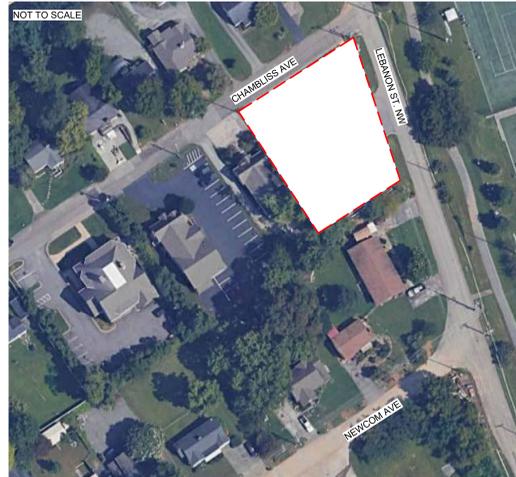


# FOREST PARK ANIMAL CLINIC EXPANSION

4600 CHAMBLISS AVE.



## LOCATION MAP



## SUMMARY OF WORK

This project scope includes the expansion of the existing building at 4600 Chambliss Ave, Knoxville, TN, 37917. The 948 sf expansion will include a dental suite, vet offices, workstations and a lounge/comfort room. This project includes mechanical, electrical, plumbing, and structural.

## CODES

2024 INTERNATIONAL BUILDING CODE (IBC)  
2024 INTERNATIONAL EXISTING BUILDING CODE (IEBC)  
2024 INTERNATIONAL FIRE CODE (IFC)  
2024 INTERNATIONAL PLUMBING CODE (IPC)  
2024 INTERNATIONAL MECHANICAL CODE (IMC)  
2024 INTERNATIONAL FUEL GAS CODE (IFGC)  
2023 NATIONAL ELECTRICAL CODE (NEC)  
2024 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)  
2017 ICC ANS1 A117.1



## SYMBOLS

**TITLE BAR**

- DRAWING NUMBER
- DRAWING TITLE
- VIEW NAME
- DRAWING SCALE
- SHEET NUMBER

**INTERIOR ELEVATION**

- VIEW NUMBER
- SHEET NUMBER

**SECTION**

- SECTION NUMBER
- SHEET NUMBER
- DIRECTION OF CUT

**DETAIL**

- DETAIL NUMBER
- SHEET NUMBER
- CALLOUT

**ELEVATION**

- DRAWING NUMBER
- SHEET NUMBER

**Room name**

- 101
- ROOM NUMBER
- 150 SF
- Occu: ##
- ROOM SQUARE FOOTAGE
- ROOM OCCUPANCY

**DOOR TAG**

- 101

**WINDOW TAG**

- (W25)

**EQUIPMENT/ FURNITURE IDENTIFIER**

- 11

**WALL TAG**

- (16a)

**KEY NOTE**

- (2)

**SPOT ELEVATION**

- 1
- SIM

## CONSTRUCTION TYPE

V B (UNPROTECTED) (2024 IBC)  
SPRINKLER SYSTEM: NO

## ZONING

O - OFFICE

## PROPERTY INFORMATION

PARCEL: 107KE011

## SETBACKS

FRONT: 15'  
INSIDE SIDE: 15'  
CORNER SIDE: 15'  
REAR: 20'

## HEIGHT

MAX HEIGHT: 45' - 0"  
ACTUAL HEIGHT: 20' - 0"

## AREA

MAX SF: 9,000 SF  
ACTUAL SF: 4,686 SF  
EXISTING: 3,738 SF + ADDITION SF: 948 SF

## ALT. COMPLIANCE METHOD

2024 IEBC 301.3.2: WORK AREA METHOD  
2024 IEBC CHAPTER 8: ALT. LEVEL 2

## OWNER

FOREST PARK ANIMAL CLINIC  
4600 CHAMBLISS AVE.  
KNOXVILLE, TN, 37919  
PHONE: (865) 414 - 6186  
CONTACT: RANDALL WEST  
EMAIL: MIDSOUTHDM@GMAIL.COM

## ARCHITECT

SMEE + BUSBY ARCHITECTS, PC  
2554 SUTHERLAND AVE  
KNOXVILLE, TN 37919  
PHONE: 865.521.7550  
CONTACT: GREGOR SMEE  
EMAIL: GSMEE@SMEEBUSBY.COM

## CONTRACTOR

GSB CONTRACTORS, INC.  
4614 CHAMBLISS AVE  
KNOXVILLE, TN 37919  
CONTACT: STEVE BLANKENSHIP  
EMAIL: GSBSTEVE@BELLSOUTH.NET

## MEP

PROFICIENT ENGINEERING  
4110 SUTHERLAND AVE  
KNOXVILLE, TN 37919  
CONTACT: ANDREW TURNER  
EMAIL: ATURNER@PROFICIENTENGINEERING.COM

## STRUCTURAL

ELAM STRUCTURAL ENGINEERING  
P.O. BOX 30799  
KNOXVILLE, TN 37930  
PHONE: 865. 607.3517  
CONTACT: JOSH ELAM  
EMAIL: ELAM@ELAMSE.COM

## GENERAL NOTES

- COORDINATE WITH APPLICABLE DIMENSIONS AND DETAILS ON OTHER SHEETS.
- COORDINATE WITH REQUIREMENTS OF OWNER SUPPLIED EQUIPMENT AS REQUIRED.
- DIMENSIONS ARE TO FACE OF STUD OR OUTSIDE EDGE STRUCTURE.
- THE CONTRACTOR SHALL LAYOUT ALL PARTITIONS AND VERIFY ACCEPTABILITY OF LAYOUT WITH ARCHITECT PRIOR TO START OF THIS WORK.
- DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL OBTAIN WRITTEN CLARIFICATION FROM ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.

## DRAWING INDEX

GENERAL	ISSUED	REVISION
CS COVER SHEET		
<b>ARCHITECTURAL</b>		
D101 DEMOLITION PLAN		
LS101 LIFE SAFETY PLAN		
A100 ARCHITECTURAL SITE PLAN		
A101 FLOOR PLAN		
A201 REFLECTED CEILING PLAN		
A202 ROOF PLAN		
A301 ENLARGED EQUIPMENT PLAN, & CABINET ELEVATIONS		
A302 INTERIOR & CABINET ELEVATIONS		
A401 EXTERIOR ELEVATIONS		
A411 BUILDING SECTIONS		
A501 WALL SECTIONS		
A701 DOOR & WINDOW TYPES, & FINISH SCHEDULE		
<b>STRUCTURAL</b>		
S001 STRUCTURAL NOTES		
S002 STRUCTURAL NOTES		
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M001 GENERAL		
M002 DETAILS AND SCHEDULES		
M100 FLOOR PLAN - CRAWLSPACE - MECHANICAL		
M101 FLOOR PLAN - MECHANICAL		
<b>ELECTRICAL</b>		
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P101 FLOOR PLAN - PLUMBING		

CONSTRUCTION DOCUMENTS  
FOREST PARK ANIMAL CLINIC EXPANSION  
4600 CHAMBLISS AVE.

Project Number:	29008	
Date:	09/22/2025	
Drawn By:	GMM	
Principal:	GRS	
#	REVISION NAME	DATE

COVER SHEET



Project Number:	29008
Date:	09/22/2025
Drawn By:	GMM
Principal:	GRS

#	REVISION NAME	DATE

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DEMOLITION PLAN

**D101**

**GENERAL NOTES**

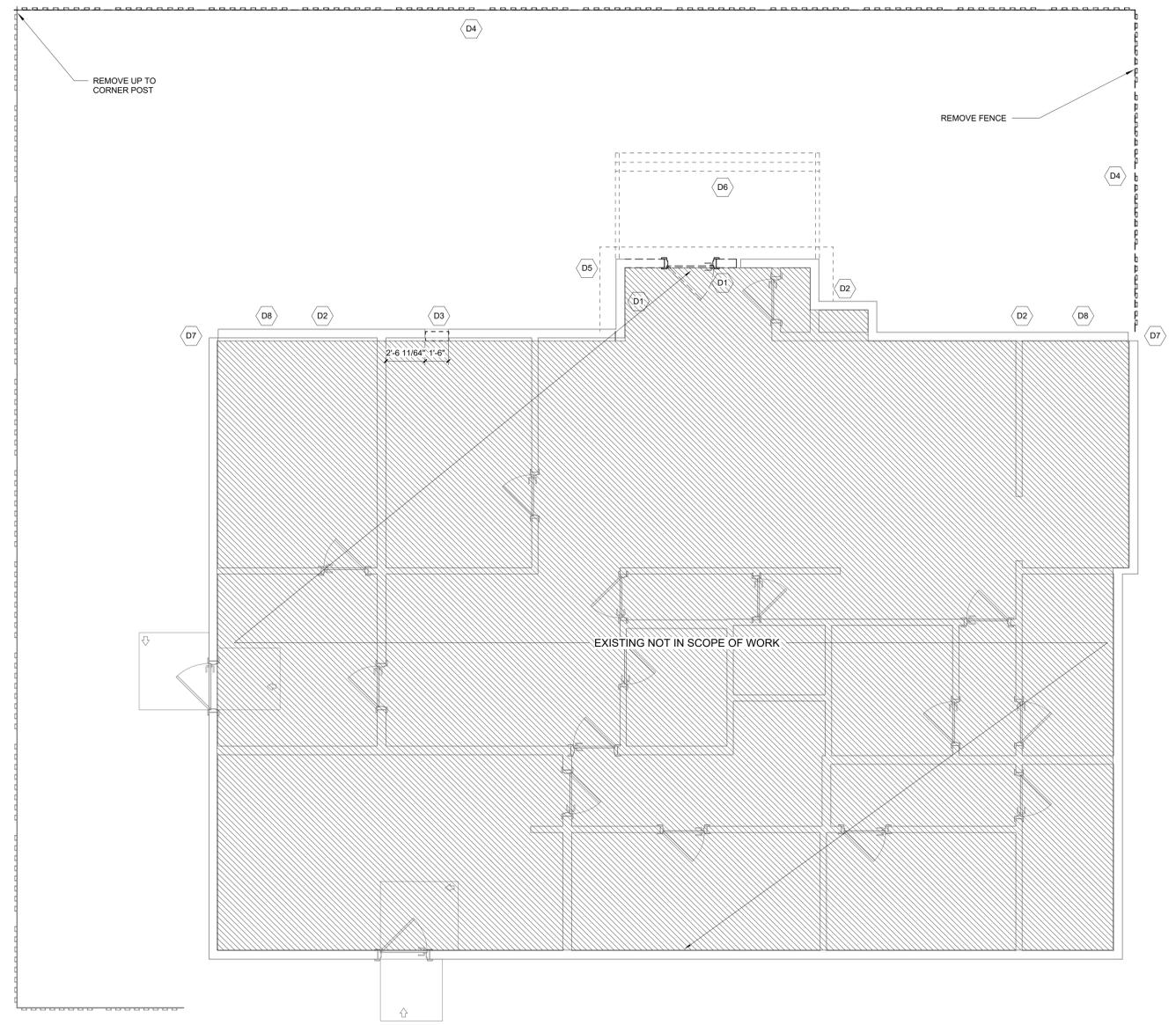
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- PROVIDE SOLID WOOD BLOCKING FOR MOUNTING OF CABINETS AND TOILET ACCESSORIES. ALL GRAB BAR MOUNTING TO SUPPORT 250 LB. MIN. LOAD

**WALL LEGEND**



**DEMOLITION LEGEND**

D1	REMOVE EXISTING EXTERIOR WALL AS INDICATED: DOOR, HARDWARE & FRAME.
D2	REMOVE EXTERIOR FACADE ON WALL AND PREPARE FOR INTERIOR FINISH.
D3	PREP AREA FOR NEW EXTERIOR WALL AND ENCLOSED INTERIOR SPACE.
D4	REMOVE EXISTING FENCE WHERE NOTED. FENCE ON PROJ. WEST SIDE TO REMAIN.
D5	REMOVE EXISTING ROOF AND STRUCTURE, PREPARE FOR NEW.
D6	REMOVE EXISTING STOOP, STAIRS, AND HANDRAILS.
D7	REMOVE EXISTING GUTTERS AND DOWNSPOUTS. PREPARE FOR NEW.
D8	REMOVE EXISTING WINDOW, SAVE FOR REUSE IF POSSIBLE.



**1**  
**D101** DEMOLITION PLAN  
 1/4" = 1'-0"





CONSTRUCTION DOCUMENTS  
**FOREST PARK ANIMAL CLINIC EXPANSION**  
 4600 CHAMBLISS AVE.

Project Number: 29008  
 Date: 09/22/2025  
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 Principal: GRS

#	REVISION NAME	DATE

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ARCHITECTURAL SITE PLAN

**GENERAL NOTES**

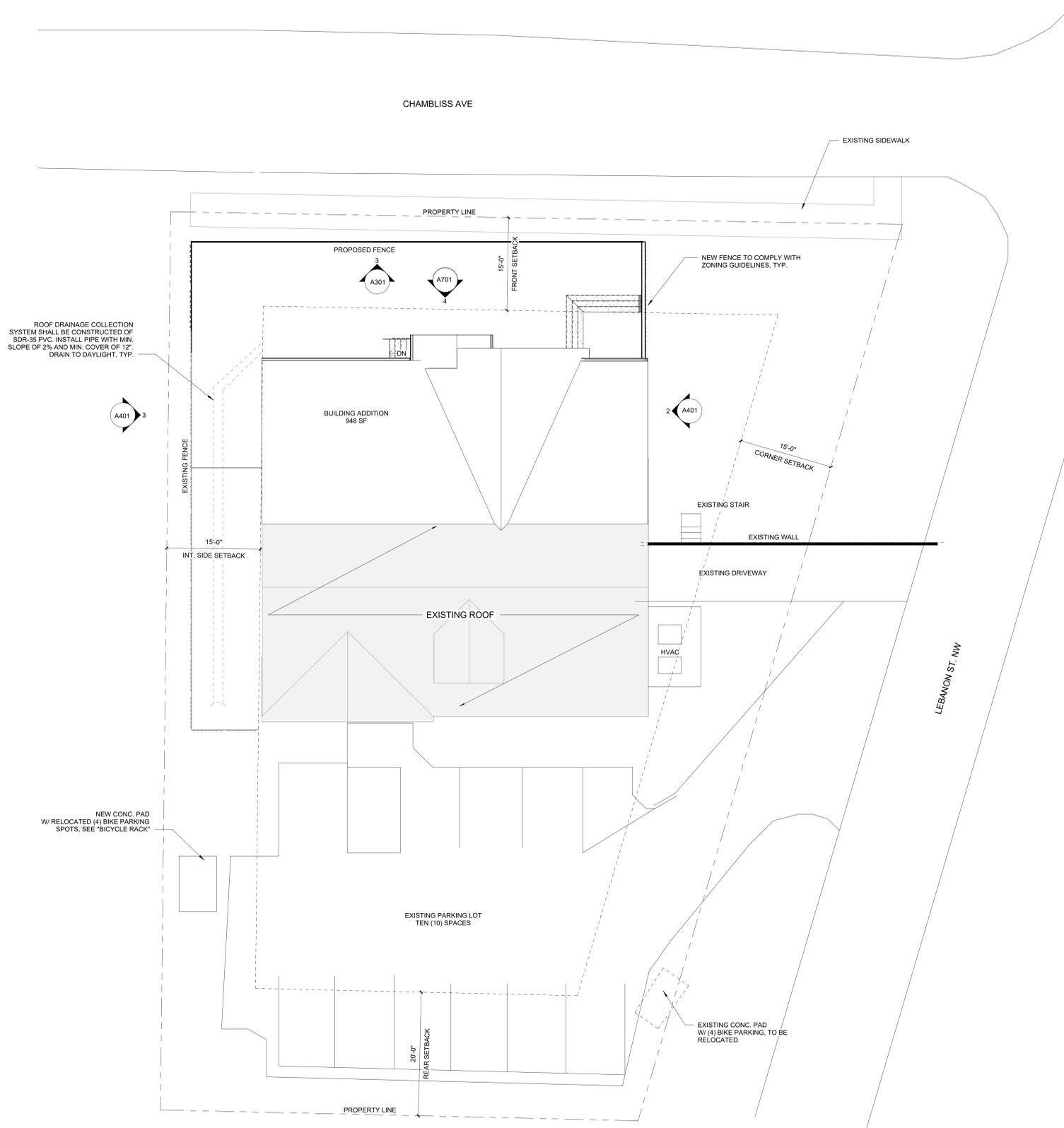
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**PARKING CALCULATIONS:**  
 ANIMAL CARE FACILITY - SMALL ANIMAL:  
 2.5 / 1,000 GFA  
 3,384 SF = 3,384 X 4 = 13,536  
 BUS STOP 1/4 MILE @ 30%  
 13,536 \* 0.70 = 10 SPOTS

**BUILDING ADDITION CALCULATIONS:**  
 EXISTING BUILDING SF:  
 3,738 SF  
 PROPOSED ADDITION SF:  
 (948 SF / 3,738 SF) = 25% ADDITION



**BICYCLE RACK**  
 1/4" = 1'-0"



ROOF DRAINAGE COLLECTION SYSTEM SHALL BE CONSTRUCTED OF SDR-35 PVC. INSTALL PIPE WITH MIN. SLOPE OF 2% AND MIN. COVER OF 12". DRAIN TO DAYLIGHT, TYP.

NEW CONC. PAD W/ RELOCATED (4) BIKE PARKING SPOTS, SEE "BICYCLE RACK"

EXISTING CONC. PAD W/ (4) BIKE PARKING, TO BE RELOCATED





**CONSTRUCTION DOCUMENTS**  
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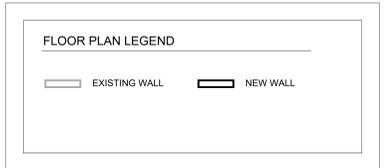
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FLOOR PLAN

**A101**

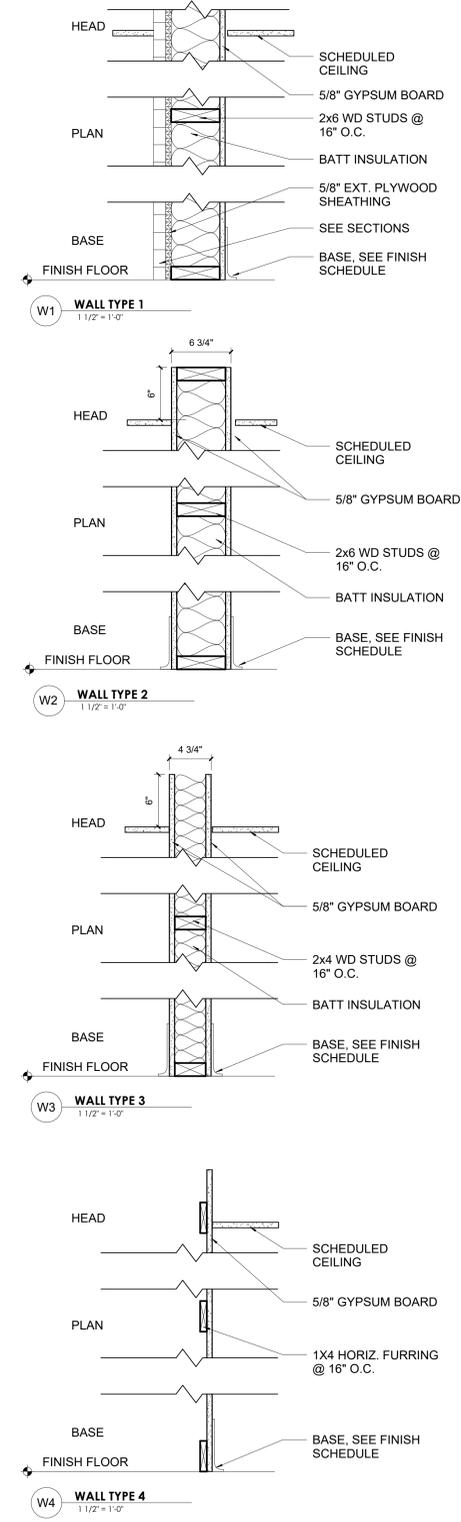
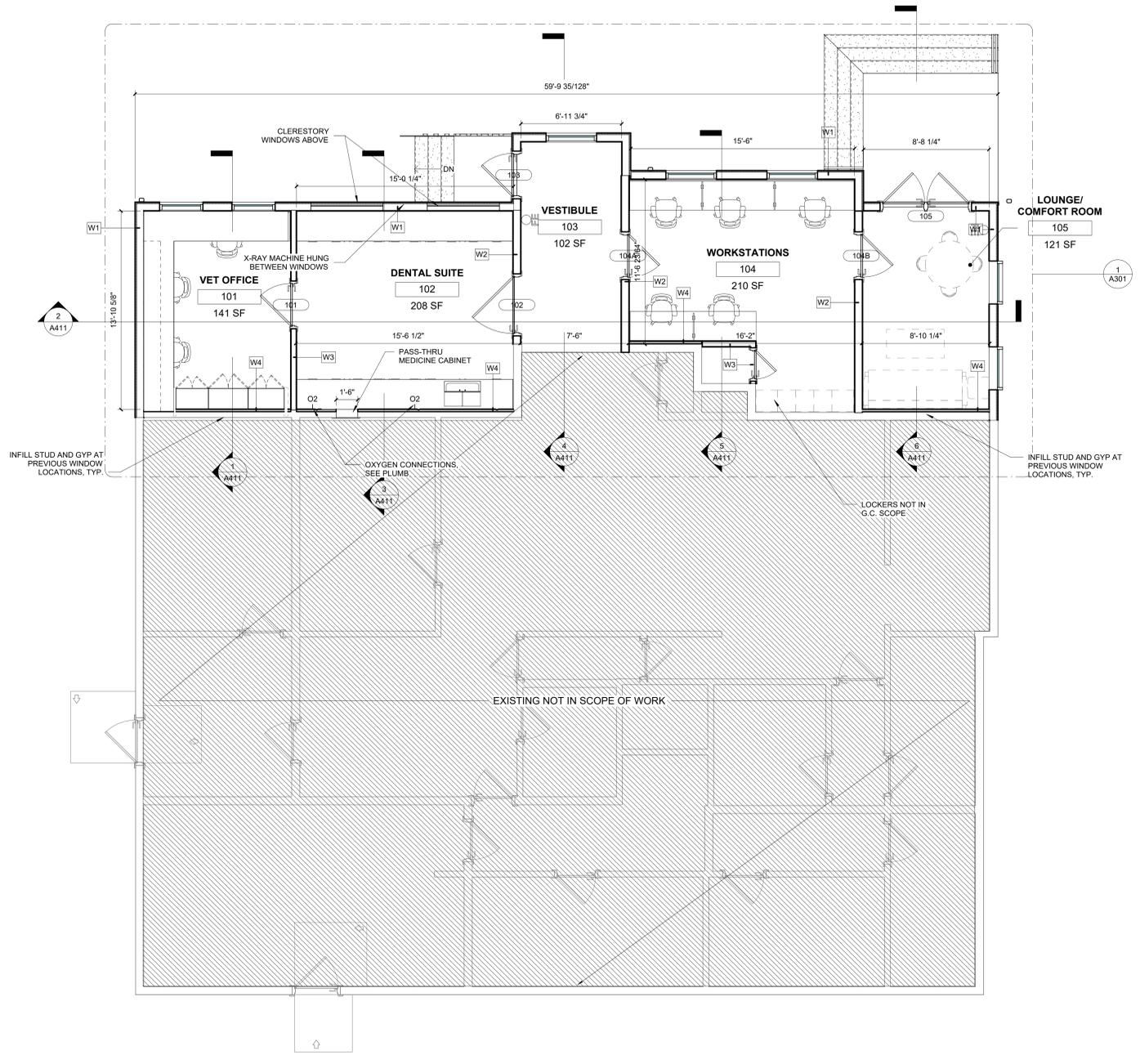
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**FIXTURE COUNT PER 2024 IBC CHAPTER 29 TABLE 2902.1**

<b>23 OCCUPANTS</b>	
<b>WATER CLOSETS:</b>	
1 PER 25    23/25 = 1	(1) FIXTURES REQUIRED / (2) FIXTURES PROVIDED
<b>LAVATORIES:</b>	
1 PER 40    23/40 = 1	(1) FIXTURES REQUIRED / (2) FIXTURES PROVIDED
<b>WATER FOUNTAINS:</b>	
1 PER 100	(1) FIXTURE REQUIRED / (1) FIXTURE PROVIDED
<b>SERVICE SINK:</b>	
	(1) FIXTURE REQUIRED / (1) FIXTURE PROVIDED



**Level 1**  
 1/4" = 1'-0"











CONSTRUCTION DOCUMENTS  
**FOREST PARK ANIMAL CLINIC EXPANSION**  
 4600 CHAMBLISS AVE.

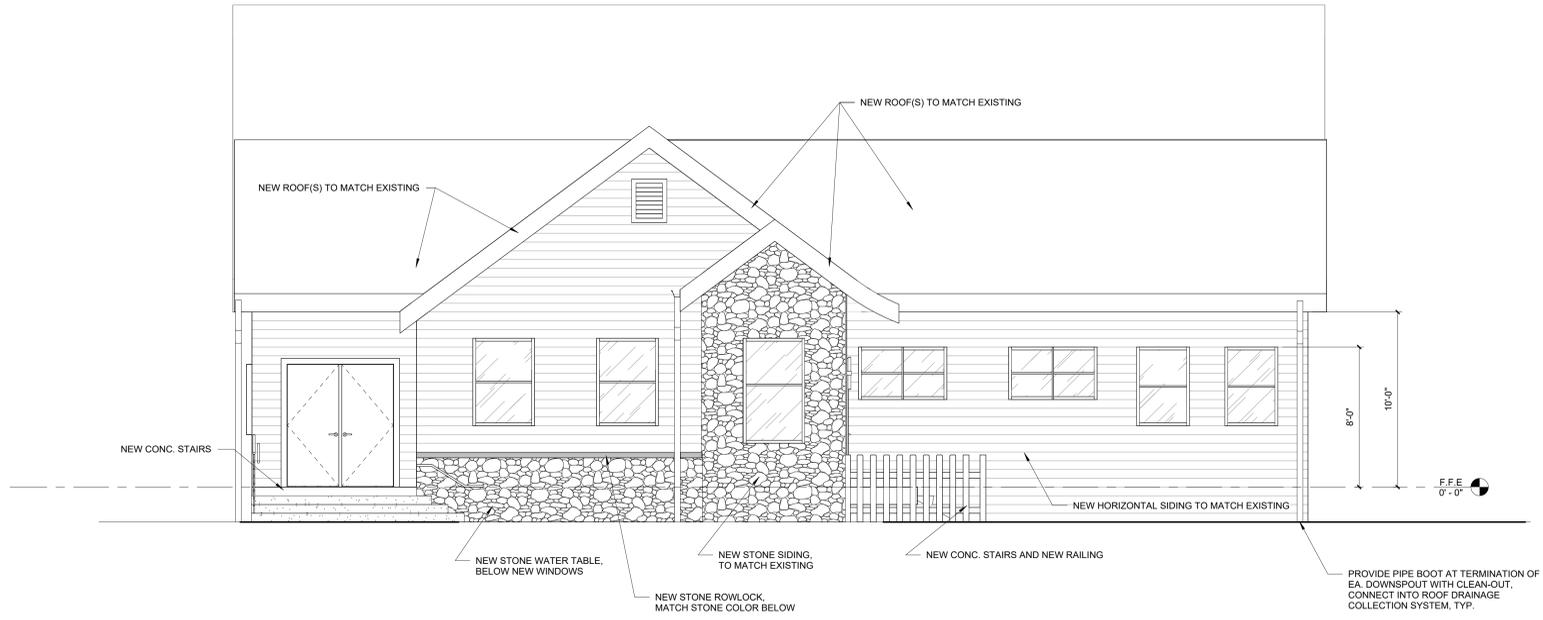
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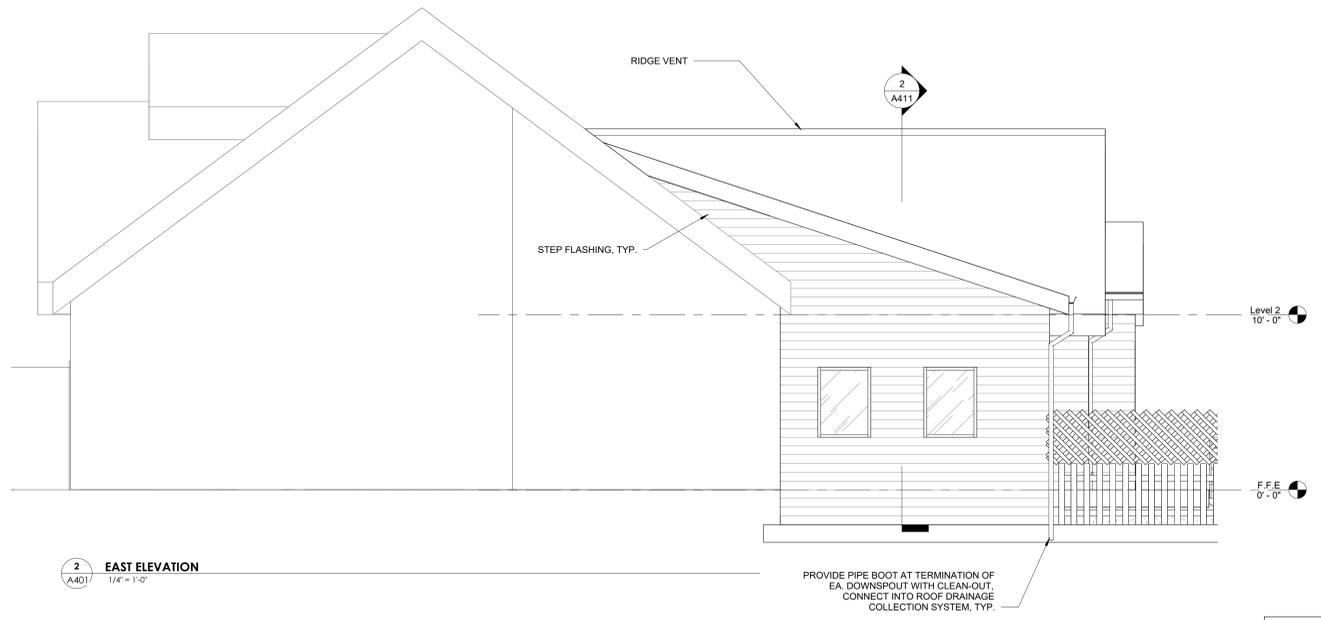
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EXTERIOR ELEVATIONS

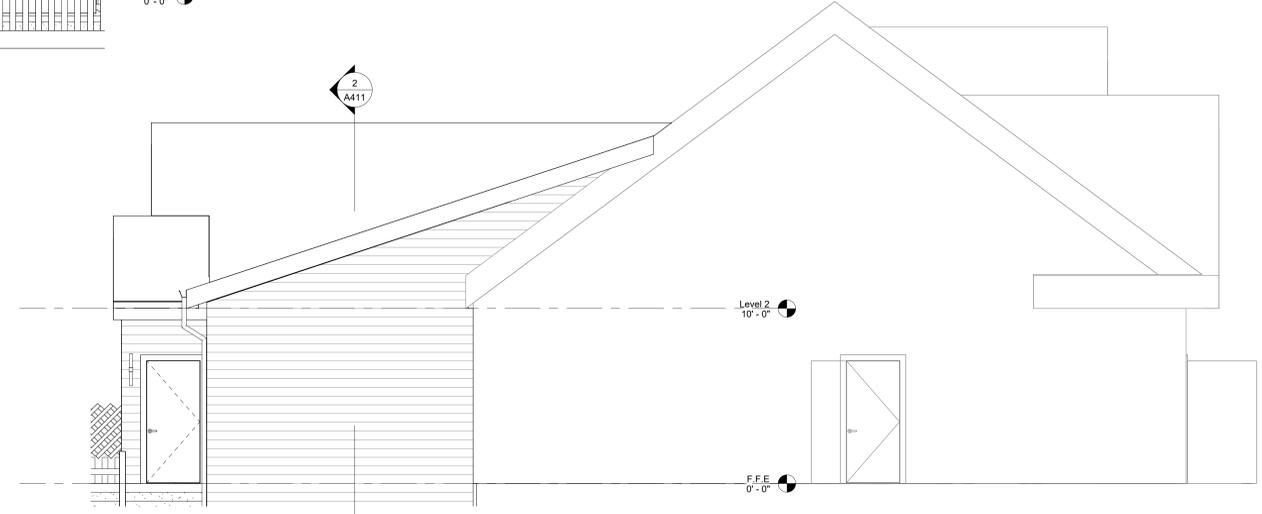
**A401**



**1 NORTH ELEVATION**  
 1/4" = 1'-0"



**2 EAST ELEVATION**  
 1/4" = 1'-0"



**3 WEST ELEVATION**  
 1/4" = 1'-0"



CONSTRUCTION DOCUMENTS  
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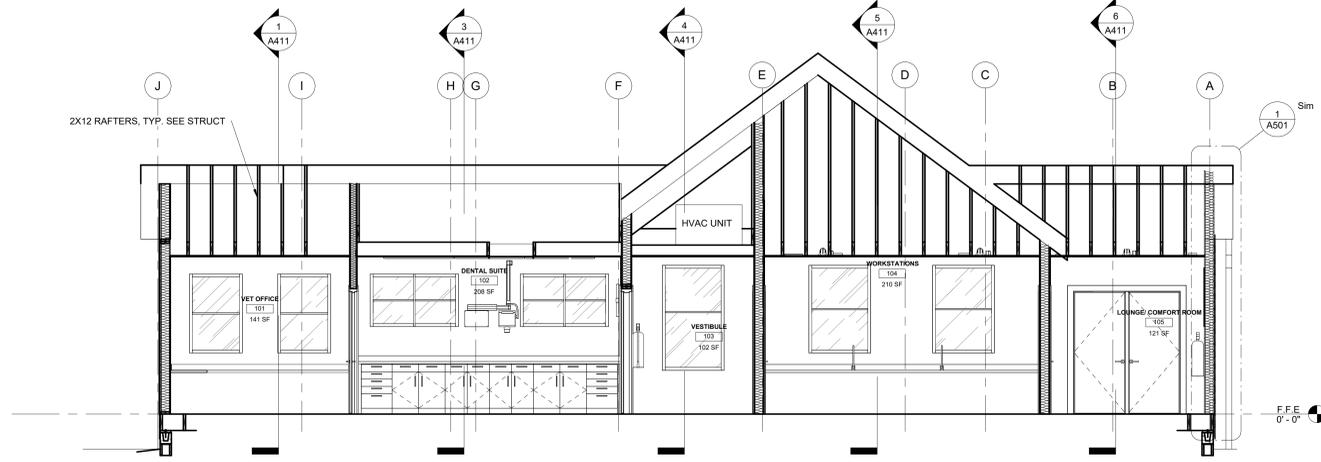
Drawn By: GMM  
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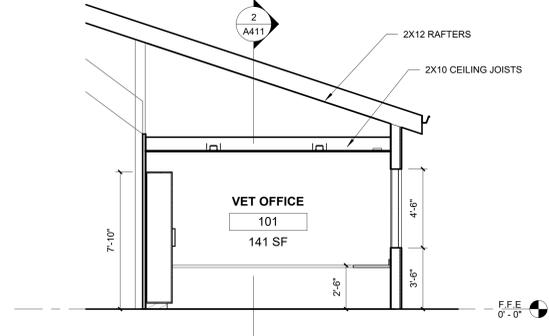
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BUILDING SECTIONS

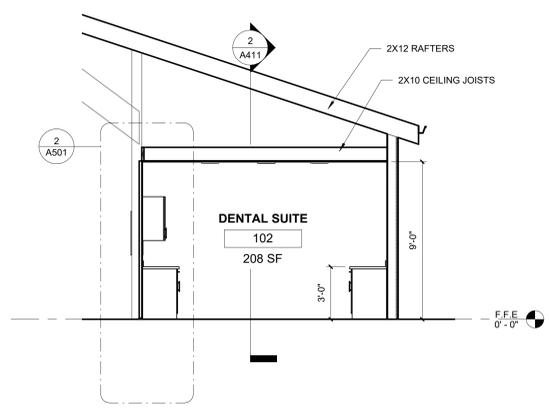
**A411**



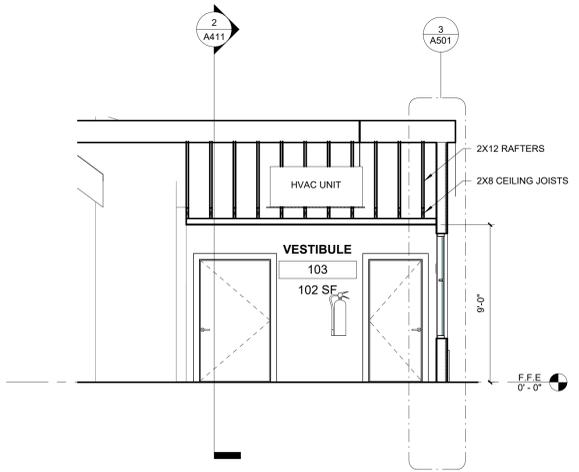
**2**  
 A411  
**ADDITION SECTION**  
 1/4" = 1'-0"



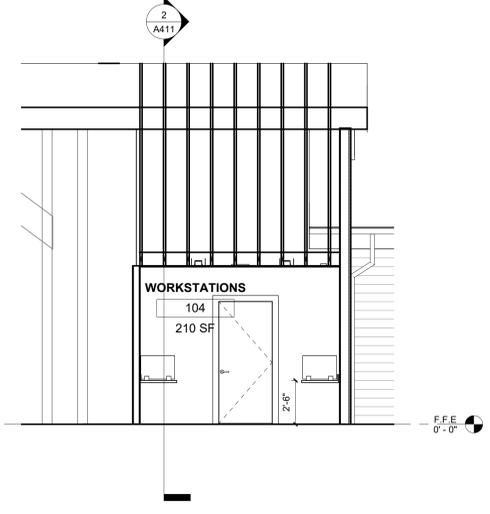
**1**  
 A411  
**VET OFFICE - 101 SECTION**  
 1/4" = 1'-0"



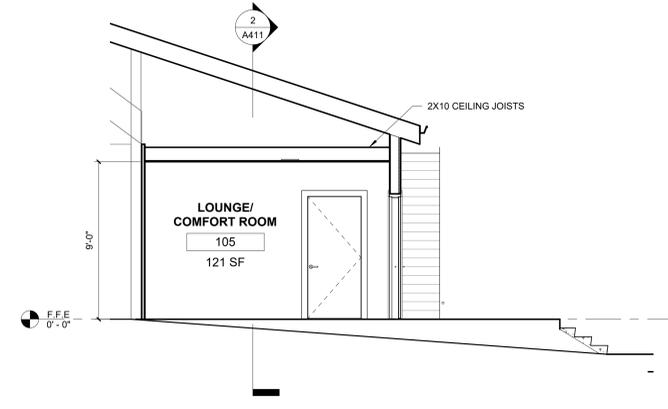
**3**  
 A411  
**DENTAL SUITE - 102 SECTION**  
 1/4" = 1'-0"



**4**  
 A411  
**VESTIBULE - 103 SECTION**  
 1/4" = 1'-0"



**5**  
 A411  
**WORKSTATIONS - 104 SECTION**  
 1/4" = 1'-0"



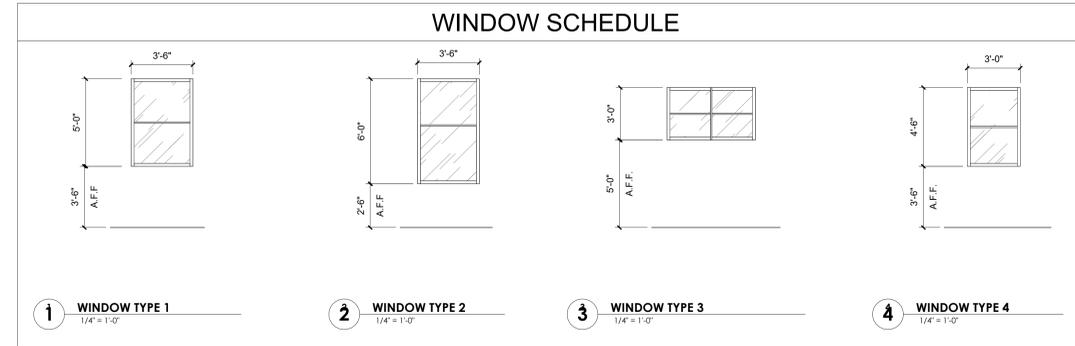
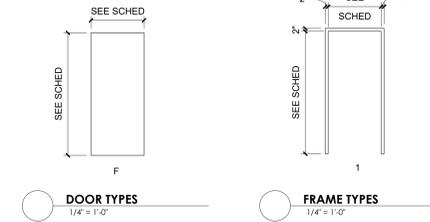
**6**  
 A411  
**LOUNGE / COMFORT ROOM SECTION**  
 1/4" = 1'-0"



MARK (DOOR NUMBER)	DOOR						FRAME			HARDWARE SET	COMMENTS
	WIDTH	HEIGHT	THICKNESS	LEAF TYPE	MATERIAL	FINISH	FRAME TYPE	MATERIAL	FINISH		
101	3' - 0"	7' - 0"	0' - 1 3/8"	F	SCW	STN	1	HM	PT		
102	4' - 0"	7' - 0"	0' - 1 3/8"	F	SCW	STN	1	HM	PT		
103	3' - 0"	7' - 0"	0' - 1 3/8"	F	SCW	STN	1	HM	PT		
104A	3' - 0"	7' - 0"	0' - 1 3/8"	F	SCW	STN	1	HM	PT		
104B	3' - 0"	7' - 0"	0' - 1 3/8"	F	SCW	STN	1	HM	PT		
105	6' - 0"	7' - 0"	0' - 1 3/8"	F	SCW	STN	1	HM	PT		

\*\*NOTES:  
WOOD SPECIES, AND STAIN TO MATCH EXISTING DOORS  
HM FRAME PT TBD BY OWNER.

ABBREVIATIONS:  
F - FLUSH  
HM - HOLLOW METAL  
PT - PAINT  
SCW - SOLID CORE WOOD  
STN - STAIN  
T - TEMPERED GLASS



FINISH SCHEDULE							
ROOM INFORMATION		FLOOR	WALL BASE	WALL FINISH	CEILING MATERIAL	CEILING HEIGHT	NOTES
NUMBER	NAME						
101	VET OFFICE	HWV	HWB	PT	GYP 1	9' - 0"	
102	DENTAL SUITE	HWV	HWB	PT	GYP 2	9' - 0"	
103	VESTIBULE	HWV	HWB	PT	GYP 1	9' - 0"	
104	WORKSTATIONS	HWV	HWB	PT	GYP 1	9' - 0"	
105	LOUNGE/ COMFORT ROOM	HWV	HWB	PT	GYP 1	9' - 0"	
106	CLOSET	HWV	HWB	PT	GYP 1	9' - 0"	

FINISH LEGEND		
KEY NAME	MATERIAL	SPECIFICATION
FLOOR FINISHES		
HWV	HEAT WELDED VINYL	MATCH EXISTING
BASE/TRIM FINISHES		
HWB	HEAT WELDED BASE	MATCH EXISTING
WALL FINISHES		
PT 1	PAINT	COLOR SELECTION BY OWNER
PT 2	PAINT	COLOR SELECTION BY OWNER
CEILING FINISHES		
GYP 1	GYPSUM BOARD	
GYP 2	GYPSUM BOARD	MOLD & MOISTURE RESISTANT



CONSTRUCTION DOCUMENTS  
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DOOR & WINDOW TYPES, & FINISH SCHEDULE

A701





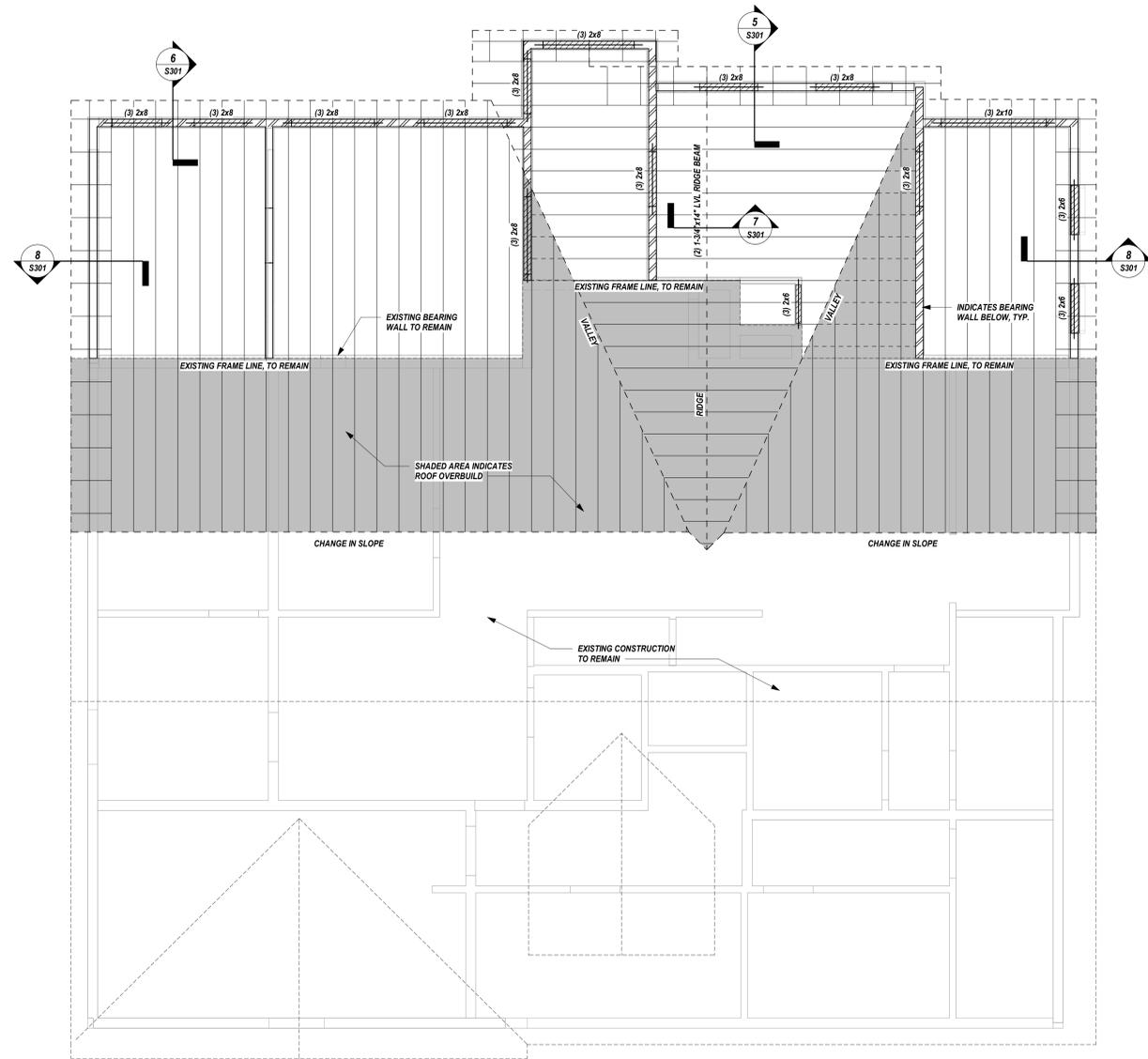








**FOREST PARK ANIMAL CLINIC EXPANSION**  
 4600 CHAMBLISS AVE.



**ROOF FRAMING PLAN NOTES**

1. ALL RAFTERS TO BE 2x12 AT 16" O.C.
2. ALL RAFTERS SHALL BE ORIENTED IN THE DIRECTION SHOWN. RAFTER AND BEAM LAYOUT SHALL NOT BE SIGNIFICANTLY ALTERED FROM THE CONSTRUCTION DOCUMENTS. IF THERE IS A CONFLICT OR THE LAYOUT AS SHOWN IN THE CONSTRUCTION DOCUMENTS CANNOT PHYSICALLY BE CONSTRUCTED, CONTACT STRUCTURAL ENGINEER.
3. PROVIDE 5/8" EXTERIOR GRADE PLYWOOD ROOF SHEATHING.
4. ALL BEAM SOLID BEARING POINTS TO BE CONTINUOUS TO FOUNDATION BELOW, U.N.O.
5. BP-1: SOLID BEARING TO BELOW  
BP-2: CONTINUOUS SOLID BEARING FROM ABOVE  
BP-3: SOLID BEARING FROM ABOVE
6. SHADED AREA INDICATES ROOF OVERBUILD, TYPICAL.
7. ALL BEAMS LABELED AS "RIDGE BEAM" SHALL HAVE RAFTERS ATTACHED TO THE BEAM USING SIMPSON HANGERS.
8. ALL BEAMS LABELED AS "RIDGE BOARD" DO NOT REQUIRE SIMPSON JOIST HANGERS.
9. SEE DETAIL 1/S301 FOR TYPICAL WALL ELEVATIONS.
10. SEE SECTION 2 AND 3/S301 FOR TYPICAL HEADER FRAMING.
11. ALL EXTERIOR LUMBER SHALL BE PRESSURE TREATED.
12. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS, WALL SECTIONS, AND DIMENSIONS NOT SHOWN.
13. IF THERE IS A DISCREPANCY BETWEEN ARCHITECTURAL PLANS/SECTIONS AND STRUCTURAL PLANS/SECTIONS, STRUCTURAL DRAWINGS SHALL CONTROL FOR ALL BEAM LOCATIONS AND BEAM BEARING POINTS.
14. SIMILAR CONDITIONS CALL FOR SIMILAR DETAILS. REFER TO GENERAL NOTES AND DETAILS IF SPECIFIC CONDITIONS ARE NOT SHOWN EXPLICITLY ON PLAN.
15. SEE SHEETS S301 AND S302 FOR STRUCTURAL NOTES.

**1 ROOF FRAMING PLAN**  
 S104 / SCALE: 1/4" = 1'-0"

Project Number: 25008  
 Date: 09/22/2025

Drawn By: JLB/CJE  
 Principal: CJE

#	REVISION NAME	DATE

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ROOF FRAMING PLAN

**S104**







Project Number:	25008
Date:	09/22/2025
Drawn By:	JW
Principal:	TW

#	REVISION NAME	DATE

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GENERAL

**M001**

**SPECIFICATIONS**

GENERAL NOTES:

REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT.

ALL DUCT DIMENSIONS INDICATED IN THESE DOCUMENTS ARE INSIDE-CLEAR DIMENSIONS.

PORTIONS OF DUCTWORK OR PIPING VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK. PAINT BLACK BEHIND ALL GRILLES.

ALL WIRING IN THE CEILING PLENUM SHALL BE PLENUM RATED CABLE.

MOUNTING FRAME OF CEILING MOUNTED AIR DISTRIBUTION DEVICES SHALL BE COMPATIBLE WITH CEILING TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPE.

ALL FIRE SEPARATIONS MUST BE PROTECTED WHEN APPLICABLE.

PROVIDE NEW FILTERS (MERV 7 OR BETTER PER OWNER) FOR ALL APPLICABLE HVAC EQUIPMENT AT THE END OF CONSTRUCTION.

ALL MATERIAL IN PLENUM MUST MEET FIRE AND SMOKE SPREAD AS REQUIRED BY NFPA 90A.

ALL ROOF PENETRATIONS TO BE 12" APART AND AT LEAST 12" AWAY FROM CURBS, WALLS, AND DRAIN SUMPS TO PROVIDE ROOFING CONTRACTOR WITH SUFFICIENT ACCESS FOR FLASHING EACH ROOF PENETRATION.

SUBSTITUTIONS MUST BE APPROVED IN WRITING BY ARCHITECT PRIOR TO BID SUBMISSION.

CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND SHALL BE FAMILIAR WITH THE SCOPE AND REQUIREMENTS OF THIS PROJECT. ANY DISCREPANCIES OR LACK OF CLARITY IN THE DOCUMENTS SHALL BE IDENTIFIED TO THE ARCHITECT OR ENGINEER PRIOR TO THE SUBMISSION OF PRICING BIDS. WITH A SUBMITTED BID, CONTRACTOR IS ACCEPTING THESE DOCUMENTS AS SUFFICIENT DEFINITION OF THE SCOPE OF WORK, AND ANY ADDITIONAL COSTS BASED ON UNCLARITY OF CONTRACT DOCUMENTS WILL NOT BE CONSIDERED.

THE CONTRACTOR SHALL REFERENCE THE FULL SET OF CONSTRUCTION DOCUMENTS DURING PRICING AND CONSTRUCTION FOR COORDINATION BETWEEN DISCIPLINES RELATIVE TO THE MECHANICAL SCOPE.

GUARANTEE:

GUARANTEE THAT EACH PIECE OF APPARATUS SHALL BE OF THE CUSTOMARY STANDARD AND QUALITY FURNISHED BY THE DESIGNED MANUFACTURER FOR THAT CATALOG NUMBER.

GUARANTEE THAT THE AIR SYSTEMS SHALL OPERATE WITHOUT AERODYNAMIC NOISE GENERATED FROM THE FAULTY INSTALLATION OF DUCT WORK OR ANY COMPONENT OF THE AIR DISTRIBUTION SYSTEM.

GUARANTEE THAT ALL SYSTEMS AND COMPONENTS SHALL BE PROVIDED WITH A ONE YEAR WARRANTY FROM THE TIME OF DATE OF SUBSTANTIAL COMPLETION. THE WARRANTY SHALL COVER ALL MATERIALS AND WORKMANSHIP. DURING THIS WARRANTY PERIOD, ALL DEFECTS IN MATERIALS AND WORKMANSHIP SHALL BE CORRECTED BY REPAIR OR REPLACEMENT WITHOUT INCURRING ADDITIONS TO THE CONTRACT.

EXISTING CONDITIONS:

CONTRACTOR SHALL VISIT THE SITE AND UNDERSTAND JOB CONDITIONS BEFORE SUBMITTING A PROPOSAL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND SIZES OF ALL EXISTING UTILITY SERVICES PRIOR TO SUBMITTING HIS PROPOSAL. NO CONSIDERATION WILL BE GIVEN TO CLAIMS FOR EXTRA COST ARISING FROM CONTRACTOR'S FAILURE TO BE FULLY COGNIZANT OF JOB OR SITE CONDITIONS EXISTING AT TIME OF ACCEPTANCE OF BID.

ACTIVE SERVICES: WHEN ENCOUNTERED IN WORK, PROTECT, BRACE, SUPPORT EXISTING ACTIVE SEWERS, GAS AND OTHER SERVICES REQUIRED FOR PROPER EXECUTION OF WORK. IF EXISTING ACTIVE SERVICES ARE ENCOUNTERED THAT REQUIRE RELOCATION, RELOCATE AS APPROVED. DO NOT PREVENT OR DISTURB OPERATION OF ACTIVE SERVICES THAT ARE TO REMAIN.

INACTIVE SERVICES: WHEN ENCOUNTERED IN WORK, REMOVE, CAP OR PLUG INACTIVE SERVICES, AS INDICATED.

INTERRUPTION OF SERVICES: WHERE WORK MAKES TEMPORARY SHUT-DOWNS OF SERVICES UNAVOIDABLE, SHUT DOWN AT NIGHT, OR AT SUCH TIMES AS APPROVED BY OWNER, WHICH WILL CAUSE LEAST INTERFERENCE WITH ESTABLISHED OPERATING ROUTINE. ARRANGE WORK TO ASSURE THAT SERVICES WILL BE SHUT DOWN ONLY DURING TIME ACTUALLY REQUIRED TO MAKE NECESSARY CONNECTION TO EXISTING WORK.

WHERE EXISTING WALLS, CEILINGS, FLOORS, ETC., ARE CUT OR OTHERWISE DAMAGED DURING CONSTRUCTION, REPAIR ALL SURFACES TO THEIR ORIGINAL CONDITION.

SHOP DRAWINGS:

SUBMIT SHOP DRAWINGS FOR REVIEW. PDF FILES PREFERRED. SHOP DRAWINGS SHALL BE BOUND INTO VOLUMES (FILES), WITH EACH VOLUME (FILE) CONTAINING ONE COPY OF ALL SHOP DRAWINGS. ALL SHOP DRAWINGS SHALL BE SUBMITTED SIMULTANEOUSLY; NO SHOP DRAWINGS WILL BE CHECKED UNTIL ALL HAVE BEEN SUBMITTED.

SUBMITTALS SHALL BE SUPPORTED BY DESCRIPTIVE MATERIAL, SUCH AS CATALOG CUTS, DIAGRAMS, PERFORMANCE CURVES AND CHARTS PUBLISHED BY THE MANUFACTURER, TO SHOW CONFORMANCE TO SPECIFICATION AND DRAWING REQUIREMENTS. MODEL NUMBERS ALONE WILL NOT BE ACCEPTABLE. ALL LITERATURE SHALL CLEARLY INDICATE THE SPECIFIED MODEL NUMBER, DIMENSIONS, ARRANGEMENT, RATING AND CHARACTERISTICS OF THE PROPOSED EQUIPMENT. CAPACITIES AND RATINGS SHALL BE BASED ON CONDITIONS INDICATED OR SPECIFIED HEREIN. ANY DEVIATIONS FROM SPECIFIED EQUIPMENT, PARTICULARLY THOSE WHICH REQUIRE COORDINATION WITH OTHER TRADES) SHALL BE CLEARLY NOTED IN A CONCISE LIST ON A SEPARATE SHEET.

TEST AND BALANCE:

TEST AND BALANCE (TAB) CONTRACTOR SHALL HOLD A CURRENT NATIONAL BALANCING COUNCIL (NBC) CERTIFICATION AND POSSESS ACCURATE AND CALIBRATED INSTRUMENTS. TAB WORK AND REPORTS SHALL BE PER NBC PRACTICAL STANDARDS, PROCEDURES AND FORMS. ACCEPTABLE ALTERNATIVE TAB FIRM CERTIFICATIONS/PROCEDURES: NEBB, AMBC, OR TABB.

PRIOR TO COMMENCEMENT OF THE TAB WORK, THE MECHANICAL SYSTEMS ARE TO BE STARTED AND FULLY FUNCTIONING. A CHECKLIST PRIOR TAB WORK IS TO BE SENT TO THE INSTALLING CONTRACTOR AND RETURNED ATTESTING TO THE READINESS OF THE SYSTEMS FOR BALANCING.

PREFERRED TAB FIRM: P-TAB.COM

**SPECIFICATIONS**

DUCTWORK AND ACCESSORIES:

INDUSTRY STANDARDS: COMPLY WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION) HVAC DUCT CONSTRUCTION STANDARDS, RECOMMENDATIONS FOR FABRICATION, GAUGES, CONSTRUCTION AND DETAILS, AND INSTALLATION PROCEDURES, EXCEPT AS OTHERWISE INDICATED.

COMPLY WITH ASHRAE (AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS) FUNDAMENTALS HANDBOOK RECOMMENDATIONS, EXCEPT AS OTHERWISE INDICATED.

DUCTWORK METAL AND GAUGES: EXCEPT AS OTHERWISE INDICATED, FABRICATE DUCTWORK FROM GALVANIZED SHEET STEEL, COMPLYING WITH ASTM A527, LOCKFORMING QUALITY, WITH ASTM A525 G90 ZINC COATING, MILL PHOSPHATIZED. GAUGES TO COMPLY WITH SMACNA STANDARDS.

DUCT SEALANT: NON-HARDENING, NON-MIGRATING MASTIC OR LIQUID ELASTIC SEALANT (TYPE APPLICABLE FOR THE FABRICATION/INSTALLATION DETAIL) AS COMPOUNDED AND RECOMMENDED BY THE MANUFACTURER SPECIFICALLY FOR SEALING JOINTS AND SEAMS IN DUCTWORK.

DUCTWORK SUPPORT MATERIALS: EXCEPT AS OTHERWISE INDICATED, PROVIDE UPPER ATTACHMENT, HANGERS OF GALVANIZED STEEL STRAPS, OR STEEL RODS AND LOWER ATTACHMENT FOR SUPPORT OF DUCTWORK. HANGING/SUPPORT SYSTEMS SHALL BE IN ACCORDANCE WITH SMACNA REQUIREMENTS.

EXPOSED DUCTWORK SHALL BE DOUBLE-WALL SPIRAL PIPE WITH PAINT GRIP UNLESS OTHERWISE NOTED OR SUBSTITUTION APPROVED BY OWNER.

VOLUNTARY ALTERNATE EXPOSED DUCTWORK SHALL BE SINGLE-WALL SPIRAL PIPE UNLESS OTHERWISE NOTED OR SUBSTITUTION APPROVED BY OWNER. ALL EXPOSED DUCTWORK SHALL BE LINED IN LIEU OF WRAPPED. DUCT LINER THERMAL RESISTANCE SHALL MEET THE MINIMUM VALUES SPECIFIED IN PARAGRAPH 'DUCT INSULATION' BELOW.

DUCT INSULATION:

R-5 SUPPLY, OUTSIDE AND RETURN AIR DUCT INSULATION IN UNCONDITIONED SPACES R-8 SUPPLY AND RETURN AIR DUCT INSULATION OUTSIDE THE BUILDING R-8 INSULATION BETWEEN DUCTS AND THE BUILDING EXTERIOR WHEN DUCTS ARE PART OF A BUILDING ASSEMBLY

HEAT PUMP:

FACTORY ASSEMBLED, SINGLE PIECE, AIR-COOLED HEAT PUMP UNIT, CONTAINED WITHIN THE UNIT ENCLOSURE IS ALL FACTORY WIRING, PIPING, CONTROLS, COMPRESSOR, REFRIGERANT CHARGE OF R-410A, AND SPECIAL FEATURES REQUIRED PRIOR TO FIELD START-UP.

UNIT CABINET WILL BE CONSTRUCTED OF GALVANIZED STEEL, BONDERIZED, AND COATED WITH A POWDER COAT PAINT.

CONDENSER FAN WILL BE DIRECT-DRIVE PROPELLER TYPE, DISCHARGING AIR UPWARD. CONDENSER FAN MOTORS WILL BE TOTALLY ENCLOSED, 1-PHASE TYPE WITH CLASS B INSULATION AND PERMANENTLY LUBRICATED BEARINGS. SHAFTS WILL BE CORROSION RESISTANT FAN BLADES WILL BE STATICALLY AND DYNAMICALLY BALANCED. CONDENSER FAN OPENINGS WILL BE EQUIPPED WITH STEEL WIRE SAFETY GUARDS.

COMPRESSOR WILL BE HERMETICALLY SEALED. COMPRESSOR WILL BE MOUNTED ON RUBBER VIBRATION ISOLATORS.

CONDENSER COIL WILL BE AIR COOLED. COIL WILL BE CONSTRUCTED OF ALUMINUM FINS MECHANICALLY BONDED TO COPPER TUBES WHICH ARE THEN CLEANED, DEHYDRATED, AND SEALED.

REFRIGERATION CIRCUIT COMPONENTS WILL INCLUDE LIQUID-LINE SHUTOFF VALVE WITH SWEAT CONNECTIONS, VAPOR-LINE SHUTOFF VALVE WITH SWEAT CONNECTIONS, SYSTEM CHARGE OF R-410A REFRIGERANT, POE COMPRESSOR OIL, ACCUMULATOR, AND REVERSING VALVE.

SEE SCHEDULE FOR LIST OF ACCEPTABLE MANUFACTURERS.

FAN COIL UNIT:

PROVIDE FAN COIL UNIT MANUFACTURER'S STANDARD MATERIALS AND COMPONENTS AS INDICATED BY PUBLISHED PRODUCT INFORMATION, DESIGNED AND CONSTRUCTED AS RECOMMENDED BY MANUFACTURER, AND AS REQUIRED FOR A COMPLETE INSTALLATION.

PROVIDE MANUFACTURER'S STANDARD COIL OF INDICATED TYPE AND RATED FOR INDICATED CAPACITY. COPPER TUBE COILS, MECHANICALLY EXPANDED INTO ALUMINUM PLATE FINS, RATED AT 250 PSIG AND LEAK TESTED AT 350 PSIG MIN. AIR PRESSURE. PROVIDE MANUAL AIR VENTS.

ELECTRIC HEATING COILS SHALL BE AN OPEN GRID TYPE WITH FACTORY INSTALLED HIGH LIMIT CONTROL. HEATER SHALL BE FULLY ACCEPTABLE THROUGH THE DISCHARGE GRILLE OPENINGS.

THE FAN SHALL BE A CENTRIFUGAL, FORWARD CURVED, DOUBLE WIDTH, DOUBLE INLET, DIRECT DRIVE TYPE, BALANCED STATICALLY AND DYNAMICALLY, AND OF INDICATED CAPACITY.

MOTORS SHALL BE OF INDICATED CAPACITY, 3 SPEED, PERMANENT SPLIT CAPACITOR, INSTALLED FOR EASY REMOVAL. PROVIDE MOTORS WITH AUTOMATIC-RESET AND INTEGRAL THERMAL OVERLOAD PROTECTION. MOTORS SHALL BE CAPABLE OF OPERATING AT TEMPERATURES INDICATED ON DRAWINGS WITHOUT OVERLOADING. MOTOR SHALL BE CAPABLE OF FIELD OILING AS REQUIRED.

CABINETS SHALL BE FABRICATED OF 18 GAUGE STEEL AND HAVE BAKED ENAMEL FINISH. ALL SURFACES IN CONTACT WITH AIR STREAM SHALL BE INSULATED WITH HALF INCH THICK, 1-1/2 POUND DENSITY, MATT FACED, GLASS FIBER INSULATION.

THE FILTER SHALL BE ONE INCH THICK, THROWAWAY GLASS FIBER TYPE.

THE DRAIN PAN SHALL BE REMOVABLE AND HAVE SELF EXTINGUISHER THREE (3) POUND DENSITY CELLULAR POLYSTYRENE PLASTIC LINER. THE DRAIN PAN SHALL EXTEND UNDER THE ENTIRE COIL SECTION.

THERMOSTAT SHALL BE 7-DAY PROGRAMMABLE TYPE.

SEE SCHEDULE FOR LIST OF ACCEPTABLE MANUFACTURERS.

**SPECIFICATIONS**

DIFFUSERS, GRILLES, & REGISTERS:

EGGCRATE GRILLE:

RETURN GRILLES SHALL BE TITUS MODEL 50F FOR THE SIZES AND MOUNTING TYPES AS SHOWN ON THE PLANS AND OUTLET SCHEDULE. RETURN GRILLES MUST PROVIDE A FREE AREA OF AT LEAST 80%. OUTER BORDERS SHALL BE CONSTRUCTED OF HEAVY EXTRUDED ALUMINUM WITH A THICKNESS OF 0.040-0.050 INCH AND SHALL HAVE COUNTERSUNK SCREW HOLES FOR A NEAT APPEARANCE. BORDERS WIDTH SHALL BE 1/4 INCHES ON ALL SIDES AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. CHOICE OF THREE SIZES OF ALUMINUM GRID: 1/2 X 1/2 INCH, 3/4 X 3/4 INCH, OR 1 X 1 X 1 INCH SHALL BE AVAILABLE.

OPTIONAL OPPOSED-BLADE VOLUME DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL OR ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE.

DOUBLE DEFLECTION REGISTERS:

ALUMINUM SUPPLY GRILLES SHALL BE OF THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE DEFLECTION BLADES SHALL BE AVAILABLE PARALLEL TO THE LONG OR SHORT DIMENSION OF THE GRILLE OR REGISTER. CONSTRUCTION SHALL BE OF ALUMINUM WITH A 1/4-INCH WIDE BORDER ON ALL SIDES. SIZES 24 X 24 INCHES AND BELOW SHALL HAVE ROLL-FORMED BORDERS WITH A MINIMUM THICKNESS OF 0.032 INCH. LARGER SIZES SHALL BE CONSTRUCTED USING CONTINUOUS ALUMINUM EXTRUSIONS WITH A NOMINAL THICKNESS OF 0.040 THROUGH 0.050 INCH AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. SCREW HOLES SHALL BE COUNTERSUNK FOR A NEAT APPEARANCE.

DEFLECTION BLADES SHALL BE CONTOURED TO A SPECIFICALLY DESIGNED AND TESTED CROSS-SECTION TO MEET PUBLISHED TEST PERFORMANCE DATA. BLADES SHALL BE SPACED ON 1/4-INCH CENTERS. BLADES SHALL HAVE FRICTION PIVOTS ON BOTH SIDES TO ALLOW INDIVIDUAL BLADE ADJUSTMENT WITHOUT LOOSENING OR RATTLING OR BE INSERTED THROUGH THE FRAME AND HELD TIGHT WITH STEEL FRICTION WIRE INTERLOCKED TO THE FRAME ON BOTH ENDS OF EACH SIDE. PLASTIC BLADE PIVOTS ARE NOT ACCEPTABLE.

OPTIONAL OPPOSED BLADE VOLUME DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE STEEL OR ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE.

THE GRILLE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 315° F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H. THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSION ENVIRONMENTS SALT SPRAY TEST WITHOUT CREEPAGE, BLISTERING OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE GRILLE. THE GRILLE SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-2006.

CEILING FAN:

CEILING MOUNTED EXHAUST FANS SHALL BE OF THE CENTRIFUGAL DIRECT DRIVE TYPE. THE FAN HOUSING SHALL BE CONSTRUCTED OF STEEL. THE PLASTIC DUCT COLLAR SHALL BE A TAPERED SLEEVE FOR EASE OF CONNECTION TO 3 IN AND 4 IN ROUND DUCTWORK AND SHALL INCLUDE A BACKDRAFT DAMPER. THE GRILLE SHALL BE CONSTRUCTED OF NON-YELLOWING HIGH STRENGTH POLYMER AND ATTACHED TO THE HOUSING WITH TORSION SPRINGS. THE WHEELS SHALL BE CONSTRUCTED OF HIGH STRENGTH POLYMER. THE ACCESS FOR WIRING SHALL BE EXTERNAL. THE MOTOR DISCONNECT SHALL BE INTERNAL AND OF THE PLUG IN TYPE.

ALL FANS SHALL BEAR THE AMCA CERTIFIED RATINGS SEALS FOR SOUND AND AIR PERFORMANCE AND SHALL BE U.L. LISTED.

**ABBREVIATIONS**

AFF	ABOVE FINISHED FLOOR	MAU	MAKE-UP AIR UNIT
AHU	AIR HANDLING UNIT	MAV	MANUAL AIR VENT
CO2	CARBON DIOXIDE	MBH	1,000 BTU PER HOUR
D	CONDENSATE DRAIN	MFCU	MINI FAN COIL UNIT
DB	DRY BULB	MHP	MINI HEAT PUMP
EA	EXHAUST AIR	MVD	MANUAL VOLUME DAMPER
EDH	ELECTRIC DUCT HEATER	NC	NORMALLY CLOSED
EF	EXHAUST FAN	NO	NORMALLY OPEN
ESP	EXTERNAL STATIC PRESSURE	OA	OUTSIDE AIR
EWH	ELECTRIC WALL HEATER	OBD	OPPOSED BLADE DAMPER
F	DEGREES FAHRENHEIT	PDU	POOL DEHUMIDIFYING UNIT
FCU	FAN COIL UNIT	PIU	POWER INDUCTION UNIT
FD	FIRE DAMPER	RA	RETURN AIR
FSD	COMB. FIRE/SMOKE DAMPER	RH	RELIEF HOOD
H	HUMIDISTAT	RTU	ROOFTOP UNIT
IH	INTAKE HOOD	SA	SUPPLY AIR
LAT	LEAVING AIR TEMPERATURE	SP	STATIC PRESSURE
LMT	LEAVING WATER TEMPERATURE	UC	UNDER CUT DOOR
M	MOTOR	VAV	VARIABLE AIR VOLUME
MA	MAKE-UP AIR	WB	WET BULB

**LEGEND**

SYMBOLS	DESCRIPTION
X1 X2	DIFFUSER, GRILLE, REGISTER OR LOUVER TAG X1 = TYPE, X2 = CFM
⊗	POSITIVE PRESSURE (AIR GOES OUT) DIFFUSER OR REGISTER, 4-WAY AIR PATTERN (UNLESS OTHERWISE NOTED)
⊙	NEGATIVE PRESSURE (AIR GOES IN) GRILLE
→	POSITIVE PRESSURE AIRFLOW (TYP. SUPPLY)
←	NEGATIVE PRESSURE AIRFLOW (TYP. RETURN/EXHAUST)
	FLEXIBLE DUCT
⌈	MANUAL VOLUME DAMPER (MVD)
⌋	VERTICAL (TYP. WALL) FIRE DAMPER
⌋	VERTICAL (TYP. WALL) COMBINATION FIRE/SMOKE DAMPER
⌋	HORIZONTAL (TYP. FLOOR/CEILING) FIRE DAMPER
⌋	HORIZONTAL (TYP. FLOOR/CEILING) COMBINATION FIRE/SMOKE DAMPER
⊖	THERMOSTAT
⊕	HUMIDISTAT
⌈	INTERNALLY LINED DUCT
⊙	DUCT UP
⊗	DUCT UP
⊙	DUCT DN
⌈	SUPPLY DUCT
UNIT #	EQUIPMENT TYPE EQUIPMENT NUMBER, WHERE A LETTER IS USED, THERE ARE MULTIPLE INSTANCES.





**FOREST PARK ANIMAL CLINIC EXPANSION**  
4600 CHAMBLISS AVE.

Project Number: 25008  
Date: 09/22/2025

Drawn By: JW  
Principal: TW

#	REVISION NAME	DATE

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FLOOR PLAN - CRAWLSPACE - MECHANICAL

**M100**

**GENERAL NOTES**

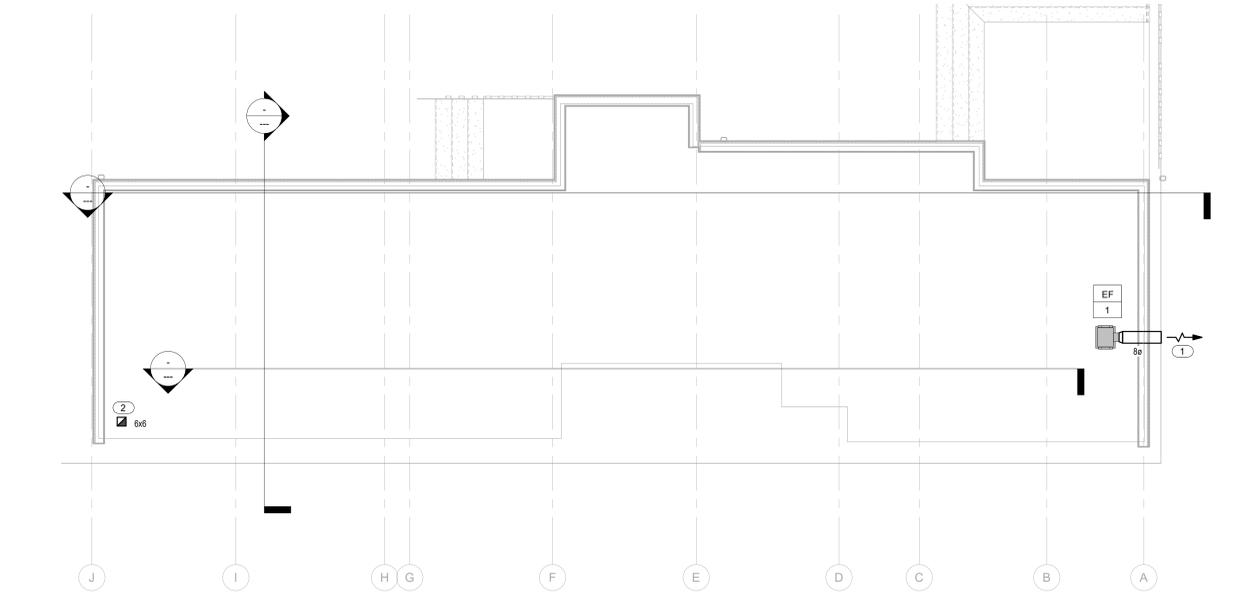
A. EACH SUPPLY DIFFUSER/REGISTER RUNOUT SHALL BE PROVIDED WITH A VOLUME DAMPER. REFER TO THE DIFFUSER TAKE-OFF DETAIL FOR ADDITIONAL INFORMATION.

B. DRAWINGS ARE DIAGRAMMATIC ONLY; FINAL ROUTING OF DUCTWORK AND EQUIPMENT LOCATIONS SHALL BE DETERMINED IN THE FIELD. ADDITIONAL OFFSETS, ELBOWS, ETC. SHALL BE PROVIDED AND INSTALLED WITHOUT ADDITIONAL COST TO THE OWNER.

**KEYNOTES**

1 EXHAUST DUCT ROUTED TO WALL CAP WITH INSECT SCREEN. LOCATE MINIMUM 3' FROM OPERABLE OPENINGS. WALL CAP COLOR AND FINISH SHALL BE SELECTED BY ARCHITECT.

2 DUCT ROUTED FROM FLOOR GRILLE ABOVE. REFER TO SHEET M101 FOR GRILLE LOCATION.



**M100** FLOOR PLAN - CRAWLSPACE - MECHANICAL  
1/4" = 1'-0"



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FLOOR PLAN - MECHANICAL

**M101**

**GENERAL NOTES**

A. EACH SUPPLY DIFFUSER/REGISTER RUNOUT SHALL BE PROVIDED WITH A VOLUME DAMPER. REFER TO THE DIFFUSER TAKE-OFF DETAIL FOR ADDITIONAL INFORMATION.

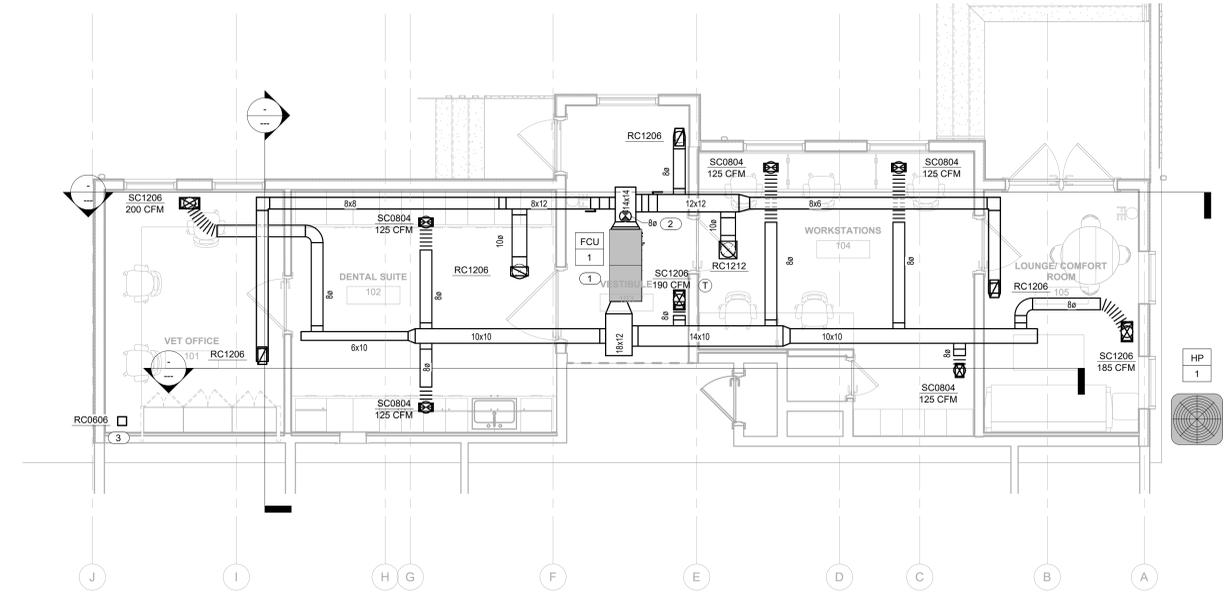
B. LOCATIONS SHALL BE DETERMINED IN THE FIELD. ADDITIONAL OFFSETS, ELBOWS, ETC. SHALL BE PROVIDED AND INSTALLED WITHOUT ADDITIONAL COST TO THE OWNER.

**KEYNOTES**

1 TRAP AND ROUTE 1" INSULATED CONDENSATE LINE TO DRY WELL.

2 OUTSIDE AIR DUCT UP TO ROOF CAP WITH BACKDRAFT DAMPER.

3 MOUNT TRANSFER GRILLE IN FLOOR. REFER TO SHEET M100 FOR DUCTWORK CONTINUATION.



**FLOOR PLAN - MECHANICAL**  
1/4" = 1'-0"

**SPECIFICATIONS**

**GENERAL**

CONTRACTOR SHALL REFER TO ALL RELATED DOCUMENTS, ARCHITECTURAL, STRUCTURAL, CIVIL AND MEP DRAWINGS, AND FULLY UNDERSTAND THE SCOPE OF WORK AND CONDITION OF CONSTRUCTION.

THE WORK UNDER THIS SPECIFICATIONS AND DRAWINGS SHALL INCLUDE ALL LABOR.

ALL INSTALLATION OF DEVICES AND CONNECTION OF CONDUCTORS SHALL BE PERFORMED BY LICENSED AND SKILLED ELECTRICIAN OR JOURNEYMAN.

ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE OWNER. IF ANY PORTION OF THE WORK IS FOUND UNSATISFACTORY BY THE OWNER, IT SHALL BE REMOVED AND REINSTALLED WITHOUT DELAY AT NO COST TO THE OWNER.

THE WORK INCLUDES, BUT NOT LIMITED TO:  
THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM.  
ROUGH-IN AND FINAL CONNECTIONS TO ALL DEVICES REQUIRING ELECTRICAL POWER, INCLUDING OWNER PROVIDED EQUIPMENT.  
LIGHTING CONTROL  
LIGHTING FIXTURES

EACH CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS REQUIRED BY THE REGULATORY AUTHORITIES. ALL FEES RELATED TO OBTAINING PERMITS AND INSPECTION SHALL BE PAID FOR BY EACH CONTRACTOR IN HIS TRADE.

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH LOCAL, COUNTY, STATE, AND NATIONAL ELECTRICAL CODE 2023, SPECIFICATIONS, UTILITY COMPANY REQUIREMENTS AND ALL INDUSTRY STANDARDS.

ANY DIFFERENCES IN ABOVE MENTIONED REQUIREMENTS, THE MOST STERN SHALL OVERRULE ALL OTHERS.

IN ADDITION TO ABOVE MENTIONED CODES AND SPECIFICATIONS, THE FOLLOWING INDUSTRY STANDARDS SHALL BE COMPLIED IF THEY ARE MORE STRINGENT.

- IEEE
- IES
- IECC 2018
- ASHRAE 90.1
- NFPA
- NEMA
- UL
- ADA

THE MANUFACTURER'S PUBLISHED DIRECTIONS SHALL BE FOLLOWED IN THE DELIVERY, STORAGE, PROTECTION, INSTALLATION AND WIRING OF ALL EQUIPMENT AND MATERIAL.

THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM. THE SYSTEMS SHALL INCLUDE BUT ARE NOT LIMITED TO THE ITEMS SHOWN ON THE DRAWINGS. EXACT LOCATIONS OF THESE ITEMS SHALL BE DETERMINED BY REFERENCE TO THE GENERAL PLANS AND MEASUREMENTS AT THE BUILDING AND IN COOPERATION WITH THE OTHER SUBCONTRACTORS, AND IN ALL CASES, SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGE IN THE LOCATION OF ANY PART OF THIS WORK WITHOUT ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL SEEK APPROVAL FROM THE OWNER FOR ANY CHANGES TO THE SPECIFICATIONS OR CONTRACT DOCUMENTS.

ANY EXCEPTIONS, INCONSISTENCIES AND CONFLICTS IN CONTRACT DOCUMENTS, SPECIFICATIONS AND CONTRACT DOCUMENTS BY OTHER TRADE SHALL BE BROUGHT TO ATTENTION TO THE OWNER PRIOR TO BID.

CONTRACTOR SHALL COORDINATE AND VERIFY THE WORK WITH EXISTING CONDITIONS AND THE WORK OF OTHER TRADE PRIOR TO ANY FABRICATIONS OR INSTALLATION. IF THE LAYOUT OF THE DEVICES ON DRAWINGS ARE IMPRACTICAL TO THE CONDITION IN FIELD, CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY PRIOR TO ANY FABRICATION OR INSTALLATION.

ELECTRICAL DEVICES ARE INDICATED ON DRAWINGS AT APPROXIMATE LOCATIONS. THE OWNER RESERVE THE RIGHT TO MAKE REASONABLE CHANGES IN LOCATIONS WITHOUT ADDITIONAL COSTS.

THE LINES INDICATING BRANCH CIRCUITS DO NOT REPRESENT THE ROUTING OF ELECTRICAL CONDUITS. THEY INDICATE THE LAYOUT AND CONTROL OF CIRCUITS.

**PRODUCTS AND WORK**

MATERIALS FURNISHED SHALL BE NEW AND BY STANDARD MANUFACTURERS AND MUST CONFORM TO THE NATIONAL BOARD OF FIRE UNDERWRITER'S REQUIREMENTS AND BEAR THE UNDERWRITER'S LABORATORIES' SEAL OF APPROVAL.

LISTED MANUFACTURERS, MODELS, OR CATALOGUE NUMBERS IN PART OR ALL SHALL ENTAIL TO INCLUDE THE PUBLISHED MANUFACTURER'S DESCRIPTION AND SPECIFICATION.

CONTRACTOR SHALL NOT INTERPRET THAT THE LISTED MANUFACTURERS IN SPECIFICATIONS OR DRAWINGS TO EXCLUDE ALL OTHER MANUFACTURERS.

CONTRACTOR SHALL MAKE CERTAIN THAT ALL EQUIPMENT FIT IN THE SPACE DESIGNATED AND DESIGNED FOR THE SURROUNDINGS IT OCCUPIES.

COMPLETE CATALOGUE ILLUSTRATION AND DESCRIPTIONS OF ALL EQUIPMENT SHALL BE SUBMITTED TO THE OWNER PRIOR TO ORDERING ANY EQUIPMENT.

ALL HORIZONTAL RUNS OF CONDUITS SHALL BE SUPPORTED BY MEANS OF APPROVED HANGER FROM THE STRUCTURAL CEILING.

COORDINATE THE WORK UNDER THIS SECTION WITH ALL OTHER TRADES.

**CONDUITS AND RACEWAYS:**

MANUFACTURERS: SQUARE D, B-LINE, ALLIED TUBE & CONDUIT, HOFFMAN, CARLON ELECTRICAL, WIREMOLD.

OUTDOORS EXPOSED: RIGID STEEL  
OUTDOORS CONCEALED ABOVE GROUND: RIGID STEEL.  
OUTDOORS UNDERGROUND: TYPE EPC-40-PVC  
OUTDOORS CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND MOTOR DRIVEN EQUIPMENT): LFMC.  
BOXES AND ENCLOSURES ABOVE GROUND: NEMA 3R UNLESS NOTED OTHERWISE ON PLANS.  
INDOORS EXPOSED NOT SUBJECT TO PHYSICAL DAMAGE: EMT.  
INDOORS EXPOSED SUBJECT TO SEVERE PHYSICAL DAMAGE: RIGID STEEL CONDUIT.  
INDOORS CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT.  
INDOORS CONNECTION TO VIBRATING EQUIPMENT: FMG, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.  
INDOORS DAMP OR WET LOCATIONS: IMC.  
INDOORS LOW-VOLTAGE CABLES: EMT.

**CONDUCTORS:**

COPPER CONDUCTORS #10 AND SMALLER: LABELED PER UL 83, TYPE THHN/THWN, SOLID COPPER 800 VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA. METAL CLAD (TYPE MC) CABLE WHERE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 330.

COPPER CONDUCTORS #8 OR LARGER: LABELED PER UL 83, TYPE THHN/THWN, STRANDED COPPER, 500VOLT INSULATION, UNIFORM COLOR CODED JACKET WITH JACKET DATA.

**ACCEPTABLE MANUFACTURERS OF CONDUCTORS:**

- PIRELLIE
- SCOTHWIRE
- AETNA
- REPUBLIC
- AFC
- ENCORE WIRE
- KERITE

CONTRACTOR MAY USE ALUMINUM CONDUCTORS FOR #4 AWG OR LARGER IN THE PLACE OF COPPER CONDUCTORS. CONTRACTOR SHALL REFER TO NEC TABLE 310-16 FOR EQUIVALENT AMPACITY AND SHALL COMPENSATE FOR VOLTAGE DROP.

CONTRACTOR SHALL MAKE ADEQUATE ADJUSTMENT TO CONDUIT SIZES INDICATED SHOULD ALTERNATIVE CONDUCTOR INSULATION OR MATERIAL BE UTILIZED.

**SPECIFICATIONS**

**MOLDED CASE CIRCUIT BREAKER:**

INCLUDE SCHEDULE OF ALL FUSES, RATINGS, TIME COORDINATION DATA, MANUFACTURER'S STANDARD DATA AND TIME-CURRENT CURVES. ALL DATA SHALL BE BASED ON TEST OF STANDARD PRODUCTS.

APPROVED MANUFACTURERS:  
GENERAL ELECTRIC  
CUTLER HAMMER  
SQUARE D  
SIEMENS

THERMAL-MAGNETIC BOLT-IN TYPE CIRCUIT BREAKERS WITH QUICK-MAKE, QUICK-BREAK CONTACTS, TRIP-FREE OPERATION WITH OVER-THE-CENTER TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE.

MULTI-POLE BREAKERS SHALL HAVE INTERNAL COMMON TRIP AND COMMON RESET WITH A SINGLE TOGGLE HANDLE OR NON-REMOVABLE MONOLITHIC TIE-HANDLE.

TRIP RATINGS SHALL BE MOLDED ON THE HANDLE OR FACE OF BREAKER.

BREAKER TERMINALS SHALL BE RATED TO ACCOMMODATE A MINIMUM OF 75 DEGREE C. CONDUCTORS.

BREAKER SHALL BE RATED FOR MOUNTING AND OPERATION IN ANY POSITION; SHALL ACCOMMODATE AND MATCH THE TYPE OF TERMINATIONS REQUIRED.

SINGLE POLE BREAKERS RATED 15 AND 20 AMPERES SHALL BE UL LABELED AS "SWITCHING BREAKERS" AT THE APPLIED CIRCUIT VOLTAGE.

MULTI-POLE BREAKERS RATED 100 AMPERES AND LARGER SHALL BE MOLDED CASE THERMAL-MAGNETIC BOLT-IN TYPE BREAKER WITH ADJUSTABLE INSTANTANEOUS TRIP.

**LIGHTING FIXTURE**

SUBMITTAL:  
SCHEDULE BY TYPE DESIGNATION ALL LIGHTING FIXTURES, EACH COMPLETE WITH DATA SHEET WITH COMPLETE PHYSICAL, ELECTRICAL AND LIGHTING CHARACTERISTICS, LAMP TYPE AND LAMP DATA.

REFER TO THE "LIGHTING FIXTURE SCHEDULE" IN THE DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS AND MANUFACTURER TYPES.

PROVIDE LAMPS FOR EACH FIXTURE OF QUANTITY, TYPE AND COLOR AS LISTED IN LIGHTING FIXTURE SCHEDULE. GE, SYLVANIA OR PHILIPS ARE ACCEPTABLE.

EACH LIGHTING FIXTURE SHALL BE UL LABELED FOR PROPER OPERATION IN THE TYPE OF CEILING CONSTRUCTION AND FOR THE MOUNTING ARRANGEMENT ON IN WHICH IT IS INSTALLED.

FIELD VERIFY ACTUAL CEILING SLOPE FOR FIXTURES INSTALLED IN SAME AND ACTUAL FIELD DIMENSIONS AND ANGLES OF CONSTRUCTION FOR ANY FIXTURE CONFORMING THE SHAPE AND LENGTH OF SAME, FOR COORDINATION OF FIXTURE CONSTRUCTION.

**PANELBOARD**

SUBMITTAL:  
INCLUDE SCHEDULE OF EACH PANELBOARD WITH ALL DEVICES AND COMPLETE WITH PHYSICAL AND ELECTRICAL DATA AND WITH RATINGS FOR EACH COMPONENT INCLUDING BREAKER/FUSE OVERLAY CURVES.

LABELED PER UL #67 AND #50, CONFORM WITH NEMA #250 AND PB 1, NFPA #70-384 AND 70-373.

ALL JUNCTION BOXES SHALL BE LABELED WITH PANEL AND CIRCUIT DESIGNATION.

PROVIDE TYPED CIRCUIT DIRECTORY WITH EACH CIRCUIT SERVING DEVICES AND AREA ITS SERVING.

APPROVED MANUFACTURERS:  
GENERAL ELECTRIC  
CUTLER HAMMER  
SQUARE D  
SIEMENS

**LIGHTING CONTROL**

TIME SWITCHES:  
SOLID STATE, PROGRAMMABLE, WITH ALPHANUMERIC DISPLAY; COMPLYING WITH UL 917, 20-A BALLAST LOAD, 120/240VAC.

TWO ON-OFF SET POINTS ON A 24-HOUR SCHEDULE AND ANNUAL HOLIDAY SCHEDULE THAT OVERRIDES THE WEEKLY OPERATION ON HOLIDAYS.

ALLOW CONNECTION OF A PHOTOELECTRIC RELAY AS SUBSTITUTE FOR ON-OFF FUNCTION OF A PROGRAM.

BATTERY BACKUP FOR NOT LESS THAN SEVEN DAYS RESERVE TO MAINTAIN SCHEDULES AND TIME CLOCK.

INDOOR OCCUPANCY SENSORS:  
WALL OR CEILING MOUNTED SOLID-STATE INDOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK.

ADJUSTABLE TIME-DELAY OVER A RANGE OF 1 TO 30 MINUTES.

SENSOR OUTPUT: CONTACTS RATED TO OPERATE THE CONNECTED RELAY, COMPLYING WITH UL773A. SENSOR IS POWERED FROM POWER PACK.

POWER PACK: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120 OR 277 VAC. AUTOMATIC LIGHT-LEVEL SENSOR: ADJUSTABLE FROM 2 TO 200 FC (21.5 TO 2152 LUX); TURN LIGHTS OFF WHEN SELECTED LIGHTING LEVEL IS PRESENT.

DUAL SENSOR TYPE: DETECT OCCUPANCY AREA USING PIR (PASSIVE INFRARED) AND ULTRASONIC DETECTION METHOD.

**GROUNDING AND BONDING**

ALL GROUNDING AND BONDING SHALL CONFORM TO NEC ARTICLE 250.

COPPER WIRE OR CABLE INSULATED FOR 600V UNLESS REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.

INSTALL SOLID CONDUCTOR FOR #6 AWG AND SMALLER AND STRANDED CONDUCTORS FOR #6 OR LARGER.

INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS FOR ALL EQUIPMENT.

**LOW VOLTAGE TRANSFORMERS**

SUBMITTAL:  
PROVIDE PRODUCT DATA FOR EACH TRANSFORMER. INDICATE DIMENSIONS AND WEIGHTS.

PROVIDE CERTIFICATION THAT TRANSFORMERS, ACCESSORIES, AND COMPONENTS WILL WITHSTAND SEISMIC FORCES.

MANUFACTURERS: CUTLER-HAMMER, SIEMENS, GE AND SQUARE D.

INSULATION CLASS: 220 DEG C, UL COMPONENT RECOGNIZED INSULATION SYSTEM WITH MAXIMUM OF 150 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.

COMPLY WITH NEMA TP1, CLASS 1 EFFICIENCY LEVELS AND TESTED ACCORDING TO NEMA TP2.

TESTING AND INSPECTION: PERFORM VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST STATED IN NETA ACCEPTANCE TESTING SPECIFICATION. CERTIFY COMPLIANCE WITH TEST PARAMETERS.

PERFORM AN INFRARED SCAN OF TRANSFORMER CONNECTIONS TWO MONTHS AFTER SUBSTANTIAL COMPLETION, PLUS 2 FOLLOW UP SCANS, ONE AT 4 MONTHS AND THE OTHER AT 11 MONTHS. PROVIDE CERTIFIED REPORT.

**ELECTRICAL GENERAL NOTES**

THE DESIGN OF THIS SET OF DOCUMENT IS BASED ON NEC 2023.

ELECTRICAL CONTRACTOR SHALL REFER TO ALL OTHER DESIGN DRAWINGS PRIOR TO BID AND RETAIN FULL UNDERSTANDING OF THE SCOPE OF WORK.

FIXTURE TYPE INDICATED BY UPPER CASE CHARACTERS, SWITCHING AND GROUPING DESIGNATED BY LOWER CASE LETTER AND CIRCUIT BY NUMBER (WHERE APPLICABLE).

REFER TO THE ARCHITECTURAL/INTERIORS REFLECTED CEILING PLANS FOR EXACT FIXTURE PLACEMENT AND DIMENSIONS.

REFER TO THE ARCHITECTURAL/INTERIORS DOCUMENTS FOR ACTUAL DEVICE LOCATIONS AND DIMENSIONS.

COORDINATE THE INSTALLATION OF ALL CEILING MOUNTED DEVICES (FIRE ALARM SYSTEM DEVICES AND SPEAKERS, SOUND SYSTEM SPEAKER, ETC.) TO BE SYMMETRICAL ABOUT LIGHT FIXTURES AND SPRINKLER HEADS. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.

ALL MOUNTING OF EQUIPMENT IS AS SHOWN UNLESS OTHERWISE NOTED. COORDINATE WITH ARCHITECT THE COLOR/FINISHES OF ALL ELECTRICAL DEVICES, OUTLETS, COVERPLATES AND TRIM.

EMERGENCY BATTERY PACKS AND EXIT SIGNS SHALL BE CONNECTED AHEAD OF ANY SWITCHING DEVICES.

REFER TO MECHANICAL DRAWINGS FOR DUCT SMOKE DETECTOR LOCATIONS AND QUANTITIES OPERATION SHALL INCLUDE DUAL CONTACT BASE WITH LOCAL EQUIPMENT SHUTDOWN AND FIRE ALARM SIGNAL INITIATION.

WHEN CONDUCTOR OR CONDUIT SIZE IS INDICATED FOR BRANCH CIRCUIT HOME RUN, THE CONDUCTOR AND CONDUIT SIZE INDICATED SHALL BE USED FOR THE COMPLETE CIRCUIT.

REFER TO THE APPROPRIATE DRAWINGS FOR THE EXACT LOCATION AND REQUIREMENTS OF EQUIPMENT INSTALLED UNDER OTHER DIVISIONS OF THE DOCUMENTS, WHICH REQUIRE ELECTRICAL SERVICE.

EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS.

WALL SWITCHES CONTROLLING CIRCUITS OF OPPOSITE PHASES SHALL NOT BE INSTALLED IN COMMON BOX UNLESS PERMANENT BARRIER IS PROVIDED.

ALL HOME RUNS SHALL RUN PARALLEL TO STRUCTURE AS MUCH AS POSSIBLE WHERE CEILING IS EXPOSED.

ALL RACEWAY AND EQUIPMENT SUPPORTS AND HANGERS SHALL BE FULLY COORDINATED WITH STRUCTURAL DRAWINGS TO INSURE LOCATION OF SAME OCCURS WITHIN FOUR (4) INCHES OF PANEL POINT ON BAR JOISTS.

COORDINATE LOCATION OF ALL FLOOR MOUNTED MECHANICAL AND PLUMBING EQUIPMENT IN ORDER TO VERIFY POWER & CONTROL RACEWAY CONCEALED IN SLABS TERMINATED AT PROPER LOCATION.

DISCONNECT SWITCHES, MOTOR STARTERS AND OTHER ELECTRICAL EQUIPMENT INSTALLED ABOVE ACCESSIBLE CEILINGS, AND REQUIRING ACCESS FOR MAINTENANCE, SHALL BE INSTALLED WITH BOTTOM OF DEVICE ONE (1) FOOT ABOVE CEILING TO PROVIDE READY ACCESSIBILITY.

MECHANICAL, PLUMBING, FIRE PROTECTION AND OTHER EQUIPMENT ARE SHOWN ON FLOOR PLAN IN APPROXIMATE LOCATION. COORDINATE WITH M, P, FP AND CONTRACT DRAWINGS/SUBMITTALS FOR EXACT LOCATION OF EQUIPMENT.

GENERAL DIAGRAMMATIC RACEWAY INTERCONNECTIONS OF EQUIPMENT, FIXTURES AND DEVICES ARE INDICATED ON FLOOR AND REFLECTED CEILING PLANS. REFER TO STRUCTURAL AND ARCHITECTURAL PLANS FOR ELEVATION CHANGES AND RACEWAY ROUTES.

RACEWAY FOR EXTERIOR LIGHTING MAY BE INDICATED OUTSIDE OF BUILDING FOOTPRINT FOR CLARITY. ROUTE ALL EXTERIOR LIGHTING RACEWAY WITHIN BUILDING STRUCTURE.

POWER AND COMMUNICATIONS/DATA CONDUITS CAN CROSS AT 90°, BUT WHERE PARALLEL, SHALL BE A MINIMUM OF 8" APART.

TELEVISION AND RADIO ANTENNAS CABLES SHALL HAVE SURGE PROTECTION. GROUND ALL MASTS.

PROVIDE SURGE PROTECTION FOR ELECTRICAL AND TELEPHONE SERVICES.

PROVIDE TVSS FOR FIRE ALARM CONTROL PANEL.

FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT ELECTRICAL CHARACTERISTICS WITH DIV. 15 CONTRACTOR PRIOR TO ROUGH-IN. ADJUST ELECTRICAL CONNECTIONS IF NECESSARY TO MATCH ACTUAL EQUIPMENT IN FIELD. FOR EXAMPLE, COORDINATE THE NAMEPLATE OVERCURRENT PROTECTION DEVICE RATING OF MECHANICAL EQUIPMENT AMONG MECHANICAL AND ELECTRICAL SUBCONTRACTORS. ADJUST CIRCUIT BREAKER TO MATCH NAMEPLATE RATINGS OF EQUIPMENT AT NO ADDITIONAL COST.

FIELD COORDINATE MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS FOR ANY SUPPLEMENTAL POWER REQUIREMENTS, INCLUDING BUT NOT LIMITED TO CONTROL CIRCUITS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ALL EQUIPMENT TO ITS INTENDED OPERATIONAL STATUS.

REFER TO FIRE PROTECTION DRAWINGS FOR LOCATIONS OF FLOW AND TAMPER SWITCHES.

EACH PENETRATION OF A FIRE RESISTANT RATED ASSEMBLY BY A PIPE, TUBE WIRE OR CONDUIT SHALL BE PROTECTED BY A THROUGH PENETRATION FIRE STOP SYSTEM THAT HAS BEEN TESTED ACCORDING TO ASTM E 914 OR E 199.

ELECTRICAL RECEPTACLES, SWITCHES, OUTLETS, ETC. SHALL NOT BE INSTALLED BACK TO BACK ON FIRE RESISTANCE RATED WALLS. THEY SHALL BE AT LEAST 24-INCHES APART.

LIGHT SWITCHES AND ELECTRICAL OUTLETS, LOCATED IN ROOMS ACCESSIBLE TO THE DISABLED SHALL BE LOCATED NO HIGHER THAN 48 INCHES AND NO LOWER THAN 15 INCHES ABOVE THE FINISHED FLOOR SURFACE. IF THE REACH OR THE CONTROL IS OVER AN OBSTRUCTION, THE MINIMUM HEIGHT SHALL BE REACHED TO 44 INCHES FOR A FORWARD APPROACH OR 46 INCHES FOR A SIDE APPROACH.

REFER TO LOW VOLTAGE CONSULTANT'S DRAWINGS FOR VOICE, DATA AND CATV OUTLET LOCATIONS. REFER TO LV CONSULTANT'S DRAWINGS FOR ANY ADDITIONAL INFORMATION.

CONNECT ALL EXIT SIGNS TO NEAREST UNSWITCHED PORTION OF THE LIGHTING CIRCUIT IN THE AREA.

ELECTRICAL BOXES INSTALLED IN FIRE RATED WALLS SHALL MAINTAIN THE INTEGRITY OF THE RATED WALL.

SUPPORT ALL VERTICAL RACEWAY PER NEC TABLE 300.19(A).

MAKE ELECTRICAL CONNECTIONS TO ELECTRIC WATER COOLERS FROM GFCI PROTECTED OUTLET IN WALL BEHIND COOLER HOUSING. THE OUTLET AND CORD SHALL NOT BE VISIBLE FROM PUBLIC VIEW.

COORDINATE WITH CUTSHEETS OF ALL EQUIPMENT TO BE INSTALLED AND PROVIDE ADDITIONAL CIRCUITS FOR CONTROLS IF REQUIRED BY MANUFACTURER.

FINAL COLOR, FINISH AND OTHER AESTHETIC PORTIONS OF ALL DEVICES SHALL BE COORDINATED WITH ARCHITECT OR OWNER'S REPRESENTATIVE. THIS SET OF DRAWINGS DOES NOT SUPERSEDE ARCHITECTURAL OR INTERIOR DOCUMENTS.

ALL EXPOSED HORIZONTAL RUNS OF CONDUITS SHALL BE EITHER PARALLEL OR PERPENDICULAR TO EXTERIOR WALLS.

PROVIDE PLENUM RATED CABLES IF THE CABLES ARE EXPOSED AND ROUTED THROUGH PLENUM.

FOR ALL FUSES 1,200A OR HIGHER, PROVIDE ARC ENERGY REDUCTION PER NEC 240.67.

WHERE HIGHEST TRIP SETTING IN INSTALLED OVERCURRENT DEVICE IS 1,200A OR HIGHER, CONTRACTOR TO PROVIDE DOCUMENTATION OF CIRCUIT BREAKER(S) LOCATION AND PROVIDE AT LEAST ONE METHOD TO REDUCE CLEARING TIME VIA ENERGY-REDUCING MAINTENANCE SWITCH, INSTANTANEOUS TRIP SETTING, OR OTHER APPROVED METHOD AS LISTED PER NEC 240.87(B).

**ELECTRICAL LEGEND**

SYMBOLS	DESCRIPTION	MOUNTING
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	42" AFF OR 6" ABOVE COUNTER TOP
	QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	18" AFF
	QUADRAPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	42" AFF OR 6" ABOVE COUNTER TOP
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	FLUSH WITH FINISHED FLOOR
	DUPLEX RECEPTACLE, 120V, 20A, NEMA 5-20R	IN CEILING
	SPECIAL RECEPTACLE CONFIGURATION AND ELECTRICAL CHARACTERISTIC AS NOTED ON DWG	18" AFF
	JUNCTION BOX FLUSH IN WALL WITH COVER SIZE PER NEC.	18" AFF
	JUNCTION BOX FLUSH IN CEILING WITH COVER SIZE PER NEC.	IN CEILING
	JUNCTION BOX FLUSH IN FINISHED FLOOR WITH COVER SIZE PER NEC.	FLUSH WITH FINISHED FLOOR
	SWITCH	42" AFF
	SWITCH - 3 WAY	42" AFF
	SWITCH - WALL MTD, INTEGRAL OCCUPANCY SENSOR	42" AFF
	SWITCH - DIMMER	42" AFF
	SWITCH - CEILING MOUNTED OCCUPANCY SENSOR	IN CEILING
	TV OUTLET	18" AFF
	TELEPHONE OUTLET	18" AFF
	TELEPHONE OUTLET, SUBSCRIPT F - FIREMAN'S PHONE, H - HOUSE PHONE, P - PAY PHONE	42" AFF OR 6" ABOVE COUNTER TOP
	TELEPHONE / DATA COMBINATION OUTLET	18" AFF
	TELEPHONE / DATA COMBINATION OUTLET	42" AFF OR 6" ABOVE COUNTER TOP
	DATA OUTLET	18" AFF
	DATA OUTLET	42" AFF OR 6" ABOVE COUNTER TOP
	DISCONNECT SWITCH, SUBSCRIPT: AMP / # OF POLES / ENCLOSURE	AS INDICATED ON DWG
	FUSED DISCONNECT SWITCH, SUBSCRIPT: AMP / # OF POLES / ENCLOSURE / FUSE	AS INDICATED ON DWG
	ELECTRICAL PANELBOARD. REFER TO PANELBOARD SCHEDULE.	SURFACE MOUNTED ON WALL
	EQUIPMENT AS NOTED ON DRAWING.	SURFACE MOUNTED ON WALL
	MOTOR	
	HOME RUN WITH WIRE TICKS. XX - PANEL DESIGNATION, # - CIRCUIT DESIGNATION, WIRE TICKS - (1) NEUTRAL, (3) HOT (1& 2) GROUND.	
	SMOKE DETECTOR, CEILING / WALL MOUNTED	CEILING / 80" AFF
	HEAT DETECTOR, CEILING/WALL MOUNTED	CEILING / 80" AFF
	FIRE ALARM NOTIFICATION DEVICE, AUDIO AND VISUAL.	80" AFF
	FIRE ALARM NOTIFICATION DEVICE, AUDIO.	80" AFF
	FIRE ALARM NOTIFICATION DEVICE, VISUAL.	80" AFF
	FIRE ALARM INITIATION DEVICE, PULL STATION.	42" AFF

**ABBREVIATIONS**

AC	6" ABOVE COUNTER SPACE OR 42" AFF	IG	ISOLATED GROUND
AF	AMP FUSE	ISC	SHORT CIRCUIT CURRENT
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AL	ALUMINUM	MTD	MOUNTED
BFC	BELOW FINISHED CEILING	N	NEUTRAL
BKR	BREAKER	NL	NIGHT LIGHT
CHD	CONDUIT	NEC	NATIONAL ELECTRICAL CODE
CONN	CONNECTED OR CONNECTION	PNL	PANEL
CTB	CABLE TV TERMINAL BACKBOARD	RECP	RECEPTACLE
CU	COPPER	TEL	TELEPHONE
DN	DOWN	TTB	TELEPHONE TERMINAL BOARD
EC	EMPTY CONDUIT	TV	TELEVISION
ELEC	ELECTRICAL	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FACP	FIRE ALARM CONTROL PANEL	TYP	TYPICAL
FAA	FIRE ALARM ANNUNCIATOR PANEL	XFMR	TRANSFORMER
G OR GRND	GROUND	UG	UNDERGROUND
GFCI OR GF	GROUND FAULT CIRCUIT INTERRUPTER	WP	WEATHERPROOF

**FIRE ALARM NOTES**

A FIRE ALARM SYSTEM HAS BEEN DETERMINED TO NOT BE NECESSARY AS PER NFPA 101 AND/OR IBC REQUIREMENTS FOR THIS PROJECT.





LUMINAIRE SCHEDULE				
CALLOUT	LAMP	DESCRIPTION	MODEL	VOLTS
A	(1) 12W LED	6" RECESSED CAN LIGHT	TO BE DETERMINED	120V 1P 2W
B	(1) 40W LED	1X4 LED LIGHT	TO BE DETERMINED	120V 1P 2W
C	(1) 40W LED	1X4 LED SURGERY LIGHT	TO BE DETERMINED	120V 1P 2W
D	(1) 13W LED	EXTERIOR WALL SCONCE	TO BE DETERMINED	120V 1P 2W
T	(2) 1.5W LED	EMERGENCY LIGHTING UNIT	LITHONIA ELM2-LED	120V 1P 2W
UC	(1) 12W LED	UNDER CABINET LIGHT	TO BE DETERMINED	120V 1P 2W
XC	(2) 1.5W LED	COMBINATION EXIT/EMERGENCY LIGHTING UNIT	LITHONIA LHQM-LED-R-HO	120V 1P 2W
XR	(1) 3W LED	REMOTE LAMP HEAD	LITHONIA ELA-QWP-L0309-SD	120V 1P 2W

MEDICAL EQUIPMENT SCHEDULE						
EQUIPMENT NAME	VOLTS	LOAD	BREAKER	CIRCUIT	WIRE CALLOUT	DISCONNECT DESCRIPTION
X-RAY 2	208 V 2P 3W	1400 VA	20/2	B-36.40	1/2"C, 2#12, #12N, #12G	VERIFY WITH MANUFACTURER

GENERAL EQUIPMENT SCHEDULE						
CALLOUT	VOLTS	LOAD	BREAKER	CIRCUIT	WIRE CALLOUT	DISCONNECT DESCRIPTION
EF-1	120 V 1P 2W	100 VA	20/1	B-39	1/2"C, 1#12, #12N, #12G	INTERLOCK WITH FCU-1
FCU-1	208 V 2P 3W	9048 VA	45/2	B-34.36	3/4"C, 2#6, #6N, #10G	60A/2P/NEMA 1
HP-1	208 V 3P 4W	4500 VA	25/3	B-33.35.37	1/2"C, 3#10, #10N, #10G	30A/3P/NEMA 3R

**GENERAL NOTES**

A. DRAWINGS ARE DIAGRAMMATIC ONLY; FINAL DEVICE AND EQUIPMENT LOCATION AND ELEVATION TO BE DETERMINED IN FIELD. SEE ARCHITECTURAL DRAWINGS FOR FURTHER REQUIREMENTS.

B. ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY ARTICLE 250.146.

C. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES.

D. PROVIDE UNSWITCHED HOT LEG OF CIRCUIT TO EMERGENCY LIGHTING AND EXIT SIGNS.

D. BRANCH CIRCUITS SERVING PATIENT CARE AREAS SHALL COMPLY WITH NEC 517.13. IMPEDANCE TESTING OF 10% OF ALL RECEPTACLES IN PATIENT CARE AREAS SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 99 6.3.3.1.4. THE IMPEDANCE MEASUREMENT SHALL BE BETWEEN A GROUND REFERENCE POINT AND THE RECEPTACLE GROUND CONTACT.

D. VERIFY BREAKER AND WIRE SIZES OF ALL MEDICAL EQUIPMENT WITH EQUIPMENT NAMEPLATES AND SPECIFICATIONS.

**KEYNOTES**

1 MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION AND INSTALLATION REQUIREMENTS.

2 MOUNTING HEIGHT AFF.

3 COORDINATE EXACT ATTIC LOCATION FOR SWITCH AND LIGHTING FIXTURE WITH ARCHITECT AND OWNER.

4 COORDINATE EXACT CRAWLSPACE LOCATION FOR JUNCTION BOX WITH ARCHITECT AND OWNER.

**FIRE ALARM NOTES**

A FIRE ALARM SYSTEM HAS BEEN DETERMINED TO NOT BE NECESSARY AS PER NFPA 101 AND/OR IBC REQUIREMENTS FOR THIS PROJECT.

**Panel: B**  
 Supply From: EXISTING  
 Enclosure: Type 1

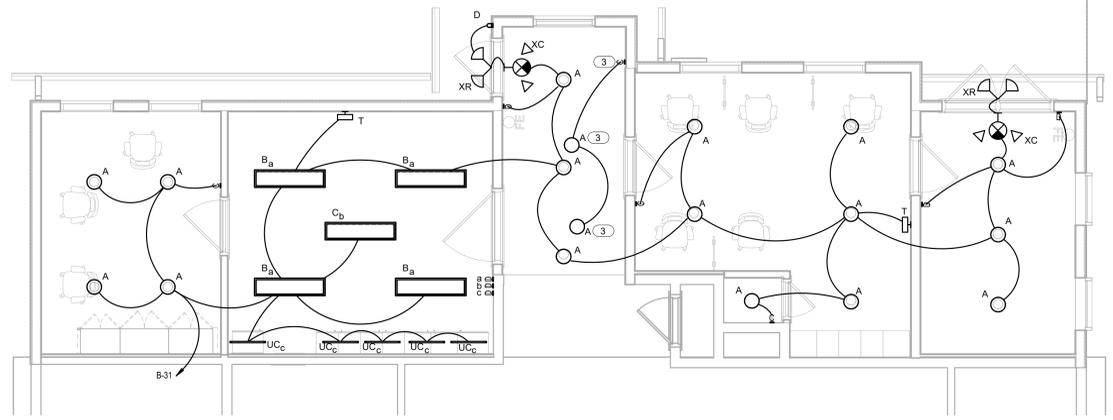
Volts: 208Y/120V 3P 4W  
 Lugs: Standard

AIC Rating: EXISTING  
 Mains Type: MLO  
 Mains Rating: 200 A

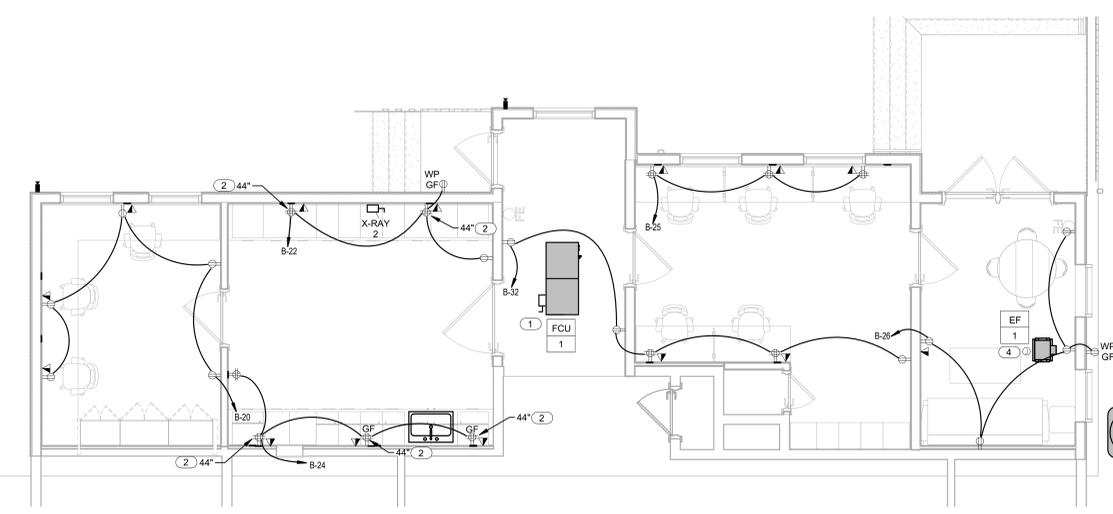
CKT	Circuit Description	Wire Size	Trip	Pole	A	B	C	Pole	Trip	Wire Size	Circuit Description	CKT		
1	EXISTING	1/2"C, 2#10, #10N, #10G	30 A	2	2.5	5.0				1"C, 2#4, #4N, #10G	EXISTING	2		
3	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				2	60 A	1/2"C, 2#10, #10N, #10G	EXISTING	4		
5	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1	1.9	2.5		1.9	2.5	2	30 A	1/2"C, 2#10, #10N, #10G	EXISTING	6
7	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1	1.9	2.5				1	20 A	1/2"C, 1#12, #12N, #12G	EXISTING	8
9	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				1.9	1.9	1	20 A	1/2"C, 1#12, #12N, #12G	EXISTING	10
11	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				1.9	1.9	1	20 A	1/2"C, 1#12, #12N, #12G	EXISTING	12
13	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1	1.9	1.9				1	20 A	1/2"C, 1#12, #12N, #12G	EXISTING	14
15	EXISTING	1-1/2"C, 2-1/0, 1/0N, #6G	125 A	2				10.4	2.5	2	30 A	1/2"C, 2#10, #10N, #10G	EXISTING	16
17	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				10.4	2.5	1	20 A	1/2"C, 1#12, #12N, #12G	EXISTING	18
19	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1	1.9	0.9				1	20 A	1/2"C, 1#12, #12N, #12G	Receptacle	20
21	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				1.9	0.7	1	20 A	1/2"C, 1#12, #12N, #12G	Receptacle	22
23	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				1.9	0.7	1	20 A	1/2"C, 1#12, #12N, #12G	Receptacle	24
25	Receptacle	1/2"C, 1#12, #12N, #12G	20 A	1	0.5	0.9				1	20 A	1/2"C, 1#12, #12N, #12G	Receptacle	26
27	EXISTING	1-1/4"C, 2#1, #1N, #8G	100 A	2				8.3	1.7	2	20 A	1/2"C, 2#12, #12N, #12G	EXISTING	28
29	EXISTING	1/2"C, 1#12, #12N, #12G	20 A	1				8.3	1.7	1	20 A	1/2"C, 1#12, #12N, #12G	EXISTING	30
31	Lighting	1/2"C, 1#12, #12N, #12G	20 A	1	1.3	0.9				1	20 A	1/2"C, 1#12, #12N, #12G	Receptacle	32
33	HP-1	1/2"C, 3#10, #10N, #10G	25 A	3				1.5	4.5	2	45 A	3/4"C, 2#6, #6N, #10G	FCU-1	34
35	HP-1	1/2"C, 3#10, #10N, #10G	25 A	3				1.5	4.5	2	45 A	3/4"C, 2#6, #6N, #10G	FCU-1	36
37	HP-1	1/2"C, 3#10, #10N, #10G	25 A	3				1.5	0.7	2	20 A	1/2"C, 2#12, #12N, #12G	X-Ray 2	38
39	Motor	1/2"C, 1#12, #12N, #12G	20 A	1				0.1	0.7	2	20 A	1/2"C, 2#12, #12N, #12G	X-Ray 2	40

Total connected amps by phase: 203 A 384 A 352 A  
 Total connected load by phase: 24315 VA 43672 VA 39800 VA  
 Total connected load: 107785 VA  
 Total connected current: 299 A  
 Total demand load: 67047 VA  
 Total demand current: 186 A

Load Classification	Demand Factor	Connected Current	Connected Load (VA)	Estimated Demand (VA)
Heating	100.00%	38 A	13548 VA	13548 VA
Lighting	100.00%	0 A	16 VA	16 VA
Lighting - Dwelling Unit	100.00%	3 A	1045 VA	1045 VA
Motor	125.00%	0 A	100 VA	125 VA
Power	100.00%	1 A	200 VA	200 VA
Receptacle	55.46%	25 A	91528 VA	50764 VA
X-Ray	100.00%	4 A	1400 VA	1400 VA



2 FLOOR PLAN - LIGHTING  
 1/4" = 1'-0"



1 FLOOR PLAN - POWER  
 1/4" = 1'-0"

Project Number: 25008  
 Date: 09/22/2025

Drawn By: Author  
 Principal: Approver

#	REVISION NAME	DATE

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FLOOR PLAN - ELECTRICAL



18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 09 | 08 | 07 | 06 | 05 | 04 | 03 | 02

P

N

M

L

K

J

H

G

F

E

D

C

B

A

**MEDICAL GAS EQUIPMENT**

CONTRACTOR SHALL FULLY COORDINATE WITH ALL MEDICAL GAS EQUIPMENT PROVIDED ON THIS PROJECT. REFER TO MEDICAL EQUIPMENT PLAN SHEET AND EQUIPMENT SCHEDULE TO DETERMINE WHAT DEVICES ARE PROVIDED AND/OR INSTALLED BY OWNER AND WHAT DEVICES SHALL BE PROVIDED AND/OR INSTALLED BY PLUMBING CONTRACTOR. COORDINATE WITH OWNER.

REFER TO MEDICAL EQUIPMENT BOOK AND ACTUAL MEDICAL EQUIPMENT PROVIDED ON PROJECT TO ENSURE THAT ALL FINAL CONNECTIONS AND INTERCONNECTIONS BETWEEN DEVICES ARE PROVIDED.

**MEDICAL GAS TESTING**

SYSTEM INSPECTIONS SHALL BE PERFORMED PRIOR TO CONCEALING PIPING DISTRIBUTION SYSTEMS IN WALLS, CEILINGS, CHASES, TRENCHES, UNDERGROUND, OR OTHERWISE HIDDEN FROM VIEW.

INSPECTIONS SHALL BE CONDUCTED BY A PARTY TECHNICALLY COMPETENT AND EXPERIENCED IN THE FIELD OF MEDICAL GAS AND VACUUM PIPELINE INSPECTIONS AND TESTING AND MEETING THE REQUIREMENTS OF ASSE 8020, PROFESSIONAL QUALIFICATIONS STANDARD FOR MEDICAL GAS SYSTEMS INSPECTORS, OR ASSE 8030, PROFESSIONAL QUALIFICATIONS STANDARD FOR MEDICAL GAS SYSTEMS VERIFIERS.

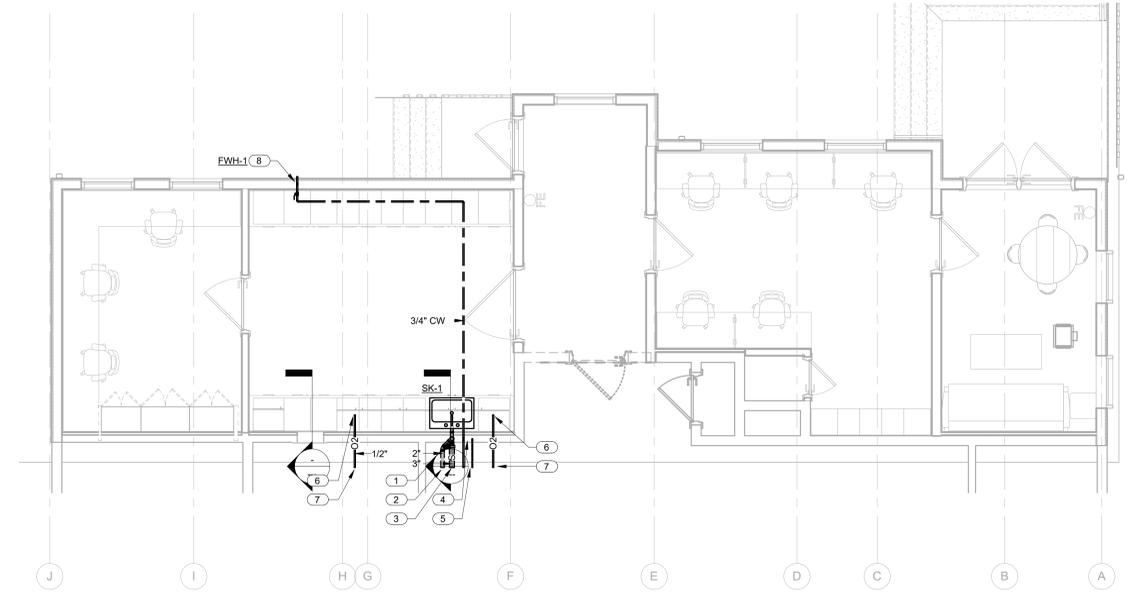
INSPECTIONS SHALL BE PERFORMED BY A PARTY OTHER THAN THE INSTALLING CONTRACTOR.

**KEYNOTES**

- 1 2" V DN
- 2 2" V A/C & CONNECT TO EXISTING VENT PIPING. FIELD VERIFY EXACT LOCATION PRIOR TO COMMENCING WORK. PROVIDE NEW VENT THROUGH ROOF AS NECESSARY.
- 3 3" S BIF & CONNECT TO EXISTING SANITARY SEWER MAIN IN BUILDING. FIELD VERIFY EXACT LOCATION, DEPTH, AND DIRECTION OF FLOW PRIOR TO COMMENCING WORK.
- 4 1/2" CW & 1/2" HW DN
- 5 3/4" CW & 1/2" HW A/C & CONNECT TO EXISTING WATER PIPING. FIELD VERIFY SIZE AND EXACT LOCATION.
- 6 1/2" O2 A/C TO DENTAL EQUIPMENT. FIELD VERIFY SIZE AND EXACT LOCATION.
- 7 1/2" O2 A/C TO STORAGE TANKS. FIELD VERIFY SIZE AND EXACT LOCATION.
- 8 3/4" CW DN



FOREST PARK ANIMAL CLINIC EXPANSION  
4600 CHAMBLISS AVE.



1 FLOOR PLAN - PLUMBING  
P101 1/4" = 1'-0"

Project Number:	29008	
Date:	09/22/2025	
Drawn By:	LI	
Principal:	TW	
#	REVISION NAME	DATE

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FLOOR PLAN - PLUMBING

P101

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18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 09 | 08 | 07 | 06 | 05 | 04 | 03 | 02