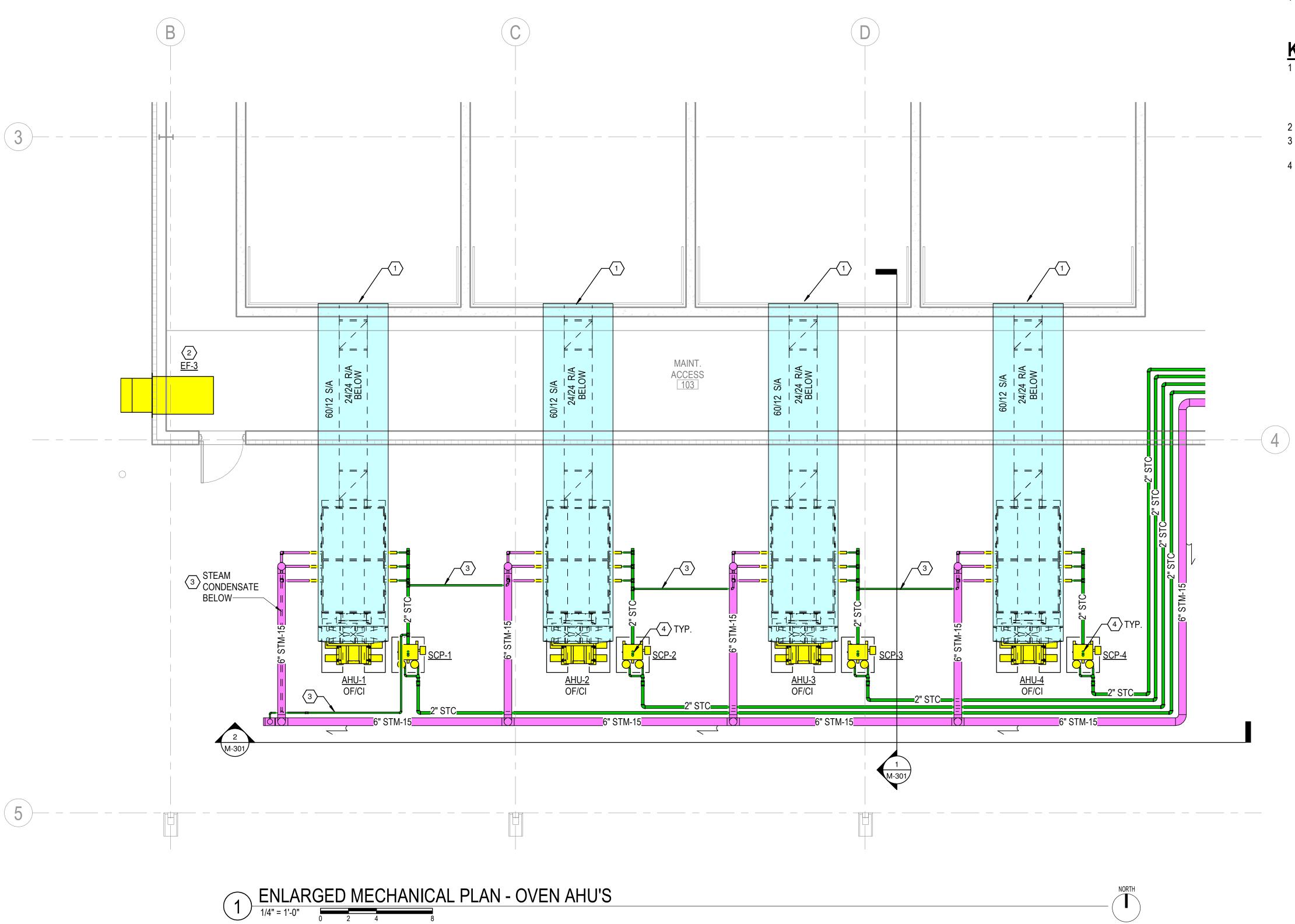
MECHANICAL PLAN





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

KEYED NOTES

- CONNECT THE AIR HANDING UNIT SUPPLY AND RETURN DUCTWORK TO THE OVEN IN STRICT ACCORDANCE WITH THE OVEN MANUFACTURER AND OWNER'S
 REQUIREMENTS. CONFIRM THESE REQUIREMENTS PRIOR TO BID AND ROUGH-IN.
- INSTALL THE FAN AS HIGH ON THE WALL AS POSSIBLE. PIPE SHALL BE FULL SIZE OF STEAM TRAP DISCHARGE
- CONDENSATE RECEIVER TANK VENT FULL SIZE OF FACTORY CONNECTION TO TANK.

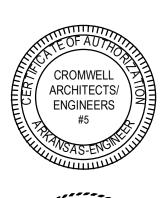


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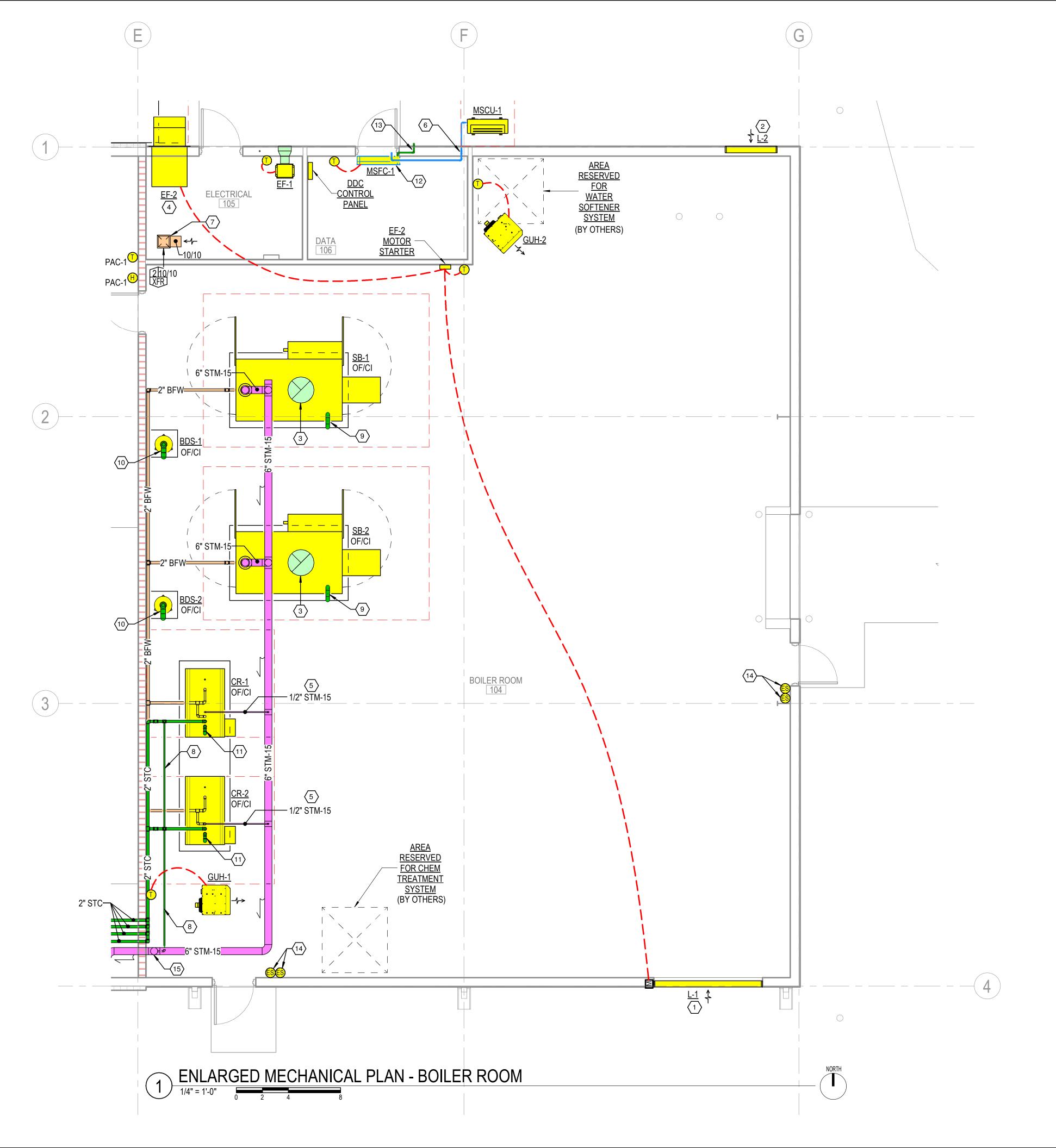
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ENLARGED MECHANICAL PLAN -OVEN AHU'S

2024-045

07-31-2024



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

KEYED NOTES

- 1 INSTALL THE GENERAL VENTILATION LOUVER AS LOW ON THE WALL AS POSSIBLE.
- INSTALL THE COMBUSTION AIR LOUVER WITHIN 12" OF THE TOP OF THE WALL.
- ROUTE A 24" BOILER FLUE UP THROUGH THE ROOF AND TERMINATE AT A LISTED WEATHERCAP.
- INSTALL THE FAN AS HIGH ON THE WALL AS POSSIBLE.
- 5 ROUTE 1/2" STEAM LINE TO THE SPARGE TUBE ASSEMBLY AT THE CONDENSATE RECOVERY/FEEDWATER TANK.
- 6 RISE IN THE WALL WITH THE INSULATED REFRIGERANT LINE SET AND CONTINUE ABOVE CEILING AS SHOWN.

OPEN TO THE BOILER ROOM.

- 7 EXTEND A 10/10 TRANSFER DUCT UP THROUGH THE CEILING STRUCTURE, TURN HORIZONTAL, AND TERMINATE
- 8 PIPE SHALL BE FULL SIZE OF STEAM TRAP DISCHARGE PORT.
- BOILER T&P DRIP PAN ELBOW VENT PIPE UP THROUGH
- 10 BOILER BLOWDOWN ASSEMBLY VENT PIPE UP THROUGH ROOF.
- 11 ROUTE CONDENSATE RECEIVER TANK VENT FULL SIZE UP THROUGH ROOF.
- 12 INSTALL THE FAN COIL UNIT OVER THE DOOR AT APPROXIMATELY 8' A.F.F.
- DROP IN THE WALL WITH THE INSULATED CONDENSATE DRAIN LINE, PENETRATE TO THE EXTERIOR AT 6" A.F.G., TURN DOWN AND TERMINATE.
- 14 PROVIDE A BOILER EMERGENCY STOP BUTTON AT THE EXIT DOOR, ONE FOR EACH BOILER. EMERGENCY STOP BUTTONS SHALL BE CLEARLY LABELED AS TO WHICH BOILER IS SERVED BY EACH BUTTON, WHITE ARIAL LETTERING ON A RED BACKGROUND. LABEL SHALL READ, "EMERGENCY SHUT-OFF SWITCH FOR BOILER (SB-1 OR SB-2)".
- 15 PROVIDE A STEAM MAIN DRIP LEG AS DETAILED.



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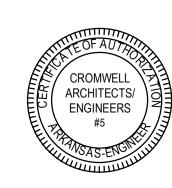
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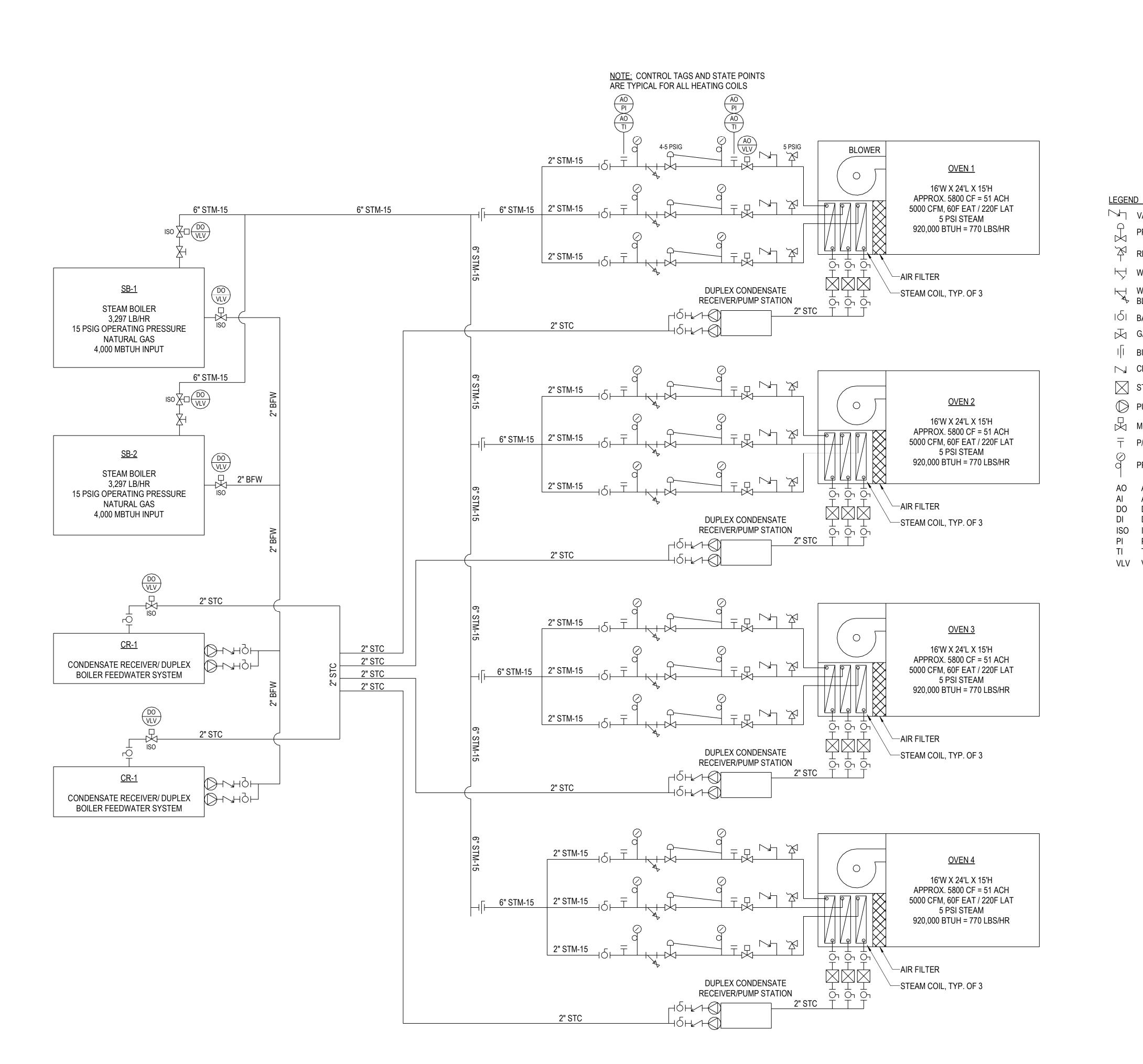
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Sheet Number

M-402

MECHANICAL PLAN -

BOILER ROOM





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Design Phase

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VACUUM RELIEF CHECK PRV RELIEF VALVE ₩YE STRAINER WYE STRAINER W/
BLOW-DOWN IÓI BALL VALVE GATE VALVE | BUTTERFLY VALVE CHECK VALVE STEAM TRAP D PUMP MOTORIZED CONTROL VALVE P/T PLUG PRESSURE GAUGE

AO ANALOG OUTPUT

VLV VALVE

ANALOG INPUT

DIGITAL OUTPUT

ISOLATION VALVE PRESSURE INDICATOR TI TEMPERATURE INDICATOR

DIGITAL INPUT

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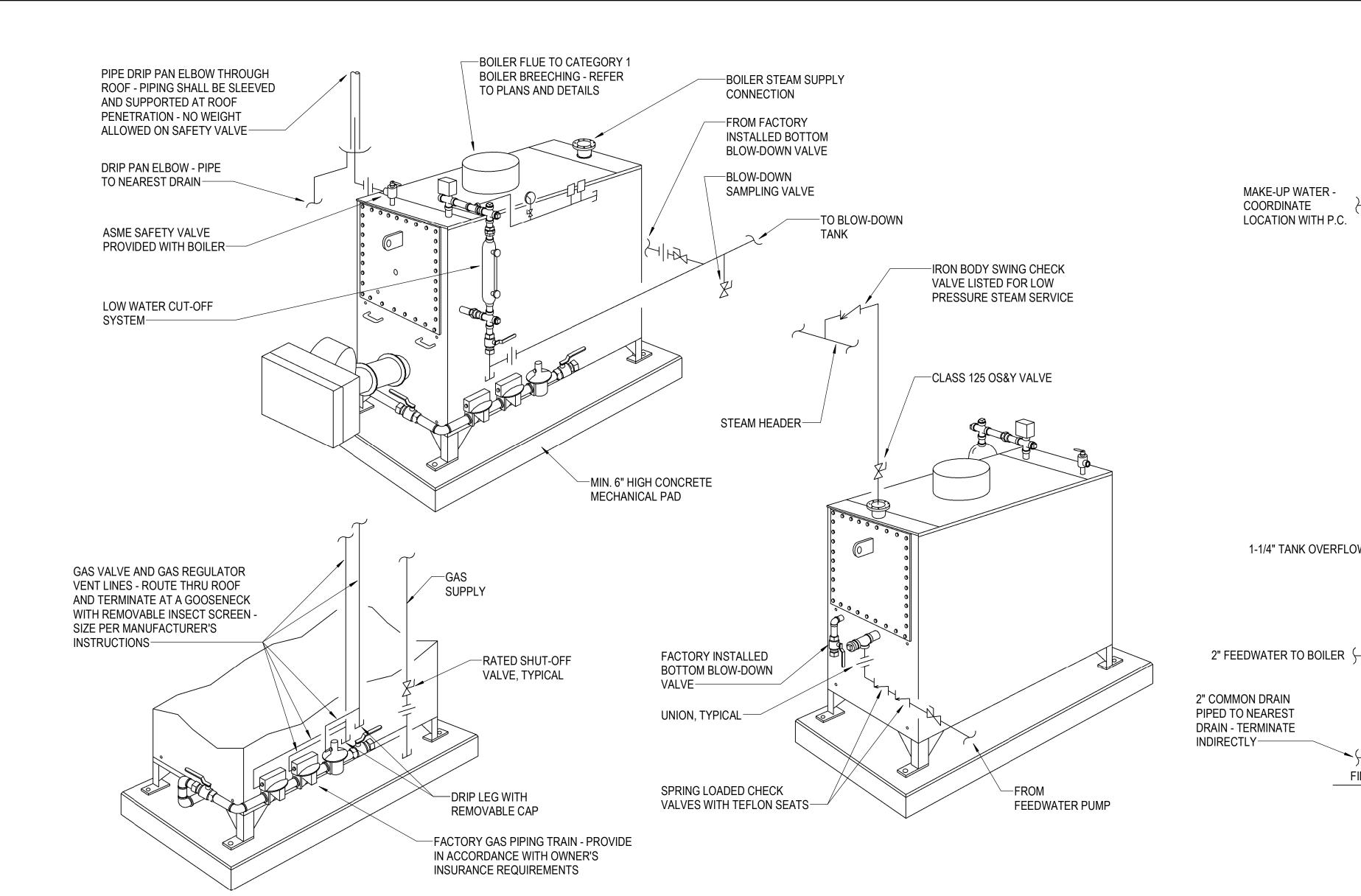
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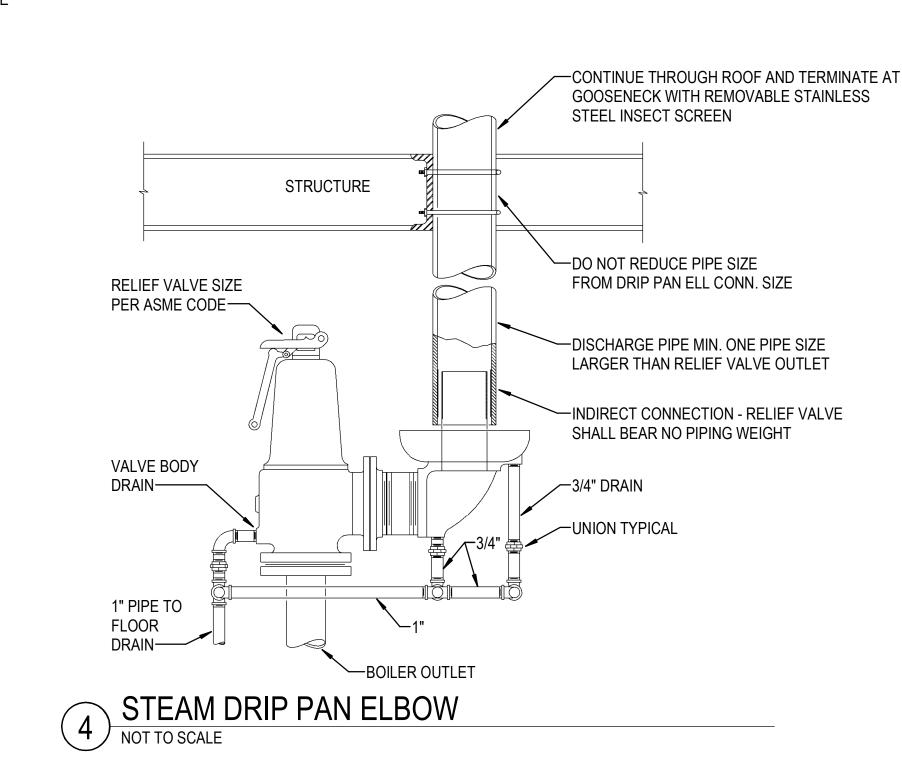
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MECHANICAL P&ID





LOW PRESSURE INDOOR POWER BURNER STEAM BOILER

DRIP LEG SIZING

STATIC HEAD MIN. (IN)

AUTOMATIC

WARM-UP

28

28

28

28

28

28

28

28

28

SUPERVISED

WARM-UP

10

10

10

10

10

10

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12

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CONDENSATE RECOVERY/FEEDWATER SYSTEM
NOT TO SCALE

MIN. 6" HIGH CONCRETE

MECHANICAL PAD-

2" TANK DRAIN WITH

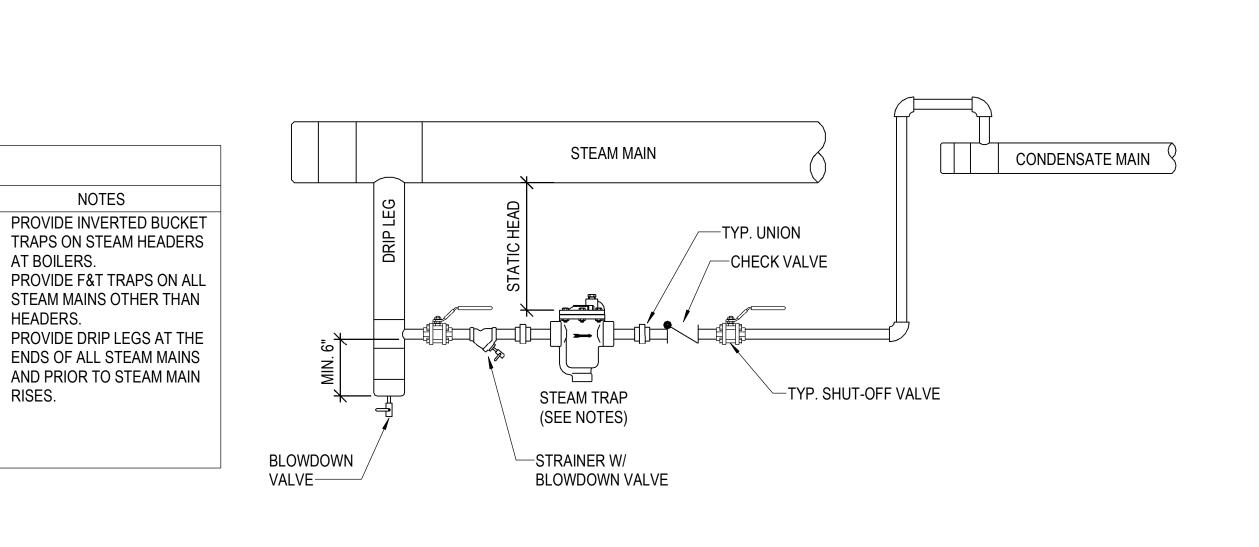
ISOLATION VALVE-

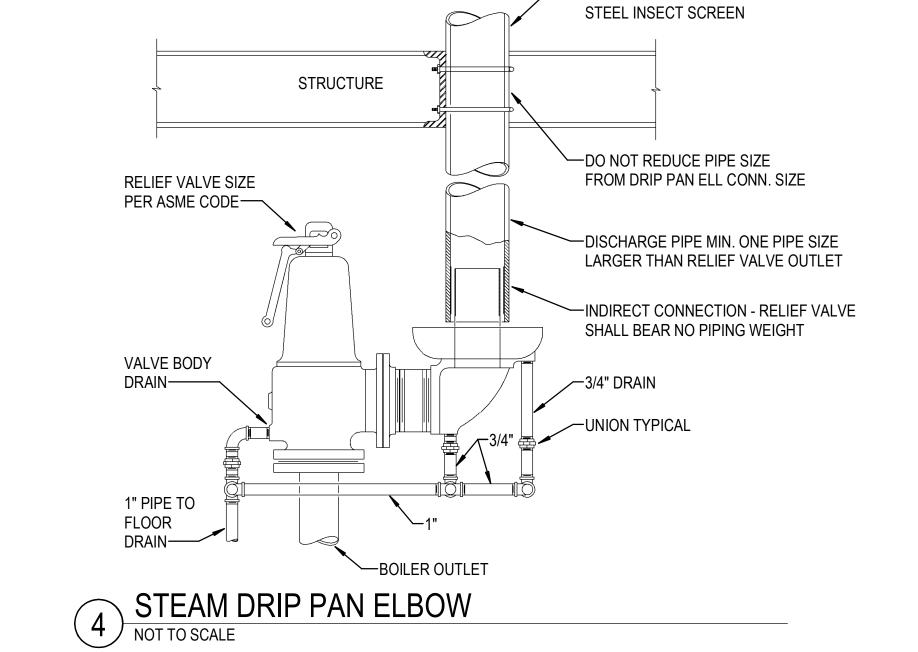
— 2" —

FIN. FLOOR

MAKE-UP WATER -COORDINATE LOCATION WITH P.C.

1-1/4" TANK OVERFLOW-





3 STEAM DRIP LEG

DRIP LEG

DIAMETER

(IN)

1/2

3/4

4

STEAM MAIN

DIAMETER

(IN)

1/2

3/4

10

C R O M W E L L

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501.372.2900

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Design Phase

BUIL

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CONSTRUCTION

DOCUMENTS

Date Description

PROVIDE REMOVABLE

ROOF

-4x6 HANDHOLE

-ISOLATION VALVE,

TYPICAL

PITCH TO DRAIN

SPARGE TUBE

ASSEMBLY-

-MAKE-UP WATER FLOAT VALVE

STEAM MAIN-

STAINLESS STEEL INSECT

-GAUGE GLASS

-THERMOMETER

TYPICAL BOILER FEEDWATER PUMP - PUMP

SUCTION WITH STRAINER AND ISOLATION

VALVE FACTORY PIPED TO TANK

TANK CONNECTION

-SPARGE TUBE REGULATING

VALVE TEMPERATURE SENSOR

-DUPLEX PUMP CONTROL PANEL

-TYPICAL BOILER FEEDWATER PUMP

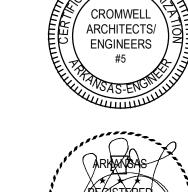
DISCHARGE FIELD PIPED WITH UNION,

CHECK VALVE, AND ISOLATION VALVE

SCREEN OVER OPENING

Stamp

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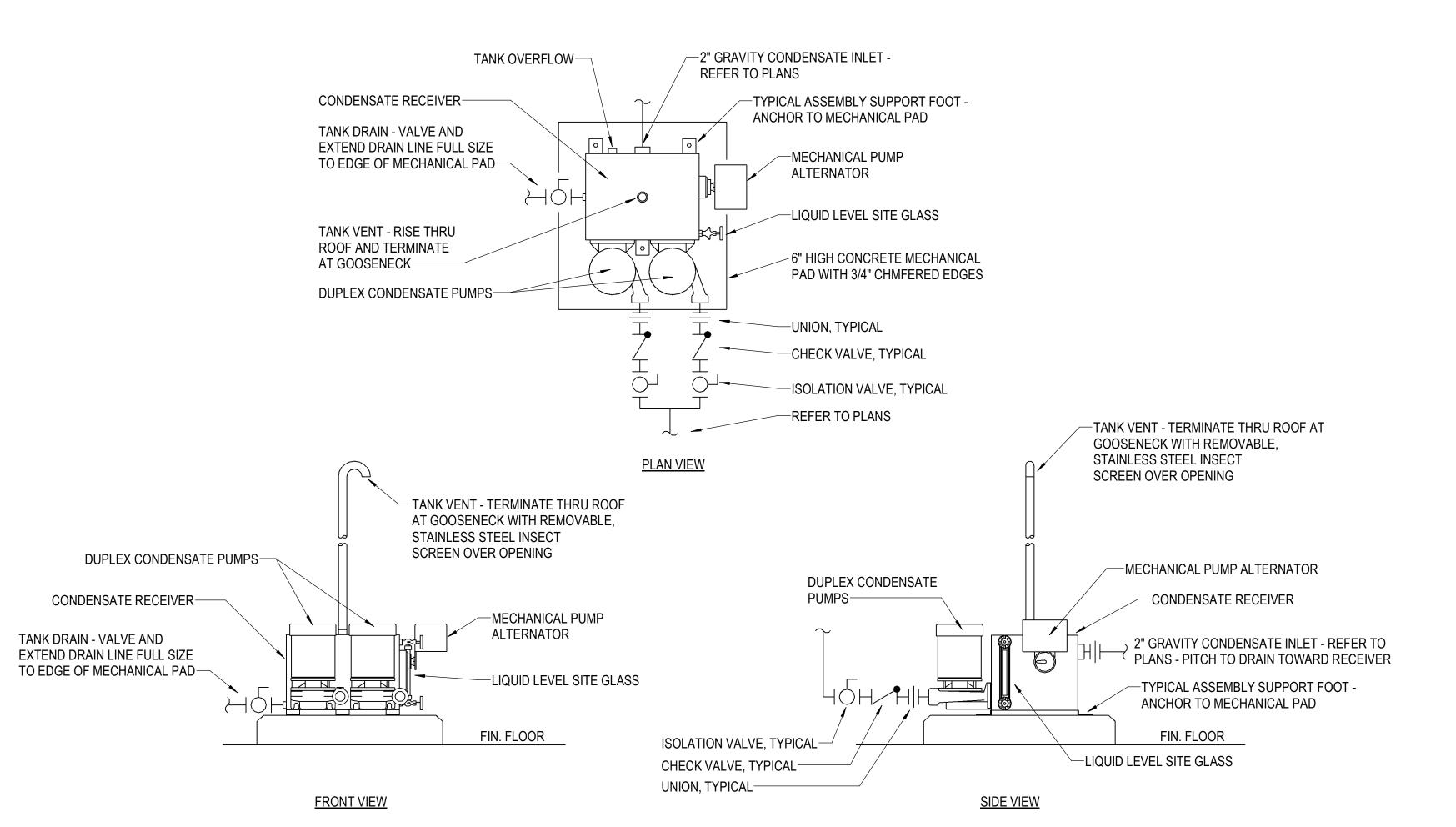
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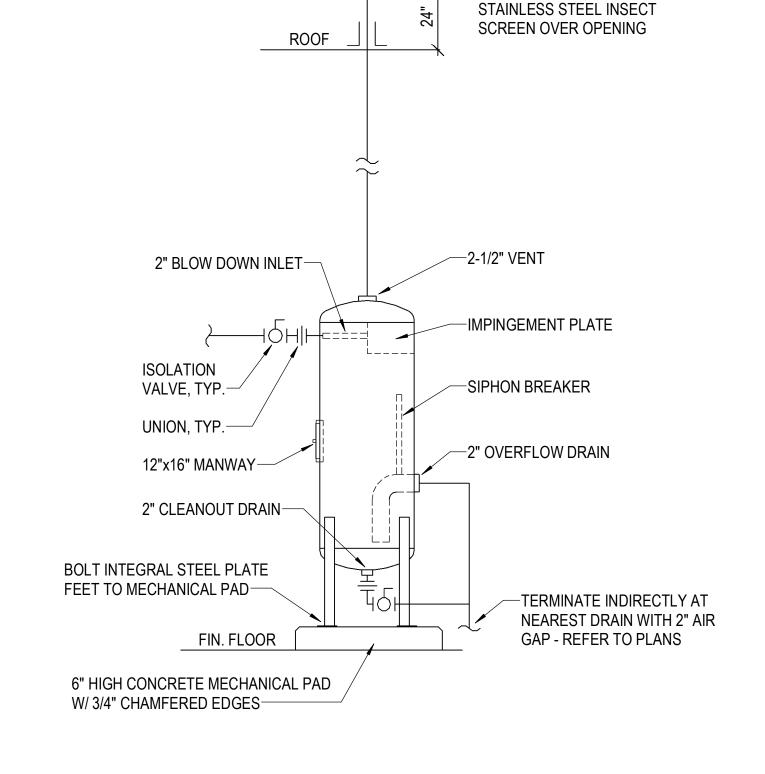
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MECHANICAL DETAILS

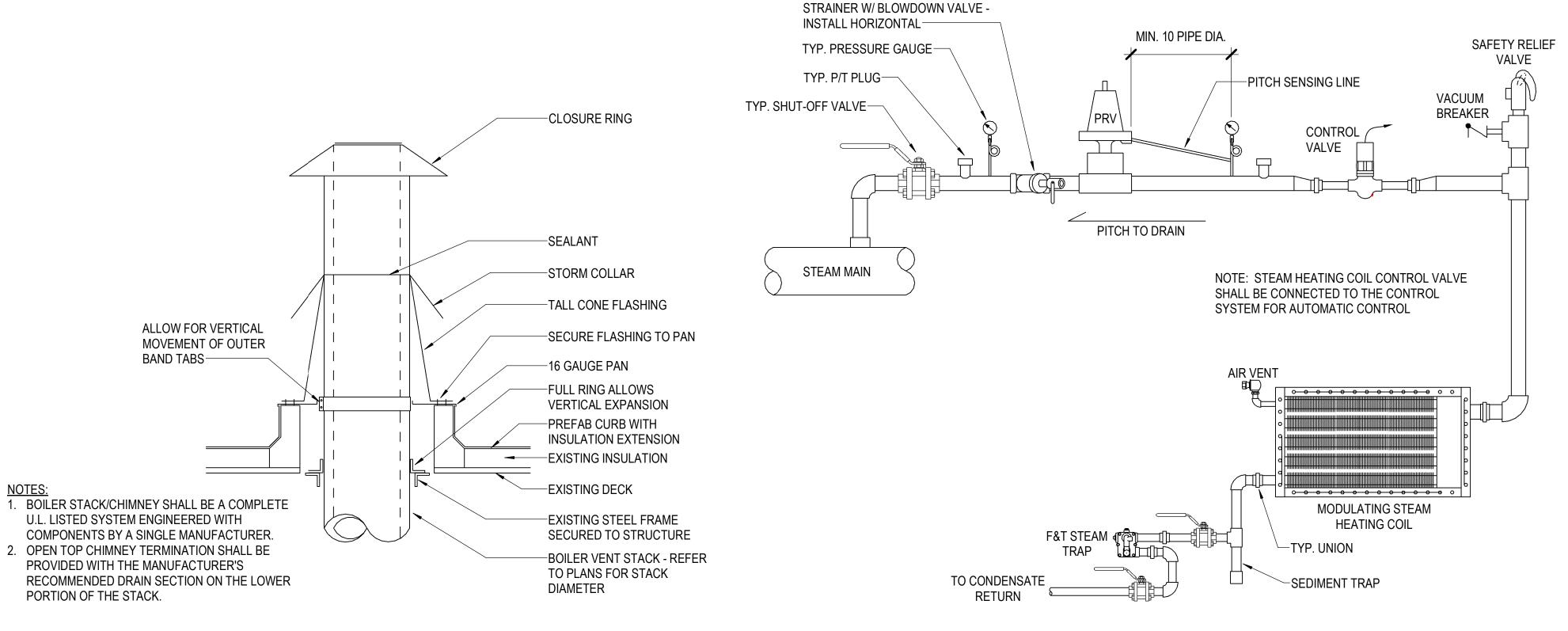




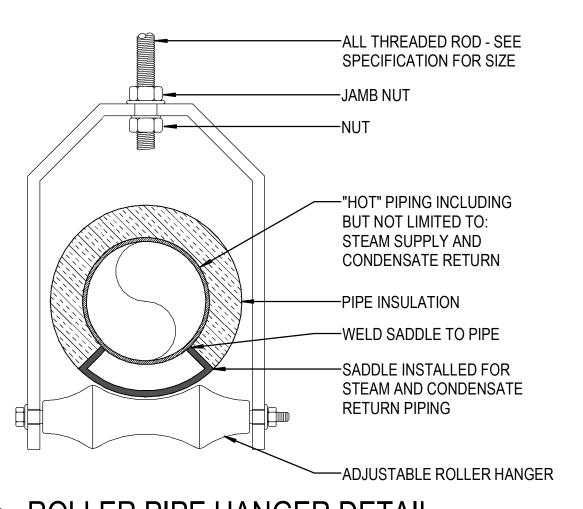
-PROVIDE REMOVABLE,

DUPLEX CONDENSATE PUMP
NOT TO SCALE

2 BLOW DOWN SEPARATOR
NOT TO SCALE



STEAM HEATING COIL



ROLLER PIPE HANGER DETAIL

BOILER FLUE

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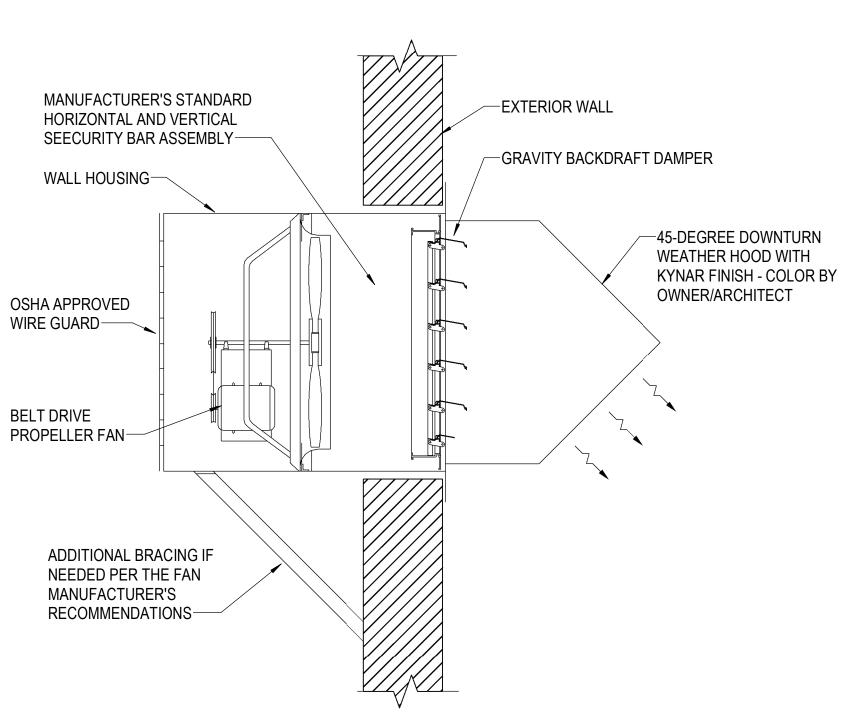
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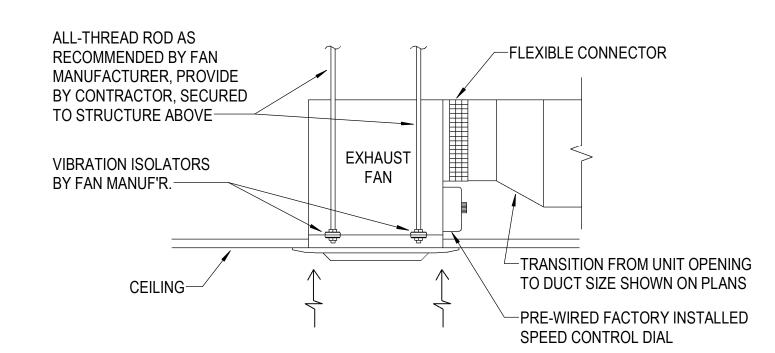
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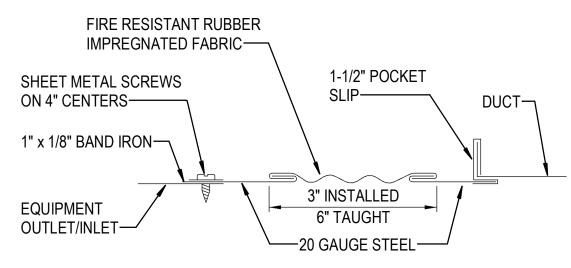
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SIDEWALL EXHAUST FAN NOT TO SCALE



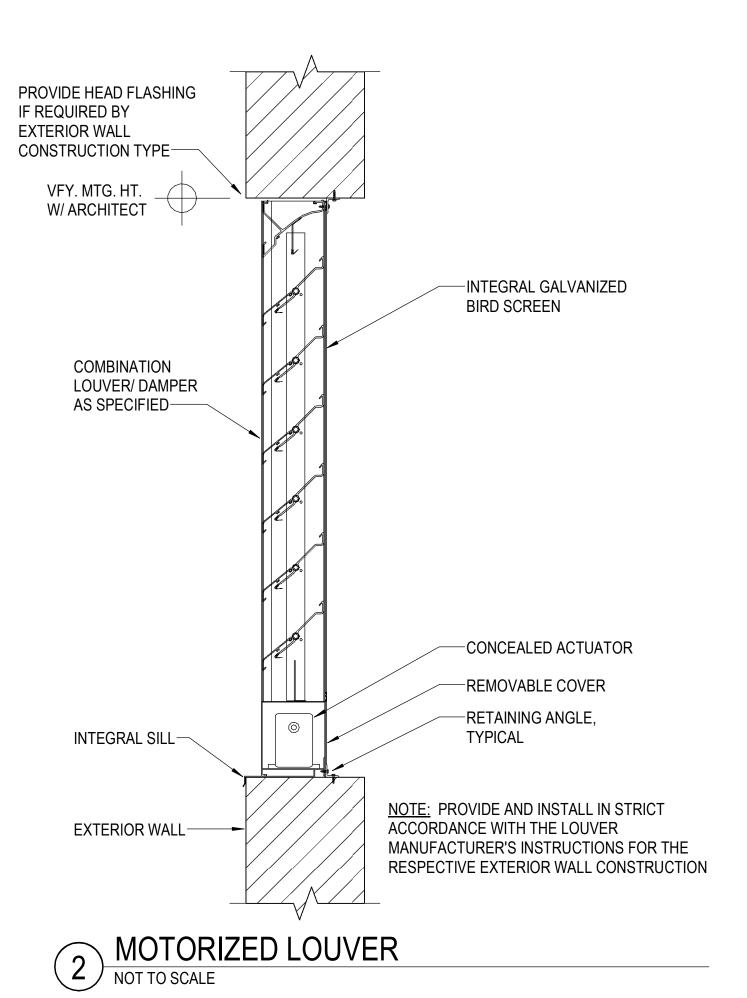
CEILING EXHAUST FAN

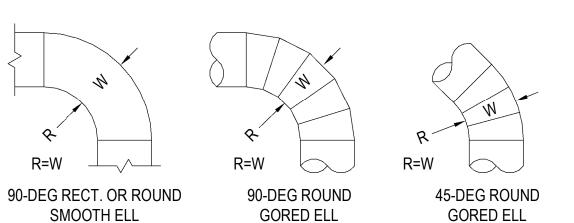


NOTE: PROVIDE FLEXIBLE DUCT CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING EQUIPMENT.

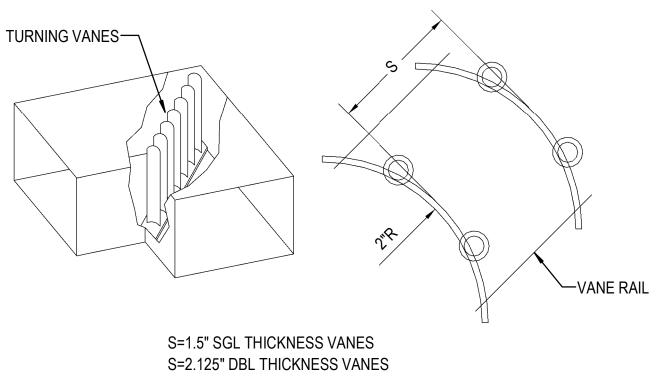
5 FLEXIBLE DUCT CONNECTION
NOT TO SCALE



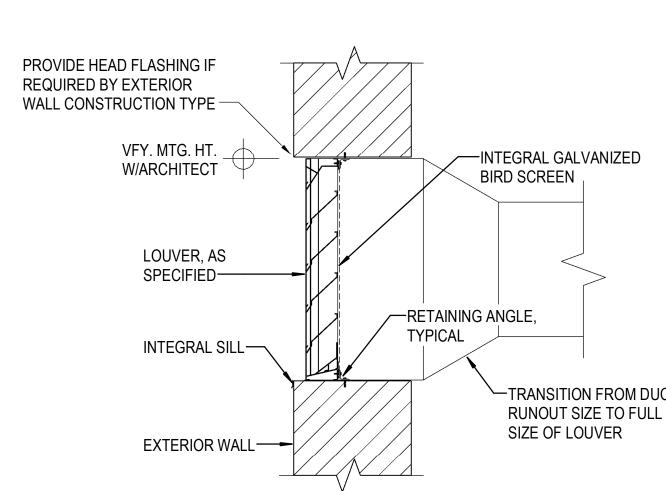




GORED ELL GORED ELL



SHORT RADIAS ELBOWS, ELBOWS WITH MITERED THROATS/RADIUS HEELS, AND ELBOWS WITH MITERED THROATS/CHAMFERRED HEELS ARE NOT ACCEPTABLE.



VANES SHALL BE WELDED TO THE VANE RAIL IN DUCT SYSTEMS WITH

/-4" LEFT SIDE CLEARANCE

2" TOP

MAXIMUM 4" WALL

20" CLEARANCE

REFRIGERANT TUBING-

NOT TO SCALE

WHERE FULL RADIUS TURNS ARE NOT POSSIBLE, MITERED ELL'S

WITH TURNING VANES SHALL BE

PROVIDED FOR ALL CHANGES IN

DIRECTION 45-DEGREES OR

CONSTRUCT ELBOWS IN

GREATER.

HORIZONTAL AND VERTICAL DUCT

COMPRESSOR SIDE

DUCTLESS MINI-SPLIT SYSTEM

PENETRATION—

CLEARANCE

4" RIGHT SIDE

CLEARANCE

10" REAR CLEARANCE

-CONDENSATE DRAIN

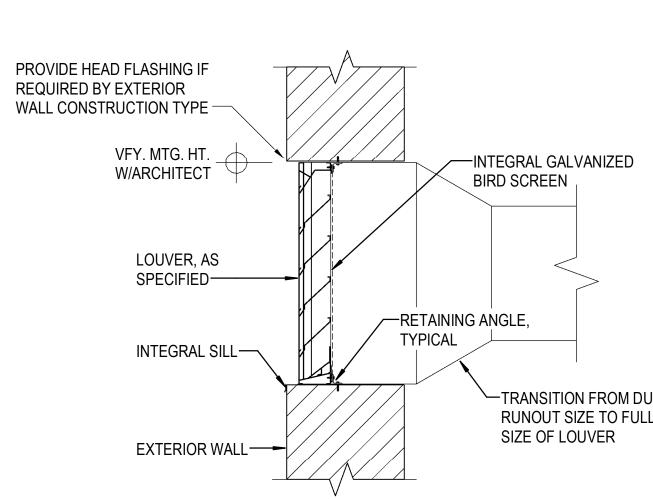
HOSE 5/8" O.D. NIPPLE

36" FRONT

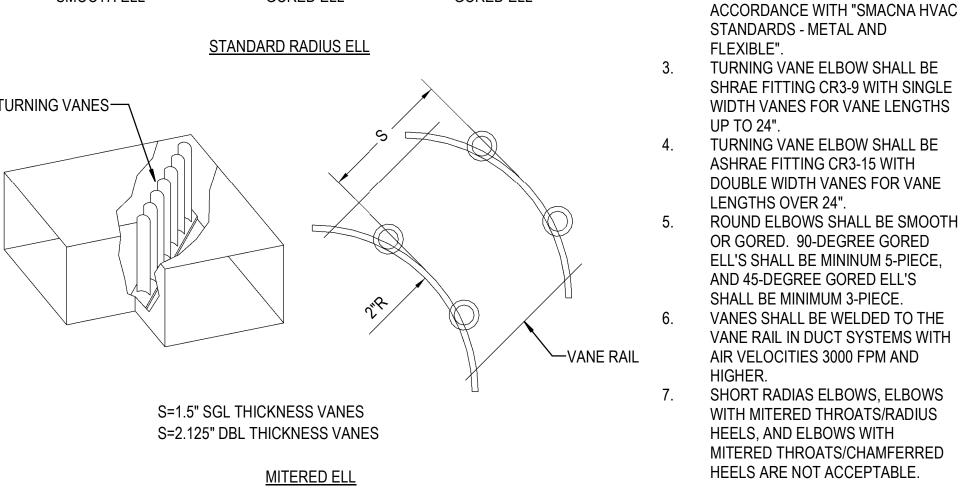
CLEARANCE

10" SIDE CLEARANCE

CLEARANCE



7 STATIC LOUVER
NOT TO SCALE



TRANSITION FROM DUCT RUNOUT SIZE TO FULL

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-VINYL TRIM

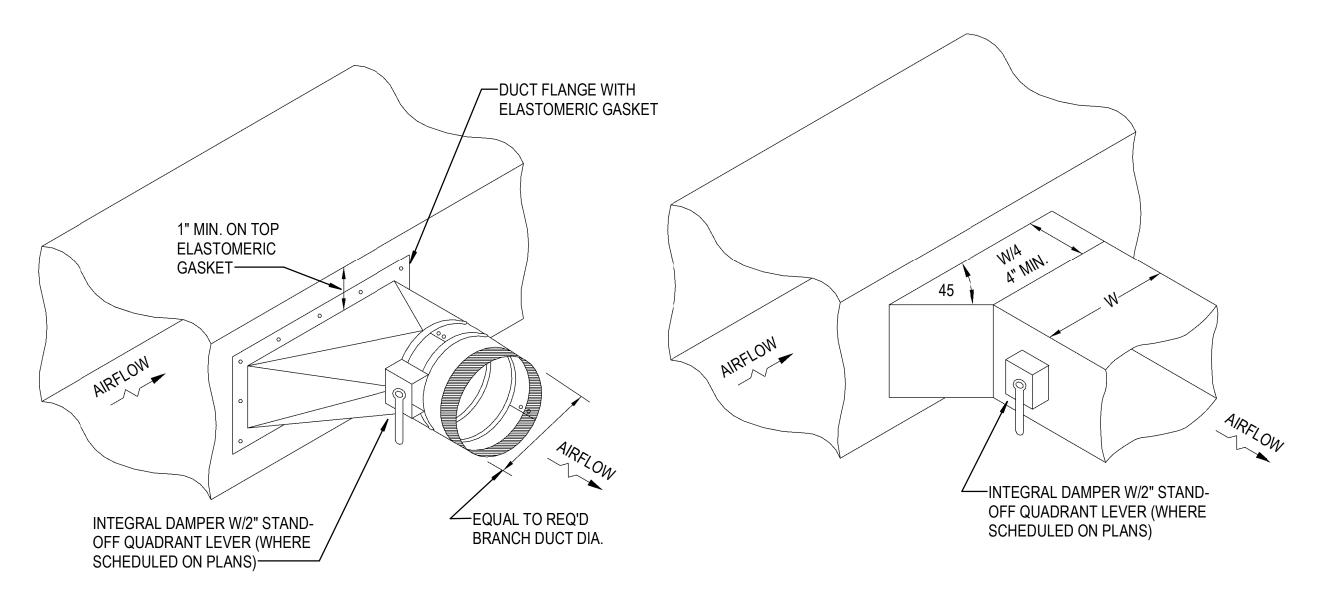
-OUTSIDE WALL

-WALL HANGER

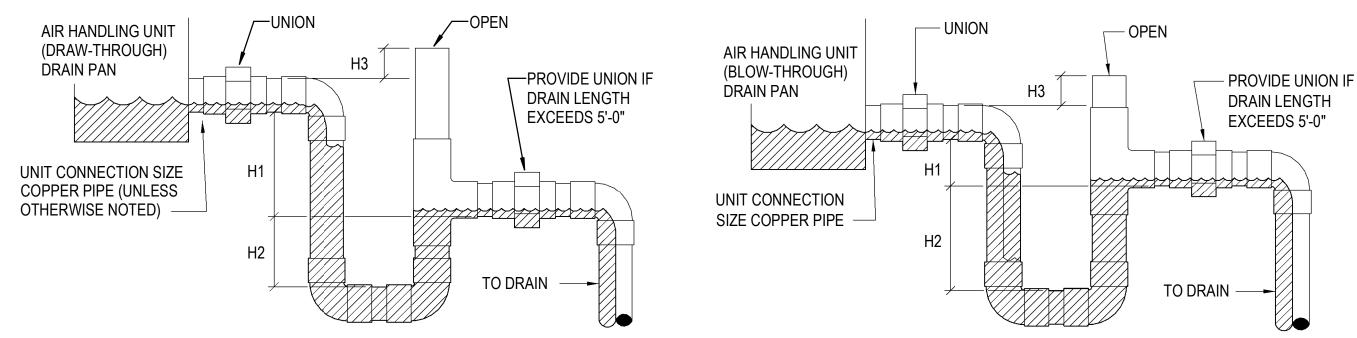
-WALL GASKET

WALL PENETRATION

MECHANICAL DETAILS



BRANCH DUCT TAKE-OFF NOT TO SCALE



DRAW-THROUGH CONFIGURATION

H1: NEGATIVE STATIC PRESSURE AT PAN +1"

H2: 1/2 x H1 (MINIMUM)

H3: 1" ABOVE TOP OF DRAIN PAN (MIMIMUM) FAN INLET/OUTLET PRESSURE (WHICHEVER IS APPLICABLE) SHALL BE MEASURED DURING AIR TEST AND BALANCE. TRAP DEPTH SHALL BE ADJUSTED AS REQUIRED TO MEET OR EXCEED MINIMUM DEPTH.

PRE-FORMED RUNNING TRAPS ARE NOT ACCEPTABLE. TRAP PIPE DIAMETER SHALL BE FULL SIZE OF FACTORY COIL CONNECTION, BUT NO LESS

THAN 3/4".

TRAPS SHALL BE INSULATED AS SPECIFIED FOR CONDENSATE DRAIN PIPING. TRAPS SHALL BE LOCATED WITHIN 4' OF THE COIL.

CONDENSATE DRAIN SHALL TERMINATE WITH AN INDIRECT CONNECTION HAVING A MINIMUM

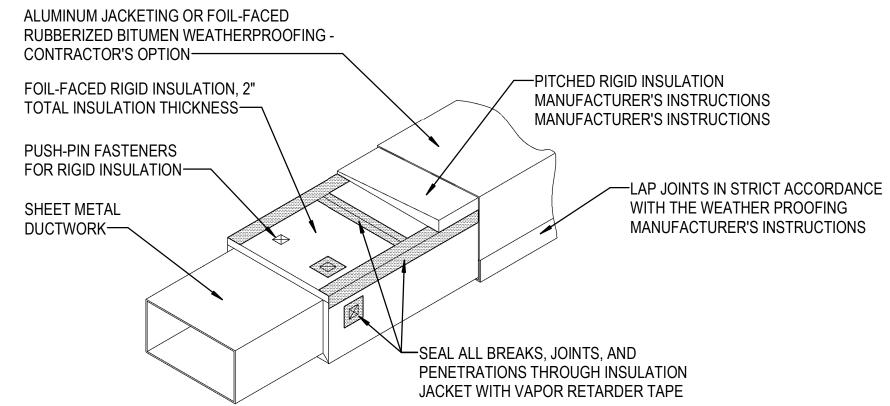
BLOW-THROUGH CONFIGURATION

H1: 1" (MINIMUM)

H2: POSITIVE STATIC PRESSURE AT PAN +1"

H3: 1" ABOVE TOP OF DRAIN PAN (MIMIMUM)

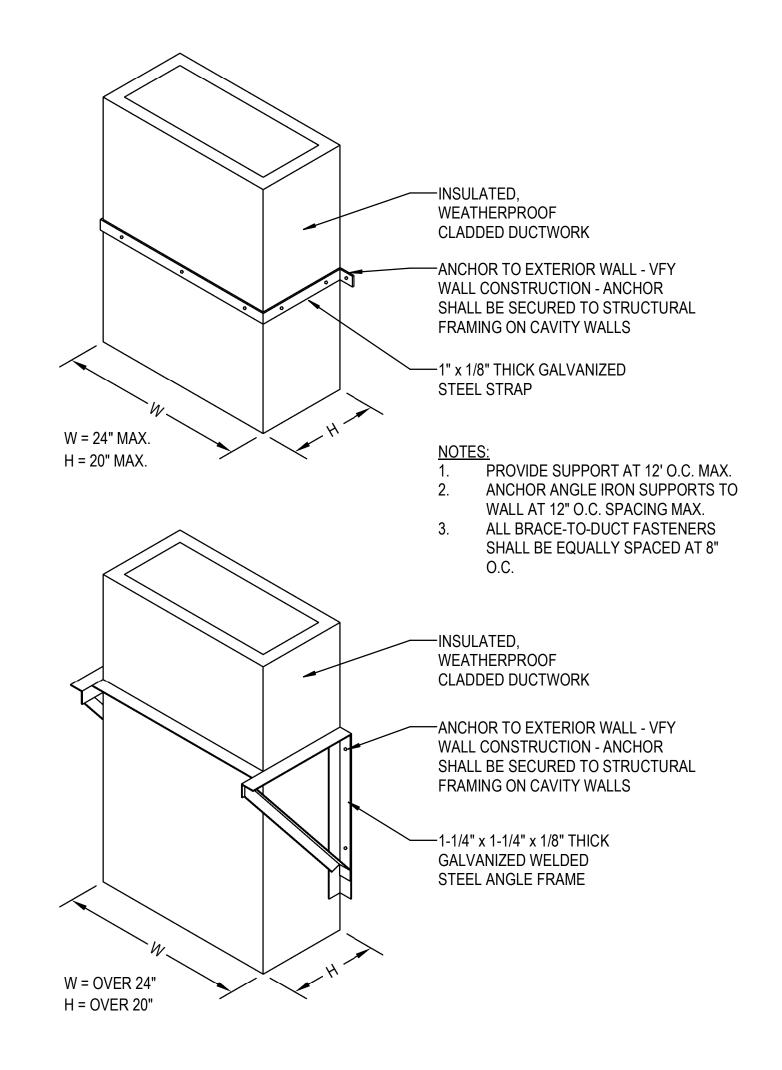
CONDENSATE TRAP



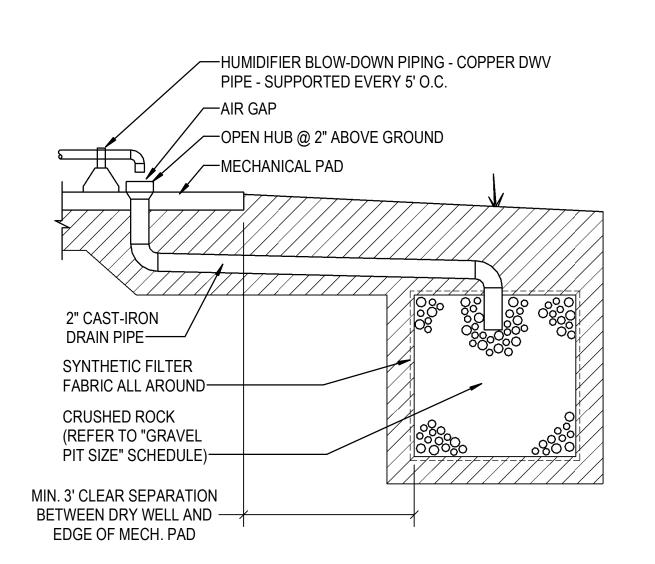
- ALL SHEET METAL DUCT JOINTS AND SEAMS SHALL BE THOROUGHLY COATED WITH A U.L. 181 COMPLIANT SEALANT, SMACNA SEAL CLASS A, HARDCAST OR EQUAL.
- COMBINATION VAPOR/WEATHER/UV BARRIER SHALL BE EQUAL TO POLYGUARD ALUMAGUARD RUBBERIZED BITUMEN FOIL FACED MEMBRANE WITH ASPHALT/ASPHALT LAP SEALS. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- WHERE THE DUCTWORK PENETRATED THE BUILDING ENVELOPE, THE EXTERIOR WEATHERPROOF INSULATION SHALL EXTEND MIN. 6" INTO THE BUILDING INTERIOR BEFORE TRANSITIONING TO THE INTERIOR DUCT INSULATION

EXTERIOR DUCT INSULATION DETAIL - "PAC-1"

NOT TO SCALE







HUMIDIFIER BLOWDOWN DRY WELL DETAIL NOT TO SCALE

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Sheet Number

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	UNIT HEATERS - GAS														
MARK	LOCATION	FAN TYPE	CFM	MOTOR	FUEL	INPUT	OUTPUT	ELECTRI	CAL	*MANUF'R	MODEL	REMARKS			
INITALAL	LOCATION	IANTITE	OI W	(HP)	TOLL	(MBH)	(MBH)	VOLTS	PH	WANT IX	WIODEL	TILIVIATIO			
GUH-1	BOILER ROOM 104	PROP.	1,921	1/4	NAT. GAS	150.0	124.5	120	1	REZNOR	UDXC 150	SEE NOTES			
GUH-2	BOILER ROOM 104	PROP.	1,921	1/4	NAT. GAS	150.0	124.5	120	1	REZNOR	UDXC 150	SEE NOTES			

* OR APPROVED EQUAL

NOTES: 1. ALUMINIZED STEEL HEAT EXCHANGER

2. ALUMINIZED STEEL BURNER RACK WITH STAINLESS STEEL INSERT

3. SPARK IGNITED, INTERMITTENT SAFETY PILOT WITH ELECTRONIC FLAME SUPERVISION WITH TIMED LOCKOUT

4. TWO-STAGE COMBINATION GAS VALVE

5. TEFC MOTOR WITH INTERNAL OVERLOAD FAN MOTOR PROTECTION

6. FAN AND LIMIT SAFETY CONTROLS

7. BLOCKED VENT SHUT-OFF SAFETY

8. 24V CONTROL TRANSFORMER WITH 24V TERMINAL STRIP

9. INDIVIDUALLY ADJUSTABLE HORIZONTAL LOUVERS

10. FULL FAN SAFETY GUARD

11. BOTTOM BURNER ACCESS 12. HORIZONTAL OR VERTICAL VENT OUTLET

13. 10-YEAR NON-PRORATED WARRANTY ON HEAT EXCHANGERS, BURNERS, AND FLUE COLLECTION BOX

14. 5-YEAR NON-PRORATED WARRANTY ON ALL MECHANICAL AND ELECTRICAL COMPONENTS

15. SUSPEND FROM ROOF STRUCTURE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

16. PROVIDE TYPE-B LISTED FLUE AND CONNECT TO THE EXISTING FLUE PIPING.

17. PROVIDE HEATING THERMOSTAT.

FAN SCHEDULE															
		GENE	RAL			FAN ELECTRICAL									
	MARK	MANUF'R./MODEL	SERVES	SERVES GENERAL MOTOR/DRIVE TYPE CFM ESP RPM SONES VOLTAGE MOTOR CONTROL		REMARKS									
	EF-1	GREENHECK SP-A390-VG	ELECTRICAL 105	EXHAUST	EC/ DIRECT	CENT.	300	1/4"	1,195	3.5	120/1/60	51 W	WALL-MOUNTED THERMOSTAT	NOTES 1-5,9	
	EF-2	GREENHECK AER-36-03-0620-VG	BOILER ROOM 104	EXHAUST	EC/ DIRECT	PROP.	15,000	1/4"	950	31	480/3/60	2 HP	WALL-MOUNTED THERMOSTAT	NOTES 1,2,6-9	
	EF-3	GREENHECK BAER-24-03-0330	COOL DOWN 101	EXHAUST	EXP/ BELT	PROP.	6,000	1/4"	1,295	27	480/3/60	1 HP	INTERLOCK WITH PAC-1	NOTES 2,6,7,11,12,13	
	* OD ADD	DOVED FOUND UNITED ATE	IEDWICE	•		·	·	·	·		•	·			

* OR APPROVED EQUAL UNLESS NOTED OTHERWISE

NOTES:

1. FACTORY MOUNTED INTEGRAL DISCONNECT.

2. INTEGRAL BAROMETRIC BACKDRAFT DAMPER.

3. FAN SPEED CONTROL FACTORY WIRED AND MOUNTED.

4. HANGER/ISOLATION KIT.

5. WALL CAP EQUAL TO GREENHECK #WC-8X8 WITH INTEGRAL BACKDRAFT DAMPER, BIRDSCREEN, AND BLACK ENAMEL FINISH.

6. FLUSH EXTERIOR SHORT WALL HOUSING.

7. 45-DEGREE TURN DOWN DISCHARGE HOOD.

8. WALL-MOUNTED MOTOR STARTER BY FAN MANUFACTURER EQUAL TO A GREENHECK MSAC.

9. 120V DIRECT ACTING WALL THERMOSTAT BY FAN MANUFACTURER.

10. INTERLOCK WITH LOUVER "L-1" SUCH THAT THE LOUVER DAMPER IS FULLY OPEN WHEN THE FAN IS OPERATING AND VICE VERSA.

11. NEMA 7/9 INTEGRAL DISCONNECT

12. ALUMINUM FAN BLADES

13. INTERLOCK WITH PAC-1 SUCH THAT WHEN PAC-1 IS OPERATING, EF-3 IS OPERATING, AND VICE VERSA.

	MINI SPLIT-SYSTEM HEAT PUMP SCHEDULE																	
INDOOR UNIT				OUT	COOLING				HEATING			ELECTRICAL						
MARK	TYPE	*MANUF'R./ MODEL	SERVES	FAN CFM (SPEEDS)	MARK	*MANUF'R./ MODEL	TOT. CAP. (BTUH)	EDB (°F)	EWB (°F)	AMB (°F)	SEER2	TOT. CAP. (BTUH)	AMB (°F)	HSPF2	VOLTAGE	MCA	BKR	REMARKS
MSFC-1	DUCTLESS SIDEWALL	LG LSN181HSV5	DATA 106	706 / 530 / 477 / 371	MSHP-1	LG LSU181HSV5	18,000	80.0	67.0	95.0	22.0	21,600	47.0	9.5	208/1/60	19.0	30A	SEE NOTES

* OR APPROVED EQUAL

1. SYSTEM SHALL BE COMPLETE WITH INDOOR AND OUTDOOR UNIT FROM SAME MANUFACTURER

2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT

3. 24-HOUR ON/OFF TIMER

4. AUTO CHANGEOVER

5. AUTO RESTART

6. LOW AMBIENT DOWN TO 0°F 7. CONDENSATE SENSOR CONNECTION

8. INVERTER (VARIABLE SPEED COMPRESSOR)

9. SMART DIAGNOSIS

10. 3M MICRO FILTER

11. SELF-CLEANING INDOOR COIL

	12.	SLEEP	MODE
--	-----	-------	------

13. COOLING ONLY FUNCTION

14. STAND-ALONE DIGITAL PROGRAMMABLE WALL THERMOSTAT

15. BUILT-IN BASE PAN HEATER

16. CENTRIFUGAL REFRIGERANT OIL SEPARATOR

17. BRUSHLESS DIGITALLY CONTROLLED INDOOR FAN MOTOR

18. FIVE YEAR COMPRESSOR WARRANTY 19. TWO YEAR FUNCTIONAL PARTS WARRANTY

STEAM CONDENSATE RECEIVER/PUMP										
GENERAL PUMP							ELECTRIC	AL		
MARK	MANUF'R / MODEL *	RECEIVER	TYPE	MANUF'R / MODEL *	FLOW (GPM)	HEAD (PSIG)	RPM	VOLTAGE	HP	REMARKS
SCP-1	RUSSELL #610CVAD117	10 GALLON	DUPLEX PUMPS	RUSSELL #VA512SS	9.0	10.0	1750	208/1/60	1/3	SEE NOTES
SCP-2	RUSSELL #610CVAD117	10 GALLON	DUPLEX PUMPS	RUSSELL #VA512SS	9.0	10.0	1750	208/1/60	1/3	SEE NOTES
SCP-3	RUSSELL #610CVAD117	10 GALLON	DUPLEX PUMPS	RUSSELL #VA512SS	9.0	10.0	1750	208/1/60	1/3	SEE NOTES
SCP-4	RUSSELL #610CVAD117	10 GALLON	DUPLEX PUMPS	RUSSELL #VA512SS	9.0	10.0	1750	208/1/60	1/3	SEE NOTES

* OR APPROVED EQUAL

1. PACKAGED STEAM CONDENSATE RECEIVER/DUPLEX PUMP PACKAGE.

2. NEMA 4 MECHANICAL PUMP ALTERNATOR 3. PUMP WITH 300-DEGREE F SEALS AND TEFC MOTOR

4. BRASS GAUGE GLASS AND COCKS 5. TYPE 304 STAINLESS STEEL RECEIVER

	LOUVER SCHEDULE								
MARK	SERVES	MANUF'R./MODEL	SIZE	TYPE	BPWP (FPM)	MAX. S.P. (IN. W.C.)	MATERIAL	FINISH	REMARKS
L-1	BOILER ROOM 104 - EF-1 MAKE-UP AIR	GREENHECK EACC-601	100x60	INTAKE	1,192	-	EXT. ALUM.	KYNAR	NOTES 1-7
L-2	BOILER ROOM 104 - BOILER COMBUSTION AIR	GEENHECK ESJ-401	48x84	INTAKE	691	-	EXT. ALUM.	KYNAR	NOTES 1-3
+ OD ADDDO	AVED FALLE IN DUOLING AD D	ATTARE							

* OR APPROVED EQUAL IN RUSKIN OR POTTORF

1. INTEGRAL GALVANIZED BIRD SCREEN.

2. INTAKE LOUVERS SHALL NOT BE SIZED FOR ANY MORE THAN 90% OF THE LOUVER MANUFACTURER'S BPWP RATING. 3. COLOR TO BE SELECTED BY OWNER FROM MANUFACTURER'S STANDARD RANGE - NO LESS THAN 24 STANDARD COLORS.

4. COMBINATION LOUVER DAMPER WITH CONCEALED ACTUATOR (120V) AND LINKAGE.

5. IF NEEDED, CONTROL TRANSFORMER SHALL BE CONCEALED (480V/120V).

6. BLADE END SWITCH.

7. LOUVER DAMPER MOTOR SHALL BE INTERLOCKED WITH "EF-1" SUCH THAT THE DAMPER IS FULLY OPEN WHEN THE FAN IS OPERATING AND VICE-VERSA.

AIR DEVICE			KEY NO. IF MO THAN ON		4 A 4 210	- THROW CFM		
MARK	DESCRIPTION	SIZE	MOUNTING	MATERIAL	FINISH	*MANUF'R	MODEL	REMARKS
Α	HIGH CAP. DRUM TYPE	48x6	DUCT	ALUMINUM	NOTE 2	PRICE	AHCD1	NOTE 2
В	DOUBLE DEFLECTION	12x6	DUCT	ALUMINUM	WHITE	PRICE	620	NOTE 1
1	HEAVY DUTY GRILLE	48x48	SIDEWALL	ALUMINUM	WHITE	PRICE	98	NOTE 1,3
2	45° FIXED BLADE	12x12	HARD CEILING	ALUMINUM	WHITE	PRICE	630	NOTE 1
2						_		

NOTES: | * OR APPROVED EQUAL

1. SURFACE MOUNTED AIR DEVICES SHALL HAVE COUNTERSUNK FASTENERS.

2. FINISH TO BE SAME AS FOR DUCTWORK - FINISH TO BE DETERMINED BY THE OWNER/ARCHITECT.

3. INTEGRAL OPPOSED BLADE DAMPER OPERABLE FROM FACE OF GRILLE.



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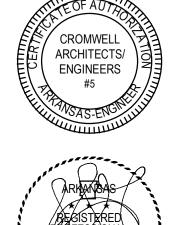
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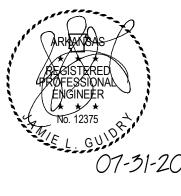
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CONSTRUCTION **DOCUMENTS**

	JIIS ———			
No.	Date	Description		





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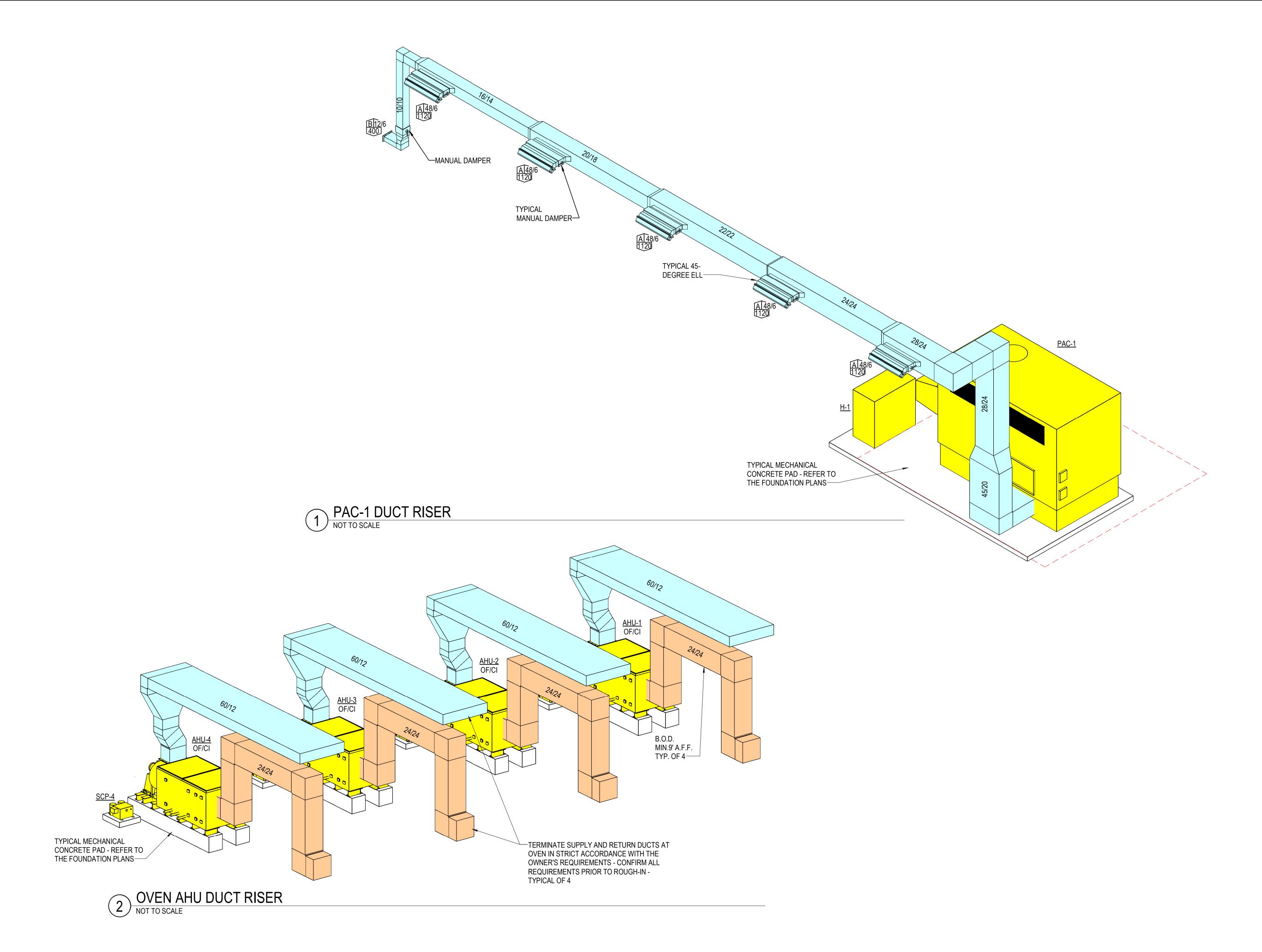
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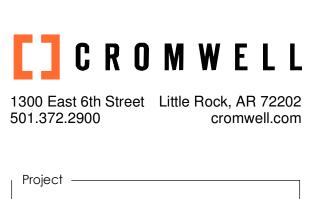
MECHANICAL

SCHEDULES

2024-045

07-31-2024





66B

EN BUILDING BUILDING CONSTRUCTION **DOCUMENTS** Date Description CROMWELL ARCHITECTS/ **ENGINEERS**

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RISERS

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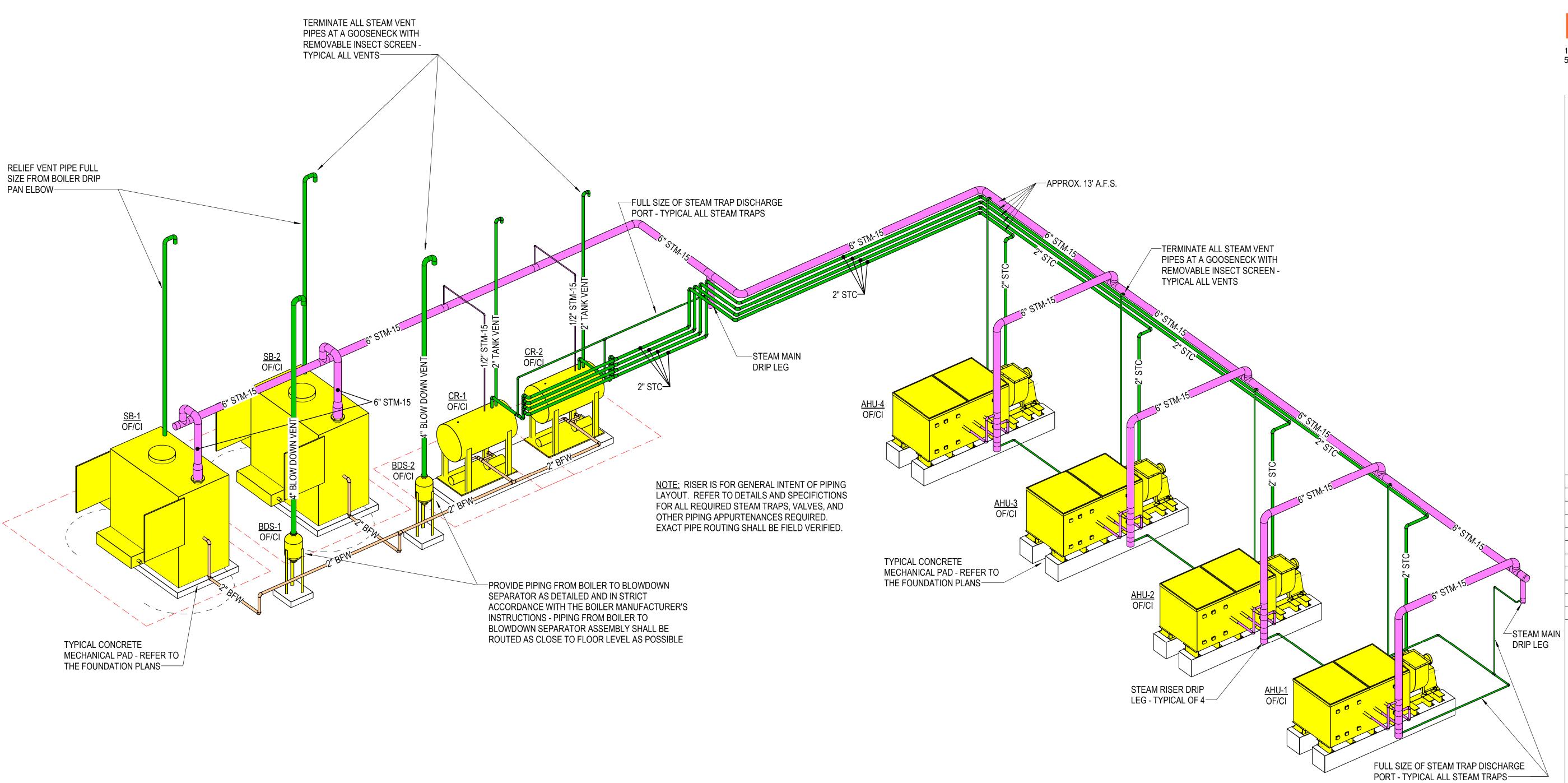
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MECHANICAL PIPING RISER

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ARKANSAS

AEROJET BUILDING 66B

CORE OVEN BUILDING

EAST CAMDEN,

ARKANSAS

Famour ARKANSAS

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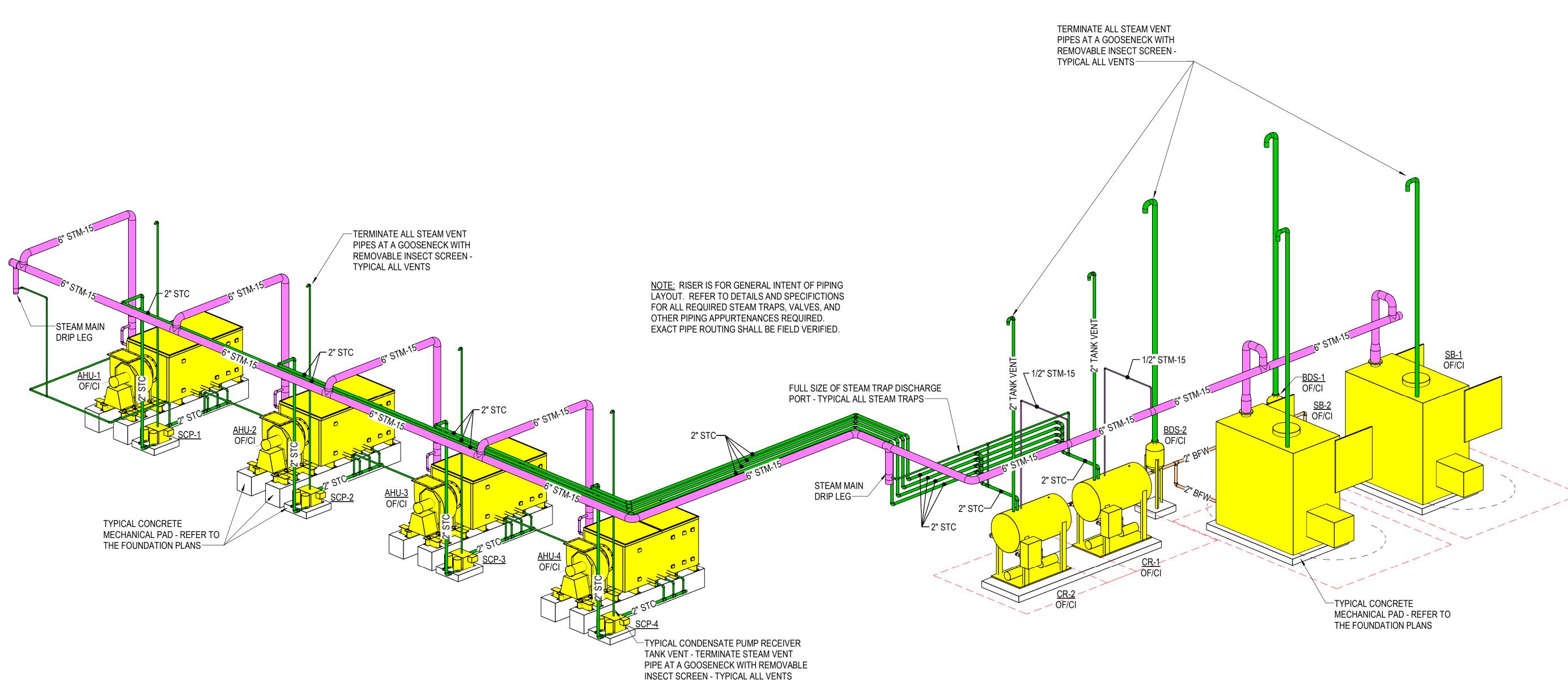
ENGINEERS

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MECHANICAL PIPING RISER

Sheet Number

M-902







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> MECHANICAL PIPING RISER

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)
- SINGLE SPECIAL-PURPOSE RECEPTACLE OUTLET; NUMBER CORRESPONDS TO THE SPECIAL-PURPOSE RECEPTACLE SCHEDULE
- 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-60X 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

COLOR LEGEND:

- **EXISTING TO REMAIN**
- DEMOLISH
- NEW CONSTRUCTION

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. 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.

<u>SWITCHGEAR</u>

MAGNETIC MOTOR STARTER (FURNISHED BY DIVISION 23, UNLESS NOTED OTHERWISE)

ELECTRICAL PANELBOARD, FLUSH MOUNTED

ELECTRICAL PANELBOARD, SURFACE MOUNTED

EXISTING ELECTRICAL PANELBOARD. SURFACE MOUNTED

EXISTING ELECTRICAL PANELBOARD, FLUSH MOUNTED

- SAFETY SWITCH; 30A CURRENT RATING UNLESS NOTED OTHERWISE. +4'-0" TO HANDLE
- FUSIBLE SAFETY SWITCH; CURRENT RATING AND FUSE RATING NOTED. +4'-0" TO HANDLE
- CIRCUIT BREAKER IN WALL MOUNTED ENCLOSURE
 - ELECTRICAL TRANSFORMER, FLOOR MOUNTED UNLESS INDICATED OTHERWISE

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

SWITCH, SINGLE POLE, 20A

- SWITCH, DOUBLE POLE, 20A SWITCH
- \$3 3-WAY, 20A SWITCH
- \$4 4-WAY, 20A SWITCH
- \$K KEY OPERATED
- SINGLE POLE SWITCH, WITH PILOT LIGHT
- SINGLE POLE MANUAL MOTOR STARTING SWITCH, WITH THERMAL OVERLOAD ELEMENT AND PROVISIONS FOR LOCKING OPEN
- SWITCH, DIMMING (COORDINATE WITH FIXTURE MANUFACTURER)
- SWITCH, MULLION SWITCH
- \$LV LOW VOLTAGE WITH MOMENTARY CONTACTS SWITCH
- OCCUPANCY SENSOR, WALL MOUNTED, DUAL TECHNOLOGY
- OCCUPANCY SENSOR, CEILING MOUNTED, DUAL TECHNOLOGY
- PHOTOCELL

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

SHALL BE MOUNTED AT THE SAME HEIGHT AFF TO ACHIEVE A UNIFORM APPEARANCE OR AS DIRECTED BY THE A/E.

MISCELLANEOUS

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

CONDUIT RUN, EXPOSED

CONDUIT RUN, CONCEALED

FLEXIBLE CONDUIT

<u>CIRCUIT</u> **INFORMATION** HOMERUN DESIGNATION PHASE CONDUCTOR(S) EQUIPMENT GROUND (PROVIDE EQUIPMENT GROUND FOR ALL BRANCH CIRCUITS AND FEEDERS, WHETHER SHOWN OR NOT. WHERE SHOWN TO SHARE A CONDUIT, BRANCH CIRCUITS SHALL SHARE EQUIPMENT GROUND UNLESS INDICATED OTHERWISE) - NEUTRAL CONDUIT SIZE · WIRE SIZE CIRCUIT DESIGNATION

 CIRCUIT DESIGNATION INDICATES PANELBOARD AND CIRCUIT(S) TO WHICH HOMERUN IS CONNECTED.

- WIRE SIZE SHALL BE NO. 12, UNLESS INDICATED OTHERWISE
- O 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.)

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

GENERAL SYMBOLS NOTES

NIC = NOT IN CONTRACT

- 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

DISCONNECT SWITCH OR LOAD INTERRUPTER SWITCH CURRENT RATING AS INDICATED, 3 POLE OR AS INDICATED

SWITCH WITH GROUND FAULT INTERRUPTER

F30 FRS FUSE, CURRENT RATING AND TYPE WHEN INDICATED

TRANSFORMER, DESCRIPTION AS NOTED OR PER



SCHEDULE

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POTENTIAL TRANSFORMER

AMMETER

SS PHASE SELECTOR SWITCH A

VOLTMETER

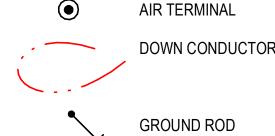
WH WATT-HOUR METER SPD SURGE PROTECTIVE DEVICE

AUTOMATIC TRANSFER SWITCH

GENERATOR

LIGHTNING PROTECTION LEGEND:

— - - — SURFACE MOUNTED LIGHTNING PROTECTION MAIN CONDUCTOR



GROUND ROD

__ - - COUNTERPOISE CONDUCTOR

BOND

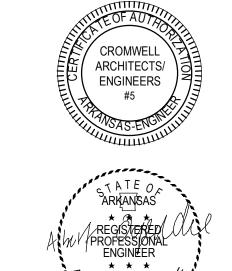
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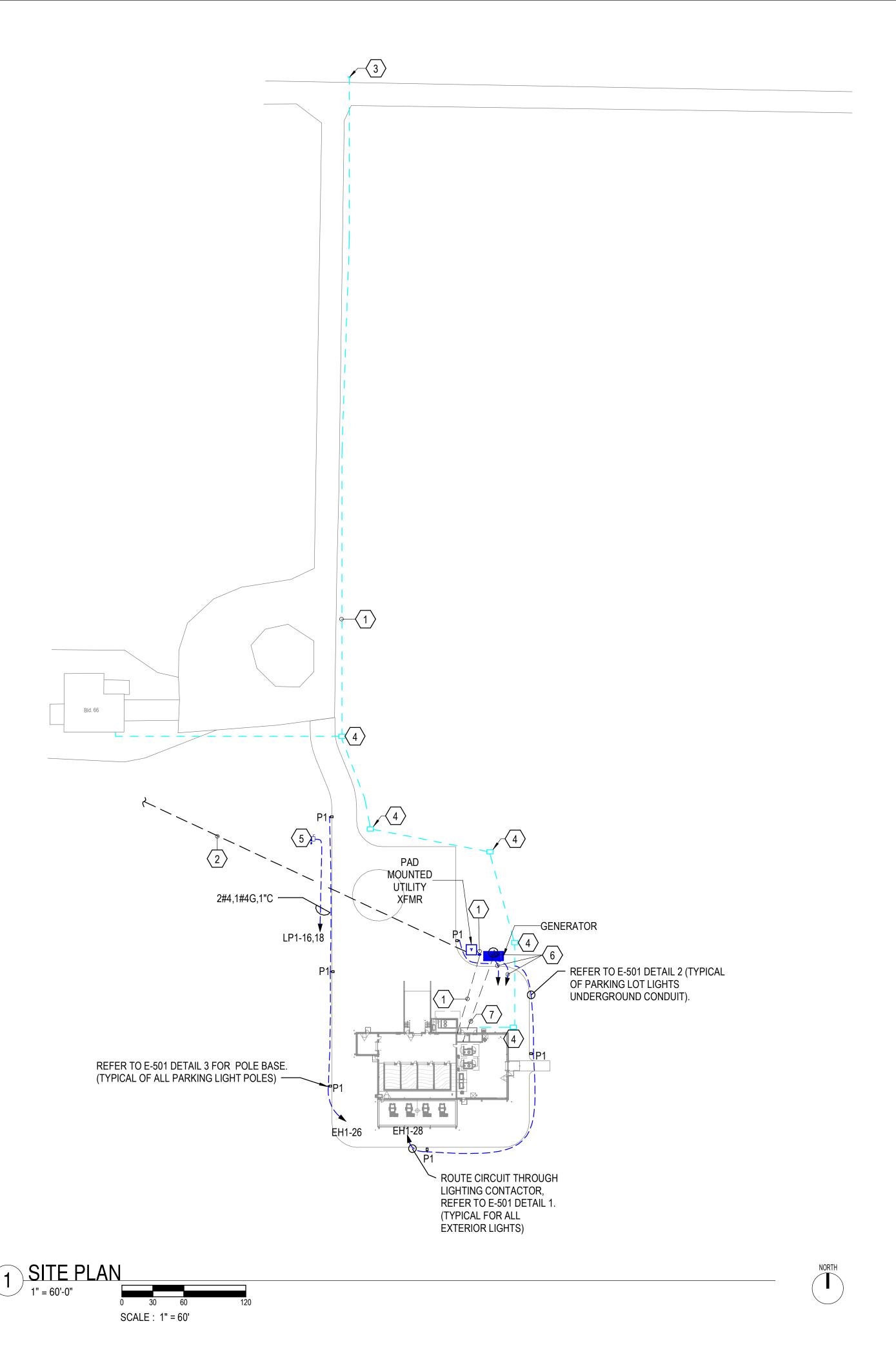
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ELECTRICAL LEGEND

Sheet Number

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- 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. DASHED LINES IN CONDUIT INDICATE THAT THE CONDUITS ARE BURIED UNDERGROUND. CONDUITS SHALL BE BURIED NO LESS THAN 3'-0" UNDERGROUND.
- E. GENERATOR PAD SHALL BE LOCATED NO LESS THAN 50'-00" FROM BUILDING. REFER TO E-503 DETAIL 4 FOR PAD DETAIL.

KEYED NOTES:

- ROUTE (3) 4" PVC SCHEDULE 80 CONDUIT BURIED 3'-0" MINIMUM UNDERGROUND FOR UTILITY POWER. TRANSITION TO 4" RIGID METAL CONDUIT APPROXIMATELY 52'-0" FROM BUILDING. ONE CONDUIT IS SPARE.
- 3" SCHEDULE 80 PVC PIPE ROUTED UNDERGROUND TO UTILITY TIE IN POINT FOR PRIMARY SERVICE, PROVIDE A PULL STRING AND ELBOWS ON BOTH ENDS. COORDINATE WITH UTILITY AND PROVIDE ALL REQUIREMENTS.
- TIE IN TO EXISTING FIBER PATCH PANEL. LOCATION INDICATED BY THIS KEYNOTE IS APPROXIMATE, FIELD VERIFY EXACT LOCATION OF EXISTING FIBER HUT.
- PROVIDE AN INGROUND WEATHER PROOF BOX.
- 240V,3POLE,60A,NF WEATHERPROOF DISCONNECT BOX TO POWER LIFT STATION CONTROL PANEL. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH INSTALLER.
- JUNCTION BOX POWERS GENERATOR BATTERY AND BLOCK HEATER. COORDINATE EXACT LOCATION WITH GENERATOR. POWER FROM ELP1-23, ELP1-25.
- ROUTE ONE 4" AND THREE 1" PVC SCHEDULE 80 CONDUIT BURIED 3'-0" MINIMUM UNDERGROUND FOR GENERATOR BATTERY CHARGER, BLOCK HEATER AND CONTROLS. TRANSITION TO 4" RIGID METAL CONDUIT APPROXIMATELY 52'-0" FROM BUILDING.



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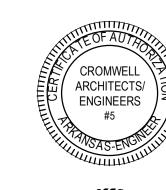
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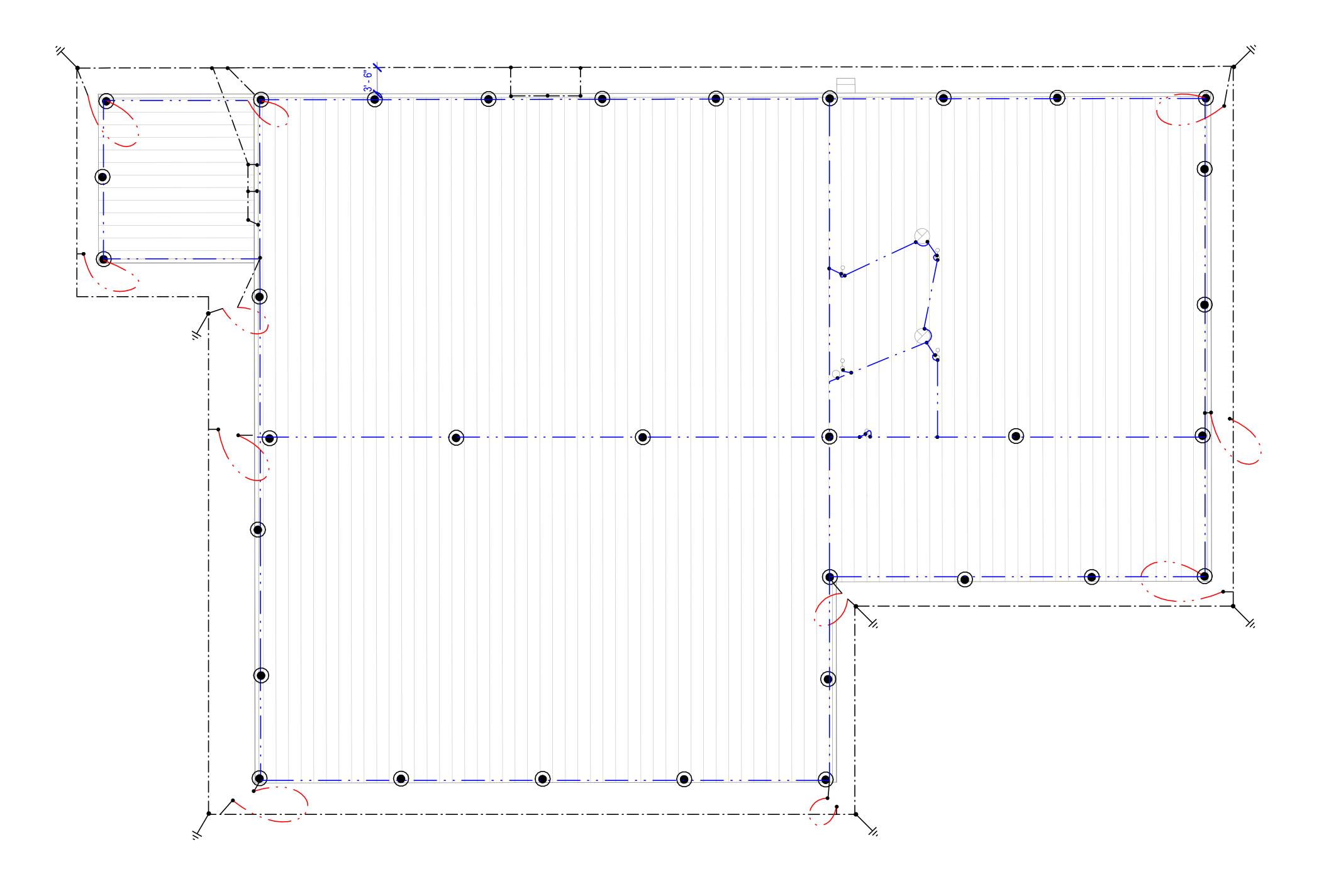
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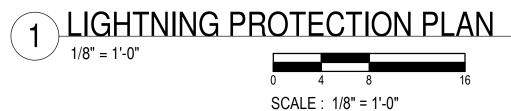
ELECTRICAL SITE

PLAN

Sheet Number

ES101







- A. LIGHTNING PROTECTION DESIGN IS TO SHOW INTENT ONLY, CONTRACTOR SHALL ENGAGE A THIRD PARTY LIGHTNING PROTECTION DESIGNER / ENGINEER WHOSE SOLE PURPOSE IS DESIGNING AND CERTIFYING LIGHTNING PROTECTION SYSTEMS TO PROVIDE A COMPLETE SYSTEM WITH UL MASTER LABEL. THE DESIGN SHALL MEET OR EXCEED REQUIREMENTS PRESCRIBED IN NFPA 780 CHAPTER 8.
- B. ALL MATERIALS SHALL BE CLASS II, UNDERWRITERS LABORATORIES LISTED AND LABELED. LABELS TO BE ON ALL AIR TERMINALS AND AT 10' INTERVALS ON CONDUCTOR CABLE.
- C. LOCATE AIR TERMINALS AS SHOWN AND AS REQUIRED BY NFPA 780. ENSURE THAT ALL AIR TERMINALS ARE WITHIN 2'-0" OF OUTSIDE BUILDING EDGE, OUTSIDE CORNER. ENSURE AIR TERMINAL PROJECTS 10" ABOVE OBJECT PROTECTED AND THAT SPACING DOES NOT EXCEED 20'-0". AIR TERMINALS 2'-0" ABOVE OBJECT PROTECTED SHALL NOT EXCEED SPACING OF 25'-0".
- D. MAINTAIN DOWNWARD OR HORIZONTAL COURSING OF MAIN CONDUCTOR CABLE AND ENSURE THAT ALL BENDS HAVE AT LEAST AN 8" RADIUS AND DO NOT EXCEED 90 DEGREES.
- E. SUPPORT ALL EXPOSED CONDUCTOR CABLE AT 3'-0" ON CENTER MAXIMUM.
- F. BOND TO WATER SERVICE AND OTHER PIPING SYSTEMS AS REQUIRED BY CODE(S).
- G. INTERCONNECT LIGHTNING PROTECTION GROUND WITH OTHER BUILDING GROUND SYSTEMS AS REQUIRED BY CODE(S).
- H. BOND METAL BODIES ON ROOF THAT ARE OUTSIDE THE ZONE OF PROTECTION THAT ARE SUBJECT TO A DIRECT LIGHTNING STRIKE OR WHICH EXCEED THE HEIGHT OF ADJACENT AIR TERMINALS WITH MAIN SIZE CONDUCTOR CABLE. TYPICAL METAL BODIES INCLUDE BUT ARE NOT LIMITED TO: EXHAUST FANS, VENTS, HANDRAILS, AIR HANDLING UNITS, LADDERS, ANTENNAS, COOLING TOWERS, SKYLIGHTS, ETC.
- I. ACTUAL JOBSITE CONDITIONS MAY ALTER SOME AIR TERMINAL AND GROUNDING LOCATIONS.
- J. INSTALL GROUND ELECTRODES AS SHOWN AND AS REQUIRED BY CODE(S) BUT IN NO INSTANCE SHALL THEY BE LESS THAN 1'-0" BELOW GRADE AND 2'-0" FROM FOUNDATION WALL. ELECTRODES SHALL PENETRATE EARTH AT LEAST 10'-0".
- K. STRUCTURAL STEEL MAY BE USED AS A DOWN CONDUCTOR WHERE PERMITTED BY NFPA 780. MAKE ADDITIONAL CONNECTIONS AS REQUIRED BY NFPA 780.
- L. ADJUST LOCATIONS IN FIELD AS REQUIRED TO COMPLY WITH NFPA 780 BASED ON ACTUAL CONDITIONS.
- M. PROVIDE SURGE PROTECTION DEVICES MEETING THE REQUIREMENTS OF NFPA 780 FOR ALL POWER SERVICE ENTRANCES AND CONDUCTIVE COMMUNICATIONS SYSTEMS, AND ANTENNA SYSTEMS. MAKE ALL CONNECTIONS.
- N. PROTECT DOWN CONDUCTORS IN CONDUIT, ENTIRE VERTICAL ROUTING ON EXTERIOR OF BUILDING. PAINT TO MATCH ADJACENT SURFACE.
- O. REPAIR AREAS DISTURBED FOR GROUND ROD INSTALLATION TO EXISTING OR BETTER CONDITIONS AND GRADE PRIOR TO INSTALLATION. CUT CONCRETE AT EXISTING JOINTS WHERE APPLICABLE.

LIGHTNING PROTECTION LEGEND:

— - - — SURFACE MOUNTED LIGHTNING PROTECTION MAIN CONDUCTOR

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AIR TERMINAL



GROUND ROD

DOWN CONDUCTOR



___ - - _ COUNTERPOISE CONDUCTOR

BOND

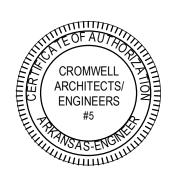


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LIGHTNING PROTECTION PLAN

Sheet Number –

EG101



- A. ALL EXIT LIGHTS AND EMERGENCY LIGHTING UNIT TYPE EL SHALL BE POWERED FROM UNSWITCHED LIGHTING CIRCUIT INDICATED.
- MOUNT ALL EXIT LIGHTS 1' ABOVE DOOR JAMB.
- C. MOUNT TYPE W1 & W1E 8'-0" ABOVE FINISHED GRADE.
- D. MOUNT FIXTURE TYPE A & AE AT 14'-6" AFF. COORDINATE WITH OTHER DISCIPLINES ON FIXTURE PLACEMENT.
- E. ALL EXTERIOR LIGHTING SHALL BE POWERED THROUGH A LIGHTING CONTACTOR. REFER TO E-501 DETAIL 1.

KEYED NOTES:

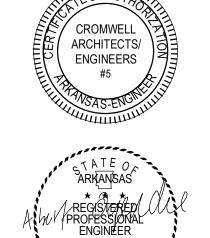
- JUNCTION BOX POWERS OVEN LIGHT FIXTURE, COORDINATE EXACT LOCATION WITH OVEN LIGHT LOCATION.
- 2 SURFACE MOUNT FIXTURES UNDERNEATH ROOF STRUCTURE.
- 3 MOUNT FIXTURES 8'-6" AFF IN THIS SPACE.
- MOUNT FIXTURES 11'-0" AFF IN THIS SPACE.



JET BUILDING 66B OVEN BUILDING CAMDEN, NSAS

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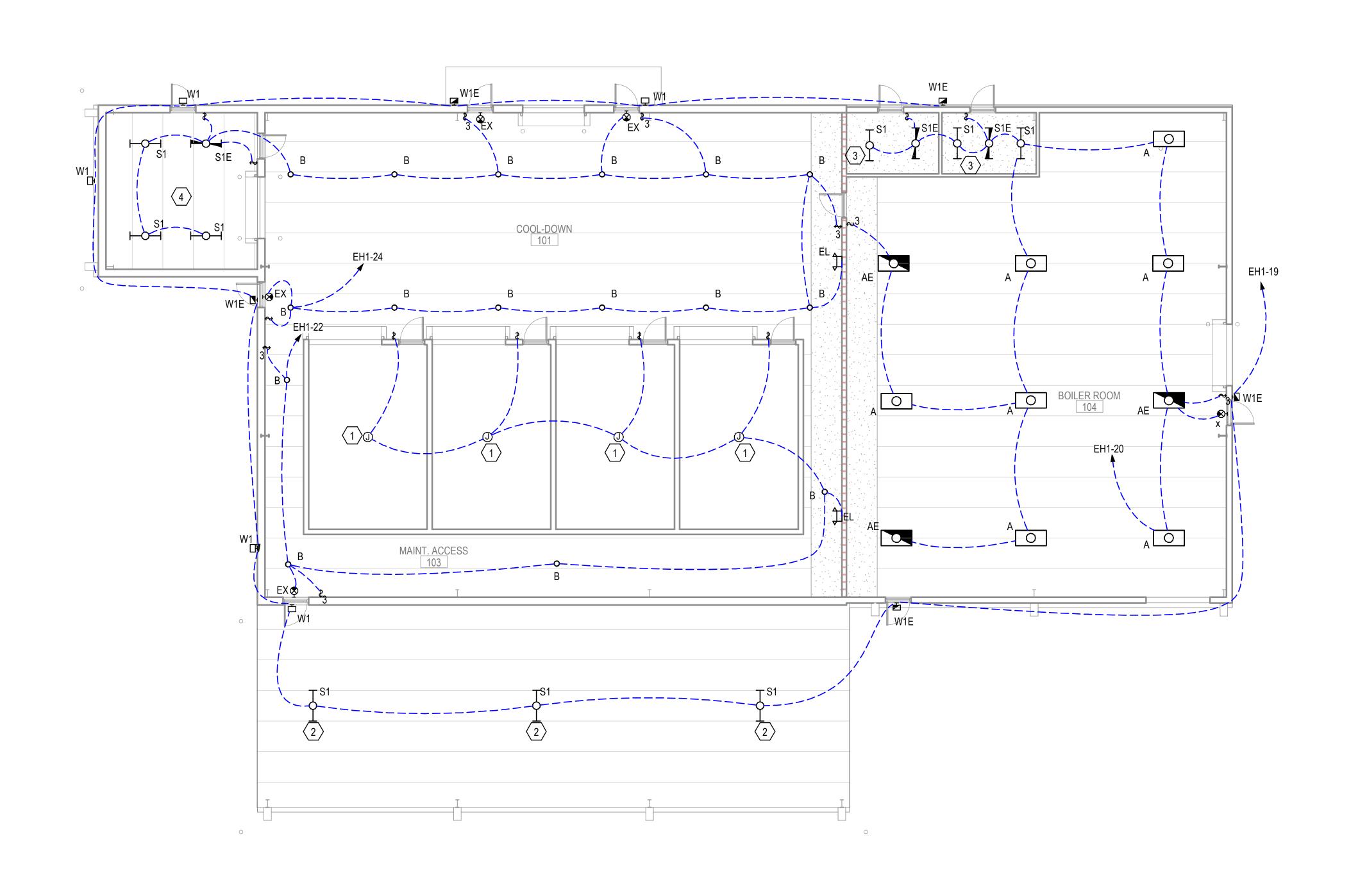
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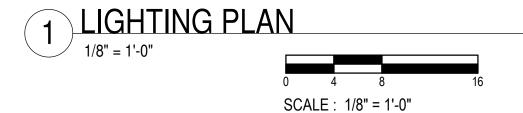
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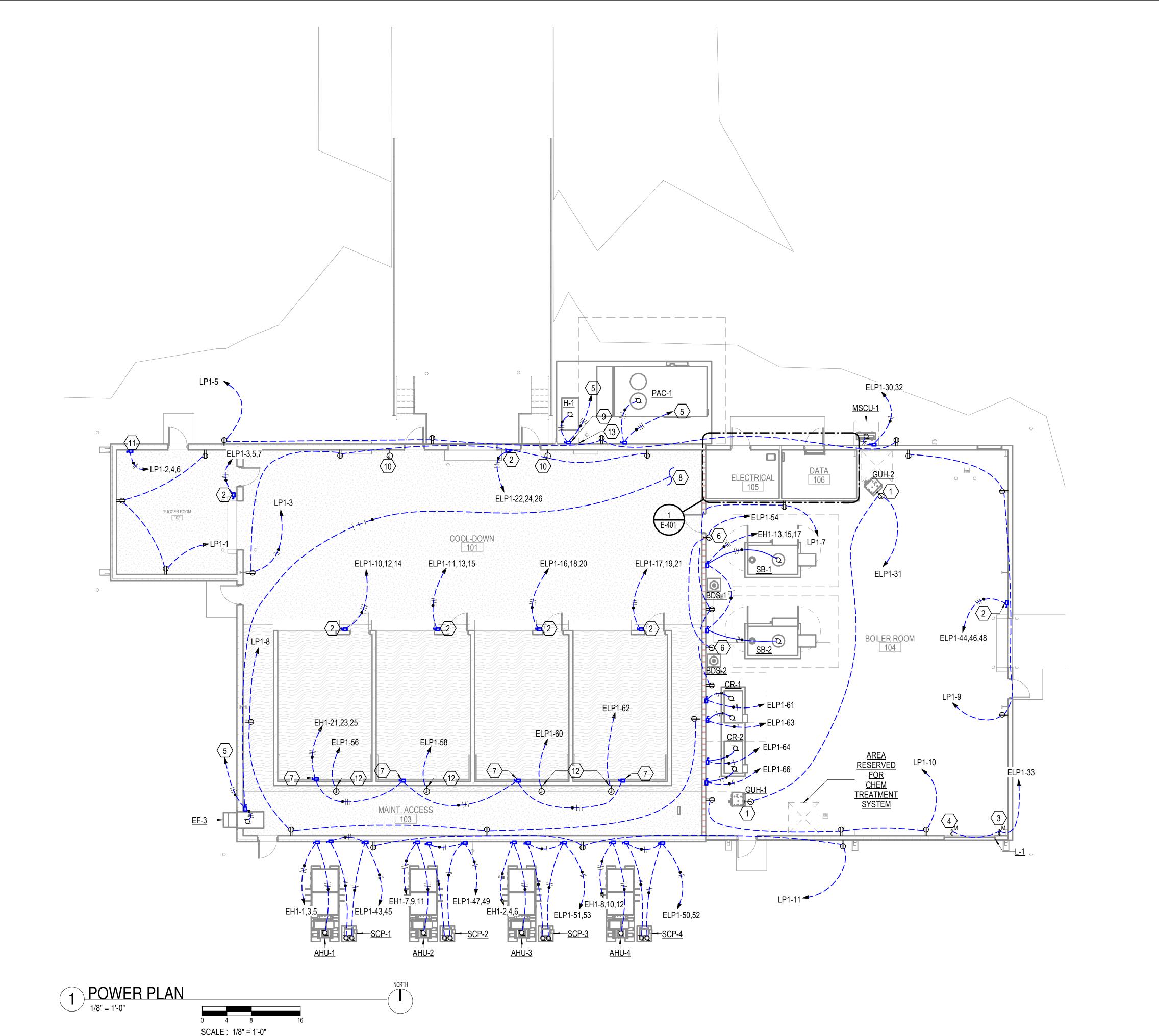
LIGHTING PLAN

Sheet Number —

EL101







- 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

KEYED NOTES:

- JUNCTION BOX POWERS GAS HEATER. COORDINATE EXACT LOCATION WITH INSTALLER
- 240V,30A,3PHASE DISCONNECT POWERS OVER HEAD DOOR COORDINATE EXACT LOCATION WITH INSTALLER. COORDINATE AND PROVIDE EXACT POWER REQUIREMENTS WITH DOOR MANUFACTURER.
- MOTOR STARTER POWERS LOUVERS, COORDINATE EXACT LOCATION
- MOTOR STARTER POWERS EXHAUST FAN. COORDINATE EXACT LOCATION WITH INSTALLER.
- REFER TO SINGLE-LINE FOR POWER INFORMATION.
- JUNCTION BOX POWERS BOILER CONTROL PANEL. COORDINATE EXACT LOCATION WITH INSTALLER.
- DISCONNECT POWERS COOL DOWN FANS. COORDINATE EXACT LOCATION WITH COOL DOWN FAN INSTALLER.
- PARTIAL CIRCUIT, SEE E-401 FOR CONTINUATION.
- PROVIDE A 480V,3POLE,200A NON-FUSED DISCONNECT IN A NEMA 3R
- JUNCTION BOX POWERS ACCESS CONTROL, COORDINATE EXACT LOCATION WITH INSTALLER. POWER FROM ELP1-65.
- DISCONNECT POWERS TUGGER CHARGER, COORDINATE EXACT LOCATION WITH OWNER. POWER REQUIREMENTS ARE APPROXIMATE, FIELD VERIFY AND PROVIDE EXACT POWER REQUIREMENTS FROM EXISTING TUGGER.
- JUNCTION BOX TO POWER OVEN CONTROL PANEL, COORDINATE EXACT LOCATION WITH INSTALLER.
- JUNCTION BOX SERVES HEAT TRACE, ROUTE CONDUIT FROM ELECTRICAL ROOM TO THIS LOCATION, REFER TO E-401 KEYNOTE 9 FOR APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH HEAT TRACE INSTALLER.



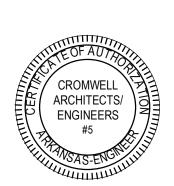
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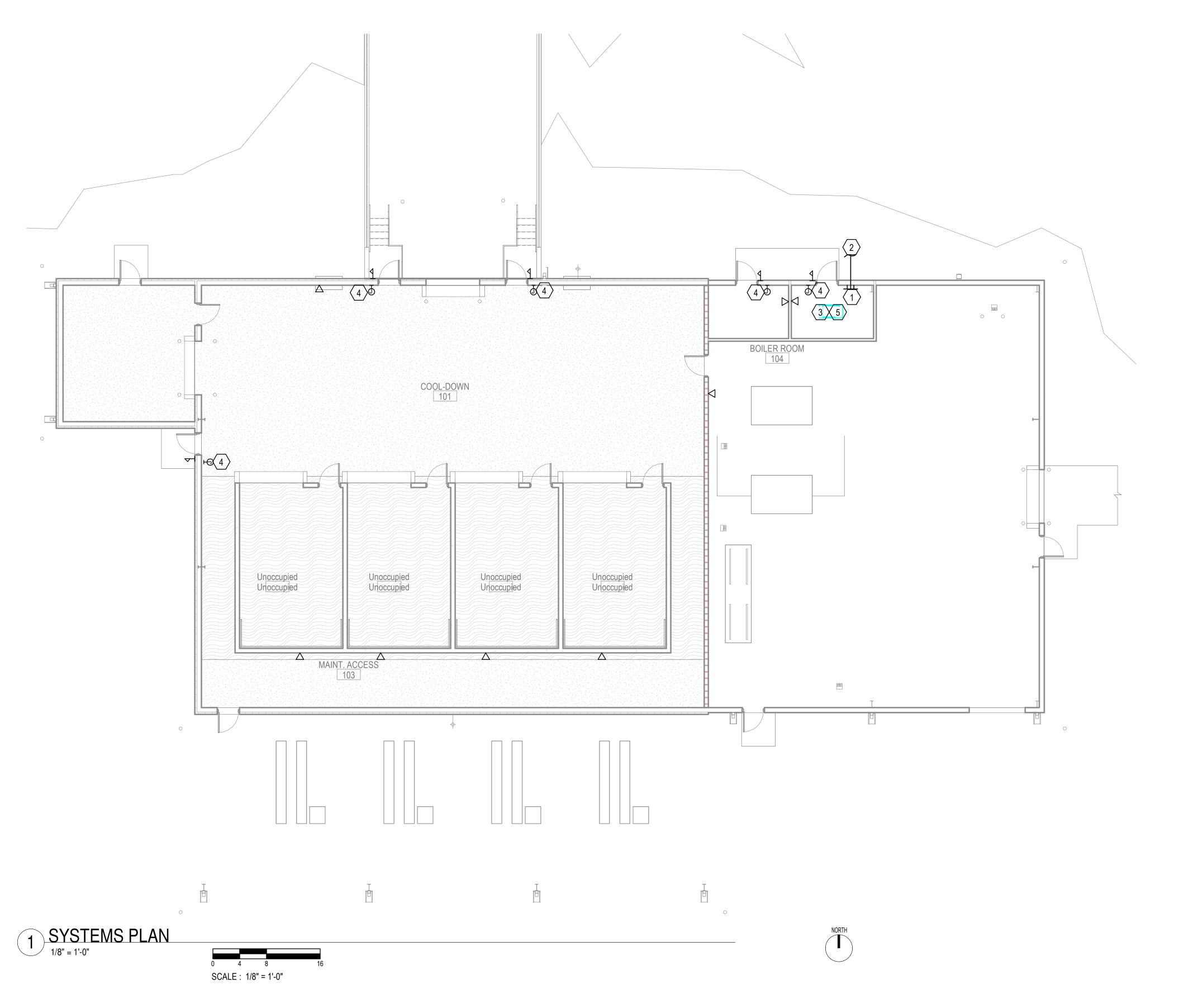
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POWER PLAN



- A. REFER TO E-502 FOR ACCESS CONTROL DOOR DETAIL. PROVIDE ALL REQUIREMENTS.
- B. PROVIDE 1" CONDUIT FOR ALL DATA DEVICES AND SECURITY INDICATED, ROUTE CONDUIT TO TELECOMMUNICATIONS ROOM.
- C. PROVIDE CAT 6 CABLE TO DATA LOCATIONS, AND TERMINATE AT PATCH PANEL AND AT THE COMMUNICATIONS DATA OUTLET LOCATION.

KEYED NOTES:

- 1 TELECOMMUNICATIONS GROUND BUS BAR. GROUND RACK TO GROUND BUS BAR.
- CONNECT COMMUNICATIONS GROUND BUS BAR TO COUNTERPOISE USING A #4/0 CU BARE CONDUCTOR.
- PROVIDE 4 POST RACK PER OWNERS IT STANDARDS.
- ACCESS CONTROL JUNCTION BOX, COORDINATE EXACT LOCATION WITH INSTALLER.
- PROVIDE 24 PORT PATCH PANEL, USE PATCH PANEL TO PATCH INCOMING FIBER, PROVIDE 24 PORT COPPER PATCH PANEL AND PATCH ALL CAT6 LOW VOLTAGE WIRING TO THIS PATCH PANEL. REFER TO AEROJET IT STANDARDS FOR EQUIPMENT SPECIFICATION, REQUIRED WIRE MANAGERS AND OTHER LOW VOLTAGE REQUIREMENTS.



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AEROJET BUILDING 66B CURE OVEN BUILDING EAST CAMDEN,

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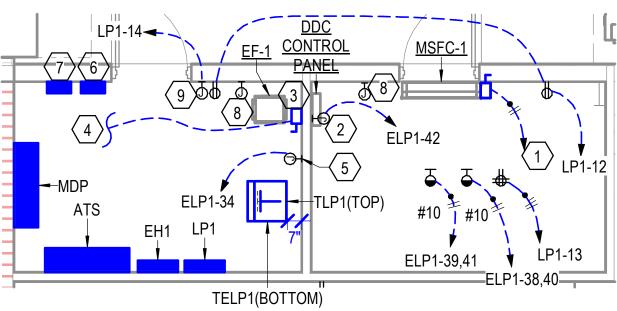
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SYSTEMS PLAN

Sheet Number —

ET101



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

ENLARGED ELECTRICAL AND COMMUNICATIONS ROOM





KEYED NOTES:

- DISCONNECT POWERS INDOOR SPLIT UNIT. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
- JUNCTION BOX POWERS DDC CONTROL PANEL. COORDINATE EXACT LOCATION WITH INSTALLER.
- DISCONNECT POWERS EXHAUST FAN. COORDINATE EXACT LOCATION WITH INSTALLER.
- PARTIAL CIRCUIT, REFER TO CIRCUIT EP101 FOR CIRCUIT CONTINUATION.
- JUNCTION BOX POWERS FIRE ALARM CONTROL PANEL. COORDINATE EXACT LOCATION WITH INSTALLER.
- EXTERIOR LIGHTING CONTACTOR.
- REMOTE GENERATOR ANNOUNCIATOR PANEL. ROUTE 1" CONDUIT TO GENERATOR LOCATION. USE MANUFACTURER RECOMMENDED CABLE TYPE AND SIZE.
- JUNCTION BOX POWERS ACCESS CONTROL, COORDINATE EXACT LOCATION WITH INSTALLER. POWER FROM ELP1-65.
- JUNCTION BOX POWERS HEAT TRACE CONTROLLER, COORDINATE EXACT LOCATION WITH INSTALLER. ROUTE 1" CONDUIT TO LOCATION INDICATED BY KEYNOTE 13 ON EP101.

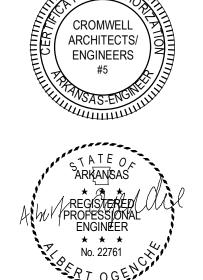
Project -

66B EN BUILDIN BUILDING Z 山 ERO URE

CONSTRUCTION **DOCUMENTS**

Design Phase

No.	Date	Description



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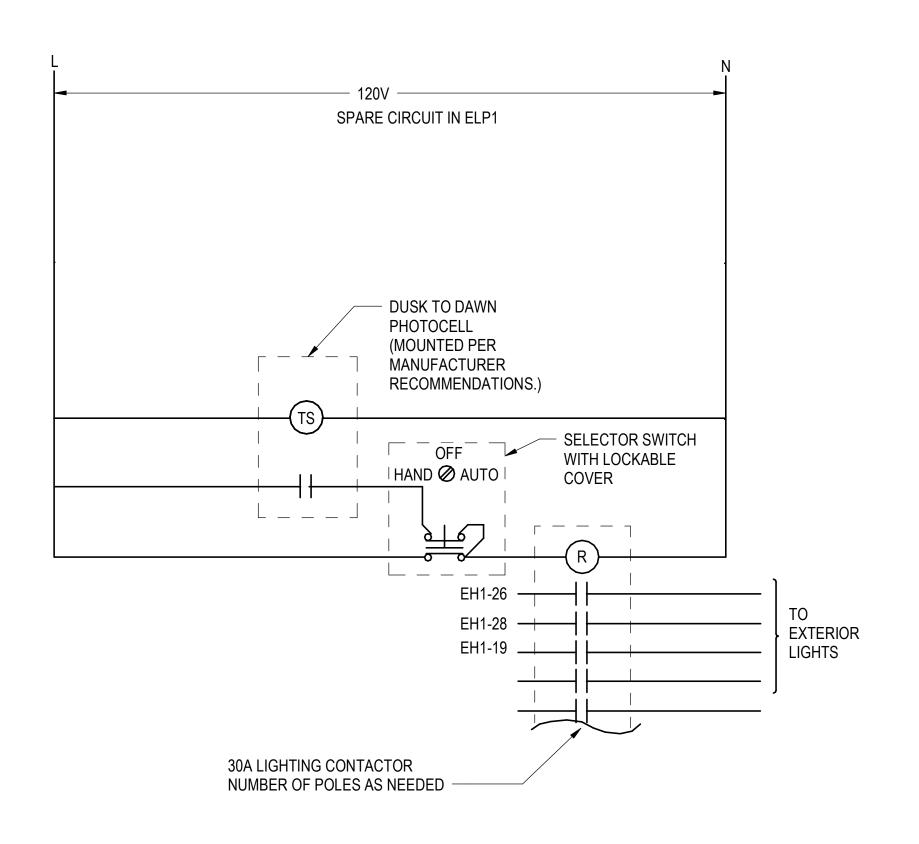
2024-045

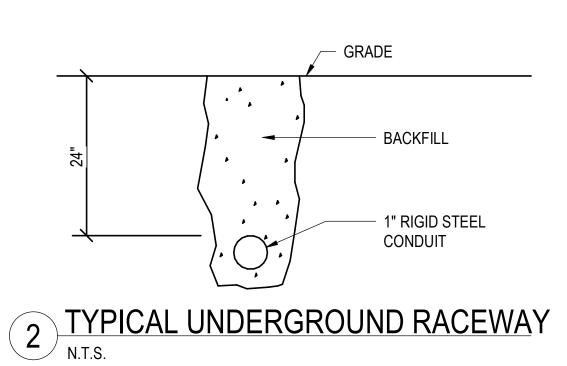
07-31-2024

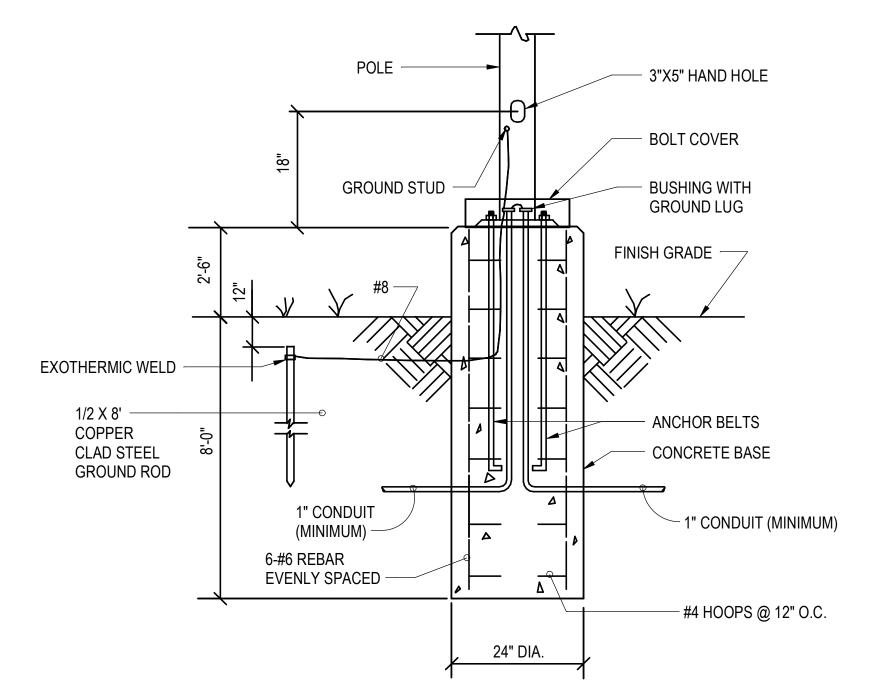
Project Number —

Sheet Title —

ENLARGED ELECTRICAL PLANS

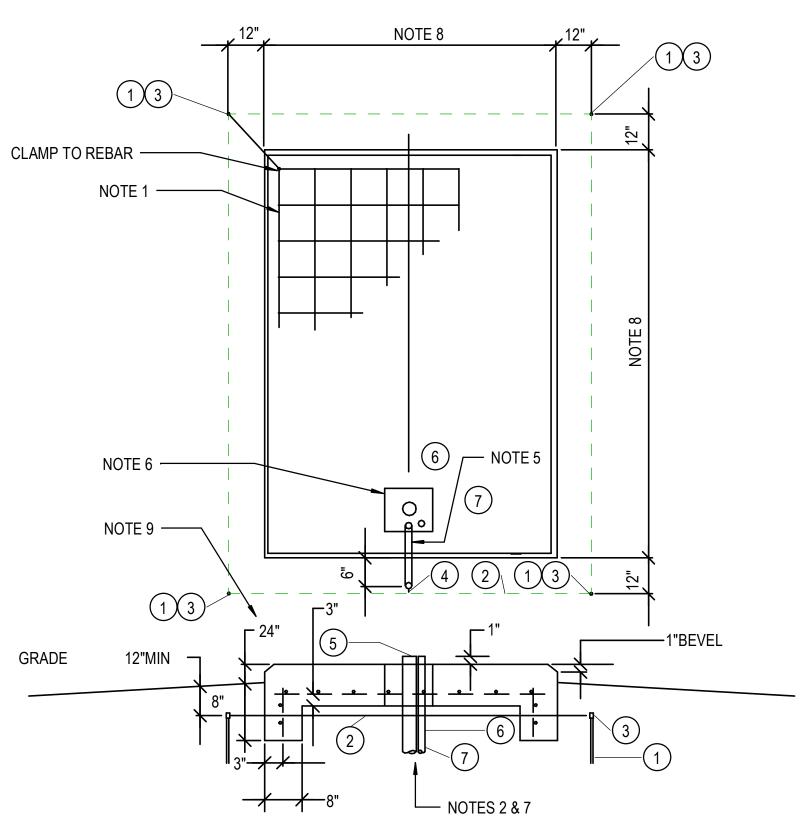






3 LIGHTING POLE BASE TYPE N.T.S.

1 TIME SWITCH SCHEMATIC DIAGRAM N.T.S.



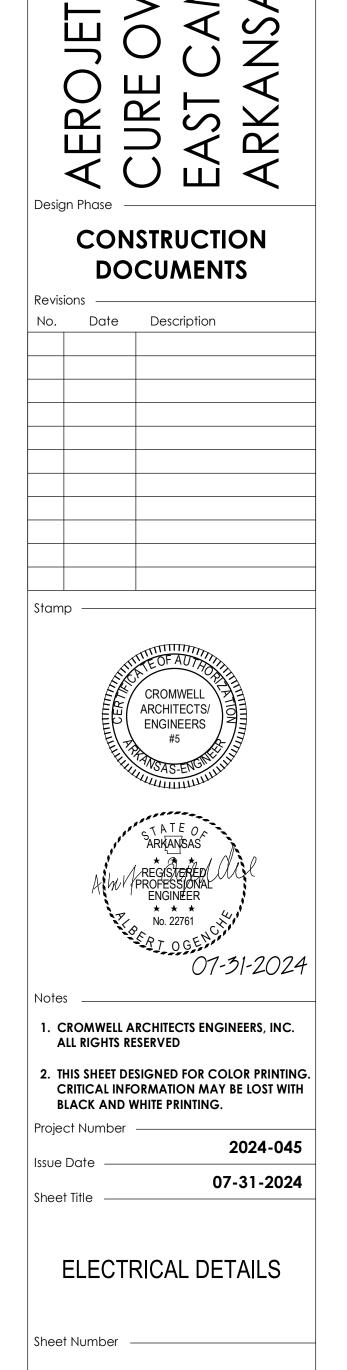
SECTIONAL VIEW

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
- 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.

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





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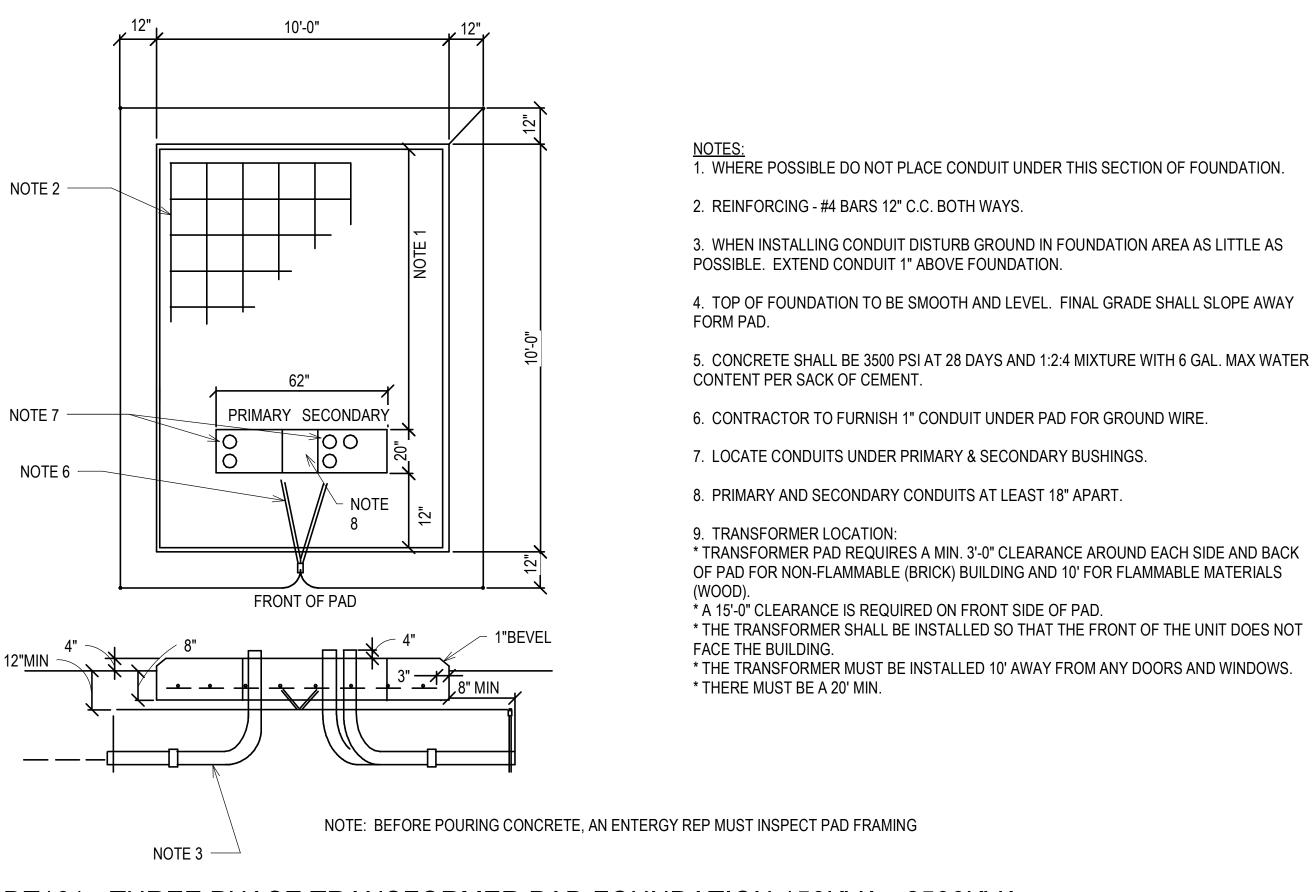
1300 East 6th Street Little Rock, AR 72202 501.372.2900 cromwell.com

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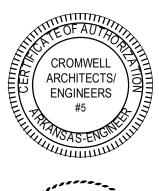
1 DT161 - THREE PHASE TRANSFORMER PAD FOUNDATION 150KVA - 2500KVA N.T.S.



66B EN BUILDIN BUILDING Z 山 CONSTRUCTION

DOCUMENTS

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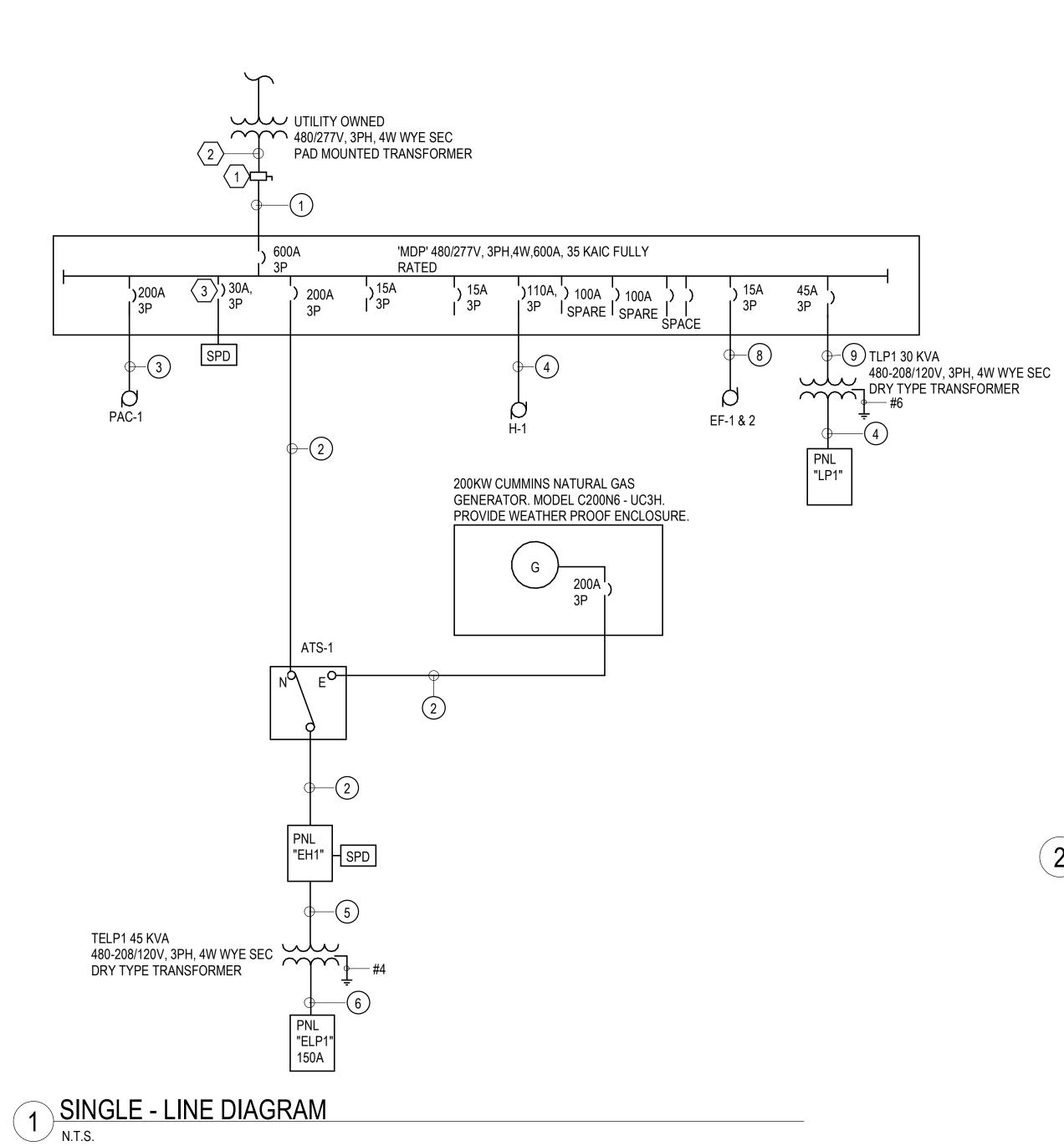
Project Number —

Sheet Title

ELECTRICAL DETAILS

2024-045

07-31-2024



		FEEDER	SCHEDU	LE		
NUMBER	SETS	PHASE CONDUCTOR S (PER SET)	NEUTRAL CONDUCTOR S (PER SET)	GROUND CONDUCTOR S (PER SET)	CONDUIT SIZE (PER SET)	NOTES
1	2	3-#350	1-#350	1-#2/0	4"	
2	1	3-#3/0	1-#3/0	1-#6	2"	
3	1	3-#3/0	-	1-#6	2"	
4	1	3-#1	-	1-#6	1.25"	
5	1	3-#4	-	1-#8	1"	
6	1	3-#1/0	1-#1/0	1-#6	2"	
7	1	3-#4	1-#4	1-#8	1"	
8	1	3-#12	1-#12	1-#12	0.75"	
9	1	3-#6	1-#6	1-#6	0.75"	

- 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 400 ARE TO BE BASED ON THE NEC TABLE 4 (CHAPTER 9), 40% FILL COLUMN.

2 FEEDER SCHEDULE N.T.S.

GENERAL NOTES:

- A. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL HAVE A NEMA 3R ENCLOSURE.
- B. SPD'S 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:

- PROVIDE 480V,600AMP, 3PHASE, NEMA 3R DISCONNECT SWITCH TO DISCONNECT POWER PER UTILITY REQUIREMENTS.
- PROVIDE TWO SETS OF 4#350 KCMIL IN 4" CONDUIT. PROVIDE A SPARE 4" CONDUIT.
- SIZE PER MANUFACTURERS RECOMMENDATIONS.



Project

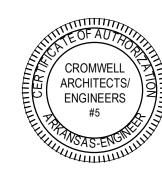
EROJET BUILDING 66B URE OVEN BUILDING AST CAMDEN, RKANSAS

CONSTRUCTION DOCUMENTS

Revis	ions	
		Description

Stamp

Design Phase





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07-31-2024

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Issue Date —

Sheet Title ———

ELECTRICAL SINGLE-LINE DIAGRAM

Sheet Number -

E-601

		LIGHTI	NG FIX	(TURE	SCHEDU	ILE		
TYPE	MANUFACTURER	CATALOG NUMBER	VOLTAGE	SOURCE	TOTAL FIXTURE LUMENS	MAXIMUM FIXTURE WATTAGE	DESCRIPTION	KEYED NOTES
А	COOPER METALUX	LHBS-1218-UNV-L84050-LHBS-PMK	UNV	LED	12000	85	2X4 LENS	
AE	COOPER METALUX	LHBS-1218-UNV-L84050-EL20W-REMLHBS-PMK	UNV	LED	12000	85	2X4 LENS	1
В	HOLOPHANE LIGHTING	HPLED-84LED-L5-MVOLT-40K-UNM-700MA-40C-DGXD	UNV	LED	21400	195	14" ROUND PENDANT LIGHT	2
EX	ENVOY LIGHTING	XPEH-1-R-DT-2-2-W	UNV	LED	420 PER HEAD	10	CLASS 1 / CLASS II EXIT EMERGENCY LIGHT COMBO	2
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
EL	ENVOY LIGHTING	XPEL-U-2-2-W	120/277V	LED	N/A	11	EMERGENCY LIGHTING UNIT	1,2
W1	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK	UNV	LED	4000	59	EXTERIOR WALL PACK	
P1	BEACON LIGHTING	(1) VP-4-720L-565-4K7-4W-UNV-DBT	UNV	LED	75000	565	PARKING LOT LIGHTING	
P-POLE	BEACON LIGHTING	RSS-B-30-60-C-XX-DBT	-	-	-	-	30'-0" SQUARE POLE	
W1	COOPER LIGHTING	PRV-P-PA1B-740-U-T4W-WM-BK	UNV	LED	4000	59	EXTERIOR WALL PACK	
X	COOPER LIGHTING	EDG-1-R-EL	120/277	LED	N/A	3.1	EXIT LIGHT, ARROWS AND FACES PER PLANS	1

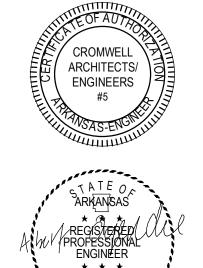
LIGHTING FIXTURE SCHEDULE GENERAL NOTES: 1. PROVIDE FLANGE KIT AS REQUIRED

LIGHTING FIXTURE SCHEDULE KEYED NOTES: 1. BATTERY BACK UP. ARROWS AND FACES PER PLANS 2. CLASS 1 DIV2 & CLASS 2 DIV 1 RATED FIXTURE



AEROJET BUILDING 66B CURE OVEN BUILDING MDEN, CONSTRUCTION

DOCUMENTS Date Description



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ELECTRICAL

SCHEDULES

2024-045

07-31-2024

	PANEL MAIN	El-C		MOUNTING POLES		ACE	-	CATION_ 200		RM TRIP	200	MAIN BUS RATING	S 22	25	AMPS	
VC	DLTAGE			PHASE	-	-	I IVAIVIL _	200				ER INTERRUPTING CAPACITY	′ 10k	ζ۸		
٧٠				SN + EQP GND					IVIIIN	IIVIOIVI	DINLAIN	IN INTENNOL TING OALAGITE		V	-	
	DEVICE			BRANCH CIRCUIT			PH	ASE LOAI)			BRANCH CIRCUIT			DEVICE	<u> </u>
MPS					VOLT	NO	+	OLT AMPS	+	NO	VOLT					ΔМР
TRIP	POLES	IYPE	LOAD	DESCRIPTION	AMPS	NO	Α	В	С	NO	AMPS	DESCRIPTION	LOAD	IYPE	POLES	TRIF
15	3		Н	SUPPLY FAN OVEN1	2106	1	4212			2	2106	SUPPLY FAN OVEN 3	Н		3	15
-			Н	-	2106	3		4212		4	2106		Н			-
_			Н	-	2106	5			4212	6	2106	-	Н			-
15	3		Н	SUPPLY FAN OVEN2	2106	7	4212			8	2106	SUPPLY FAN OVEN 4	Н		3	15
-			Н	-	2106	9		4212		10	2106	-	Н			-
-			Н	-	2106	11			4212	12	2106	-	Н			-
15	3		Н	SB-1 & SB-2	942	13	942			14		SPARE			3	15
-			Н	-	942	15		942		16		-				-
-			Н	-	942	17			942	18		-				-
20	1		L	EXT LIGHTS	722	19	1882			20	1160	LIGHTS BLR, ELEC & COM	L		1	20
15	3		Н	COOL DOWN FAN OV 1-4	1220	21		2372		22	1152	LIGHTS OVEN	L		1	20
-			Н	-	1220	23			2416	24	1196	LIGHTS CLDOWN & TUG	L		1	20
-			Н	-	1220	25	2945			26	1725	PARKING LOT LIGHTING	L		1	20
20	1			SPARE		27		1726		28	1726	PARKING LOT LIGHTING	L		1	20
20	1			SPARE		29				30						-
20	1			SPARE		31				32		SPARE			3	15
20	1			SPARE		33				34		-				-
20	1			SPARE		35				36		-				-
70	3		М	TLP1	15000	37	15000			38		SPARE			3	15
-			М	-	15000	39		15000		40		-				-
-			М	-	15000	41			15000	42		-				-
20	1					43				44		SPARE			3	15
20	1					45				46		-				_
20	1					47				48		-				-
20	1					49				50		SPARE			3	15
20	1					51				52		-				-
20	1					53				54		-				-
		1			TOTAL		29193	28464	26782			KVA (CONNECTED) KVA (DEMAND)			(CONN (DEMA	

	Panel _.	ELP1	MOUNTING			-	CATION_			-		3 22	25	AMPS	
	MAIN	СВ	POLES		-	FRAME _	150								
VOI	LTAGE		_ PHASE	3	-			MIN	IMUM	I BREAKE	ER INTERRUPTING CAPACITY	10	KA	-	
			SN + EQP GND			T			<u> </u>				Ì		
	DEVICE		BRANCH CIRCUIT	T		-{	ASE LOAI				BRANCH CIRCUIT			DEVICE	
AMPS	POLES	TYPE		VOLT	NO		OLT AMPS		NO	VOLT		T	TYPE	POLES	AMF
IRIP		LOAD		AMPS		Α	В	С		AMPS	DESCRIPTION	LOAD			IRI
20	1		SPARE		1				2		SPARE			3	30
15	3	M	OVERHEAD DOOR TUGRM		3				4		-				-
-		M	-		5				6		-				-
-		M	-		7				8		SPARE			1	20
20	1	R	SPARE	1080			1780		10		OVEN-2 OVERHEAD DOOR	M		3	15
15	3	M	OVEN -1 OVERHEAD DOOR	700				1400		700		M			-
-		M	-	700	13	1400			14	700		M			-
-		M	-	700	15		1400		16		OVEN-3 OVERHEAD DOOR	M		3	15
15	3	M	OVEN -2 OVERHEAD DOOR	700	17			1400		700		M			-
-		M	-	700	19	1400			20	700	-	M			-
-		M	-	700	21		1400		22		OVERHEAD	M		3	15
20	1	M	BLOCK HEATER	500	23			1200		700	-	М			-
20	1	M	BATTERY CHARGER	500	25	1200			26	700	-	М			-
20			SPARE		27				28		SPARE			1	20
20	1		SPARE		29			1976	30	1976	MSCU-1	Н		2	30
20	1	M	GAS FIRED MECH RM	300	31	2276			32	1976	-	Н			-
15	1	М	LV1 , LV2 & EF-1	500	33		1500		34	1000	FACP PANEL	М		1	20
20	1		SPARE		35				36					1	20
20	1	R	QUADRAPLEX COMM	360	37	1860			38	1500	L630R COMM ROOM	М		2	30
30	2	М	L630R COMM ROOM	1500	39		3000		40	1500	-	М			-
-		М	-	1500	41			2500	42	1000	DDC CONTROL	М		1	20
15	2	Н	SCP1-PUMP 1 & PUMP 2	832	43	1458			44		MECH OVERHEAD	М		3	15
-		Н	-	832	45		1458		46	626	-	М			-
15	2	Н	SCP2-PUMP 1 & PUMP 2	832	47			1458	48	626	-	М			-
-		Н	-	832	49	1664			50	832	SCP4- PUMP1 & 2	М		2	15
15	2	Н	SCP3-PUMP 1 & PUMP 2	832	51		1664		52	832	-	М			_
-		Н	-	832	53			1032	54	200	SB1 & SB2 CONTROL PNL	Н		1	20
20	1		SPARE		55	500			56		OVEN CONTROL PANEL	Н		1	20
20	1		SPARE		57		500		58		OVEN CONTROL PANEL	Н		1	20
20	1		SPARE		59			500	60		OVEN CONTROL PANEL	Н		1	20
20	1	Н	CR-1 PUMP 1	1176	61	1676			62		OVEN CONTROL PANEL	H		1	20
20	1	H	CR-1 PUMP 2	1173	63		2349		64		CR2 PUMP-1	H		1	20
20	1		SPARE		65		-	1176			CR2 PUMP-2	H		1	20
20	1		SPARE		67				68		SPARE	1		1	20
20	1		SPARE		69				70		SPARE			1	20
20	1		SPARE		71				72		SPARE			1	20
	ı		J. 7 11 tim		73				74		J. 7 II C			1	
					75				76						
					77				78						
					79				80						
					81				82						
					83				84						
				TOTAL	00	13434	15051	12642		/1	KVA (CONNECTED)	11/		(CONN	L FCTE
						10-70-7	10001	12072			KVA (DEMAND)			(DEMA	

	PANEL	LF	21	MOUNTING			-	CATION			_	MAIN BUS RATING	G10	00	AMPS	
	MAIN		В	POLES	3		FRAME	100								
VO	LTAGE				3				MIN	IMUM	1 BREAKE	R INTERRUPTING CAPACITY	<u> </u>	KA		
		CESS	ORIES	SN + EQP GND										1		
	DEVICE			BRANCH CIRCUIT			1	HASE LOA				BRANCH CIRCUIT			DEVICE	
AMPS	POLES	TYPE			VOLT	NO		OLT AMPS		NO	VOLT		1	TYPE	POLES	AMPS
IRIP			LOAD		AMPS		A	В	С		AMPS	DESCRIPTION	LOAD			TRIP
20	1			RECEPT TUGGER	540	1	3340	2222		2		TUG CHARGER	M		3	30
20	1		R	RECEPT COOL DOWN	1080	3		3880		4	2800		M			-
20	1	G	R	RECEPTACLE EXT NORTH	720		1000		3520		2800		M			-
20	1	G	R	RECEPT MECH RM	540	7	1260			8		RECEPTS MAINT ACCESS	R		1	20
20	1	G	R	RECEPT MECH RM	540	9		1080		10		RECEPTS MECH ROOM	R	G	1	20
20	1	G	R	RECEPTACLE EXT SOUTH	540				900			RECEPTS COMM RM	R		1	20
20	1		R	QUADRAPLEX COMM	360	13	560			14		HEAT TRACE	M		1	20
20	1			SPARE		15		2746		16		LIFT STATION	M		2	45
20	1			SPARE		17			2746		2746		M			-
20	1			SPARE		19				20		SPARE			1	20
20	1			SPARE		21				22		SPARE			1	20
20	1			SPARE		23				24		SPARE			1	20
20	1			SPARE		25				26		SPARE			1	20
20	1			SPARE		27				28		SPARE			1	15
20	1			SPARE		29				30		SPARE			1	15
						31				32						
						33				34						
						35				36						
						37				38						
						39				40						
						41				42						
						43				44						
						45				46						
						47				48						
						49				50						
						51				52						
						53				54						
				1	TOTAL		5160	7706	7166		20	KVA (CONNECTED)	56	AMPS	(CONNE	ECTED)
												KVA (DEMAND)			(DEMAN	



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

EN BUILDING

Z W

CONSTRUCTION

DOCUMENTS

CROMWELL ARCHITECTS/ ENGINEERS

2024-045

07-31-2024

Date Description

PANEL SCHEDULE LEGEND

MAIN
CB = CIRCUIT BREAKER LO = LUGS ONLY

G = GROUND FAULT CIRCUIT INTERRUPTER

S = SHUNT TRIP

V = VARIABLE (ADJUSTABLE TRIP)

E = EQUIPMENT GROUND FAULT PROTECTION

R = RED MARKING ON BREAKER

M = MISCELLANEOUS

S = SUBFED

MISCELLANEOUS SN = SOLID NEUTRAL

SPD = SURGE PROTECTIVE DEVICE AIC = AMPERE INTERRUPTING CAPACITY KAIC = KILO AMPERE INTERRUPTING CAPACITY

66B

BUILDING

ERO

Design Phase

No.

Stamp

BRANCH CIRCUIT BREAKER TYPE
A = ARC FAULT CIRCUIT INTERRUPTER

L = LOCKOUT DEVICE O = LOCK ON DEVICE OR BREAKER

<u>LOAD TYPE</u> L = LIGHTING

R = RECEPTACLE H = HVAC

V = VARIOUS

EQP GND = EQUIPMENT GROUND BUS IG = INSULATED GROUND BUS



