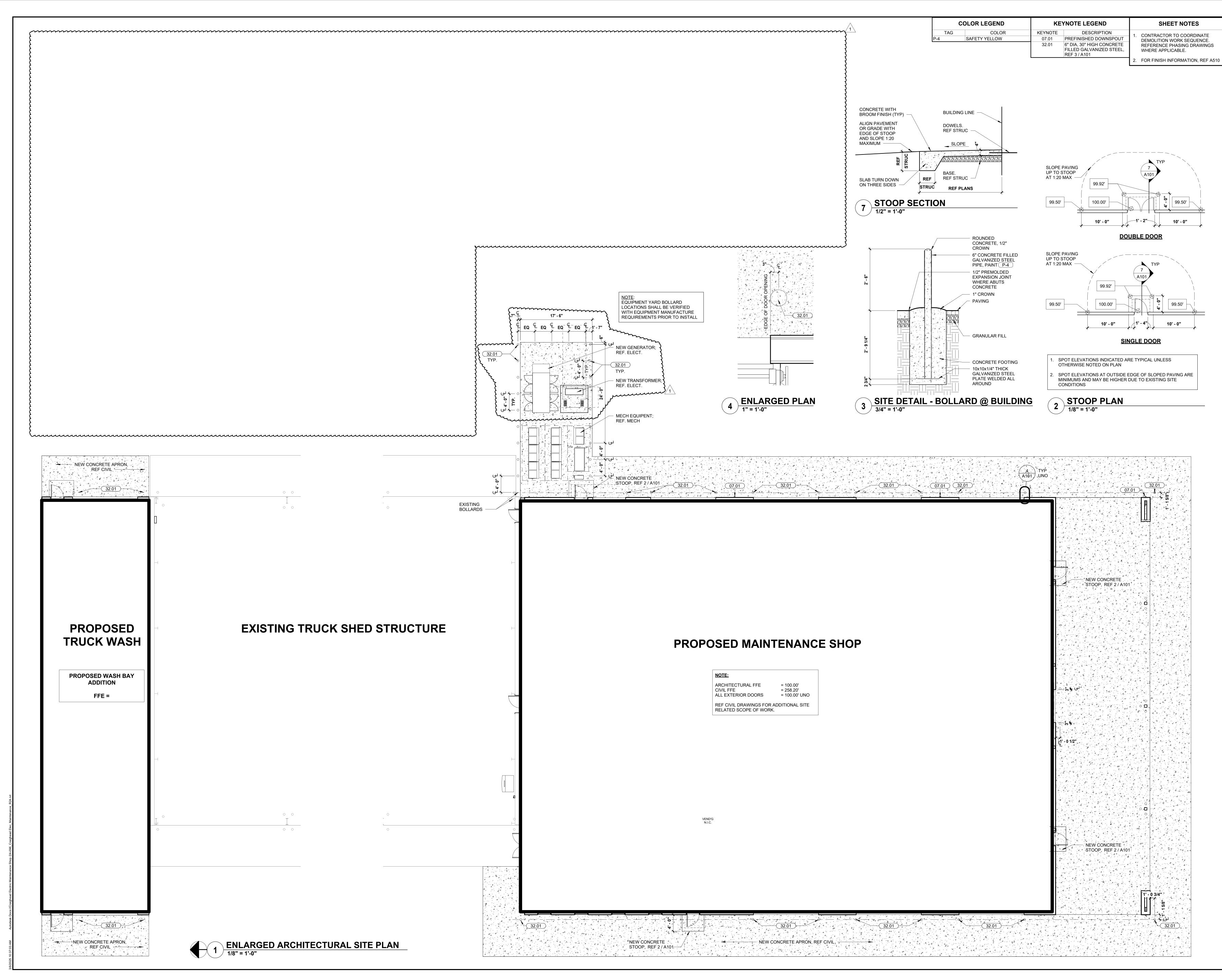
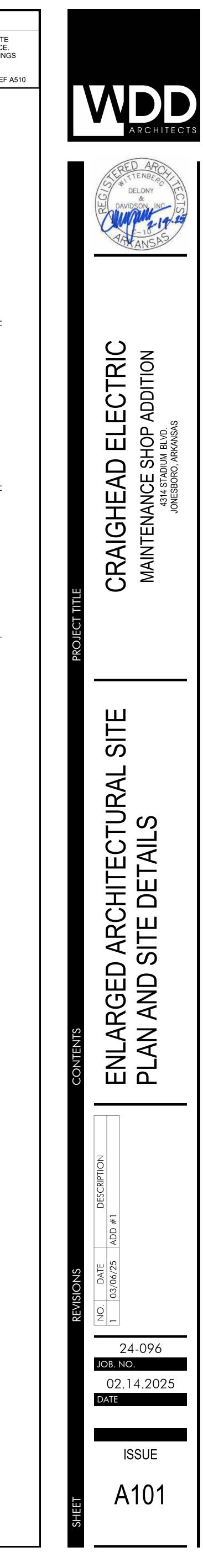
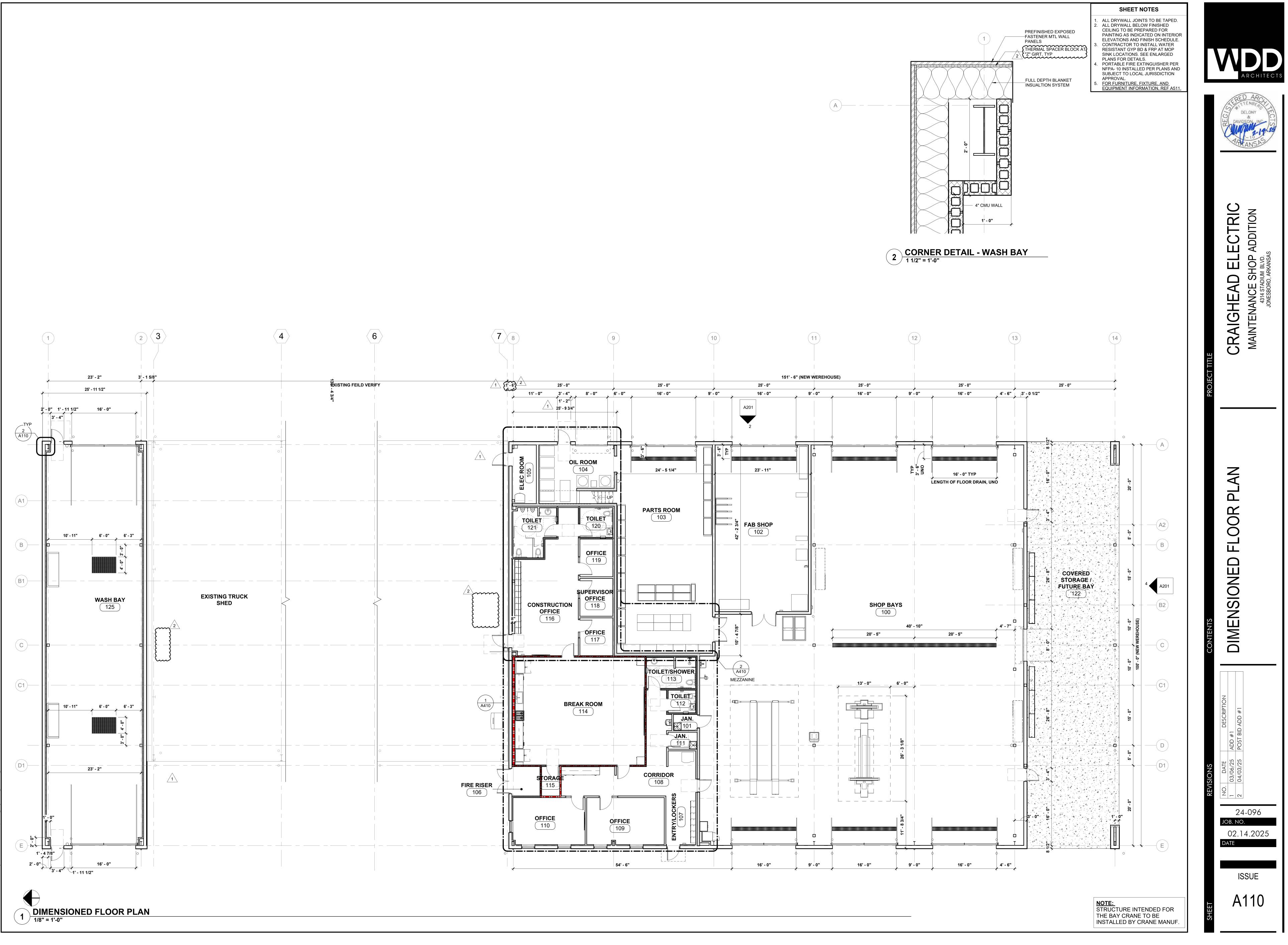
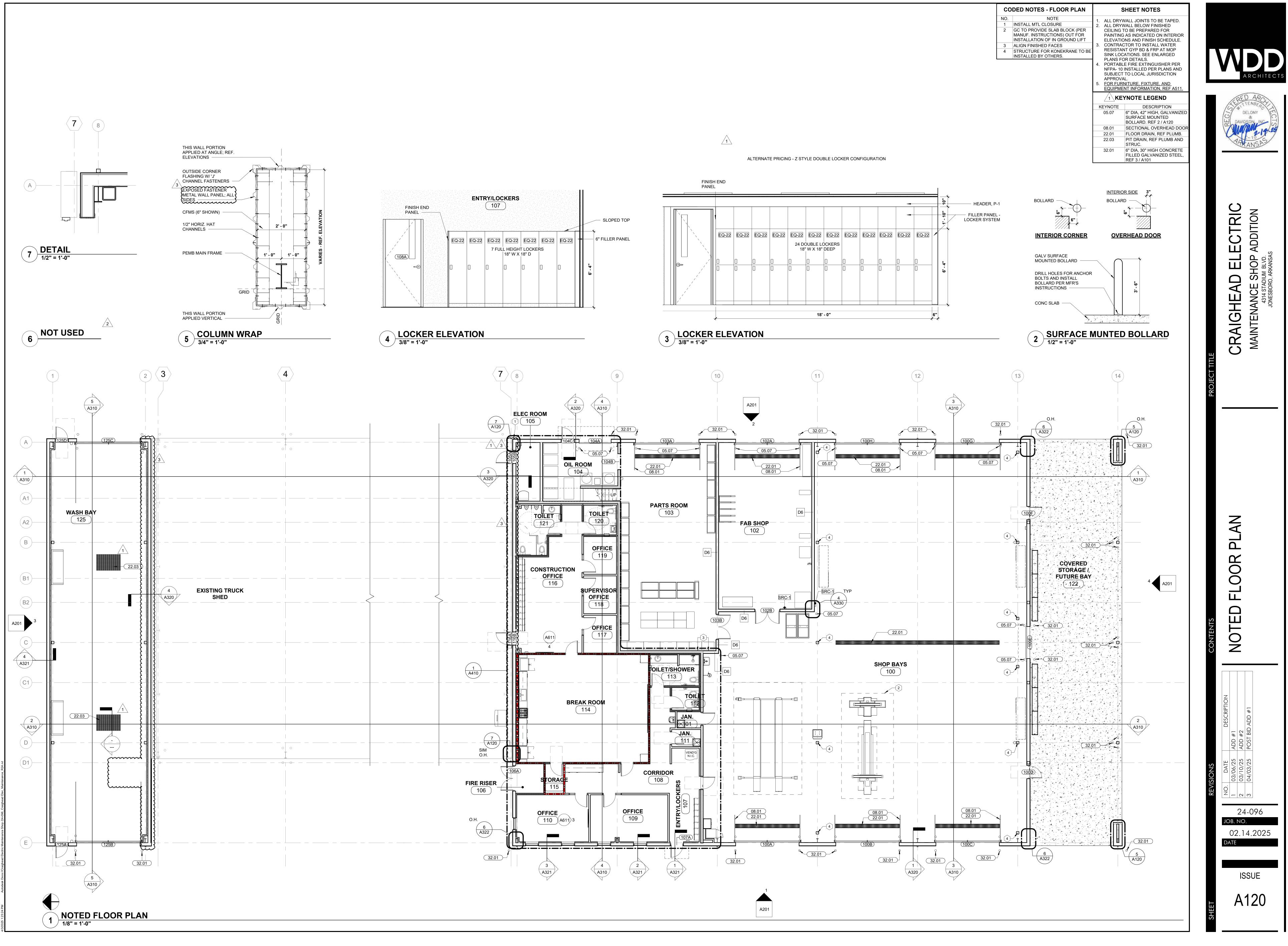


ſ	KE	YNOTE LEGEND		SHEET NOTES
	KEYNOTE	DESCRIPTION	1	CONTRACTOR TO COORDIN
	32.02	CHAINLINK FENCEING	<b> </b> '.	DEMOLITION WORK SEQUEN
	32.03	ROLLING CHAINLINK GATE		REFERENCE PHASING DRAV
-				WHERE APPLICABLE.

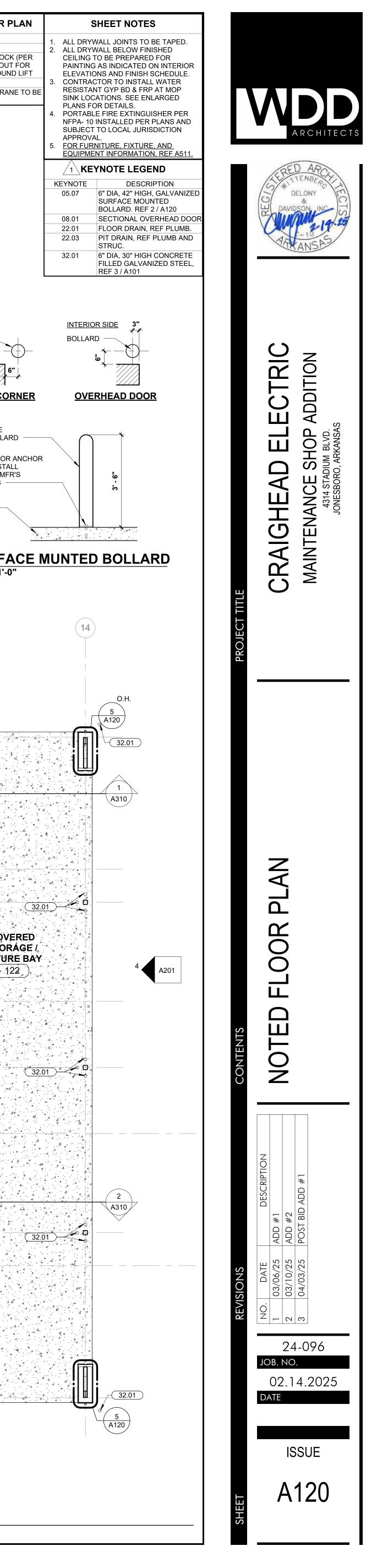


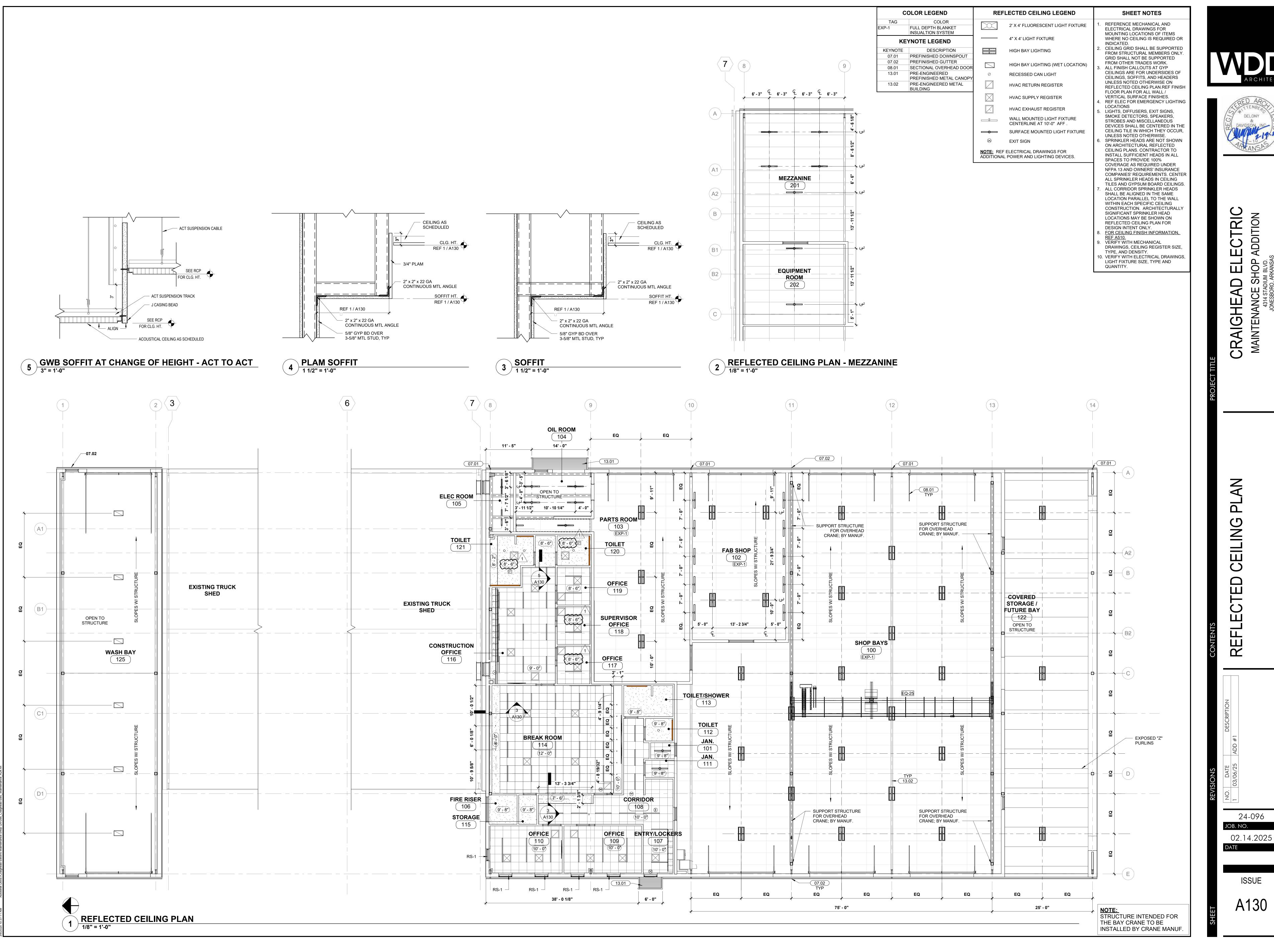






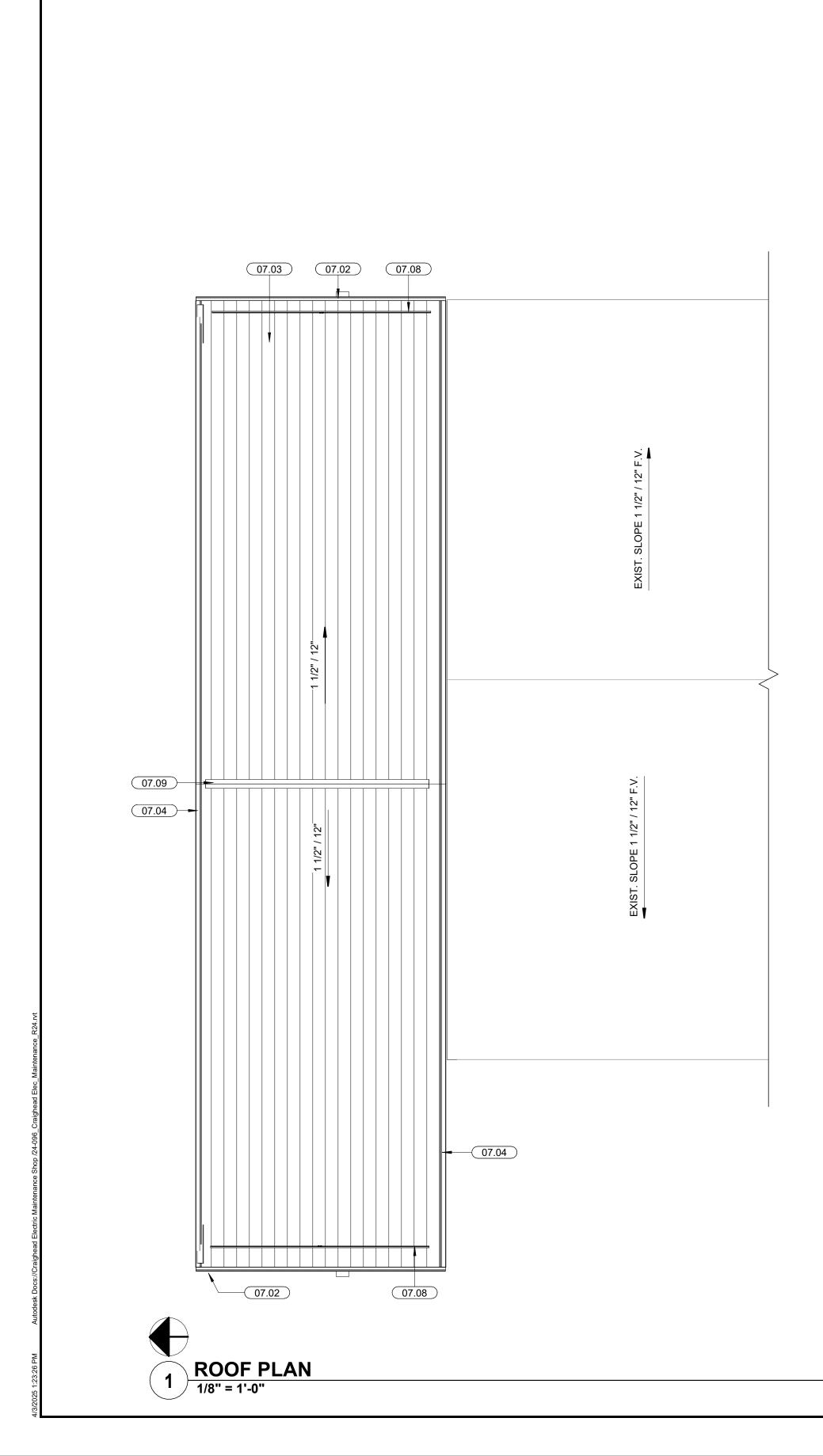
FINISH END PANEL			(107							
	EQ-22	EQ-22	EQ-22	EQ-22	EQ-22	EQ-22	EQ-22			6" FILLER F
108A			7 FUL	L HEIGH 18" W X		RS		2 A		
	٥	0	0	0	0		0		6' - 4"	
	- 9 /- <sup>0</sup> / 9 /- 9 / 7 3 /- 5 / 7 / 7 /- 5 /			- ( 120 - 2007) - S - ( ( - ( - 1007) - S					L,	<b>N</b>

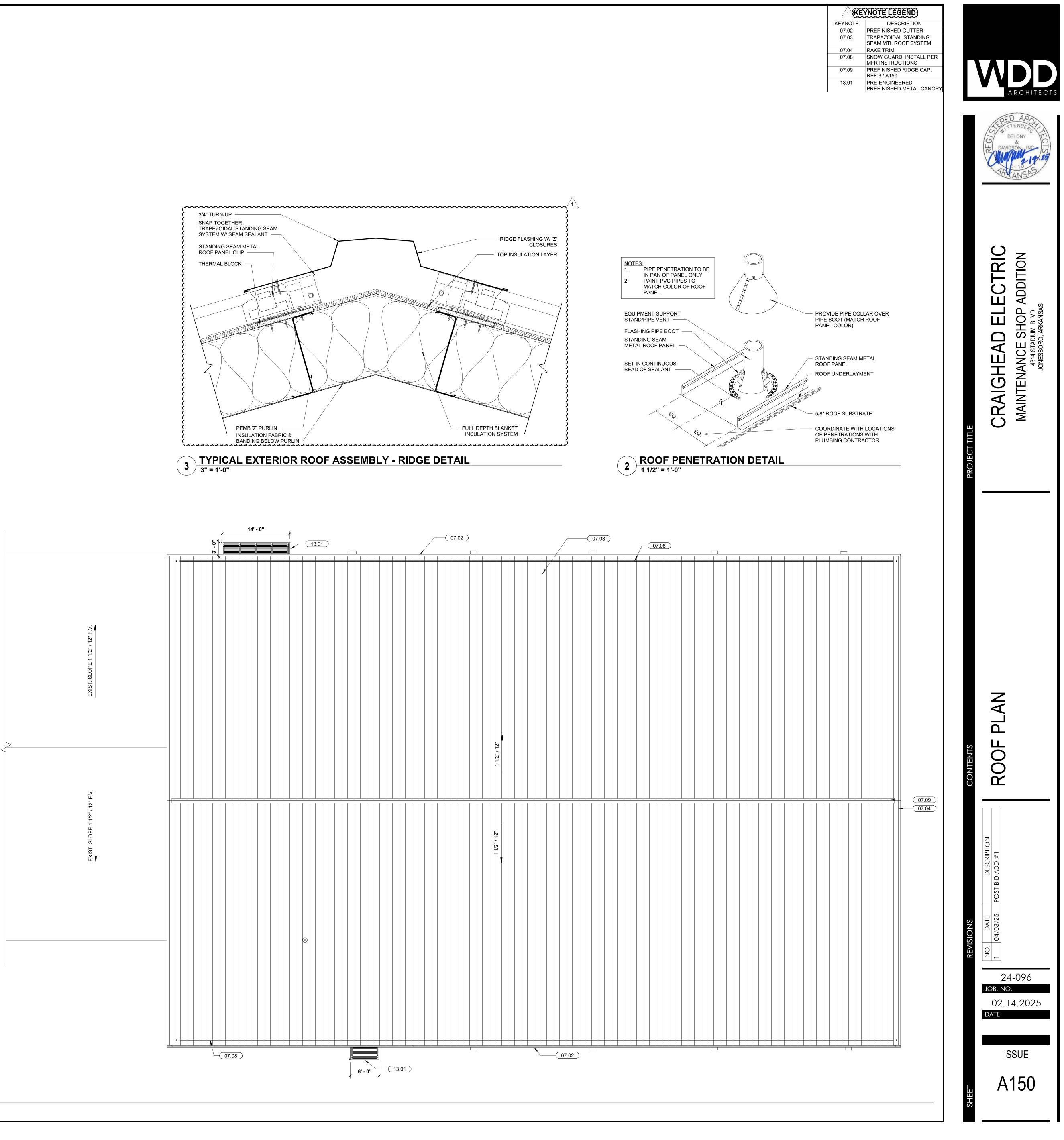


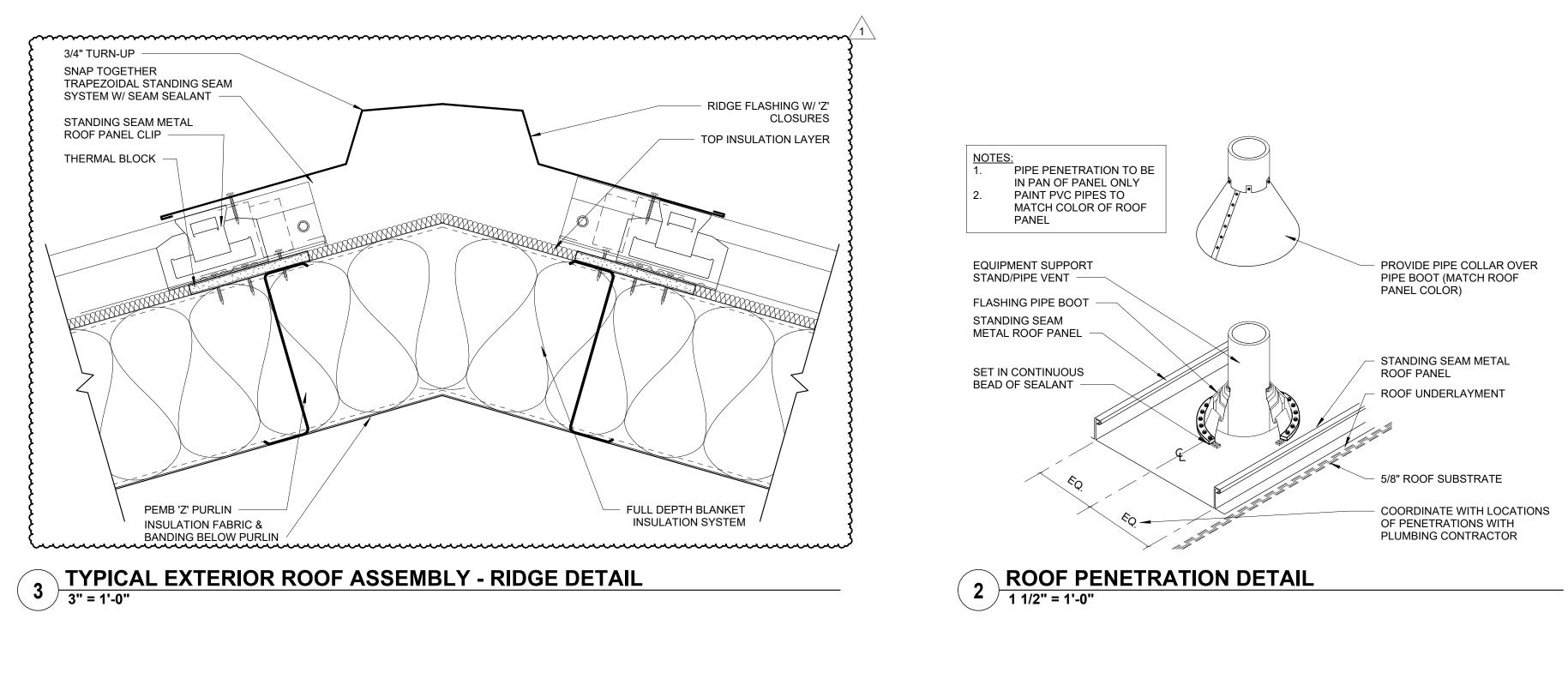


C	DLOR LEGEND	
TAG	COLOR	
KP-1	FULL DEPTH BLANKET INSUALTION SYSTEM	
KE	YNOTE LEGEND	
KEYNOTE	DESCRIPTION	E
07.01	PREFINISHED DOWNSPOUT	<u>سا</u>
07.02	PREFINISHED GUTTER	Г
08.01	SECTIONAL OVERHEAD DOOR	l
13.01	PRE-ENGINEERED PREFINISHED METAL CANOPY	
13.02	PRE-ENGINEERED METAL BUILDING	
	`	
		<u>nc</u> AD

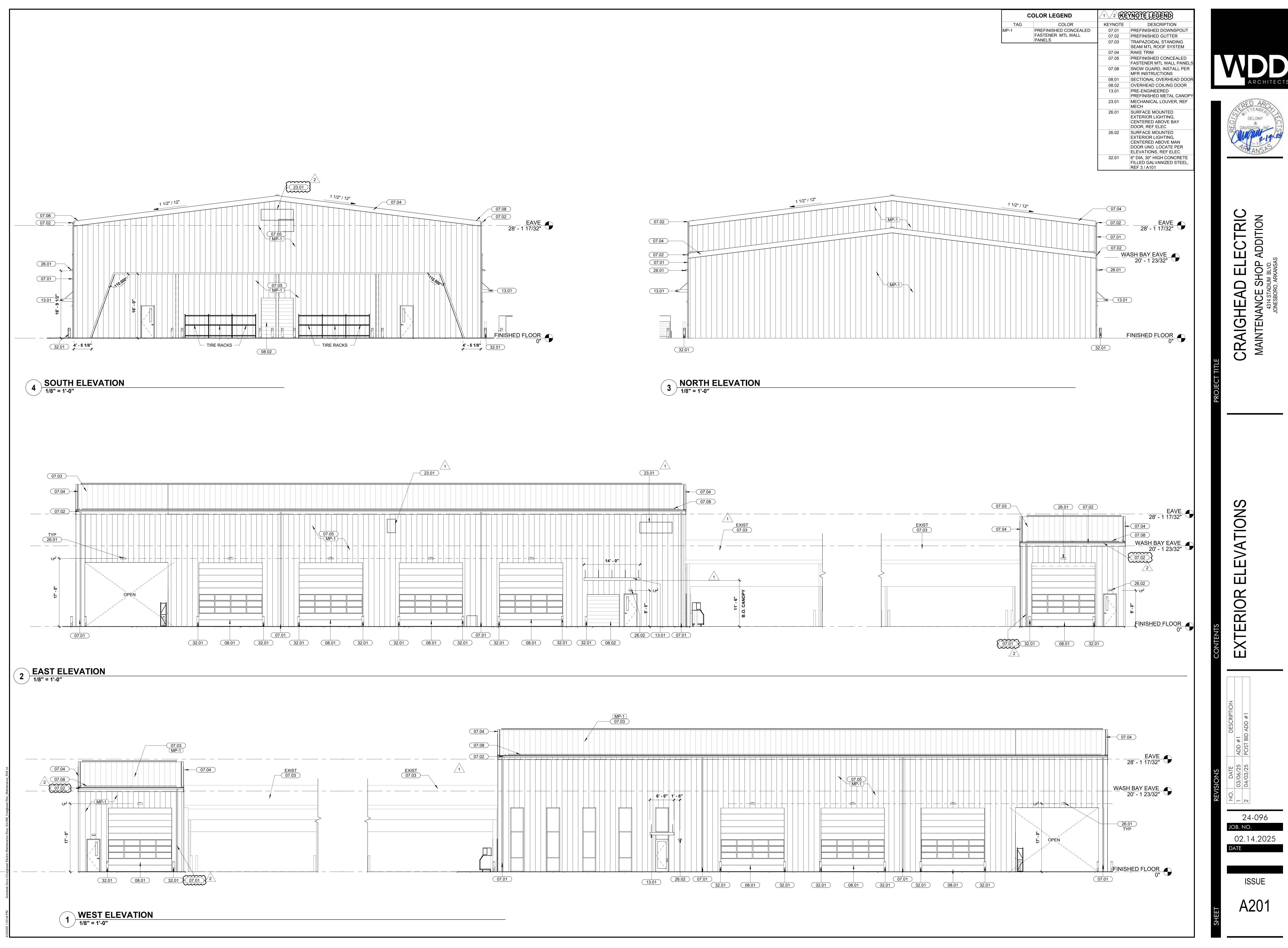
REFI	LECTED CEILING LEGEND		SHEET NOTES
	2' X 4' FLUORESCENT LIGHT FIXTURE	1.	ELECTRICAL DRAWINGS FO
	4" X 4' LIGHT FIXTURE		MOUNTING LOCATIONS OF WHERE NO CEILING IS REC INDICATED.
	HIGH BAY LIGHTING	2.	CEILING GRID SHALL BE SU FROM STRUCTURAL MEMB GRID SHALL NOT BE SUPPO
	HIGH BAY LIGHTING (WET LOCATION)	3.	FROM OTHER TRADES WOR ALL FINISH CALLOUTS AT G
$\oslash$	RECESSED CAN LIGHT		CEILINGS ARE FOR UNDER CEILINGS, SOFFITS, AND HI
	HVAC RETURN REGISTER		UNLESS NOTED OTHERWIS REFLECTED CEILING PLAN FLOOR PLAN FOR ALL WAL
	HVAC SUPPLY REGISTER	4.	VERTICAL SURFACE FINISH REF ELEC FOR EMERGENC
$\square$	HVAC EXHAUST REGISTER	5.	
	WALL MOUNTED LIGHT FIXTURE CENTERLINE AT 10'-0" AFF .		SMOKE DETECTORS, SPEA STROBES AND MISCELLAN DEVICES SHALL BE CENTE
<b></b>	SURFACE MOUNTED LIGHT FIXTURE		CEILING TILE IN WHICH THE UNLESS NOTED OTHERWIS
$\otimes$	EXIT SIGN	6.	SPRINKLER HEADS ARE NO ON ARCHITECTURAL REFLE
	ELECTRICAL DRAWINGS FOR POWER AND LIGHTING DEVICES.		CEILING PLANS. CONTRACT INSTALL SUFFICIENT HEAD SPACES TO PROVIDE 100%
			COVERAGE AS REQUIRED I NFPA 13 AND OWNERS' INS COMPANIES' REQUIREMEN ALL SPRINKLER HEADS IN (
		7.	TILES AND GYPSUM BOARD ALL CORRIDOR SPRINKLER SHALL BE ALIGNED IN THE LOCATION PARALLEL TO TH
			WITHIN EACH SPECIFIC CEL CONSTRUCTION. ARCHITE SIGNIFICANT SPRINKLER H LOCATIONS MAY BE SHOW REFLECTED CEILING PLAN
		8.	DESIGN INTENT ONLY. FOR CEILING FINISH INFOR
		9.	<u>REF A510.</u> VERIFY WITH MECHANICAL

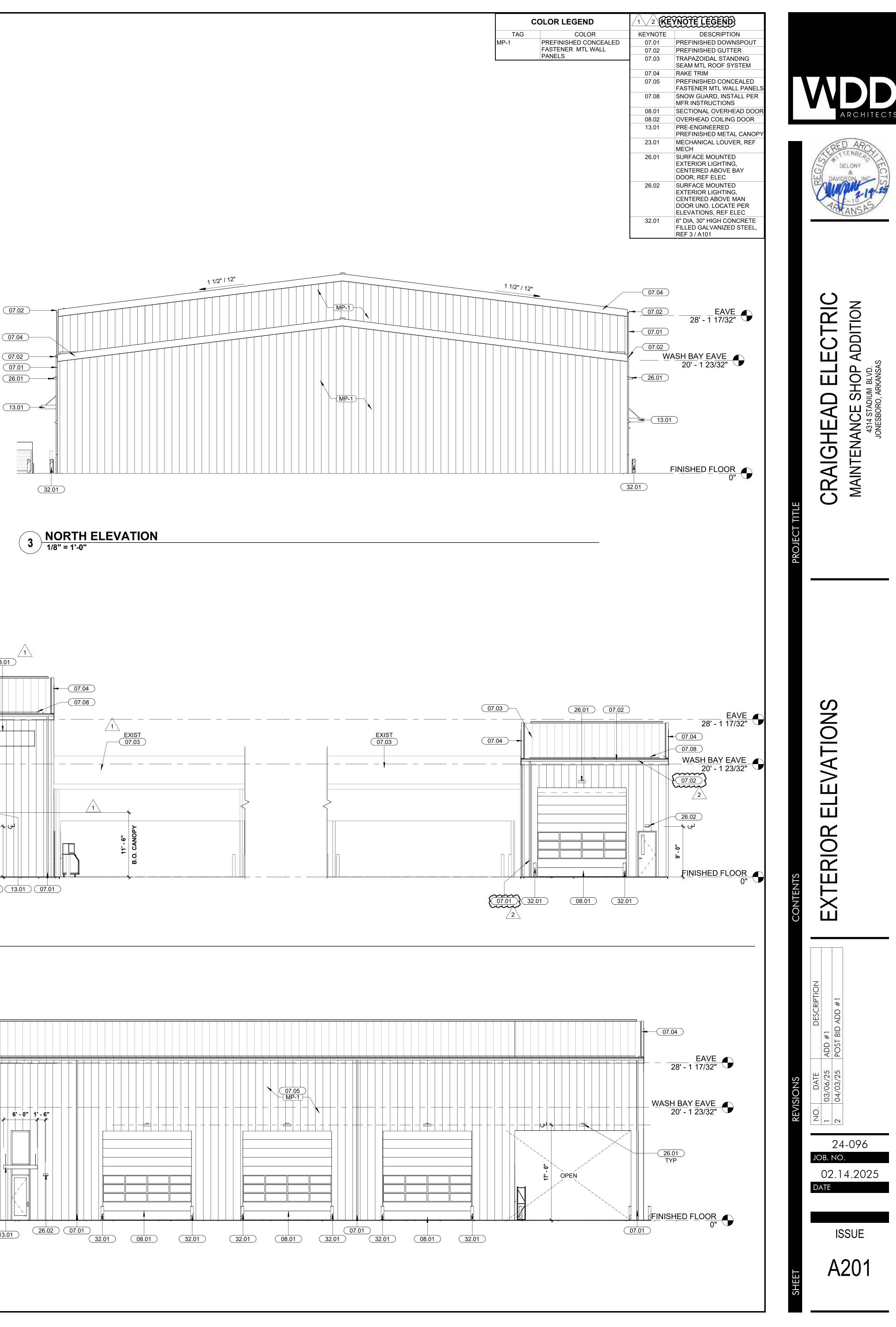


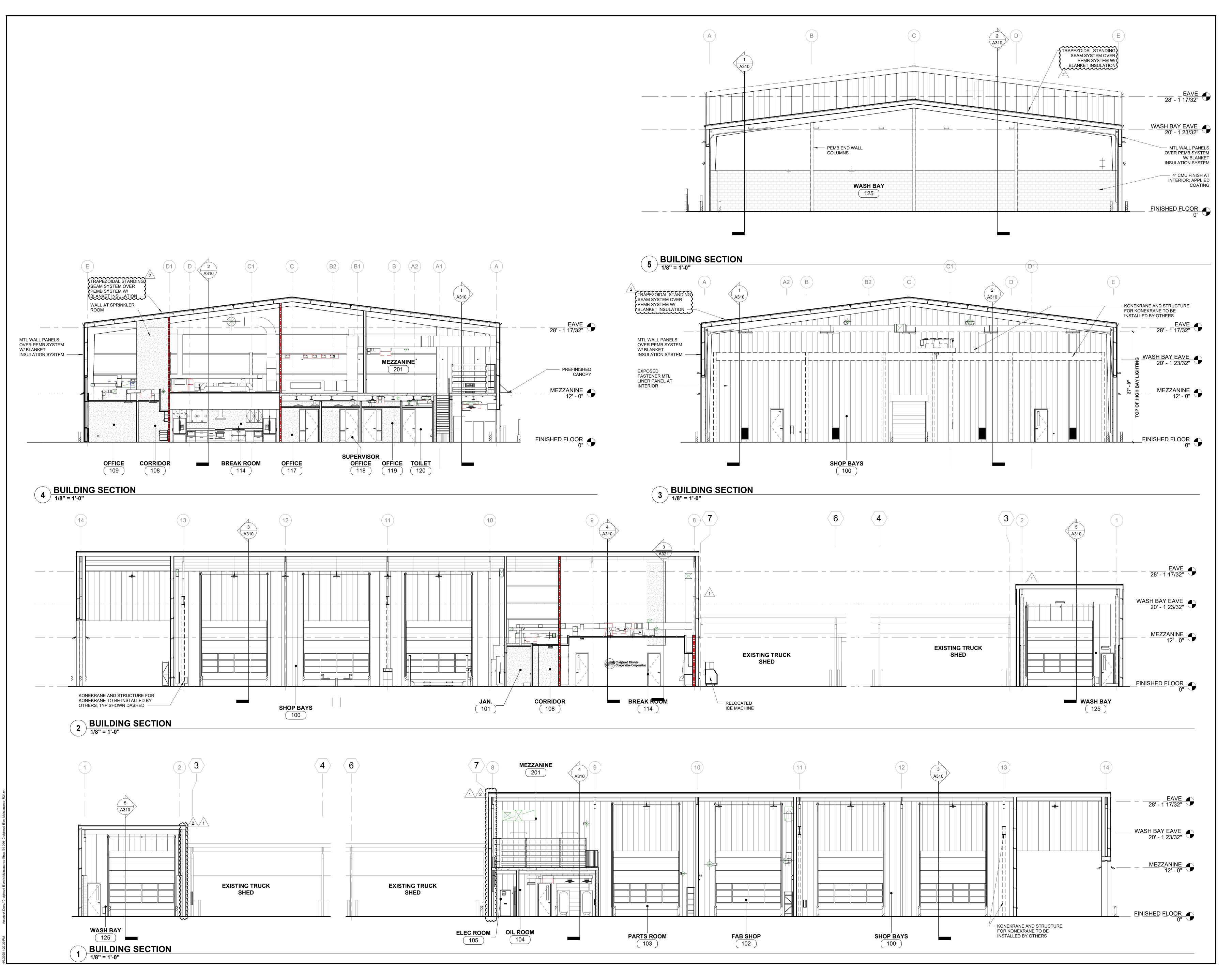


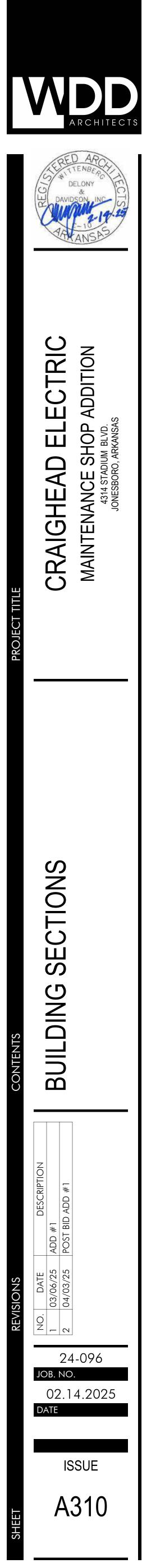


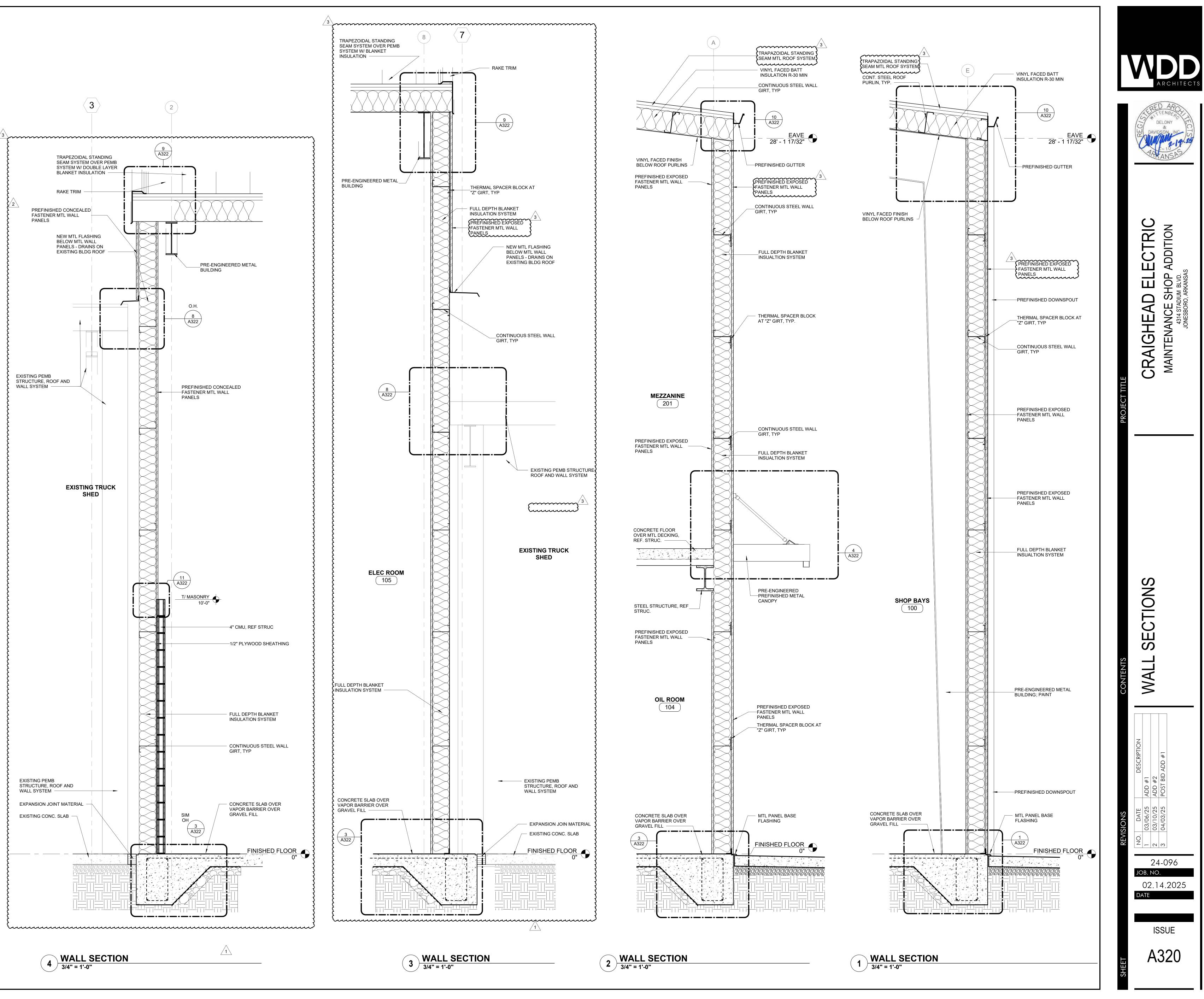
	NÔTE LÉGE
KEYNOTE	DESCR
07.02	PREFINISHED G
07.03	TRAPAZOIDAL S
07.04	RAKE TRIM
07.08	SNOW GUARD, MFR INSTRUCT
07.09	PREFINISHED F REF 3 / A150
13.01	PRE-ENGINEER PREFINISHED M









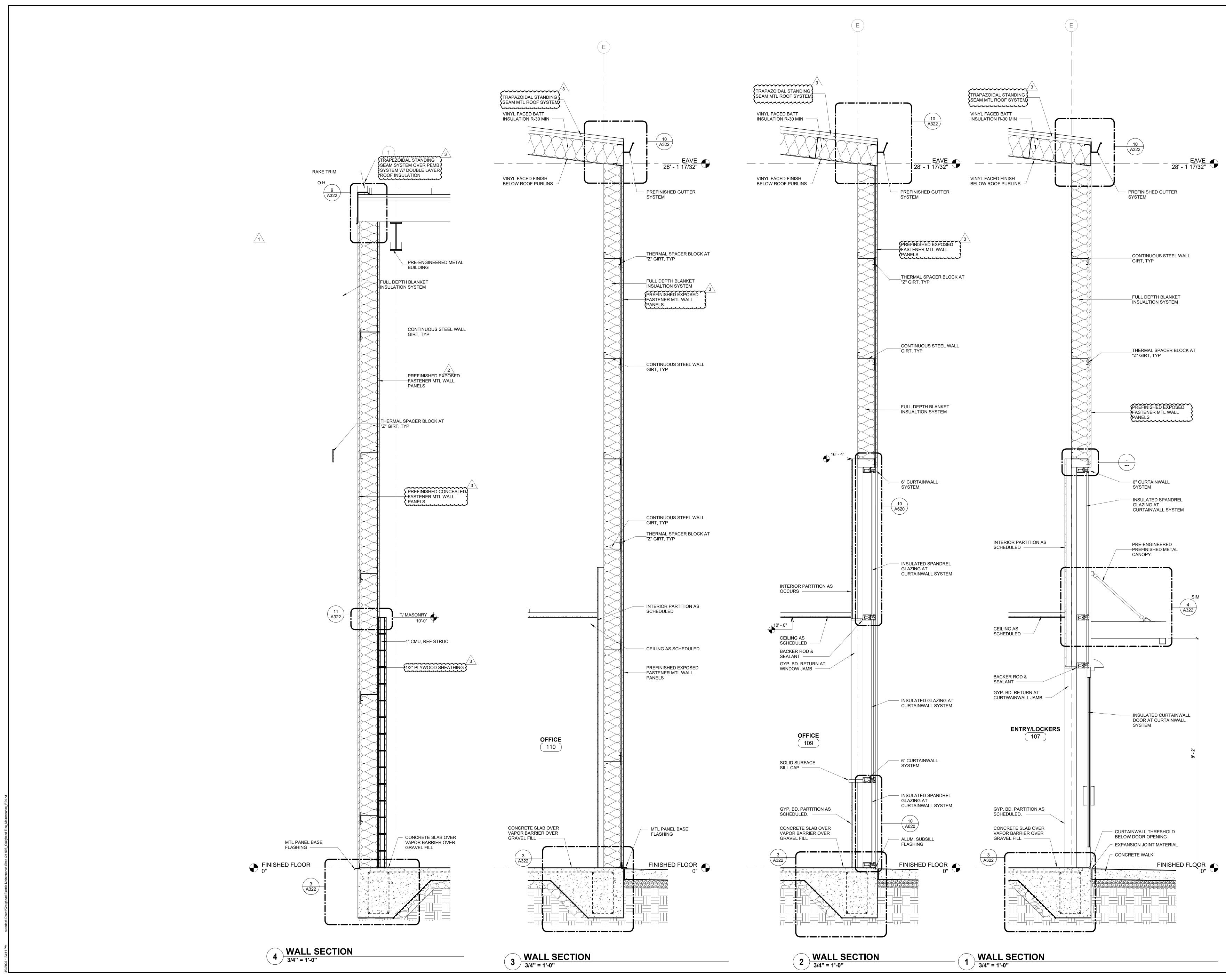










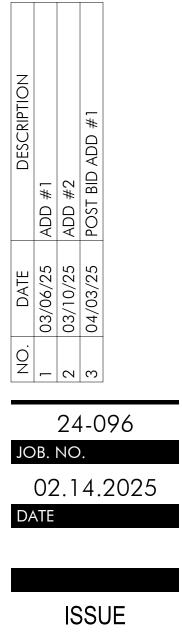










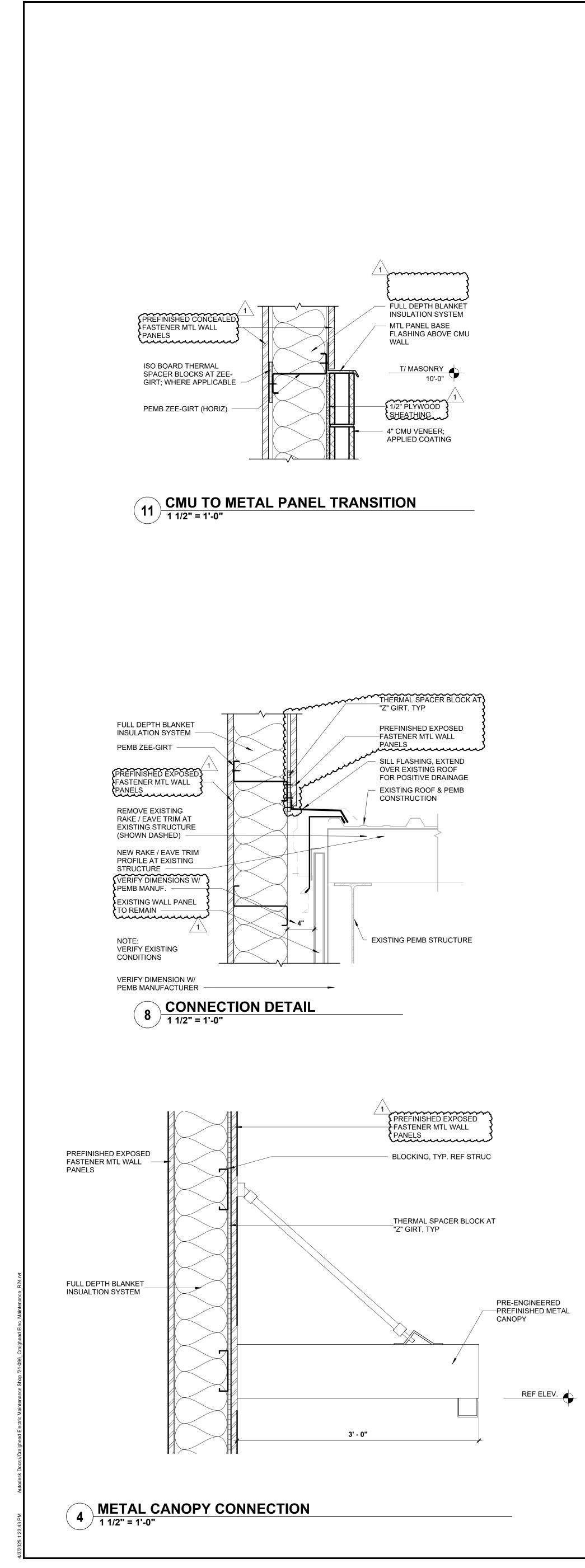


A321

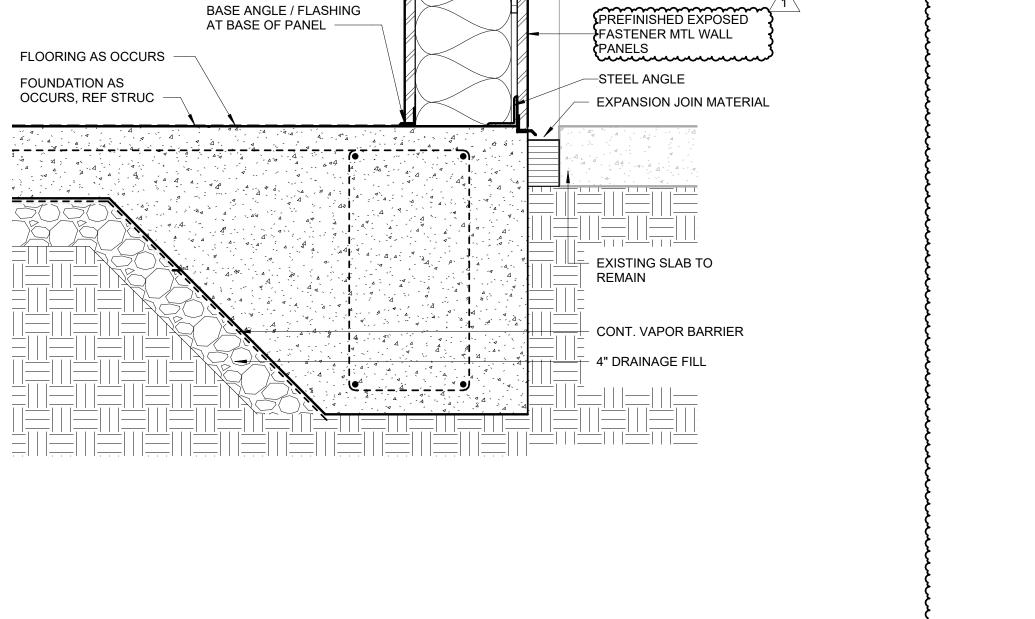


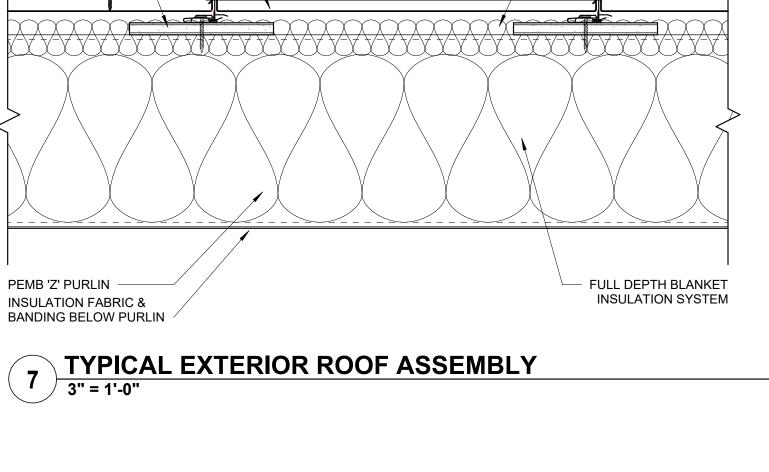






# 3 FOUNDATION DETAIL 1 1/2" = 1'-0"





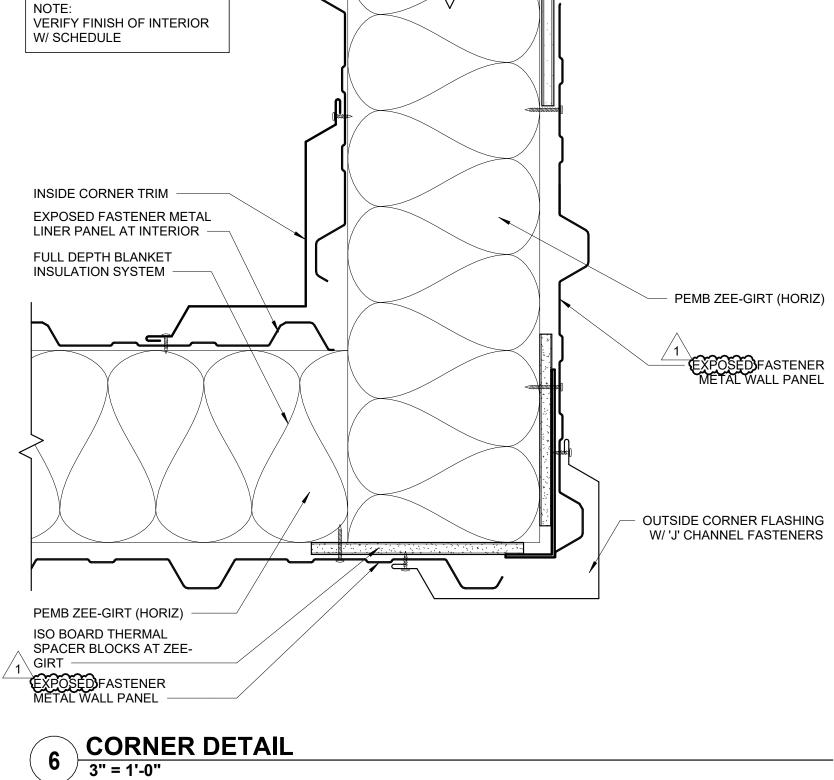
PREFINISHED EXPOSED FASTENER MTL WALL

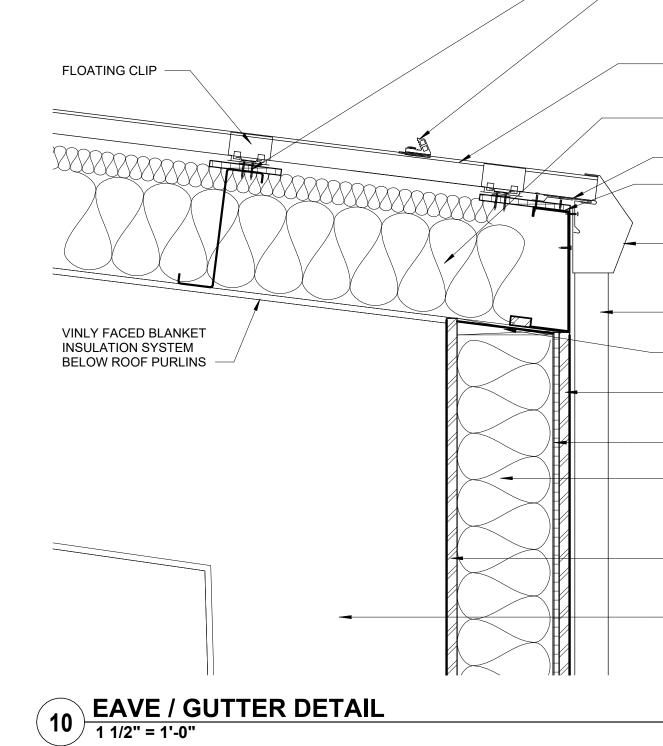
FULL DEPTH BLANKET

INSUALTION SYSTEM

PANELS

16" TYP. - REF. SPECIFICATIONS





CONTINUOUS STEEL WALL GIRT, TYP UTILITY CLIP WITH CONT. PREFINISHED SNOW & ICE DIVERTER, INSTALLED PER MFR INSTRUC PREFINISHED STANDING SEAM METAL ROOF PANEL W/ SEAM SEALANT DOUBLE LAYER ROOF INSULATION, R-29 GUTTER STRAP -EAVE STRUT

PREFINISHED METAL

PREFINISHED METAL DOWNSPOUT SYSTEM

CONT. WD BLOCKING

FASTENER MTL WALL

FULL DEPTH BLANKET

INSUALTION SYSTEM

PREFINISHED EXPOSED

PRE-ENGINEERED METAL

-FASTENER MTL WALL

PANELS

BUILDING

- TOP INSULATION LAYER

THERMAL SPACER BLOCK AT

"Z" GIRT, TYP

"Z" GIRT, TYP

PREFINISHED EXPOSED

PANELS

THERMAL SPACER BLOCK AT

GUTTER

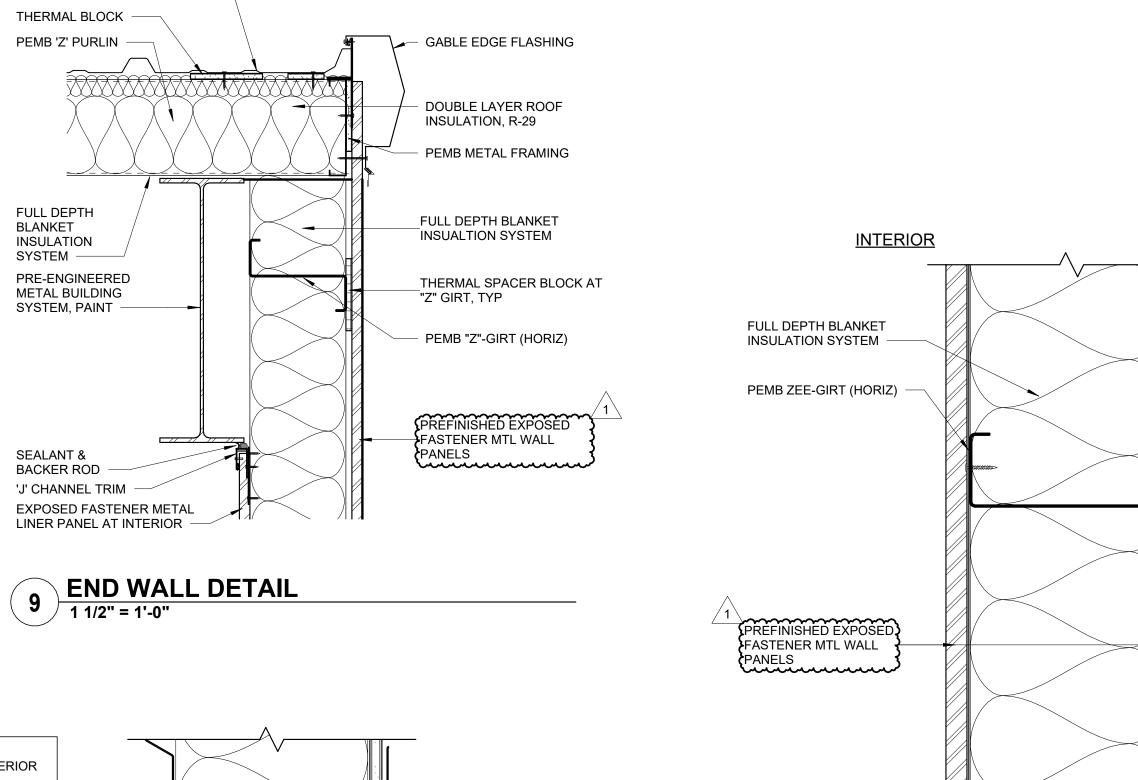
FULL DEPTH BLANKET INSULATION SYSTEM — PRE-ENGINEERED METAL BUILDING SYSTEM, PAINT SEALANT &

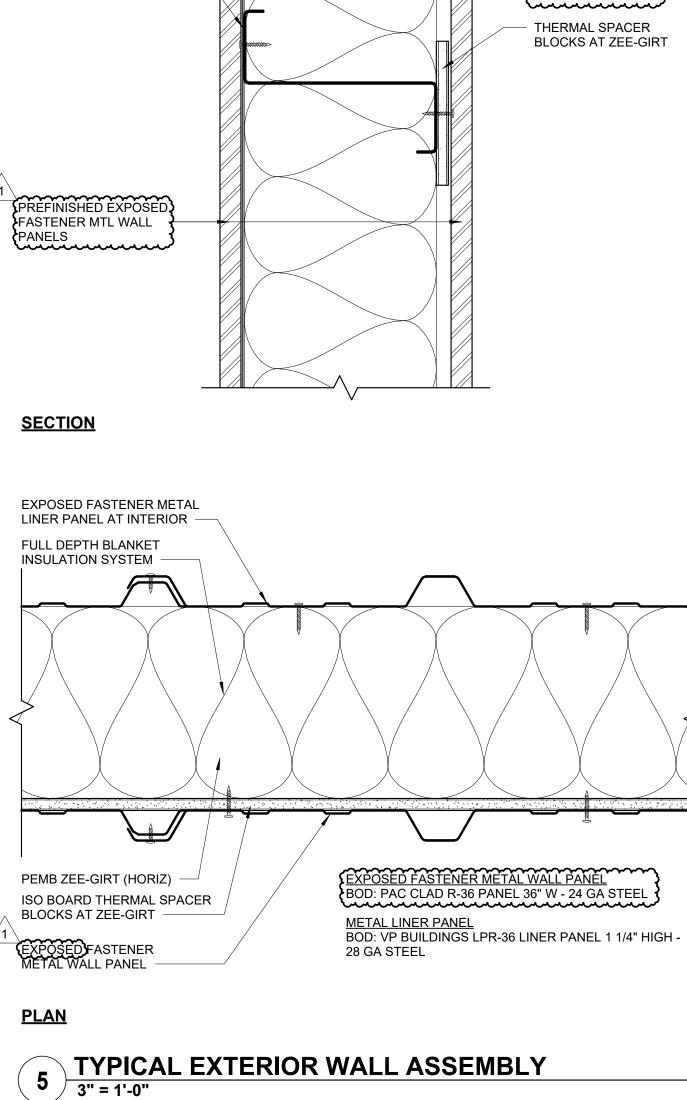
BACKER ROD

STANDING SEAM METAL ROOF PANEL W/ SEAM SEALANT THERMAL BLOCK PEMB 'Z' PURLIN -

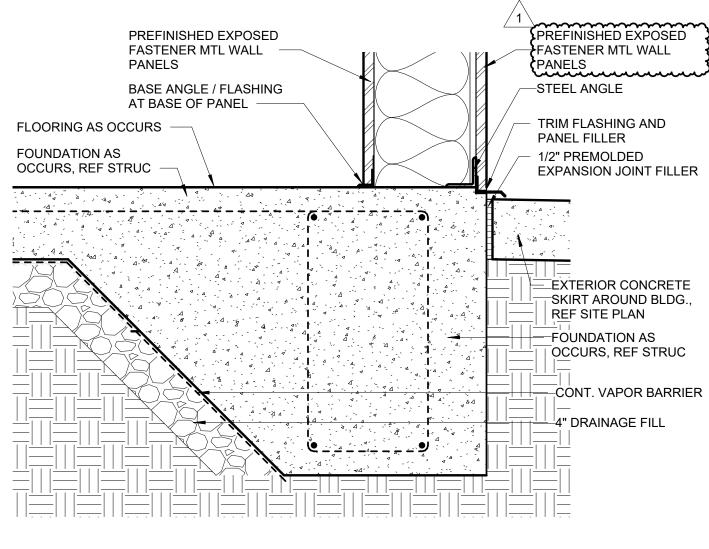
9 END WALL DETAIL 1 1/2" = 1'-0"

NOT USED 2 

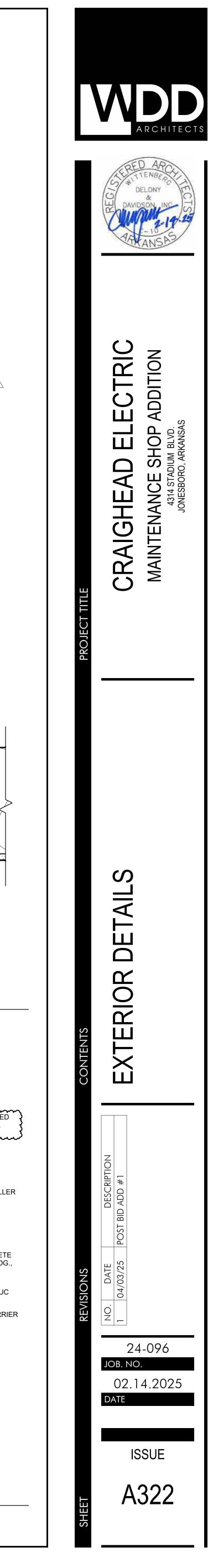




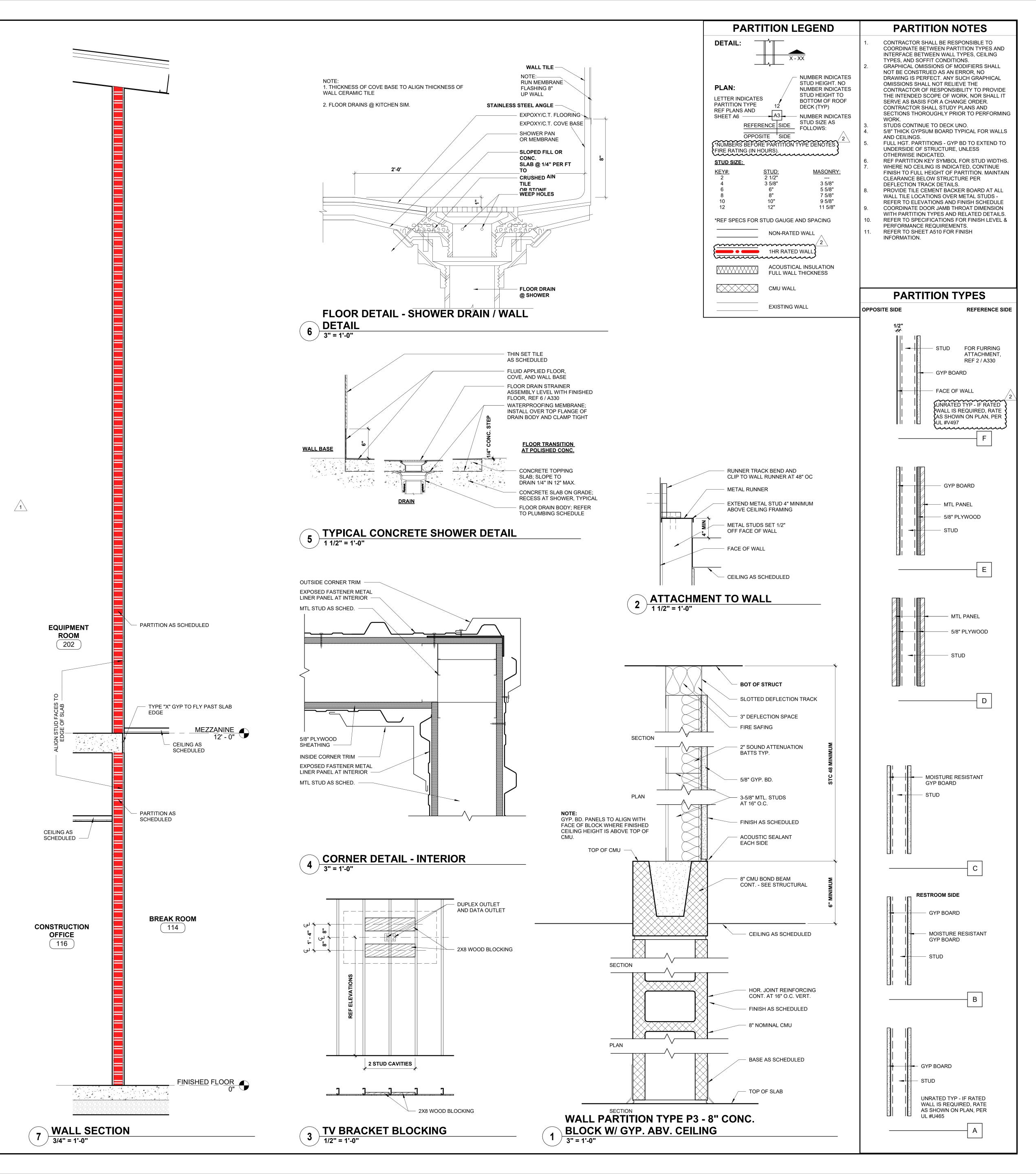
EXTERIOR

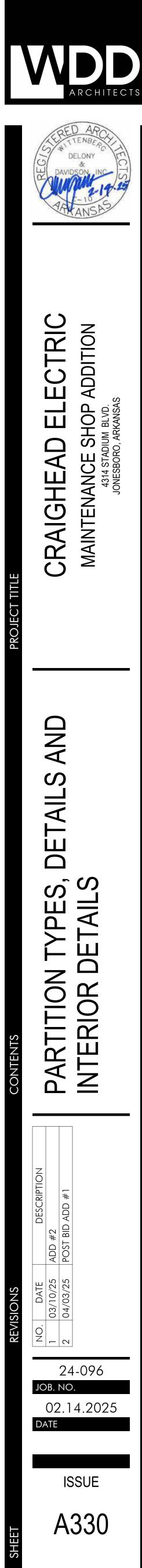


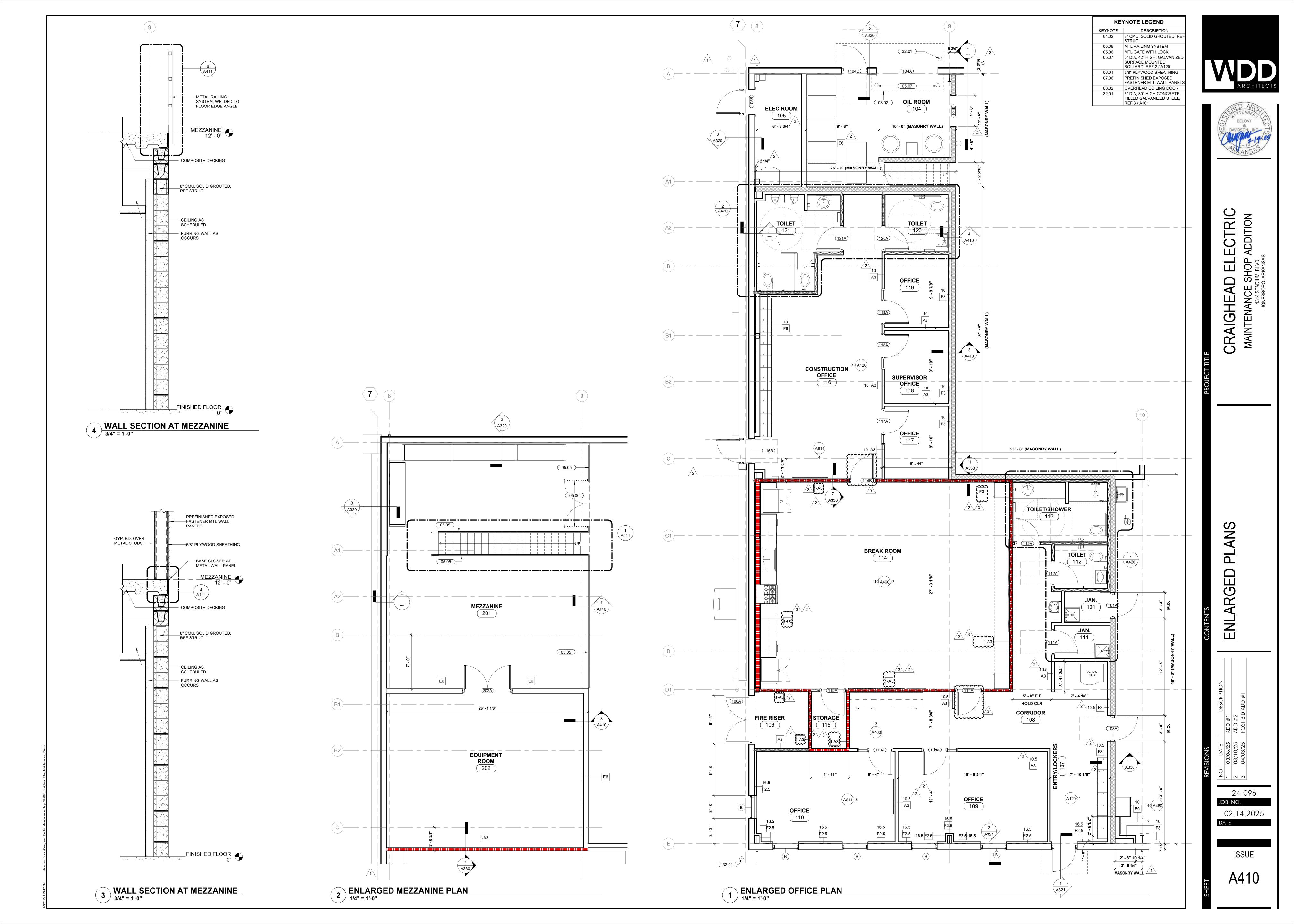
# 1 **FOUNDATION DETAIL** 1 1/2" = 1'-0"

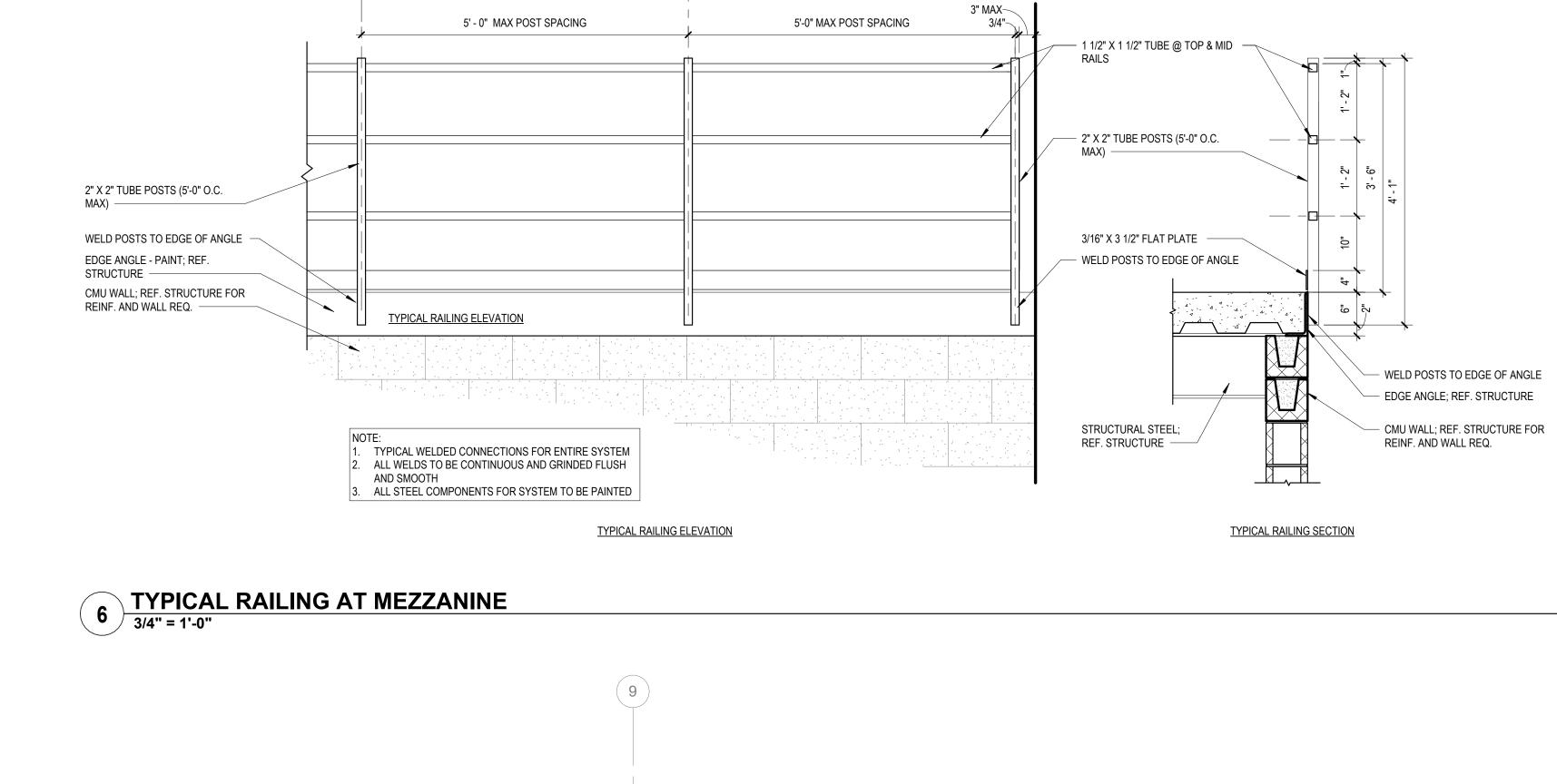


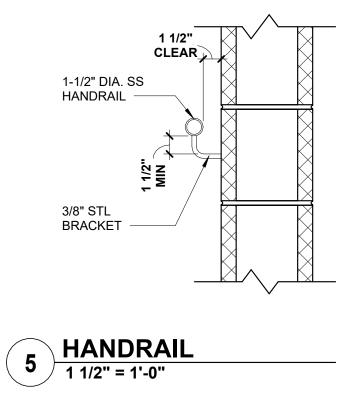
5 1:23:45 PM Autodesk Docs://Craighead Electric Maintenance Shop /24-096\_Craighead Elec\_Maintenance\_R24.rvt

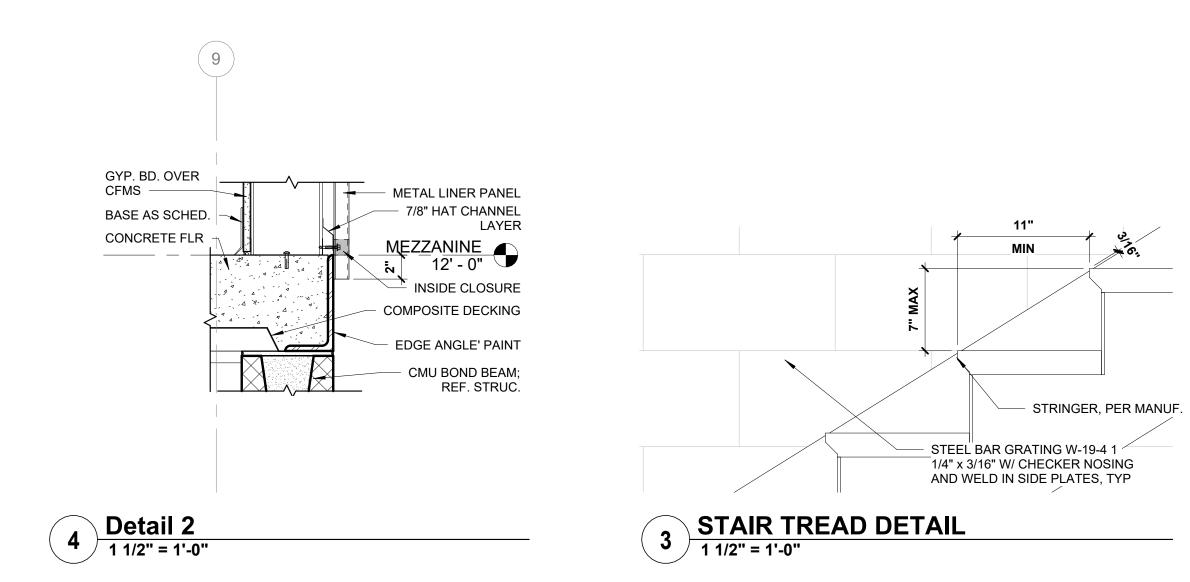


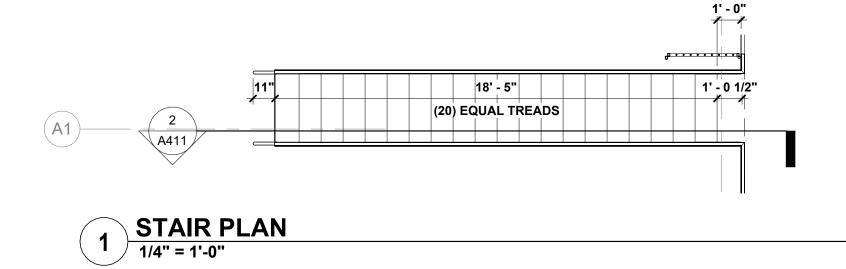




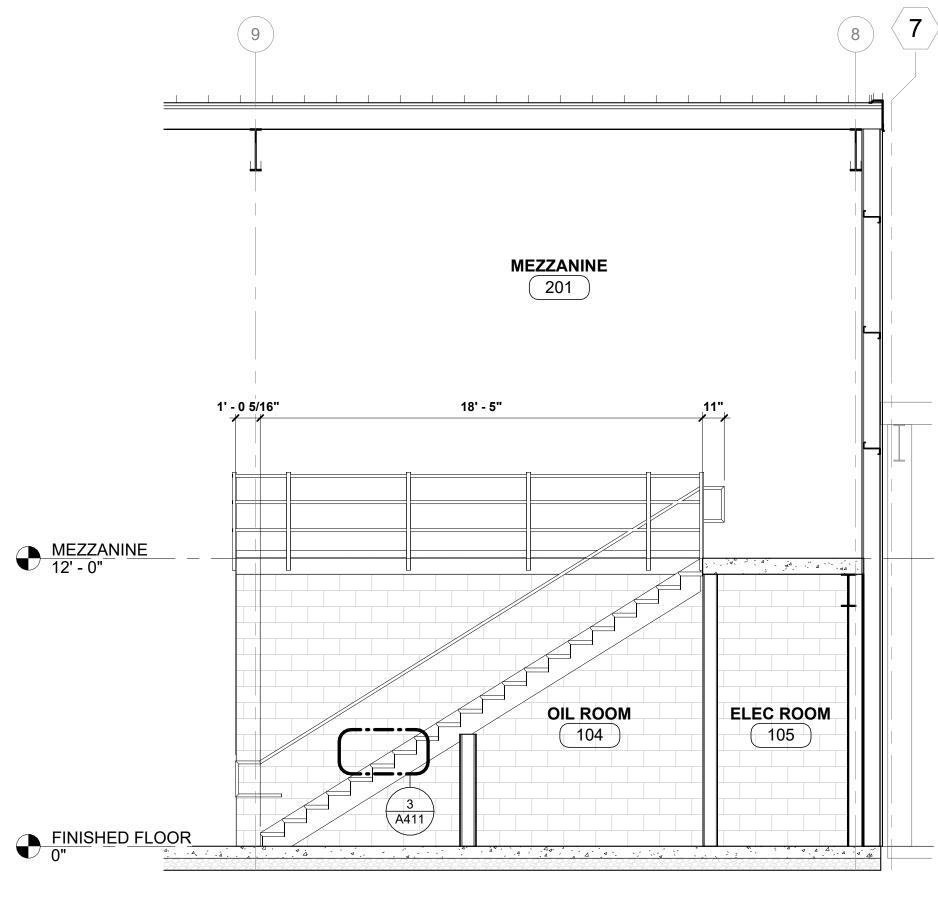




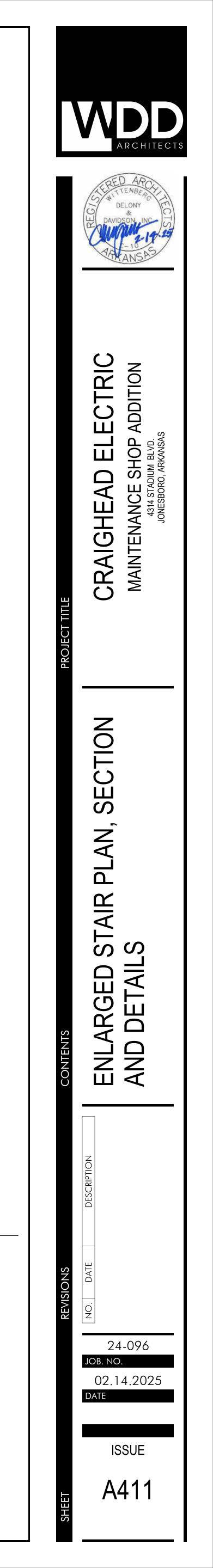




# 2 **STAIR SECTION** 1/4" = 1'-0"

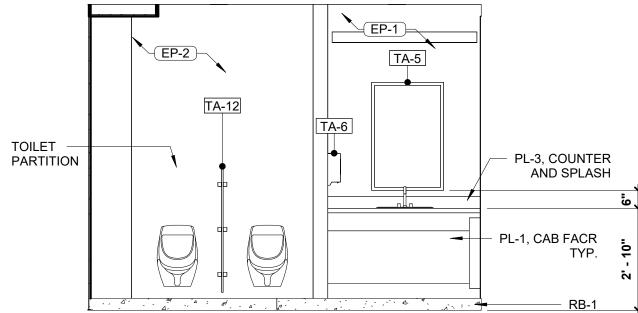


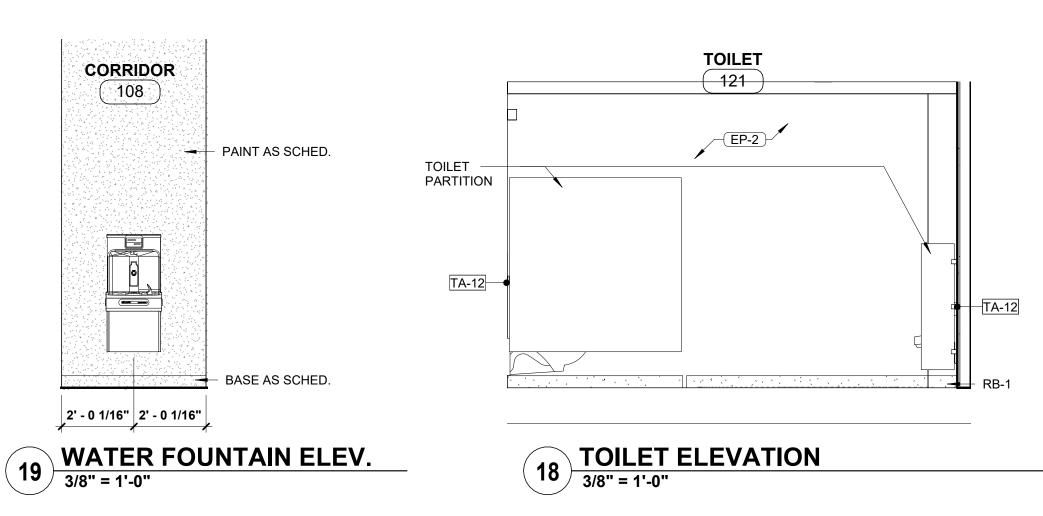
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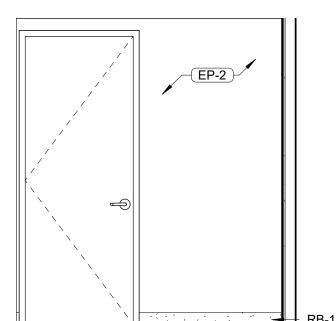


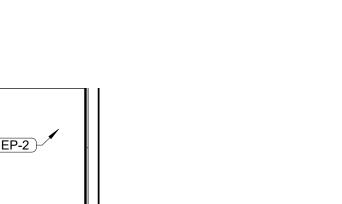


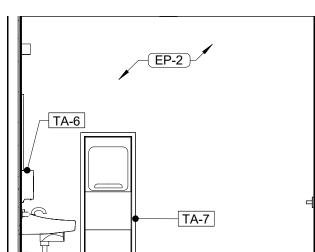


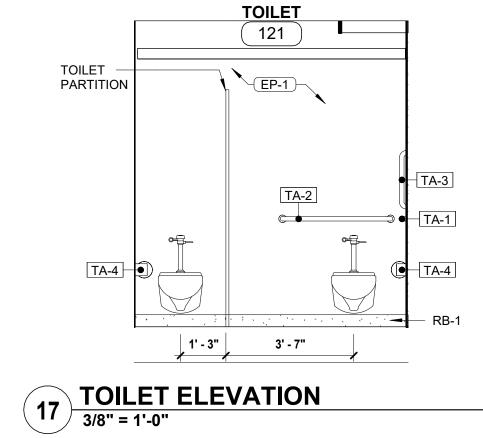


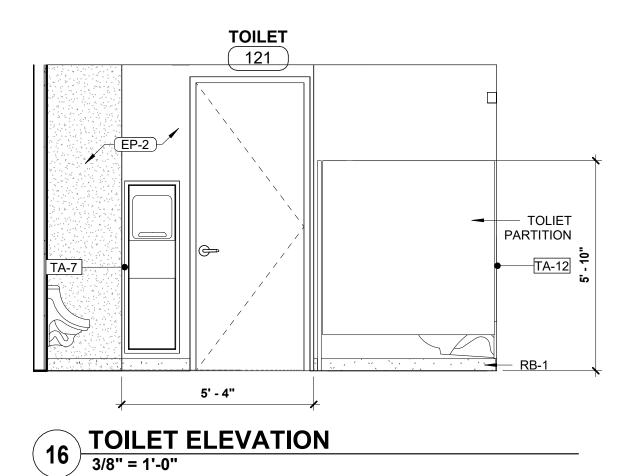




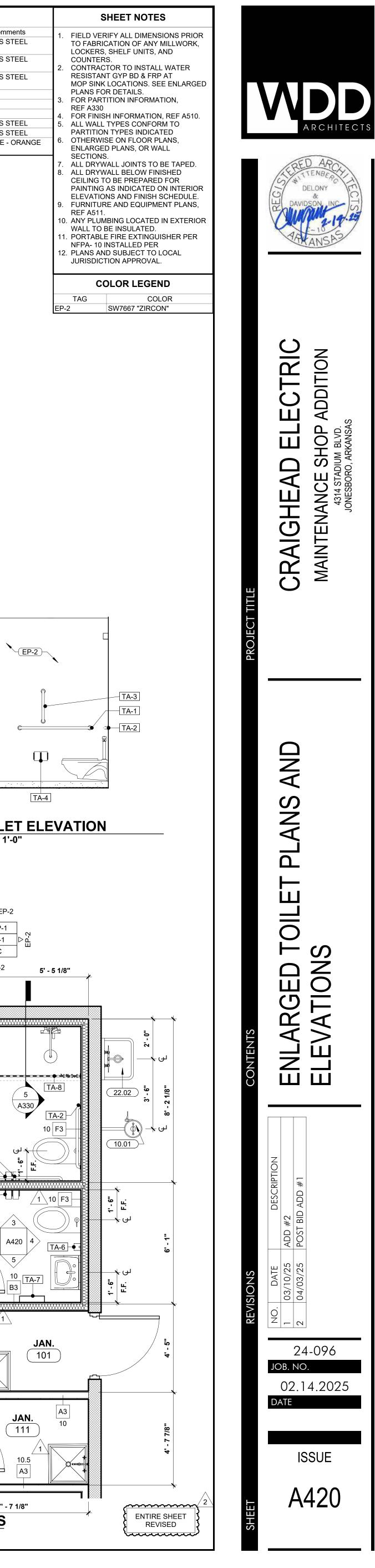




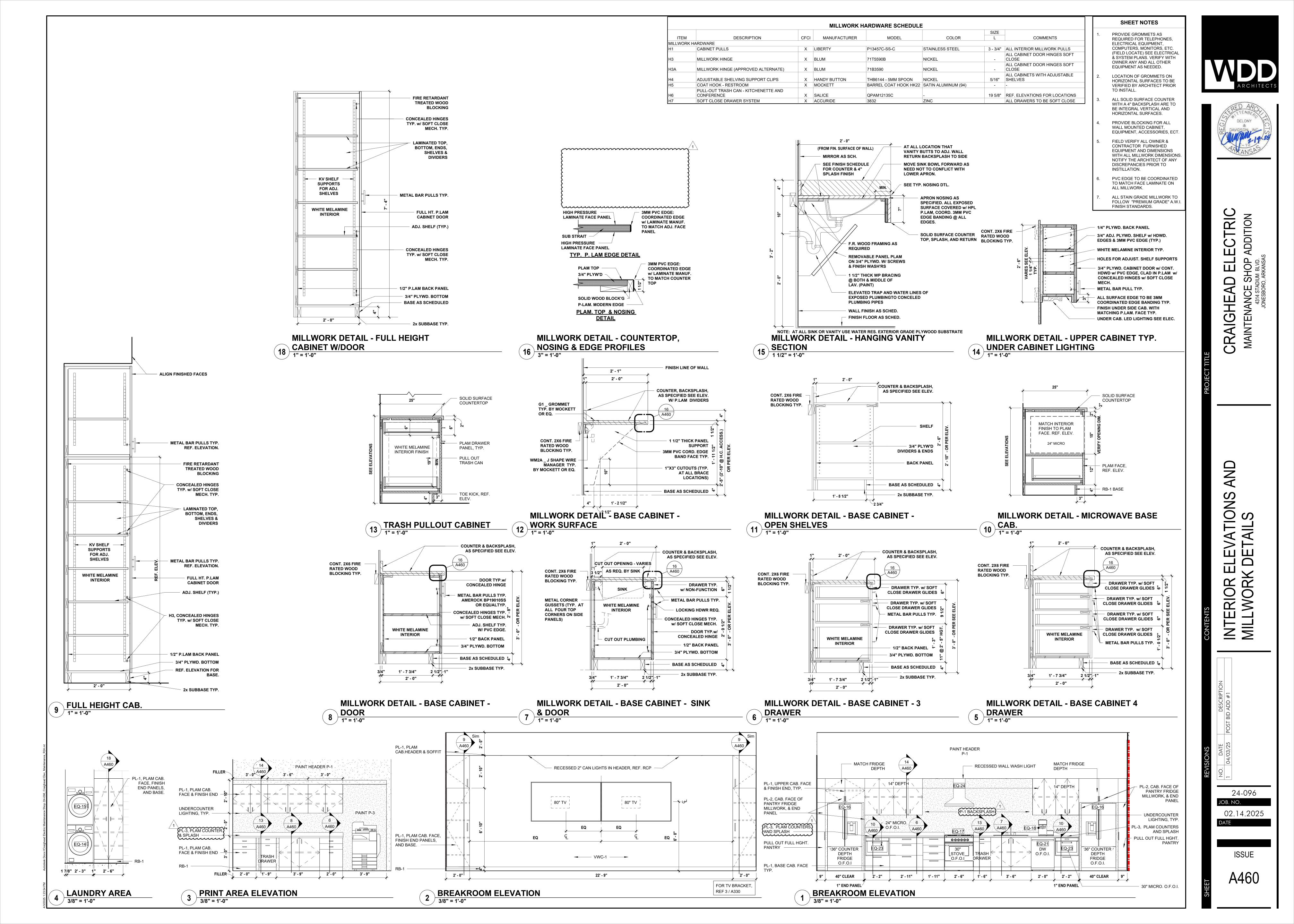


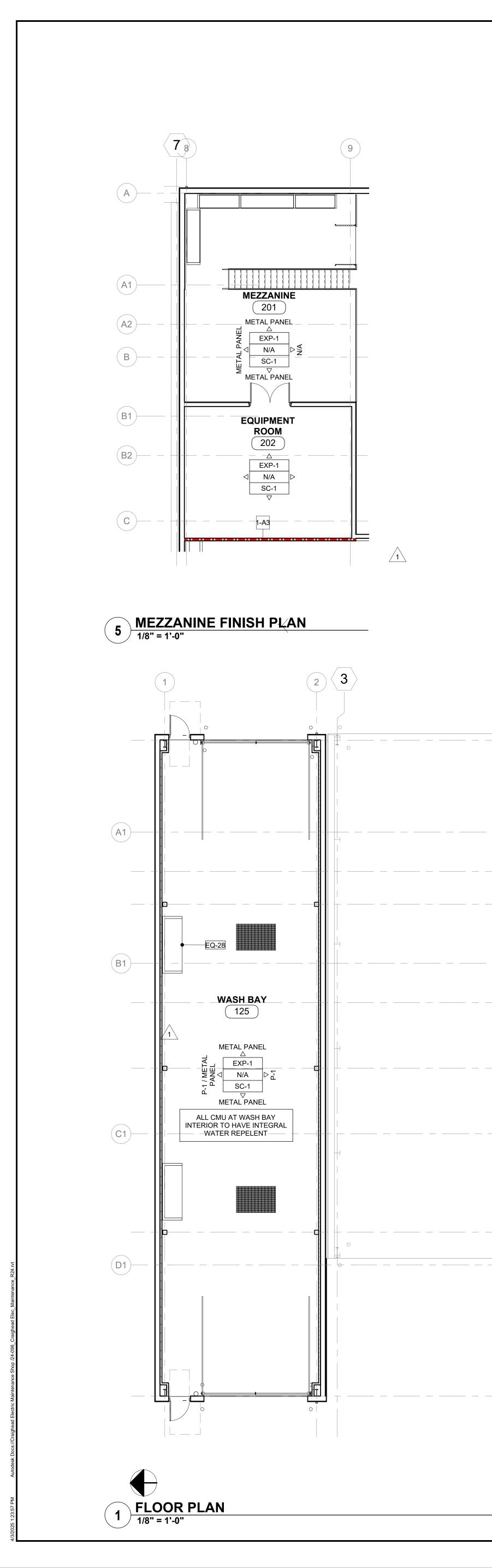


EP-1

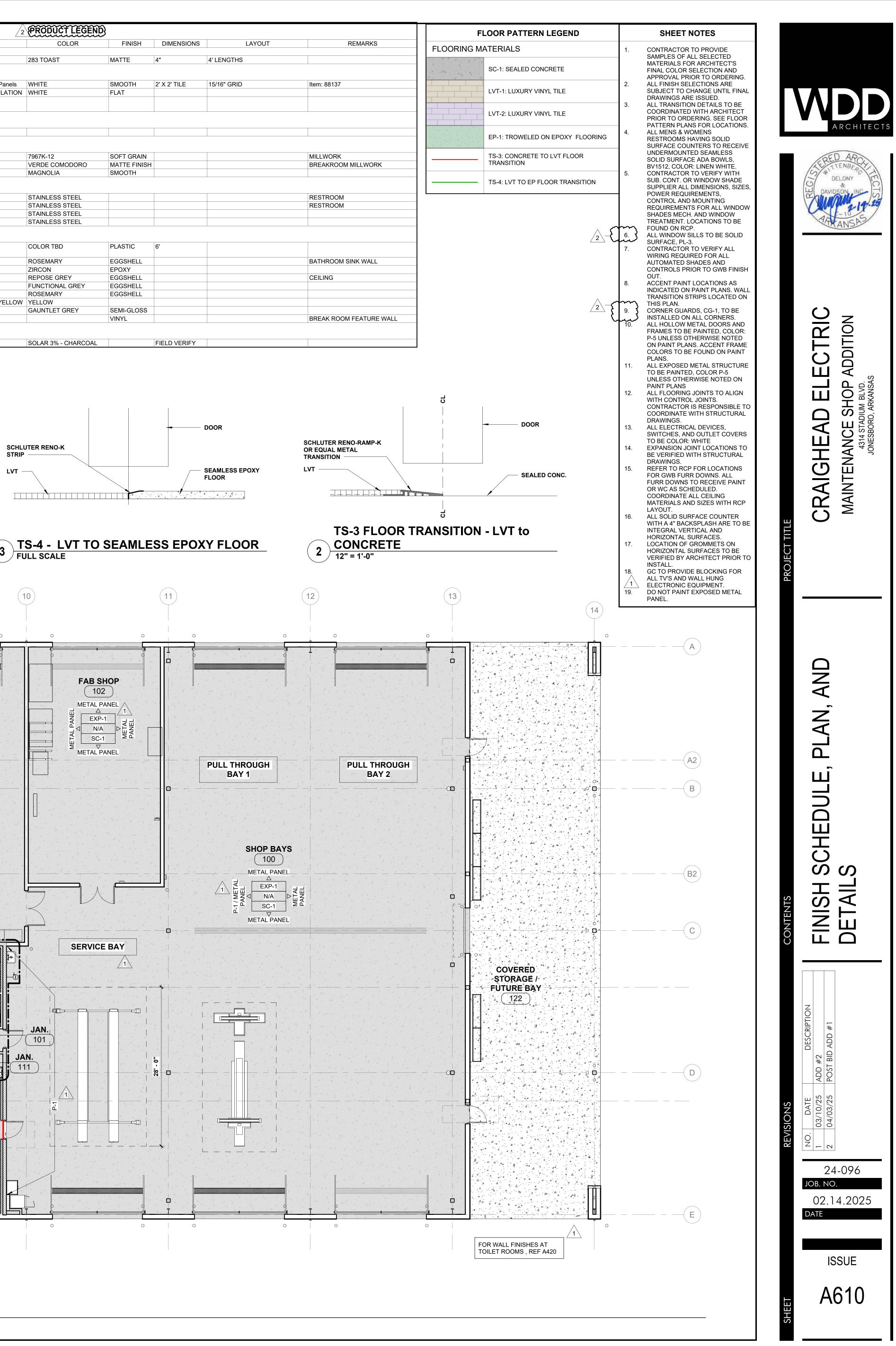


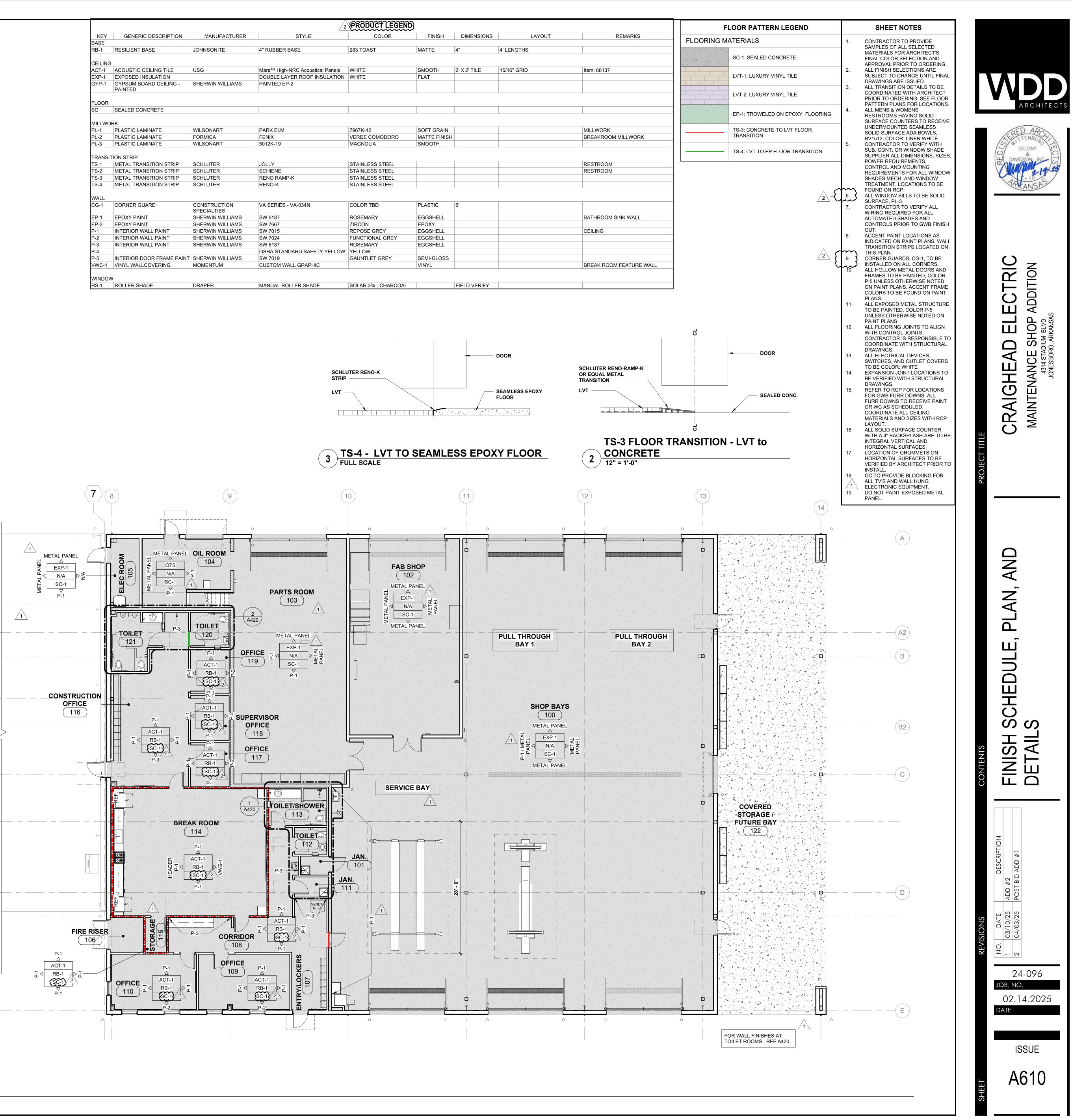
TOILET ACCESSORIES SCHEDULE					S	
Type Mark	Description	Manufacturer	Model	Comments		FIELD VER
A-1	STAINLESS STEEL GRAB BAR W/ CONCEALED MOUNTING	BOBRICK	B-6806-42	STAINLESS STEEL	'.	TO FABRIC
A-2	STAINLESS STEEL GRAB BAR W/ CONCEALED MOUNTING	BOBRICK	B-6806-36	STAINLESS STEEL	2.	COUNTERS
A-3	STAINLESS STEEL GRAB BAR W/ CONCEALED MOUNTING	BOBRICK	B-6806-18	STAINLESS STEEL		RESISTAN <sup>-</sup> MOP SINK
A-4	TOILET PAPER DISPENSER	BOBRICK	B540	SATIN		PLANS FO
A-5	Type 304 Stainless Steel	American Specialties	Туре 01	SATIN	3.	FOR PART REF A330
A-6	SOAP DISPENSER	BOBRICK	B-2111	SATIN	4	FOR FINIS
A-7	RECESSED PAPER TOWEL DISPENSER	BOBRICK	B-3940	STAINLESS STEEL	5.	ALL WALL
A-8	SHOWER ROD / CURTAIN WITH HOOKS	BOBRICK	B-6047	STAINLESS STEEL		PARTITION
A-12	TOILET PARTITIONS	SCRANTON	HINEY HIDERS	CONCRETE - ORANGE PEEL	6.	OTHERWIS

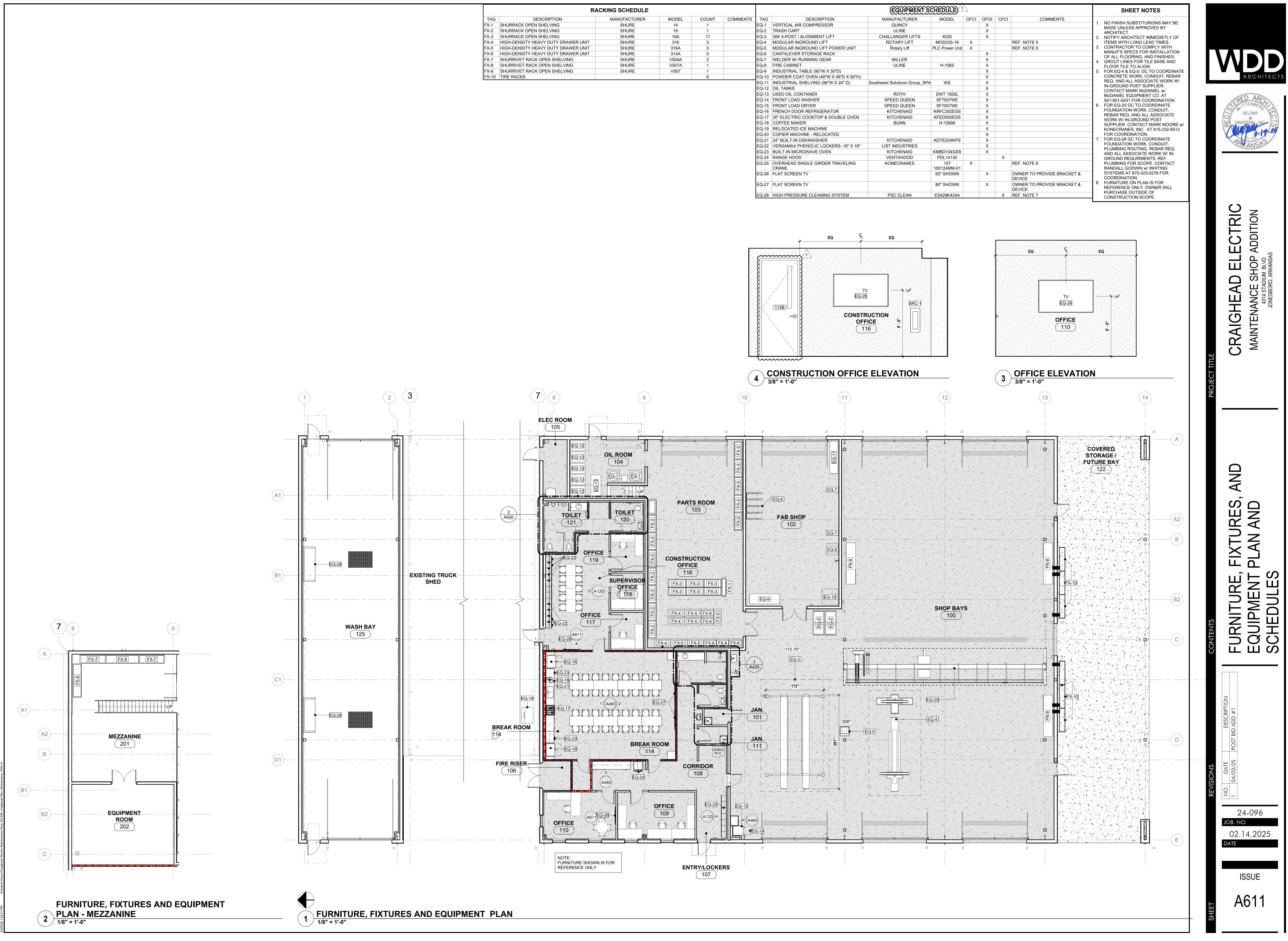




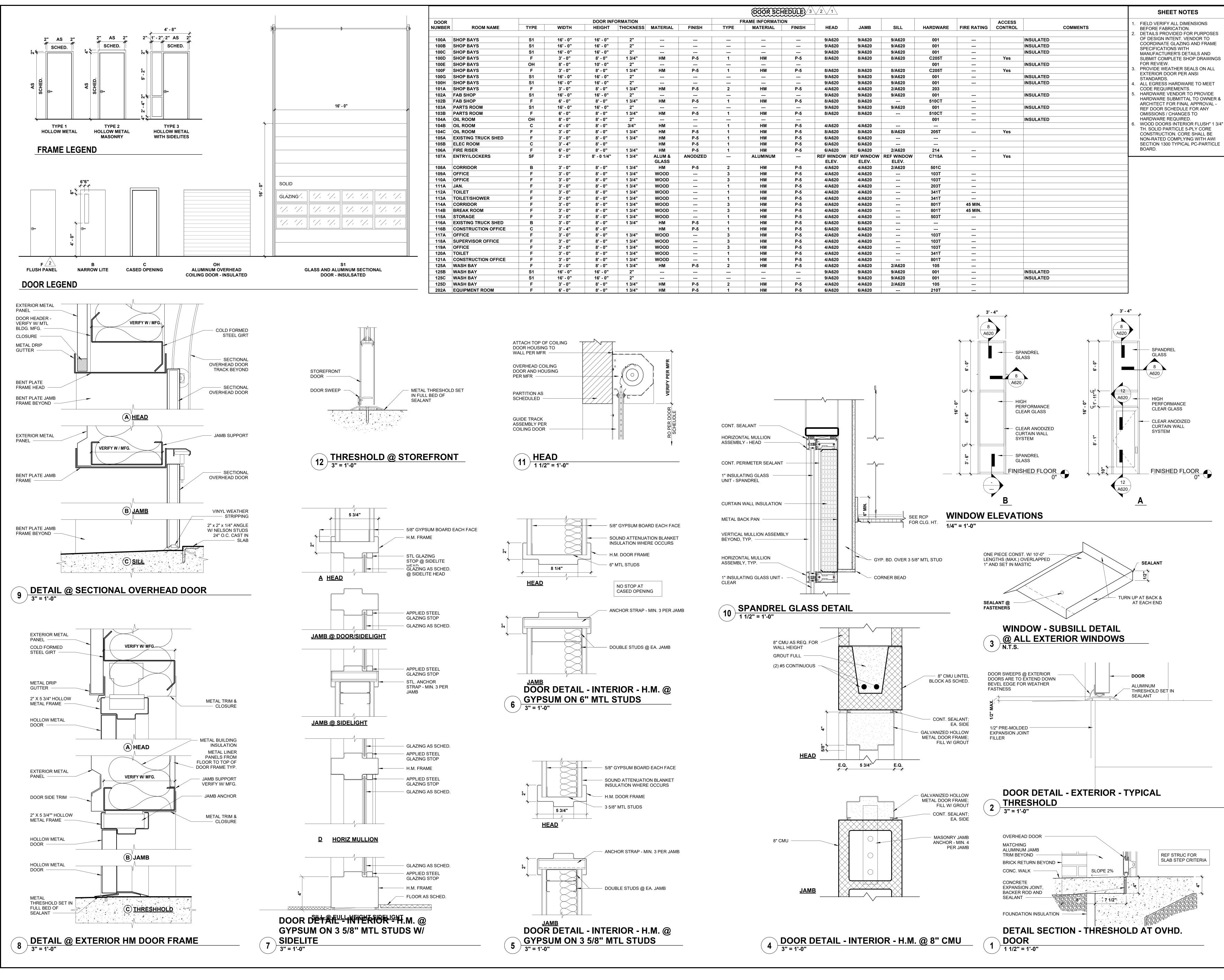
			2	PRODUCT LEGEND	}
KEY	GENERIC DESCRIPTION	MANUFACTURER	STYLE	COLOR	FINISH
BASE					
RB-1	RESILIENT BASE	JOHNSONITE	4" RUBBER BASE	283 TOAST	MATTE
CEILING					
ACT-1	ACOUSTIC CEILING TILE	USG	Mars™ High-NRC Acoustical Panels	WHITE	SMOOTH
EXP-1	EXPOSED INSULATION		DOUBLE LAYER ROOF INSULATION	WHITE	FLAT
GYP-1	GYPSUM BOARD CEILING - PAINTED	SHERWIN WILLIAMS	PAINTED EP-2		
FLOOR					
SC	SEALED CONCRETE				
MILLWC					
PL-1	PLASTIC LAMINATE	WILSONART	PARK ELM	7967K-12	SOFT GRAIN
PL-2	PLASTIC LAMINATE	FORMICA	FENIX	VERDE COMODORO	MATTE FINIS
PL-3	PLASTIC LAMINATE	WILSONART	5012K-19	MAGNOLIA	SMOOTH
TRANSI	TION STRIP				
TS-1	METAL TRANSITION STRIP	SCHLUTER	JOLLY	STAINLESS STEEL	
TS-2	METAL TRANSITION STRIP	SCHLUTER	SCHIENE	STAINLESS STEEL	
TS-3	METAL TRANSITION STRIP	SCHLUTER	RENO RAMP-K	STAINLESS STEEL	
TS-4	METAL TRANSITION STRIP	SCHLUTER	RENO-K	STAINLESS STEEL	
WALL					
CG-1	CORNER GUARD	CONSTRUCTION SPECIALTIES	VA SERIES - VA-034N	COLOR TBD	PLASTIC
EP-1	EPOXY PAINT	SHERWIN WILLIAMS	SW 6187	ROSEMARY	EGGSHELL
EP-2	EPOXY PAINT	SHERWIN WILLIAMS	SW 7667	ZIRCON	EPOXY
P-1	INTERIOR WALL PAINT	SHERWIN WILLIAMS	SW 7015	REPOSE GREY	EGGSHELL
P-2	INTERIOR WALL PAINT	SHERWIN WILLIAMS	SW 7024	FUNCTIONAL GREY	EGGSHELL
P-3	INTERIOR WALL PAINT	SHERWIN WILLIAMS	SW 6187	ROSEMARY	EGGSHELL
P-4			OSHA STANDARD SAFETY YELLOW	YELLOW	
P-5	INTERIOR DOOR FRAME PAINT	SHERWIN WILLIAMS	SW 7019	GAUNTLET GREY	SEMI-GLOSS
VWC-1	VINYL WALLCOVERING	MOMENTUM	CUSTOM WALL GRAPHIC		VINYL
WINDO					
RS-1	ROLLER SHADE	DRAPER	MANUAL ROLLER SHADE	SOLAR 3% - CHARCOAL	
1.0-1				JOSEAN J/J = UNANGOAL	





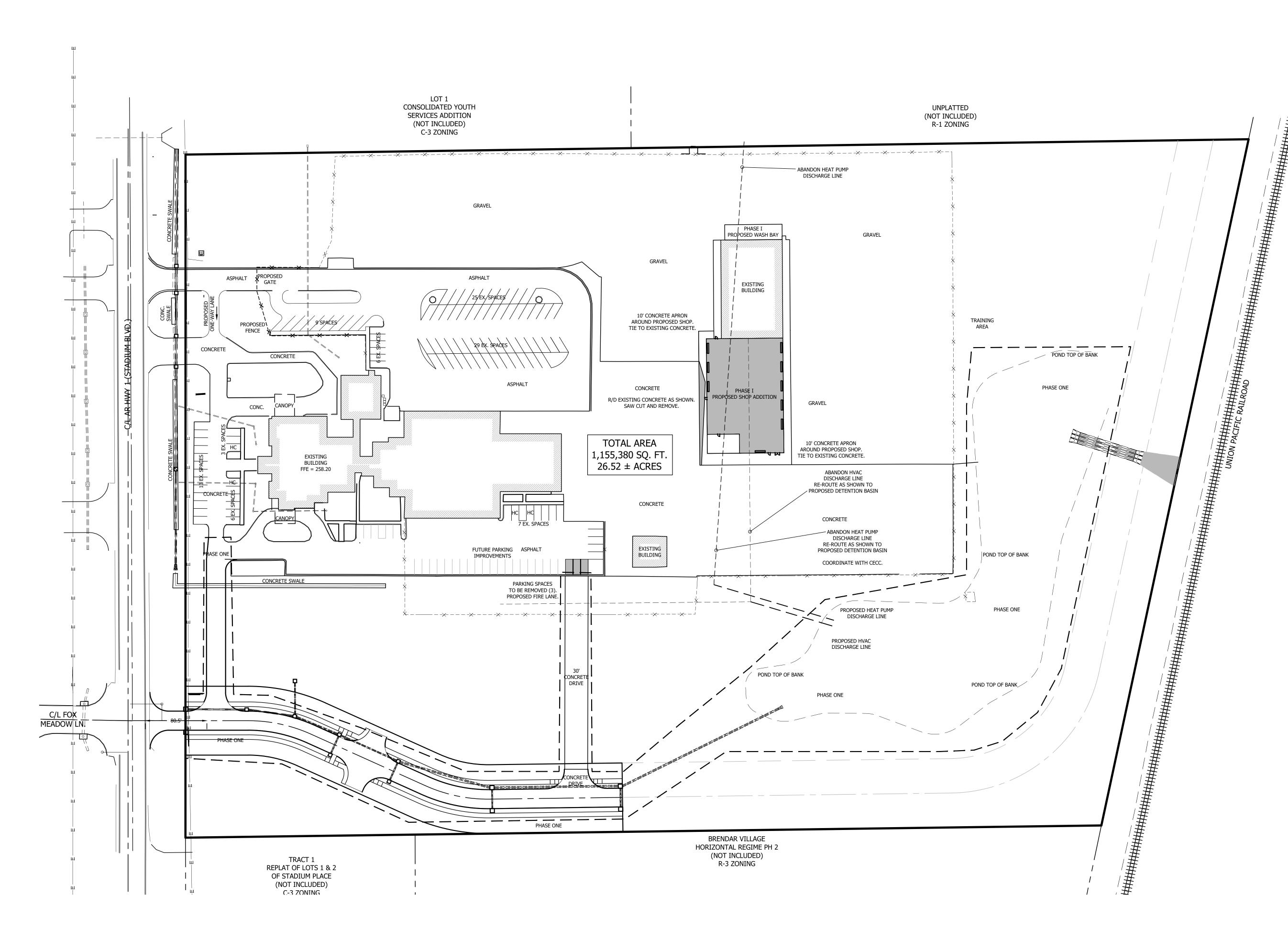


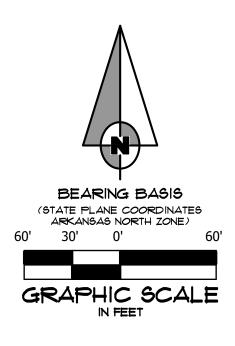
RA	CKING SCHEDULE				
DESCRIPTION	MANUFACTURER	MODEL	COUNT	COMMENTS	1
SHURRACK OPEN SHELVING	SHURE	14	1		E
SHURRACK OPEN SHELVING	SHURE	16	1		E
SHURRACK OPEN SHELVING	SHURE	16A	17		E
HIGH-DENSITY HEAVY DUTY DRAWER UNIT	SHURE	316	3		E
HIGH-DENSITY HEAVY DUTY DRAWER UNIT	SHURE	316A	5		E
HIGH-DENSITY HEAVY DUTY DRAWER UNIT	SHURE	314A	5		E
SHURRIVET RACK OPEN SHELVING	SHURE	V504A	2		Е
SHURRIVET RACK OPEN SHELVING	SHURE	V507A	1		E
SHURRIVET RACK OPEN SHELVING	SHURE	V507	1		Е
TIRE RACKS			6		E
	DESCRIPTION SHURRACK OPEN SHELVING SHURRACK OPEN SHELVING SHURRACK OPEN SHELVING HIGH-DENSITY HEAVY DUTY DRAWER UNIT HIGH-DENSITY HEAVY DUTY DRAWER UNIT SHURRIVET RACK OPEN SHELVING SHURRIVET RACK OPEN SHELVING SHURRIVET RACK OPEN SHELVING	SHURRACK OPEN SHELVINGSHURESHURRACK OPEN SHELVINGSHURESHURRACK OPEN SHELVINGSHUREHIGH-DENSITY HEAVY DUTY DRAWER UNITSHUREHIGH-DENSITY HEAVY DUTY DRAWER UNITSHUREHIGH-DENSITY HEAVY DUTY DRAWER UNITSHURESHURRIVET RACK OPEN SHELVINGSHURESHURRIVET RACK OPEN SHELVINGSHURESHURRIVET RACK OPEN SHELVINGSHURESHURRIVET RACK OPEN SHELVINGSHURE	DESCRIPTIONMANUFACTURERMODELSHURRACK OPEN SHELVINGSHURE14SHURRACK OPEN SHELVINGSHURE16SHURRACK OPEN SHELVINGSHURE16AHIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE316HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE316AHIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE314ASHURRIVET RACK OPEN SHELVINGSHUREV504ASHURRIVET RACK OPEN SHELVINGSHUREV507ASHURRIVET RACK OPEN SHELVINGSHUREV507	DESCRIPTIONMANUFACTURERMODELCOUNTSHURRACK OPEN SHELVINGSHURE141SHURRACK OPEN SHELVINGSHURE161SHURRACK OPEN SHELVINGSHURE16A17HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE3163HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE316A5HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE314A5SHURRIVET RACK OPEN SHELVINGSHUREV504A2SHURRIVET RACK OPEN SHELVINGSHUREV507A1SHURRIVET RACK OPEN SHELVINGSHUREV5071	DESCRIPTIONMANUFACTURERMODELCOUNTCOMMENTSSHURRACK OPEN SHELVINGSHURE141SHURRACK OPEN SHELVINGSHURE161SHURRACK OPEN SHELVINGSHURE16A17HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE3163HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE316A5HIGH-DENSITY HEAVY DUTY DRAWER UNITSHURE314A5SHURRIVET RACK OPEN SHELVINGSHUREV504A2SHURRIVET RACK OPEN SHELVINGSHUREV507A1SHURRIVET RACK OPEN SHELVINGSHUREV5071



DOOR				DOOR INF	ORMATION			F	RAME INFORMAT	0
NUMBER	ROOM NAME	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	TYPE	MATERIAL	
100A	SHOP BAYS	S1	16' - 0"	16' - 0"	2"					Т
100R	SHOP BAYS	S1	16' - 0"	16' - 0"	2"					+
100C	SHOP BAYS	S1	16' - 0"	16' - 0"	2"					+
100D	SHOP BAYS	F	3' - 0"	8' - 0"	1 3/4"	НМ	P-5	1	НМ	+
100E	SHOP BAYS	OH	8' - 0''	10' - 0''	2"					+
100F	SHOP BAYS	F	3' - 0"	8' - 0"	1 3/4"	НМ	P-5	1	НМ	+
100G	SHOP BAYS	S1	16' - 0"	16' - 0''	2"					+
100H	SHOP BAYS	S1	16' - 0"	16' - 0"	2"					+
101A	SHOP BAYS	F	3' - 0"	8' - 0''	1 3/4"	НМ	P-5	2	НМ	+
102A	FAB SHOP	S1	16' - 0''	16' - 0''	2"					+
102B	FAB SHOP	F	6' - 0''	8' - 0''	1 3/4"	НМ	P-5	1	НМ	+
103A	PARTS ROOM	S1	16' - 0''	16' - 0''	2"					t
103B	PARTS ROOM	F	6' - 0''	8' - 0''	1 3/4"	НМ	P-5	1	НМ	t
104A	OIL ROOM	ОН	8' - 0"	8' - 0"	2"					t
104B	OIL ROOM	С	4' - 0''	8' - 0"	3/4"	НМ		1	НМ	t
104C	OIL ROOM	F	3' - 0"	8' - 0"	1 3/4"	НМ	P-5	1	НМ	t
105A	EXISTING TRUCK SHED	F	3' - 0"	8' - 0"	1 3/4"	НМ	P-5	1	НМ	t
105B	ELEC ROOM	С	3' - 4"	8' - 0"		НМ	P-5	1	НМ	t
106A	FIRE RISER	F	6' - 0"	8' - 0"	1 3/4"	НМ	P-5	1	НМ	t
107A	ENTRY/LOCKERS	SF	3' - 0"	8' - 0 1/4"	1 3/4"	ALUM & GLASS	ANODIZED		ALUMINUM	T
108A	CORRIDOR	В	3' - 0"	8' - 0"	1 3/4"	НМ	P-5	2	HM	t
109A	OFFICE	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	HM	T
110A	OFFICE	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	НМ	T
111A	JAN.	F	3' - 0"	8' - 0''	1 3/4"	WOOD		1	HM	T
112A	TOILET	F	3' - 0"	8' - 0''	1 3/4"	WOOD		1	НМ	T
113A	TOILET/SHOWER	F	3' - 0"	8' - 0''	1 3/4"	WOOD		1	НМ	T
114A	CORRIDOR	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	НМ	T
114B	BREAK ROOM	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	НМ	T
115A	STORAGE	F	3' - 0"	8' - 0''	1 3/4"	WOOD		1	НМ	T
116A	EXISTING TRUCK SHED	В	3' - 0"	8' - 0''	1 3/4"	НМ	P-5	1	HM	
116B	CONSTRUCTION OFFICE	С	3' - 4"	8' - 0''		НМ	P-5	1	НМ	
117A	OFFICE	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	HM	
118A	SUPERVISOR OFFICE	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	НМ	
119A	OFFICE	F	3' - 0"	8' - 0''	1 3/4"	WOOD		3	HM	
120A	TOILET	F	3' - 0"	8' - 0''	1 3/4"	WOOD		1	HM	
121A	CONSTRUCTION OFFICE	F	3' - 0''	8' - 0''	1 3/4"	WOOD		1	НМ	Τ
125A	WASH BAY	F	3' - 0''	8' - 0''	1 3/4"	НМ	P-5	2	НМ	Γ
125B	WASH BAY	S1	16' - 0''	16' - 0''	2"					
125C	WASH BAY	S1	16' - 0"	16' - 0"	2"					
125D	WASH BAY	F	3' - 0"	8' - 0''	1 3/4"	НМ	P-5	2	НМ	
202A	EQUIPMENT ROOM	F	6' - 0"	8' - 0"	1 3/4"	НМ	P-5	1	НМ	





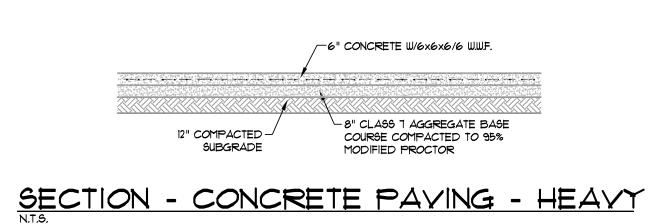


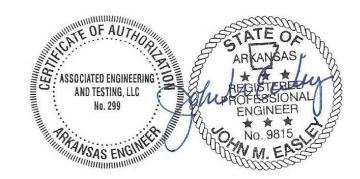
## SITE NOTES

- 1. ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED. 2. ALL CURB RETURN RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
- 3. THROUGHOUT ALL EXCAVATION ACTIVITIES, POSITIVE DRAINAGE SHALL BE MAINTAINED WITHIN MINIMUM SLOPES OF 0.50% OR GREATER AND SURFACE DRAINAGE GENERALLY IN THE DIRECTION PROVIDED BY EXISTING TOPOGRAPHY.
- WORK SHALL PROGRESS IN SUCH A MANNER AS TO ALLOW THE EXISTING VEGETATION TO REMAIN AS LONG AS POSSIBLE, CONSISTENT WITH THE SCOPE OF
- 5. ALL ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%. ALL ACCESSIBLE PARKING SPACES SHALL HAVE A MAXIMUM SLOPE OF 2.0% IN ALL DIRECTIONS.
- 6. ALL SPOT ELEVATIONS ARE AS SHOWN. 7. REMOVE AND DISPOSE OF ALL DEBRIS AND OTHER MATERIAL AS SHOWN IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS.

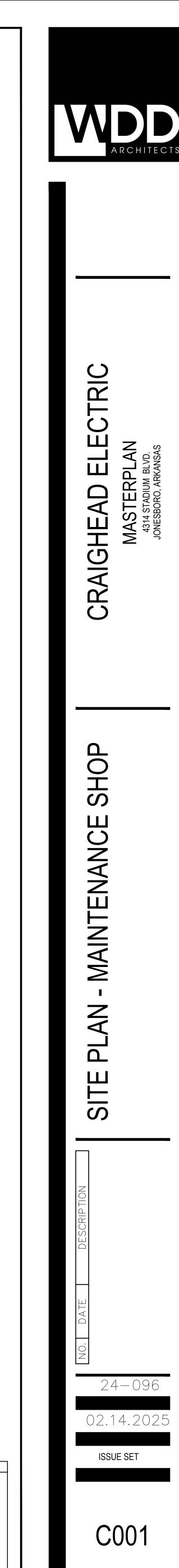
WORK.

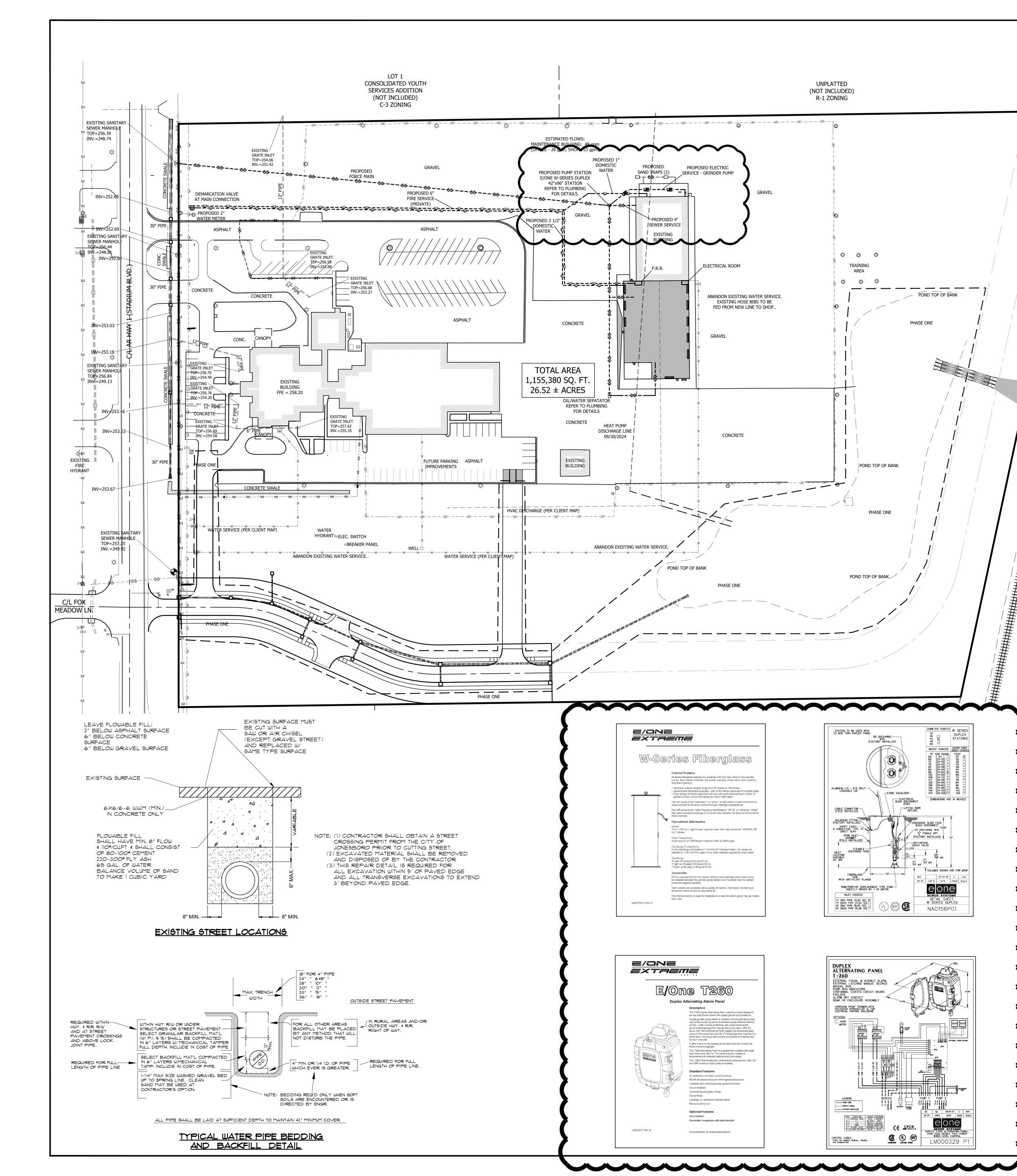
- 8. ACCESS ALONG ROADWAY SHALL BE MAINTAINED AT ALL TIMES. CONSTRUCTION IN CITY, COUNTY OR STATE RIGHT OF WAY SHALL BE COORDINATED WITH THE RESPECTIVE AUTHORITY.
- 9. TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES. THE CONTRACTOR SHALL GIVE AFFECTED PROPERTY OWNERS SUFFICIENT NOTICE PRIOR TO CONSTRUCTION OPERATIONS. 10. PARKING REQUIREMENTS:
- ADDITIONAL PARKING NOT REQUIRED NO BUILDING CONSTRUCTION THIS PHASE.





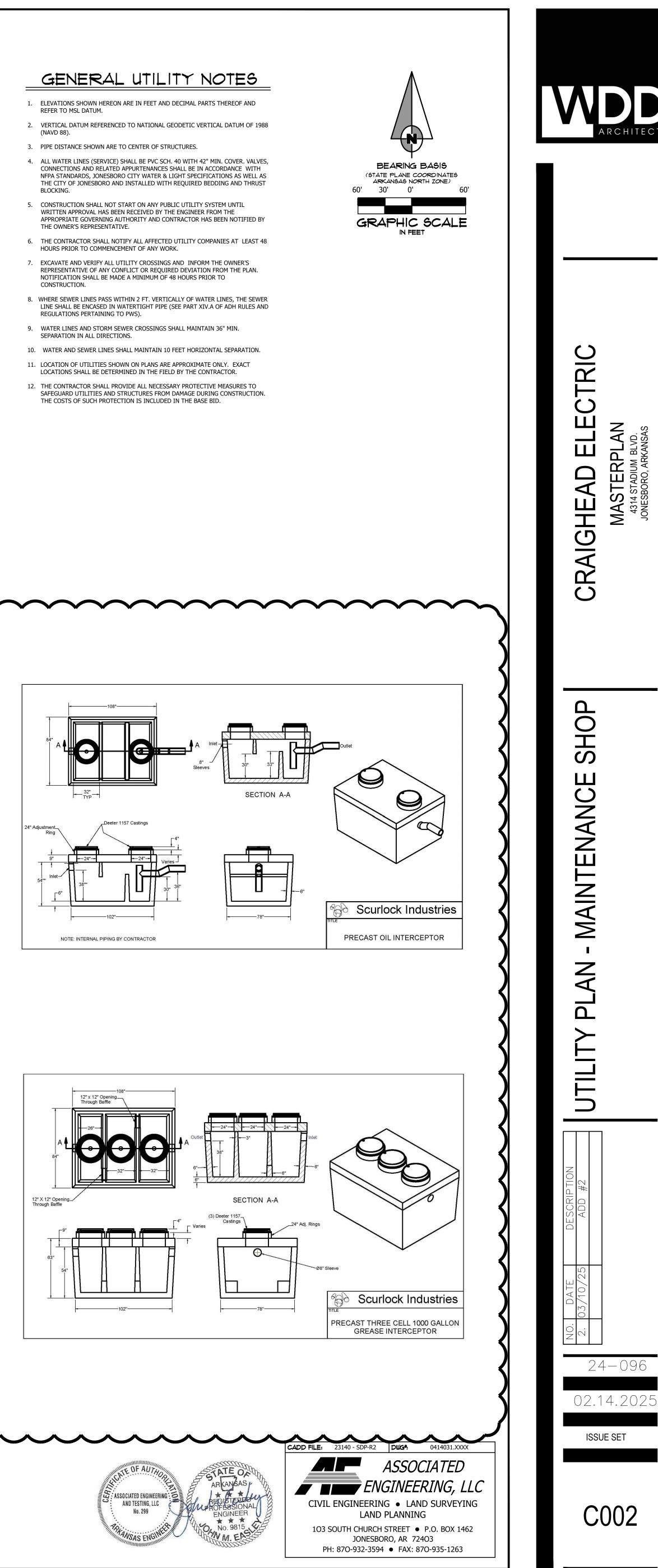


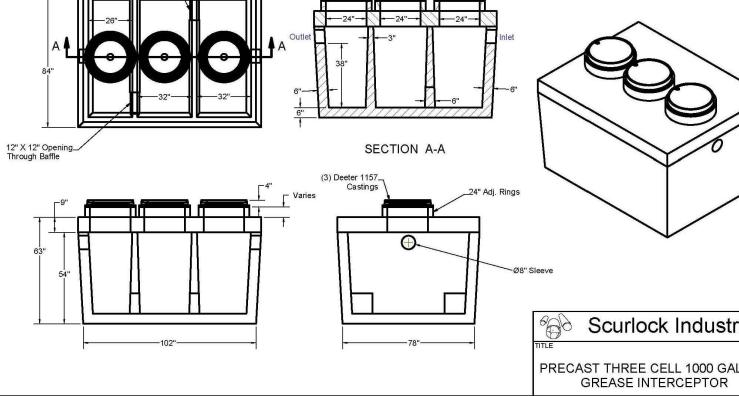




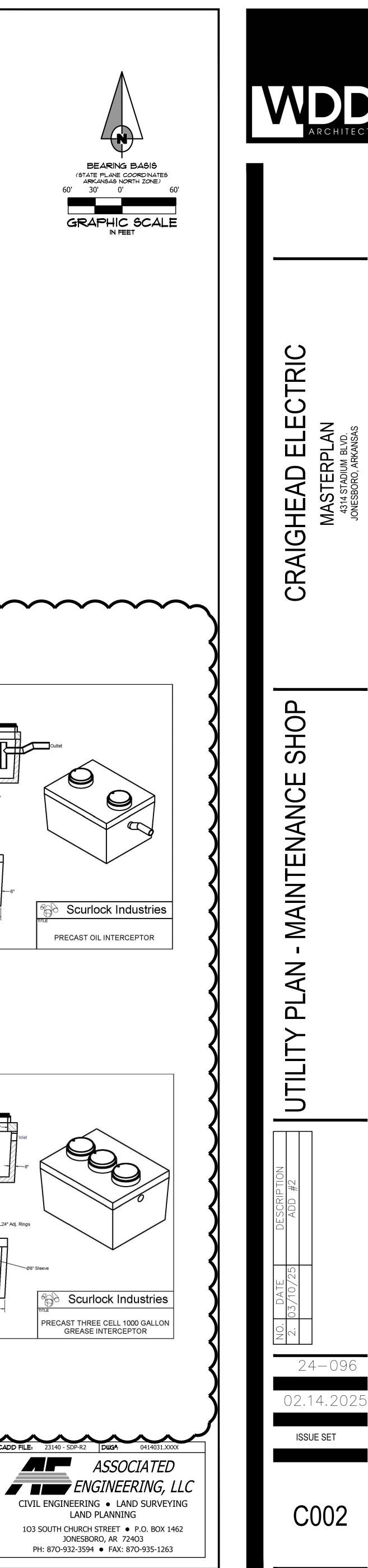
- (NAVD 88).

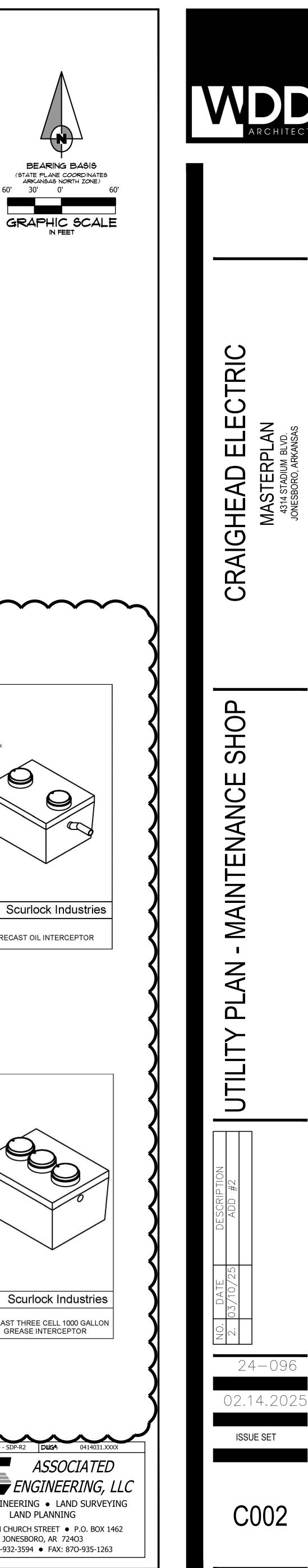
- WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE THE OWNER'S REPRESENTATIVE.
- HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
- NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- REGULATIONS PERTAINING TO PWS).
- SEPARATION IN ALL DIRECTIONS.
- LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- THE COSTS OF SUCH PROTECTION IS INCLUDED IN THE BASE BID.



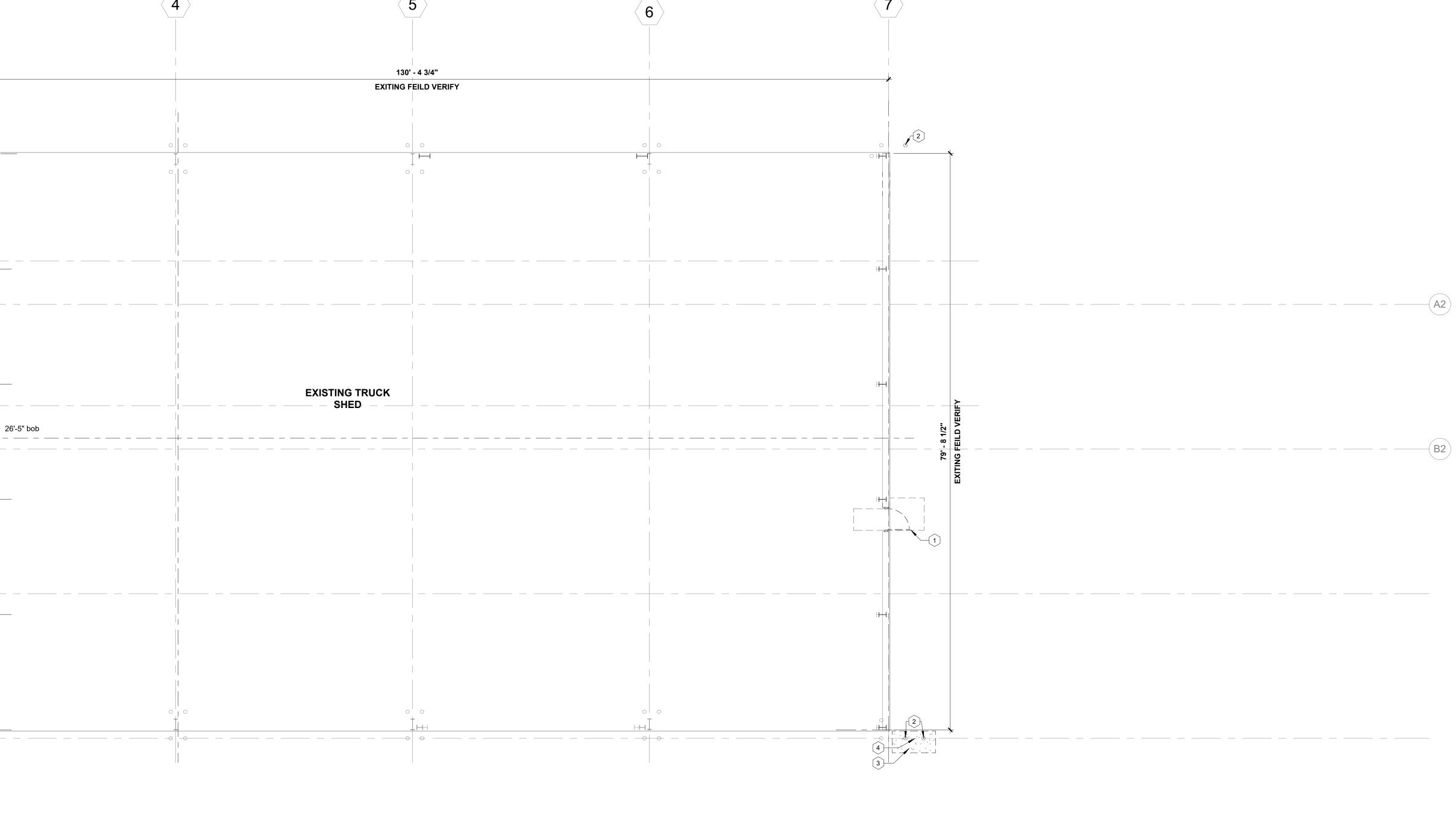






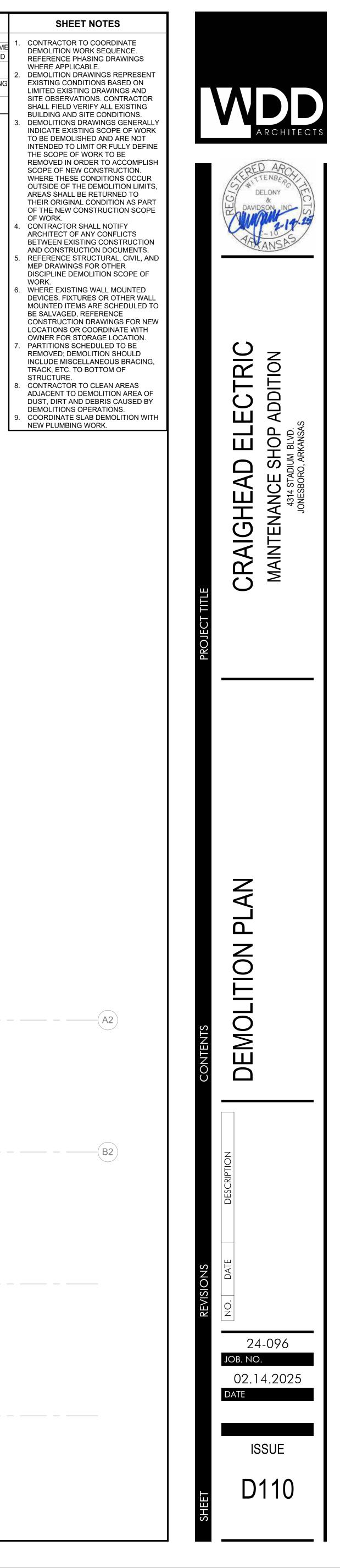


(A1)	
(B1)	
	26'-5" bot
(C1)	
(D1)	
	1 DEMOLITION PLA 1/8" = 1'-0"



LAN

		CODED NOTES - DEMO		SHEET NOTE
	NO.	NOTE		
	1	REMOVE EXISTING DOOR AND FRAME	1.	CONTRACTOR TO COORD DEMOLITION WORK SEQU
	2	EXISTING BOLLARD TO BE REMOVED		REFERENCE PHASING DR
	3	EXISTING CONC. PAD TO BE		WHERE APPLICABLE.
		REMOVED	2.	DEMOLITION DRAWINGS F
	4	EXISTING SPIGOT AND OTHER PIPING		EXISTING CONDITIONS BA
		TO BE REMOVED. REF PLUMB		LIMITED EXISTING DRAWI SITE OBSERVATIONS. CO
	5	EXISTING EQUIPMENT TO BE REMOVED. REF MEP		SHALL FIELD VERIFY ALL
l		REMOVED. REF MEP		BUILDING AND SITE COND
			3.	DEMOLITIONS DRAWINGS
				INDICATE EXISTING SCOP
				TO BE DEMOLISHED AND INTENDED TO LIMIT OR FU
				THE SCOPE OF WORK TO
				REMOVED IN ORDER TO A
				SCOPE OF NEW CONSTRU
				WHERE THESE CONDITIO
				OUTSIDE OF THE DEMOLI AREAS SHALL BE RETURN
				THEIR ORIGINAL CONDITION
				OF THE NEW CONSTRUCT
				OF WORK.
			4.	CONTRACTOR SHALL NOT
				ARCHITECT OF ANY CONF
				AND CONSTRUCTION DO
			5.	REFERENCE STRUCTURA
				MEP DRAWINGS FOR OTH
				DISCIPLINE DEMOLITION S
			e	WORK. WHERE EXISTING WALL M
			6.	DEVICES, FIXTURES OR O
				MOUNTED ITEMS ARE SCI
				BE SALVAGED, REFERENC
				CONSTRUCTION DRAWING
				LOCATIONS OR COORDIN
			7.	OWNER FOR STORAGE LC PARTITIONS SCHEDULED
			<b>1</b> ′ ·	
				REMOVED: DEMOLITION S
				REMOVED; DEMOLITION S
				INCLUDE MISCELLANEOU TRACK, ETC. TO BOTTOM
				INCLUDE MISCELLANEOU TRACK, ETC. TO BOTTOM STRUCTURE.
			8.	INCLUDE MISCELLANEOU TRACK, ETC. TO BOTTOM STRUCTURE.



1.	PRIOR TO BID, CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE REQUIREMENTS OF THESE NOTES AS WELL AS OTHER NOTES SHOWN ON THE CONTRACT DOCUMENTS.
2.	REFER TO SPECIFICATIONS. SPECIFICATIONS AND DRAWINGS ARE COMPLIMENTARY EXCEPT THAT, IN CASE OF CONFLICT, SPECIFICATIONS WILL GOVERN.
3.	BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS (SEE SCHEDULES), THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (MECHANICAL, STRUCTURAL, ETC.). IF SUBSTITUTE MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND HIS SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF SUBSTITUTE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.
4.	COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED FOR REVIEW. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER, WITHIN THE WARRANTY PERIOD, SHALL BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.
5.	CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES; OBTAIN ALL PERMITS, AND PAY ALL GOVERNMENTAL TAXES, FEES AND OTHER COSTS IN CONNECTION WITH WORK; FILE ALL NECESSARY PLANS; PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION AND OBTAIN REQUIRED CERTIFICATES OF INSPECTION.
6.	CONTRACTOR SHALL INCLUDE IN THE WORK ALL LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS, ETC. IN ORDER TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, RULES, AND REGULATIONS OF LOCAL, STATE AND FEDERAL GOVERNMENTS, WHETHER OR NOT SHOWN ON THE DRAWINGS.
7.	UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE COMPLETE TIE-IN WITH UTILITY LINES AT NO EXTRA COST TO THE OWNER. THE CONTRACTOR SHALL PAY ALL COSTS REQUIRED BY UTILITY COMPANY PERTAINING TO CONSTRUCTION AND TIE-IN. DEPOSITS REQUIRED FOR PERMANENT SERVICE SHALL BE PAID BY THE OWNER.
8.	ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY COMPONENT, DEVICE OR OPTION. THE EQUIPMENT LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE FINAL LOCATIONS SHALL BE ESTABLISHED IN THE FIELD TO FIT THE AVAILABLE SPACE.
9.	CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ELECTRICAL WORK WITH THAT OF OTHER TRADES. EXACT LOCATIONS OF ALL EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS.
10.	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.
11.	CONTRACTOR SHALL NOT SCALE DRAWINGS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY THE CONTRACT DOCUMENTS.
12.	UNLESS NOTED OTHERWISE, THE INDICATION AND/OR DESCRIPTION OF ANY ITEM IN THE DRAWINGS OR SPECIFICATIONS CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM.
13.	ROUGH-IN OR INSTALLATION OF OWNER FURNISHED EQUIPMENT SHALL NOT BEGIN UNTIL APPROVED EQUIPMENT DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT. SEE ARCHITECTURAL SPECIFICATIONS OR DRAWINGS FOR LIST OF OWNER FURNISHED EQUIPMENT (WHERE APPLICABLE).
14.	CONTRACTOR SHALL VERIFY ALL EQUIPMENT LOCATIONS, POWER REQUIREMENTS, ROUTING, CONDUCTOR SIZE, AND CONDUCTOR COUNT PRIOR TO ROUGH-IN.
15.	COORDINATE FINAL HEIGHTS AND LOCATIONS OF ALL DEVICES WITH MILLWORK, FURNITURE OR OTHER EQUIPMENT.
16.	ALL DEVICES LOCATED IN SAME GENERAL LOCATION ON THE SAME WALL SHALL BE GROUPED AND ALIGNED HORIZONTALLY OR VERTICALLY, AS NECESSARY.
17.	GROUPED SWITCHES SHALL BE GANG MOUNTED.
18.	COLOR AND TYPE OF DEVICE COVER PLATES TO BE SELECTED BY ARCHITECT.
19.	COORDINATE FRAMES AND ACCESSORIES FOR FIXTURE MOUNTING WITH ARCHITECTURAL FINISH SCHEDULE.
20.	REPLACE ALL ARCHITECTURAL FEATURES REMOVED OR DAMAGED DURING THE COURSE OF THE WORK.
21.	SEAL ALL ROOF AND WALL PENETRATIONS. ROOFING CONTRACTOR SHALL BE RESPONSIBLE FOF FLASHING AND SEALING OF ALL ROOF PENETRATIONS. COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BID FOR ALL REQUIRED FLASHINGS AT ROOF PENETRATIONS. MINIMUM HEIGHT OF FLASHING IS 8 IN. ABOVE ROOF.
22.	SPECIAL CARE SHALL BE TAKEN ON THE ROOF TO PREVENT DAMAGE. ANY DAMAGE SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER.
23.	SEAL ALL ELECTRICAL PENETRATIONS THROUGH RATED ASSEMBLIES, FIRE WALLS AND SMOKE WALLS. FIREPROOFING SEALANT SHALL BE UL APPROVED AND SHALL BE INSTALLED IN A MANNEF THAT MAINTAINS THE RATING OF THE ASSEMBLY BEING PENETRATED.

LIGHTING	<b>FIXTURE</b>	SCHEDULI

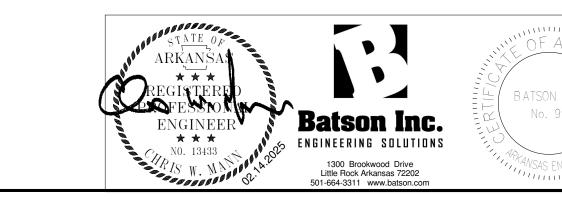
					Q'D LAMPS	-	
- ID~	MANUFACTURER	MODEL NO.	VOLTAGE		~_TYPE~~~	MOUNTING~~	
<b>A</b>	LA LIGHTING	HBN200-48-4-FRA-DRDM-UNV-3-840-YTCS10	120V	-	LED	PENDANT	PENDANT MOUNTED LED HIGH BAY FIXTURE
<u>}</u> В	NORA LIGHTING	NPDBLSW-E22/334-W	120V	-	LED	RECESSED	2X2 RECESSED LED FLAT PANEL; SET TO 30W LUMENS; VERIFY CCT SETTI ARCHITECT
<u>}</u> ВЕ		DELETED FROM PROJECT					
В1	NORA LIGHTING	NPDBLSW-E22/334-W-NPDBL-22RFK/W	120V	-	LED	RECESSED	2X2 RECESSED LED FLAT PANEL W/ DRYWALL RECESSED KIT; SET TO 3 LUMENS; VERIFY CCT SETTING W/ ARCHITECT
<u>}</u> В2		DELETED FROM PROJECT					
Yun	LA LIGHTING	CIT100-4-4L-DRFA-WL-SSL-DRDM-UNV-1-840	120	min	LED	SURFACE/WALL	4FT VAPOR-TIGHT STRIP FIXTURE 4000 LUMEN
CE	LA LIGHTING	CIT100-4-4L-DRFA-WL-SSL-BPLSL1.5-DRDM-UNV-1-840	120V	-	LED	SURFACE/WALL	4FT VAPOR-TIGHT STRIP FIXTURE W/ EMERGENCY BATTERY BACKU
C1	LA LIGHTING	CIT100-6-4L-DRFA-WL-SSL-DRDM-UNV-1-840	120V	-	LED	SURFACE/WALL	4FT VAPOR-TIGHT STRIP FIXTURE; 6000 LUMEN
D	KURTZON LIGHTING	WL-SEG-1540-3HI-840-FP-UNV-DIM1-MOUNTING	120V	-	LED	PENDANT	PENDANT MOUNTED LED WET LOCATION VAPOR-TIGHT FIXTURE
F	ALPHABET LIGHTING	NU2RD-SW-10LM-40K-80-55D-DL-FINISH-RET-UNV-DIM10	120V	-	LED	RECESSED	2" ROUND RECESSED LED ACCENT LIGHT
G	LA LIGHTING	STW100-6-4L-FRWA-DRDM-UNV-1-840-VHOOK	120V	-	LED	PENDANT	4FT LENSED LED STRIP FIXTURE
GE	LA LIGHTING	STW100-6-4L-FRWA-BPLSL1.5-DRDM-UNV-1-840-VHOOK	120V	-	LED	PENDANT	4FT LENSED LED STRIP FIXTURE W/ EMERGENCY BATTERY BACKU
G1	LA LIGHTING	STW100-4.5-3L-FRWA-DRDM-UNV-1-840-VHOOK	120V	-	LED	PENDANT	3FT LENSED LED STRIP FIXTURE
н	ALPHABET LIGHTING	NU4RD-SW-20LM-40-80-65D-SBL-FINISH-FINISH-RET-UNV-DIM10	120V	-	LED	RECESSED	4" ROUND RECESSED LED CAN LIGHT
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~₩U4RÐ~S₩~20ĿM~40~80~65D~SBL~FINISH~RIMISH~RET~UNV~DIMIO~EMXIFS~~	120V	-	LED	RECESSED	4" ROUND RECESSED LED CAN LIGHT W/ EMERGENCY BATTERY BACKU INTEGRAL TEST SWITCH
ر ک	AMERICAN LINEAR LIGHTING	2W-4-VLD-40-UNV-FINISH	< 120V	-	LED	WALL	4FT DIRECT WALL-MOUNTED LED LIGHT
) J1	AMERICAN LINEAR LIGHTING	2W-5-VLD-40-UNV-FINISH	} 120V	-	LED	WALL	5FT DIRECT WALL-MOUNTED LED LIGHT
J2	AMERICAN LINEAR LIGHTING	2W-6-VLD-40-UNV-FINISH	) 120V	-	LED	WALL	6FT DIRECT WALL-MOUNTED LED LIGHT
33	AMERICAN LINEAR LIGHTING	2W-7-VLD-40-UNV-FINISH	2 120V	-	LED	WALL	7FT DIRECT WALL-MOUNTED LED LIGHT
Yur	QTLLIGHTING	QLINK-SST-DRY-40-DF-FINISH-12	ر م 120V	-	LED	UNDERCABINET	12" LINE VOLTAGE LED UNDERCABINET FIXTURE
V1	QTL LIGHTING	Q-LINK-SST-DRY-40-DF-FINISH-24	120V	-	LED	UNDERCABINET	24" LINE VOLTAGE LED UNDERCABINET FIXTURE
w	EVENLITE	TEBL6-FINISH-SD	120V	-	LED	WALL	LED HIGH OUTPUT EMERGENCY EGRESS LIGHTING UNIT
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~ <u>1204</u> ~~~			WAEL ~~~~	LED HIGH OUTPUT EMERGENCY EGRESS LIGHTING UNIT W/ WET LOCA
x ک	EVENLITE	TCXCOM-COLOR-U-FINISH-SD	120V	-	LED	SURFACE UNIVERSAL	THERMOPLASTIC COMBINATION EXIT/EMERGENCY LIGHT - SINGLE FAI CHEVRONS AS SHOWN ON PLANS
XWT	EVENLITE	TWE'COM COLOR-1-FINISH	11201	m	Mitton	UNIVERSAL	WET LOCATION RATED COMBINATION EXIT/EMEBGENCY LIGHT - SINGLE CHEVRONS AS SHOWN ON PLANS
XS	EVENLITE	TDCOM-COLOR-U-FINISH	120V	-	LED	UNIVERSAL	COMBINATION EXIT/EMERGENCY LIGHT - SINGLE FACE - CHEVRONS AS S ON PLANS
	EVENLITE		~~120X~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		WALE	EXTERIOR_EGRESS-EMERGENCY-LIGHT
AA	TECHBRITE	MWP07-135-27V-DDK-FINISH	120V	-	LED	WALL	LUMEN SELECTABLE EXTERIOR WALL-MOUNTED AREA LIGHT; SET TO 81W
ВВ	TECHBRITE	MWP07-70-27V-DDK-FINISH	120V	-	LED	WALL	EXTERIOR WALL-MOUNTED AREA LIGHT - SMALL HOUSING; SET TO 28W
BBE	TECHBRITE	MWP07-70-27V-DDK-FINISH-B	120V	-	LED	WALL	EXTERIOR WALL-MOUNTED AREA LIGHT - SMALL HOUSING W/ EMERGE BATTERY BACKUP; SET TO 28W (40%)
Yuu	mmm		m	hu	mm	hunn	· ····································

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Ø	2X4 LAY-IN OR SURFACE-MOUNTED FIXTURE	⊕	QUADRAPLEX RECEPTACLE	FK	FIRE ALARM HORN / STROBE DEVICE
Ø	2X4 LAY-IN OR SURFACE-MOUNTED FIXTURE; SHADING INDICATES EMERGENCY FIXTURE	ф	SPECIALTY RECEPTACLE	SK	FIRE ALARM SPEAKER / STROBE DEVICE
Ø	2X2 LAY-IN OR SURFACE-MOUNTED FIXTURE	O	FLOOR RECEPTACLE	D3	FIRE ALARM STROBE DEVICE
Ø	2X2 LAY-IN OR SURFACE-MOUNTED FIXTURE; SHADING INDICATES EMERGENCY FIXTURE	⊙▼	FLOOR BOX	Ē	CEILING-MOUNTED FIRE ALARM STROBE DEVICE
	SURFACE, STRIP OR PENDANT-MOUNTED FIXTURE	the	HOMERUN: HOT, NEUTRAL, GROUND	Б <sup>н</sup>	CEILING-MOUNTED FIRE ALARM HORN / STROBE DEVICE
	WALL-MOUNTED SURFACE OR STRIP FIXTURE	Б	DISCONNECT SWITCH	© <sub>s</sub>	CEILING-MOUNTED FIRE ALARM SPEAKER / STROBE DEV
- <b>\$</b> -	SURFACE-MOUNTED OR RECESSED CAN LIGHT FIXTURE	۲	FUSED DISCONNECT SWITCH	Z <sub>C,M,I</sub>	ZAM FIRE ALARM DEVICE: CONTROL, MONITOR, IAM
Q	WALL-MOUNTED SURFACE FIXTURE	⊠ <sub>1</sub>	COMBINATION STARTER / FUSED SWITCH	ML	MAGNETIC LOCK
<b> Ø</b>	CEILING-MOUNTED EXIT LIGHT; SHADING INDICATES FACES CHEVRONS AS SHOWN ON PLANS		MOTOR STARTER	TSFS	FIRE ALARM TAMPER / FLOW SWITCHES
×	WALL-MOUNTED EXIT LIGHT; SHADING INDICATES FACES CHEVRONS AS SHOWN ON PLANS	J	JUNCTION BOX (FLUSH MOUNTED)		SECURITY CAMERA
S	SINGLE-POLE SWITCH	⊡	PUSH-BUTTON	CR	CARD READER (BOX ONLY)
S₃	THREE-WAY SWITCH	▼	TELEPHONE OUTLET	К	KEYPAD (BOX ONLY)
S <sub>4</sub>	FOUR-WAY SWITCH	w ▼	WALL-MOUNTED TELEPHONE OUTLET	P	PAGING SPEAKER
SD	DIMMER SWITCH	$\bigtriangledown$	DATA OUTLET	V	PAGING SPEAKER VOLUME CONTROL
So	WALL-MOUNTED OCCUPANCY SENSOR SWITCH	V	COMBINATION TELEPHONE / DATA OUTLET	a	INDICATES ABOVE COUNTER
SOD	WALL-MOUNTED OCCUPANCY SENSOR DIMMING SWITCH		HDMI OUTLET	GFI	INDICATES GROUND FAULT PROTECTION
S <sub>LV</sub>	LOW VOLTAGE SWITCH	AP	WIRELESS ACCESS POINT	WR	INDICATES WEATHER RESISTANT
S <sub>M</sub>	MANUAL MOTOR STARTER SWITCH	6	SMOKE DETECTOR	TR	INDICATES TAMPER RESISTANT
69	CEILING-MOUNTED LOW VOLTAGE OCCUPANCY SENSOR	S	DUCT SMOKE DETECTOR	AFF	INDICATES ABOVE FINISH FLOOR
S 120V/277V	CEILING-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR	Θ	HEAT DETECTOR	AFG	INDICATES ABOVE FINISH GRADE
PP	OCCUPANCY SENSOR POWER PACK	0	CARBON MONOXIDE DETECTOR	NS	INDICATES NON-SWITCHED
Φ	SIMPLEX RECEPTACLE	0	DOOR HOLDER	ER	INDICATES EXISTING RELOCATED
Ф	DUPLEX RECEPTACLE	F	FIRE ALARM PULL STATION	ETR	INDICATES EXISTING TO REMAIN

\*\*\* NOTE: NOT ALL SYMBOLS SHOWN IN LEGEND ARE APPLICABLE TO THIS PROJECT. \*\*

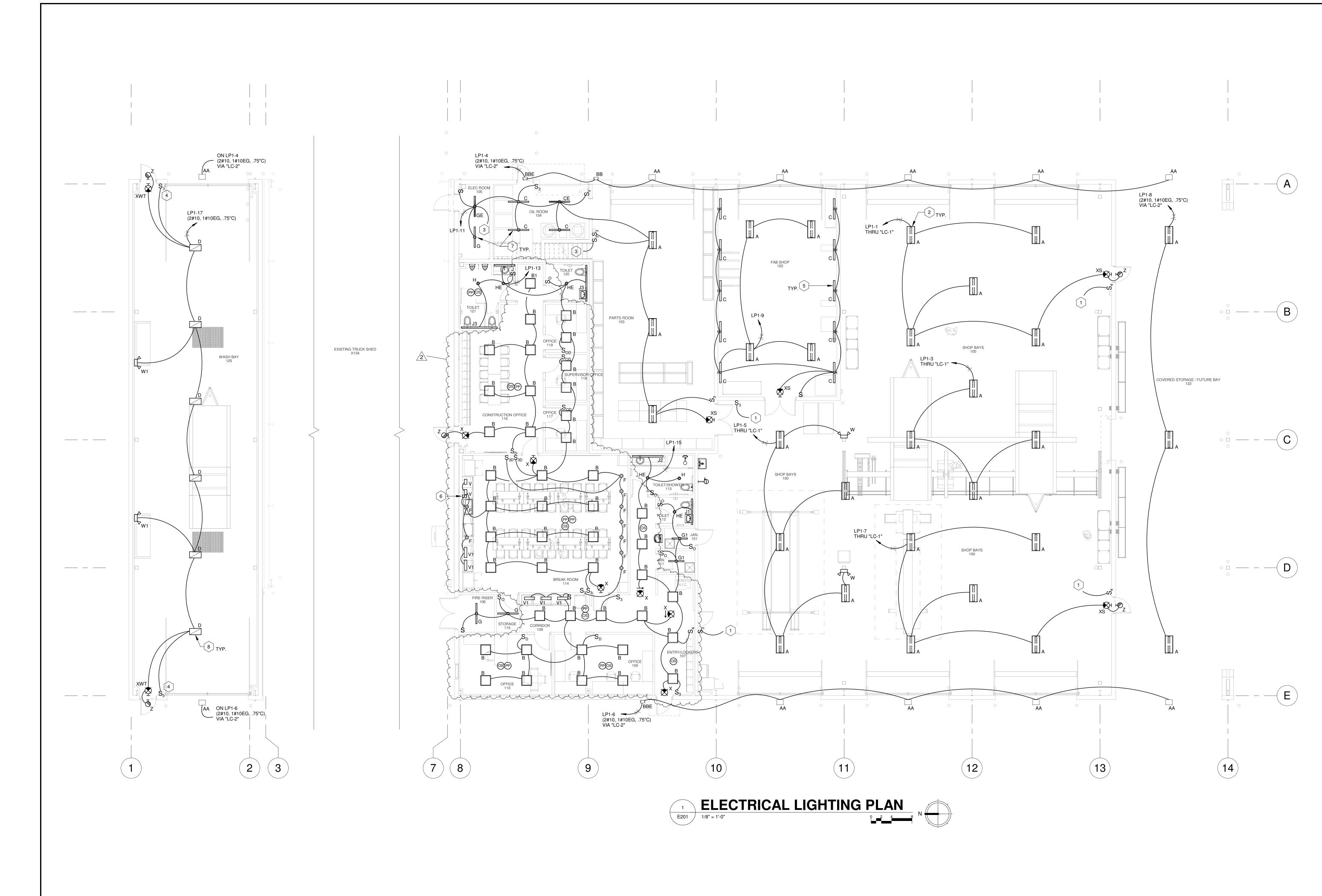
## ELECTRICAL DRAWING INDEX

E001	ELECTRICAL NOTES, LEGEND, & INDEX
E201	ELECTRICAL LIGHTING PLAN
E301	ELECTRICAL POWER & SYSTEMS PLAN
E302	ELECTRICAL MEZZANINE AND ENLARGED PLANS
E401	HVAC EQUIPMENT POWER PLAN
E501	ELECTRICAL ONE-LINE DIAGRAM AND PANEL SCHEDULES
E601	ELECTRICAL PANEL SCHEDULES
E701	ELECTRICAL DETAILS







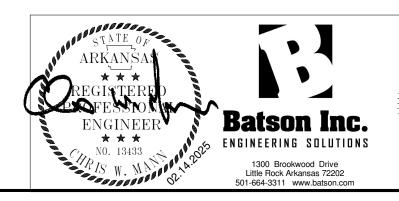


# **GENERAL ELECTRICAL NOTES**

- 1. ALL EXIT LIGHTS AND BATTERY BACKUP FOR EMERGENCY FIXTURES SHALL BE CIRCUITED WITH AN UN-SWITCHED HOT.
- 2. COORDINATE FINAL LOCATIONS AND MOUNTING HEIGHTS OF FIXTURES WITH ARCHITECT PRIOR TO BEGINNING ROUGH-IN.
- 3. ALL CONDUIT, WIRING AND ELECTRICAL CONNECTIONS IN WASH BAY SHALL BE WATERTIGHT.
- 4. ALL CONDUIT INSTALLED ACROSS EXISTING TRUCK SHED SHALL BE ROUTED AS HIGH AS POSSIBLE. COORDINATE ROUTING WITH EXISTING STRUCTURE AND UTILITIES.

# KEYED ELECTRICAL NOTES

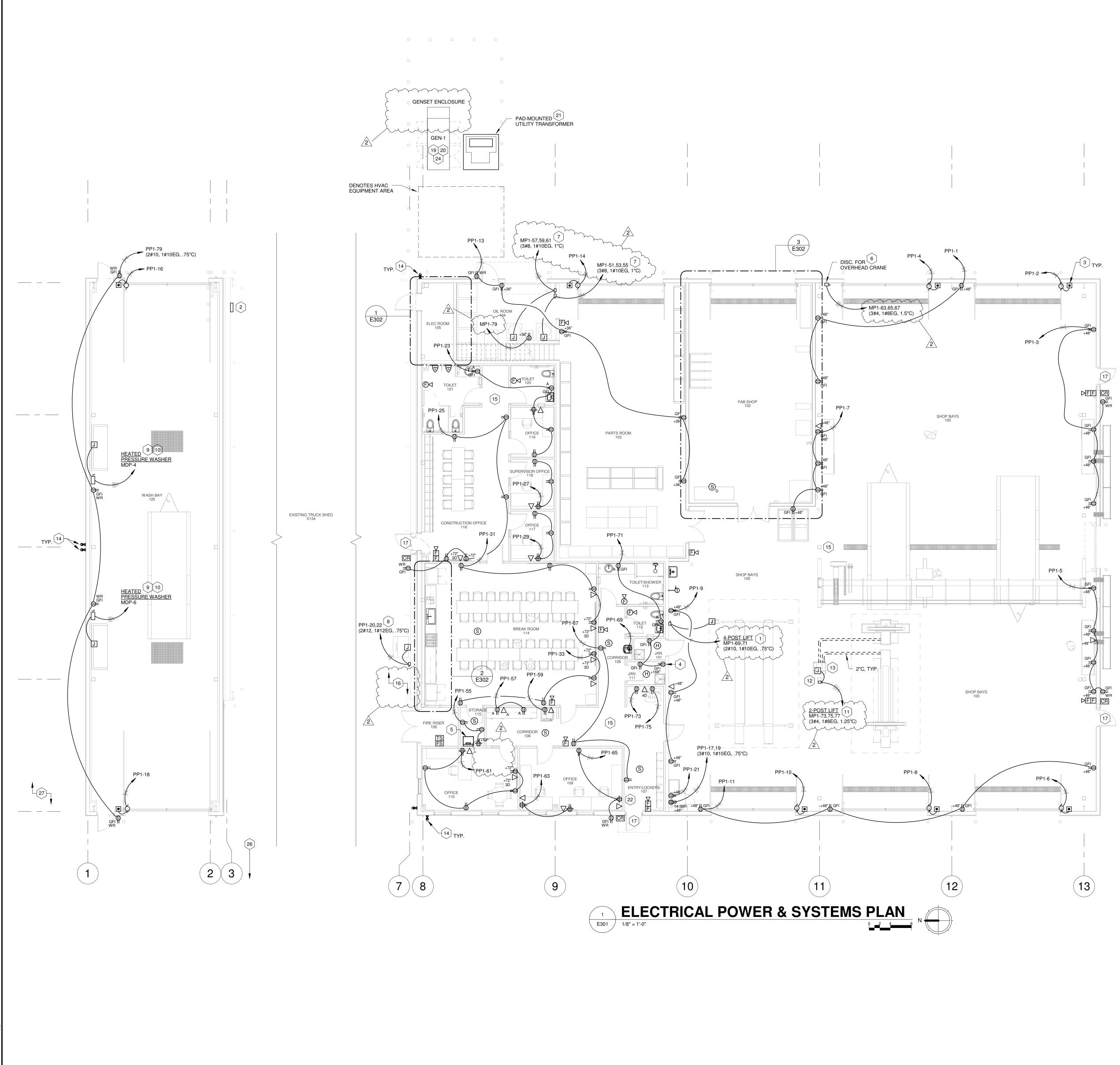
- TO LIGHTING CONTACTOR "LC-1" FOR SWITCHING OF SHOP BAY FIXTURES.
- 2 MOUNT TYPE "A" LIGHTING FIXTURES AT 28'-0" ABOVE FINISH FLOOR TO BOTTOM OF FIXTURE. TYPICAL ALL FIXTURES IN SHOP BAY, FAB SHOP, AND PARTS ROOM.
- 3 UP TO MEZZANINE STRIP FIXTURES. SEE SHEET E302 FOR CONTINUATION.
- 4 INSTALL SWITCHES THIS ROOM WITH FLIP-COVER TYPE COVER PLATES.
- 5 WALL MOUNT FIXTURES AT 9'-0" ABOVE FINISH FLOOR TO CENTERLINE OF FIXTURE.
- 6 GANG DISPOSAL AND UNDERCABINET LIGHTING SWITCH TOGETHER. UNDERCABINET LIGHTING SWITCH SHALL BE INSTALLED CLOSEST TO SINK.
- 7 MOUNT FIXTURES AT 9'-0" ABOVE FINISH FLOOR TO BOTTOM OF FIXTURES.
- 8 MOUNT FIXTURES AT 20'-0" ABOVE FINISH FLOOR TO BOTTOM OF FIXTURES.



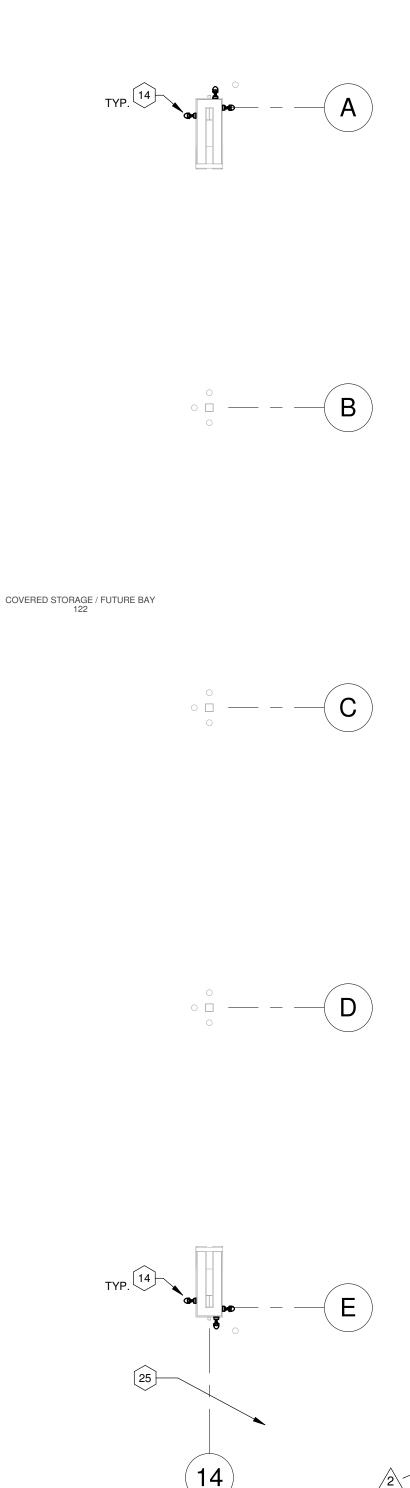








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# GENERAL ELECTRICAL NOTES

- 1. VERIFY EXACT LOCATIONS OF ALL EQUIPMENT PRIOR TO BEGINNING ROUGH-IN AND PLACEMENT OF WIRING DEVICES, DISCONNECTS, ETC.
- 2. ALL CONDUIT, WIRING AND ELECTRICAL CONNECTIONS IN WASH BAY SHALL BE WATERTIGHT.
- ALL CONDUIT INSTALLED ACROSS EXISTING TRUCK SHED SHALL BE ROUTED AS HIGH AS POSSIBLE. COORDINATE ROUTING WITH EXISTING STRUCTURE AND UTILITIES.
- 4. ALL WIRING DEVICES NOTED AS 'ABOVE COUNTER' WITH AN 'A' DESIGNATION AND ARE AT LOCATIONS WITH A BACKSPLASH SHALL BE INSTALLED AT 48" ABOVE FINISH FLOOR TO CENTERLINE OF THE BACK
- BOX.
  5. ALL WIRING DEVICES INSTALLED IN SHOP BAYS, PARTS & OIL ROOMS AND FAB SHOP SHALL BE INSTALLED WITH STAINLESS STEEL COVER PLATES.

# KEYED ELECTRICAL NOTES

- 1 PROVIDE AND INSTALL NEMA 1 NON-FUSIBLE DISCONNECT RATED 240V/30A/3P. APPROXIMATE LOCATION OF EXISTING TRUCK SHED PANELBOARD. RE-FEED PANELBOARD FROM NEW TRANSFORMER "TTS". REFER TO ONE-LINE DIAGRAM. 3 PROVIDE AND INSTALL ALL CONDUIT AND WIRING BETWEEN DOOR OPERATOR AND DOOR CONTROLLER. VERIFY EXACT MOUNTING LOCATION OF DOOR OPERATOR WITH DOOR INSTALLER PRIOR TO BEGINNING ROUGH-IN. 4 OUTLET FOR RECIRCULATION PUMP. COORDINATE EXACT OUTLET HEIGHT WITH PLUMBING CONTRACTOR. MOUNT OUTLET WITHIN 6'-0" OF PUMP. 5 PROVIDE AND INSTALL WALL-MOUNTED 12U NETWORK RACK. 6 PROVIDE AND INSTALL NEMA 1 NON-FUSIBLE DISCONNECT RATED 240V/100A/3P. STUB UP CONDUIT AND WIRING UP WALL NEAR OVERHEAD CRANE BUS BARS. COORDINATE WITH OVERHEAD CRANE INSTALLER FOR EXACT STUB LOCATION AND AMOUNT OF EXTRA SLACK NEEDED TO MAKE CONNECTIONS. OVERHEAD CRANE INSTALLER TO MAKE CONNECTIONS TO CRANE BUS BARS. 7 PROVIDE AND INSTALL NEMA 1 NON-FUSIBLE DISCONNECT RATED 240V/60A/3P. 8 PROVIDE AND INSTALL NEMA 3R NON-FUSIBLE DISCONNECT RATED 240V/30A/2P. 9 PROVIDE AND INSTALL NEMA 4X NON-FUSIBLE DISCONNECT RATED 240V/200A/3P. 10 REFER TO ONE-LINE DIAGRAM FOR FEEDER REQUIREMENTS. PROVIDE AND INSTALL NEMA 1 NON-FUSIBLE DISCONNECT RATED 240V/100A/3P. 12 MOUNT DISCONNECT TO COLUMN AND ROUTE WIRING UNDERGROUND OVER TO 2-POST LIFT POWER UNIT. INSTALL SEAL-OFFS IN CONDUIT AS REQUIRED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. (13) COORDINATE WITH OWNER'S EQUIPMENT INSTALLER TO PROVIDE AND INSTALL 2"C IN SLAB FROM LIFT POWER UNIT TO LIFT. INSTALL SEAL-OFFS IN CONDUIT ENTERING POWER UNIT AS REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS. VERIFY EXACT CONDUIT ROUTING AND CONNECTION LOCATIONS PRIOR TO BEGINNING ROUGH-IN. 14 SECURITY CAMERA ROUGH-IN: PROVIDE AND INSTALL 2-GANG BACK BOX WITH (2) CAT 6 CABLES IN EACH BOX. VERIFY MOUNTING HEIGHTS BOX WITH (2) CAT 6 CABLES IN EACH BOX. VERIFY MOUNTING HEIGHTS OF ALL CAMERAS PRIOR TO BEGINNING ROUGH-IN. ROUTE CAT 6 CABLES BACK TO STORAGE 115. PROVIDE AND INSTALL (2) CAT 6 CABLES AT THIS APPROXIMATE LOCATION FOR WIRELESS ACCESS POINT. 16 PROVIDE AND INSTALL (1) 4"C FROM STORAGE ROOM 115 OVERHEAD TO THIS APPROXIMATE LOCATION FOR FIBER OPTIC CABLING (BY OWNER). VERIFY EXACT STUB LOCATION AND HEIGHT WITH OWNER PRIOR TO BEGINNING ROUGH-IN. SECURE DOOR REQUIRING ACCESS CONTROLS. REFER TO TYPICAL 18 NOT USED. 19 DIESEL GENERATOR (OWNER-FURNISHED, OWNER-INSTALLED). INSTALL EMPTY CONDUIT STUB-UPS BETWEEN GENERATOR AND TRANSFER SWITCH. REFER TO ONE-LINE DIAGRAM FOR REQUIREMENTS. PROVIDE (2) 1"C BETWEEN GENERATOR PAD AND ATS FOR CONTROLS. VERIFY STUB-UP LOCATION AT GENERATOR PAD. INSTALL PULL STRINGS IN EMPTY CONDUITS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING TRANSFORMER PAD AND ALL SECONDARY CONDUIT AND WIRING. COORDINATE PAD REQUIREMENTS AND FINAL PLACEMENT OF TRANSFORMER WITH CECC. APPROXIMATE LOCATION OF FIRE ALARM ANNUNCIATOR PANEL. CONFIRM LOCATION WITH OWNER PRIOR TO BEGINNING ROUGH-IN. 23 NOT USED.
- (2) 1"C STUB-UPS BETWEEN GENERATOR AND PANEL "EQ1" FOR BATTERY CHARGER AND BLOCK HEATER CIRCUITS. VERIFY STUB UP LOCATION AND INSTALL PULL STRINGS IN EMPTY CONDUITS.
   PROVIDE AND INSTALL (2) 1"C (POWER/COMMUNICATIONS) FOR SOUTH GATE ENTRY. REFER TO ARCHITECTURAL SITE PLAN FOR GATE LOCATION. CONNECT GATE OPERATOR TO "PP1-26" AND ROUTE (2#6, 1 #6EG, 1"C). STUB UP COMMUNICATIONS CONDUIT IN STORAGE 115.
   PROVIDE AND INSTALL (1) 1.25"C (POWER) AND (1) 1"C (COMMUNICATIONS) FOR WEST GATE ENTRY. REFER TO

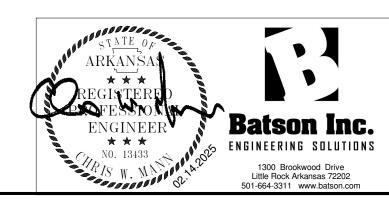
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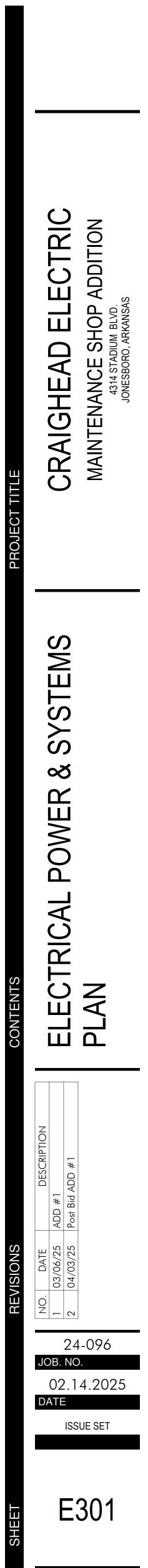
(28) NOT USED.

 (COMMUNICATIONS) FOR WEST GATE ENTRY. REFER TO ARCHITECTURAL SITE PLAN FOR GATE LOCATION. CONNECT GATE OPERATOR TO "PP1-28" AND ROUTE (2#4, 1#4EG, 1.25"C). STUB UP COMMUNICATIONS CONDUIT IN STORAGE 115.
 (27) GRINDER STATION. REFER TO CIVIL PLAN FOR EXACT LOCATION. CONNECT GRINDER STATION CONTROL PANEL TO "MP1-50,52". INSTALL SEAL-OFFS AT GRINDER STATION CONTROL PANEL. ROUTE (3#10, 1#10EG, 1"C) FROM PANELBOARD TO CONTROL PANEL. VERIFY EXACT LOCATION OF CONTROL PANEL WITH INSTALLING

CONTRACTOR.













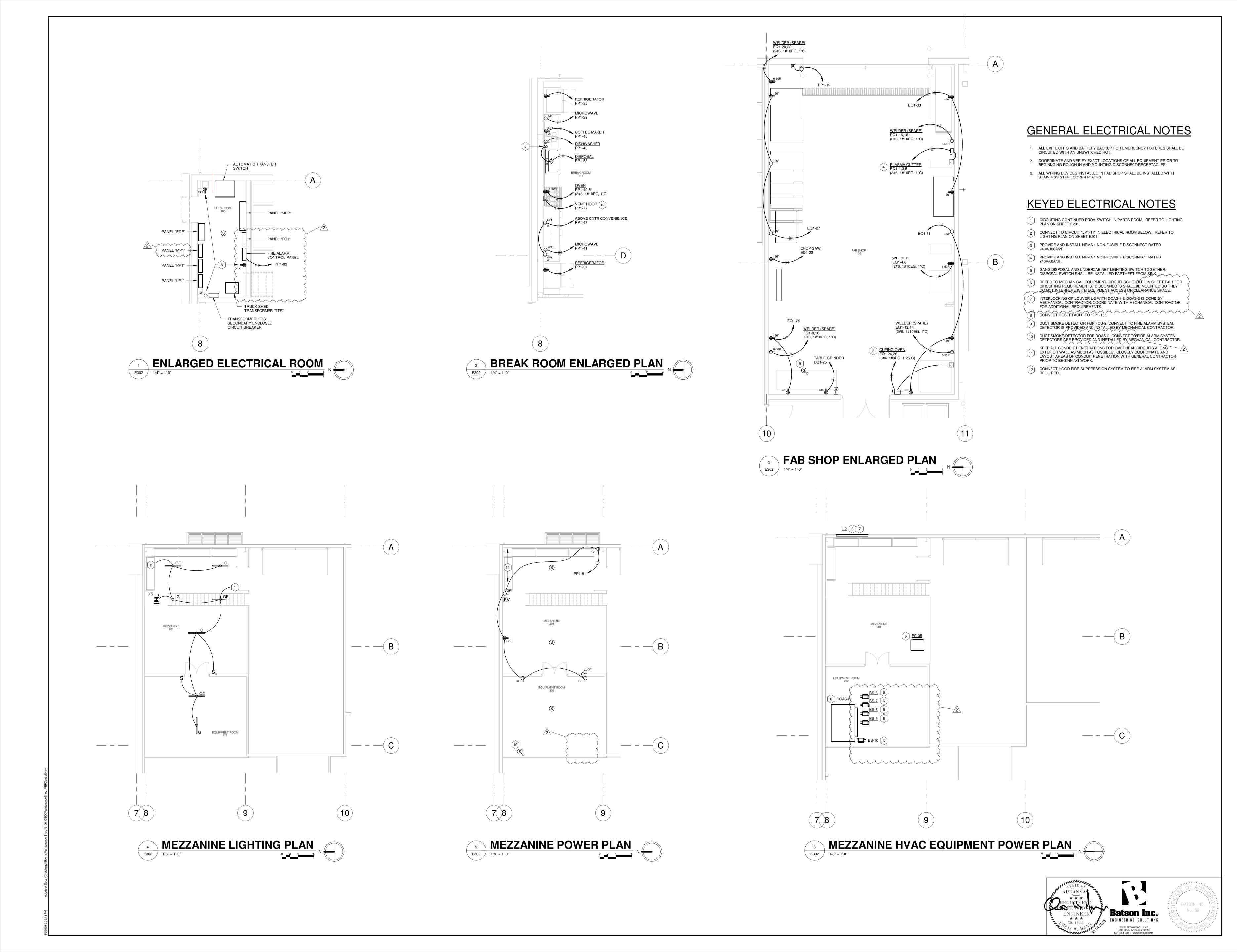






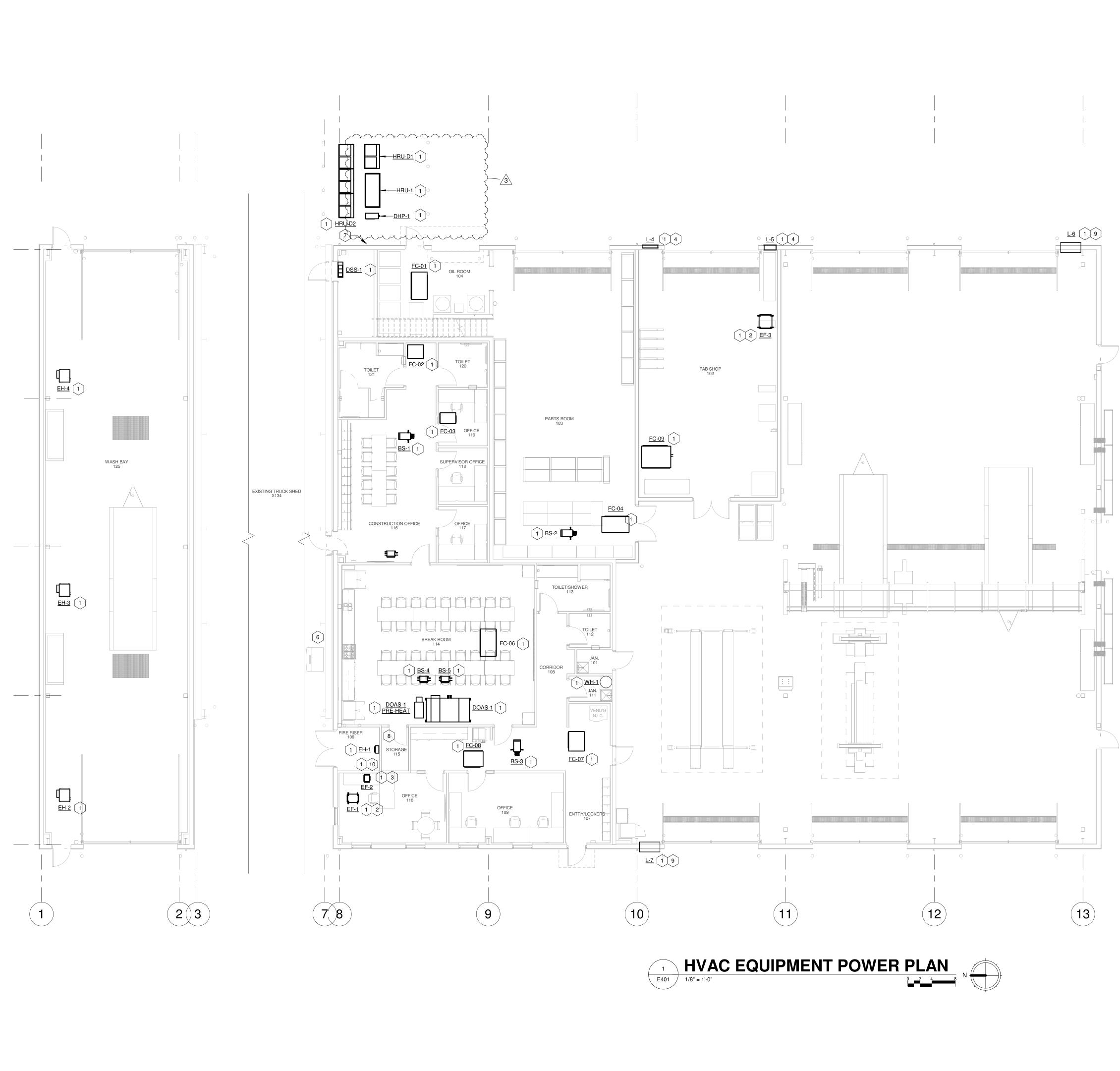












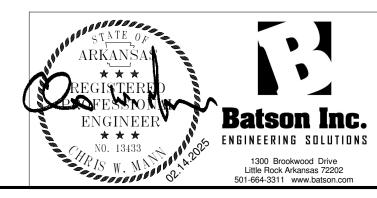
ENT CIRCUIT SCHEDULE	
T, WIRE/CONDUIT	DISC.
56 } 2#12, 1#12EG, .75"C	NF 240V/30A/2I
50 2#8, 1#10EG; 75"C	NF 240 V/60 A/21
	INE DIAGRAM
	INE DIAGRAM
	INE DIAGRAM
) SEE ONE-LI	INE DIAGRAM
2 SEE ONE-LI	INE DIAGRAM
	INE DIAGRAM
DELETED FROM PROJECT	
DELETED FROM PROJECT	
3 ~~~~2#12,\1#12EG,75"C~~~	, DOUBLE POLE, SINGLE 240/30A TOGGL
2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
1 2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE
9 2#12, 1#12EG, .75"C	240/30A TOGGL DOUBLE POLE, SINGLE 240/30A TOGGL
23 2#12, 1#12EG, .75"C	240/30A TOGGL DOUBLE POLE, SINGLE
27 ) 2#12, 1#12EG, .75"C	240/30A TOGGL DOUBLE POLE, SINGLE
2#12, 1#12EG, .75°C	240/30A TOGGL DOUBLE POLE, SINGLE
2#12, 1#12EG, .75 C	240/30A TOGGL DOUBLE POLE, SINGLE
	240/30A TOGGL DOUBLE POLE, SINGLE
	240/30A TOGGL NEMA 4X STAINLES
11 2#10, 1#10EG, .75"C	240V/30A/2P NEMA 4X STAINLES
2#10, 1#10EG, .75"C	240V/30A/2P
2#10, 1#10EG, .75"C	240V/30A/2P
6 3#10, 1#10EG, .75"C	NF 240V/30A/3
0 2#12, 1#12EG, .75"C	240/30A TOGGL DOUBLE POLE, SINGLE
0 2#12, 1#12EG, .75"C	240/30A TOGGL DOUBLE POLE, SINGLE
0 2#12, 1#12EG, .75"C	240/30A TOGGL DOUBLE POLE, SINGLE
4 ) 2#12, 1#12EG, .75"C	240/30A TOGGL
4 2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
8 2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
8 2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
8 2#12, 1#12EG, .75"C	DOUBLE POLE, SINGLE 240/30A TOGGL
8 2#12, 1#12EG; .75"C	-DOUBLE POLE, SINGLE 240/30A TOGGL
DELETED FROM PROJECT	
26 <b>2#12,1#12EG,.75"C</b>	
2#12, 1#12EG, .75"C	NEMA 1 TOGGL
2#12, 1#12EG, .75"C	NEMA 1 TOGGL
2#10, 1#10EG, .75"C	NEMA 1 TOGGI
DELETED FROM PROJECT	· ' ייזאר צ4∪¥73U¥72 
2 2#12, 1#12EGr. 75"C	M M M M M
2#12, 1#12EG, .75"C	
3#12, 1#12EG, .75"C	NF 240V/30A/3
NON-FUSED, RT = NEMA 3R ENCLOSURE	
R TO INSTALLATION. BETWEEN INDOOR AND OUTDOOR UNIT P	PER MANUFACTURER
	ED WITH A HANDLE PAD
IAN	E BETWEEN INDOOR AND OUTDOOR UNIT F IAN #12AWG. IGLE-THROW SWITCHES SHALL BE PROVIDE

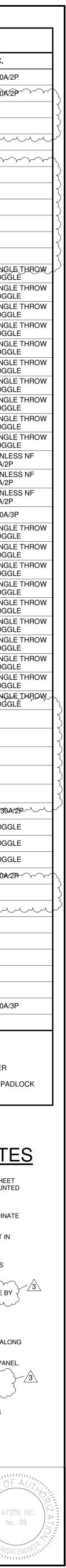
# **GENERAL ELECTRICAL NOTES**

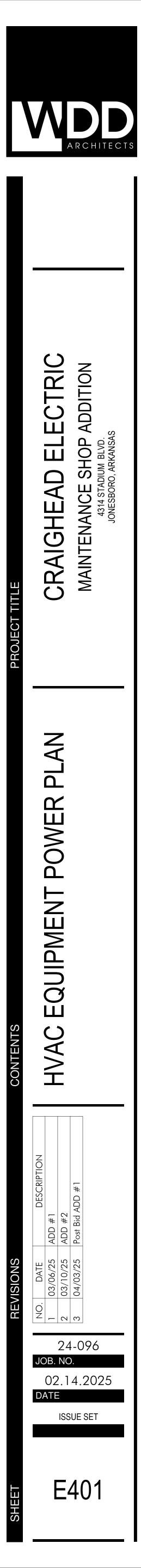
- 1. VERIFY EXACT LOCATIONS OF ALL EQUIPMENT PRIOR TO BEGINNING ROUGH-IN AND PLACEMENT OF WIRING DEVICES, DISCONNECTS, ETC.
- 2. ALL CONDUIT, WIRING AND ELECTRICAL CONNECTIONS IN WASH BAY SHALL BE WATERTIGHT.
- 3. ALL CONDUIT INSTALLED ACROSS EXISTING TRUCK SHED SHALL BE ROUTED AS HIGH AS POSSIBLE. COORDINATE ROUTING WITH EXISTING STRUCTURE AND UTILITIES.

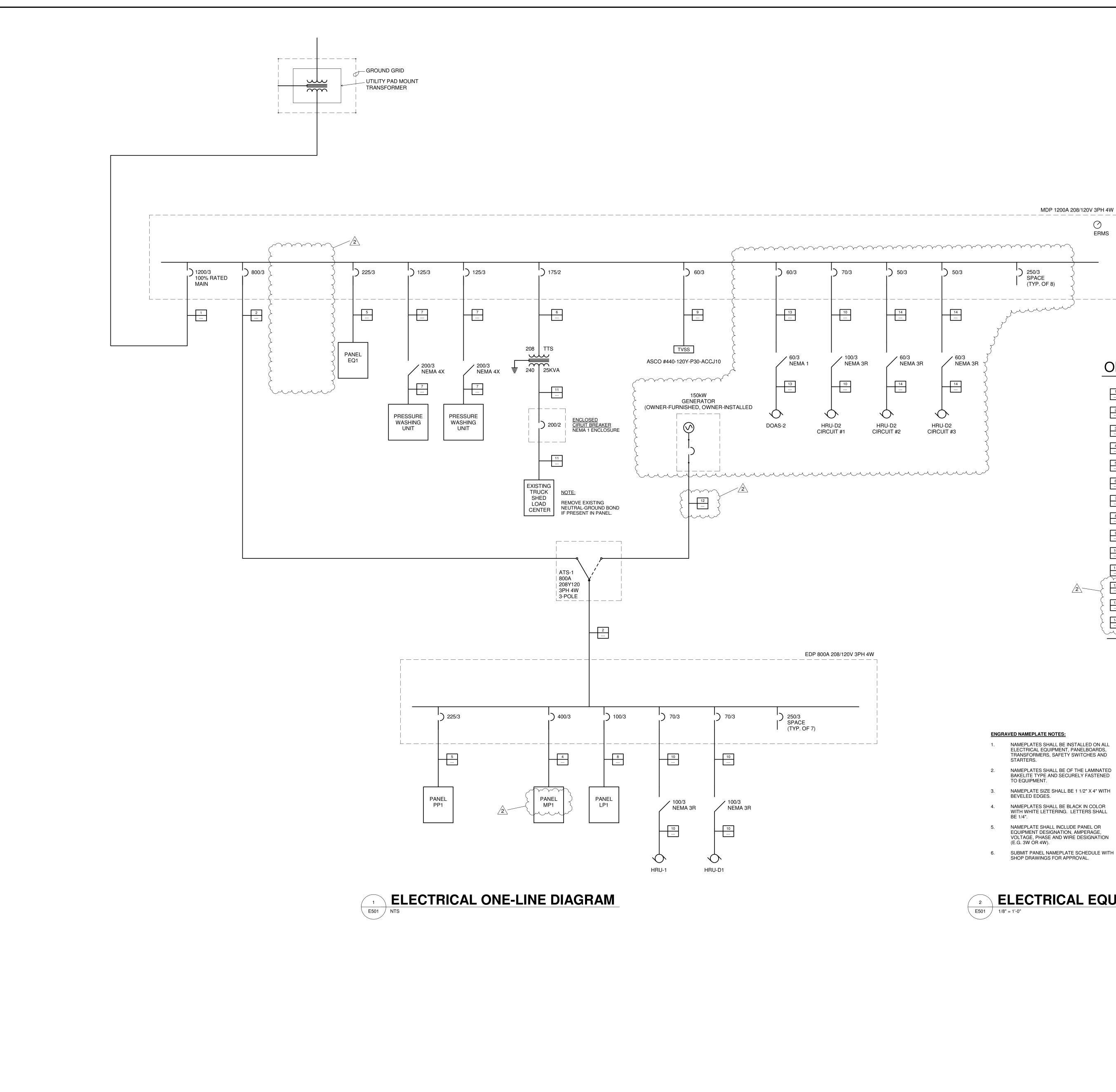
# KEYED ELECTRICAL NOTES

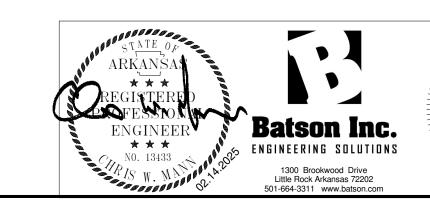
- 1 REFER TO MECHANICAL EQUIPMENT CIRCUIT SCHEDULE THIS SHEET FOR CIRCUITING REQUIREMENTS. DISCONNECTS SHALL BE MOUNTED SO THEY DO NOT INTERFERE WITH EQUIPMENT ACCESS OR CLEARANCE SPACE.
- 2 ROUTE EXHAUST FAN CIRCUIT THRU TIMER (BY DIV. 23). COORDINATE LOCATION OF TIMER WITH MECHANICAL CONTRACTOR.
- 3 ROUTE EXHAUT FAN CIRCUIT THRU LINE-VOLTAGE THERMOSTAT IN STORAGE 115. VERIFY EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- 4 INTERLOCKING OF LOUVERS <u>L-4</u> & <u>L-5</u> WITH EXHAUST FAN EF-3 IS DONE BY MECHANICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR FOR ADDITIONAL REQUIREMENTS.
- 5 INTERLOCKING OF LOUVER <u>L-3</u> WITH EXHAUST FAN EF-4 IS DONE BY MECHANICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR FOR ADDITIONAL REQUIREMENTS.
- 6 PROVIDE AND INSTALL 120V FOR HEAT TRACE AT ICE MACHINE. CONNECT TO CIRCUIT "PP1-24".
- 7 DISCONNECTS FOR OUTDOOR HRU UNITS SHALL BE INSTALLED ALONG THIS WALL.
- 8 PROVIDE AND INSTALL 120V CIRCUIT FOR HVAC BMS CONTROL PANEL. CONNECT TO CIRCUIT "MP1-44".
- 9 INTERLOCKING OF LOUVERS L-6 & L-7 WITH EF-4 IS DONE BY MECHANICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR FOR ADDITIONAL REQUIREMENTS.
- 10 DRY-PIPE SPRINKLER SYSTEM AIR COMPRESSOR LOCATED THIS ROOM. VERIFY EXACT LOCATION WITH FIRE PROTECTION CONTRACTOR.



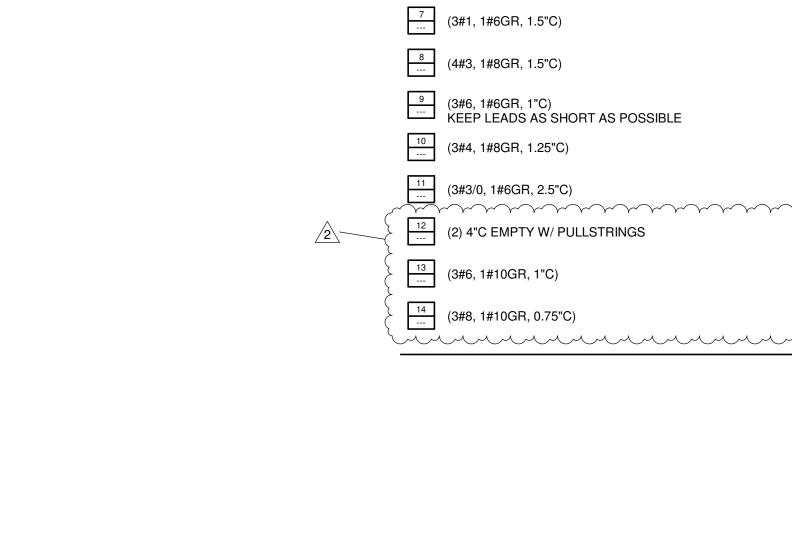












# ONE-LINE FEEDER SCHEDULE

PANEL A

225A, 120/208V, 3PH, 4W

FED FROM PANEL MDP

TYPICAL PANEL NAMEPLATE

AHU-1

200A, 208V 3-PHASE FED FROM PANEL MDP

TYPICAL EQUIPMENT NAMEPLATE

rebar — G — — 3/4" X 10'-0" N — GRD ROD

1 3 SETS (4#600 kcmil, 4"C)

4 (4#500 kcmil, 1#3GR, 4"C)

5 .-- (4#4/0, 1#4GR, 2.5"C)

6 .... (2#2/0, 1#6GR, 2"C)

2 SETS (4#500 kcmil, 1#1/0GR, 4"C)

3 2 SETS (4#350 kcmil, 1#1GR, 3.5"C)

MDP 1200A 208/120V 3PH 4W

) 250/3 SPACE (TYP. OF 8)

, ....

ENGRAVED NAMEPLATE NOTES:

STARTERS.

BE 1/4".

TO EQUIPMENT.

1

2.

З.

5.

6.

NAMEPLATES SHALL BE INSTALLED ON ALL

ELECTRICAL EQUIPMENT, PANELBOARDS,

TRANSFORMERS, SAFETY SWITCHES AND

NAMEPLATES SHALL BE OF THE LAMINATED

BAKELITE TYPE AND SECURELY FASTENED

NAMEPLATE SIZE SHALL BE 1 1/2" X 4" WITH BEVELED EDGES.

NAMEPLATES SHALL BE BLACK IN COLOR WITH WHITE LETTERING. LETTERS SHALL

NAMEPLATE SHALL INCLUDE PANEL OR EQUIPMENT DESIGNATION, AMPERAGE, VOLTAGE, PHASE AND WIRE DESIGNATION (E.G. 3W OR 4W).

SUBMIT PANEL NAMEPLATE SCHEDULE WITH SHOP DRAWINGS FOR APPROVAL.

50/3

14

14

 $\bigcirc$ 

HRU-D2

CIRCUIT #3

60/3 NEMA 3R

\_\_\_\_\_

 $\bigcirc$ 

\_ \_ \_ \_ -

ERMS

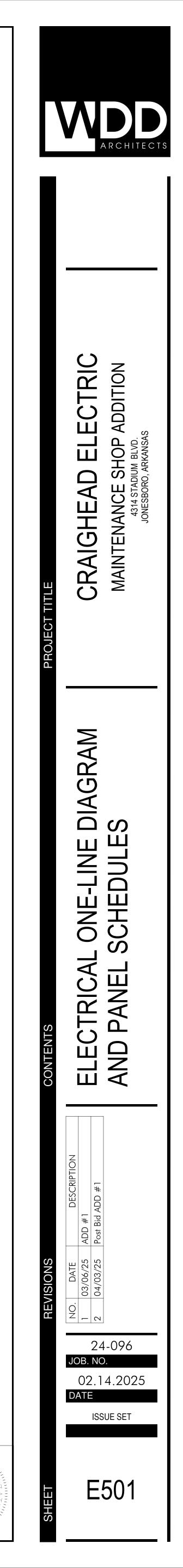
ENERGY-REDUCTION MAINTENANCE

CONTRACTOR SHALL INCLUDE ARC-FLASH AND COORDINATION STUDY IN THEIR SCOPE OF WORK FOR THE ELECTRICAL DISTRIBUTION SYSTEM. AFFIX ARC-FLASH

SWITCH NOTE

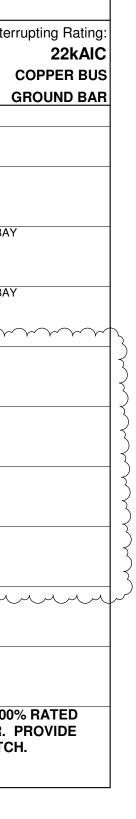
BLDG STEEL

LABELS TO ALL PANELBOARDS.



			PA	NELE	BOAR	D SC	HED	ULE				
Panel Name:	Volts:			Mains	:	Fed Fr	om:	U	TILIT	Y	Interruptin	
MDP	1	20/20	08	12	00A	Mounti	ng:	Feeder	r:		-	
TYPE:	phase:	phase:		lugs	breaker	surface	-	top	bo	ttom	COPF	
SQUARE D "HCR-U"	3	}	4		X	X				Χ	GROU	
				BR	ANCH I	BREAKE	RS	-				
ITEM	СКТ	СКТ	L	OAD (KV	′A)	L	OAD(KV	'A)	СКТ	СКТ	ITEM	
	BKR	NO.	Α	В	С	Α	В	С	NO.	BKR		
PANEL "EDP"	800/3		73.76							60/3	TVSS	
		1		74.34					2			
					69.68				]			
TRUCK SHED TRANSFORMER	175/2		8.33			10.71				125/3	PRESSURE WASHER - WASH BAY	
		3		8.34			10.71		4			
	$\sim$	$\sim$	$\sim$	$\sim$	8.33	$\sim$		10.71	1			
SPACE W/ BUSSING	250/3					10.71	m			125/3	PRESSURE WASHER - WASH BAY	
		5					10.71		6			
								10.71	$\neg \neg \neg$	$\sim$		
PANEL "EQ1"	225/3		11.40			5.01				60/3	DOAS-2	
	m	77	m	8.53	P		5.01		8			
					75.55			5.01				
SPACE W/ BUSSING	250/3				}	5.60				70/3	HRU-D2 - CIRCUIT #1	
		9					5.60		10			
					{			5.60	1			
SPACE W/ BUSSING	250/3				ΙÇ	4.13				50/3	HRU-D2 - CIRCUIT #2	
		11			$\zeta$		4.13		12			
								4.13	-			
SPACE W/ BUSSING	250/3				18	4.13				50/3	HRU-D2 - CIRCUIT #3	
		13			$\left  \right\rangle$		4.13		14			
					3		1.10	4.13	-			
SPACE W/ BUSSING	250/3				5	~~~	~~~			,250/3	SPACE W/ BUSSING ~ ~ ~ ~	
		15							16			
									-			
SPACE W/ BUSSING	250/3									250/3	SPACE W/ BUSSING	
		17							18			
									4			
PROVIDE WITH 4-PIECE TRIM WITH	I	1	93.49	91.21	93.56	40.29	40.29	40.29			PROVIDE PANEL WITH 100% R	
DOOR. PROVIDE PANEL AS SERVIC	E					TOTALS			L		MAIN CIRCUIT BREAKER. PRO	
ENTRANCE RATED.			100.70			]					PANEL WITH ERMS SWITCH.	
				399.13	3	TOTAL	CONN. L	OAD KVA				

			ГА	r		D SC					l .
Panel Name:	Volts	:		Mains	:	Fed Fr	om:		ATS		Interrupting F
EDP	1	20/2	208	80	A0(	Mounti	ng:	Feeder	:		22
TYPE:	phase:		wire:	lugs	breaker	surface	flush	top	bot	ttom	COPPEI
SQUARE D "HCP-SU"		3	4	X		X				X	GROUNI
				BR	ANCH I	BREAKE	ERS				
ITEM	СКТ	скт	· L	OAD (KV	(A)	L	OAD(KV	A)	СКТ	СКТ	ITEM
	BKR	NO.	A	В	С	A	В	С	NO.	BKR	
PANEL "PP1"	225/3		24.22			4.27				100/3	PANEL "LP1"
		1		23.30			4.38		2		
					18.46			4.90			
SPACE W/ BUSSING	250/3									250/3	SPACE W/ BUSSING
		3							4		
PANEL "MP1"	400/3		33.14							250/3	SPACE W/ BUSSING
h h h h h h h h h h h h h h h h h h h		5		34.53					6		
					34.26						
HRU-1	70/3		6.46							250/3	SPACE W/ BUSSING
		7		6.46					8		
					6.46					050/0	
HRU-D1	70/3		5.60							250/3	SPACE W/ BUSSING
		9		5.60				-	10		
	050/0				5.60	-				050/0	
SPACE W/ BUSSING	250/3									250/3	SPACE W/ BUSSING
		11						_	12		
PROVIDE WITH 4-PIECE TRIM WITH DOOR.			69.42	69.89	64.78	4.27	4.38	4.90			PROVIDE PANEL WITH 54" CIRCUI BREAKER MOUNTING SPACE.
Boon			73.69	74.27	69.68	TOTALS	5				DILANEIT MOONTING OF AGE.
				217.64	ŀ	TOTAL	CONN. L	ONN. LOAD KVA			



Interrupting Ratir 22kA			EDP		Fed From:			Mains:			Volts:	Panel Name:
		Feeder:			Mounting:		0A	10	08	20/2	1	LP1
COPPER B		tom		top	flush	surface	breaker	lugs	wire:		phase:	TYPE:
GROUND B		X				X		X	4	}	3	SQUARE D "NQ"
					RS	BREAKE	ANCH E	BRA				
ITEM		CKT	СКТ	A)	OAD(KV	L	A)	OAD (KV	L	СКТ	СКТ	ITEM
		BKR	NO.	С	В	А	С	В	A	NO.	BKR	
2 COIL VOLTAGE	LC-1 & LC-	20/1	2			0.01			1.42	1	20/1	LIGHTS SHOP BAY LIGHTS
EXT. WALL PACKS (EAST)	LIGHTS	20/1	4		1.12			1.14		3	20/1	LIGHTS SHOP BAY LIGHTS
EXT. WALL PACKS (WEST)	LIGHTS	20/1	6	0.91			1.42			5	20/1	LIGHTS SHOP BAY LIGHTS
EXTERIOR COVERED BAY	LIGHTS	20/1	8			0.52			1.42	7	20/1	LIGHTS SHOP BAY LIGHTS
	SPARE	20/1	10		0.00			1.41		9	20/1	LIGHTS FAB SHOP
	SPARE	20/1	12	0.00			1.20			11	20/1	LIGHTS PARTS/OIL ROOM, ELEC RM, MEZZ
	SPARE	20/1	14			0.00			0.90	13	20/1	LIGHTS CONSTR. OFF, BREAK RM
BUSSING	SPACE W/	20/1	16					0.71		15	20/1	LIGHTS TLTS, CORRIDOR, OFFICE 109-110
BUSSING	SPACE W/	20/1	18				1.37			17	20/1	LIGHTS WASH BAY
BUSSING	SPACE W/	20/1	20						0.00	19	20/1	SPARE
BUSSING	SPACE W/	20/1	22					0.00		21	20/1	SPARE
BUSSING	SPACE W/	20/1	24				0.00			23	20/1	SPARE
BUSSING	SPACE W/	20/1	26						0.00	25	20/1	SPARE
BUSSING	SPACE W/	20/1	28					0.00		27	20/1	SPARE
BUSSING	SPACE W/	20/1	30				0.00			29	20/1	SPARE
BUSSING	SPACE W/	20/1	32							31		SPACE W/ BUSSING
BUSSING	SPACE W/	20/1	34							33	20/1	SPACE W/ BUSSING
BUSSING	SPACE W/	20/1	36							35	20/1	SPACE W/ BUSSING
BUSSING	SPACE W/	20/1	38							37	20/1	SPACE W/ BUSSING
BUSSING	SPACE W/	20/1	40							39	20/1	SPACE W/ BUSSING
BUSSING	SPACE W/	20/1	42							41	20/1	SPACE W/ BUSSING
				0.91	1.12	0.53	3.99	3.26	3.74			
			-			TOTALS	4.90	4.38	4.27			
				DAD KVA		TOTAL		13.55				

PANELBOARD SCHEDULE

pting Rating:	

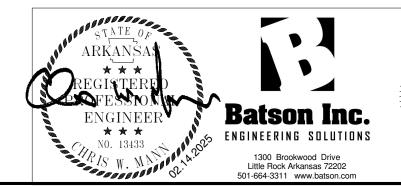
22kAIC COPPER BUS ROUND BAR

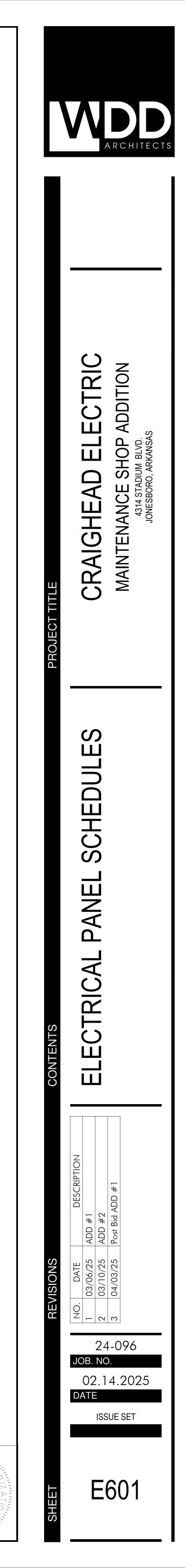
Panel Name	9:	Volts:			Mains:		Fed Fro	om:		EDP		Interrupting Rating
	PP1	120	)/20	8	22	5A	Mountir	ng:	Feeder	r:		22kAl
TYPE:		phase:	w	vire:	luas	breaker	surface	flush	top	bot	ttom	COPPER BU
	SQUARE D "NQ"	3		4	X	Diediter	X		top		X	GROUND BA
		U		•			BREAKE	RS		-	<u> </u>	
									•	OVT	OVT	
	ITEM		KT _	-		/	-	DAD(KV)	1'	CKT	CKT	ITEM
			0.	A	В	С	Α	B	C	NO.	BKR	
RECPTS	SHOP BAYS			0.60			1.50			2		OVERHEAD DOOR - SHOP BAY
RECPTS	SHOP BAYS, EXTERIOR		3		1.00			1.50		4		OVERHEAD DOOR - SHOP BAY
RECPTS	SHOP BAYS, EXTERIOR		5			1.00	. = .		1.50	6		OVERHEAD DOOR - SHOP BAY
RECPTS	SHOP BAYS		7	0.80			1.50	. = .		8	20/1	OVERHEAD DOOR - SHOP BAY
RECPTS	SHOP BAYS		9		0.60			1.50		10		OVERHEAD DOOR - SHOP BAY
RECPTS	SHOP BAYS		1			0.80			1.50	12		OVERHEAD DOOR - FAB SHOP
RECPTS	PARTS & OIL ROOMS, EXTERIOR			1.00			1.50			14		OVERHEAD DOOR - PARTS ROOM
<u>RECPTS</u> DRYER - SHO	ELECTRICAL ROOM	00/0	15		0.60			1.50		16		OVERHEAD DOOR - WASH BAY
	PF DAT	30/2	17			2.50			1.50	18		OVERHEAD DOOR - WASH BAY ICE MACHINE - TRUCK SHED
			9	2.50			1.24			20	20/2	ICE MACHINE - TRUCK SHED
WASHING MA	CHINE - SHOP BAY		21		1.80			1.24		22		
RECPTS	OFFICE 119, TLTS 120, 121	20/1 2	23			1.20			0.18	24		ICE MACHINE HEAT TRACE
RECPTS	CONSTR. OFFICE 116, EXT.	20/1 2	25	1.20			1.18			26		WEST ENTRY GATE
RECPTS	SUPERVISER OFFICE 118	20/1 2	27		0.80			1.18		28	20/1	SOUTH ENTRY GATE
RECPTS	OFFICE 117	20/1 2	29			0.80			0.00	30	20/1	SPARE
RECPTS	BREAK ROOM 114	20/1 3	31	0.80			0.00			32	20/1	SPARE
RECPTS	BREAK ROOM 114	20/1 3	33		0.60			0.00	-	34	20/1	SPARE
REFRIGERAT	OR - BREAK ROOM 114	20/1 3	35			1.00			0.00	36	20/1	SPARE
REFRIGERAT	OR - BREAK ROOM 114	20/1 3	37	1.00						38	20/1	SPARE
MICROWAVE	- BREAK ROOM 114	20/1 3	39		1.20					40	20/1	SPARE
MICROWAVE	- BREAK ROOM 114	20/1 4	11			1.20				42		SPACE W/ BUSSING
DISHWASHEF	R - BREAK ROOM 114	20/1 4	13	1.00						44		SPACE W/ BUSSING
COFFEE MAK	ER - BREAK ROOM 114	20/1 4	15		1.20					46		SPACE W/ BUSSING
	ITER - BREAK ROOM 114		17			0.40				48		SPACE W/ BUSSING
OVEN - BREA	K ROOM 114	50/2	19	4.00						50		SPACE W/ BUSSING
		Ę	51		4.00					52		SPACE W/ BUSSING
DISPOSAL	BREAK ROOM 114	20/1 5	53			1.18				54		SPACE W/ BUSSING
RECPTS	STORAGE 115	20/1 5	55	0.80						56		SPACE W/ BUSSING
ABOVE CNTR	WORK AREA - CORRIDOR 108	20/1 5	57		0.40					58		SPACE W/ BUSSING
COPIER - WO	RK AREA IN CORRIDOR 108	20/1 5	59			1.00				60		SPACE W/ BUSSING
RECPTS	OFFICE 110	20/1 6	61	1.20						62		SPACE W/ BUSSING
RECPTS	OFFICE 109	20/1 6	33		0.80					64		SPACE W/ BUSSING
RECPTS	OFFICE 109, EXTERIOR	20/1 6	5			0.80				66		SPACE W/ BUSSING
RECPTS	ENTRY 107, CORRIDOR 108	20/1 6	67	0.60						68		SPACE W/ BUSSING
ELECTRIC WA	ATER COOLER - CORRIDOR 108	20/1 6	<u>9</u>		1.18					70		SPACE W/ BUSSING
RECPTS	TLTS 112,113, JAN 101, 111, RECIRC	20/1 7	71			1.00				72		SPACE W/ BUSSING
VENDING MAG	CHINE - CORRIDOR 108	20/1 7	73	1.00						74		SPACE W/ BUSSING
VENDING MAG	CHINE - CORRIDOR 108	20/1 7	75		1.00					76		SPACE W/ BUSSING
VENT HOOD	BREAK ROOM 114	20/1 7	77			0.30				78		SPACE W/ BUSSING
RECPTS	WASH BAY	20/1 7	79	0.80						80		SPACE W/ BUSSING
RECPTS	MEZZANINE & MEZZ EQUIP ROOM	20/1 8	31		1.20					82		SPACE W/ BUSSING
	CONTROL PANEL	20/1 8	33			0.60				84		SPACE W/ BUSSING
	<b>GFCI TYPE BREAKERS FOR</b>			17.30	16.38	13.78	6.92	6.92	4.68			PROVIDE GFEP TYPE CIRCUIT
	OWING CKTS: #1 THRU #13, #			24.22	23.30	18.46	TOTALS					BREAKERS FOR THE FOLLOWING
21, #35 THI #20 THRU	RU #43, #49/51, #69, #73, #75,				65.98			<b></b>	OAD KVA			CKTS: #24.

				PA	NELB	OAR	D SC	HEDI	JLE			
	Panel Name:	Volts:			Mains:		Fed Fr	om:		EDP		Interrupting Rating:
	EQ1	1	20/2	08	22	5A	Mounti	ng:	Feede	r:		22kAIC
	TYPE:	phase:		wire:	lugs	breaker	surface	flush	top		tom	COPPER BUS
	SQUARE D "NQ"	ľ 3	3	4	Ň		X				X	GROUND BAR
		ļ			BR	ANCH E	BREAKE	RS	•			
		СКТ	СКТ	L	OAD (KV	A)	L	OAD(KV/	A)	СКТ	СКТ	
	ITEM	BKR	NO.	Α	B	C	Α	B	C	NO.	BKR	ITEM
	PLASMA CUTTER	50/3	1	3.72						2		SPARE
3			3	-	3.72			3.27		4		WELDING OUTLET - FAB SHOP
		$\gamma \gamma$	5	$\sim$	$\sim$	3.72			3.27	6		
ــــــــــــــــــــــــــــــــــــــ	SPARE	20/1	7			$\square$				8	50/2	SPARE WELDING OUTLET - FAB SHOP
$\langle$	SPARE	20/1	9			3				10		
Ĺ	SPABE	20/1	11	m	m					12	50/2	SPARE WELDING OUTLET - FAB SHOP
	SPACE W/ BUSSING		13							14		
	SPACE W/ BUSSING		15							16	50/2	SPARE WELDING OUTLET - FAB SHOP
	SPACE W/ BUSSING		17							18		
	GRINDER STATION	30/2	19							20	50/2	SPARE WELDING OUTLET - FAB SHOP
			21							22		
	CHOP SAW FAB SHOP	20/1	23			1.80			5.82	24	70/2	CURING OVEN - FAB SHOP
	GRINDER FAB SHOP	20/1	25	0.72			5.82			26		
	RECPTS FAB SHOP CONVENIENCE	20/1	27		0.60					28		SPACE W/ BUSSING
	RECPTS FAB SHOP CONVENIENCE	20/1	29			0.40	-			30		SPACE W/ BUSSING
	RECPTS FAB SHOP CONVENIENCE	20/1	31	0.60						32		SPACE W/ BUSSING
	RECPTS FAB SHOP CONVENIENCE	20/1	33		0.40					34		SPACE W/ BUSSING
	DRY-PIPE SPRINKLER SYSTEM AIR COMPRESSOR	20/3	35			0.54				36		SPACE W/ BUSSING
			37	0.54						38		SPACE W/ BUSSING
			39		0.54					40		SPACE W/ BUSSING
	SPACE W/ BUSSING		41							42	20/1	SPACE W/ BUSSING
				5.58	5.26	6.46	5.82	3.27	9.09			
				11.4	8.53	15.55	TOTALS					
					35.48		TOTAL	CONN. LO	OAD KVA	<b>\</b>		

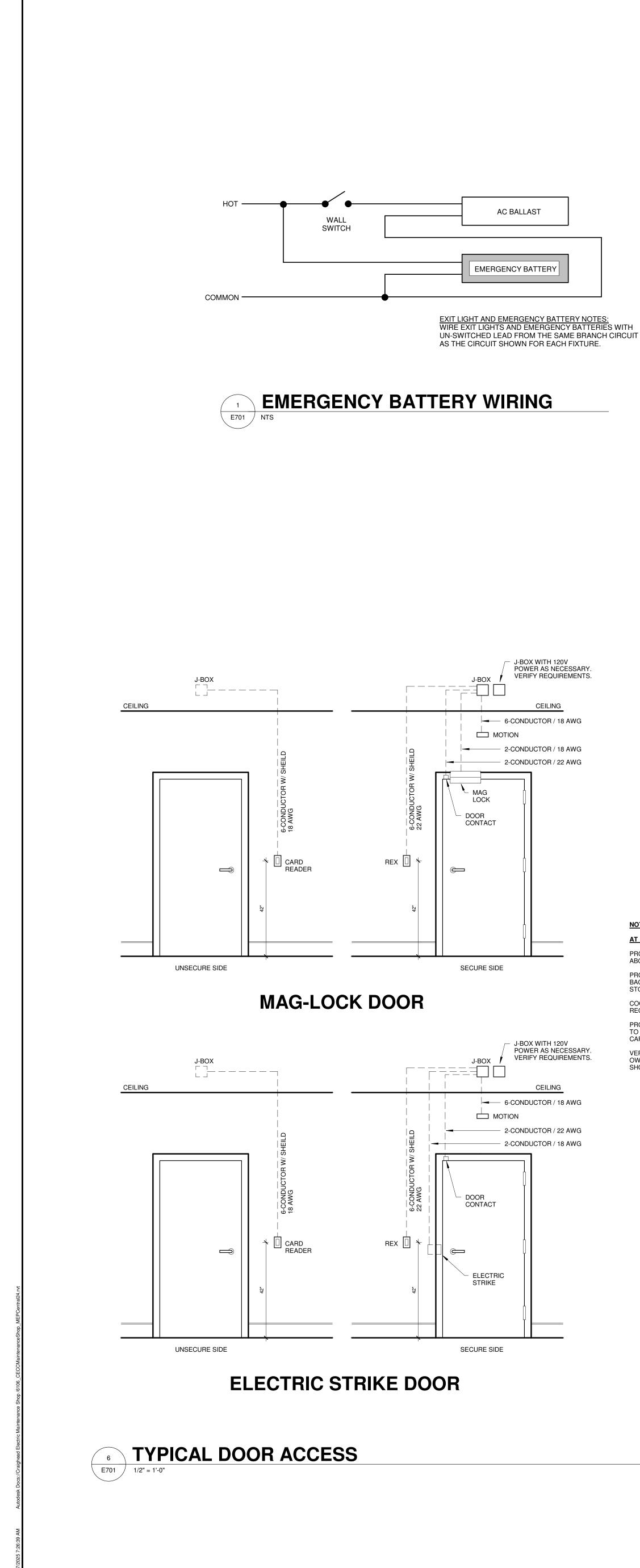
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Panel Name:	Volts:			Mains:		Fed Fr		1	EDP		Interrupting Rating:	
<u>{ MP1 {}}</u>	1	20/2	08	-	<b>0A</b>	Mounti		Feede	r: □		22kAl0	
TYPE:	phase:		wire:	-	breaker	surface	flush	top		ttom	COPPER BUS	
SQUARE D "NQ"	3	5	4			X     REAKERS				X	GROUND BAI	
				BR	ANCHE		RS				1	
ITEM	CKT	CKT		OAD (KV	1		OAD(KV		СКТ	СКТ	ITEM	
FC-1	BKR 20/2	NO.	A	В	С	A	В	С	NO.	BKR	WH-1	
FG-1	20/2	1	0.28	0.00		2.66	0.07		2	30/3		
FC-2	20/2	3 5		0.28	0.12		2.67	2.66	4			
		7	0.12		0.12	0.10		2.00	8	20/2	BS-1, BS-2, BS-3	
FC-3	20/2	9	0.1.2	0.07			0.10		10			
		11			0.07			0.07	12	20/2	BS-4 & BS-5	
FC-4	20/2	13	0.23			0.07			14	00/2		
FC-5	20/2	15		0.23			0.07		16	20/2	BS-6, BS-7, BS-8, BS-9, BS-10	
10-5	20/2	17	0.15		0.15	ŶŶŶ	Y Y Y	0:07	18	Y Y	SPACE W/ BUSSING	
FC-6	20/2	19 21	0.15	0.21					20 22		SPACE W/ BUSSING	
		23		0.21	0.21		~~~	1.03~	22	ر 20/2	DHP-14DSS-1 ~ ~ ~ ~ ~ ~ ~ ~ ~	
FC-7	20/2	25	0.13		0.21	1.03			26			
		27		0.13			0.43		28	20/1	EF-1	
FC-8	20/2	29			0.15	_		0.05	30		EF-2	
	00/0	31	0.15			1.38			32		EF-3	
FC-9	20/2	33		0.75			1.25		34		EF-4	
EH-1 FIRE RISER ROOM	00/1	35	1.50		0.75			1.25	36		SPACE W/ BUSSING	
EH-2 - WASH BAY	20/1 30/2	37 39	1.50	2.50	5				38 40		SPACE W/ BUSSING	
		41		2.50	2.50	tun	J.J.	0.10	42	20/1	LOUVERSL2, L-3, L-4, L-5, L-0 & L-2	
EH-3 - WASH BAY	30/2	43	2.50			0.60			44		HVAC BMS CONTROL PANEL	
		45		2.50			0.00		46		SPARE	
EH-4 - WASH BAY	30/2	47			2.50			0.00	48			
AIR COMPRESSOR - OIL ROOM	40/3	49	2.50			1.66			50	30/2	GRINDER STATION	
	40/3	51		3.04	0.04		1.66	0.00	52	20/2	DOAS-1	
		53 55	3.04		3.04	0.90		0.90	54 56	20/2		
AIR COMPRESSOR - OIL ROOM	40/3	57	3.04	3.04		0.90	3.00		58	40/2	DOAS-1 PRE-HEATER	
		59			3.04			3.00	60			
		61	3.04						62		SPACE W/ BUSSING	
OVERHEAD CRANE - SHOP BAYS	70/3	63		6.16					64		SPACE W/ BUSSING	
		65			6.16				66		SPACE W/ BUSSING	
4-POST LIFT	30/2	67	6.16	1.04					68		SPACE W/ BUSSING SPACE W/ BUSSING	
	00/2	69 71		1.94	1.94				70 72		SPACE W/ BUSSING	
2-POST LIFT	80/3	73	4.50		1.94				74		SPACE W/ BUSSING	
		75	4.00	4.50					76		SPACE W/ BUSSING	
		77			4.50				78		SPACE W/ BUSSING	
RECPTS AIR DRYER	20/1	79	0.44						80		SPACE W/ BUSSING	
SPARE	20/1	81							82		SPACE W/ BUSSING	
SPARE	20/1	83							84		SPACE W/ BUSSING	
			24.74	25.35	25.13	8.40	9.18	9.13				

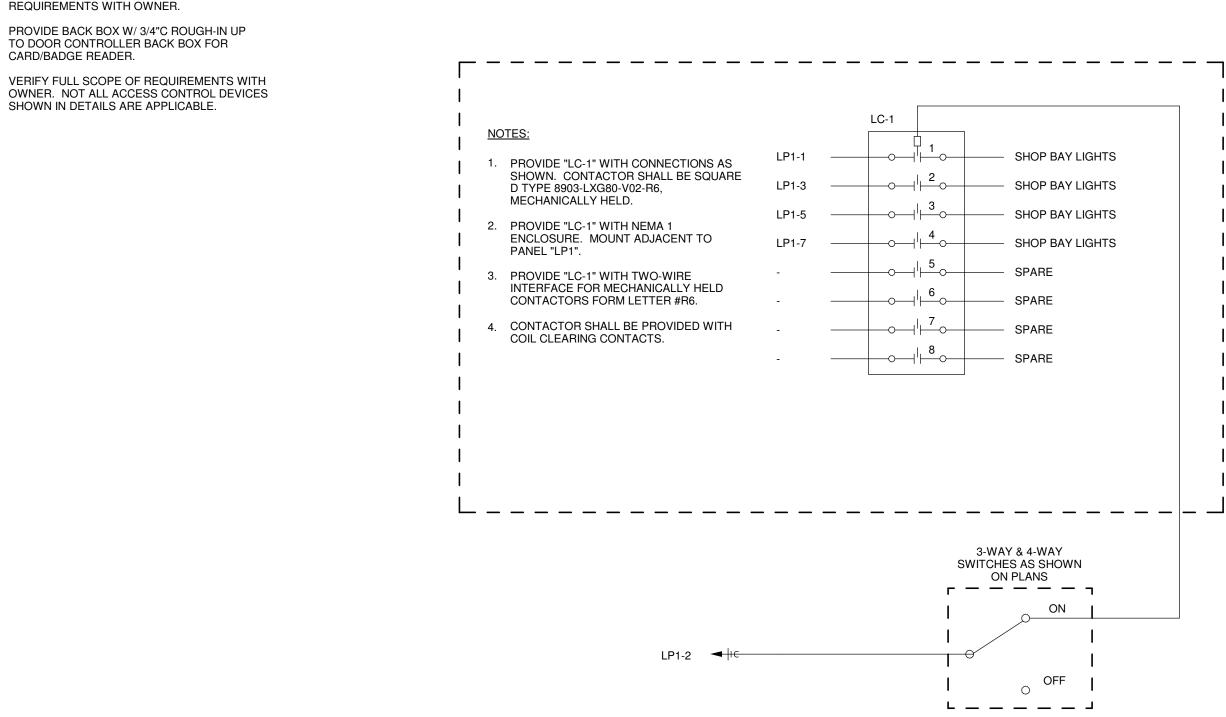




/3



## LIGHTING CONTROL DETAIL "LC-1" 7 E701 NO SCALE



E701 NOT TO SCALE

## CARD/BADGE READER. VERIFY FULL SCOPE OF REQUIREMENTS WITH

BACK BOX AND ROUTE CABLES BACK TO STORAGE 111. COORDINATE LOW-VOLTAGE CABLING REQUIREMENTS WITH OWNER.

NOTES: AT EACH SECURE DOOR: PROVIDE AND INSTALL 2-GANG BACK BOX ABOVE DOOR FOR DOOR CONTROLLER. PROVIDE (2) CAT 6 IN DOOR CONTROLLER



INSULATED THROAT CONNECTOR

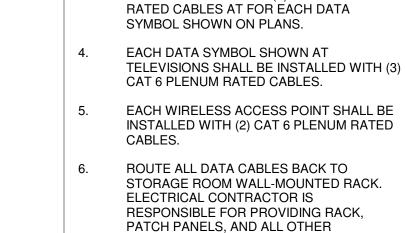
- 1" EMT - STUB TO

ABOVE ACCESSIBLE CEILING

ABOVE ACCESSIBLE CEILING

- 4" SQUARE BOX

W/2 GANG RING



FOR EACH TELE/DATA JACK,

IN THIS DETAIL.

BACK BOX AND CONDUIT ONLY AS SHOWN

WHERE STUB-UP IS LOCATED IN AN

EXPOSED CEILING AREA, HOMERUN

CONDUIT BACK TO DATA EQUIPMENT.

PROVIDE AND INSTALL (2) CAT 6 PLENUM-

SHOP BAY LIGHTS

SHOP BAY LIGHTS

SHOP BAY LIGHTS

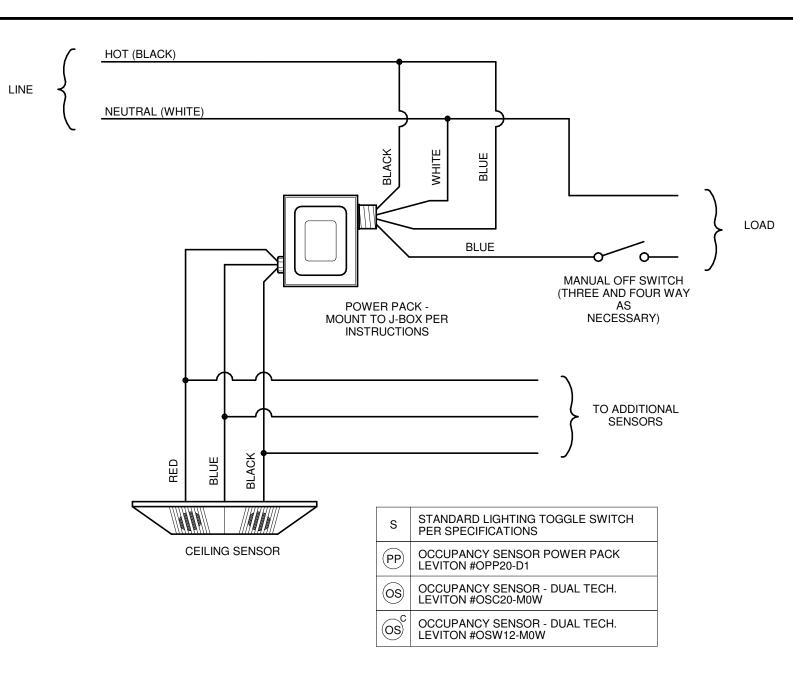
ON

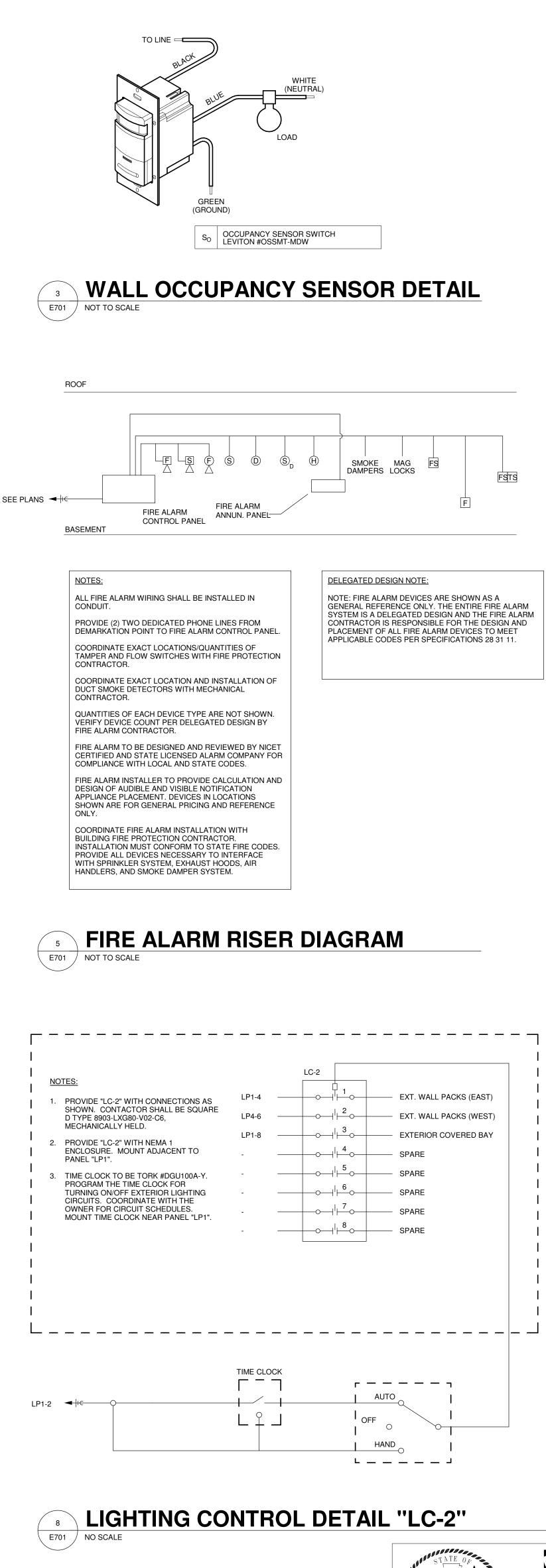
OFF

SPARE

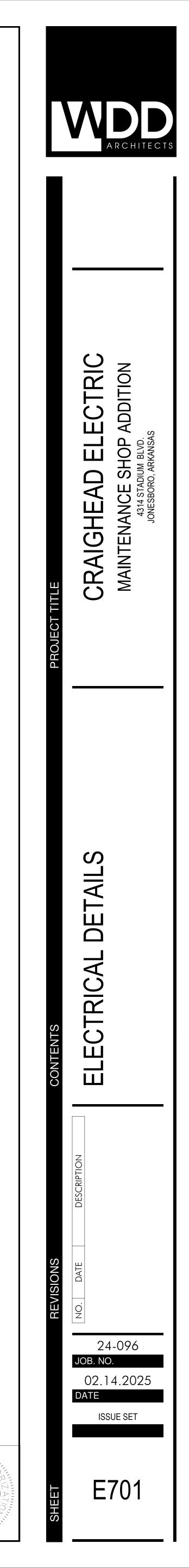
PROVIDE:

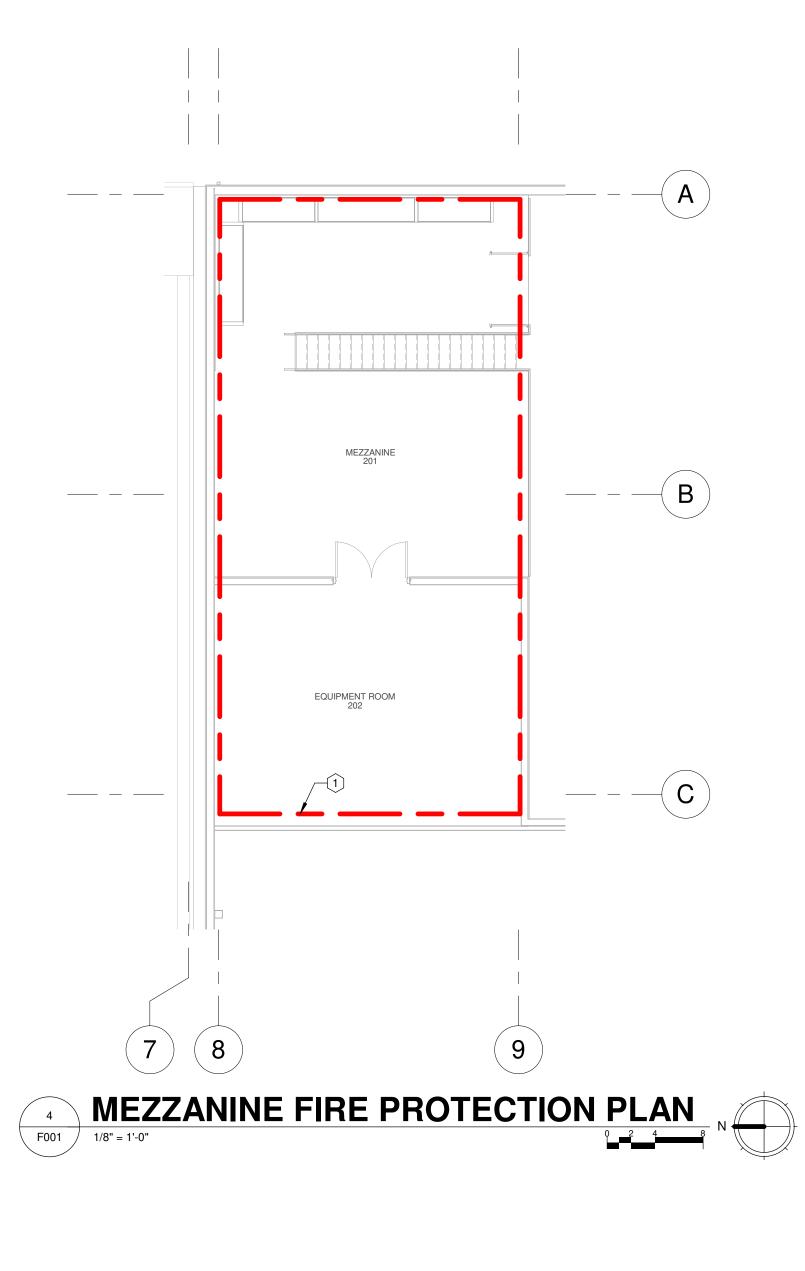
## **CEILING OCCUPANCY SENSOR DETAIL** E701 NOT TO SCALE











## **KEYED NOTES:**

WET PIPE SPRINKLER SYSTEM TO BE PROVIDED FOR MEZZANINE AS INDICATED BY OUTLINE.

## **GENERAL NOTES:**

- 1. REFER TO SPECIFICATIONS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 2. REFER TO ALL PROJECT DRAWINGS FOR DETAILS OF CONSTRUCTION AND INSTALLATION REQUIREMENTS.
- 3. REFER TO GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS FOR THE CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FULL COORDINATION OF

PROJECT INCLUDING THE EQUIPMENT AND INSTALLATION OF THE MECHANICAL WORK.

- 4. CONTRACTOR SHALL BECOME, PRIOR TO BID, THOROUGHLY FAMILIAR WITH THE REQUIREMENTS OF THESE NOTES AS WELL AS OTHER NOTES SHOWN ON THE
- CONTRACT DOCUMENTS. 5. THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS (SEE SCHEDULES), THE SELECTION OF WHICH HAS INFLUENCED THE DESIGNS OF OTHER TRADES (ELECTRICAL, STRUCTURAL, ETC.). IF SUBSTITUTE MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE BID, OR SUBMITTED, IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND ALL HIS SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. ALL COSTS OF ALL TRADES ASSOCIATED WITH THE SUBSTITUTION SHALL BE INCLUDED IN THE BID.
- 6. COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER, WITHIN THE WARRANTY PERIOD, SHALL BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.
- 7. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, OR COMPONENT.
- 8. 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.
- 9. CONTRACTOR SHALL NOT SCALE DRAWINGS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY THE CONTRACT
- DOCUMENTS. 10. UNLESS NOTED OTHERWISE, THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS CARRIES WITH IT THE INSTRUCTION TO FURNISH
- AND INSTALL THE ITEM. 11. EXACT LOCATIONS OF ALL EQUIPMENT, ROOF CURBS, DUCTS, DIFFUSERS, ETC. SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER, LIGHTING, AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL REQUIREMENTS. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING GRID AND LIGHTING LAYOUT FOR COORDINATION OF FINAL DIFFUSER LOCATIONS.
- 12. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS.
- 13. COORDINATE PLACEMENT OF ALL THERMOSTATS, ROOF MOUNTED EQUIPMENT, ETC. WITH ARCHITECTURAL AND STRUCTURAL TRADES.
- 14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND OTHER DRAWINGS FOR COMPLETE INFORMATION PRIOR TO BID.
- 15. ROUGH-IN OR INSTALLATION OF OWNER FURNISHED EQUIPMENT SHALL NOT BEGIN UNTIL APPROVED EQUIPMENT DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT DO NOT SUBMIT SHOP DRAWINGS FOR ANY EQUIPMENT WHICH MAY BE COORDINATED WITH OWNER FURNISHED ITEMS UNTIL THE APPROVED DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT. VERIFY THE APPROVED EQUIPMENT HAS THE SAME ROUGH-IN AND FINAL CONNECTION REQUIREMENTS AND DESIGN CRITERIA AS THE DOCUMENTS. NOTIFY ENGINEER OF ANY CHANGES, INCOMPATIBILITY, OR UNUSUAL CONDITIONS IMMEDIATELY. SEE SPECIFICATIONS OR DRAWINGS FOR LIST OF OWNER FURNISHED EQUIPMENT (WHERE APPLICABLE).
- 16. ALL MECHANICAL CONSTRUCTION DETAILS SHALL BE AS SHOWN AND AS REQUIRED TO MAINTAIN "UL" ASSEMBLY RATINGS AS SHOWN ON ARCHITECTURAL SHEETS. SEAL AROUND ALL PENETRATIONS THOROUGH UL RATED ASSEMBLIES, FIRE AND SMOKE WALLS. COORDINATE WITH GENERAL CONTRACTOR.
- 17. NO OTHER TRADES, I.E., ELECTRICAL, CEILING, PLUMBING, ETC., SHALL BE SUSPENDED
- HUNG, OR SUPPORTED FROM DUCTWORK OR PIPING. 18. ROOFING CONTRACTOR SHALL BE RESPONSIBLE FOR FLASHING AND SEALING OF ALL
- ROOF PENETRATIONS. 19. SPECIAL CARE SHALL BE TAKEN ON THE ROOFS TO PREVENT DAMAGE. ANY DAMAGE SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER. COMPLY WITH BONDING REQUIREMENTS OF EXISTING ROOF.
- 20. PROVIDE CONCRETE PADS FOR ALL GROUND-MOUNTED EQUIPMENT. 21. REPLACE ALL ARCHITECTURAL FEATURES REMOVED OR DAMAGED DURING THE

# FIRE PROTECTION DRAWING INDEX

FIRE PROTECTION NOTES, LEGEND, INDEX, & MEZZANINE PLAN

F001

F101

COURSE OF THE WORK.

FIRE PROTECTION FLOOR PLAN

## FIRE PROTECTION NOTES:

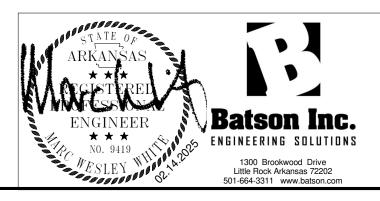
1. REFER TO GENERAL NOTES ON DRAWING.

CONFORMITY.

- REFER TO DRAWING FOR ADDITIONAL INFORMATION. PROVIDE COMPLETE HYDRAULICALLY CALCULATED, FULLY AUTOMATIC, WET AND DRY
- PIPE SPRINKLER SYSTEMS, AS PER NFPA 13, SPECIFICATIONS, AND LOCAL CODE AND INSURER'S REQUIREMENTS.  $\frac{1}{2}$ FIRE PROTECTION SYSTEMS, PIPING, PUMPS, VALVES, AND ACCESSORIES INDICATED ON THE DRAWINGS ARE DIAGRAMMATIC ONLY. IT IS THE RESPONSIBILITY OF THE DESIGNING CONTRACTOR TO VERIFY EQUIPMENT SELECTIONS, PIPE ROUTING, ETC. FOR CODE COMPLIANCE, INSURER COMPLIANCE, AND ARCHITECTURAL/STRUCTURAL
- 5. FIRE PROTECTION SYSTEM SHOP DRAWINGS SHALL INCLUDE SEPARATE AND COMPLETE REFLECTED CEILING PLANS INDICATING LOCATION OF EACH SPRINKLER HEAD, AS WELL AS PIPING LAYOUTS. PROVIDE ADDITIONAL SPRINKLER HEADS (OVER CODE MINIMUM QUANTITIES) IF REQUESTED BY ARCHITECT, TO OBTAIN SYMMETRICAL CEILING LAYOUTS.
- SPRINKLER SYSTEM SHALL BE COMPLETE WITH BACKFLOW PREVENTION DEVICES, VALVES, P.I.V.'S, ALARM BELLS, SIAMESE CONNECTIONS, SPRINKLER PIPES & HEADS, ELECTRONIC SUPERVISION, FIRE DEPARTMENT CONNECTIONS, HYDRANTS,
- ACCESSORIES, ETC., AS REQUIRED BY NFPA, INSURER, AND LOCAL AUTHORITIES.
- 7. COORDINATE LOCATIONS OF FIRE EXTINGUISHER AND FIRE HOSE CABINETS WITH ARCHITECTURAL PLANS.
- 8. SYSTEM SHALL INTERFACE WITH THE BUILDING FIRE ALARM SYSTEM. SEE ELECTRICAL. 9. PROVIDE HEADS SUITABLE FOR TEMPERATURES TO BE ENCOUNTERED.
- 10. SEE SPECIFICATIONS AND PROJECT MANUAL FOR SYSTEM REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DETAILS AND REFLECTED CEILING PLAN.
- 11. ALL VALVES SHALL HAVE ELECTRONIC SUPERVISION. HYDRAULIC CALCULATIONS SHALL BE BASED ON THE HYDRANT FLOW TEST. CONTRACTOR SHALL VERIFY FLOW TEST DATA WITH LOCAL AUTHORITIES PRIOR TO
- SYSTEM DESIGN OR PREPARATION OF SHOP DRAWINGS. 13. IF HYDRAULIC CALCULATIONS AND CURRENT FLOW TEST DATA INICATES THAT A FIRE
- PUMP IS REQUIRED, NOTIFY ENGINEER 4 DAYS PRIOR TO BID. 14. SPECIAL CONSIDERATION SHALL BE GIVEN TO AREAS THROUGH THE BUILDING SUCH AS
- DROPPED SOFFITS AND LIGHTING SOFFITS THAT NECESSITATE ADDITIONAL SPRINKLER HEADS. REFER TO ARCHITECTURAL PLANS TO BUILDING DETAILS. 15. LAYOUT THE SPRINKLER PIPING SO THAT THERE IS A MINIMUM SEPARATION OF 18" BETWEEN THE CEILING HEIGHT AND THE BOTTOM OF THE SPRINKLER PIPE, EVEN IF THIS
- REQUIRES RUNNING THE PIPE IN THE JOIST SPACE. 16. DUCT RUNS AND GRAVITY DRAINAGE SYSTEMS HAVE PRIORITY OVER SPRINKLER LINE MAINS, BRANCHES, AND DROPS. OFFSET DROPS TO OBTAIN REQUIRED HEAD LAYOUT. COORDINATE WITH OTHER TRADES.
- 17. CONDUCT A COORDINATION MEETING WITH SUBCONTRACTORS TO ESTABLISH CLEARANCE REQUIREMENTS NEEDED FOR MECHANICAL, PLUMBING AND ELECTRICAL WORK PRIOR TO FABRICATION OF SPRINKLER SYSTEM. ANY RELOCATION OF FIRE SPRINKLER SYSTEM REQUIRED FOR PROPER INSTALLATION OF M.E.P. SYSTEMS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 18. THE SPRINKLER CONTRACTOR SHALL BASE HIS DESIGN LAYOUT AND BID ON CAREFUL COORDINATION OF THE MECHANICAL, PLUMBING, ELECTRICAL AND STRUCTURAL SYSTEMS IN THE BUILDING. 19. RUN PIPING HORIZONTALLY AND AT RIGHT ANGLES TO WALLS AND CEILINGS. CENTER
- SPRINKLER HEADS IN BOTH HORIZONTAL DIRECTIONS WITH RESPECT TO CEILING COMPONENTS, SUCH AS CEILING GRID, LIGHT FIXTURES, HVAC DIFFUSERS AND SPEAKERS, AS DIRECTED BY ARCHITECT. SPRINKLER HEADS MUST BE CENTERED IN CEILING GRID PANELS (TYPICAL AT ALL LAY-IN CEILINGS).
- 20. PROVIDE TEST CONNECTIONS AT MOST REMOTE POINT OF MAIN PORTION OF EACH SPRINKLER SYSTEM.
- 21. DO NOT PAINT SPRINKLER HEADS.
- 22. PAINT EXPOSED SPRINKLER PIPING IN FINISHED SPACES PER ARCHITECT'S DIRECTION. 23. SPRINKLER HEADS SHALL HAVE FINISH WITH ESCUTCHEONS PER THE SPECIFICATIONS.

## FIRE PROTECTION LEGEND ABBREVIATION OR SYMBOL DESCRIPTION

E FIRE PROTECTION SYSTEM

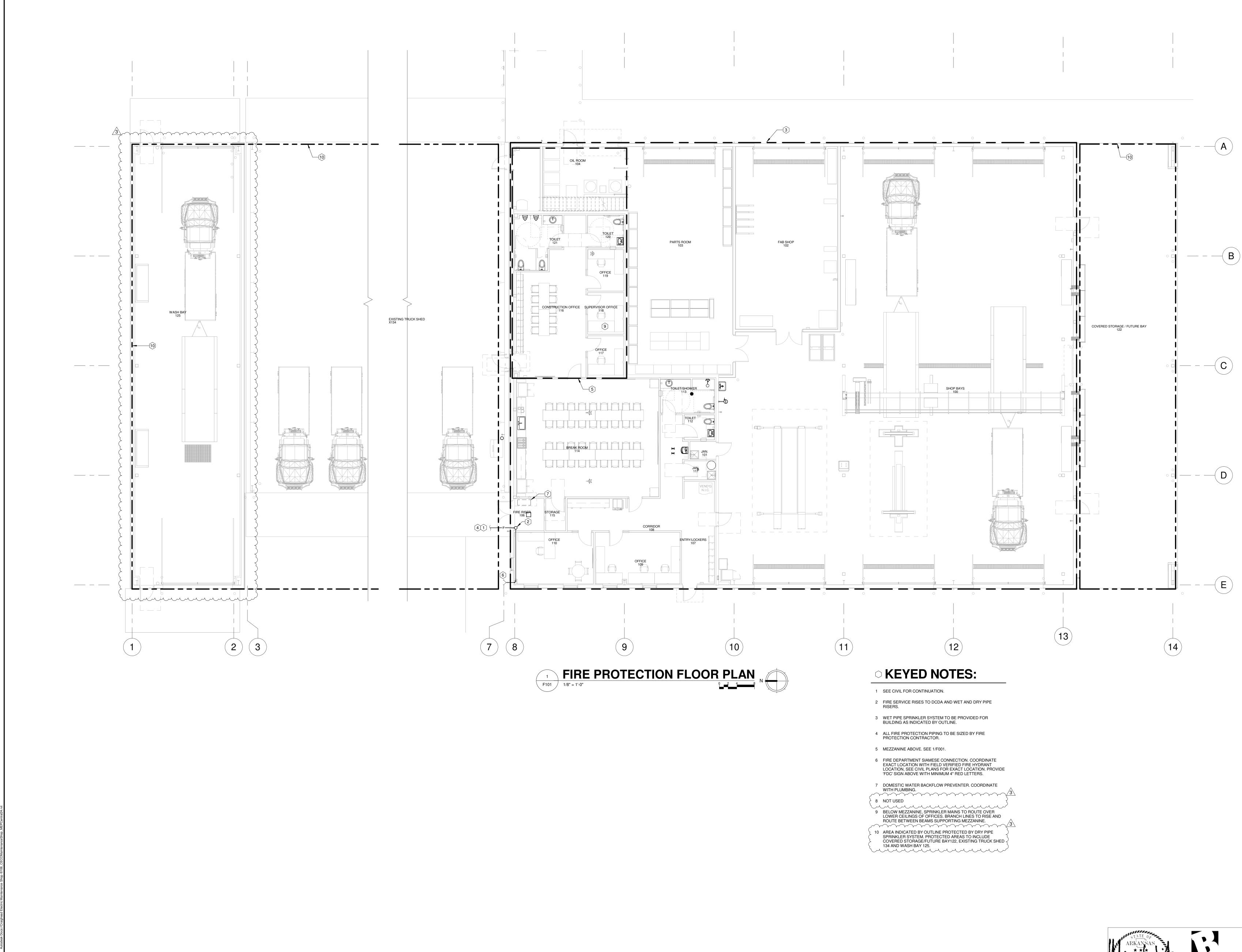


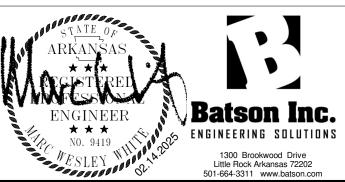






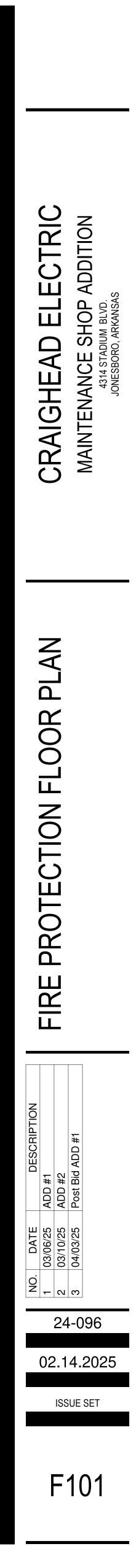














## **GENERAL NOTES:**

- 1. REFER TO SPECIFICATIONS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 2. REFER TO ALL PROJECT DRAWINGS FOR DETAILS OF CONSTRUCTION AND INSTALLATION REQUIREMENTS.
- 3. REFER TO GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS FOR THE CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FULL COORDINATION OF PROJECT INCLUDING THE EQUIPMENT AND INSTALLATION OF THE MECHANICAL WORK. 4. CONTRACTOR SHALL BECOME, PRIOR TO BID, THOROUGHLY FAMILIAR WITH THE
- REQUIREMENTS OF THESE NOTES AS WELL AS OTHER NOTES SHOWN ON THE
- CONTRACT DOCUMENTS. 5. THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS (SEE SCHEDULES), THE SELECTION OF WHICH HAS INFLUENCED THE DESIGNS OF OTHER TRADES (ELECTRICAL, STRUCTURAL, ETC.). IF SUBSTITUTE MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE BID, OR SUBMITTED, IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR AND ALL HIS SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. ALL COSTS OF ALL TRADES ASSOCIATED WITH THE SUBSTITUTION SHALL BE INCLUDED IN THE BID.
- 6. COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER, WITHIN THE WARRANTY PERIOD, SHALL BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.
- 7. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, OR COMPONENT
- 8. 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.
- 9. CONTRACTOR SHALL NOT SCALE DRAWINGS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY THE CONTRACT DOCUMENTS.
- THE DRAWINGS OR SPECIFICATIONS CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM.
- 11. EXACT LOCATIONS OF ALL EQUIPMENT, ROOF CURBS, DUCTS, DIFFUSERS, ETC. SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER, LIGHTING, AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED MECHANICAL REQUIREMENTS. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING GRID AND LIGHTING LAYOUT FOR COORDINATION OF FINAL DIFFUSER LOCATIONS.
- 12. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS.
- 13. COORDINATE PLACEMENT OF ALL THERMOSTATS, ROOF MOUNTED EQUIPMENT, ETC. WITH ARCHITECTURAL AND STRUCTURAL TRADES. 14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND OTHER DRAWINGS FOR COMPLETE INFORMATION PRIOR TO BID.
- 15. ROUGH-IN OR INSTALLATION OF OWNER FURNISHED EQUIPMENT SHALL NOT BEGIN UNTIL APPROVED EQUIPMENT DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT. DO NOT SUBMIT SHOP DRAWINGS FOR ANY EQUIPMENT WHICH MAY BE COORDINATED WITH OWNER FURNISHED ITEMS UNTIL THE APPROVED DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT. VERIFY THE APPROVED EQUIPMENT HAS THE SAME ROUGH-IN AND FINAL CONNECTION REQUIREMENTS AND DESIGN CRITERIA AS THE DOCUMENTS. NOTIEY ENGINEER OF ANY CHANGES, INCOMPATIBILITY, OR UNUSUAL CONDITIONS IMMEDIATELY. SEE SPECIFICATIONS OR DRAWINGS FOR LIST OF OWNER FURNISHED
- EQUIPMENT (WHERE APPLICABLE). 16. ALL MECHANICAL CONSTRUCTION DETAILS SHALL BE AS SHOWN AND AS REQUIRED TO MAINTAIN "UL" ASSEMBLY RATINGS AS SHOWN ON ARCHITECTURAL SHEETS. SEAL AROUND ALL PENETRATIONS THOROUGH UL RATED ASSEMBLIES, FIRE AND SMOKE WALLS. COORDINATE WITH GENERAL CONTRACTOR.
- 17. NO OTHER TRADES, I.E., ELECTRICAL, CEILING, PLUMBING, ETC., SHALL BE SUSPENDED, HUNG, OR SUPPORTED FROM DUCTWORK OR PIPING.
- 18. ROOFING CONTRACTOR SHALL BE RESPONSIBLE FOR FLASHING AND SEALING OF ALL ROOF PENETRATIONS.
- 19. SPECIAL CARE SHALL BE TAKEN ON THE ROOFS TO PREVENT DAMAGE. ANY DAMAGE SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER. COMPLY WITH BONDING REQUIREMENTS OF EXISTING ROOF.
- 20. PROVIDE CONCRETE PADS FOR ALL GROUND-MOUNTED EQUIPMENT.

COURSE OF THE WORK.

# **REFRIGERATION PIPING NOTES:**

- 1. ALL INSTALLATION PROCEDURES SHALL BE AS DIRECTED BY THE REFRIGERATION CONTRACTOR TO INSURE THAT ALL OF THE SYSTEMS ARE COMPATIBLE.
- 2. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL REFRIGERATION PIPING SHALL USE THE SIZES AND DETAILS OF CONSTRUCTION AS DIRECTED BY THE EQUIPMENT MANUFACTURER.
- 4. DO NOT VENT REFRIGERANT TO THE ATMOSPHERE. RECOVER OR RECLAIM PER THE LATEST REGULATIONS AND ASHRAE GUIDELINES.

- 10. UNLESS NOTED OTHERWISE, THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN

- 21. REPLACE ALL ARCHITECTURAL FEATURES REMOVED OR DAMAGED DURING THE

# **HVAC NOTES:**

- REFER TO GENERAL NOTES ON DRAWING FOR ADDITIONAL REQUIREMENTS.
- PROVIDE ACCESS DOORS TO ALL FIRE DAMPERS, SMOKE DAMPERS, EQUIPMENT, COILS, ETC. WHERE NOT DIRECTLY ACCESSIBLE THROUGH AIR DEVICES OR REMOVABLE CEILING GRID. MINIMUM SIZE SHALL BE 18" X 18" UNLESS NOTED OTHERWISE.
- 2. SEE STRUCTURAL PLANS FOR EXACT DIMENSIONS AND DETAILS OF THE BUILDING.
- 3. MAINTAIN A MINIMUM OF 15'-0" BETWEEN ALL FRESH AIR INTAKES AND PLUMBING VENTS, EXHAUST FAN DISCHARGE, FLUES, ETC. COORDINATE WITH ALL OTHER CONTRACTORS ON SITE.
- 4. SEAL ALL ROOF AND WALL PENETRATIONS. FLASH AND COUNTERFLASH ROOF PENETRATIONS. MINIMUM HEIGHT OF FLASHING IS EIGHT (8) INCHES ABOVE ROOF.
- 5. ALL HVAC WORK TO BE PER SMACNA AND ALL APPLICABLE CODES.
- 6. ALL DUCTS SHALL BE MOUNTED HIGH AS POSSIBLE AGAINST BOTTOM OF JOISTS EXCEPT AS REQUIRED TO AVOID CONFLICTS WITH INTERSECTING DUCTS. DIAGONALLY OFFSET DUCTS IMMEDIATELY BEFORE AND AFTER PASSING UNDER INTERSECTING DUCTS OR LARGE STRUCTURAL MEMBERS TO MAINTAIN DUCT TIGHT TO STRUCTURE.
- 7. PROVIDE TURNING VANES AT ALL ELBOWS GREATER THAN 45 DEGREES. TURNING VANES SHALL BE DOUBLE THICKNESS.
- 8. MAXIMUM 4'-0" FLEX DUCT ON ALL DIFFUSER RUNOUTS. CONNECTIONS TO FLEX DUCT SHALL BE SMOOTH ON AIRFLOW SIDE. 9. PROVIDE INDICATED BRANCH TAKEOFF AND DAMPER AT EACH CONNECTION OF ROUND
- BRANCH DUCTS TO A RECTANGULAR DUCT. 10. PROVIDE FLEXIBLE CONNECTIONS AND TRANSITIONS ON DUCT INLET AND OUTLET CONNECTIONS TO ALL ROOF TOP UNITS, EXHAUST FANS, AIR BOXES, ETC. WHERE
- EQUIPMENT HAS ROTATING PARTS (MOTORS, ETC.). 11. SEE ARCH REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DEVICES.
- 2. WHERE DUCT LINER IS INDICATED, THE DUCT SIZES ON THE DRAWINGS SHALL BE INCREASED IN SIZE TO ACCOMMODATE LINER THICKNESS. SIZES SHOWN ON THE DRAWINGS ARE THE REQUIRED CLEAR INSIDE DIMENSIONS OF THE LINER WHERE USED.
- 13. INTERNALLY INSULATE ALL RECTANGULAR SUPPLY AND RETURN AIR DUCTS. ALL BRANCH DUCTS TO BE EXTERNALLY INSULATED WITH FIBERGLASS DUCT INSULATION WRAP UNLESS OTHERWISE INDICATED.
- 14. THE DUCT SIZES ON THE DRAWINGS SHALL BE INCREASED IN SIZE TO ACCOMMODATE LINER THICKNESS. SIZES SHOWN ON THE DRAWINGS ARE THE REQUIRED CLEAR INSIDE DIMENSIONS OF THE LINER WHERE USED.
- 15. PROVIDE ALUMINUM JACKETS ON ALL EXTERIOR PIPE INSULATION. 16. INSTALL SCHEDULED FILTERS AT THE COMPLETION OF CONSTRUCTION. USE ONE SET OF SCHEDULED FILTERS DURING CONSTRUCTION AS INDICATED ON THE SCHEDULE. INSTALL FINAL SET PRIOR TO TEST AND BALANCE.
- 17. BALANCE AIR SYSTEM TO PROVIDE INDICATED AIR FLOWS. SEE SPECIFICATIONS FOR OTHER TEST AND BALANCE REQUIREMENTS. SUBMIT FINAL BALANCE OF AIR SYSTEMS (FLOW AND TEMPERATURE) FOR REVIEW.
- 18. MECHANICAL CONTRACTOR (MC) SHALL COORDINATE AND VERIFY THE FOLLOWING WITH THE ELECTRICAL CONTRACTOR (EC) PRIOR TO BID: ALL STARTERS: FURNISHED BY MC, INSTALLED BY EC.
  - DUCT SMOKE DETECTORS: FURNISHED BY EC, INSTALLED BY EC. ELECTRIC DAMPER ACTUATORS: FURNISHED BY MC, INSTALLED BY MC. DISCONNECTS WHERE NOT FURNISHED WITH EQUIPMENT: FURNISHED BY EC INSTALLED BY EC. WHERE FURNISHED WITH EQUIPMENT: FURNISHED BY MC,
- INSTALLED BY EC. 19. INSTALL SMOKE DETECTORS IN SUPPLY OR RETURN DAMPERS WHERE INDICATED ON
- PLANS. 20. COORDINATE FINAL PLACEMENT OF ALL THERMOSTATS WITH ARCHITECT AND
- ENGINEER. ANY THERMOSTAT THAT IS REQUIRED TO BE MOUNTED ON AN EXTERIOR WALL SHALL BE MOUNTED ON AN INSULATED PAD. 21. PROVIDE HVAC CONDENSATE DRAIN. INSTALL WITH TRAP AND AIR VENT PER CODE AND
- IS INDICATED AND FULL SIZE OF DRAIN PAN CONNECTION. 22. PROVIDE AUXILIARY DRAIN PAN FOR COOLING COILS ABOVE THE CEILING. PROVIDE MOISTURE SENSOR IN PAN TO STOP UNIT AND SIGNAL ALARM.

# **CONTROL NOTES:**

REFER TO GENERAL NOTES ON DRAWING.

- 1. ALL CONTROL DEVICES SHALL BE BY ONE MANUFACTURER. ALL CONTROL SET POINTS SHALL BE ADJUSTABLE. THERMOSTATS AND WIRING FOR FANS SHALL BE INCLUDED
- WITH CONTROLS. 2. THE CONTROL SYSTEM SHALL BE SUITABLE FOR THE LOCATIONS SHOWN ON THE
- PLANS.
- 3. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 4. PROVIDE LOCKABLE COVERS AND GUARDS FOR ALL THERMOSTATS AND SENSORS.
- 5. ALL THERMOSTATS, SENSORS, AND OTHER EXPOSED CONTROL DEVICE LOCATIONS
- SHALL BE COORDINATED WITH THE ENGINEER AND ARCHITECT BEFORE ROUGHING IN. 6. ALL CONTROLS SHALL BE TESTED AND CALIBRATED BEFORE TESTING AND BALANCING
- IS PERFORMED. 7. PROVIDE LAMINATED TAGS AT ALL CONTROL DEVICES INDICATING EQUIPMENT BEING
- CONTROLLED. 8. INTERLOCK CONTROLS WITH THE ELECTRICAL FIRE AND SMOKE ALARM SYSTEM
- COORDINATE WITH THE ELECTRICAL SYSTEMS CONTRACTOR FOR INTERFACE REQUIREMENTS OF THE SYSTEMS.
- 9. PROVIDE AUXILIARY CONTACTORS AS REQUIRED FOR OPERATIONS OF CONTROLSEQUENCES.
- 10. ALL WIRING SHALL BE IN CONDUIT. REFER TO SPECIFICATIONS.

11. PROVIDE MONITORING AND CONTROL OF HEAT TAPE

ABBREVIATION OR SYMBOL	DESCRIPTION	ABBREVIATION OR SYMBOL	DESCRIPTION
AD	AIR DOOR	r7777777	
AH	AIR HANDLING UNIT		NEW EQUIPMENT
A.F.F.	ABOVE FINISHED FLOOR		
AV	ATTIC VENT		
В	BOILER	CS	CEILING SUPPLY
BHP	BRAKE HORSE POWER	DG	DOOR GRILLE
BTUH CFM	BRITISH THERMAL UNIT PER HOUR CUBIC FEET PER MINUTE	CE	CEILING EXHAUST
CH	CHILLER	LSD	LINEAR SLOT DIFFUSER
CV	CONSTANT VOLUME	CR	CEILING RETURN
CVB	CONSTANT VOLUME TERMINAL	TR	TRANSFER GRILLE
DB	DRY BULB TEMPERATURE	SWE	SIDE WALL EXHAUST
DP	DIFFERENTIAL PRESSURE	SWS	SIDE WALL SUPPLY
EA	EXHAUST AIR	SWR	SIDE WALL RETURN
EAT	ENTERING AIR TEMPERATURE OF THE COIL		
EF	EXHAUST FAN		
ERU		$\frac{\text{CS-1}}{150} \stackrel{\frown}{\longrightarrow} \text{MARK}$	AIR DEVICE DESIGNATION
ESP EUH	EXTERNAL STATIC PRESSURE ELECTRIC UNIT HEATER	(CFM)	
EWT	ENTERING WATER TEMPERATURE		
FAS	FACILITY AUTOMATION SYSTEM		CEILING SUPPLY DIFFUSER
FCU	FAN COIL UNIT		GEIEING SOFTET DIT OSEN
FO	FLAT OVAL		
FPMB	FAN POWERED MIXING TERMINAL		CEILING RETURN GRILLE
FPM	FEET PER MINUTE (VELOCITY)		
GH	GRAVITY HOOD		
GPM	GALLONS PER MINUTE		CEILING EXHAUST GRILLE
GUH	GAS UNIT HEATER		
HP	HORSEPOWER	l IIII IIII IIII IIII IIII IIII IIII I	
KW	KILOWATT		LINEAR SLOT DIFFUSER
L	LOUVER LEAVING AIR TEMPERATURE OF THE COIL		
LAT LBS	POUNDS		
LWT			GRILLE OR REGISTER ON BOTTOM
MAU	MAKE-UP AIR UNIT		OF DUCTWORK
MAX.	MAXIMUM		
MBH	1000 BTUH		
MCA	MINIMUM CIRCUIT AMPACITY		SIDEWALL SUPPLY/RETURN
MIN.	MINIMUM		
MHP	MOTOR HORSE POWER	18/24	DUCT SIZE (FOR DOUBLE LINE DUCT)
MOCP	MAXIMUM OVER CURRENT PROTECTION		
N/A			SUPPLY DUCT UP
NC N.C.	NOISE CRITERIA NORMALLY CLOSED		
NIC	NORMALLY CLOSED NOT IN CONTRACT		SUPPLY DUCT DOWN
N.O.	NORMALLY OPEN		SUPER DOCT DOWN
NK.	NECK		
NTS	NOT TO SCALE		RETURN OR EXHAUST DUCT UP
OBD	OPPOSED BLADE DAMPER		
OFCI	OWNER FURNISHED/CONTRACTOR		RETURN OR EXHAUST DUCT DOWN
OSA	INSTALLED OUTSIDE AIR		
P	PUMP		
PBD	PARALLEL BLADE DAMPER		
PDU	POOL DEHUMIDIFIER UNIT		FLEXIBLE DUCT CONNECTION
PRV	PRESSURE REDUCING VALVE	$\langle F \rangle$ $\langle S \rangle$	
PSF	POUNDS PER SQUARE FOOT		
PSI	POUNDS PER SQUARE INCH		(1) FIRE DAMPER, (2) COMBINATION FIRE/SMOKE DAMPER, (3) SMOKE DAMPER
PSIG	POUNDS PER SQUARE INCH GAUGE		
RA		$\langle 0 \rangle$	
RC RF	REMOTE CONDENSER		(1) OPPOSED BLADE DAMPER,
RH	RELIEF FAN RELATIVE HUMIDITY		(2) PARALLEL BLADE DAMPER,
RHP	RADIANT HEATING PANEL		(3) SMOKE DETECTOR
RPM	REVOLUTION PER MINUTE		
RTH	RADIANT TUBE HEATER		THERMOSTAT OR SENSOR
RTU	ROOF TOP (AIR CONDITIONING) UNIT	<b>(C)</b>	CO2 SENSOR
SA	SUPPLY AIR		COZ SENSON
SC	SENSIBLE CAPACITY	2	KEYED NOTE
SP	STATIC PRESSURE	/ ~	
SPEC.	SPECIFICATION		
TC			
TSP T'STAT	TOTAL STATIC PRESSURE		
TSTAT TYP.	THERMOSTAT TYPICAL		
UH	UNIT HEATER		
VAV	VARIABLE AIR VOLUME		
VAVB	VARIABLE AIR VOLUME TERMINAL		
VSD	VARIABLE SPEED (FREQUENCY) DRIVE		
WB	WET BULB TEMPERATURE		
WG	WATER GAUGE		
1	FEET		
"	INCHES		
Ø	ROUND DUCT		
X	DETAIL/SECTION DESIGNATION		
X	DETAIL/DEDITION DEDITION		

\* NOT ALL SYMBOLS MAY APPLY TO THIS PROJECT

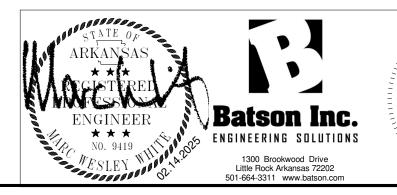
## **HVAC LEGEND**

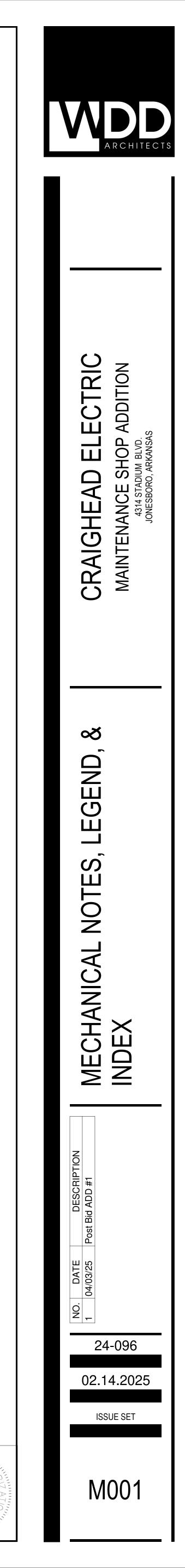
ABBREVIATION OR SYMBOL	DESCRIPTION	
CD		CONDENSATE DRAIN
HWR-	(	HOT WATER RETURN
HWS-	—- <u>`</u>	HOT WATER SUPPLY
RS/RL		REFRIGERANT SUCTION /
MUP		MAKE-UP WATER
<u></u>		BALL VALVE
·([])		BUTTERFLY VALVE
→  1\	— <b>`</b>	CHECK VALVE
Ļ	—1	GATE VALVE
\ <b>T</b>	— <b>\</b>	GLOBE VALVE
₹	— <b>`</b>	NEEDLE VALVE
	— <b>`</b>	PLUG VALVE
Ļ	— <b>\</b>	PRESSURE REGULATING
, F <sup>2</sup> / <sub>↓</sub>		RELIEF VALVE
[S]	<u> </u>	SOLENOID VALVE
,	i	VALVE IN RISER
	<u> </u>	PIPE UNION
` Ţ		AUTO AIR VENT
<u> </u>		MANUAL AIR VENT
		ECCENTRIC TRANSITION
<u>↓</u>		CONCENTRIC TRANSITIO
Ø		PRESSURE GAUGE
` 		STEAM TRAP
·		STRAINER (Y-TYPE)
T		TEMPERATURE & PRESS
		THERMOMETER
	<u> </u>	DIRECTION OF FLOW
		DIRECTION OF FLOW
	]	FLEXIBLE PIPE CONNECT
		FLEXIBLE PIPE CONNECT
)	— <b>`</b>	FLEXIBLE PIPE CONNECT
C+	— <b>`</b>	PIPE DOWN
}+∵+		TEE DOWN
C+	— <b>`</b>	PIPE UP
<u>}</u> −−−+⊖+−−−−		TEE UP
<u>}</u> −−−+ <del>+</del> +		BRANCH - BOTTOM OF PI
ب ب م		BRANCH - TOP OF PIPE
یلہ + +_		ELBOW
ىتر بىن		TEE
х+		45° ELBOW
~		CAP
}	h	END OF LINE CLEANOUT

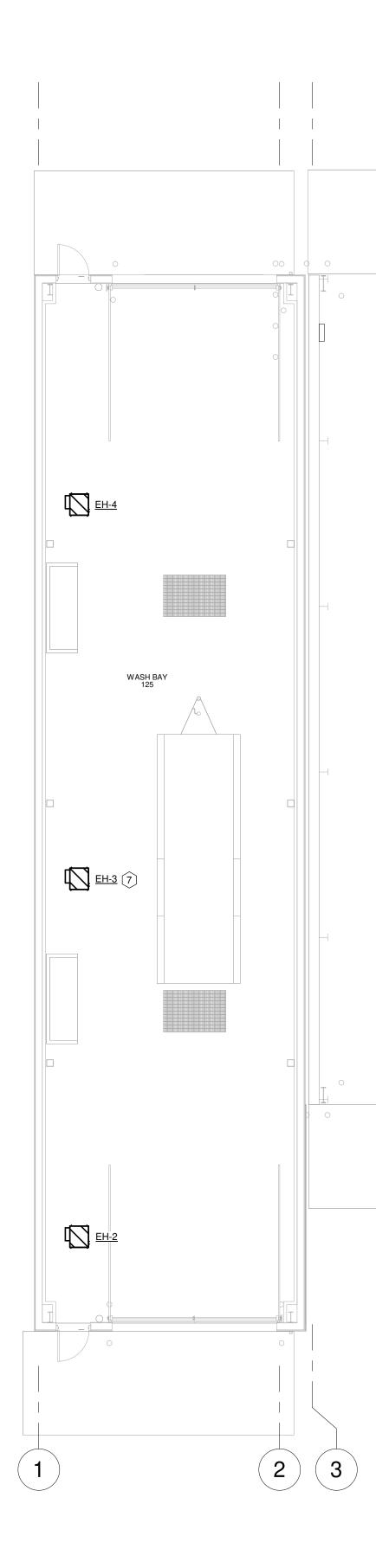
## DESCRIPTION CONDENSATE DRAIN HOT WATER RETURN HOT WATER SUPPLY **REFRIGERANT SUCTION / LIQUID** MAKE-UP WATER BALL VALVE BUTTERFLY VALVE CHECK VALVE GATE VALVE GLOBE VALVE NEEDLE VALVE PLUG VALVE PRESSURE REGULATING VALVE RELIEF VALVE SOLENOID VALVE VALVE IN RISER PIPE UNION AUTO AIR VENT MANUAL AIR VENT ECCENTRIC TRANSITION CONCENTRIC TRANSITION PRESSURE GAUGE STEAM TRAP STRAINER (Y-TYPE) **TEMPERATURE & PRESSURE PLUG** THERMOMETER DIRECTION OF FLOW DIRECTION OF FLOW FLEXIBLE PIPE CONNECTION FLEXIBLE PIPE CONNECTION FLEXIBLE PIPE CONNECTION PIPE DOWN TEE DOWN PIPE UP TEE UP BRANCH - BOTTOM OF PIPE BRANCH - TOP OF PIPE ELBOW TEE 45° ELBOW

# **MECHANICAL DRAWING INDEX**

M001	MECHANICAL NOTES, LEGEND, & INDEX
M101	HVAC FLOOR PLAN
M102	MEZZANINE MECHANICAL PLANS
M201	MECHANICAL PIPING FLOOR PLAN
M301	MECHANICAL SECTIONS
M402	MECHANICAL DETAILS
M501	MECHANICAL SCHEDULES







EXISTING TRUCK SHED X134

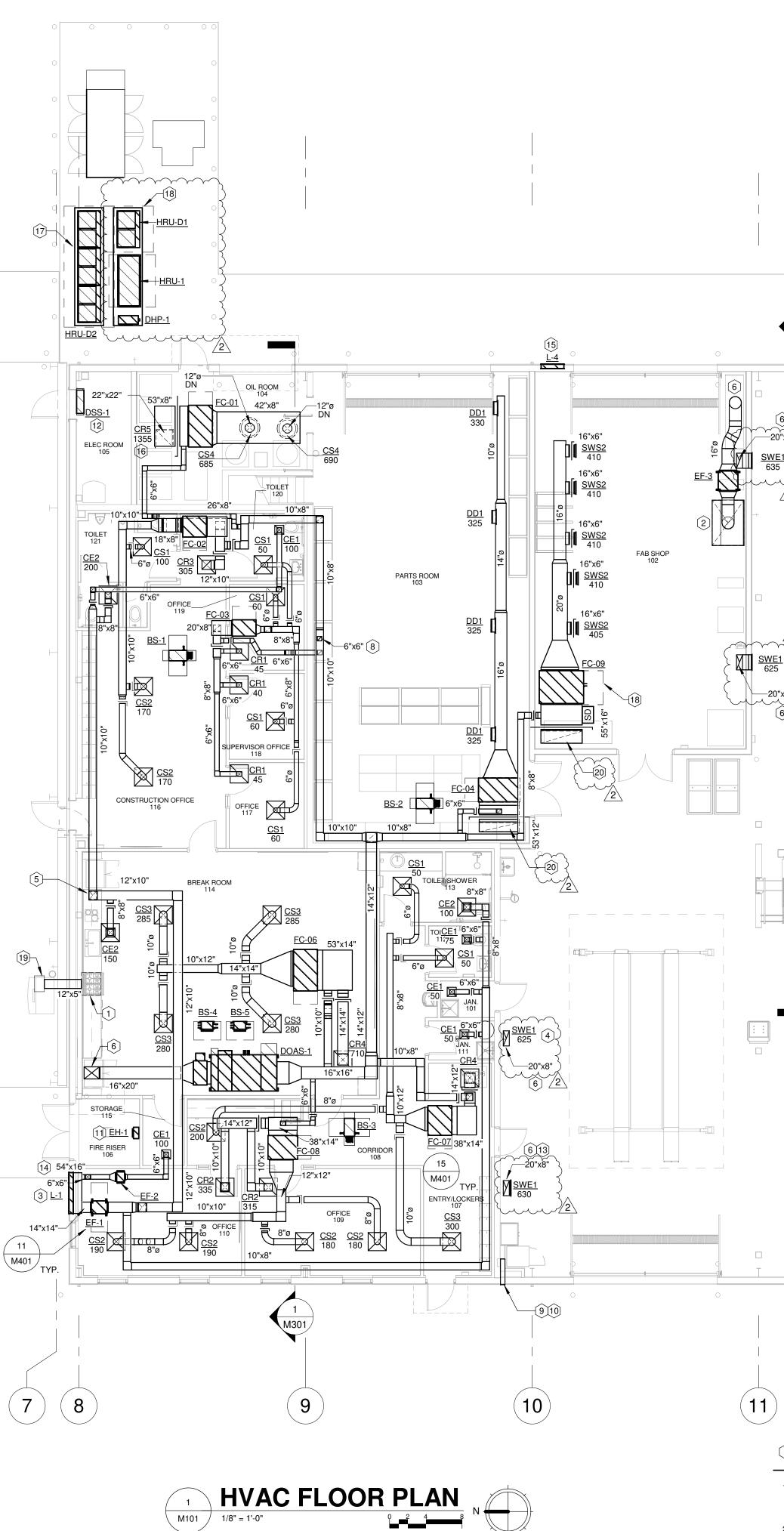
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## 16 RETURN DUCT RISES FROM GRILLE TO STUB INTO BOTTOM OF LINED PLENUM. 17 OUTDOOR UNIT MOUNTED ON 4" CONCRETE HOUSEKEEPING PAD ABOVE EQUIPMENT YARD CONCRETE PAD. PAD TO EXTEND 4" BEYOND MECHANICAL EQUIPMENT ON ALL SIDES WITH CONSTRUCTION PER STRUCTURAL. (TYPICAL) 18 MANUFACTURER'S REQUIRED CLEARANCE. (TYPICAL) 2 19 WALL CAP. 20 TERMINATE RETURN DUCT WITH DOWN-TURNED ELBOW. COVER OPENING WITH EXPANDED WIRE MESH.

9 ALL ALUMINUM DRYER VENT WALL CAP WITH BACKDRAFT DAMPER.

11 BOTTOM OF UNIT HEATER MOUNTED 18" A.F.F.

15 BOTTOM OF LOUVER MOUNTED 18" A.F.F.

12 DSS-1 MOUNTED ABOVE DOOR.

10 6" ALL ALLIMINUM RESIDENTIAL DRYER VENT INSTALLED AS PER SECTION 504 OF THE "ARKANSAS MECHANICAL CODE".

13 EXHAUST DUCT TO BE SECURED TO WALL A MINIMUM OF 3 LOCATIONS PER DETAIL 19/M401. (TYPICAL)

14 EXHAUST DUCTS TO CONNECT TO LOUVER WITH SHEET METAL PLENUM.

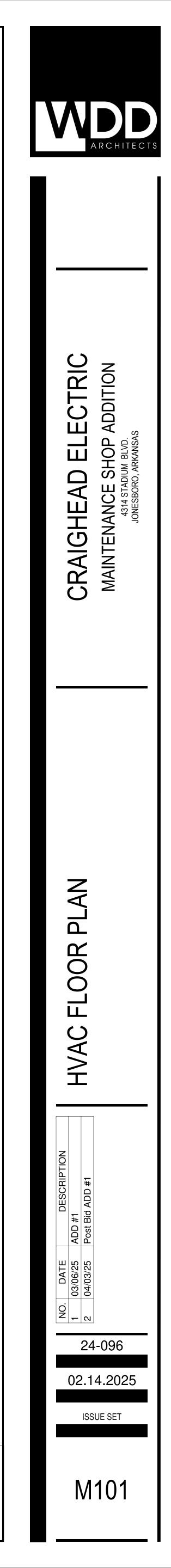


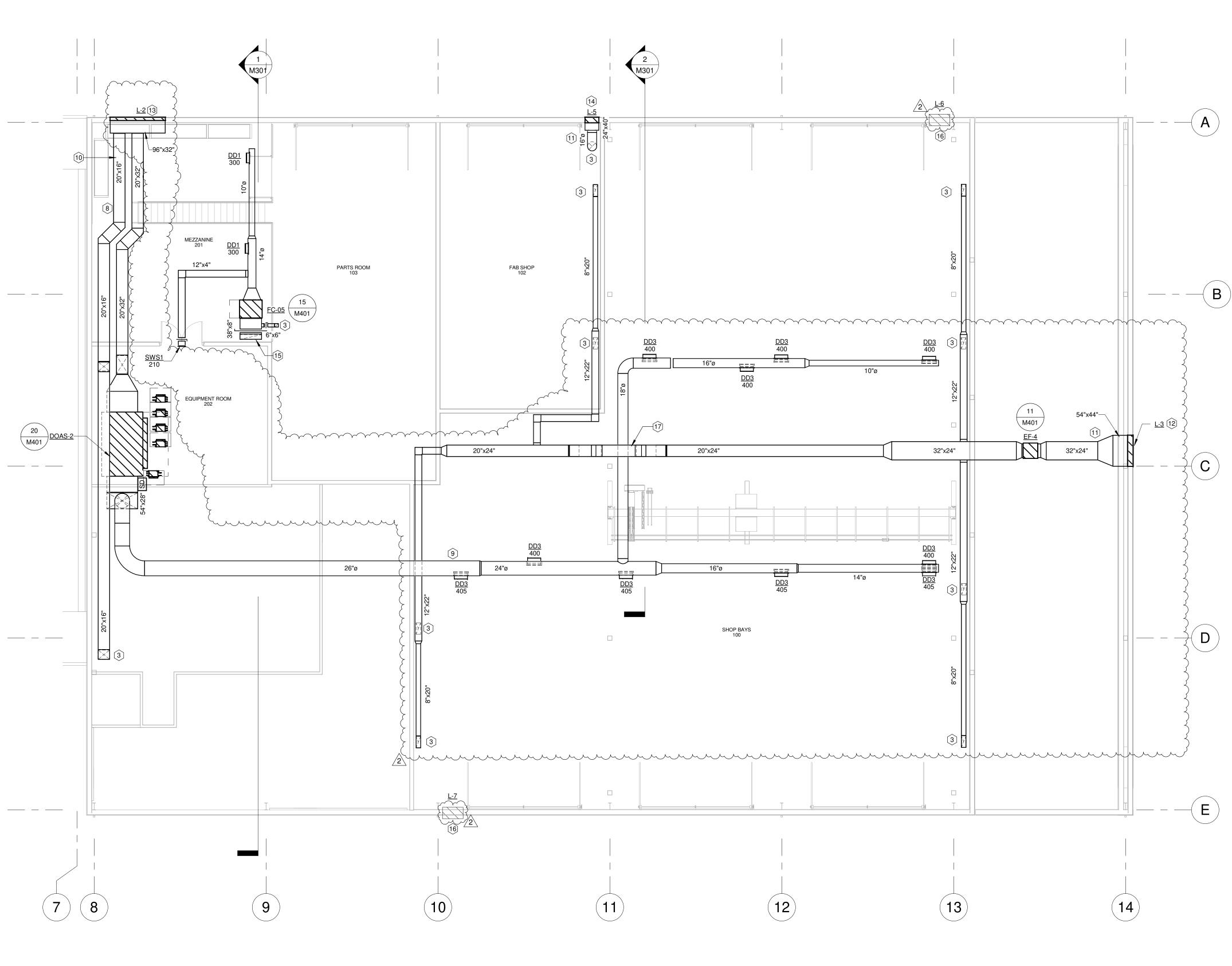
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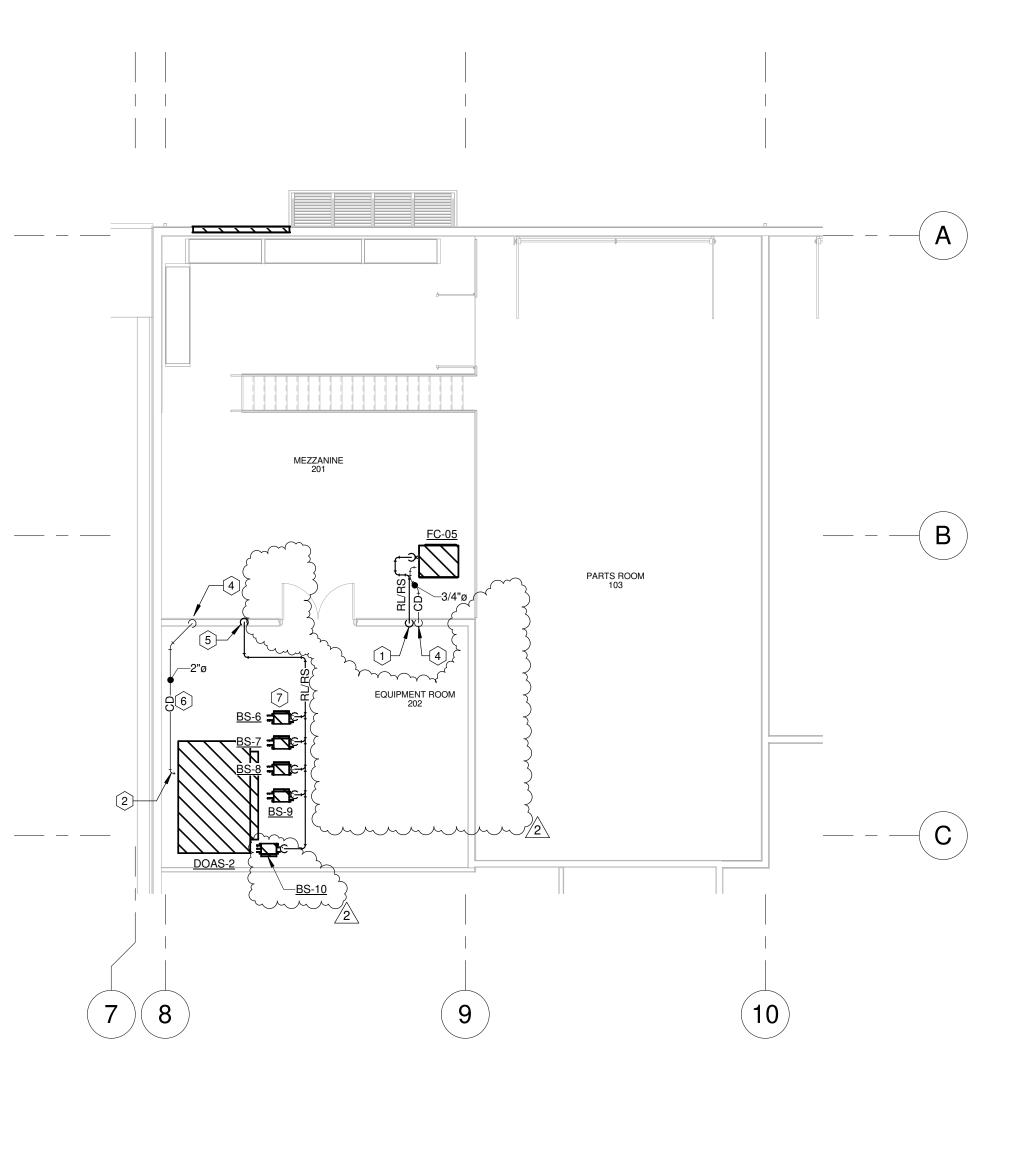
-( E )

\_\_\_\_\_ COVERED STORAGE / FUTURE BAY 122 SHOP BAYS 100 ° □ − − ( D ) <u>SWE</u> 630 mm (13) **12**) (14)  $\overline{\phantom{a}}$  $\searrow$ **KEYED NOTES:** 1 GREENHECK MODEL GRRS FIRE READY HOOD WITH INTEGRAL FAN, REAR DISCHARGE, FINISHED TOP AND WALL CAP. LOCATE HOOD PER ARCHITECT. 2 5' X 3.5' STAINLESS STEEL EXHAUST HOOD OVER PLASMA CUTTER. SEE DETAIL 17/M401. 3 BOTTOM OF LOUVER MOUNTED 13'-6" A.F.F. 4 INSTALL BOTTOM OF GRILLE 12" A.F.F. WITHIN SHOP BAY. (TYPICAL OF 8) 5 DUCT DROPS INTO CHASE ABOVE MILLWORK. 6 DUCT RISES TO MEZZANINE LEVEL ABOVE. SEE 1/M102 FOR CONTINUATION. PROVIDE MANUAL BALANCING DAMPER IN RISER. 7 UNIT HEATER MOUNTED 9'-0" A.F.F. (TYPICAL OF 3) 8 DUCT RISES TO FC-05. SEE 1/M102 FOR CONTINUATION.





1 M102 1/8" = 1'-0" M102 1/8" = 1'-0" N 





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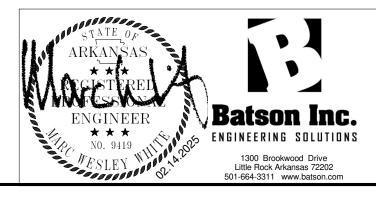
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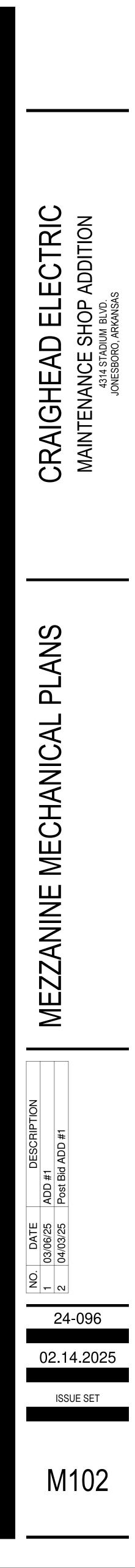
## **KEYED NOTES:**

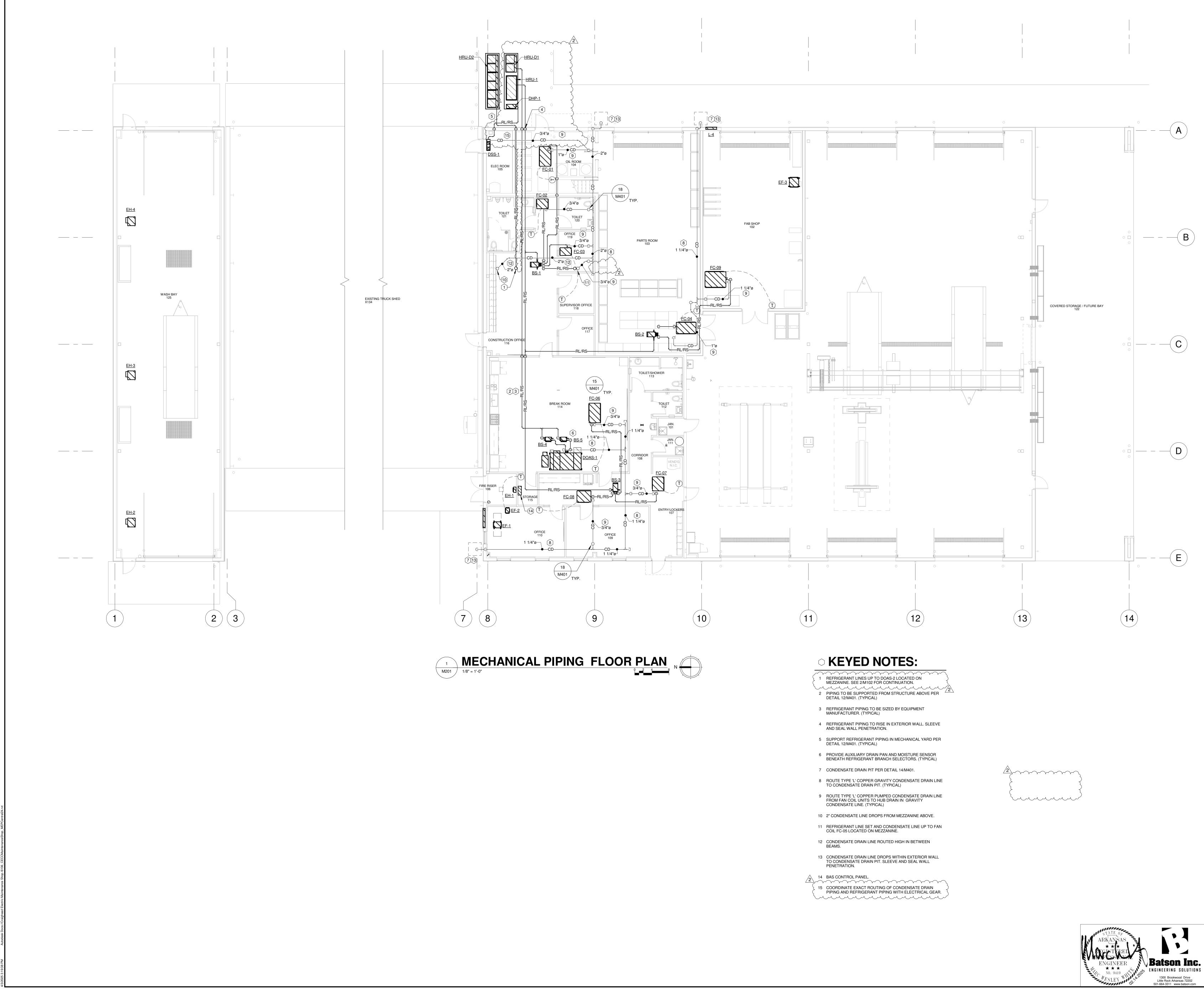
- 1 REFRIGERANT LINE SET RISE UP FROM BRANCH SELECTOR BS-1 BELOW.
- 2 PROVIDE CONDENSATE TRAP PER DETAIL 13/M401.
- 3 DUCT DROPS TO FLOOR BELOW. SEE 1/M101 FOR CONTINUATION.
- 4 CONDENSATE LINE DROPS IN WALL TO PLENUM BELOW. SEE 1/M201 FOR CONTINUATION.
- 5 REFRIGERANT LINE SETS RISE IN WALL FROM PLENUM BELOW. SEE 1/M201 FOR CONTINUATION.
- 6 CONDENSATE DRAIN LINE SUPPORTED OFF EQUIPMENT ROOM FLOOR PER DETAIL 12/M401.
- 7 BRANCH SELECTOR MOUNTED HIGH IN SPACE. SUPPORT FROM ROOF STRUCTURE SIMILAR TO FAN COILS AND EXHAUST FANS. (TYPICAL)
- 8 OUTSIDE AIR INTAKE DUCTS TO BE INSULATED WITH 2" FIBERGLASS WRAP.
- 9 SUPPLY AIR DUCTS FROM DOAS-2 AND 3 TO BE DOUBLE WALL LINED SHEET METAL.
- 10 OUTSIDE AIR INTAKE DUCTS TO CONNECT TO LOUVER L-2 WITH LINED SHEET METAL PLENUM.
- 11 EXHAUST DUCT TO CONNECT TO LOUVER WITH SHEET METAL PLENUM. 12 BOTTOM OF LOUVER MOUNTED 26'-3" A.F.F.
- 13 BOTTOM OF LOUVER MOUNTED 23'-6"" A.F.F.
- 14 BOTTOM OF LOUVER MOUNTED 23'-2" A.F.F.
- 15 TERMINATE RETURN DUCT WITH DOWN-TURNED ELBOW. COVER OPENING WITH EXPANDED WIRE MESH.
- 16 TOP OF LOUVER MOUNTED 26'-0" A.F.F.
- 17 EXHAUST DUCT RISES ABOVE 18"Ø OUTSIDE SUPPLY AIR

   DUCT ABOVE CRANE.





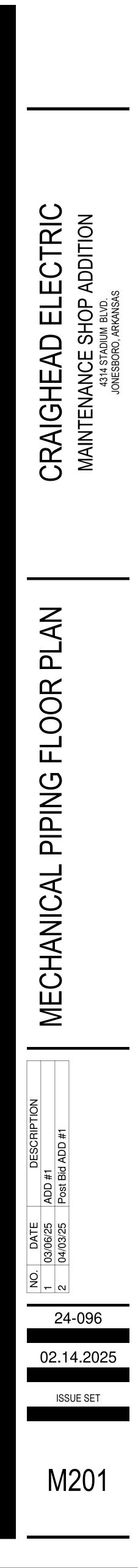


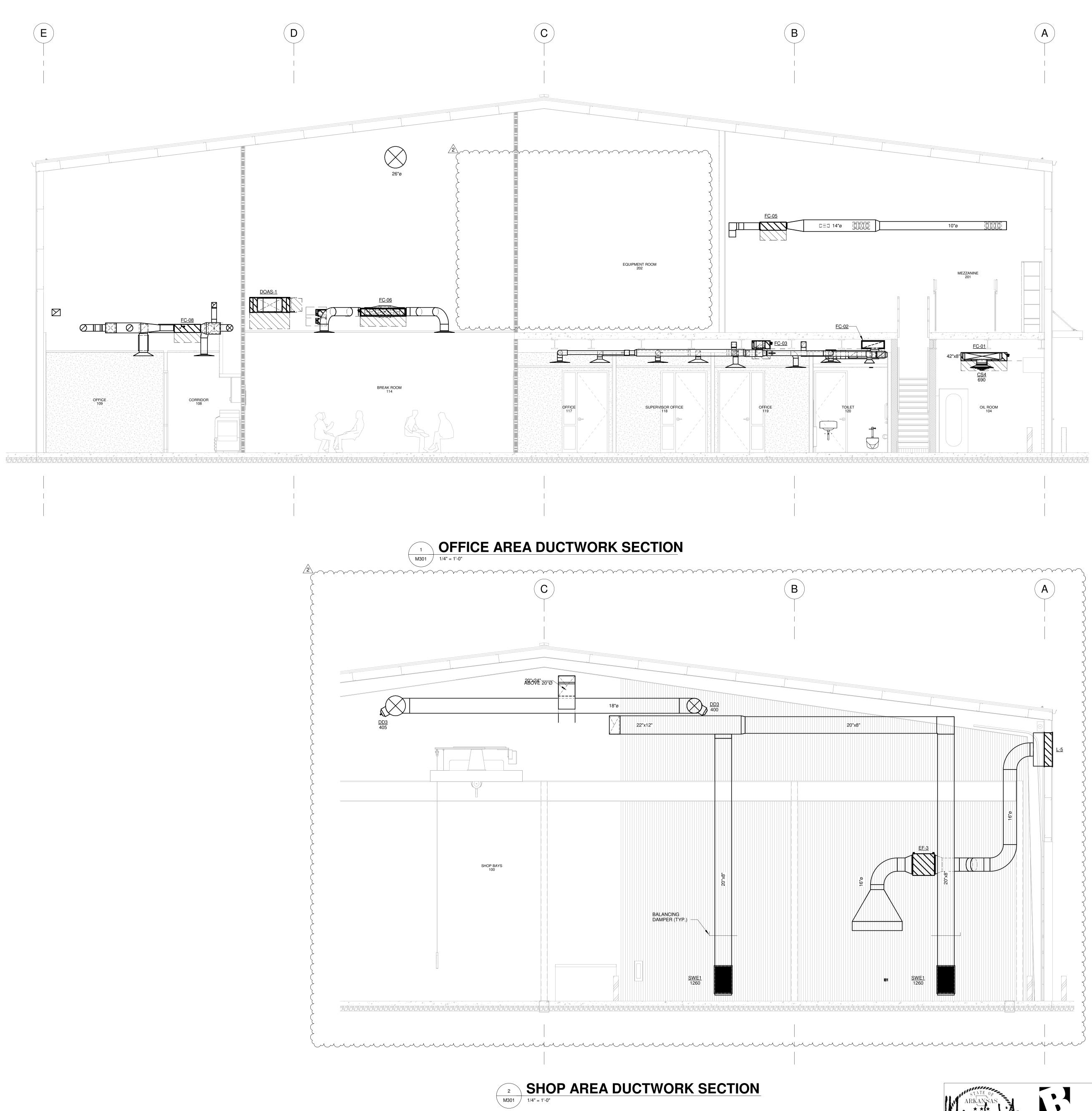


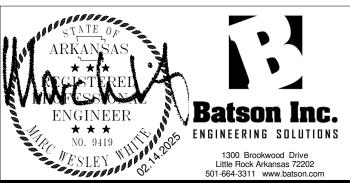






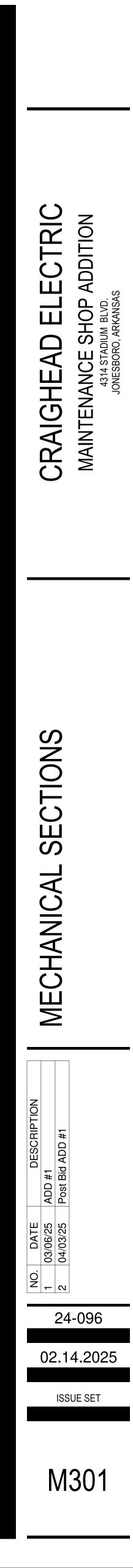


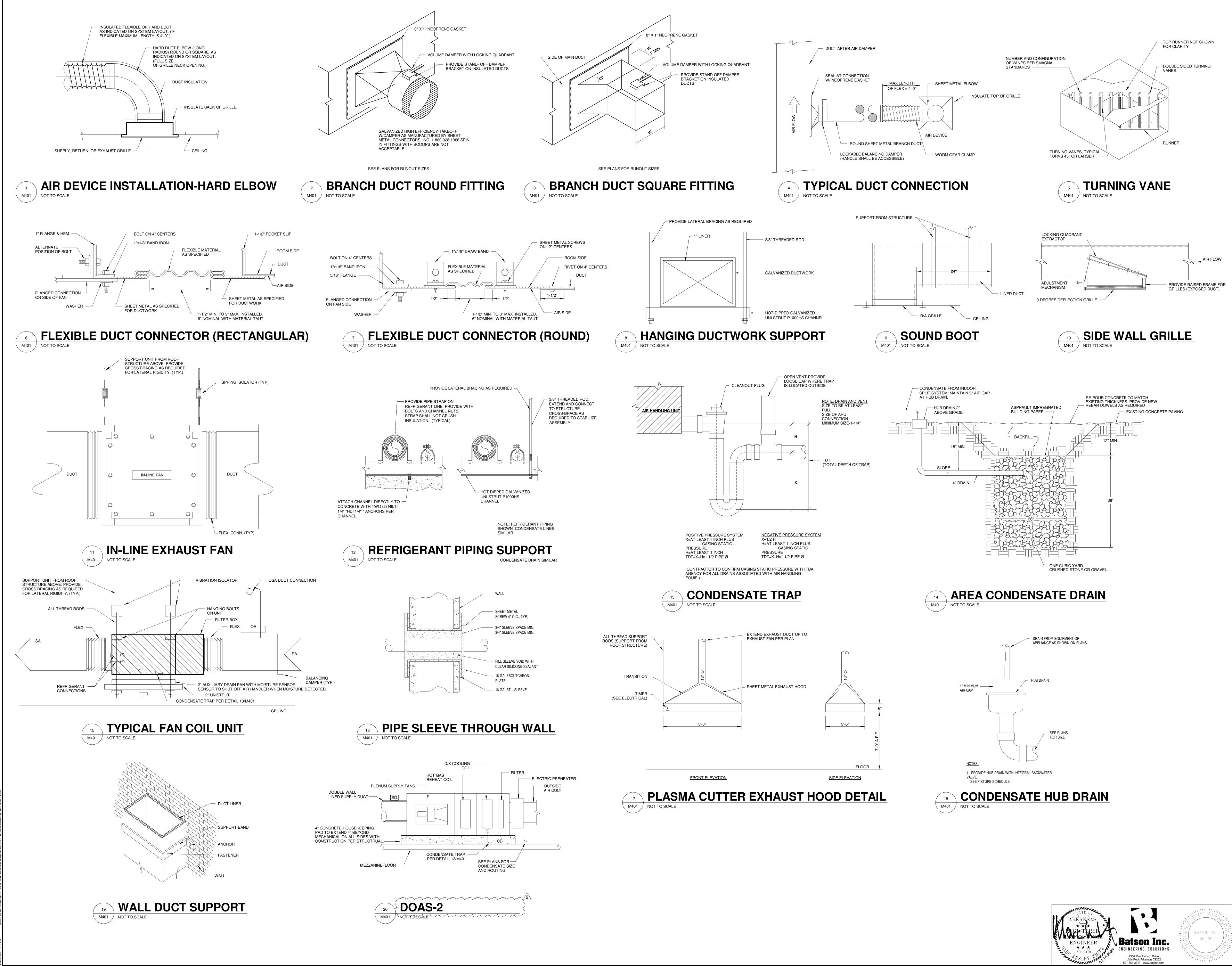








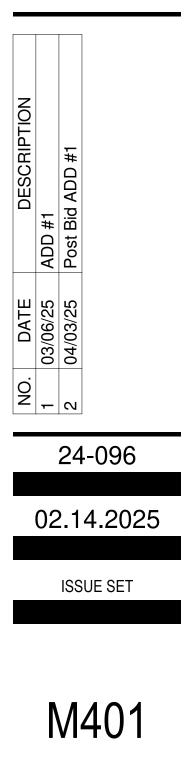


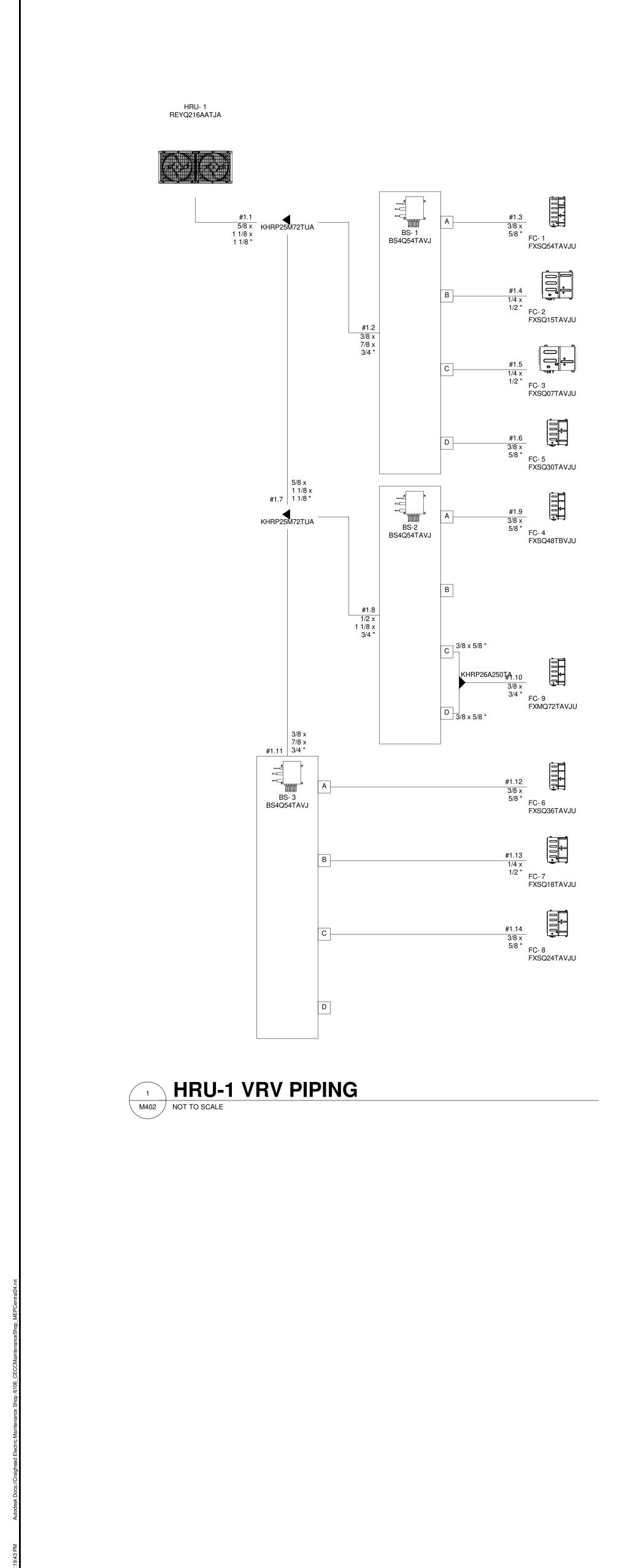




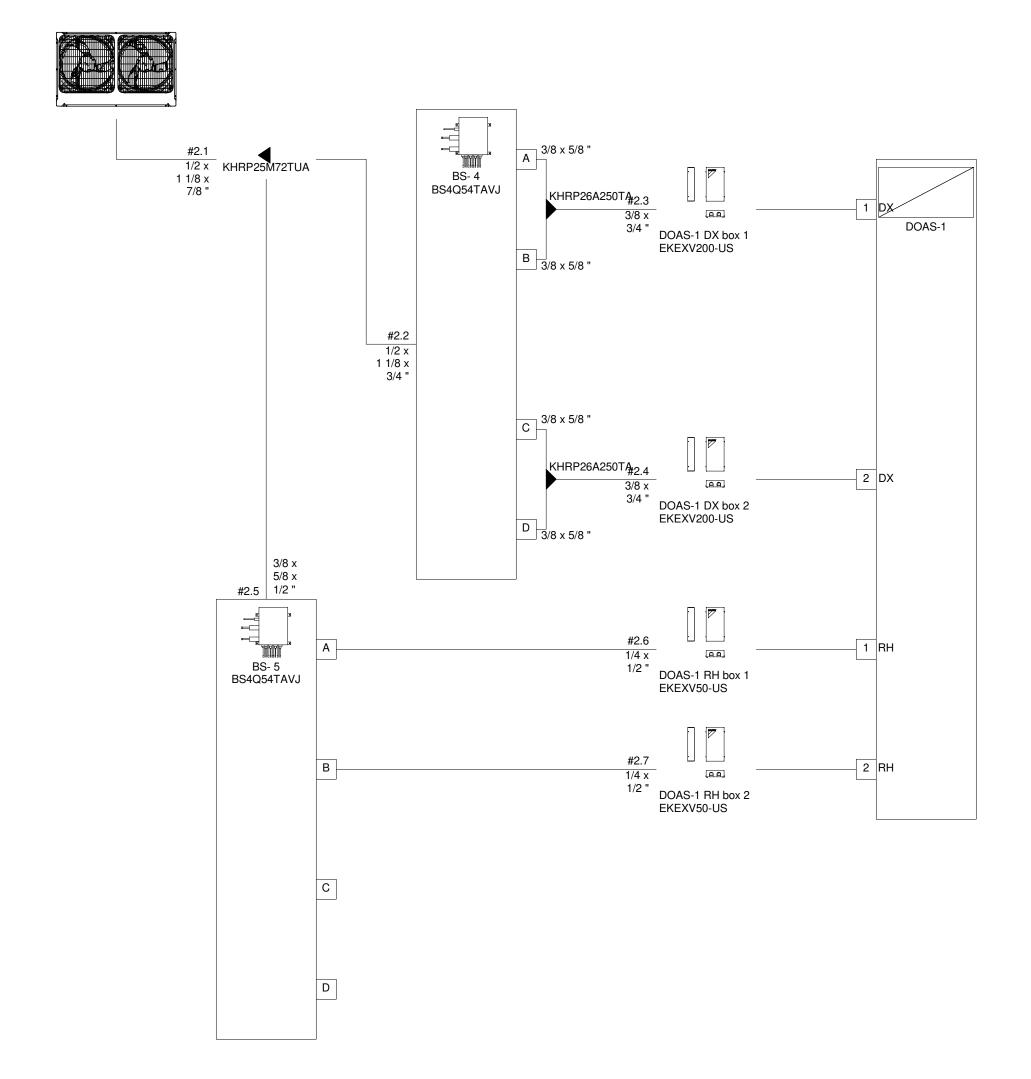




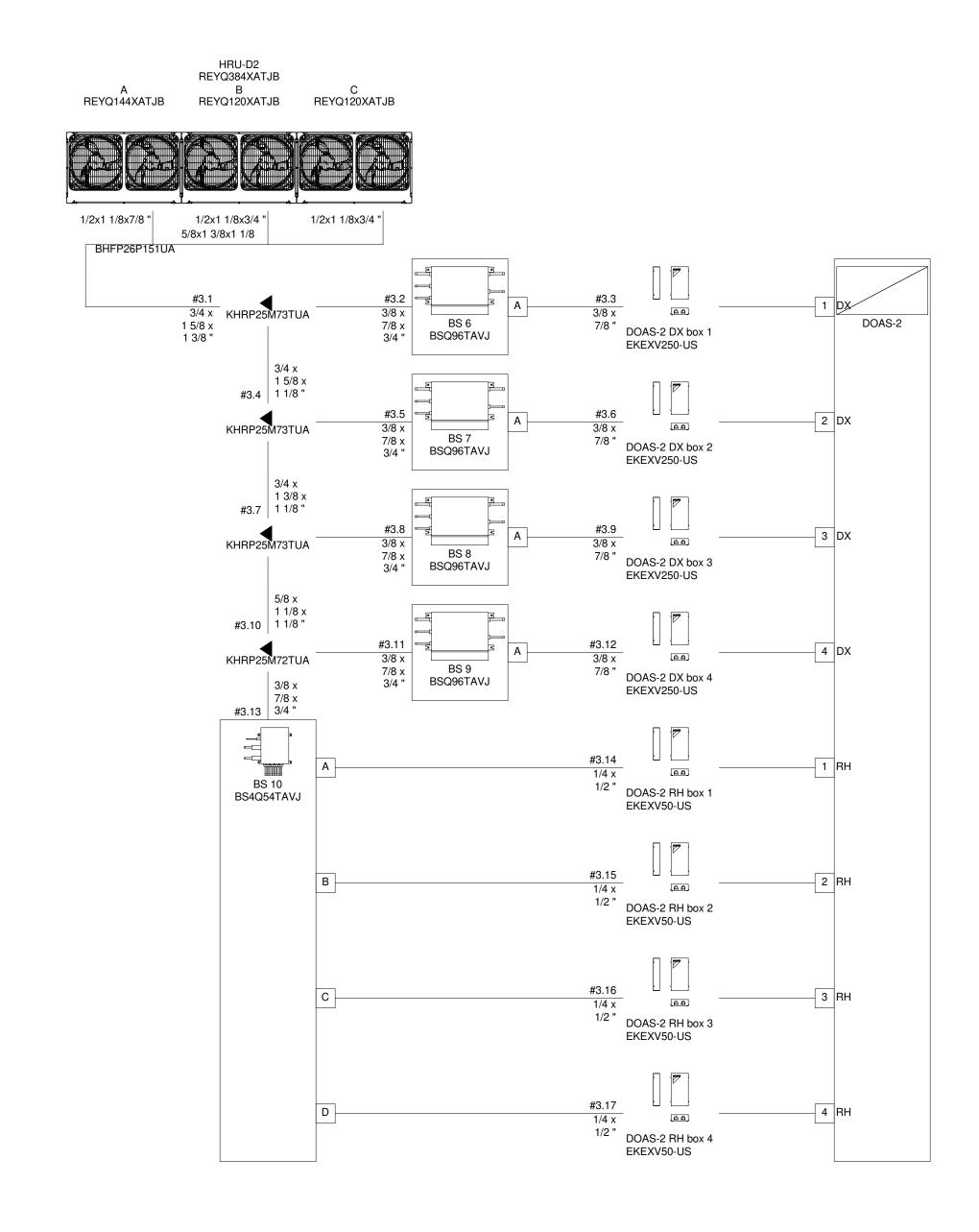




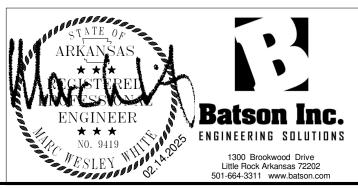






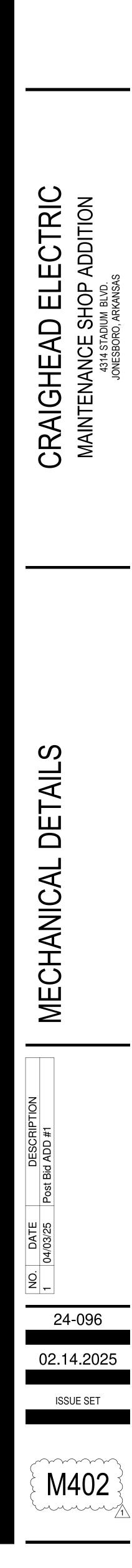














												ELE	CTRICAL													
NOMI MARK TONN		COOLIN	G CAPACITY		IG CAPACITY	REFRIGERANT CHAR	<sup>₄</sup> ⊏ CONNECTION — RATIO	VOLTAGE /		MCA			MOP			RLA	MANUFACTUR			EIGHT			FICIENCY			REMARKS
		BTU/h	AMBIENT DESIGN (°F DB)	BTU/H	AMBIENT DESIG (°F DB / WB)	N FACTORY CHARGE (LE		PHASE	MOD #1	MOD #2	MOD #3	TOTAL MOI	#1 MOD #2 N	D #3 TOTAL	MOD #1 MC	D #2 MOD #3 TO			-	(LBS)	EER	IEER	COP47	COP17	SCHE	
IRU- 1 18	AIR COOLED HEAT RECOVERY (1)	1) 210,157	100	173,914	10.0 / 8.0	25.79	141	208V / 3	67.2			67.2 70	0	70.0	40.0	40	0 DAIKIN	REYQ216A	ATJA	956.8	11	20.5	3.25	2.05	21.9	
HRU-D1 12	AIR COOLED HEAT RECOVERY (1)	140,838	100	137,685	10.0 / 8.0	25.79	100	208V / 3	58.3			58.3 70	0	70.0	42.6	42	6 DAIKIN	REYQ144X	АТЈВ	727	11.6	21.6	3.42	2.12	22	
HRU-D2 32	AIR COOLED HEAT RECOVERY (3)	3) 372,618	100	287,936	10.0 / 8.0	77.4	100	208V / 3	58.3	43.0	43.0	144.3 70	0 50.0	50.0 170.0	42.6	8.2 28.2 99	0 DAIKIN	REYQ384X	ATJB 727.0	727.0/727.0	9.9	17.6	3.2	20.6	17	
HRU-D3	NOT USED				<u> </u>							I I										- r - r - r				
ulu	ATED OUTDO	OR AIR	UNIT SCH	IEDUL									uluul	ulul	unda	<u>ulu</u>	<u> </u>									
man and a second		OR AIR	UNIT SCH SERVES	IEDUL CFM	FAN DATA	R (KW) TOTAL CAPACIT (MBH)	COOLIN Y SENSIBLE CA (MBH)		WB LDB/LW		ING DX	HGRH	uluul	ELECTRIC PF	unda					MODEL	REMARKS					
DEDICA	ATED OUTDO			CFM	FAN DATA ESP POWE	(MBH)	Y SENSIBLE CA	PACITY EDB/E		B CAPACITY (MBH)		HGRH		ELECTRIC PF				FLA MA	IUFACTURER OXYGEN 8	MODEL T18IN	REMARKS PROVIDE DAIKIN		 RATION KIT			
DEDICA MARK			SERVES	CFM	FAN DATA ESP POWE	(MBH)	Y SENSIBLE CA (MBH)	PACITY EDB/E	7 54.7/53.	B CAPACITY (MBH)	EDB/LDB	HGRH CAPACITY (BTUH)	COIL EDB/LDB K	ELECTRIC PF	REHEAT RATE ELECTE CONNETION		IT ELECTRICAL DATA	FLA MA								

						FAN DA	ТА		COC	DLING DX			HEATIN	G DX	HGRH COIL	ELECT	RIC PREHEAT	ι ι	INIT ELECTRI	CAL DATA				
MARK		LOCATION	S	SERVES	CFM	ESP F	POWER (KW)	TOTAL CAPA (MBH)		E CAPACITY //BH)	EDB/EWE	B LDB/LWB	CAPACITY (MBH)		PACITY EDB/LD	B KW S	SEAPARATE ELEC CONNETIO	N VOLTS/PH	ASE MCA	MOP	FLA N	IANUFACTURER	MODEL	REMARKS
DOAS-1		BREAKROOM 114		FAB SHOP/ PARTS ROOM	1590	0.75	0.78	127.3	7	72.5	96/77	54.7/53.7	108.2	17/80	43.4 55/80	6	YES	208/1	8.8	15.0	8.6	OXYGEN 8	T18IN	PROVIDE DAIKIN VALVE INTEGRATION KIT
DOAS-2	E	QUIPMENT ROOM 202	SHO	DP BAYS 100	4020	0.75	1.6	372.5	2	210.8	99/78	51.5/51.0	238.8	17/72	79.5 52/70	15	NO	208/3	52.1	60.0	41.7	OXYGEN 8	T48IN	PROVIDE DAIKIN VALVE INTEGRATION KIT
DOAS-3		NOT USED	Ν	NOT USED																				NOT USED
$\mathcal{I}$						in i	, market and the second			und de la construcción de la con										in in				
		REFRIGER		CTED TO:						н		APACITY		ELECTRICA	L			DIMENSIONS	WEIGHT					
MARK	TONNAGE	TYPE	CONDENSING UNIT	ZONE CHANGEOVER DEVICE	AIRFLOW (CFM)	AIRFLOW (CFM)	/ TOTAL BTU/h	SENSIBLE BTU/h	°F DB	T( ∘F WB B	TOTAL BTU/h	EAT v °Fdb	OLTS - PHASE	MCA	MOP	MANUFACTUREF	MODEL	WxHxD	lbs	REMARKS				
FC-01	4.5	MSP Concealed Ducted Unit	HRU-1	Yes	1.377	20	43,675	32,943	72.5		59,932	68	208-230V 1ph	3.3	15	DAIKIN	FXSQ54TAVJU	61.0 x 9.6 x 31.5	104					
FC-02	1.3	MSP Concealed Ducted Unit	HRU-1	Yes	441	320	12,079	8,902	70.5	61 1	16.411	68	208-230V 1ph	1.4	15	DAIKIN	FXSQ15TAVJU	27.6 x 9.6 x 31.5	60					
	0.6	MSP Concealed Ducted Unit	HRU-1	Yes	230	50	6,210	4,684	71.4	61 8	8,308	68	208-230V 1ph	0.8	15	DAIKIN	FXSQ07TAVJU	21.7 x 9.6 x 31.5	55					
FC-03	4	MSP Concealed Ducted Unit	HRU-1	Yes	1307	75	38,834	28,200	71.6	61 5	53,295	68	208-230V 1ph	2.8	15	DAIKIN	FXSQ48TAVJU	55.1 x 9.6 x 31.5	104					
FC-03 FC-04				Yes	812	80	24,226	18,186	71.1	61 3	33,505	68	208-230V 1ph	1.8	15	DAIKIN	FXSQ30TAVJU	39.4 x 9.6 x 31.5	82					
	2.5	MSP Concealed Ducted Unit	HRU-1	res							37,839	68	208-230V 1ph	2.5	15	DAIKIN	FXSQ36TAVJU	55.1 x 9.6 x 31.5	101					
FC-04	2.5	MSP Concealed Ducted Unit MSP Concealed Ducted Unit	HRU-1 HRU-1	Yes	1130	420	29,140	18,221	68.2	61 3	07,000													
FC-04 FC-05	2.5 3 1.5				1130 600	420 320	29,140	18,221	68.2       72.7		19,960	68	208-230V 1ph	1.6	15	DAIKIN	FXSQ18TAVJU	39.4 x 9.6 x 31.5	77					
FC-04 FC-05 FC-06	3	MSP Concealed Ducted Unit	HRU-1	Yes						61 1		68 68	208-230V 1ph 208-230V 1ph	1.6	15	DAIKIN	FXSQ18TAVJU FXSQ24TAVJU	39.4 x 9.6 x 31.5 39.4 x 9.6 x 31.5	77 82					

MARK	CONDENSING UNIT SERVED	VOLTAGE- PHASE	(MCA)	(MOP)	MAX CAPACITY (PER PORT)	DIMENSIONS (WxHxD IN)	MANUFACTURER	MODEL	WEIGHT (lbs) REMARKS
BS-1	HRU- 1	208-230V 1ph	0.4	15	54	14.6 x 11.7 x 18.9	DAIKIN	BS4Q54TAVJ	48.5
BS-2	HRU- 1	208-230V 1ph	0.4	15	54	14.6 x 11.7 x 18.9	DAIKIN	BS4Q54TAVJ	48.5
BS-3	HRU- 1	208-230V 1ph	0.4	15	54	14.6 x 11.7 x 18.9	DAIKIN	BS4Q54TAVJ	48.5
BS-4	HRU- D1	208-230V 1ph	0.4	15	54	14.6 x 11.7 x 18.9	DAIKIN	BS4Q54TAVJ	48.5
BS-5	HRU- D1	208-230V 1ph	0.4	15	54	14.6 x 11.7 x 18.9	DAIKIN	BS4Q54TAVJ	48.5
BS-6	HRU-D2	208-230V 1ph	0.1	15	96	15.3 x 8.1 x 12.8	DAIKIN	BSQ96TAVJ	33.1
BS-7	HRU-D2	208-230V 1ph	0.1	15	96	15.3 x 8.1 x 12.8	DAIKIN	BSQ96TAVJ	33.1
BS-8	HRU-D2	208-230V 1ph	0.1	15	96	15.3 x 8.1 x 12.8	DAIKIN	BSQ96TAVJ	33.1
BS-9	HRU-D2	208-230V 1ph	0.1	15	96	15.3 x 8.1 x 12.8	DAIKIN	BSQ96TAVJ	33.1
BS-10	HRU-D2	208-230V 1ph	0.4		54	14.6 x 11.7 x 18.9	DAIKIN	BS4Q54TAVJ	48.5
BS-11	NOT USED								NOT USED
BS-12	NOT USED								NOT USED
BS-13	NOT USED								NOT USED
BS-14	NOT USED								NOT USED
BS-15	NOT USED								NOT USED

DUCT	LESS S	PLIT SYS	STEM S	SCHEDI	JLE					
MARK	LOCATION	SERVES	SENSIBLE CAPACITY	COOLING CFM HIGH/MED/LOW	HEAT CAPACITY	EI MCA	ECTRI MOP	CAL DATA VOLTS/PHASE	SEER	EEI
	ELEC ROOM			421/222/240		10.25	15	202/1	18.0	11 (

MARK	LOCATIO	ON SERV	ES	SENSIBLE CAPACITY		ING CFM	HEAT CAPACITY		1	ICAL DATA	SEER	EER	MANU	FACTURER	MODEL	REMARKS
DSS-1/DHP-1	ELEC ROO 105/MECH Y		M 105	8,800 BTUH		322/249	9,400 BTUH	12.35	15	208/1	18.0	11.0		DAIKIN	FTX08BXVJU-RXB09BXVJU	PROVIDE WITH LOW AMBIENT F THERMOSTAT AND CONDENSA
AIR DI	EVICE	SCHEDU	ILE													
MARK	SYSTEM	STYLE	NECK SIZE	FACE SIZE	MAX CFM	APD (IN-WG)	MAX N.C.	MATE	RIAL	FINISH	MANUFACTURE	R MC	DDEL	REMARKS		
CS1	SUPPLY AIR	SQUARE LOUVERED DIFFUSER	6"Ø	24"X24"	100	0.1	30	STE	EL	WHITE	PRICE	SMD	SERIES	Column13		
CS2	SUPPLY AIR	SQUARE LOUVERED DIFFUSER	8"Ø	24"X24"	210	0.1	30	STEE	EL	WHITE	PRICE	SMD	SERIES			
CS3	SUPPLY AIR	SQUARE LOUVERED DIFFUSER	10"Ø	24"X24"	400	0.1	30	STE	EL	WHITE	PRICE	SMD	SERIES			
CS4	SUPPLY AIR	ROUND CONE DIFFUSEF	₹ 12"Ø	27"Ø	700	0.1	30	STE	EL	WHITE	PRICE	RCD	SERIES			
SWS1	SUPPLY AIR	LOUVERED SUPPLY	4"X12"	6"X14"	300	0.1	30	STER	EL	WHITE	PRICE	5	20L	DOUBLE DEFLEC	ΓΙΟΝ	
SWS2	SUPPLY AIR	LOUVERED SUPPLY	6"X16"	8"X18"	400	0.1	30	STE		WHITE	PRICE		520L	DOUBLE DEFLEC		
DD1	SUPPLY AIR	DIFFUSER HIGH CAPACITY DRUM	0 × 10	8"X20"	325	0.1	30	STEE		WHITE	PRICE		SERIES			
		HIGH CAPACITY DRUM	10"X24"	12"X26"	805	0.1	30	STER							$\checkmark \land \land$	
	SUPPLY AIR	DIFFUSER	10 × 10	12"X20"	450	0.1		STER								
CR2	RETURN AIR	EGG CRATE FACE	10"X10"	24 X24 24"X24"	480	0.1	30	ALUMI		WHITE	PRICE		BERIES			
CR3	RETURN AIR	RETURN EGG CRATE FACE	12"X12"	24 X24 24"X24"	610	0.1	30	ALUMI		WHITE	PRICE		BERIES			
CR4	RETURN AIR	RETURN EGG CRATE FACE RETURN	14"X14"	24"X24"	900	0.1	30	ALUMI		WHITE	PRICE		ERIES			
CR5	RETURN AIR	EGG CRATE FACE RETURN	22"X22"	24"X24"	2200	0.1	30	ALUMI	NUM	WHITE	PRICE	80 S	ERIES			
CE1	EXHAUST AIR	EGG CRATE FACE RETURN	6"X6"	12"X12"	100	0.1	30	ALUMI	NUM	WHITE	PRICE	80 S	ERIES			
CE2	EXHAUST AIR	EGG CRATE FACE RETURN	8"X8"	24"X24"	260	0.1	30	ALUMI	NUM	WHITE	PRICE	80 S	ERIES			
SWE1	EXHAUST AIR	HEAVY DUTY GYM GRILLE	16"X24"	18"X26"	630	0.1	30	STE	EL	WHITE	PRICE	91S S	SERIES			

2 IF AIR DEVICE NECK SIZE DIFFERS FROM BRANCH DUCT SIZE, PROVIDE TRANSITION AS NEEDED.

3 PROVIDE FRAME STYLE / INSTALLATION TYPE AS REQUIRED FOR CEILING TYPE.

4 PROVIDE RAPID MOUNT FRAMS FOR AIR DEVICES MOUNTED IN CEILINGS OTHER THAN LAY-IN CEILINGS.

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MARK	SERVES	TYPE		FAN DATA	l l	N	IOTOR DAT	E	SONNES	TOTAL UNIT	MANUFACTURER	MODEL	REMARKS
	SERVES		CFM	ESP	RPM	HP	VOLTS	PHASE	SONNES	WEIGHT (LBS)	MANUFACIUNEN	MODEL	NEIWIANNO
EF-1	OFFICE AREA RESTROOM AND JANITOR	CENTRIFUGAL INLINE	725	0.5	1725	0.25	115	1	12.7	61	GREENHECK	SQ-99-VG	1,2,3
EF-2	STORAGE 115	INLINE CABINET	100	0.25	971	52 W	115	1	0.3	18	GREENHECK	CSP-A125	1,2,4
EF-3	FAB SHOP 102 WELDING HOOD	CENTRIFUGAL INLINE	3000	0.25	1160	1	115	1	8.4	120	GREENHECK	SQ-160-VG	1,2,5
EF-4	SHOP BAYS 100		5025	0.5	1666	2	208	1	8.8	151	GREENHECK	SQ-16-VG	1,2,6
EF-5	NOT USED										GREENHECK		NOT USED
NOTES:			Lun	h	h		hur		h	h	hund		Lunn
1 F	PROVIDE WITH DISCONNECT		4 PROVIDE WITH LINE-VOLTAGE THERMOSTAT										
2 F	PROVIDE WITH HANGING SPRING ISOLATOR		5 PROVIDE W	ITH LINE-VOL	TAGE 1-HOUR	TIMER SWIT	CH (ADJ.)						
3 F	PROVIDE WITH 24/7 PROGRAMMABLE TIMER		5 FAN TO INTE		DOAS-2 AND	3 CONTROLS	SYSTEM						

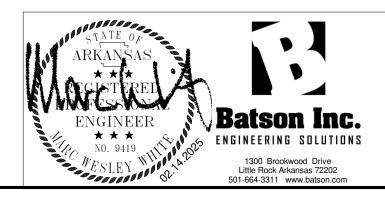
			MAX AIRFLOW	SI	ZE	FREE AREA			MODEL	
IARK	EQUIPMENT SERVED	USE	(CFM)	W"	H"	(SF)	APD (IN-WG)	MANUFACTURER	MODEL	REMARKS
L-1	EF-1 & 2	EXHUAST	1,250	54	16	2.14	0.046	GREENHECK	ESD-635	1,2
L-2	DOAS-1&2	INTAKE AIR	2 5,610	96	32	9.7	0.122	GREENHECK	ECD-601	1,2,3
L-3	EF-4 3/2	EXHAUST AIR	5,025	54 54		5.6	0.10	GREENHECK	EACC-601	1,2,3,4 2
L-4	EF-3	INTAKE AIR	2 3,000	30	40	3.54	0.101	GREENHECK	ECD-601 2	1,2,3
L-5	EF-3 2	EXHAUST AIR	3,000	24	44	3.26	0.115	GREENHECK	ECD-601	1,2,3
L-6	EF-4	INTAKE AIR	2,010	36	36	2.51	0.06	GREENHECK	EACC-601	1,2,3,4
L-7	EF-4	INTAKE AIR	2,010	36	36	2.51	0.06	GREENHECK	EACC-601	1,2,8,4

2 FINISH PER ARCHITECT

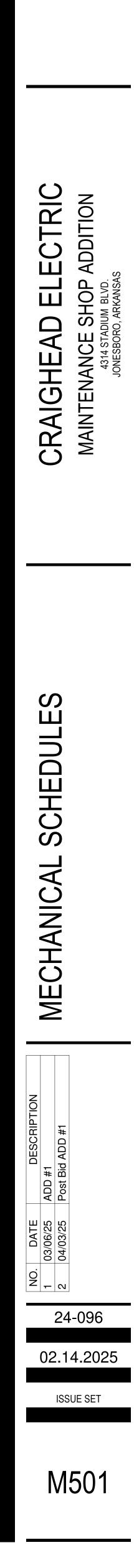
4 COMBINATION LOUVER/DAMPER

# **ELECTRIC UNIT HEATER SCHEDULE**

MARK	SERVES	TYPE	KW	MOTOR	ELE	CTRICAL E	ΔΑΤΑ	MANUFACTURER	MODEL	REMARKS
				HP/CFM	AMP	VOLTS	PHASE			
EH-1	FIRE RISER 106	SEMI-RECESS WALL MOUNT	1.5	1/125 HP	12.5	120	1	MARKEL	E3323TD-RP	1&2
EH-2	WASH BAY 125	WASHDOWN FAN FORCED UNIIT HEATER	5.0	400 CFM	24.1	208	1	MARKEL	F1F5505T-304	1&2
EH-3	WASH BAY 125	WASHDOWN FAN FORCED UNIIT HEATER	5.0	400 CFM	24.1	208	1	MARKEL	F1F5505T-304	1&2
EH-4	WASH BAY 125	WASHDOWN FAN FORCED UNIIT HEATER	5.0	400 CFM	24.1	208	1	MARKEL	F1F5505T-304	1&2
NOTES:										
1. DI	SCONNECT SWITCH									
2. IN	TEGRAL THERMOSTAT									









### **GENERAL NOTES:**

- 1. REFER TO SPECIFICATIONS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 2. REFER TO ALL PROJECT DRAWINGS FOR DETAILS OF CONSTRUCTION AND INSTALLATION REQUIREMENTS.
- 3. REFER TO GENERAL CONDITIONS AND SUPPLEMENTARY GENERAL CONDITIONS FOR THE
- PROJECT INCLUDING THE EQUIPMENT AND INSTALLATION OF THE PLUMBING WORK. 4. CONTRACTOR SHALL BECOME, PRIOR TO BID, THOROUGHLY FAMILIAR WITH THE
- REQUIREMENTS OF THESE NOTES AS WELL AS OTHER NOTES SHOWN ON THE CONTRACT DOCUMENTS.
- 5. THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS (SEE SCHEDULES), THE SELECTION OF WHICH HAS INFLUENCED THE DESIGNS OF OTHER TRADES (ELECTRICAL, STRUCTURAL, ETC.). IF SUBSTITUTE MANUFACTURERS, SIZES, OR MODEL NUMBERS ARE BID, OR SUBMITTED, IT IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR AND ALL HIS SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. ALL COSTS OF ALL TRADES ASSOCIATED

WITH THE SUBSTITUTION SHALL BE INCLUDED IN THE BID.

- 6. COORDINATION OF ALL MODIFICATIONS TO EACH DISCIPLINE WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBSTITUTIONS WHICH ARE INSTALLED AND SUBSEQUENTLY ARE PROVEN UNSATISFACTORY BY OWNER AND/OR ENGINEER, WITHIN THE WARRANTY PERIOD. SHALL BE REMOVED COMPLETELY BY THE CONTRACTOR AND REPLACED WITH THE ORIGINAL DESIGN OR CORRECTED AS DIRECTED BY THE ENGINEER WITHOUT ADDITIONAL COST TO THE OWNER.
- 7. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRICAL RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, SEQUENCE, DEVICE, OPTION, FITTING, OR COMPONENT.
- 8. 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.
- 9. CONTRACTOR SHALL NOT SCALE DRAWINGS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY THE CONTRACT DOCUMENTS.
- 10. UNLESS NOTED OTHERWISE, THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS CARRIES WITH IT THE INSTRUCTION TO FURNISH

AND INSTALL THE ITEM.

- 11. EXACT LOCATIONS OF ALL EQUIPMENT, PIPING, ETC. SHALL BE COORDINATED WITH OTHER TRADES. CEILING MOUNTED SPRINKLER, LIGHTING, AND ELECTRICAL REQUIREMENTS TAKE PRECEDENCE OVER CEILING MOUNTED PLUMBING REQUIREMENTS.
- 12. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DETAILS AND DIMENSIONS.
- OTHER TRADES. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND OTHER DRAWINGS FOR COMPLETE INFORMATION PRIOR TO BID. 14. ROUGH-IN OR INSTALLATION OF OWNER FURNISHED EQUIPMENT SHALL NOT BEGIN UNTIL APPROVED EQUIPMENT DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT. DO NOT SUBMIT SHOP DRAWINGS FOR ANY EQUIPMENT WHICH MAY BE COORDINATED
- WITH OWNER FURNISHED ITEMS UNTIL THE APPROVED DRAWINGS ARE OBTAINED FROM OWNER OR ARCHITECT. VERIFY THE APPROVED EQUIPMENT HAS THE SAME ROUGH-IN AND FINAL CONNECTION REQUIREMENTS AND DESIGN CRITERIA AS THE DOCUMENTS. NOTIFY ENGINEER OF ANY CHANGES, INCOMPATIBILITY, OR UNUSUAL CONDITIONS IMMEDIATELY. SEE SPECIFICATIONS OR DRAWINGS FOR LIST OF OWNER FURNISHED EQUIPMENT (WHERE APPLICABLE).
- 15. ALL PLUMBING CONSTRUCTION DETAILS SHALL BE AS SHOWN AND AS REQUIRED TO MAINTAIN "UL" ASSEMBLY RATINGS AS SHOWN ON ARCHITECTURAL SHEETS. SEAL AROUND ALL PENETRATIONS THOROUGH UL RATED ASSEMBLIES, FIRE AND SMOKE WALLS. COORDINATE WITH GENERAL CONTRACTOR.
- 16. NO OTHER TRADES, I.E., ELECTRICAL, CEILING, DUCTWORK, ETC., SHALL BE SUSPENDED, HUNG, OR SUPPORTED FROM PIPING. 17. ROOFING CONTRACTOR SHALL BE RESPONSIBLE FOR FLASHING AND SEALING OF ALL
- ROOF PENETRATIONS. 18. SPECIAL CARE SHALL BE TAKEN ON THE ROOF TO PREVENT DAMAGE. ANY DAMAGE
- SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER. COMPLY WITH BONDING REQUIREMENTS OF ROOF.
- 19. REPLACE ALL ARCHITECTURAL FEATURES REMOVED OR DAMAGED DURING THE COURSE OF THE WORK.

## **PLUMBING NOTES:**

- CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FULL COORDINATION OF
- 13. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF

- 1. REFER TO GENERAL NOTES ON DRAWING. CONTRACTOR SHALL VERIFY UTILITIES LOCATIONS AND INVERTS PRIOR TO PLACEMENT OF SERVICES. ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES. FURNISH AND INSTALL ELECTRIC HEAT TRACING ON ALL EXTERIOR WATER LINES, ON
- ALL LINES SUBJECT TO FREEZING TEMPERATURES, AND WHEREVER SHOWN ON PLANS. TRACING SHALL BE INSTALLED BENEATH INSULATION, AND SHALL BE PER MANUFACTURERS RECOMMENDATIONS. TRACING SHALL BE CHROMOLOX SELF-LIMITING HEAT TRACING TAPE OR APPROVED EQUAL.
- 4. LIMIT OF WORK UNDER THIS CONTRACT SHALL INCLUDE ALL PIPING TO BUILDING CURB LINE, OR TO 5 FEET OUTSIDE BUILDING. SEE ARCHITECTURAL SPECIFICATIONS. 5. ROUTE ALL HORIZONTAL ABOVE GRADE PIPING THROUGH JOIST SPACE EXCEPT AS
- REQUIRED FOR GRAVITY DRAINAGE. SEAL ALL PIPE PENETRATIONS THROUGH RATED ASSEMBLIES, FLOORS, FIRE WALLS AND SMOKE WALLS. SEALANT MATERIAL SHALL BE UL APPROVED, AND SHALL MAINTAIN
- RATING OF ASSEMBLY BEING PENETRATED. ALL PIPE DROPS FROM CEILING PLENUM TO BELOW FLOOR SHALL BE MADE IN FURR-OUTS AT COLUMNS, IN WEB OF BEAMS AT COLUMNS, OR IN WALLS UNLESS SHOWN OTHERWISE.
- DURING INSTALLATION OF ALL SYSTEMS, MAINTAIN A MINIMUM OF 18 INCHES CLEAR BETWEEN SUSPENDED CEILINGS AND ALL EQUIPMENT, PIPING, ETC.
- DO NOT ROUGH-IN FOR ANY OWNER FURNISHED EQUIPMENT UNTIL CUTSHEETS OF 9. EQUIPMENT TO BE INSTALLED ARE PROVIDED. 10. ROUTE ALL DRAINS, RELIEFS AND VENTS TO OUTSIDE OR AS INDICATED.
- . PROVIDE SHUT-OFF VALVES AT ALL BRANCH WATER LINES, AND AT ALL BRANCHES IN WATER LINES TO INDIVIDUAL FIXTURES OR GROUPS OF FIXTURES. PROVIDE VALVE ABOVE CEILING IN BRANCH SERVING EACH FPWH. 12. PROVIDE WATER HAMMER ARRESTORS IN MAIN RUNOUTS AND FIXTURE BRANCHES
- PROVIDE ACCESS TO ARRESTORS (ACCESS PANELS, ETC.). 13. PROVIDE PRESSURE REDUCERS IN WATER SUPPLY LINES TO KEEP PRESSURE BELOW 50 PSI AT ALL OUTLETS. MINIMUM PRESSURE ACCEPTABLE AT WATER OUTLETS IS 15 PSI AT DIRECT SUPPLY FLUSH VALVES, AND 8 PSI AT ALL OTHER OUTLETS. PROVIDE PRESSURE REDUCING VALVE (REGULATOR) AT DOMESTIC WATER SERVICE ENTRANCE, AS REQUIRED.
- 14. PROVIDE BACKFLOW PREVENTION ON MAIN WATER ENTRY TO BUILDING. PROVIDE BACKFLOW PREVENTION OR ANTI-SIPHON DEVICES AT ALL HOSE BIBBS AND WALL HYDRANTS, AND ANYWHERE THE POSSIBILITY OF CONTAMINATING THE POTABLE WATER SYSTEM EXISTS.
- 15. PROVIDE STOP VALVES AT EVERY FIXTURE ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC. SHALL BE CHROMIUM PLATED. WHERE EXPOSED, CHROME PLATED PIPE IS TO BE USED. 16. ALL JOINTS FOR UNDERSLAB WATER PIPING SHALL BE MADE ABOVE THE FLOOR.
- PROVIDE CLEANOUTS IN ALL SANITARY, STORM DRAINAGE & OVERFLOW LINES, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 100 FEET, AT EACH CHANGE . IN DIRECTION GREATER THAN 45 DEGREES, AND ON ALL VERTICAL RISERS AT A HEIGHT OF 30" AFF AT THE BASE OF EACH STACK.
- 18. RUN ALL UNDERGROUND SEWER LINES 3'0" MINIMUM AWAY FROM COLUMN LINES TO AVOID CONFLICTS WITH FOOTINGS. COORDINATE WITH STRUCTURAL DRAWINGS. 19. ALL SANITARY LINES ARE 1/4" FALL/FOOT WHERE POSSIBLE, AND NOT LESS THAN 1/8"
- FALL/FOOT IN ANY CASE. VERIFY INVERTS WITH SITE DRAWINGS AND COORDINATE INSTALLATION TO ASSURE PROPER FLOW. 20. ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- 21. ALL FLOOR DRAINS TO HAVE DEEP SEAL TRAPS WITH 4" DEEP SEAL MINIMUM.
- 22. PROVIDE TRAP PROTECTION ON ALL FLOOR DRAINS AND FLOOR SINKS. REFER TO DETAIL 1/P301. 23. MAINTAIN A MINIMUM OF 10'-0" BETWEEN ALL FRESH AIR INTAKES AND PLUMBING VENTS,
- FLUES, ETC. COORDINATE WITH ALL OTHER CONTRACTORS ON SITE. 24. ON SEWER VENT LINES RUNNING UP EXTERIOR WALL TO ROOF, OFFSET AS REQUIRED
- TO MAINTAIN 36" MINIMUM FROM BUILDING PARAPET WALL. 25. PROVIDE EXPANSION TANKS FOR WATER HEATERS.

В.

- 26. INSURE CIRCULATING HOT WATER SYSTEM IS CONTINUOUS AND FLOW IS IN DIRECTION INDICATED.
- 27. FOR DOMESTIC HOT WATER CIRCULATING PUMP, PROVIDE AQUASTAT IN RETURN WATER LINE TO STOP PUMP WHENEVER RETURN HOT WATER TEMPERATURE IS LESS THAN 10°F COOLER THAN SUPPLY HOT WATER. 28. AMERICANS WITH DISABILITIES ACT:
  - A. ALL PLUMBING FACILITIES SHALL BE INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. REQUIREMENTS INCLUDE THE FOLLOWING: WATER CLOSET FLUSH CONTROLS, SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREA. SHOWER CONTROLS ON STALLS UP TO 36" WIDE SHALL BE 2.
    - MOUNTED ON THE SIDE WALL OPPOSITE THE SEAT ON THE ENTRY SIDE OF THE SHOWER CENTERLINE, AND ON STALLS UP TO 60" WIDE SHALL BE MOUNTED ON THE BACK WALL ON THE RIGHT SIDE OF THE CENTERLINE. HOT WATER PIPING AND TRAPS ON FIXTURES SUPPLIED WITH 3.
    - HOT WATER SHALL BE INSULATED. ALL CONTROLS AND OPERATING MECHANISMS SHALL BE 4. OPERABLE WITH ONE HAND AND WITHOUT TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. FIXTURE AND CONTROLS MOUNTING HEIGHTS, CLEAR KNEE SPACE,
    - ACCESS CLEARANCES, ETC. SHALL COMPLY WITH ADA REQUIRED DIMENSIONS, AND AS ON DETAILS OR SCHEDULES WHEN SHOWN.

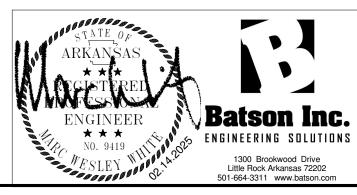
# PLUMBING LEGEND

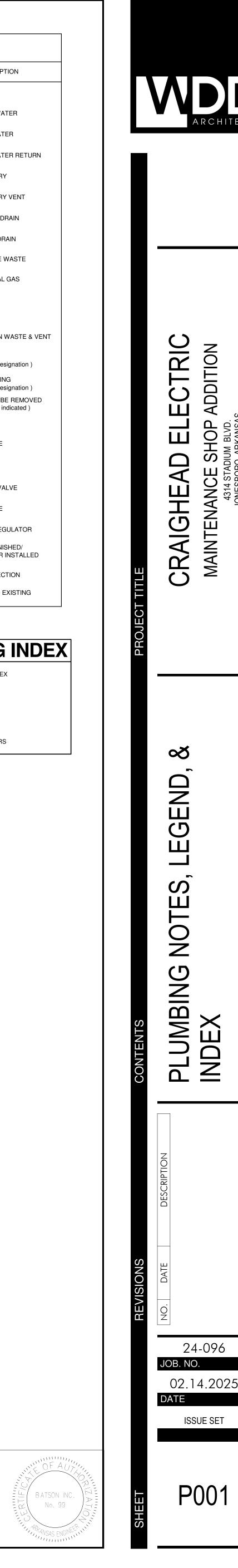
SYMBOL	DESCRIPTION
} − − −	NEW COLD WATER
\	NEW HOT WATER
├──	NEW HOT WATER RETURN
λ	NEW SANITARY
$\leftarrow$	NEW SANITARY VENT
<u>}</u> SD	NEW STORM DRAIN
} OD	OVERFLOW DRAIN
}G₩	NEW GREASE WASTE
} G₹	NEW NATURAL GAS
۲۲ AW۲	ACID WASTE
<i>۲</i> ــــــــــــــــــــــــــــــــــــ	ACID VENT
← cwv — ۲	COMBINATION WASTE & VENT
} D₹	NEW PIPING ( refer to line designation )
۲۲	EXISTING PIPING ( refer to line designation )
( indicates direction of removal )	EXISTING TO BE REMOVED ( back to point indicated )
₩	GATE VALVE
₩₩₩	GLOBE VALVE
۰ <u>۰</u> ۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰	BALL VALVE
<b>៶−−−−</b> ιφ <del> −−−−</del> ι	BUTTERFLY VALVE
$\begin{array}{c} \overline{} \\ \overline{} } \\ \overline{} } \\ \overline{} \\ \overline{} \\ \overline{} \\ \overline{} \\ \overline{} \\ \phantom{a$	CHECK VALVE
<b>∖</b> `	NG PRESS REGULATOR
OF / CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
RI / FC	ROUGH-IN / FINAL CONNECTION
$\Theta$	CONNECT TO EXISTING

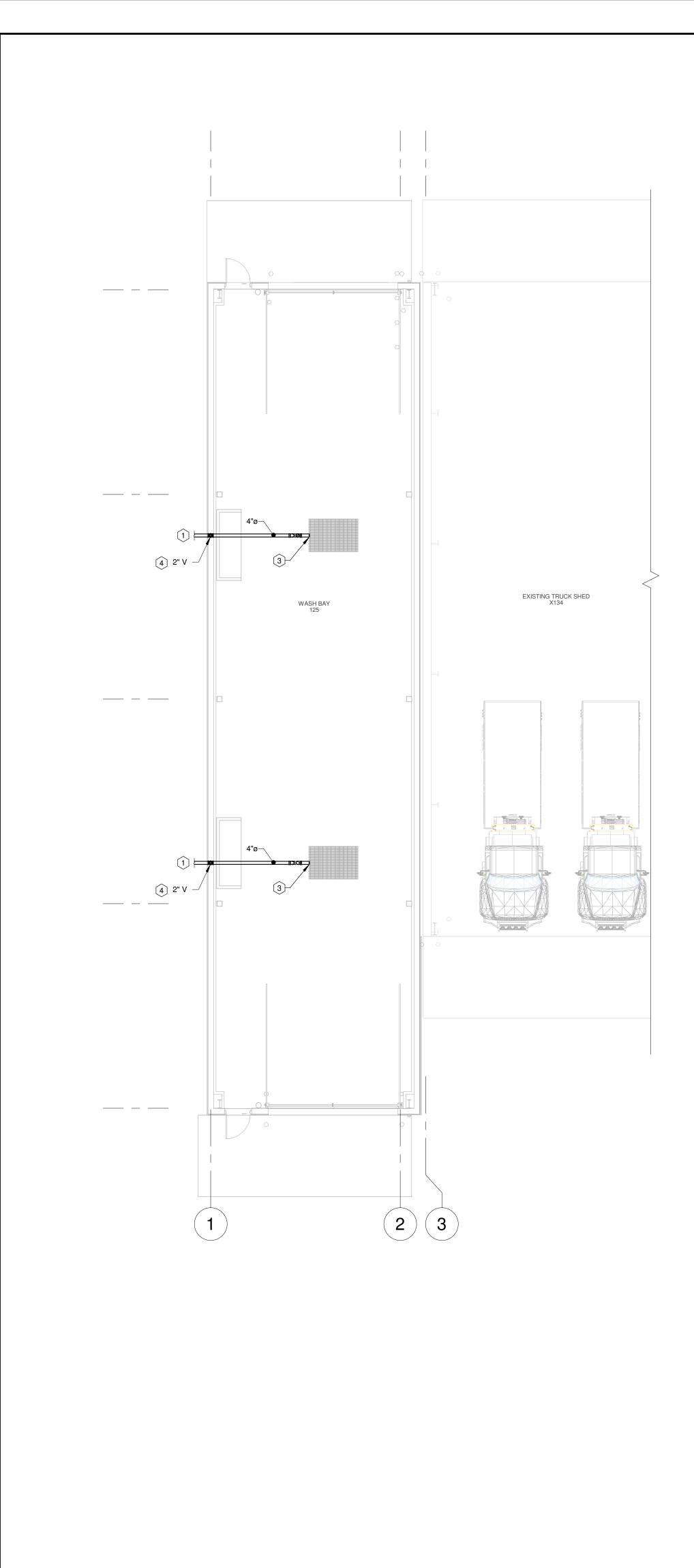
\* NOT ALL SYMBOLS MAY APPLY TO THIS PROJECT

# PLUMBING DRAWING INDEX

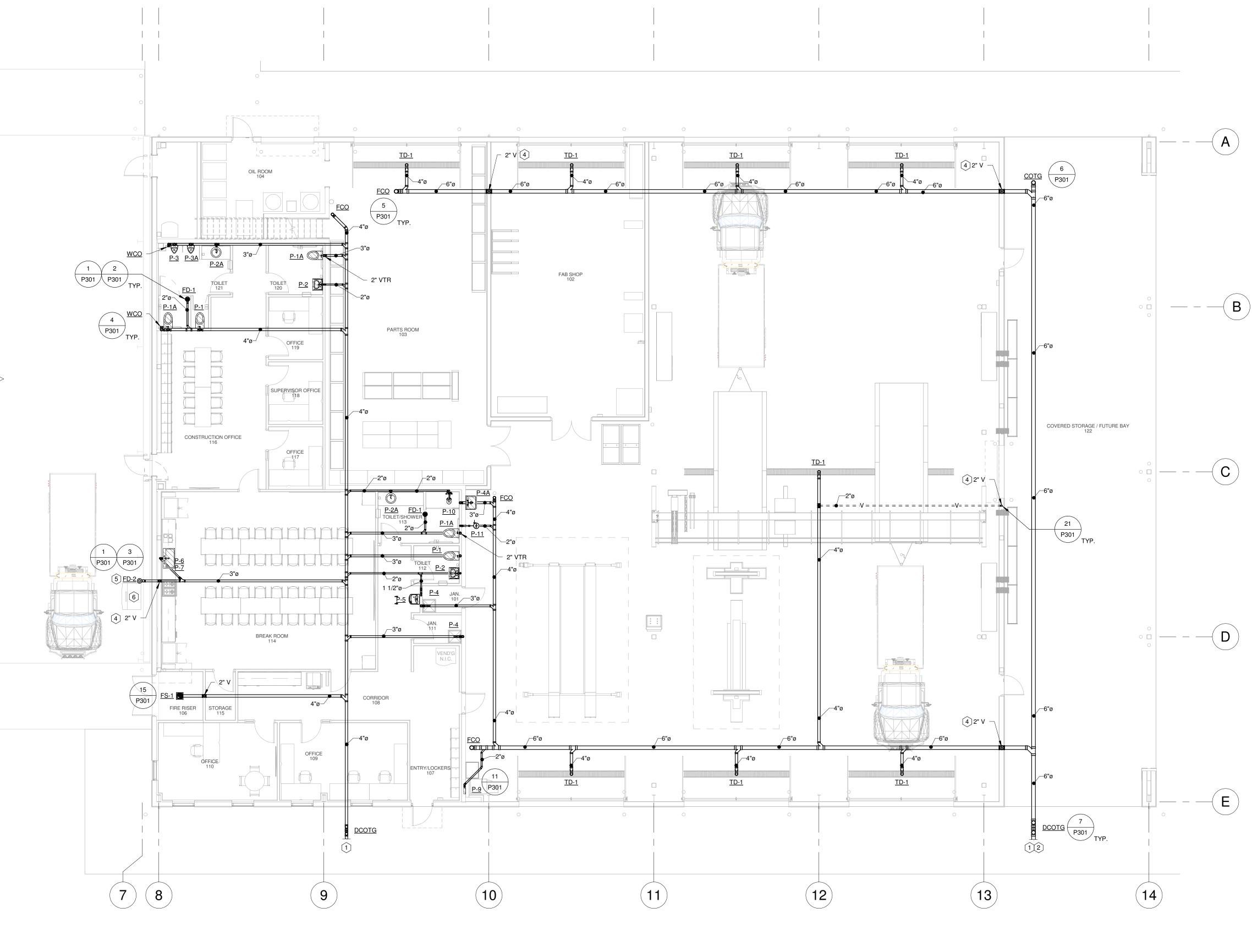
Р	2001	PLUMBING NOTES, LEGEND, & INDEX
Р	°101	SANITARY SEWER PLAN
Р	201	DOMESTIC WATER PLAN
Р	2301	PLUMBING DETAILS
Р	9401	PLUMBING SCHEDULES AND RISERS







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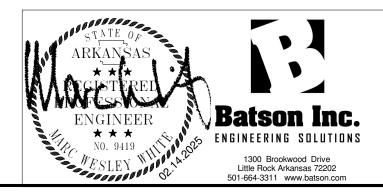
 1
 SANITARY SEWER PLAN

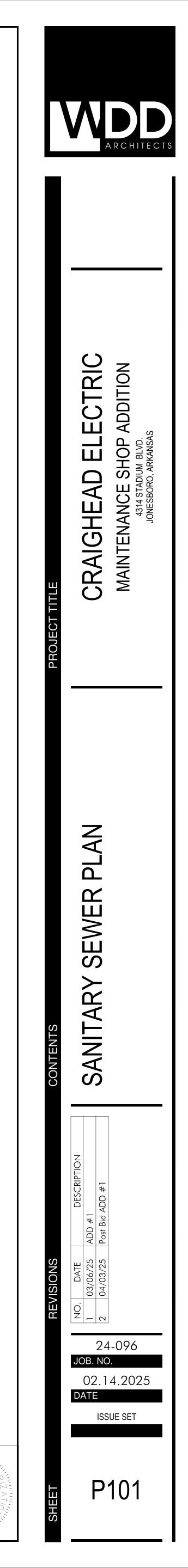
 P101
 1/8" = 1'-0"

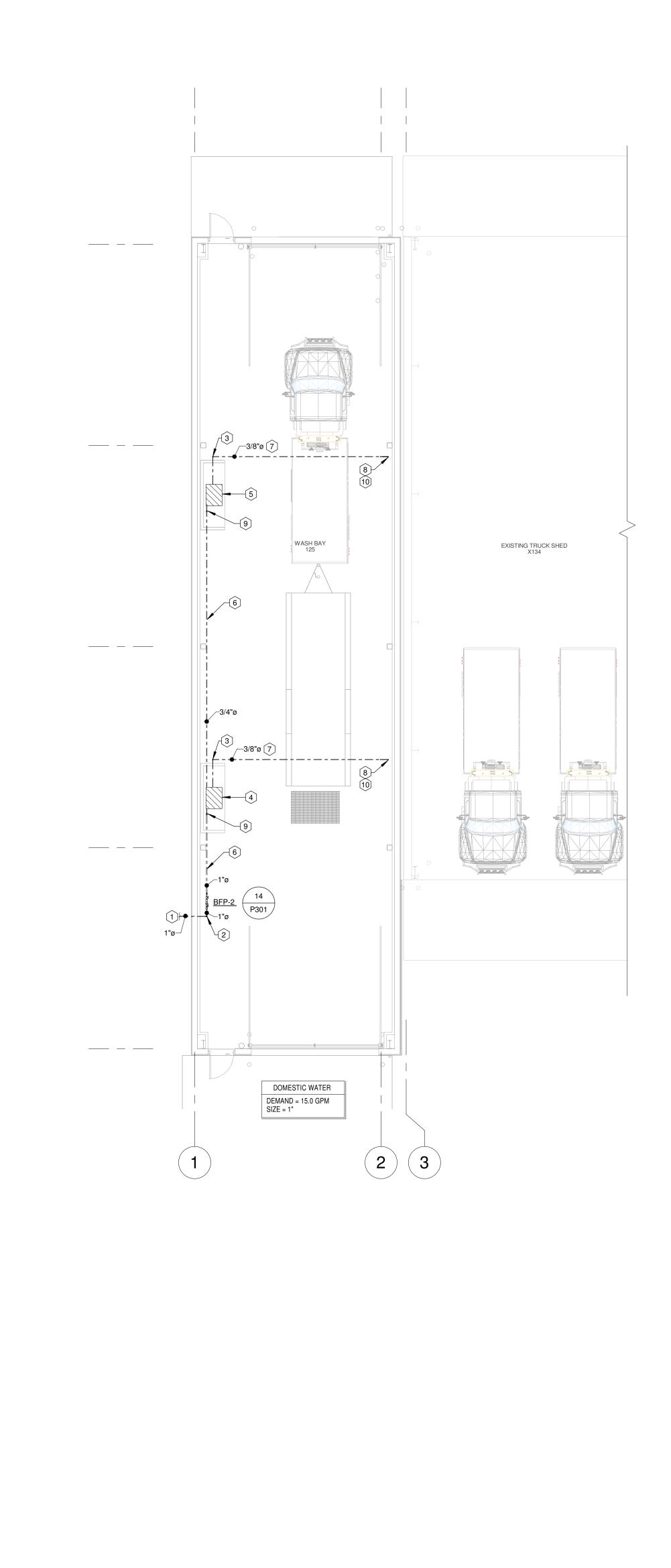
# ○ KEYED NOTES:

- 1 REFER TO CIVIL PLANS FOR CONTINUATION.
- 2 EXTEND SANITARY DRAIN LINE TO OIL/WATER SEPARATOR. SEPARATOR BY CIVIL.
- 3 4" DRAIN LINE CONNECTS TO DRAINAGE PIT 1'-0" BELOW FINISHED SLAB.
- 4 ROUTE 2" VENT UP THROUGH ROOF AND OFFSET AS REQUIRED TO MAINTAIN A MINIMUM OF 3'-0" FROM ROOF EDGE.
- 5 FLOOR DRAIN TO SERVE ICE MACHINE.
- 6 COORDINATE ICE MAKER EXACT LOCATION WITH EXHAUST CAP FROM VENT HOOD, TO AVOID CONFLICTS.

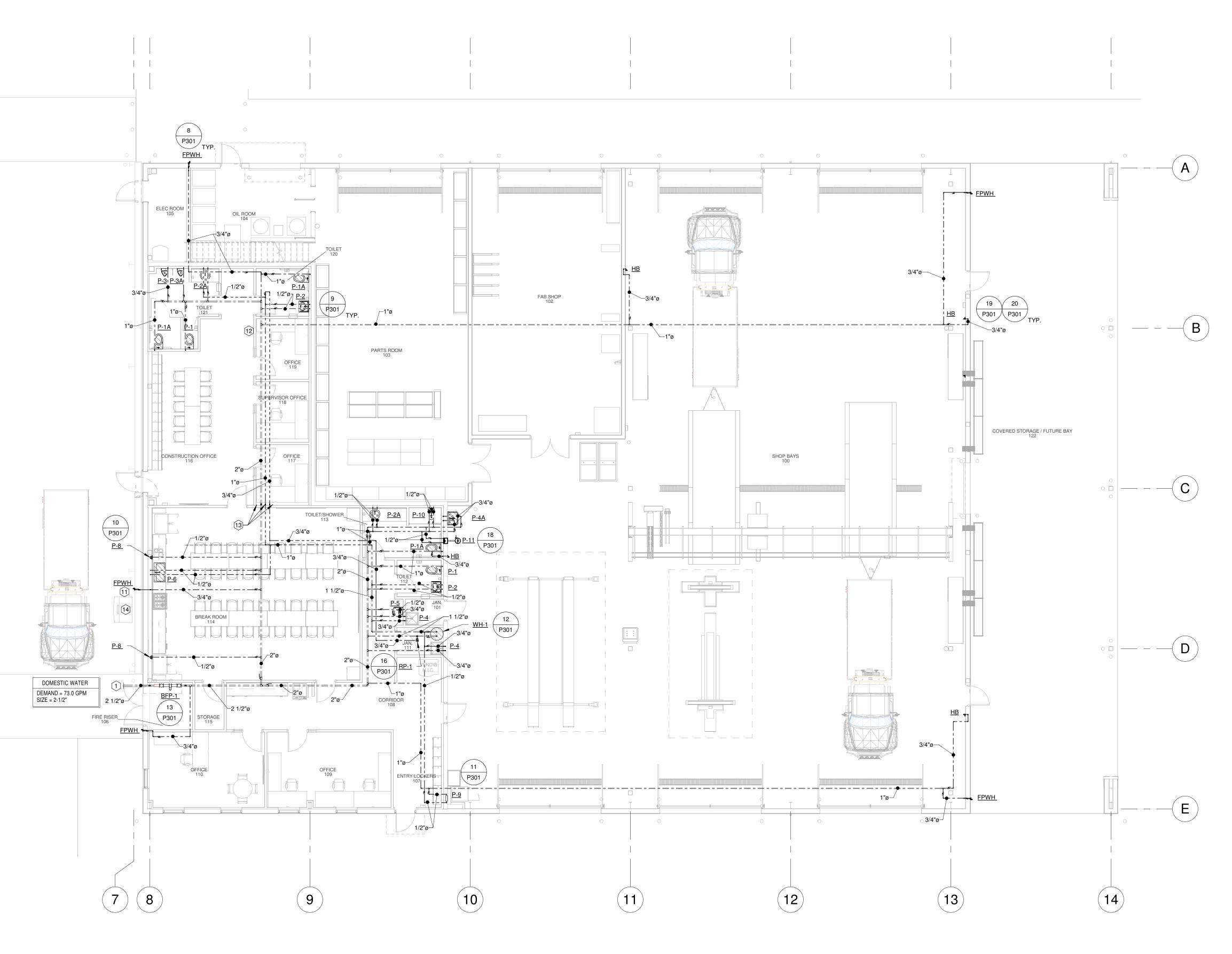
NOTE : FLOOR PLAN UPDATED TO REFLECT ARCHITECTURAL CHANGES. SHEET ISSUED FOR CONSISTENCY.







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# ○ KEYED NOTES:

1 SEE CIVIL FOR CONTINUATION.

WASHER.

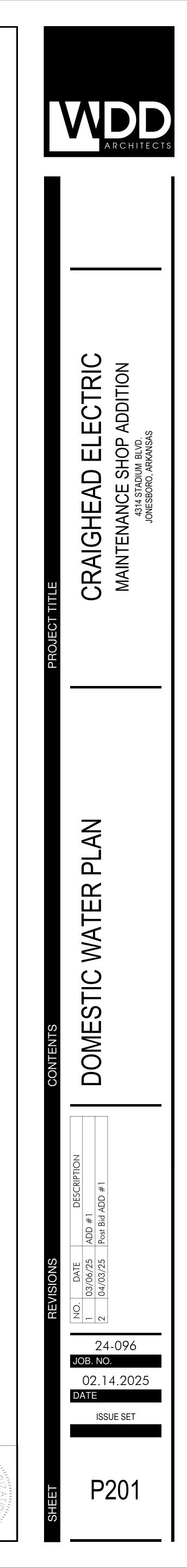
- 2 WATER LINE RISES UP FROM BELOW SLAB. SLEEVE AND SEAL SLAB PENETRATION.
- 3 DISCHARGE PRESSURIZED WATER LINE FROM WASHER DROPS BELOW GRADE TO ROUTE BELOW SLAB TO SOUTH SIDE OF WASH BAY.
- 4 PSC MODEL ES429K424A PRESSURE WASHER.5 OWNER FURNISHED, CONTRACTOR INSTALLED PRESSURE
- 6 DOMESTIC WATER LINE ROUTED TIGHT TO WALL 8 FEET A.F.F. SECURE TO WALL USING UNI-STRUT SUPPORTS EVERY 4 FEET.
- 7 PRESSURIZED WATER LINE TO BE 3/8", SCHEDULE 80 STAINLESS STEEL PIPING.
- 8 PRESSURIZED WATER LINE TO RISE FROM BELOW SLAB TO 3 FEET A.F.F. SUPPORT PIPING PER DETAIL 17/P301. SLEEVE AND SEAL SLAB PENETRATION.
- 9 3/4" DOMESTIC WATER LINE TO DROP TO PRESSURE WASHER. CONNECT TO WASHER PER MANUFACTURER'S REQUIREMENTS.
  10 TERMINATE PRESSURIZED WATER LINE PER MANUFACTURER'S REQUIREMENTS FOR CONNECTION TO WORKDOWN OF A MEMORY OF
- 11 HEAT TRACE DOMESTIC WATER CONNECTION FROM ICE MAKER TO HOSE BIBB FOR FREEZE PROTECTION. COORDINATE WITH ELECTRICAL PIROR TO INSTALLATION.

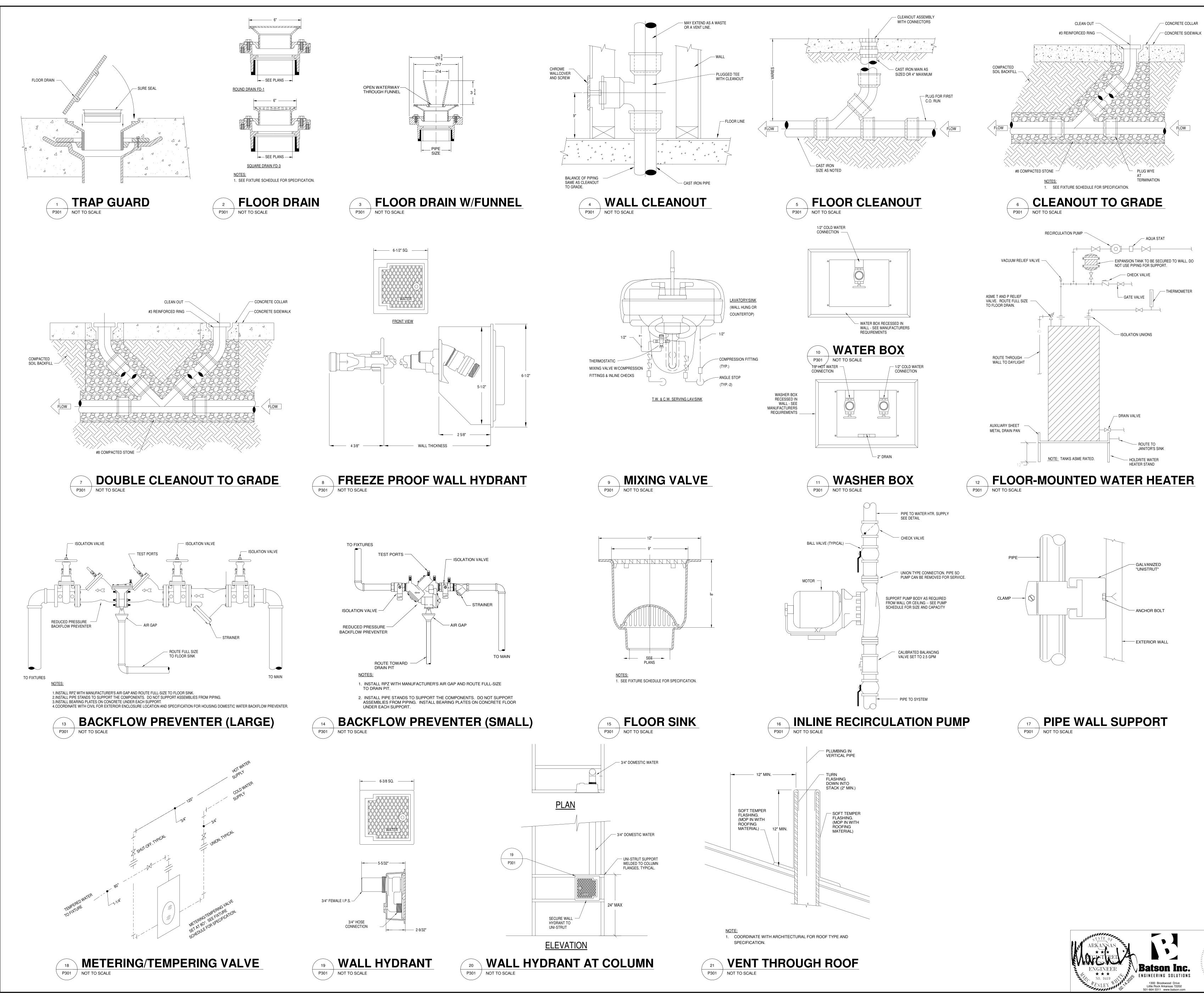
HIGH-PRESSURE WASH HOSE.

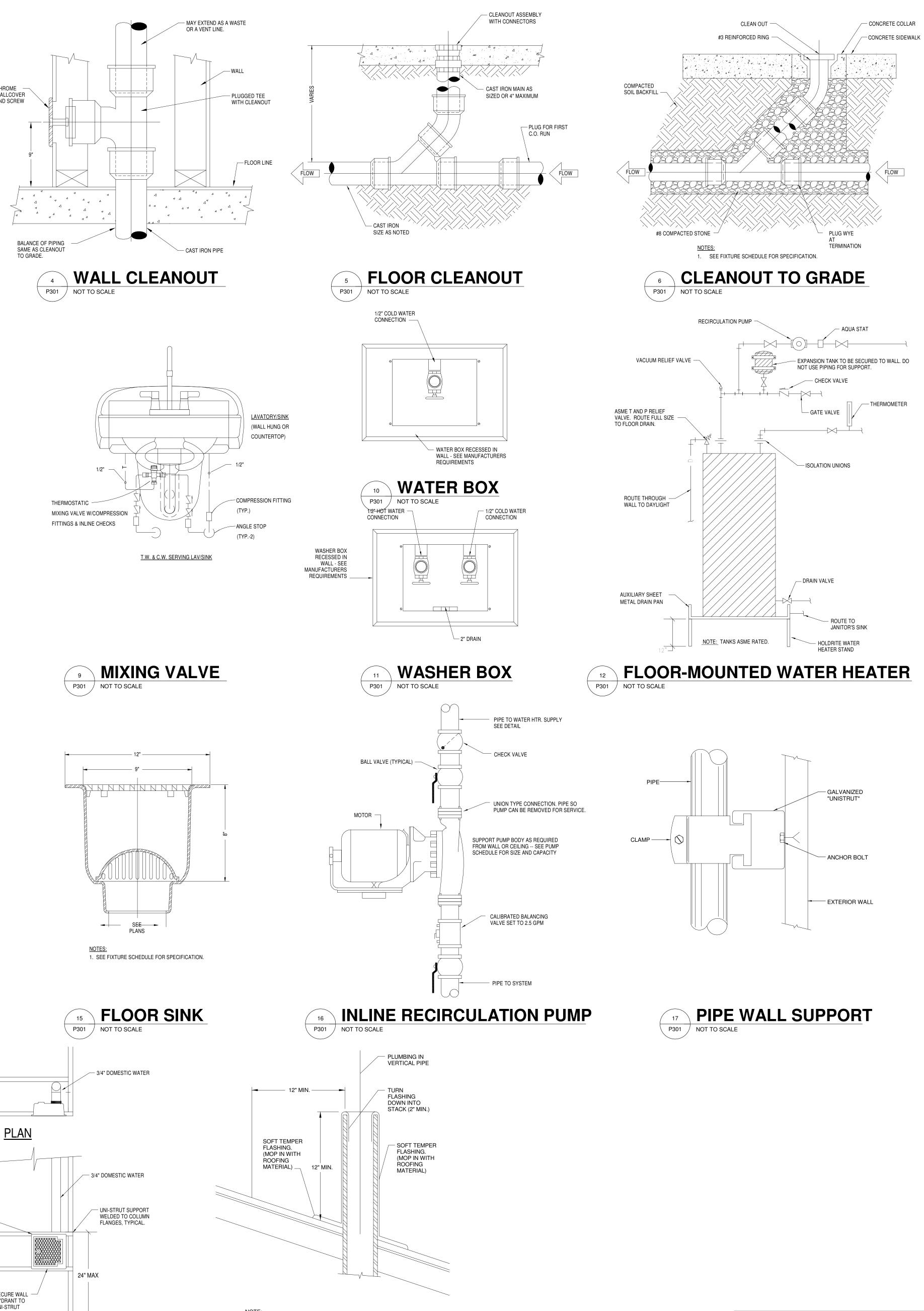
- 12 CLOSELY COORDINDATE DOMESTIC WATER ROUTING BELOW MEZZANINE WITH OTHER TRADE TO AVOID CONFLICTS PRIOR
- TO INSTALLATION. 13 DOMESTIC WATER LINES DROP TO BELOW MEZZANIE LEVEL FOR CONTINUATION TO FIXTURES.
- 14 COORDINATE ICE MAKER EXACT LOCATION WITH EXHAUST CAP FROM VENT HOOD, TO AVOID CONFLICTS.

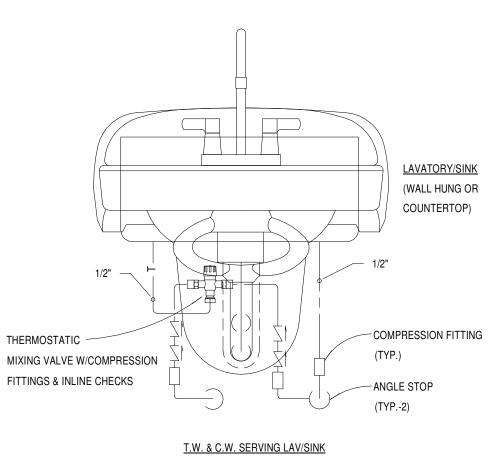




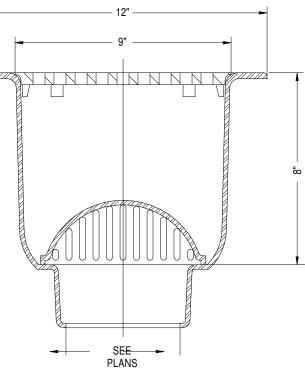


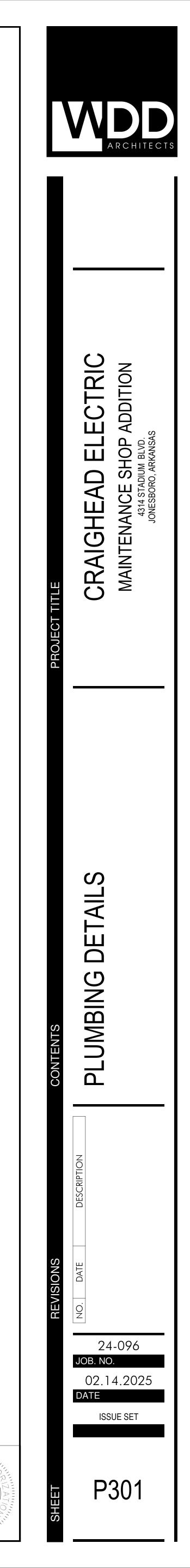




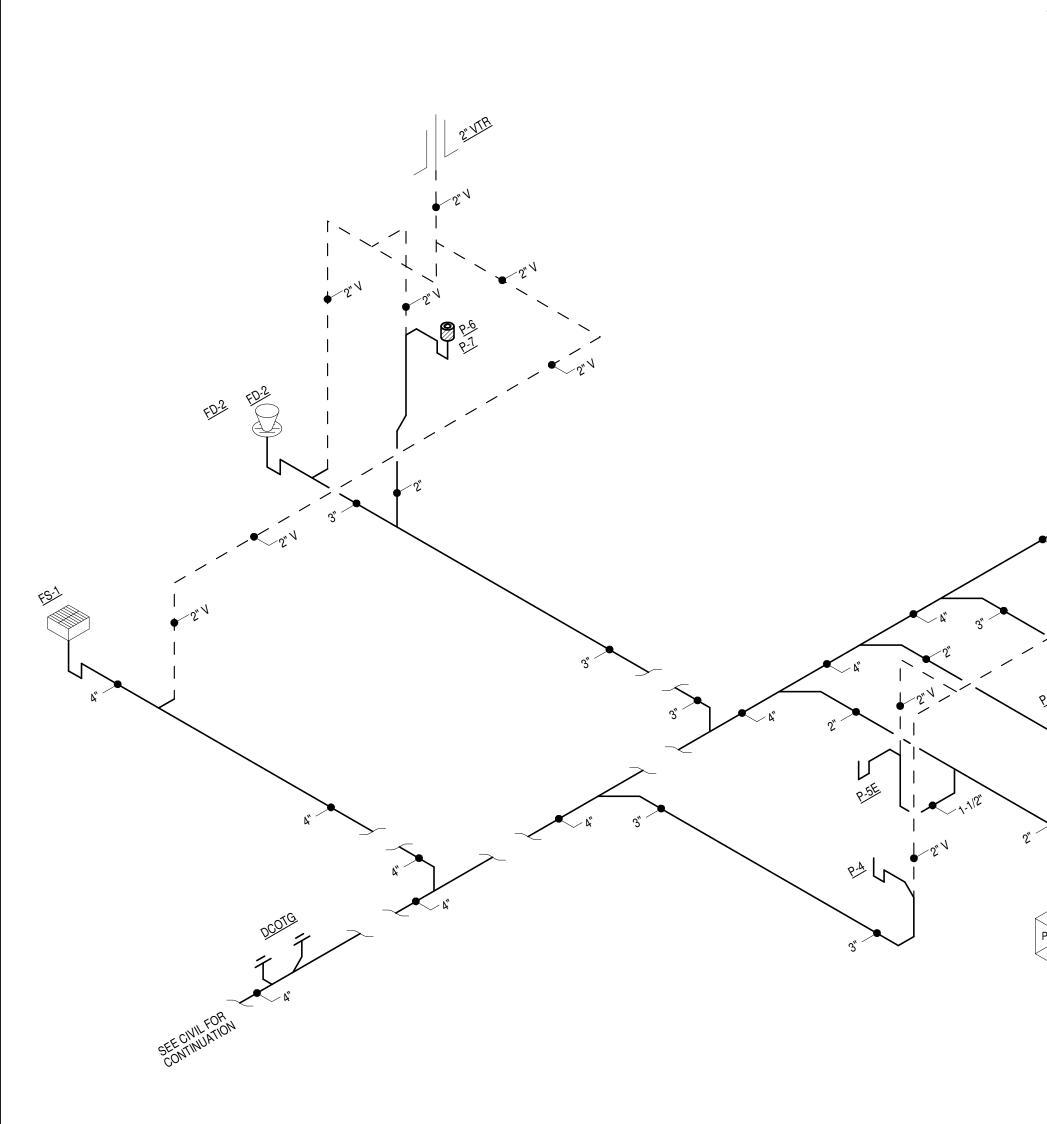








MARI WH-1					ELECT	RIC DATA	MANUFACTURER	CONNEC	TIONS	
	LUCATION	GALLON CAPACITY	SE	RVES	VOLTS/ PHASE	KW	& MODEL NO. OR EQUAL	CW	HW	REMARKS
	JAN 111	80		OP AND CE AREA	208/3	8.0	A.O. SMITH DEN-80	1-1/2"	1-1/2"	DUAL ELEMENT, SIMULTANEOUS OPERATION. PROVIDE HOLDRITE WATER HEATER FLOOR STAND 40-S-24-A AND HOLDRITE WATER HEATER DRAIN PAN QP-24. PROVIDE WITH T&P VALVE AND WATTS EXPA TANK PER MANUFACTURERS SPECIFICATION AND HOLDRITE EXPANSION TANK MOUNTING BRACKET. HEATER TEMPERATURE SET POINT TO BE 120 °F. COORDINATE WITH ELECTRICAL FOR DISCONNECT L
sp-1	JAN 111			R HEATER VH-1	120/1	25 WATTS	GRUNDFOS UP 15-10 BUC7-LC		3/4"	4 GPM WHEN OPERATING AT TOTAL DEVELOPED HEAD OF 3.2 FT OF WATER COLUMN. 3/4" SWEAT CONNECTION. 2 POLE, SINGLE PHASE. 1/25 HP. PROVIDE WITH PRE-TERMINATED LINE CORD.
PLU	MBING FIX	TURE	SC	HEDL	JLE					
MARK	DESCRIPTION	WASTE	VENT	C.W.	H.W.	MOUNTING	REMARKS			
P-1	WATER CLOSET	4"	2"	1"		FLOOR	AMERICAN STANDAR	D MADERA 3451	I.001, VITRE	OUS CHINA, WHITE. SLOAN ROYAL 111-1.28 FLUSH VALVE. CHURCH 9500NSSC, ELONGATED, OPEN FRONT SEAT, BOLT CAPS.
P-1A	WATER CLOSET - ADA	4"	2"	1"		FLOOR			,	OUS CHINA, WHITE. SLOAN ROYAL 111-1.28 FLUSH VALVE. CHURCH 9500NSSC, ELONGATED, OPEN FRONT SEAT, BOLT CAPS. INSTALL PER ADA REQUIREMENTS.
P-2A	LAVATORY - ADA	2"	2"	1/2"	1/2"	COUNTERTOP	S AMERICAN STANDAR	D AQUALYN 0476	6.028 VITRE	2 Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
P-2	LAVATORY - ADA	2"	2"	1/2"	1/2"	WALL				COUS CHIN, WHITE. AMERICAN STANDARD FAUCET MONTERREY, 4 " ON CENTER, CENTERSET GOOSENECK WITH LIMITED SWIVEL, WRIST BLADE HANDLES, 1.5 GPM. PROVIDE WITH THERMOSTATIC MIXING VALVE. PROVIDE MCGUIRE 1149
P-3	URINAL	2"	2"	3/4"		WALL				REOUS CHINA, WHITE. SLOAN ROYAL 186-1.0 FLUSH VALVE. WADE 400-AM11 CARRIER.
P-3A	URINAL - ADA	2"	2"	3/4"		WALL	AMERICAN STANDAR	D LYNBROOK 66	601.012, VIT	REOUS CHINA, WHITE. SLOAN ROYAL 186-1.0 FLUSH VALVE. WADE 400-AM11 CARRIER. INSTALL PER ADA REQUIREMENTS.
P-4	JANITOR SINK	3"	2"	3/4"	3/4"	FLOOR				EEL CAP, TILTING FLANGE, CAST BRASS DRAIN BODY, STAINLESS STEEL STRAINER AND LINT BASKET, STAINLESS STEEL SPLASH PANELS, T-35 HOSE AND WALL HOOK, T-40 S.S. MOP HANGER WITH 3 WALL GRIPS. T&S FAUCET #B-0665-BSTP R HANDLES, WALL BRACE, AND 3/4" GARDEN HOSE OUTLET.
P-4A	JANITOR SINK	3"	2"	3/4"	3/4"	FLOOR	ELKAY RNSF8118 #16	GAUGE, TYPE 3	304, STAINL	ESS STEEL SCULLERY SINK. PROVIDE WITH FAUCET MODEL LK940AT08L2H AND DRAIN MODEL LK18B. PROVIDE WITH TWO MCGUIRE SUPPLY STOPS.
P-5	ELECTRIC WATER COOLER	1-1/2"	1-1/2"	1/2"		WALL	OASIS PGF8SBF, BAR STOP AND #8872 TRA		SACOOLER	II WITH VERSAFILTER AND VERSAFILLER. 8.0 GPH OF 50°F WATER AT 90°F AMBIENT AND 80°F INLET WATER. 1/4 HP, 115V, 60HZ, 4.4AMPS. PROVIDE WITH BOTTLE FILLER VERSAFILLER KIT. PROVIDE WITH CARRIER. PROVIDE MCGUIRE #BV-210
P-6	SINGLE COMPARTMENT SINK	2"	2"	1/2"	1/2"	COUNTERTOP	ELKAY LR-2219 OVER ESCUTCHEONS. PRO			6" X 7-1/2" BOWL), 18 GAUGE STAINLESS STEEL, CENTER OUTLET, WITH CHROME P-TRAP. DELTA 27C4834 FAUCET WITH WRIST BLADE HANDLES. PROVIDE MCGUIRE 8904 P-TRAP WITH ESCUTCHEON AND MCGUIRE 177 SUPPLY KIT WITH IRAN FAUCET WITH BASKET.
P-7	DISPOSAL	2"				BELOW SINK	IN-SINK-ERATOR, BAI	OGER 500, CONT	TINUOUS FE	ED. 1/2 HP, 120V/1 , STAINLESS STEEL GRINDING ELEMENTS WITH TWO STAINLESS STEEL 360° SWIVEL LUGS, WITH DISHWASHER INLET.
P-8	WATER BOX			1/2"		WALL	WATER TITE #AB1200	, 1/2" VALVE CO	ONNECTION,	1/4" TURN BALL INSTALLED, CONTOUR DESIGN FOR EASY VALVE ACCESS. THIS BOX SERVICES ONLY ONE ICE MACHINE.
P-9	WASHER BOX	2"	2"	1/2"	1/2"	WALL				CONNECTION, 1/4" TURN BALL INSTALLED, CONTOUR DESIGN FOR EASY VALVE ACCESS. PROVIDE WITH FACTORY HAMMER ARRESTERS.
P-10	SHOWER - ADA	2"	2"	1/2"	1/2"	WALL/FLOOR	HAMILTON G 6233 IBS	F-WHT ACRYIX	ALCOVE ON	VE-PIECE ROLL-IN SHOWER, WITHFOLD UP SEAT, 2 HORIZONTAL AND ONE VERTICAL GRAB BARS, VALVE PACKAGE INCLUDES HAND HELD SHOWER SET, 60" FLEX HOSE, VACUUM BREAKER, 30" SLIDE BAR, WALL OUTLET FITTINGS, CURTAIN AN ER DRAIN. INSTALL FOR COMPLIANCE WITH ADA.
P-11	EYE WASH STATION	1-1/2"	1-1/2"	1/2" TEPID FROM MIXII		WALL	GUARDIAN GBF17241	BARRIER-FREE	WIDEAREA	EVE /FACE WASH, WALL MOUNTED. PROVIDE WITH GUARDIAN G6021-1R6 THERMOSTATIC MIXING VALVE WITH STEEL CABINET. INSTALL PER MANUFACTURER REQUIREMENTS.
PWH	FREEZE PROOF WALL HYDRAT			3/4"		WALL	WOODFORD B67, AU	COMATIC DRAIN	IING, FREEZ	ZELESS WALL HYDRANT WITH HOSE CONNECTION BACKFLOW PROTECTION. PROVIDE WITH STANDARD CHROME FINISH WITH KEY OPERATED BOX.
НВ	HOSE BIBB			3/4"		WALL	WOODFORD B24, AN	TI-SIPHON WALI	L FAUCET, F	PROVIDE WITH STANDARD CHROME FINISH WITH KEY OPERATED BOX. FOR INSTALLATION IN MODERATE CLIMATE.
FD-1	FLOOR DRAIN	2"				FLOOR	ZURN Z415B ROUND	FLOOR DRAIN, I	DURA-COAT	TED CAST IRON BODY WITH BOTTOM OUTLET AND POLISHED NICKLE BRONZE STRAINER. PROVIDE INLINE TRAP PROTECTION, REFER TO DETAIL 1/P301. INSTALL DRAIN SO THAT TOP OF RIM IS FLUSH WITH FLOOR.
FD-2	FLOOR DRAIN	3"				FLOOR	ZURN Z415E ROUND	FLOOR DRAIN V	WITH FUNNE	EL, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET AND POLISHED NICKLE BRONZE STRAINER. PROVIDE INLINE TRAP PROTECTION, REFER TO DETAIL 1/P301. INSTALL DRAIN SO THAT TOP OF RIM IS FLUSH WITH FLOOR.
-S-1	FLOOR SINK	4"				FLOOR	ZURN Z1849-3 FLOOF		x4" 14 GAUG	E, TYPE 304 STAINLESS STEEL WITH BOTTOM OUTLET WITH LIGHT DUTY PERFORATED GRATE AND SEDIMENT BASKET. PROVIDE WITH 3/4 GRATE. PROVIDE INLINE TRAP PROTECTION, REFER TO DETAIL 1/P301. INSTALL DRAIN SO THAT
ГD-1	TRENCH DRAIN	4"				FLOOR			H TRENCH [	DRAIN TO START WITH SECTION 8604 AT SHALLOW END WITH BOTTOM OUTLET DRAIN DRAIN AT THE MID POINT. PROVIDE INLINE TRAP PROTECTION, REFER TO DETAIL 1/P301. INSTALL DRAIN SO THAT TOP OF RIM IS FLUSH WITH FLOOR.
SFP-1	BACKFLOW PREVENTER			2 1/2"		SEE PLANS	WATTS LF909 2 1/2"	BACKFLOW PRE	VENTER, PF	ROVIDE WITH AIR GAP AND STRAINER. ROUTE DRAIN LINE TO FLOOR SINK.
3FP-2	BACKFLOW PREVENTER			1"		SEE PLANS	WATTS LF909 1" BAC	KFLOW PREVEN	ITER, PROV	IDE WITH AIR GAP AND STRAINER. ROUTE DRAIN LINE TO DRAIN PIT.
-CO	FLOOR CLEANOUT	SEE PLANS				FLOOR	ZURN OR EQUAL.			
COTG	CLEANOUT TO GRADE	SEE PLANS				GRADE	ZURN OR EQUAL.			
		JLE FLAND				GRADE				



## OPERATION. PROVIDE HOLDRITE WATER HEATER FLOOR STAND 40-S-24-A AND HOLDRITE WATER HEATER DRAIN PAN QP-24. PROVIDE WITH T&P VALVE AND WATTS EXPANSION PECIFICATION AND HOLDRITE EXPANSION TANK MOUNTING BRACKET. HEATER TEMPERATURE SET POINT TO BE 120°F. COORDINATE WITH ELECTRICAL FOR DISCONNECT LOCATION. DTAL DEVELOPED HEAD OF 3.2 FT OF WATER COLUMN. 3/4" SWEAT CONNECTION. 2 POLE, SINGLE PHASE. 1/25 HP. PROVIDE WITH PRE-TERMINATED LINE CORD. -1.28 FLUSH VALVE. CHURCH 9500NSSC, ELONGATED, OPEN FRONT SEAT, BOLT CAPS. -1.28 FLUSH VALVE. CHURCH 9500NSSC, ELONGATED, OPEN FRONT SEAT, BOLT CAPS. INSTALL PER ADA REQUIREMENTS. RD FAUCET MONTERREY, 4 " ON CENTER, CENTERSET GOOSENECK WITH LIMITED SWIVEL, WRIST BLADE HANDLES, 1.5 GPM. PROVIDE WITH THERMOSTATIC MIXING VALVE. PROVIDE MCGUIRE 1149 IT WITH ESCUTCHEONS. INSTALL PER ADA REQUIREMENTS. ARD FAUCET MONTERREY, 4 " ON CENTER, CENTERSET GOOSENECK WITH LIMITED SWIVEL, WRIST BLADE HANDLES, 1.5 GPM. PROVIDE WITH THERMOSTATIC MIXING VALVE. PROVIDE MCGUIRE 1149 KIT WITH ESCUTCHEONS. INSTALL PER ADA REQUIREMENTS. PROVIDE WITH WALL CARRIER. 86-1.0 FLUSH VALVE. WADE 400-AM11 CARRIER. 86-1.0 FLUSH VALVE. WADE 400-AM11 CARRIER. INSTALL PER ADA REQUIREMENTS. S DRAIN BODY, STAINLESS STEEL STRAINER AND LINT BASKET, STAINLESS STEEL SPLASH PANELS, T-35 HOSE AND WALL HOOK, T-40 S.S. MOP HANGER WITH 3 WALL GRIPS. T&S FAUCET #B-0665-BSTP RDEN HOSE OUTLET. WITH FAUCET MODEL LK940AT08L2H AND DRAIN MODEL LK18B. PROVIDE WITH TWO MCGUIRE SUPPLY STOPS. ER. 8.0 GPH OF 50 °F WATER AT 90 °F AMBIENT AND 80 °F INLET WATER. 1/4 HP, 115V, 60HZ, 4.4AMPS. PROVIDE WITH BOTTLE FILLER VERSAFILLER KIT. PROVIDE WITH CARRIER. PROVIDE MCGUIRE #BV-2165 S STEEL, CENTER OUTLET, WITH CHROME P-TRAP. DELTA 27C4834 FAUCET WITH WRIST BLADE HANDLES. PROVIDE MCGUIRE 8904 P-TRAP WITH ESCUTCHEON AND MCGUIRE 177 SUPPLY KIT WITH . GRINDING ELEMENTS WITH TWO STAINLESS STEEL 360° SWIVEL LUGS, WITH DISHWASHER INLET. DESIGN FOR EASY VALVE ACCESS. THIS BOX SERVICES ONLY ONE ICE MACHINE. ED, CONTOUR DESIGN FOR EASY VALVE ACCESS. PROVIDE WITH FACTORY HAMMER ARRESTERS. UP SEAT, 2 HORIZONTAL AND ONE VERTICAL GRAB BARS, VALVE PACKAGE INCLUDES HAND HELD SHOWER SET, 60" FLEX HOSE, VACUUM BREAKER, 30" SLIDE BAR, WALL OUTLET FITTINGS, CURTAIN AND

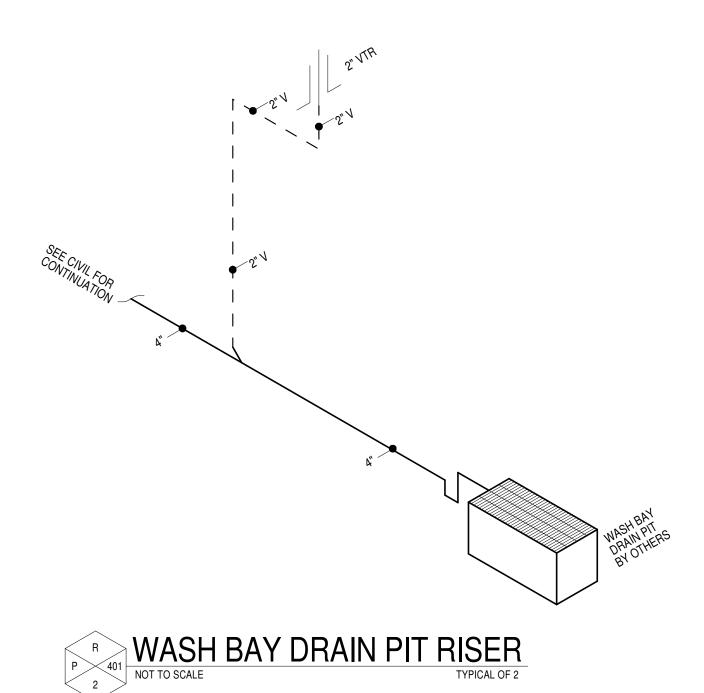
P 401 OFFICE SANITARY SEWER RISER

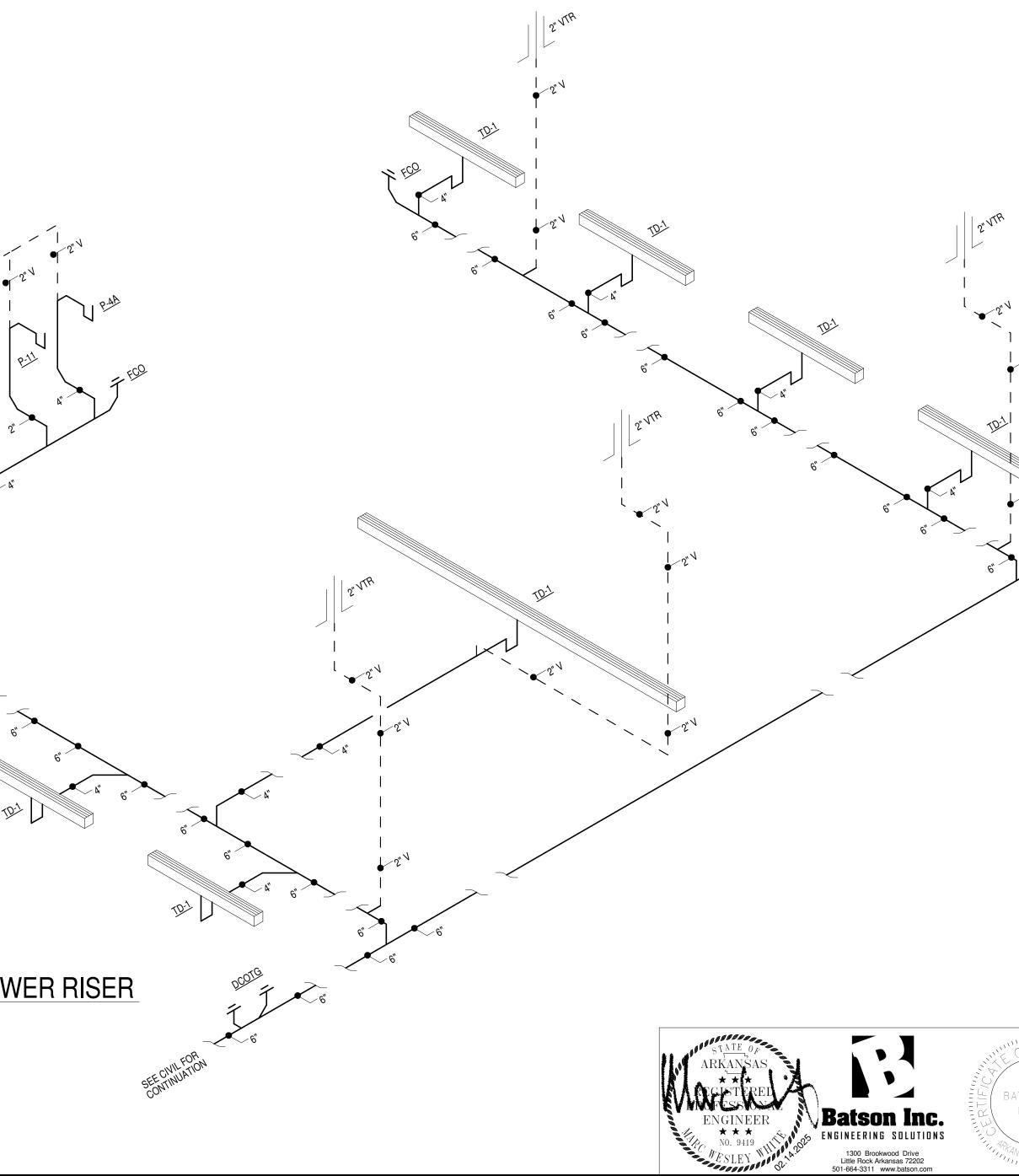
P 401 SHOP SANITARY SEWER RISER

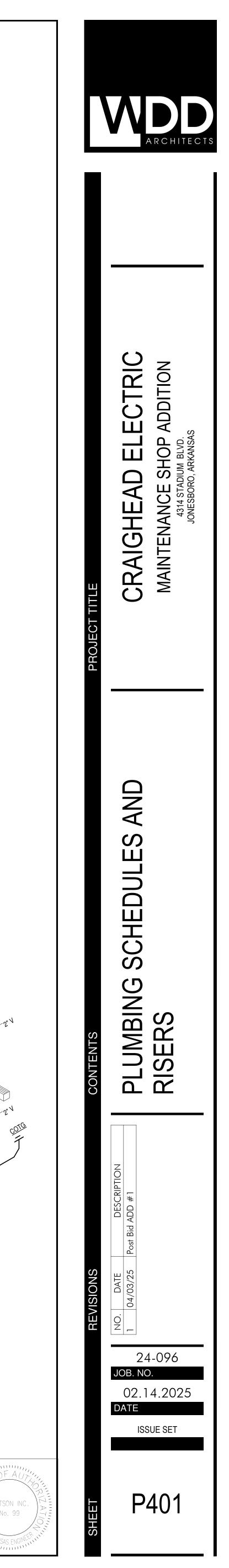
REQUIREMENTS.

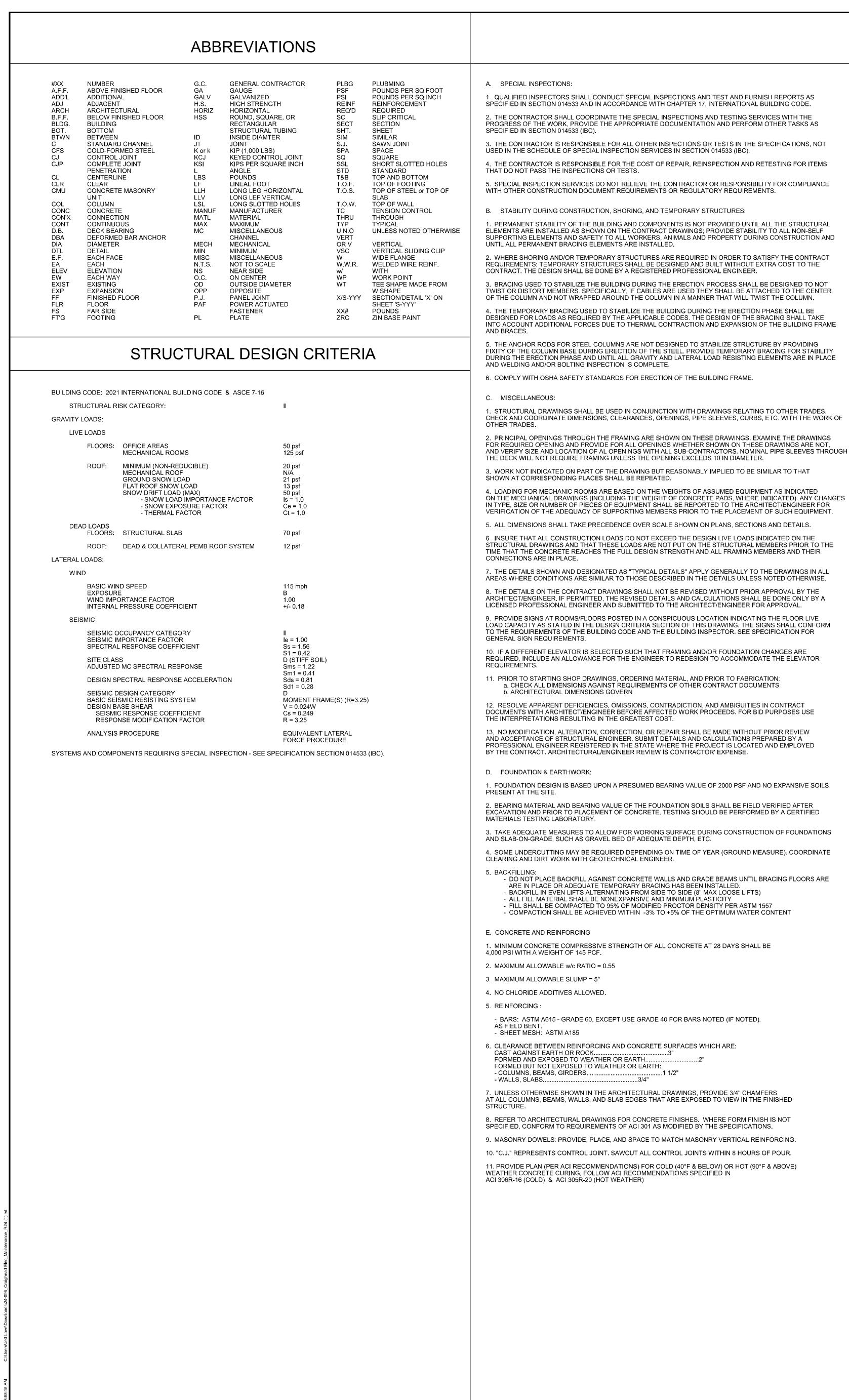
MANUFACTURER'S INDICATED ARE TO ESTABLISH MINIMUM CAPACITIES, EFFICIENCIES, QUALITY, ACCESSORIES AND STANDARDS. UNLESS OTHERWISE INDICATED ON THE SCHEDULES OR IN THE SPECIFICATIONS, EQUAL EQUIPMENT BY OTHER MANUFACTURERS MAY BE USED. 3. ANY CHANGES TO THE ELECTRICAL, STRUCTURAL, ARCHITECTURAL, OR OTHER MECHANICAL SYSTEMS WHICH RESULT FROM SUBSTITUTED EQUIPMENT SHALL BE COORDINATED FULLY PRIOR TO BID. ALL COSTS RESULTING FROM CHANGES REQUIRED BY THE SUBSTITUTION SHALL BE INCLUDED IN THE BIDS.











# 1. QUALIFIED INSPECTORS SHALL CONDUCT SPECIAL INSPECTIONS AND TEST AND FURNISH REPORTS AS SPECIFIED IN SECTION 014533 AND IN ACCORDANCE WITH CHAPTER 17, INTERNATIONAL BUILDING CODE.

2. THE CONTRACTOR SHALL COORDINATE THE SPECIAL INSPECTIONS AND TESTING SERVICES WITH THE PROGRESS OF THE WORK, PROVIDE THE APPROPRIATE DOCUMENTATION AND PERFORM OTHER TASKS AS 3. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER INSPECTIONS OR TESTS IN THE SPECIFICATIONS, NOT

USED IN THE SCHEDULE OF SPECIAL INSPECTION SERVICES IN SECTION 014533 (IBC). 4. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIR, REINSPECTION AND RETESTING FOR ITEMS THAT DO NOT PASS THE INSPECTIONS OR TESTS.

5. SPECIAL INSPECTION SERVICES DO NOT RELIEVE THE CONTRACTOR OR RESPONSIBILITY FOR COMPLIANCE WITH OTHER CONSTRUCTION DOCUMENT REQUIREMENTS OR REGULATORY REQUIREMENTS.

B. STABILITY DURING CONSTRUCTION, SHORING, AND TEMPORARY STRUCTURES:

. PERMANENT STABILITY OF THE BUILDING AND COMPONENTS IS NOT PROVIDED UNTIL ALL THE STRUCTURAL ELEMENTS ARE INSTALLED AS SHOWN ON THE CONTRACT DRAWINGS; PROVIDE STABILITY TO ALL NON-SELF

SUPPORTING ELEMENTS AND SAFETY TO ALL WORKERS, ANIMALS AND PROPERTY DURING CONSTRUCTION AND UNTIL ALL PERMANENT BRACING ELEMENTS ARE INSTALLED.

2. WHERE SHORING AND/OR TEMPORARY STRUCTURES ARE REQUIRED IN ORDER TO SATISFY THE CONTRACT

REQUIREMENTS; TEMPORARY STRUCTURES SHALL BE DESIGNED AND BUILT WITHOUT EXTRA COST TO THE

CONTRACT. THE DESIGN SHALL BE DONE BY A REGISTERED PROFESSIONAL ENGINEER. 3. BRACING USED TO STABILIZE THE BUILDING DURING THE ERECTION PROCESS SHALL BE DESIGNED TO NOT

TWIST OR DISTORT MEMBERS. SPECIFICALLY, IF CABLES ARE USED THEY SHALL BE ATTACHED TO THE CENTER OF THE COLUMN AND NOT WRAPPED AROUND THE COLUMN IN A MANNER THAT WILL TWIST THE COLUMN. 4. THE TEMPORARY BRACING USED TO STABILIZE THE BUILDING DURING THE ERECTION PHASE SHALL BE DESIGNED FOR LOADS AS REQUIRED BY THE APPLICABLE CODES. THE DESIGN OF THE BRACING SHALL TAKE

INTO ACCOUNT ADDITIONAL FORCES DUE TO THERMAL CONTRACTION AND EXPANSION OF THE BUILDING FRAME

5. THE ANCHOR RODS FOR STEEL COLUMNS ARE NOT DESIGNED TO STABILIZE STRUCTURE BY PROVIDING FIXITY OF THE COLUMN BASE DURING ERECTION OF THE STEEL. PROVIDE TEMPORARY BRACING FOR STABILITY DURING THE ERECTION PHASE AND UNTIL ALL GRAVITY AND LATERAL LOAD RESISTING ELEMENTS ARE IN PLACE

AND WELDING AND/OR BOLTING INSPECTION IS COMPLETE. 6. COMPLY WITH OSHA SAFETY STANDARDS FOR ERECTION OF THE BUILDING FRAME.

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH DRAWINGS RELATING TO OTHER TRADES. CHECK AND COORDINATE DIMENSIONS, CLEARANCES, OPENINGS, PIPE SLEEVES, CURBS, ETC. WITH THE WORK OF

### 12. UNLESS SHOWN OR OTHERWISE NOTED, PROVIDE STANDARD HOOKS ON END OF ALL BARS EXCEPT

**GENERAL STRUCTURAL NOTES** 

BE ACI 347R, CLASS C. A SURFACE IS CONSIDERED EXPOSED IF THE CONCRETE TEXTURE CAN BE SEEN BY

THOSE LAPPED OR SPLICED TO A CONTINUING BAR.

#4 @ 12" EACH WAY, TOP AND BOTTOM

ANYONE IN THE COMPLETED STRUCTURE.

- W8'S THRU W36'S - A572 GRADE 50

- TUBES - A500 GRADE B - 46 ksi

- BUILT-UP SHAPES - AS INDICATED

- ALL ELSE - A36 - 36 ksi OR A572 GRADE 50

- WELD OR BOLT, UNLESS NOTED OTHERWISE

- MINIMUM THICKNESS: ANGLES 5/16" PLATES 3/8"

- MINIMUM BOLT DIAMETER, 3/4" UNLESS NOTED.

- TWO BOLTS MINIMUM PER CONNECTED MEMBER.

2. SPACE MEMBERS UNIFORMLY BETWEEN DIMENSIONED LOCATIONS

- DESIGN CONNECTIONS NOT ENTIRELY DETAILED ON DRAWINGS

TO THE LONG AXIS OF THE SLOT, USE A25N OR A490N ELSEWHERE.

- GROOVE WELDS: FULL PENETRATION, UNLESS NOTED OTHERWISE

I. SUPPORT AND BRACING OF WORK NOT SHOWN ON STRUCTURAL DRAWINGS:

BEING SUPPORTED OR BRACED AT THE TRADE CONTRACTOR'S EXPENSE

TOP OF FLANGE OF THE NEXT ADJACENT BEAM OR JOIST.

FACADE AND WALL SYSTEMS ATTACHMENTS TO THE STRUCTURE:

BOLTS, EXCEPT USE SC BOLTS AT MOMENT CONNECTIONS.

370 SERIES

- WELDS ARE CONTINUOUS UNLESS NOTED OTHERWISE

HOLLOW STRUCTURAL SECTIONS CONNECTIONS MANUAL.

1. ROLLED AND BUILT UP SECTIONS

- PIPES - A53 - 30 ksi

4. CONNECTION DESIGN FORCES

5. BOLTED CONNECTIONS

6. WELDED CONNECTIONS:

G. EMBEDDED ITEMS:

IN CONCRETE.

H. ANCHORING:

ELECTRODES:

- FILLET WELDS:

ATTACHING TO THE ANCHOR.

ATTACHING TO THE ANCHOR.

DRAWINGS

- BEAM CONNECTIONS

ON THEM OR ATTACHES TO THEM.

F. STRUCTURAL STEEL

3. CONNECTIONS

### 13. AS PART OF CONCRETE WORK PROVIDE CONCRETE EQUIPMENT PADS, HOUSE KEEPING PADS, INERTIA BASES AND CURBS AS INDICATED ON ANY OF THE CONTRACT DRAWINGS UNLESS SPECIFIED TO BE PROVIDED UNDER OTHER DIVISIONS OF THE SPECIFICATION. UNLESS NOTED, DOWEL TO STRUCTURE

BELOW WITH #4 x 0'-6" PROJECTING 3" FROM CONCRETE BELOW AT 12" O.C. EACH WAY AND REINFORCE W/

### 14. CONCRETE EQUIPMENT PADS, INERTIA BASES AND CURBS NOT SHOWN ON THE CONTRACT DOCUMENTS FOR THIS BID PACKAGE ARE THE RESPONSIBILITY OF THE TRADE WHO'S EQUIPMENT BEARS

15. SEE ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIP SLOWS, REGLETS, MASONRY ANCHORS, PRECAST BEARING LEDGES, AND FOR MISCELLANEOUS EMBEDDED PLATS, BOLTS, ANCHORS, ETC. 16. SELECT FORMWORK TO PRODUCE THE FINISH REQUIRED. WHERE FINISH IS NOT SPECIFIED, FORMWORK FOR EXPOSED SURFACES SHALL E ACI347R, CLASS A , AND FORMWORK FOR OTHER SURFACES SHALL

f'c = 3,000 psi		SPLICE LENGTH (in)			
		TOP BARS		OTHER BARS	
BAR	LAP	(alpha	i = 1.3)	(alpha	ı = 1.0)
SIZE	CLASS	CASE 1	CASE 2	CASE 1	CASE 2
#3	А	22	33	17	25
	В	28	42	22	33
#4	A	29	43	22	33
	В	38	56	29	43
#5	А	36	54	28	42
	В	47	70	36	54
#6	А	43	65	33	50
	В	56	84	43	65
#7	А	63	94	48	72
	В	81	122	63	94
#8	А	72	107	55	83
	В	93	139	72	107
#9	А	81	121	62	93
	В	105	157	81	121
#10	А	91	136	70	105
	В	118	177	91	136
#11	А	101	151	78	116
	В	131	196	101	151

	f'c = 4,000 psi		SPLICE LENGTH (in)			
			TOP BARS		OTHER BARS	
	BAR SIZE	LAP CLASS	(alpha CASE 1	= 1.3) CASE 2	· · ·	= 1.0) CASE 2
	#3	A	19	28	15	22
	#4	B A	25 25	37 37	19 19	28 29
	#5	B A	33 31	49 47	25 24	37 36
		В	41	61	31	47
	#6	A B	37 49	56 73	29 37	43 56
	#7	A B	54 71	81 106	42 54	63 81
	#8	A	62	93	48	72
	#9	B A	81 70	121 105	62 54	93 81
	#10	В	91	136	70	105
	#10	A B	79 102	118 153	61 79	91 118
	#11	А	87	131	67	101

B 114 170 87 131

### - DETAILS SHOW THE RELATIONSHIP BETWEEN MEMBERS AND MAY GIVE LIMITATIONS OR CRITERIA TO BE USED IN DEVELOPING COMPLETE CONNECTION DESIGN AND DETAILS. USE CONNECTIONS FROM PART 4. AISC MANUAL, 9TH EDITION. FOR TS AND PIPE CONNECTIONS USE CONNECTIONS FROM AISC

1) IF SHOWN, USE 110% OF THE REACTION OF THE DRAWINGS BUT NOT LESS THAN 10 kips. 2) IF NO REACTION IS SHOWN, USE 55% OF TOTAL ALLOWABLE UNIFORM LOAD CAPACITY FROM THE AISC TABLES FOR ALLOWABLE LOADS ON BEAMS BUT NOT LESS THAN 10 kips.

- USE A325SC OR A490SC BOLTS FOR BRACING, MOMENT CONNECTIONS, CANTILEVERS, TENSIONS MEMBERS AND AT OVERSIZED OR SLOTTED HOLES WHERE THE FORCE ON THE JOINT IS PARALLEL - FOR BEAM TO COLUMN CONNECTION, USE SHORT OR LONG SLOTTED HOLES AND FULLY TENSIONED - OVERSIZED AND LONG SLOTTED HOLES PERMITTED ONLY WHERE SHOWN OR NOTED.

AISC MINIMUM, BUT NOT LESS THAN 3/16", UNLESS NOTED

1. DO NOT EMBED PIPES, TUBES, WIRES, CONDUIT, DUCTS, OR CAVITY CREATING NON-STRUCTURAL ITEMS

1. ANCHORS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE PROVIDED BY THE TRADE CONTRACTOR

2. DETERMINING THE INSTALLED CAPACITY OF ANCHORS WHICH ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS IS THE RESPONSIBILITY OF THE TRADE CONTRACTOR ATTACHING TO THE ANCHOR. 3. LOCATING AND MISSING EMBED ITEMS IN CONCRETE IS THE RESPONSIBILITY OF THE TRADE CONTRACTOR

1. SUPPORTS, BRACING, SUB-FRAMING, LIGHT GAGE FRAMING, MISCELLANEOUS STEEL, BRACKETS, CONNECTORS, AND ATTACHMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS ARE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE ENGINEERED AND PROVIDED BY THE TRADE CONTRACTOR WITH ITEMS

2. IF STRUCTURAL DRAWINGS REFERENCED BY OTHER DRAWINGS FOR ITEMS NOT FULLY DEFINED ON STRUCTURAL DRAWINGS (AND ASSOCIATED SPECIFICATIONS) THEN ENGINEER AND PROVIDE SUCH ITEMS ON A PERFORMANCE BASIS IN COMPLIANCE WITH THE GOVERNING BUILDING CODE. ALL COSTS

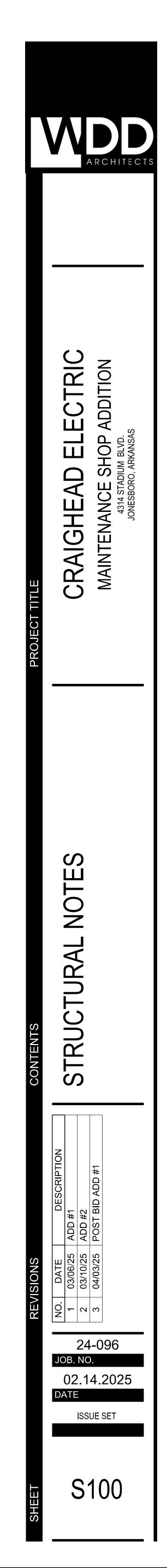
SHALL BE BORN BY THE TRADE CONTRACTOR ATTACHING TO OR BEARING UPON SUCH ITEMS. 3. SUPPORT AND BRACING SYSTEMS SHALL NOT TRANSMIT LATERAL LOADS TO COLUMNS BETWEEN FLOORS OR TO THE BOTTOMS OR SIDES OF STEEL BEAMS OR JOISTS. IF OTHER CONTRACT DRAWINGS INDICATE BRACING OR ATTACHMENT DETAILS WHICH WOULD RESULT IN LATERAL LOADS BEING TRANSMITTED TO THE SIDE OF COLUMNS BETWEEN FLOORS OR TO THE BOTTOMS OR SIDES OF BEAMS OR JOISTS THEN THE TRADE CONTRACTOR RESPONSIBLE FOR THE ITEMS TRANSMITTING SUCH

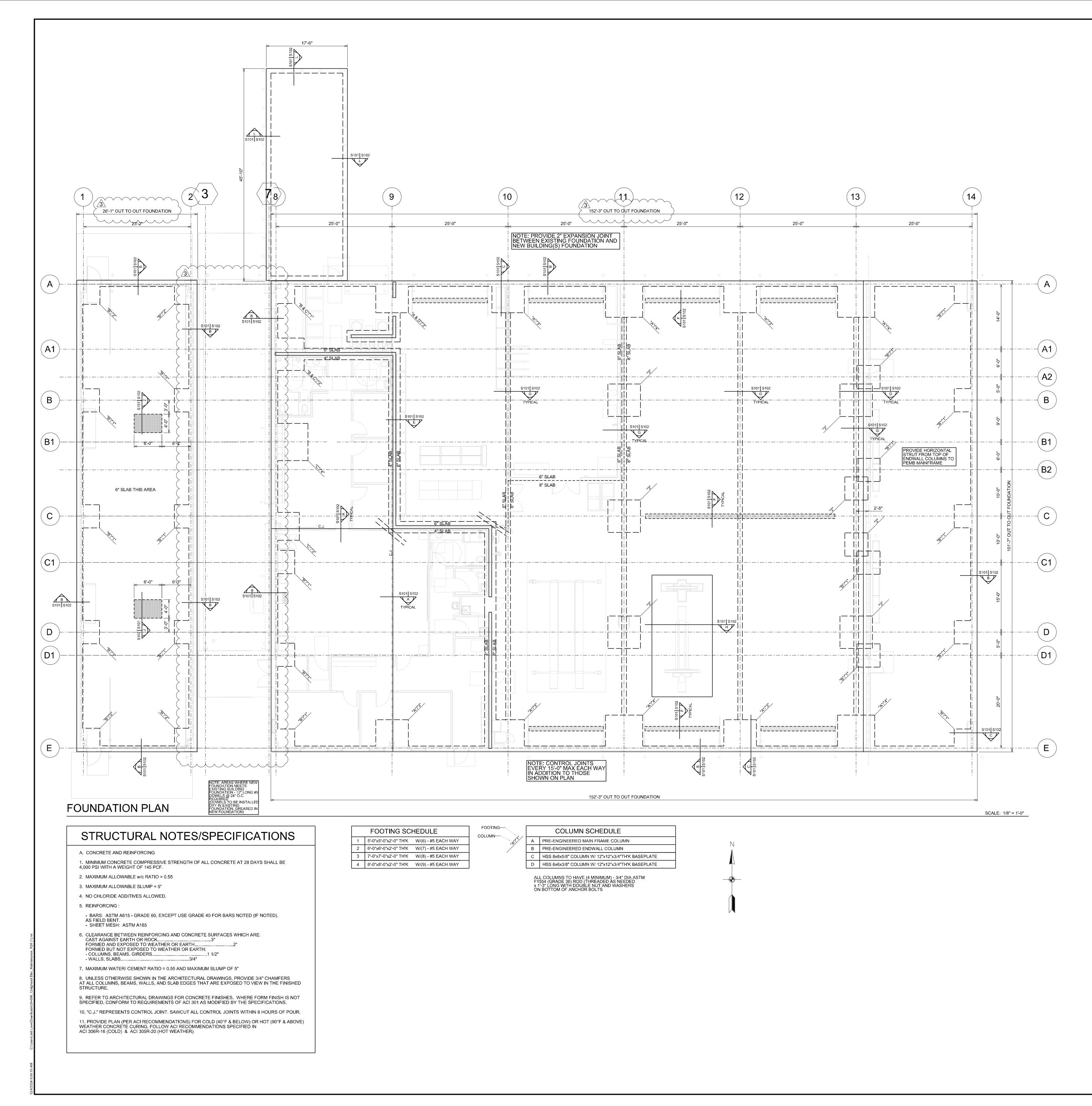
LATERAL LOADS INCLUDE THE COST IN HIS BID FOR ENGINEERING AND PROVIDING BRACING TO THE - SHALL NOT ASSUME THE STRUCTURE PROVIDES MOMENT RESISTANCE AT THE POINT OF ATTACHMENT.

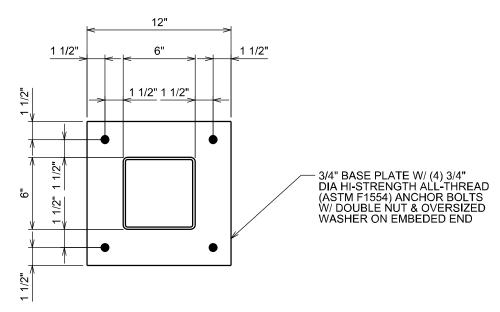
- SHALL BE TO THE EDGE OF THE FLOOR SLAB OR ROOF DECK ONLY UNLESS NOTED ONT THE STRUCTURAL - SHALL NOT RESTRICT INDEPENDENT VERTICAL OR LATERAL MOVEMENT OF THE BUILDING LEVELS.







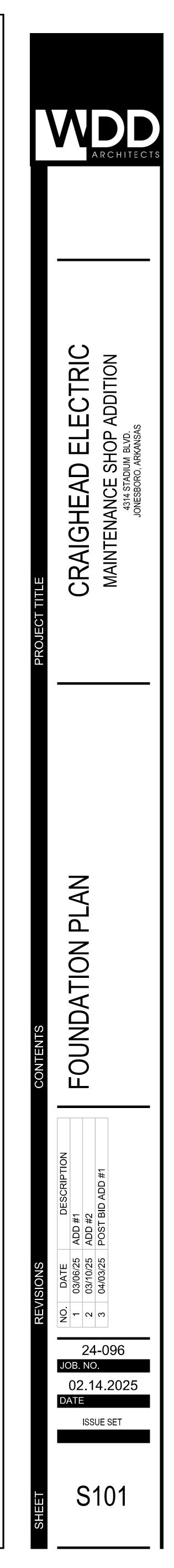




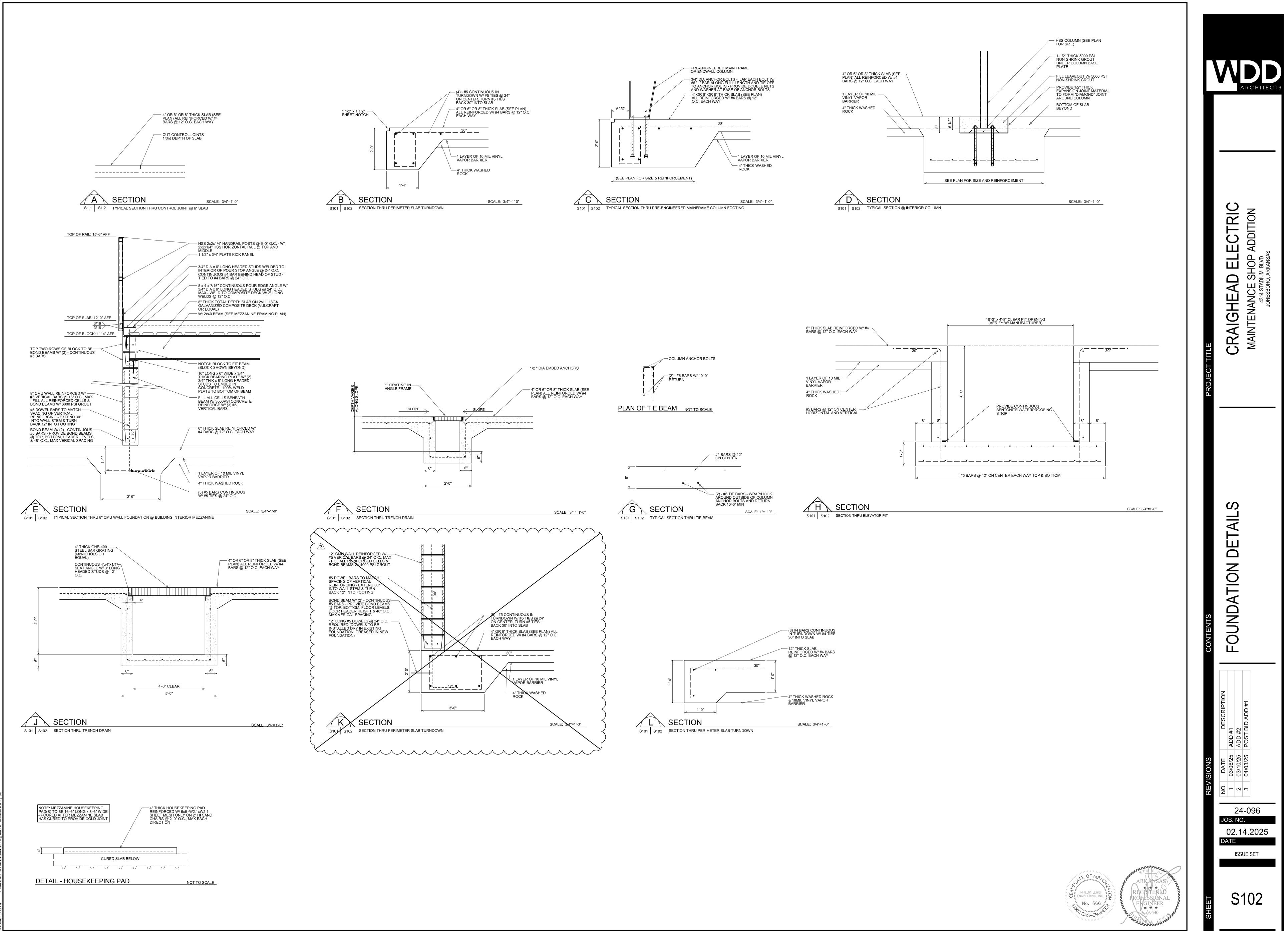
BASE PLATE DETAIL

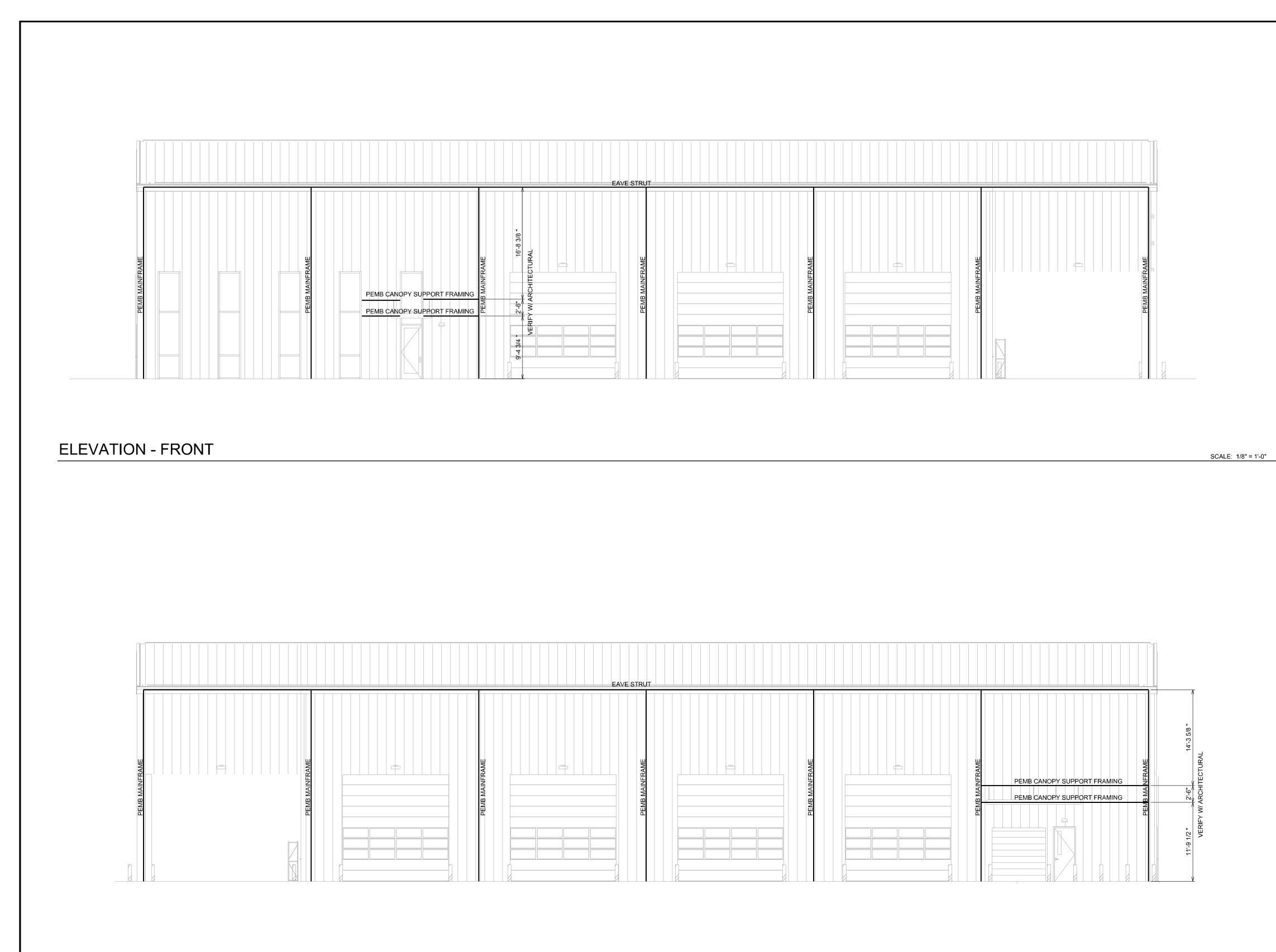
PHILLIP LEWIS ENGINEERING, INC. No. 566





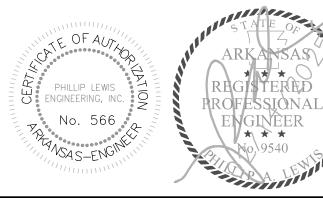
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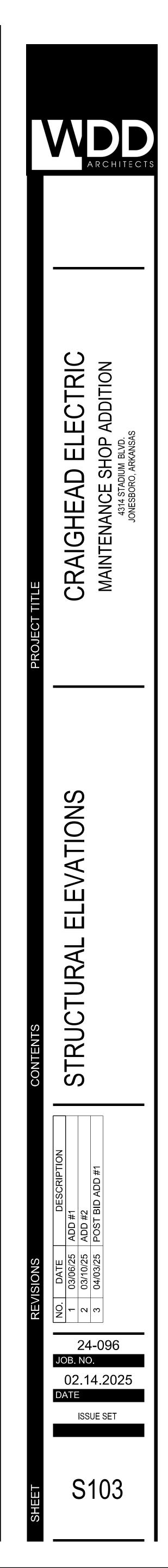


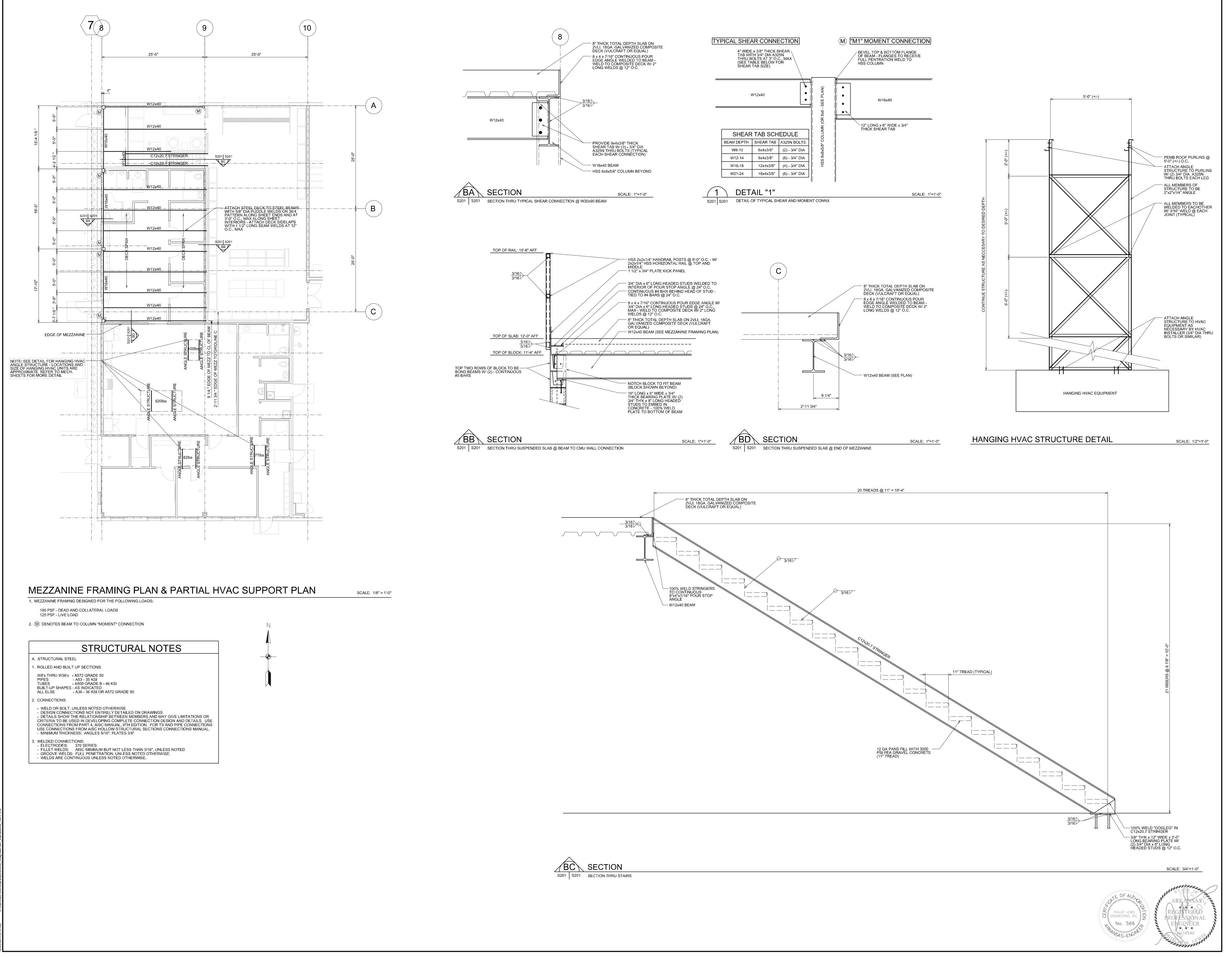


**ELEVATION - REAR** 

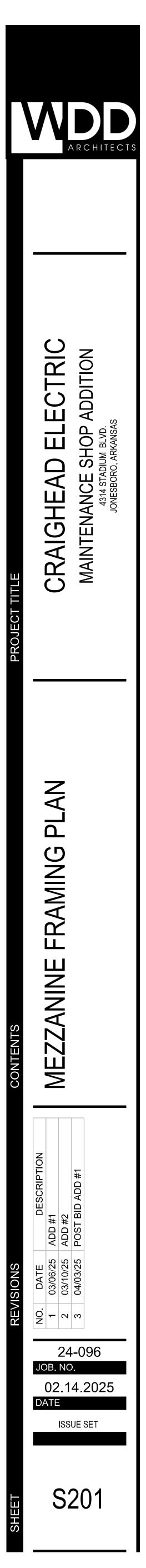
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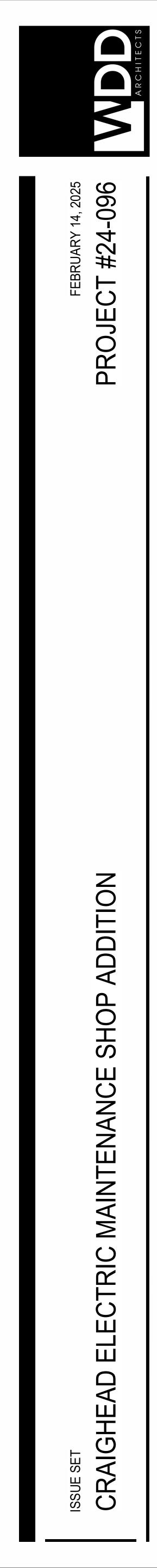








ASSOCIATED ENGINNERING, LLC







# SHEET INDEX

	Animini in
NO.	SHEET NAME
GENERAL	
T100	COVER SHEET
T110	SHEET INDEX AND GENERAL INFORMATION
T111	ARCHITECTURAL ABBREVIATIONS NOTES AND L
T120	LIFE SAFETY PLAN AND CODE INFORMATION
CIVIL	
C001	SITE PLAN - MAINTENANCE SHOP
C002	UTILITY PLAN - MAINTENANCE SHOP
ARCHITEC	CTURAL
D110	DEMOLITION PLAN
A100	ARCHITECTURAL SITE PLAN
A101	ENLARGED ARCHITECTURAL SITE PLAN AND SIT
A110	DIMENSIONED FLOOR PLAN
A120	NOTED FLOOR PLAN
A130	REFLECTED CEILING PLAN
A150	ROOF PLAN
A201	EXTERIOR ELEVATIONS
A310	BUILDING SECTIONS
A320	WALL SECTIONS
A321	WALL SECTIONS
A322 A330	EXTERIOR DETAILS PARTITION TYPES, DETAILS AND INTERIOR DETAILS
A330 A410	ENLARGED PLANS
A410 A411	ENLARGED STAIR PLANS
A411 A420	ENLARGED TOILET PLANS AND ELEVATIONS
A460	INTERIOR ELEVATIONS AND MILLWORK DETAILS
A610	FINISH SCHEDULE, PLAN, AND DETAILS
A611	FURNITURE, FIXTURES, AND EQUIPMENT PLAN
	SCHEDULES
A620	WINDOW LEGEND, DOOR SCHEDULE & DETAILS
STRUCTU S100	STRUCTURAL NOTES
S100 S101	FOUNDATION PLAN
S101 S102	FOUNDATION DETAILS
S102	STRUCTURAL ELEVATIONS
S201	MEZZANINE FRAMING PLAN
MECHANIC M001	CAL MECHANICAL NOTES, LEGEND, & INDEX
M101	HVAC FLOOR PLAN
M101 M102	MEZZANINE MECHANICAL PLANS
M201	MECHANICAL PIPING FLOOR PLAN
M301	MECHANICAL PIPING FLOOR FLAN MECHANICAL SECTIONS
M401	MECHANICAL DETAILS
M402	MECHANICAL DETAILS
M501	MECHANICAL SCHEDULES
	-
PLUMBINC P001	PLUMBING NOTES, LEGEND, & INDEX
P001 P101	SANITARY SEWER PLAN
P101 P201	DOMESTIC WATER PLAN
P201 P301	PLUMBING DETAILS
P401	PLUMBING SCHEDULES AND RISERS
ELECTRIC	
E001	ELECTRICAL NOTES, LEGEND, & INDEX
E201	ELECTRICAL LIGHTING PLAN
E301	ELECTRICAL POWER & SYSTEMS PLAN
E302	ELECTRICAL MEZZANINE AND ENLARGED PLANS
E401	
E501	ELECTRICAL ONE-LINE DIAGRAM AND PANEL SCHEDULES
E601	ELECTRICAL PANEL SCHEDULES
E701	ELECTRICAL DETAILS
FIRE PRO	
F001	FIRE PROTECTION NOTES, LEGEND, INDEX, & MEZZANINE PLAN
F101	FIRE PROTECTION FLOOR PLAN

# **PROJECT LOCATION**

### WDD ARCHITECTS

ARCHITECTS-INTERIOR DESIGN-PLANNERS 5050 NORTHSHORE LANE NORTH LITTLE ROCK, ARKANSAS 72118 PH. # (501)376-6681 EMAIL: wdd@wddarchitects.com

I HEREBY CERTIFY THAT THESE PLANS AND SPECIFIC/ HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERV I FURTHER CERTIFY THAT TO THE BEST OF MY KNOW THESE PLANS AND SPECIFICATIONS ARE AS REQUIRE LAW AND IN COMPLIANCE WITH THE ARKANSAS FIRE PREVENTION CODE FOR THE STATE OF ARKANSAS.

SIGNATURE

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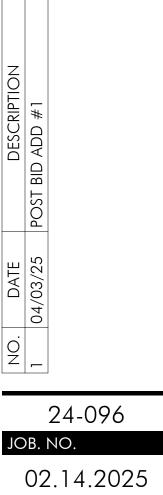
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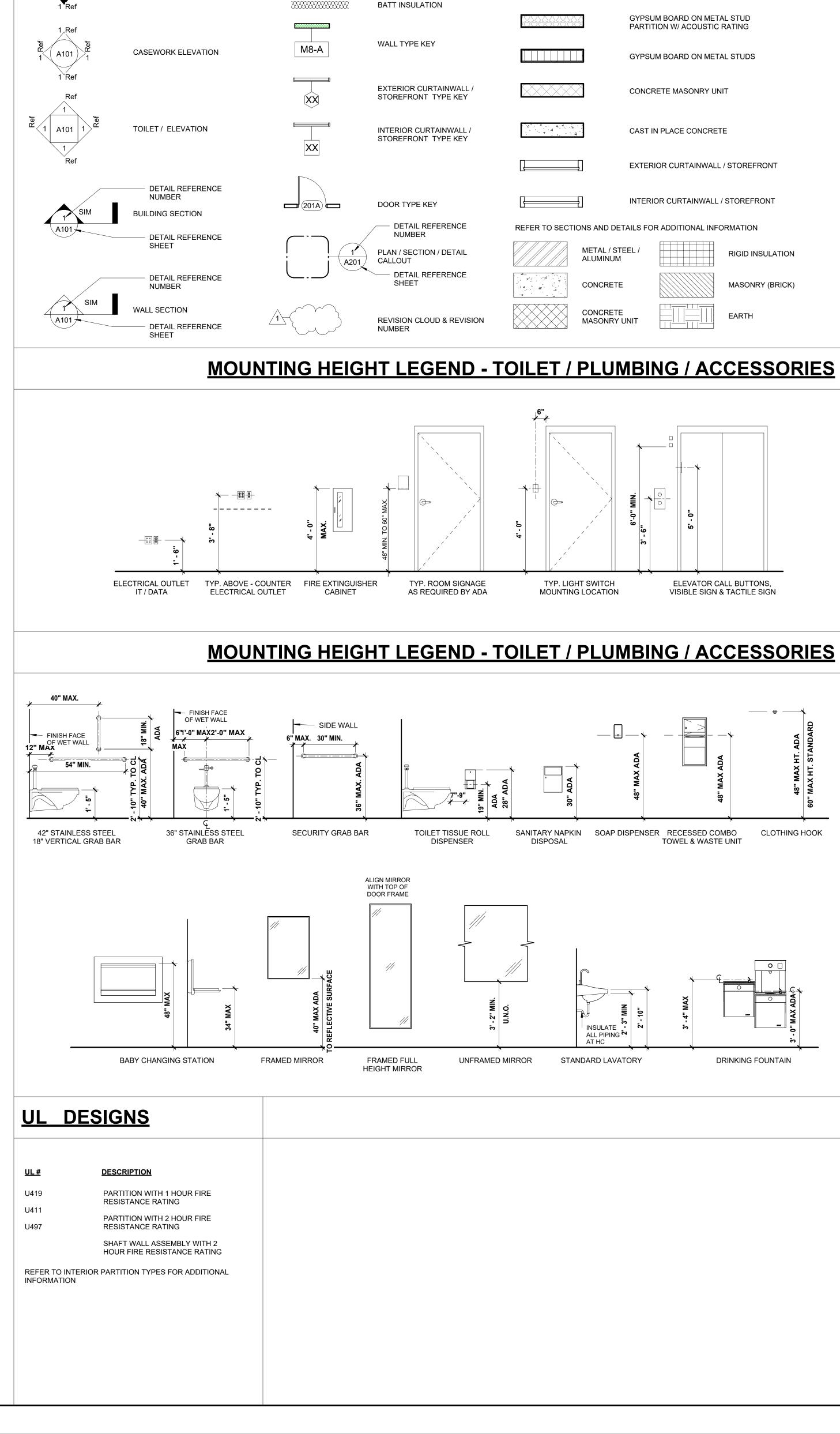
# **ABBREVIATIONS**

EXTERIOR BUILDING ELEVATION

INTERIOR ELEVATION

@ A/C	AT AIR CONDITIONING	GYP
ABV	ABOVE	НВ
AC AC	ACOUSTICAL ACOUSTICAL CLOUD	HC HDF
ACC	ACCESS	HDW
ACT ADB	ACOUSTICAL CEILING TILE AUTOMATIC DOOR BUTTON	HDWD HM
ADH ADJ	ADHESIVE ADJACENT	HOR HR
AFF	ABOVE FINISHED FLOOR	HT
AGGR AL / ALUM	AGGREGATE ALUMINUM	HVAC HW
ALT AMT	ALTERNATE AMOUNT	НЖН
ANOD	ANODIZED	ID
AP APPROX	ACRYLIC PANEL APPROXIMATE	IN INCL
APT		INFO
ARCH ASPH	ARCHITECT / ARCHITECTURAL ASPHALT	INS INT
AVE AWT	AVENUE ACCOUSTICAL WALL TREATMENT	INV
BD	BOARD	JC JT
BET	BETWEEN	
BL BLDG	BUILDING LINE BUILDING	KD KIT
BLK BLKG	BLOCK BLOCKING	LAB
BLVD	BOULEVARD	LAD
BM BM	BEAM BENCH MARK	LAM LAV
BOT BRK	BOTTOM BRICK	LB LH
BRZ	BRONZE	LMS
BUR	BUILT UP ROOFING	LPT LT
стос		LVR
C.F.C.I.	CONTRACTOR FURNISHED CONTRACTOR	LVT LW
CAB CB	CABINET CATCH BASIN	LWC
CEM	CEMENT	MAS
CER CFM	CERAMIC CUBIC FEET PER MINUTE	MAX MBR
CFMF CG	COLD FORM METAL FRAMING CORNER GUARD	MC MCB
CHG	CHANGE	MECH
CI CJ	CAST IRON CONTROL JOINT	MED MET
CLG CLKG	CEILING	MFR
CLO	CAULK(ING) / CALK(ING) CLOSET	MH MIN
CLR CMU	CLEAR / CLEARANCE CONCRETE MASONRY UNIT	MIR MISC
CO	CLEANOUT	MLDG
CO COL	COMPANY COLUMN	MO MRB
COMB COMPT	COMBINATION COMPARTMENT	MRD MT
CONC	CONCRETE	MTL
CONST CONT	CONSTRUCTION CONTINUOUS OR CONTINUE	MTRF MULL
CONTR CORR	CONTRACT / CONTRACTOR CORRUGATED	N
CPT	MODULAR CARPET TILE	NAT
CT CTD	CERAMIC TILE COATED	NC NIC
CTR CTSK	COUNTER COUNTERSUNK SCREW	NL NOM
CU FT	CUBIC FOOT	NOM NTS
CU IN CU YD	CUBIC INCH CUBIC YARD	О ТО О
CW	COLD WATER	0.F.C.I.
DA	DOUBLE ACTING	0.F.O.I.
DEPT DF	DEPARTMENT DRINKING FOUNTAIN	OA OC
DIA DIM	DIAMETER	OD OH
DN	DOWN	OPG
DP DS	DAMPPROOFING DOUNSPOUT	OPP
DTL DW	DETAIL DISHWASHER	P PC
DWC	DIGITAL WALLCOVERING	PD
DWG	DRAWING	PFN PG
E EA	EAST	PL PLAM
EA EF	EACH EACH FACE	PLAM PLT
EL ELEC	ELEVATION ELECTRIC(AL)	PREFAB PROP
ELEV EMER	ELEVATOR EMERGENCY	PSF PSI
ENC	ENCLOSE / ENCLOSURE	РТ
ENGR ENT	ENGINEER ENTRANCE	PTB PWD
EPB	EPOXY BASE	
EPT EQ	EPOXY PATIN EQUAL	QT QTY
ERD ESC	EMERGENCE ROOF DRAIN ESCUTCHEON	R
EST	ESTIMATE	RA
ETR ETS	EXISTING TO REMAIN EXTRUDED THERMOFORMABLE SHEET	RAD RB
EWC EXIST	ELECTRIC WATER COOLER EXISTING	RBF RBN
EXP	EXPOSED	RBT
EXP JT EXT	EXPANSION JOINT EXTERIOR	RD RE
F TO F	FACE TO FACE	RECP
FB	FACE BRICK	REFL
FD FDC	FLOOR DRAIN FIRE DEPARTMENT CONNECTION	REG REINF
FE FE/BC	FIRE EXTINGUISHER FIRE BLANKET / EXTINGUISHER CABINET	REM
FEC	FIRE EXTINGUISHER CABINET	RES
FFE FFL	FINISH FLOOR ELEVATION FINISH FLOOR LINE	RET REV
FHY FIN	FIRE HYDRANT FINISH(ED)	RFG RFH
FIX	FIXTURE	RM
FL FLR	FLASHING FLOOR / FLOORING	RO ROW
FLUOR	FLUORESCENT FOUNDATION	RS
FOC	FACE OF CONCRETE	S
FOF FOS	FACE OF FINISH FACE OF STUD	SC SC
FPM	FEET PER MINUTE	SCH
FR FT	FIRE RETARDANT FOOT / FEET	SCN SD
FTG	FOOTING	SEC
FUR FUT	FURRED / FURRING FUTURE	SF SFGL
G	GUTTER	SH SHT
GA	GAGE / GAUGE	SHTH
GB GC	GRAB BAR GENERAL CONTRACTOR	SIM SNT
GD	GRADE / GRADING	SPEC
GI GL	GALVANIZED IRON GLASS / GLAZING	SPK SQ
GLB GP	GLASS BLOCK GLASS PANEL	SQ FT SS
GT GV	GROUT GALVANIZED	SSK SST
GVL	GRAVEL	ST
GWB	GYPSUM WALL BOARD	

	<u>ABI</u>	BREVIATION
GYPSUM	STA STD	STATION STANDARD
HOSE BIB HOLLOW CORE	STG STL	SEATING STEEL
HANDICAP DRINKING FOUNTAIN HARDWARE HARDWOOD	STO STR SUS	STORAGE STRUCTURAL SUSPENDED
HOLLOW METAL HORIZONTAL	SWS SYS	SPECIAL WALL SURFACING SYSTEM
HOUR HEIGHT	T	
HEATING / VENTILATION / AIR CONDITIONING HOT WATER HOT WATER HEATER	TC TEL	TONGUE AND GROOVE TOP OF CURB TELEPHONE
INSIDE DIAMETER	THR THX	THRESHOLD THICK / THICKNESS
INCH INCLUDE / INCLUDED	TI TKBD TD	TOP OF INLET TACKBOARD
INFORMATION INSULATED INTERIOR	TP TS TSL	TOILET PARTITION TRANSITION STRIP TOP OF SLAB
INVERT	TST TV	TOP OF WALL TELEVISION WALL BRACKET
JANITOR'S CLOSET JOINT	TYP TZ	TYPICAL TERRAZZO
KILN-DRIED KITCHEN	UL UNFIN	UNDERWRITERS LAB UNFINISHED
LABORATORY LADDER	UON UR	UNLESS OTHERWISE NOTED URINAL
LABINATE / LAMINATED LABATORY	VB VB	VAPOR BARRIER VINYL BASE
POUND OR # LEFT HAND	VCT VERT	VINYL COMPOSITION TILE
LIMESTONE LOW POINT LIGHT	VIN VNR VSF	VINYL VENEER VINYL SPORTS FLOORING
LOUVER LUXURY VINYL TILE	VT VWC	VINYL TILE VINYL WALL COVERING
LIGHTWEIGHT LIGHTWEIGHT CONCRETE	W W	WEST WIDTH / WIDE
MASONRY MAXIMUM	W/ W/O	WITH WITHOUT
MEMBER MEDICINE CABINET	WC WD	WATER CLOSET WOOD
METAL CASING / CORNER BEAD MECHANICAL MEDIUM	WF WG WH	WIDE FLANGE WIRED GLASS WEEPHOLE
METAL MANUFACTURE / MANUFACTURER	WHB WM	WHEEL BUMPER WIRE MESH
MANHOLD MINIMUM	WOC WP	WALK OFF CARPET WATERPROOFING
MIRROR MISCELLANEOUS MOLDING / MOULDING	WP WPT WS	WALL PROTECTION WORKING POINT WHEELSTOP
MASONRY OPENING MARBLE	WSCT WTW	WAINSCOT WALL TO WALL
METAL ROOF DECKING METAL THRESHOLD MATERIAL	WWF	WELDED WIRE FABRIC
METAL FURRING MULLION		
NORTH		
NATURAL NON COMBUSTIBLE NOT IN CONTRACT		
NO LIMIT NOMINAL		
NOT TO SCALE		
OWNER FURNISHED CONTRACTOR		
OWNER FURNISHED OWNER INSTALLED OVERALL ON CENTER		
OUTSIDE DIAMETER OPPOSITE HAND		
OPENING OPPOSITE		
PAINT POLISHED CONCRETE		
PAINT DESIGN PREFINISHED		
PLATE GLASS PROPERTY LINE PLASTIC LAMINATE		
PLATE PREFABRICATED		
PROPERTY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH		
PORCELAIN TILE PORCELAIN TILE BASE		
QUARRY TILE QUANTITY		
RISER RETURN AIR		
RADIUS RUBBER BASE /RESILIENT BASE RUBBER FLOORING		
RUBBER NOSING RUBBER TILE		
ROOF DRAIN REFER TO RECEPTACLE		
REFERENCE REFLECTIVE		
REGISTER REINFORCING REMOVE		
REQUIRED RESILIENT		
RETURN REVISION / REVISIONS / REVISED		
ROOFING ROOF HATCH ROOM		
ROUGH OPENING RIGHT OF WAY		
ROLLER SHADE		
SOLID CORE SEALED CONCRETE		
SCHEDULE SCREEN STORM DRAIN		
STORM DRAIN SECTION SPORTS FLOORING		
SAFETY GLASS SHELF / SHELVING		
SHEET SHEATHING SIMILAR		
SEALANT SPECIFICATION(S)		
SPEAKER SQUARE SQUARE FOOT		
SQUARE FOOT SOLID SURFACE SERVICE SINK		
STAINLESS STEEL STREET		



CENTERLINE

ELEVATION MARKER

NORTH ARROW

\_\_\_\_\_ Ç

# MATERIALS & SYMBOLS LEGEND

### CONCEALED FASTENER METAL PANEL ON MTL. STUDS WITH CONTINUOUS INSULATION

BRICK VENEER ON MTL. STUD	20
DIVICIT VENEELV ON MILE. STOL	50
WITH CONTINUOUS INSULATI	ON

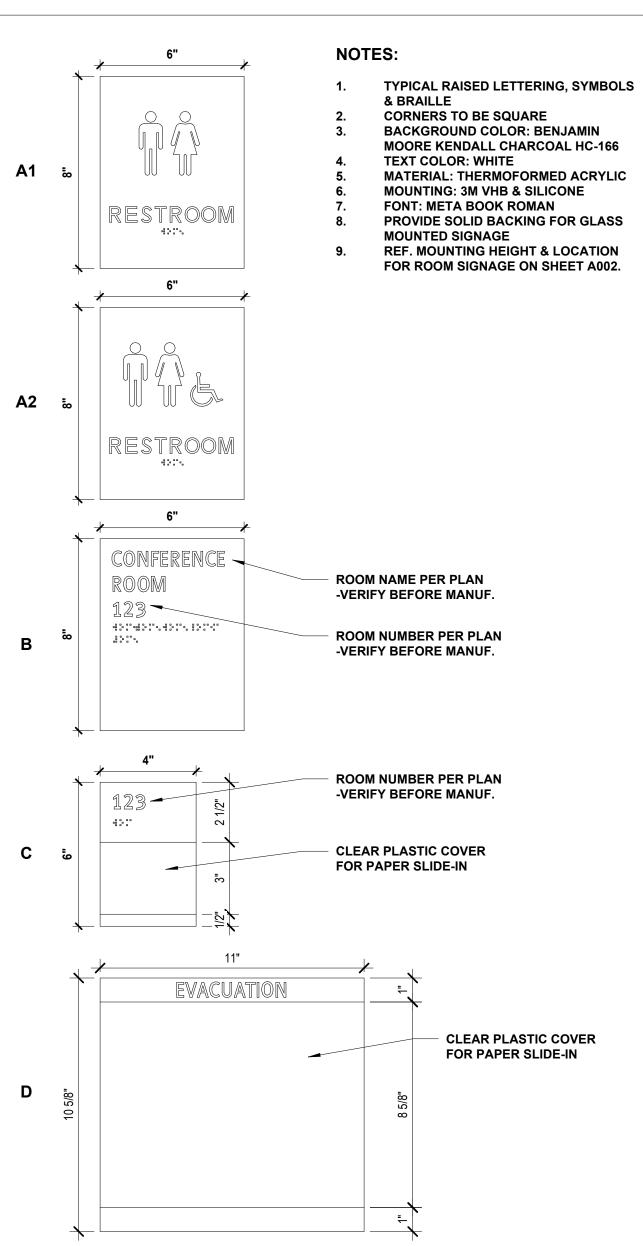
ACM PANEL TRIM ON MTL. STUDS

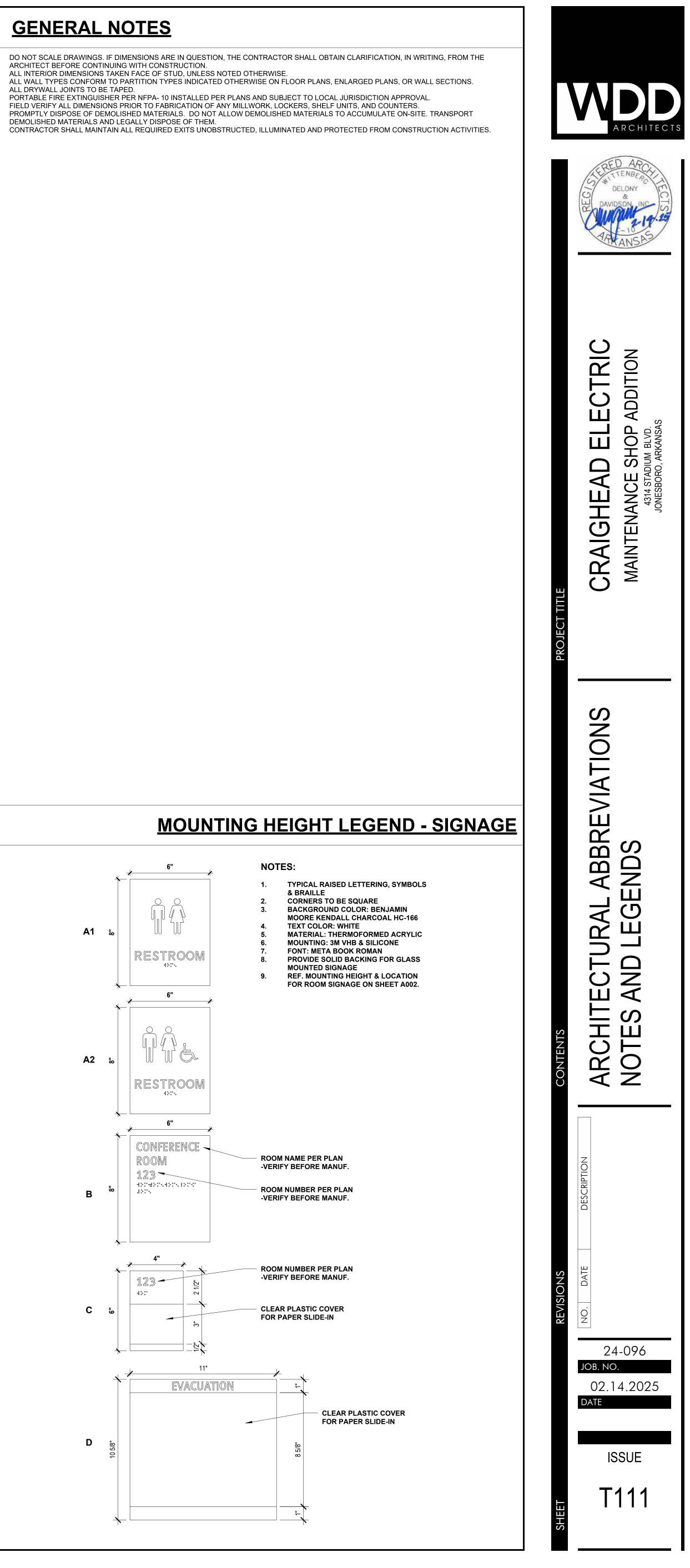
GYPSUM BOARD ON METAL STUD PARTITION W/ FIRE RESISTANCE RATING

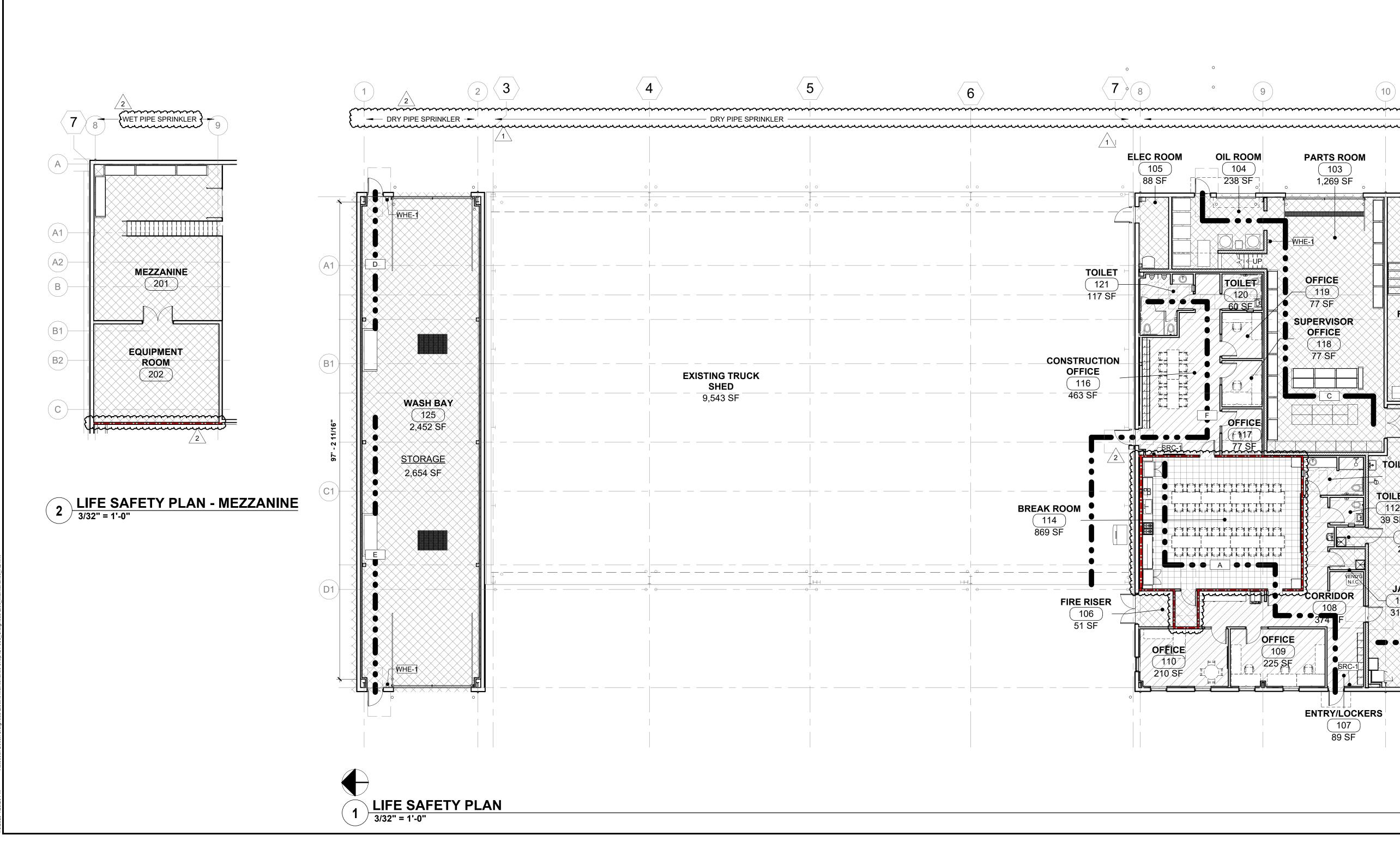
# **GENERAL NOTES**

DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL OBTAIN CLARIFICATION, IN WRITING, FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION. ALL INTERIOR DIMENSIONS TAKEN FACE OF STUD, UNLESS NOTED OTHERWISE. ALL WALL TYPES CONFORM TO PARTITION TYPES INDICATED OTHERWISE ON FLOOR PLANS, ENLARGED PLANS, OR WALL SECTIONS. ALL DRYWALL JOINTS TO BE TAPED. PORTABLE FIRE EXTINGUISHER PER NFPA- 10 INSTALLED PER PLANS AND SUBJECT TO LOCAL JURISDICTION APPROVAL. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF ANY MILLWORK, LOCKERS, SHELF UNITS, AND COUNTERS. PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. TRANSPORT DEMOLISHED MATERIALS AND LEGALLY DISPOSE OF THEM.

# **MOUNTING HEIGHT LEGEND - SIGNAGE**







	OCCUPANCY C			
OCCUPANCY	AREA	OCCUF LOAD FA		
FINISHED FLOOR				
ASSEMBLY	814 SF	15 S		
BUSINESS	2,256 SF	150 \$		
STORAGE	12,398 SF	300		
FINISHED FLOOR	15,468 SF			
MEZZANINE				
STORAGE	1,418 SF	300 \$		
MEZZANINE	1,418 SF			
TOTAL	16,886 SF			

		PLU	
	OCCUPANCY	WA	
	LOAD	MALE	
ASSEMBLY	59	0.24	
BUSINESS	14	.28	
STORAGE (S-1)	46	.23	
TOTAL	119	.75	
REQUIRED		1	
PROVIDED			
PLUMBING FIXTURE NOTES	6:		
1. PER TABLE 403.1 OF 2018 ARKANSAS PLUMBIN 2. PER SECTION 403.2. WHERE PLUMBING FIXTUR			

