

CONSTRUCTION PLANS FOR: CHOCTAW BEACH FIRE STATION

PREPARED FOR: BOARD OF COUNTY COMMISSIONERS WALTON COUNTY, FLORIDA



877 CR 393 North
Santa Rosa Beach, FL 32459
850.267.0759

CHOCTAW BEACH FIRE STATION
BOARD OF COUNTY COMMISSIONERS
WALTON COUNTY
FLORIDA

PROJECT NUMBER - 50144269
AUGUST 2023

UTILITY PROVIDERS:			
WATER CITY OF FREEPORT 112 HWY 20 WEST FREEPORT, FL PH: (850) 835-4544 SEWER PH: (850) 880-6553 WATER	ELECTRIC CHELCO DERRICK MARSHALL 112 HWY 20 WEST FORT WALTON BEACH, FL PH: (850) 307-1199	TELEPHONE MCI / VERIZON 1490 E. NINE MILE RD. PENSACOLA, FL PH: (850) 475-7465	SUNSHINE STATE ON-CALL 605 WEST GARDEN STREET ORLANDO, FL 3280 PH: (800) 432-4770
NATURAL GAS OKALOOSA GAS DISTRICT MR. GLENN BAILEY 20 HUGHES ST. NE FORT WALTON BEACH FL. PH: (850) 729-4700	CABLE UNITI FIBER 3542 ORANGE AVE. TALLAHASSEE, FL PH: (850) 544-1400	CENTURYLINK 650 DENTON BLVD. FORT WALTON BEACH, FL PH: (850) 664-3608	

GOVERNING STANDARD PLANS:
FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2020-21 STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND APPLICABLE INTERIM REVISIONS (IR'S)

STANDARD PLANS FOR ROAD CONSTRUCTION AND ASSOCIATED IR'S ARE AVAILABLE AT THE FOLLOWING WEBSITE: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, JANUARY 2021

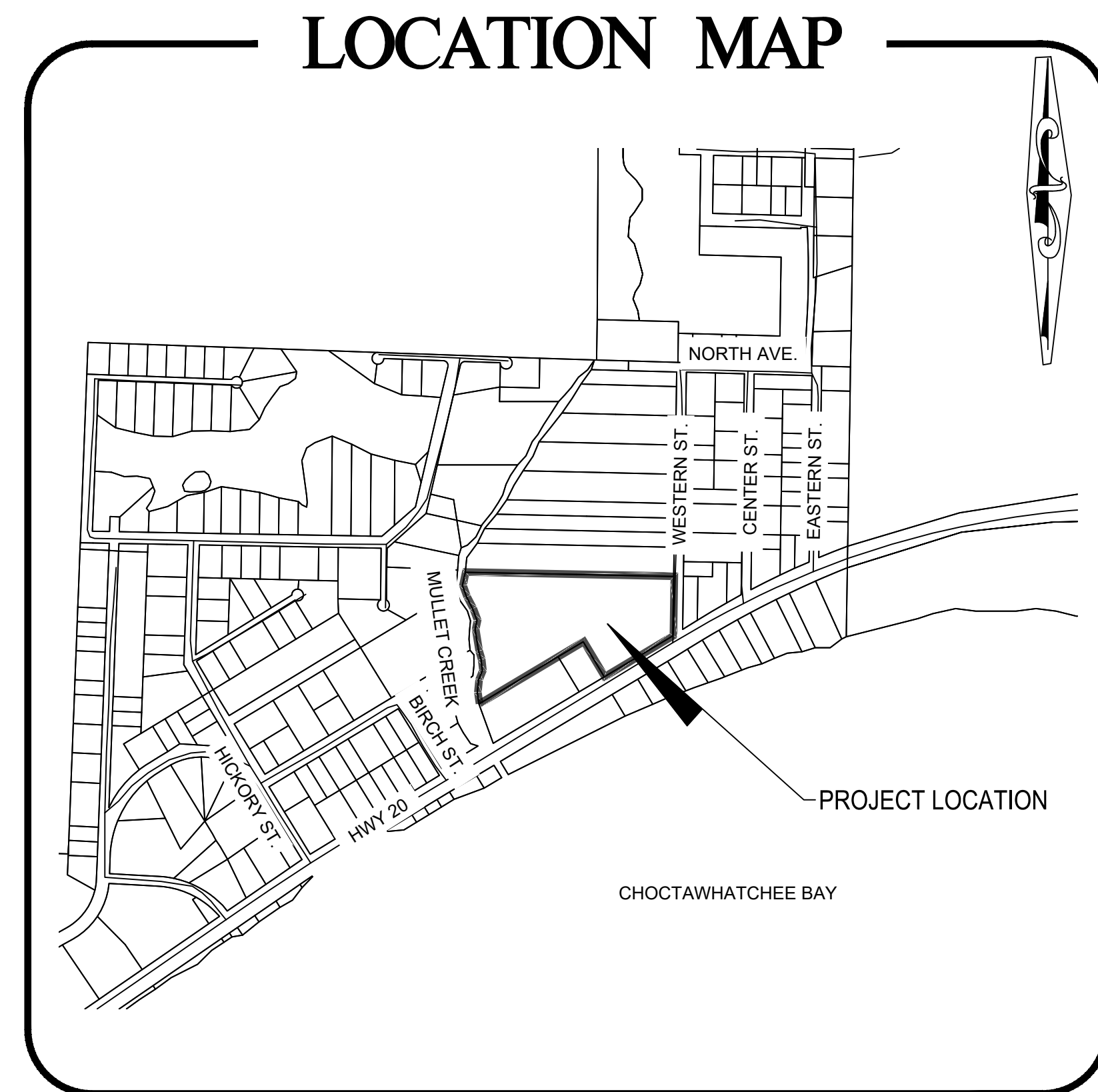
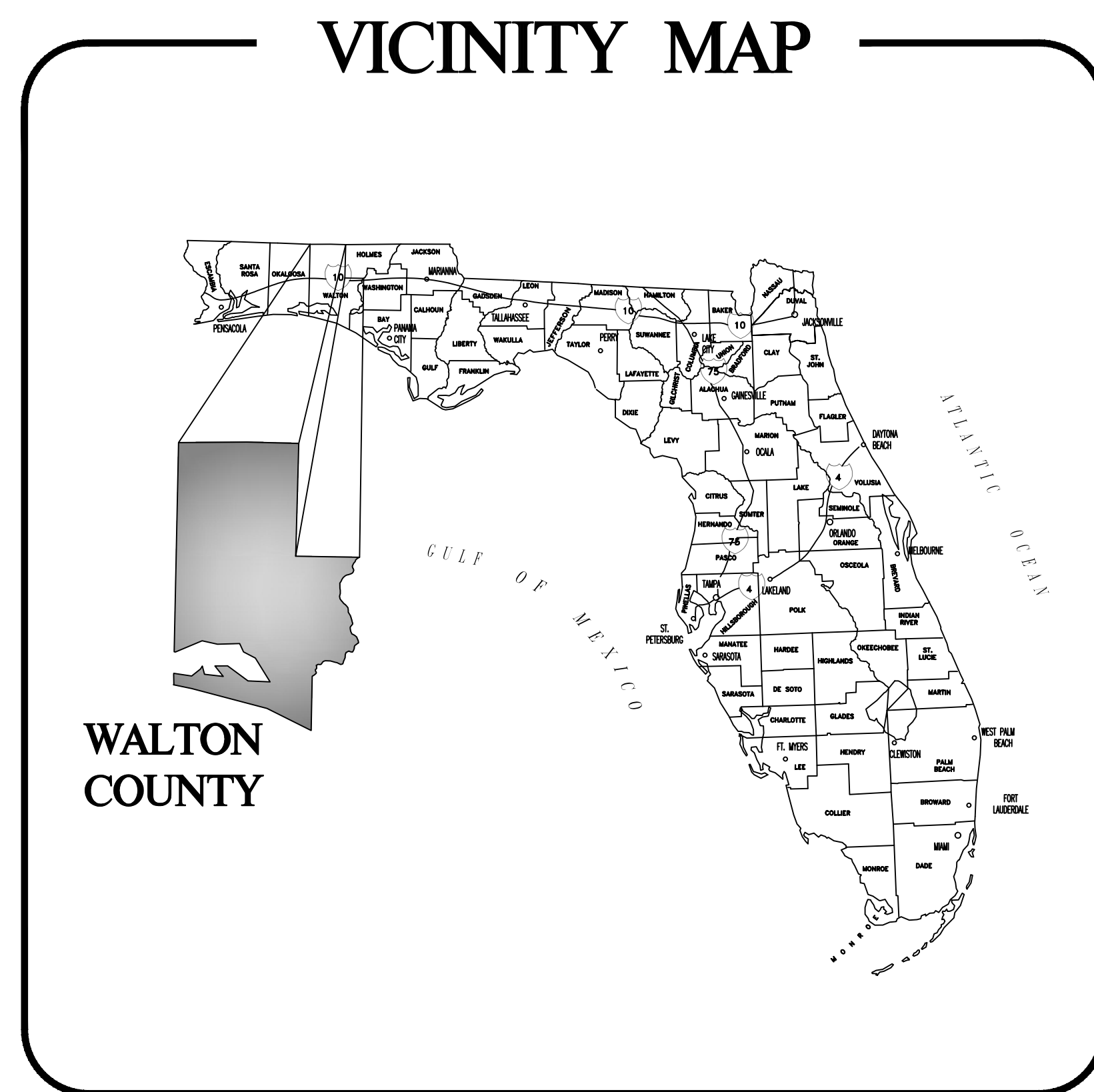
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EB 0008794

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SCALE



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REVISIONS

NO.	DESCRIPTION	DATE

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DATE _____ AUGUST 2023

TITLE
COVER SHEET

PROJECT NO. 50144269

CVR

SHEET NO.



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- DESIGN NOTES:
THE DESIGN SHALL BE TO THE FOLLOWING ADDITIONAL SPECIFICATIONS:
1. ADA COMPLIANT
 2. SPRINKLER SYSTEM IN ACCORDANCE WITH CURRENT CODE REQUIREMENT
 3. NAVIEN NPE-240A2 WATER SYSTEM
 4. ENERGY STAR APPLIANCES
 5. HIGH R VALUE INSULATION
 6. HIGH EFFICIENCY LIGHTING WITH OCCUPANCY SENSORS
 7. HIGH "R", DOUBLE INSULATED STORM WINDOWS

CHOCTAW BEACH FIRE STATION
CODE SUMMARY:

FIRST FLOOR: 8,120 SF

OCCUPANCY CLASSIFICATION:
R-3 RESIDENTIAL NOT MORE THAN 2 D.U.
H-3 HIGH HAZARD, FLAMMABLE LIQUID IN EXCESS OF 120 GAL.
B BUSINESS OFFICES

MIXED USE AND OCCUPANCY AREAS:
RESIDENTIAL (R-3): 2,200 SF
BUSINESS (B): 600 SF
HIGH HAZARD (H-3): 5320 SF

ALLOWABLE AREAS:
RESIDENTIAL (R-3): UNLIMITED
BUSINESS (B): 23,000 SF
HIGH HAZARD (H-3): 14,000 SF

SEPARATED OCCUPANCIES:
SEPARATED OCCUPANCIES REQUIRED PER 508.4

REQUIRED SEPARATIONS:
BETWEEN H-3 AND R: 2 HR.
BETWEEN H-3 AND B: 1 HR.
BETWEEN B AND R: 1 HR.

CONSTRUCTION CLASSIFICATION: TYPE III(B)
STRUCTURAL FRAME: 1 HR.
EXTERIOR BUILDING WALLS: 0 HR.
INTERIOR BEARING WALLS: 0 HR.
EXTERIOR NON-BEARING WALLS: 0 HR.
INTERIOR NON-BEARING WALLS: 0 HR.
FLOOR CONSTRUCTION: 0 HR.
ROOF CONSTRUCTION: 0 HR.

FIRE PROTECTION SYSTEMS:
AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED THROUGHOUT ALL BUILDINGS WITH A GROUP R FIRE AREA

CONCEALED SPACES:
DRAFTSTOPPING IN FLOORS, R-3, NOT REQUIRED W/SPRINKLER
DRAFTSTOPPING IN ATTIC, R-3, NOT REQUIRED W/SPRINKLER
OTHER GROUPS NOT REQUIRED W/SPRINKLER

FBC 2017 REF.
310.1
307
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TABLE 506.2
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TABLE 601
TABLE 602
TABLE 602
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MEANS OF EGRESS
OCCUPANT LOAD
RESIDENTIAL: 200 GROSS
BUSINESS: 100 GROSS
PARKING GARAGES: 200 GROSS

OCCUPANTS BY SF AREA:
R-3: 2200/200 = 11
B: 600/100 = 6
PARKING GARAGE: UNOCCUPIED AREA
ATTIC: UNOCCUPIED AREA

PLUMBING FIXTURES
R-3: 2 WC, MALE/FEMALE 1/10
LAV: MALE/FEMALE 1/0
SHR: 1/8
DF: 1/100

B: WC MALE/FEMALE, 1/25
LAV: MALE/FEMALE, 1/10
DF: 1/100

TABLE 1004.1.2

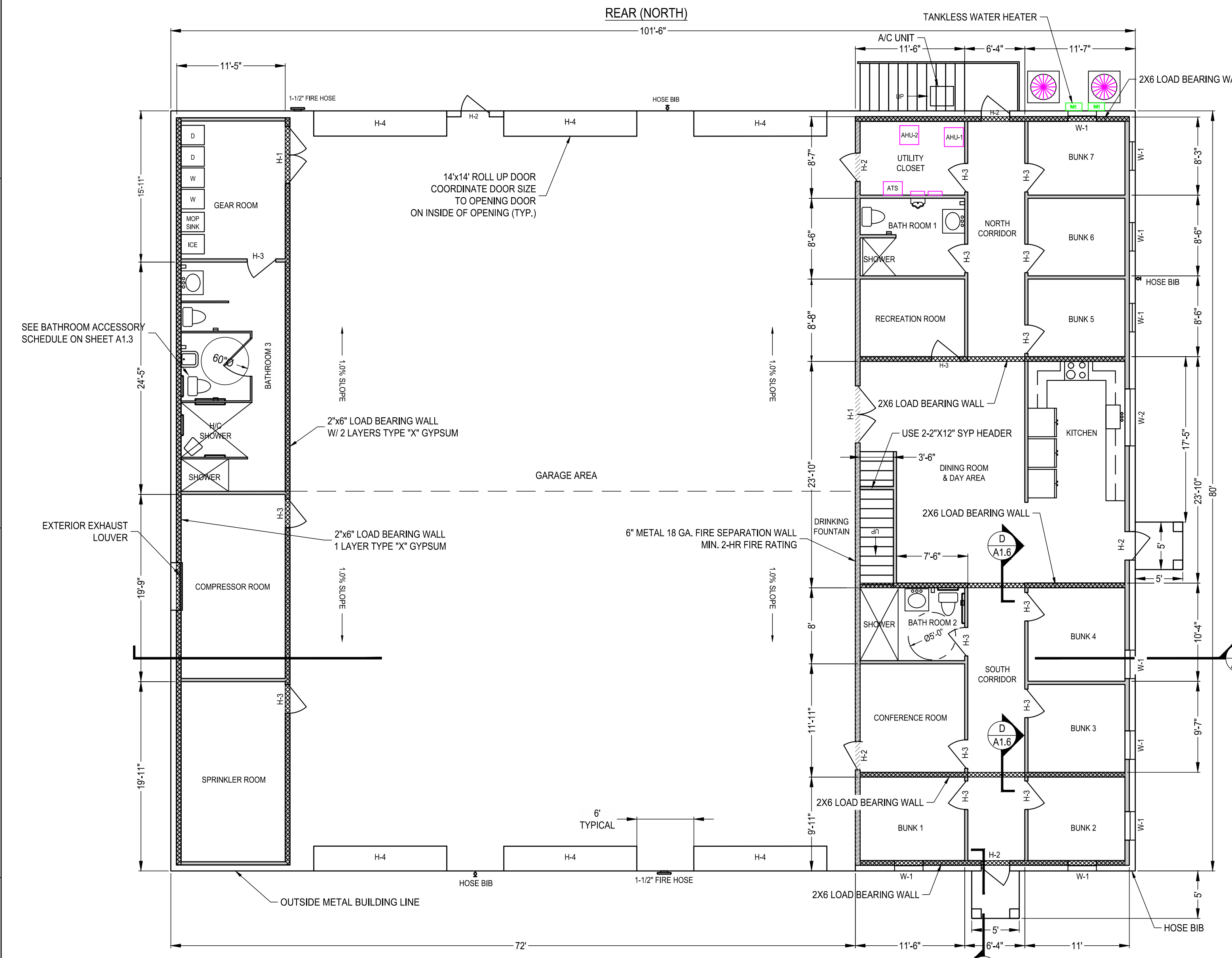
REQUIRED:	WC	LAV	SJR.	DF	SS
R-3M/F B*	1	1	1	1	1
TOTAL:	3	3 (2 WC, 1U)	2 (WL, KIT SINK)	2	1

* - SEPARATE FACILITIES NOT REQUIRED IN A BUSINESS OCCUPANCY < 3000 SF

INTERIOR FINISHES:	EXITS	CORRIDORS	ROOMS	TABLE 803.11
R-3	C	B C C	C C	
B	B	B C C	C C	
H	B	B C C	B	

FLOOR PLAN LEGEND

- 2-HR FIRE RATED WALL
- NON LOAD BEARING INTERIOR WALL
- LOAD BEARING INTERIOR WALL
- EXTERIOR WINDOWS
- DOORWAY



WINDOW SCHEDULE

WINDOW NUMBER	SIZE	MATERIAL	GLAZING TYPE	GLAZING TEMP	GLAZING IMPACT	FRAME FINISH	FRAME MATERIAL
W-1	3'-0" X 5'-0"	ALUM.	INSULATED	YES	YES	FACTORY FINISH	ALUM.
W-2	6'-0" X 3'-0"	ALUM.	INSULATED	YES	YES	FACTORY FINISH	ALUM.

DOOR SCHEDULE

DOOR NUMBER	TYPE	WIDTH	HEIGHT	THICKNESS	DOOR MATERIAL	FRAME MATERIAL	GLASS	FIRE RATING	HARDWARE
H-1	FLUSH	PR 3'-2"	7'-0"	1-3/4"	STEEL	STEEL	NONE	90 MINUTE	LOCKING LATCH SET, CLOSERS, FLOOR STOPS
H-2	FLUSH	3'-0"	7'-0"	1-3/4"	STEEL	STEEL	DSB	-	LOCKING LATCH SET, CLOSERS, FLOOR STOPS
H-3	FLUSH	3'-0"	7'-0"	1-3/4"	WOOD	WOOD	NONE	90 MINUTE	LOCKING LATCH SET, FLOOR STOPS
H-4	PER MFG	14'-0"	14'-0"	PER MFG	PER MFG	PER MFG	DSB	-	PER SPECIFICATIONS

ROOM FINISH SCHEDULE

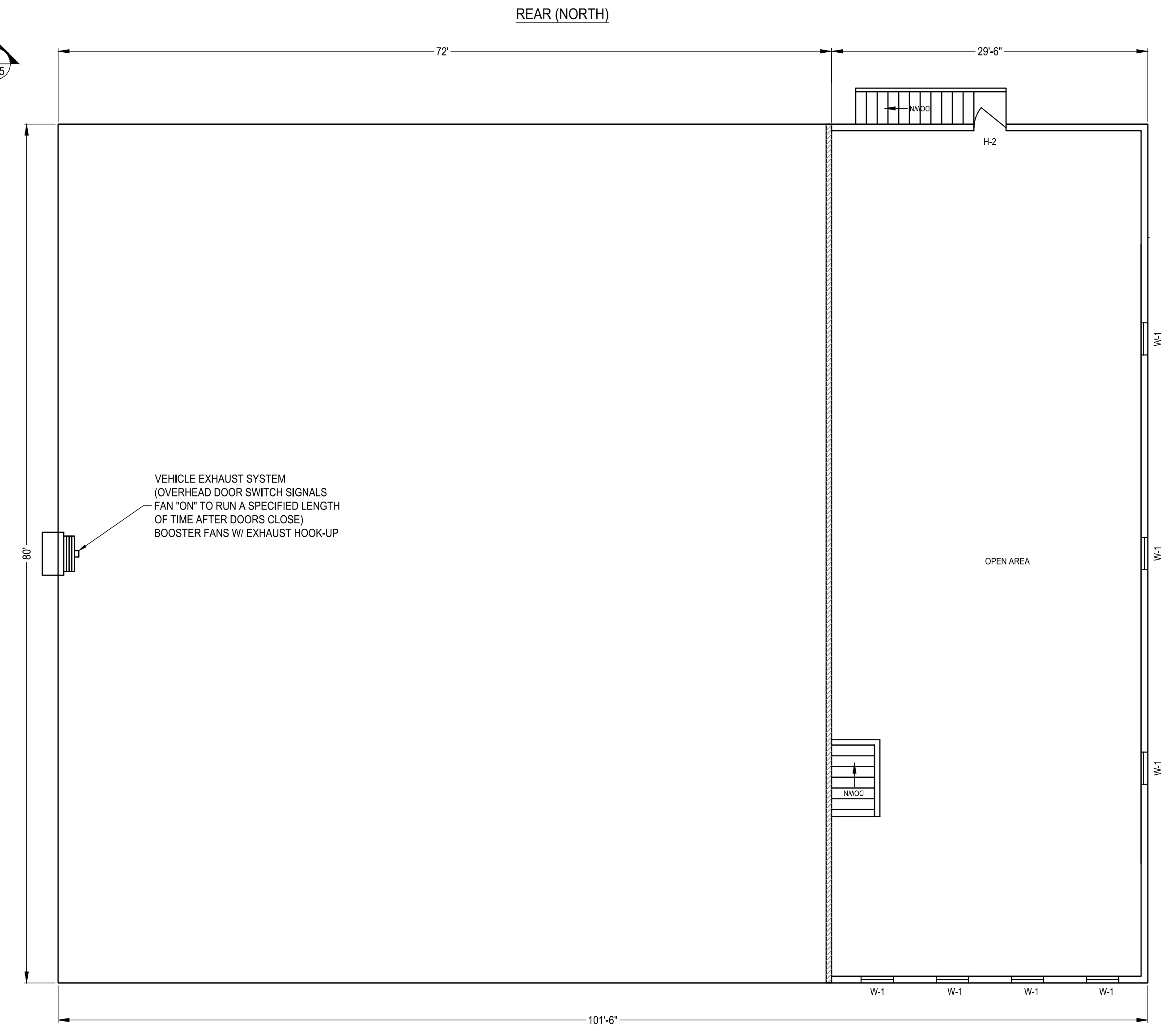
ROOM NAME	FLOOR MATL.	BASE	WALLS	CEILING MATL.	CEILING HEIGHT
BUNKS (1-7)	EPOXY	P.B.	PT.	GYP.	9'-0"
CONF. ROOM	EPOXY	P.B.	PT.	GYP.	9'-0"
CORRIDORS	EPOXY	P.B.	PT.	GYP.	9'-0"
REC. ROOM	EPOXY	P.B.	PT.	GYP.	9'-0"
DINING ROOM/KITCH.	EPOXY	P.B.	PT.	GYP.	9'-0"
UTILITY CLOSET	EPOXY	P.B.	PT.	GYP.	9'-0"
GARAGE	S.C.	P.B.	PT.	EXP.	VARIES
GEAR ROOM	S.C.	P.B.	PT.	GYP.	9'-0"
COMP. ROOM	S.C.	P.B.	PT.	GYP.	9'-0"
SPRINK. ROOM	S.C.	P.B.	PT.	GYP.	9'-0"
BATHROOM #3	EPOXY	P.B.	PT.	GYP.	9'-0"
BATHROOM #1	EPOXY	P.B.	PT.	GYP.	9'-0"
BATHROOM #2	EPOXY	P.B.	PT.	GYP.	9'-0"
2ND FLOOR OPEN AREA	UNF.	N/A	PT.	EXP.	8'-0"

PT. = PAINTED SHEET ROCK
EXP. = EXPOSED
UNF. = UNFINISHED

GYP. = TYPE X GYPSUM BOARD
ACT. = ACOUSTIC TILE DROP CEILING

EPOXY = EPOXY COATED CONCRETE
S.C. = SEALED CONCRETE
CT. = CERAMIC TILE

CTB. = CERAMIC TILE BASE
P.B. = 6" PINE BASE



SECOND FLOOR PLAN FRONT (SOUTH)

Dewberry

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BOARD OF COUNTY COMMISSIONERS
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SCALE
0' 4' 8' 16'
SCALE: 1/8" = 1' - 0"

REVISIONS

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TITLE
FLOOR PLAN

PROJECT NO. 50144269

A1.1

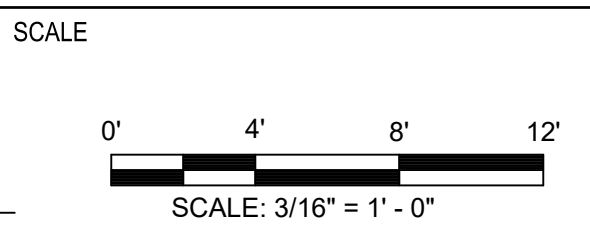
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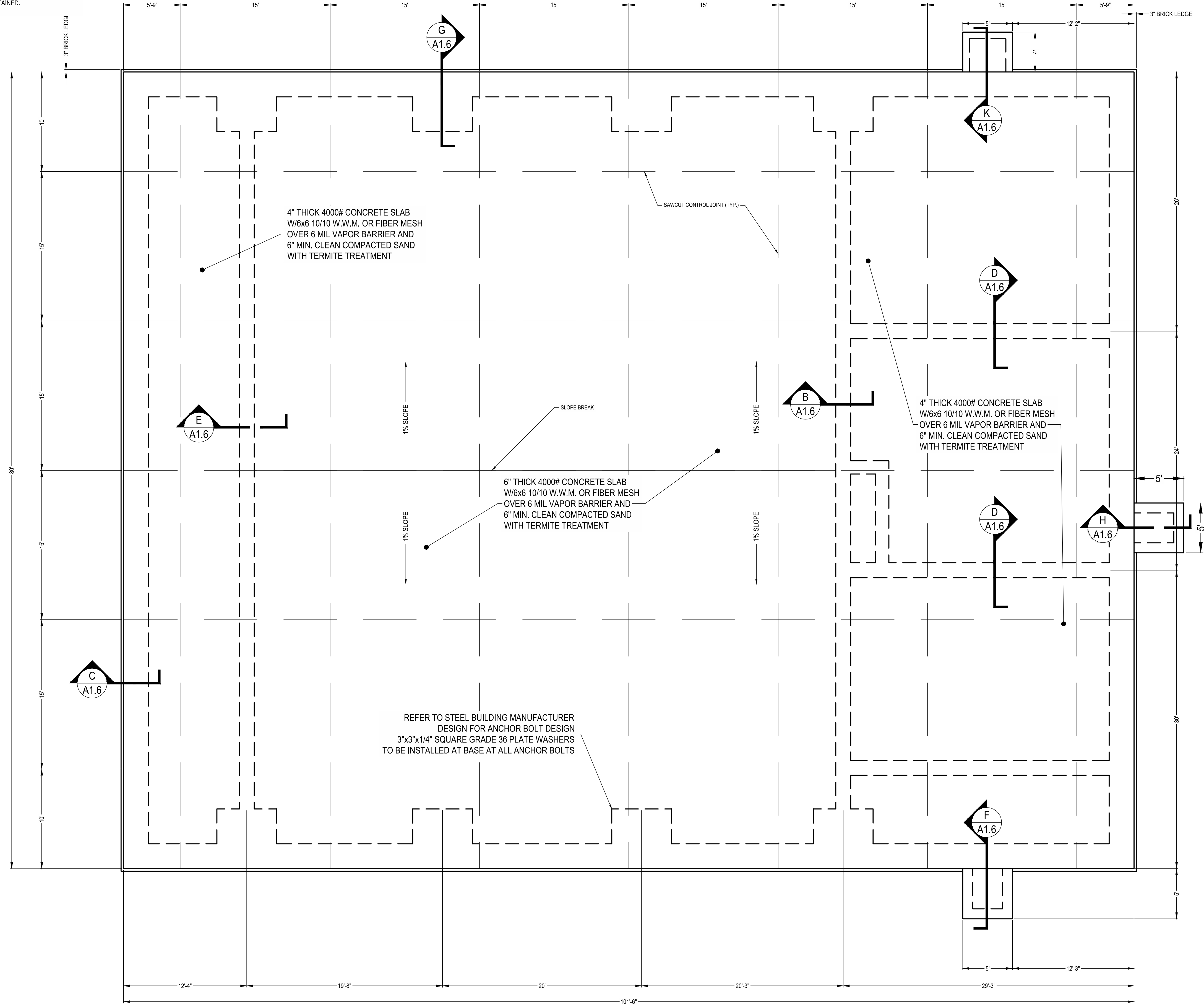
TITLE
FOUNDATION PLAN

PROJECT NO. _____ 50144269

A1.2

SHEET NO.

- FOUNDATION CONSTRUCTION NOTES:
1. CONTRACTOR SHALL SELECT METAL BUILDING AND SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
 2. FOUNDATION DESIGN WILL BE VERIFIED AFTER SUBMISSION OF REACTIONS FROM METAL BUILDING SUPPLIER.
 3. METAL BUILDING SHALL BE DESIGNED TO WITHSTAND 140 MPH 2 SECOND GUST.
 4. FOUNDATION DESIGN BASED UPON SOIL WITH 1500 PSF BEARING CAPACITY WITH NO ORGANICS OR EXPANSIVE CLAYS.
 5. CONCRETE 4000 PSI 28 DAY STRENGTH STEEL GRADE 40 OR 60.
 6. ALL FILL SHALL BE COMPACTED TO 95% OF MAX. DRY DENSITY MODIFIED PROCTOR.
 7. ALL LAP SPLICES IN FOOTING STEEL SHALL BE LAPPED A MIN. 24 BAR DIAMETERS.
 8. EXTERIOR GRADE BEAMS SHALL RUN CONTINUOUS AROUND PERIMETER OF STRUCTURE TO ASSURE CONTINUITY.
 9. REINFORCEMENT STEEL SHALL BE PLACED A MIN. OF 3" FROM CONCRETE SURFACE THROUGHOUT
 10. ALL CONCRETE SLABS SHALL HAVE CONTROL JOINTS TO CONTROL CRACKING SPACED 5 FEET IN ALL DIRECTIONS - SEE PLAN
 11. SOILS SHALL BE CHEMICALLY TREATED FOR TERMITES.
 12. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE CODES IN THE EVENT OF CONFLICT BETWEEN PLANS AND CODES THE CODES SHALL GOVERN.
 13. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS BEFORE CONSTRUCTION . ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 14. THE OWNER IS RESPONSIBLE FOR THE SUPERVISION AND COMPLETION OF THE PROJECT IN ACCORDANCE WITH THESE DRAWING AND ALL APPLICABLE PERMITS. NO WORK SHALL BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN OBTAINED.
 15. ALL CMU SHALL BE N-12 SPLIT FACE BLOCK WITH 3000 PSI PUMP MIX FILLED CELLS



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- APPLICABLE CODES:
1. FLORIDA BUILDING CODE, EXISTING BUILDING (FBC-EB) 2017 EDITION
 2. FLORIDA BUILDING CODE, BUILDING (FBC-B) 2017 EDITION
 3. FLORIDA BUILDING CODE, MECHANICAL (FBC-M) 2017 EDITION
 4. FLORIDA BUILDING CODE, FUEL GAS (FBC-FG) 2017 EDITION
 5. FLORIDA BUILDING CODE, PLUMBING (FBC-P) 2017 EDITION
 6. FLORIDA FIRE PREVENTION CODE, (FFPC) 2017 EDITION
 7. NATIONAL ELECTRICAL CODE (NEC) 2017 EDITION

OCCUPANCY CLASSIFICATION: R-2
 TYPE OF CONSTRUCTION: TYPE III
 BUILDING AREA SQ. FT. 101.5x80' - 8120 GROSS

SHALLOW FOUNDATIONS:

1. FOOTING SIZES AND REINFORCING ARE BASED ON AN ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF. ALL FOOTINGS SHALL BEAR ON COMPACTED FILL OR NATURAL SOIL PREPARED PER THE GEOTECHNICAL REPORT BY MAGNUM ENGINEERING SIGNED AND SEALED DATED JANUARY 29, 2019.
2. SUBGRADE PREPARATION SHALL BE FIELD CONTROLLED AND TESTED BY A LICENSED SOILS ENGINEER IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. AT COMPLETION, THAT ENGINEER SHALL PREPARE AND SUBMIT TO THE OWNER, ARCHITECT, CONTRACTOR, AND STRUCTURAL ENGINEER A SIGNED AND SEALED LETTER INDICATING THAT THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT HAVE BEEN FOLLOWED.
3. TOP OF ALL FOOTINGS IS NOTED ON THE DRAWINGS.

CHEMICAL ADHESIVE FOR ANCHORING REINFORCING BOLTS, THREADED BARS & ANCHOR BOLTS:

1. USE AN EPOXY, ACRYLIC OR POLYESTER RESIN ADHESIVE SYSTEM SUCH AS THE POWERS RAIN, POWER-FAST SYSTEM, HILTI HIT HY150, ITW RANSET/RED HEAD EPON AT OR CG INJECTION SYSTEM, ALLIED FASTENER ALLIED GOLD A-1000, OR ACCEPTED EQUIVALENT. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR USE AND INSTALLATION.
2. CONFIRM THE ABSENCE OF REINFORCING STEEL BY DRILLING A 1/4" Ø PILOT HOLE FOR EACH ANCHOR. DO NOT CUT REINFORCING STEEL WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
3. DRILL 1/16" LARGER Ø HOLE THAN ANCHOR BOLT AND 1/8" LARGER HOLE THAN REINFORCING BAR. THOROUGHLY CLEAN HOLE INCLUDING REMOVAL OF DUST PRIOR TO FILLING WITH EPOXY.
4. PROVIDE ANCHOR EMBEDMENT, SPACING AND EDGE DISTANCE AS SHOWN ON THE DRAWINGS.

NOTE:
 FOR EFFECTIVE AREAS BETWEEN THOSE GIVEN ABOVE THE LOAD MAY BE INTERPOLATED, OTHERWISE USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.

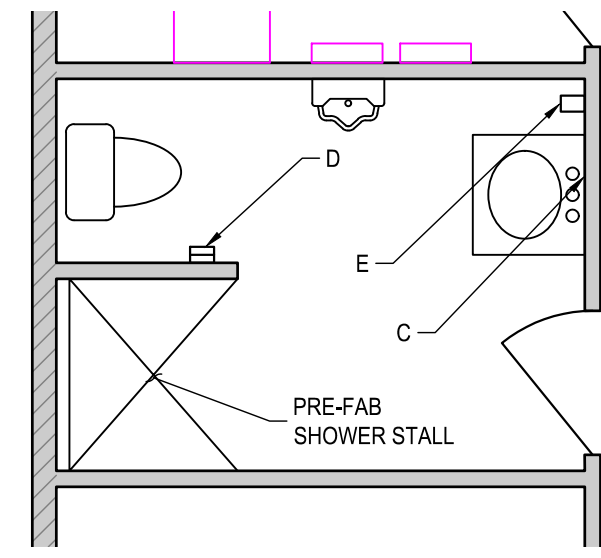
WIND LOAD DESIGN CRITERIA:

GOVERNING CODE - ASCE 7-10
 BUILDING TYPE - ENCLOSED
 BUILDING CATEGORY - IV
 EXPOSURE CATEGORY - B
 BASIC WIND SPEED - V = 160 MPH
 MEAN ROOF HEIGHT - 25'-8"
 $K_z/K_d/K_e = 0.70 / 1.00 / 0.85$
 INTERNAL PRESSURE COEFFICIENT - GCPI ±0.18

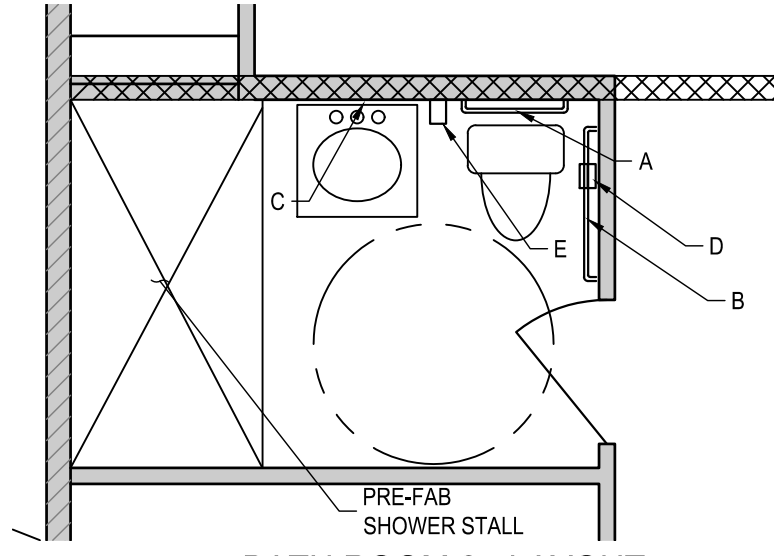
HEADER SCHEDULE	HEADER NO.	WALL TYPE	BEARING LENGTH	BEAM CONSTRUCTION OR STEEL REINFORCEMENT	STUD PACK
H-1		WOOD	6" MIN.	2 EA. 2"x10" W. 1/2" PLWD.	4 MIN.

RESTROOM ACCESSORY SCHEDULE

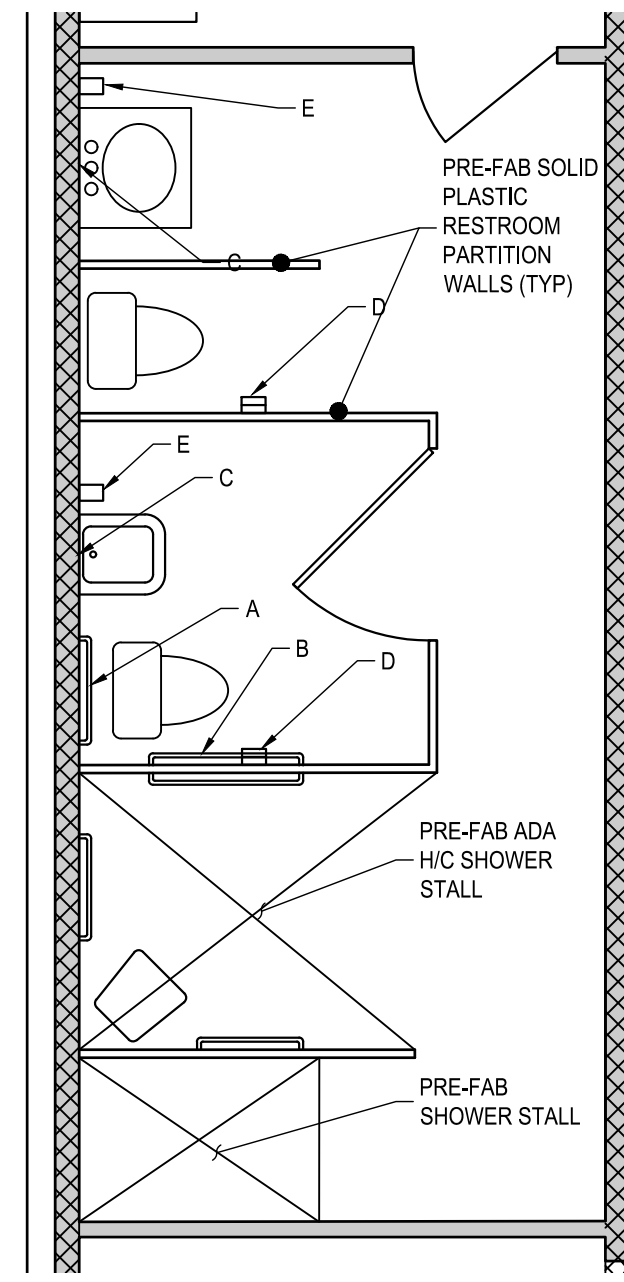
ID	DESCRIPTION	MANUFACTURER	MOUNTING HEIGHT	MATERIAL DESCRIPTION
A	36" L, 1-1/2" DIAMETER GRAB BAR	BOBRICK	33" TO TOP	TYPE 304, 18 GA. SS. SATIN FINISH W/ 3-1/4" DIAM. FLANGE, 3/8" DEEP, 22 GA W/ CONCEALED ANCHOR PLATE
B	42" L, 1-1/2" DIAMETER GRAB BAR	BOBRICK	33" TO TOP	TYPE 304, 18 GA. SS. SATIN FINISH W/ 3-1/4" DIAM. FLANGE, 3/8" DEEP, 22 GA W/ CONCEALED ANCHOR PLATE
C	SURFACE MOUNTED MIRROR 18"Wx30"H	BRADLEY	1/2" ABOVE SINK BACKSPLASH	FRAMED W/ 1 PIECE, ROLLED-FORMED SS W/ 3/8" FACE AND MITERED END CORNERS. DOUBLE STRENGTH CONTINUOUS INTEGRAL STIFFENER ALL SIDES.
D	WALL MOUNTED TOILET PAPER DISPENSER	SCOTT	19" TO BOT	DURABLE PLASTIC BODY W/ SMOKED TRANSPARENT COVER, DISPENSES (2) FULL 9.38" DIAMETER ROLLS.
E	SURFACE MOUNTED SOAP DISPENSER	N/A	N/A	N/A



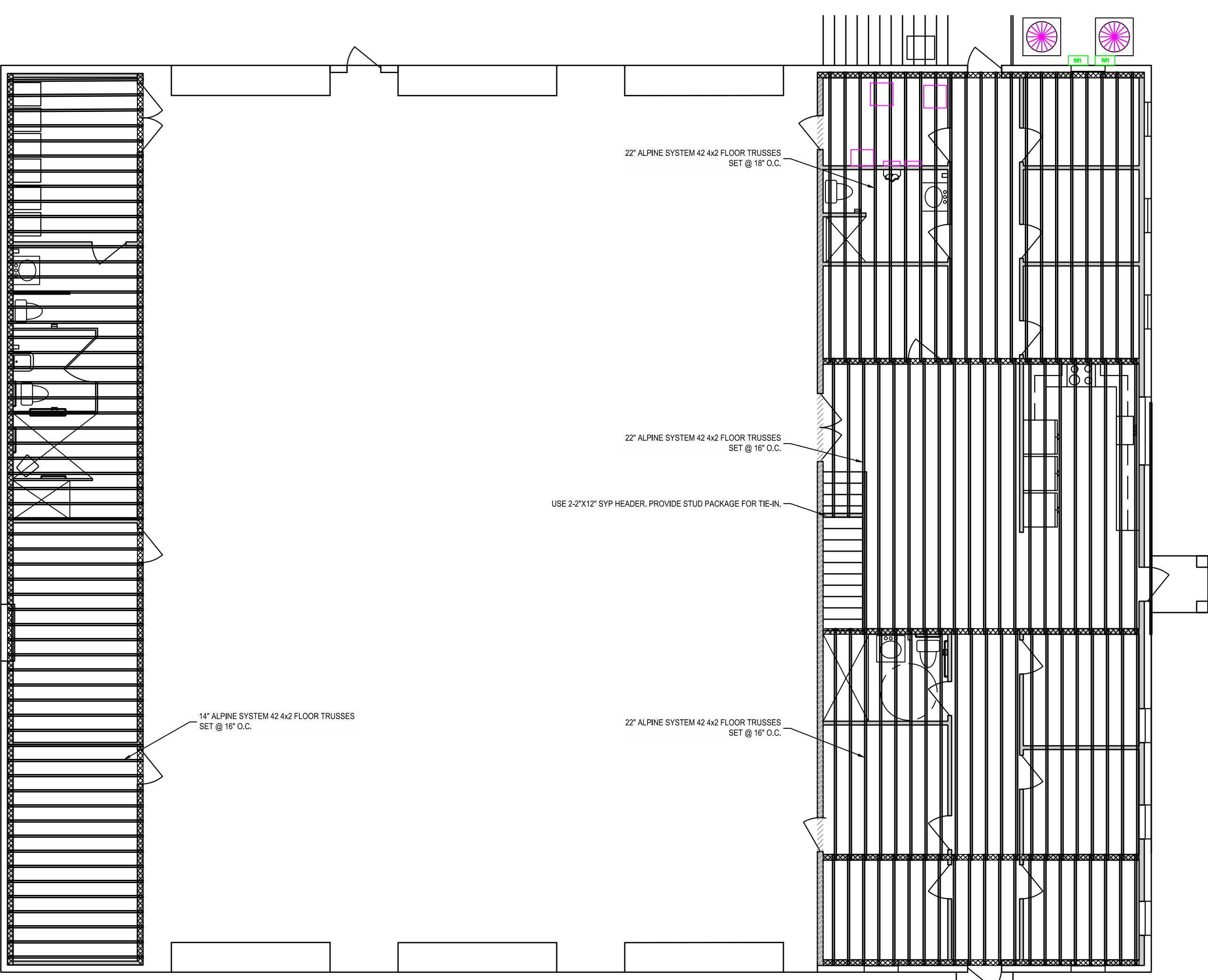
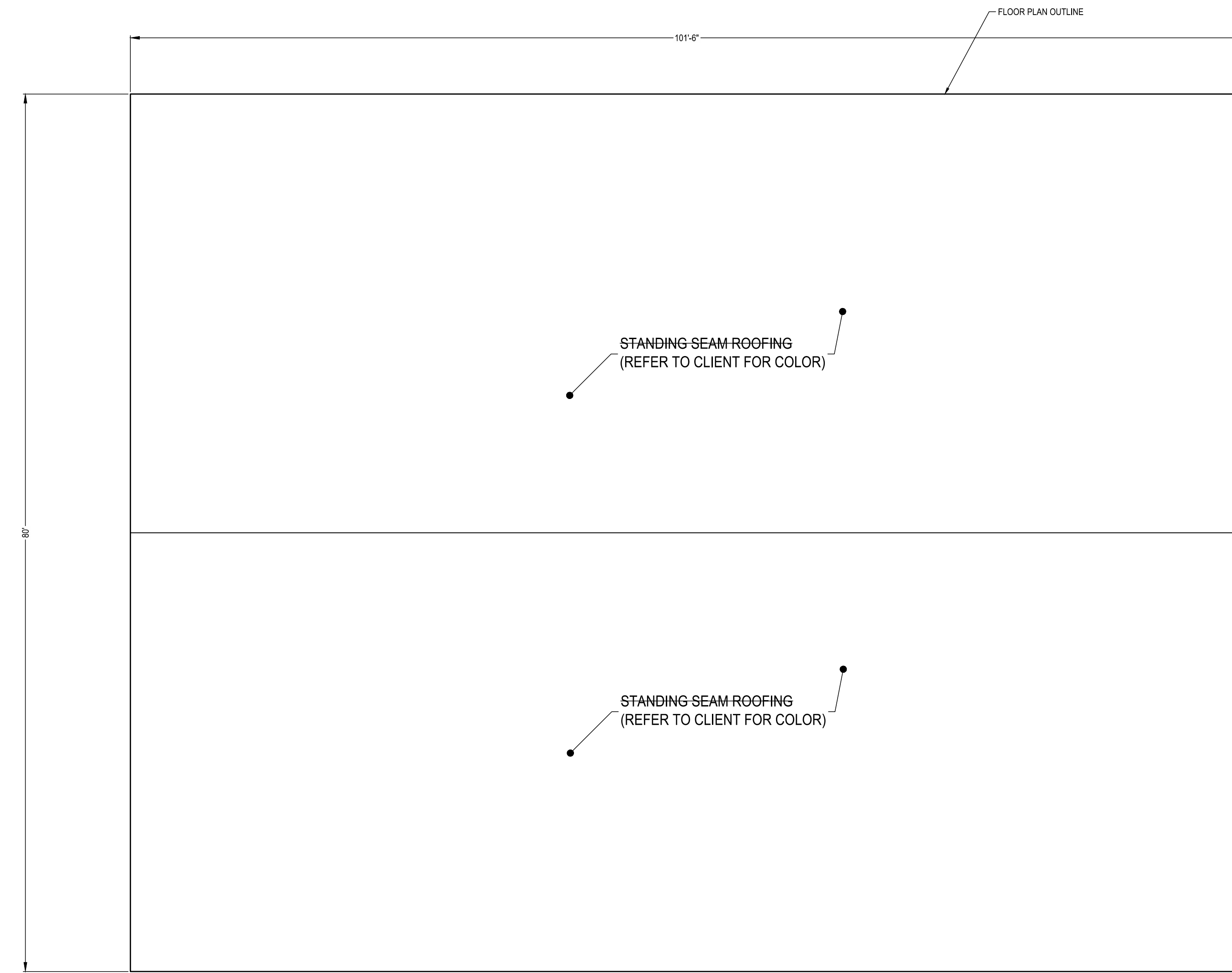
BATH ROOM 1 - LAYOUT



BATH ROOM 2 - LAYOUT



BATH ROOM 3 - LAYOUT



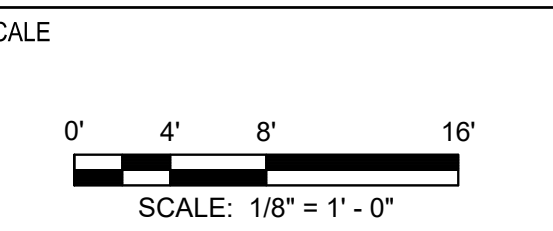
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TITLE
ROOF AND TRUSS PLAN

PROJECT NO. _____ 50144269

A1.3

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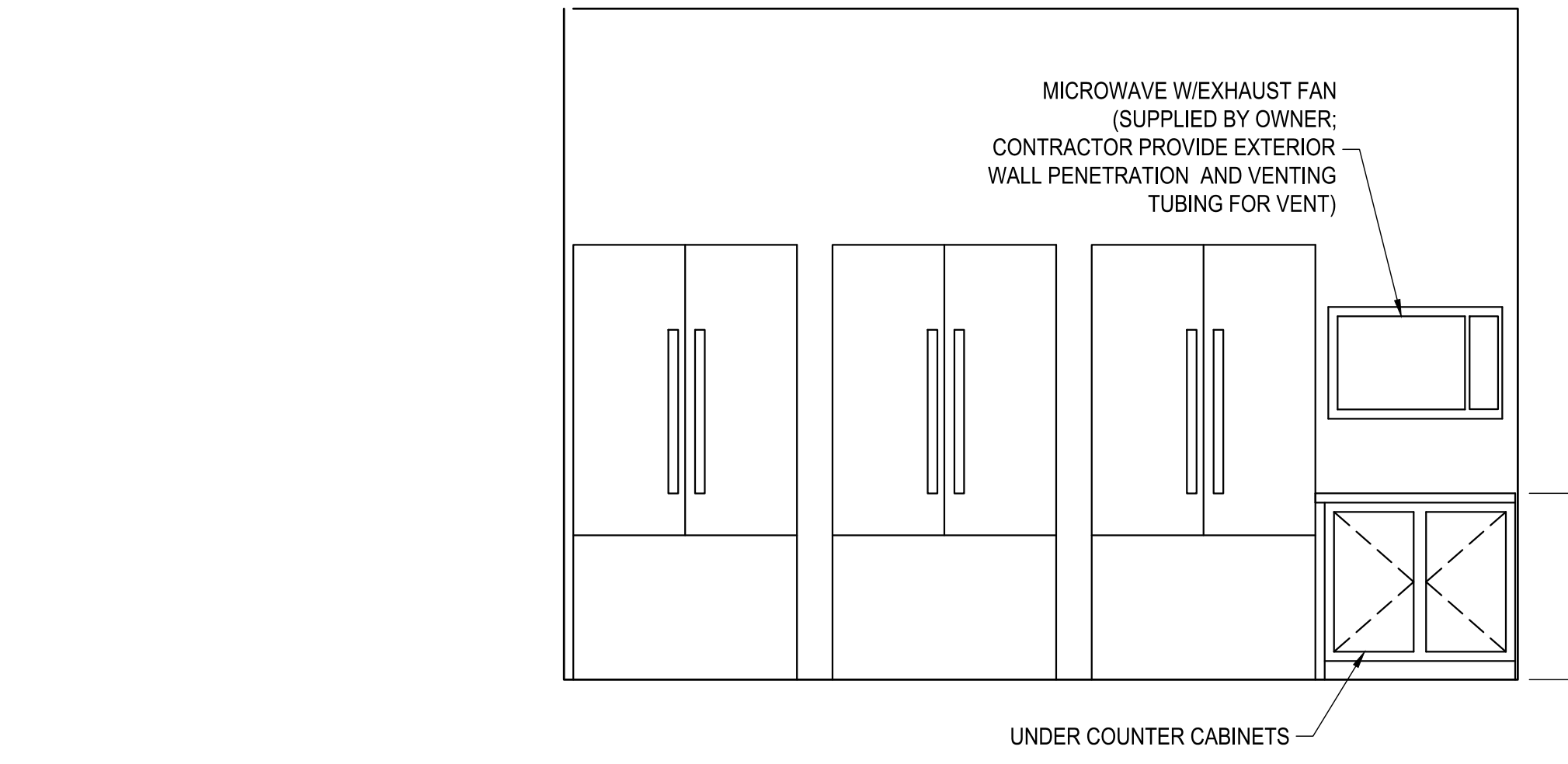
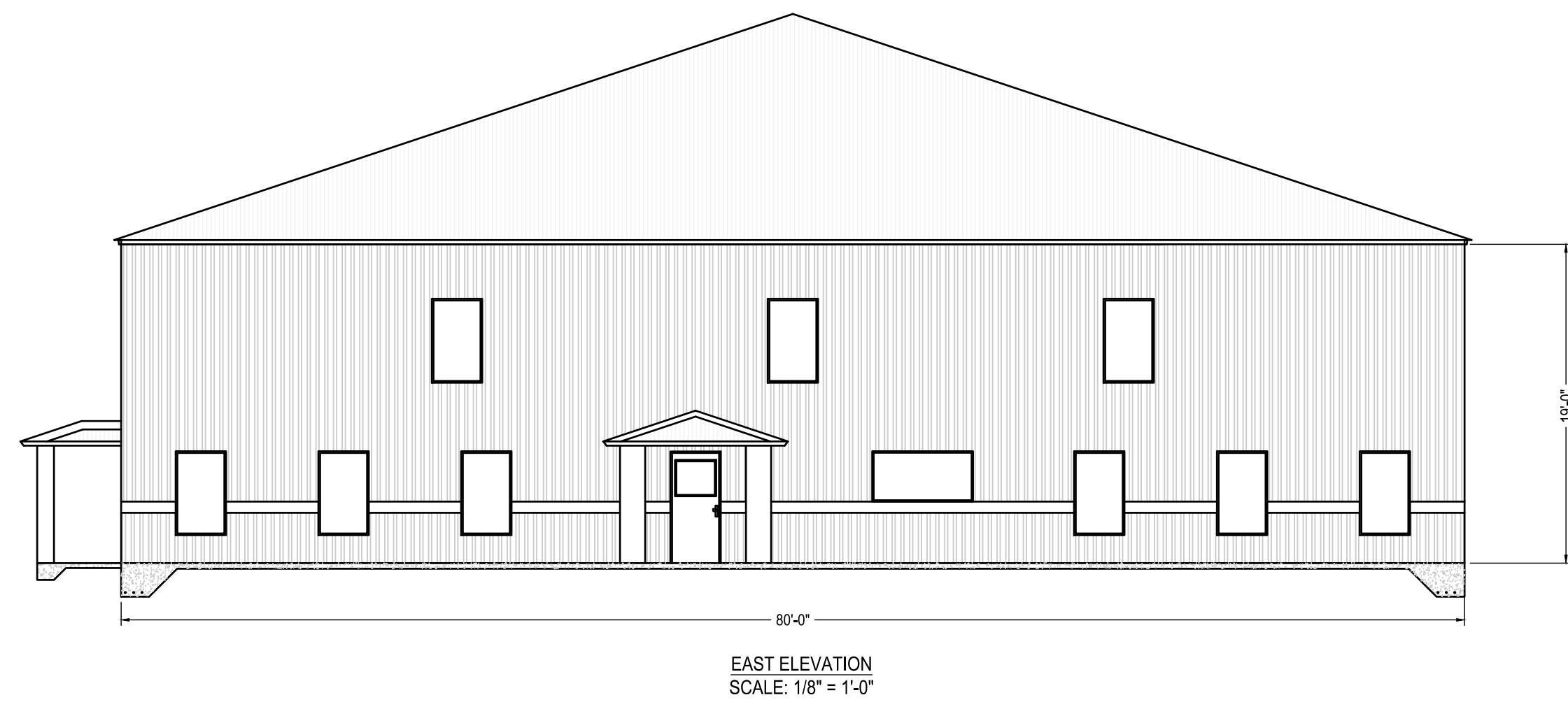
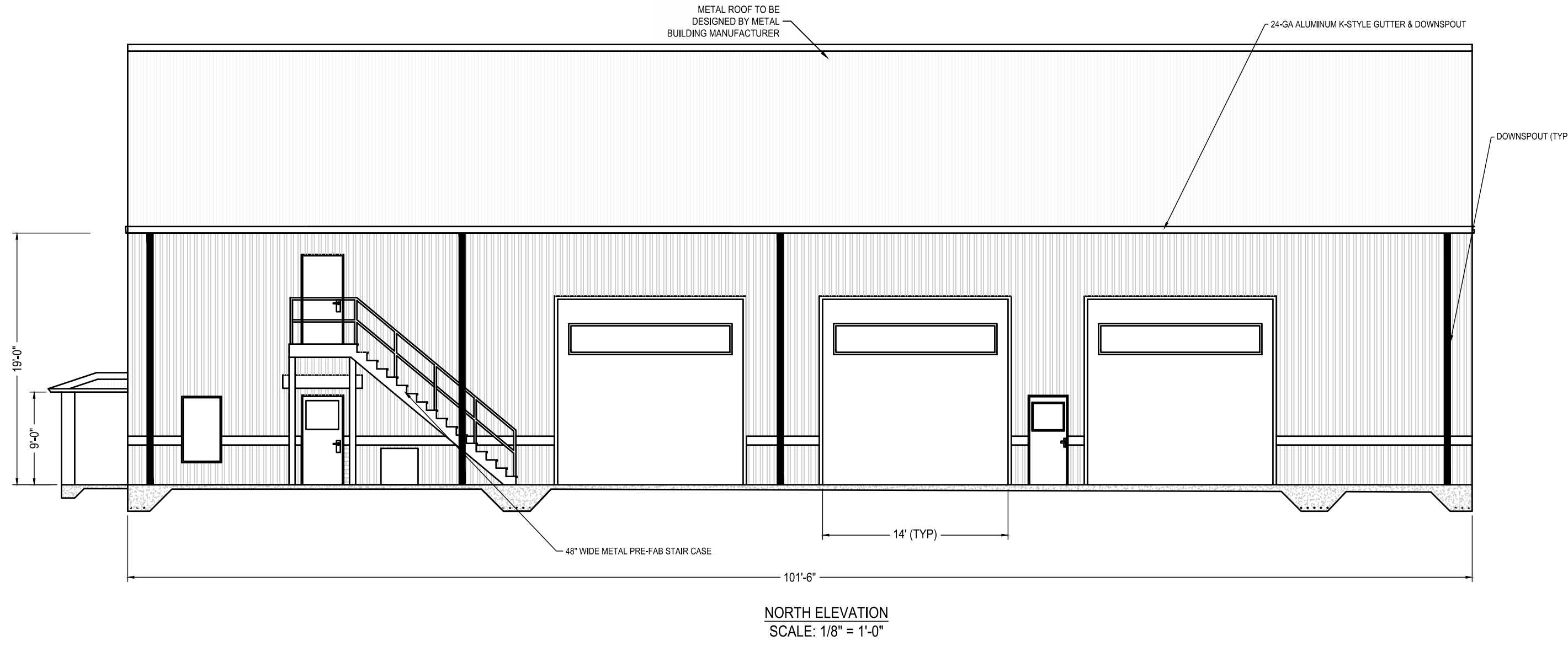
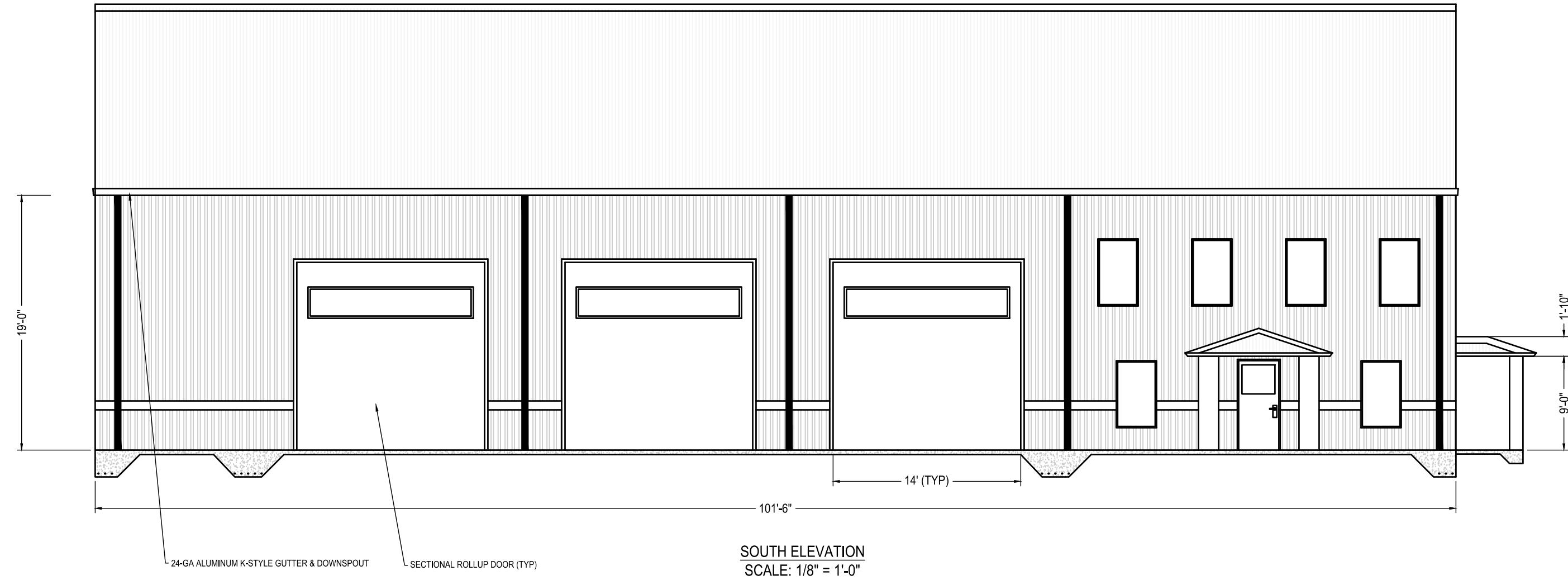
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D

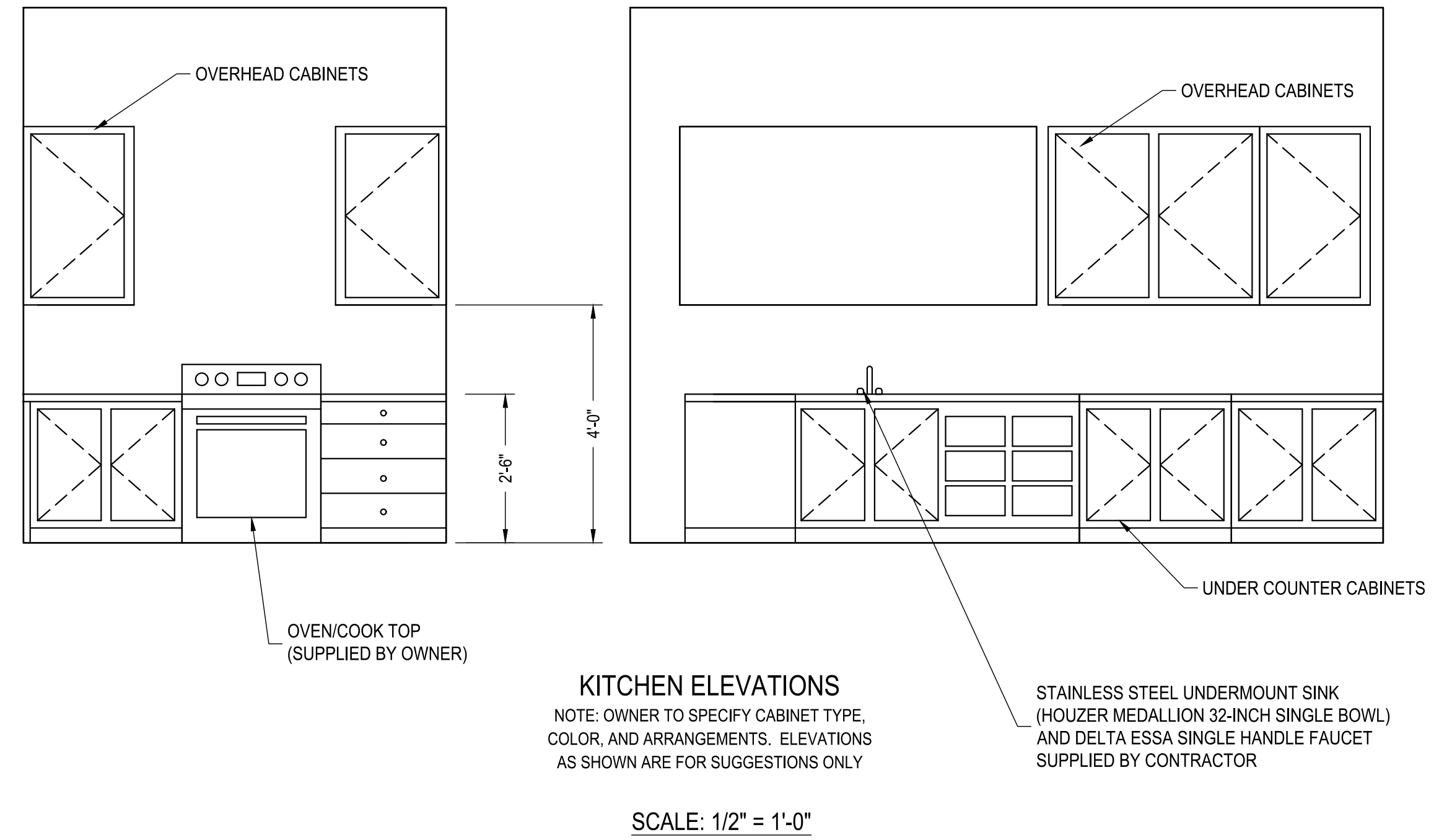
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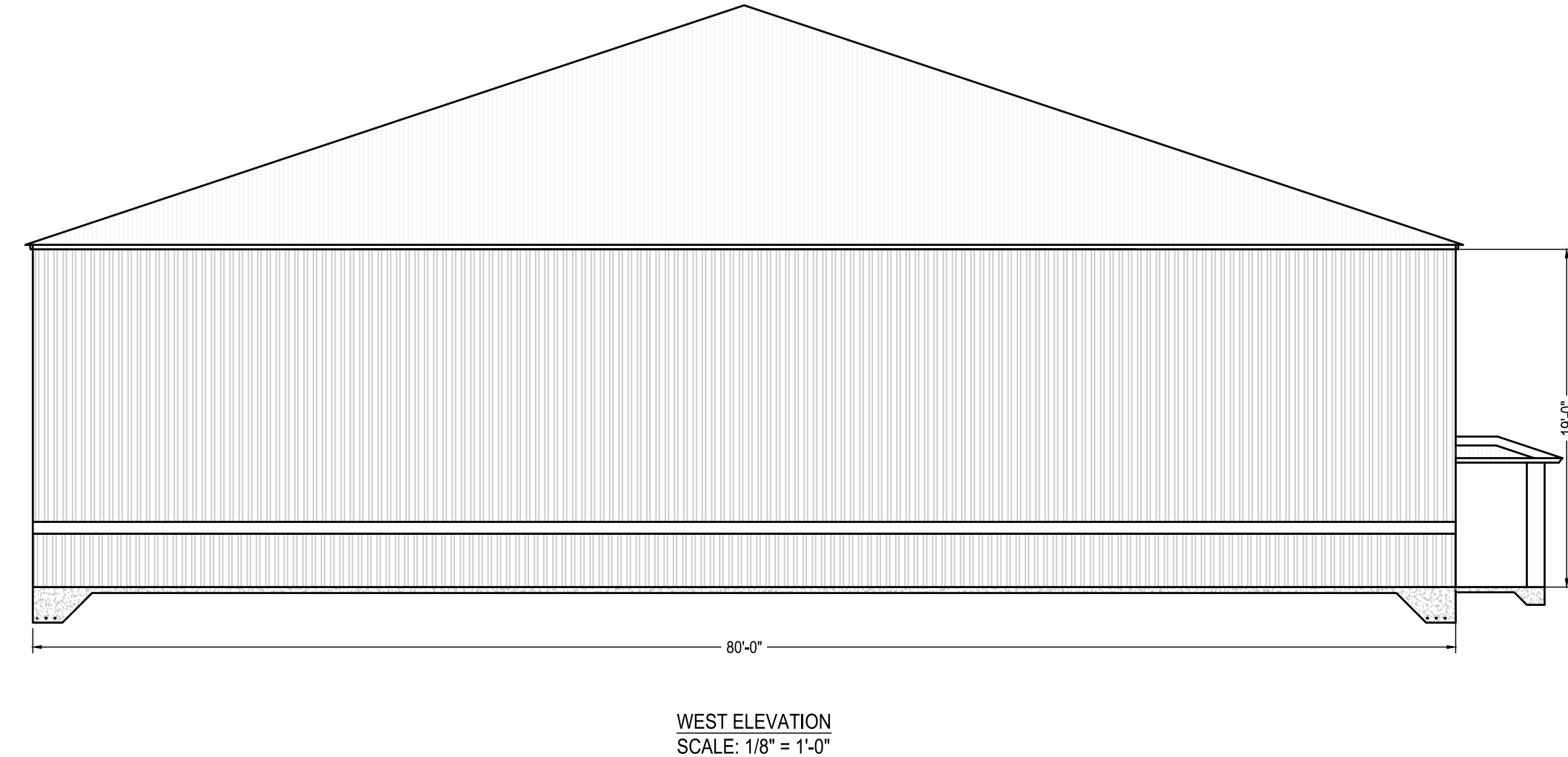
A



KITCHEN ELEVATIONS
 NOTE: OWNER TO SPECIFY CABINET TYPE, COLOR, AND ARRANGEMENTS. ELEVATIONS AS SHOWN ARE FOR SUGGESTIONS ONLY
 SCALE: 1/2" = 1'-0"



KITCHEN ELEVATIONS
 NOTE: OWNER TO SPECIFY CABINET TYPE, COLOR, AND ARRANGEMENTS. ELEVATIONS AS SHOWN ARE FOR SUGGESTIONS ONLY
 SCALE: 1/2" = 1'-0"



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



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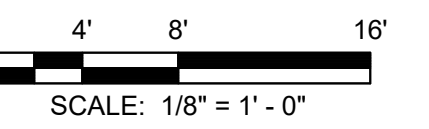
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TITLE

ELEVATIONS

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A1.4

SHEET NO.

7/26/2023 9:44:55 AM
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ELECTRICAL SPECIFICATIONS

BASIC ELECTRICAL MATERIALS AND METHODS

- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: NEW, LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
- IDENTIFICATION DEVICE COLORS: USE THOSE PRESCRIBED BY ANSI A13.1, NFPA 70, AND THESE SPECIFICATIONS.
- COLOR ADHESIVE MARKING TAPE FOR RACEWAYS, WIRES, AND CABLES: SELF-ADHESIVE VINYL TAPE, NOT LESS THAN 1 INCH WIDE BY 3 MILS THICK (25 MM WIDE BY 0.08 MM THICK).
- TAPE MARKERS FOR CONDUCTORS: VINYL OR VINYL-CLOTH, SELF-ADHESIVE, WRAPAROUND TYPE WITH PREPRINTED NUMBERS AND LETTERS.
- ENGRAVED-PLASTIC LABELS, SIGNS, AND INSTRUCTION PLATES: ENGRAVING STOCK, MELAMINE PLASTIC LAMINATE PUNCHED OR DRILLED FOR MECHANICAL FASTENERS 1/16-INCH (1.6-MM) MINIMUM THICKNESS FOR SIGNS UP TO 20 SQ. IN. (129 SQ. CM) AND 1/8-INCH (3.2-MM) MINIMUM THICKNESS FOR LARGER SIZES. ENGRAVED LEGEND IN BLACK LETTERS ON WHITE BACKGROUND.
- PULL STRINGS: PROVIDE PULL STRINGS IN ALL SPARE OR EMPTY CONDUITS AND RACEWAYS.
- COORDINATE NAMES, ABBREVIATIONS, COLORS, AND OTHER DESIGNATIONS USED FOR ELECTRICAL IDENTIFICATION WITH CORRESPONDING DESIGNATIONS INDICATED IN THE CONTRACT DOCUMENTS OR REQUIRED BY CODES AND STANDARDS. USE CONSISTENT DESIGNATIONS THROUGHOUT PROJECT.
- CUT, CHANNEL, CHASE, AND DRILL WALLS, PARTITIONS, CEILING, AND OTHER SURFACES REQUIRED TO PERMIT ELECTRICAL INSTALLATIONS. PERFORM CUTTING BY SKILLED MECHANICS OF TRADES INVOLVED. SLEEVE ALL CABLE PENETRATIONS OF WALLS. SEAL ALL CONDUIT PENETRATIONS.
- REPAIR, REFINISH AND TOUCH UP DISTURBED FINISH MATERIALS AND OTHER SURFACES TO MATCH ADJACENT UNDISTURBED SURFACES.
- ALL WORK SHALL COMPLY WITH ALL CODES & STANDARDS LISTED ON THE PLANS.
- WITHIN 30 DAYS OF NOTICE TO PROCEED, CONTRACTOR SHALL ARRANGE AND ATTEND A MEETING ON-SITE WITH A REPRESENTATIVE OF THE UTILITY TO COORDINATE REQUIREMENTS AND SCHEDULING OF INSTALLATION OF NEW SERVICE.

GROUNDING AND BONDING

- EQUIPMENT GROUNDING CONDUCTORS: COMPLY WITH NFPA 70, ARTICLE 250, FOR TYPES, SIZES, AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, UNLESS SPECIFIC TYPES, LARGER SIZES, OR MORE CONDUCTORS THAN REQUIRED BY NFPA 70 ARE INDICATED.
- INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS IN ALL FEEDERS AND BRANCH CIRCUITS.
- ALL GROUNDING CONDUCTORS SHALL BE COPPER; COMPLY WITH DIVISION 16 SECTION "CONDUCTORS AND CABLES" AND ASTM B, AS APPLICABLE.
- EQUIPMENT GROUNDING CONDUCTORS: INSULATED WITH GREEN-COLORED INSULATION.

CONDUCTORS AND CABLES

- CONDUCTOR MATERIAL: COPPER COMPLYING WITH NEMA WC 5 OR 7; SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER, STRANDED FOR NO. 8 AWG AND LARGER. ALUMINUM CONDUCTORS PERMITTED ONLY WHERE SPECIFICALLY CALLED OUT ON POWER RISER DIAGRAM.
- CONDUCTOR INSULATION TYPES: TYPE THHN-THWN COMPLYING WITH NEMA WC 5 OR 7.
- TYPE NM CABLE: NOT PERMITTED.
- TYPE MC CABLE: PERMITTED FOR 15A/20A BRANCH CIRCUITS ONLY, IN CONCEALED LOCATIONS, WHERE ALLOWED BY CODE.
- EXPOSED FEEDERS, AND FEEDERS CONCEALED IN CONCRETE OR BELOW SLAB OR BELOW GRADE: TYPE THHN-THWN, SINGLE CONDUCTORS IN RACEWAY.
- BRANCH CIRCUITS & FEEDERS CONCEALED IN CEILING, WALLS, AND PARTITIONS: TYPE THHN-THWN, SINGLE CONDUCTORS IN RACEWAY, OR MC CABLE WHERE ALLOWED BY NOTE 4, ABOVE.
- CONCEAL CABLES AND RACEWAYS IN FINISHED WALLS, CEILING, AND FLOORS. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
- INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OF EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS WHERE POSSIBLE.
- MAKE SPLICES AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.
- WIRING AT OUTLETS: INSTALL CONDUCTOR AT EACH OUTLET, WITH AT LEAST 6 INCHES (150 MM) OF SLACK.
- FREE CABLES ABOVE CEILING, NOT IN CONDUIT SHALL BE PLENUM RATED.

RACEWAYS AND BOXES

- ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
- UNLESS OTHERWISE NOTED, PROVIDE NEMA 1 ENCLOSURES IN INDOOR LOCATIONS, NEMA 3R ENCLOSURES IN OUTDOOR LOCATIONS.
- MINIMUM RACEWAY SIZE: 1/2" TRADE SIZE.
- KEEP RACEWAYS AT LEAST 6 INCHES (150 MM) AWAY FROM PARALLEL RUNS OF HOT-WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER PIPING.
- PROTECT STUB-UPS FROM DAMAGE WHERE CONDUITS RISE THROUGH FLOOR SLABS. ARRANGE SO CURVED PORTIONS OF BENDS ARE NOT VISIBLE ABOVE FINISHED SLAB.
- MAKE BENDS AND OFFSETS SO ID IS NOT REDUCED. KEEP LEGS OF BENDS IN SAME PLANE AND KEEP STRAIGHT LEGS OF OFFSETS PARALLEL, UNLESS OTHERWISE INDICATED.
- CONCEAL CONDUIT AND EMT WITHIN FINISHED WALLS AND CEILING.
- INSTALL EXPOSED RACEWAYS PARALLEL OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW SURFACE CONTOURS AS MUCH AS POSSIBLE.
- FLEXIBLE CONNECTIONS: USE MAXIMUM OF 72 INCHES (1830 MM) OF FLEXIBLE CONDUIT FOR RECESSED AND SEMIRECESSED LIGHTING FIXTURES; FOR EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT; AND FOR ALL MOTORS. USE EMC IN DAMP OR WET LOCATIONS. INSTALL SEPARATE GROUND CONDUCTOR ACROSS FLEXIBLE CONNECTIONS.

WIRING DEVICES

- STRAIGHT-BLADE-TYPE RECEPTACLES: COMPLY WITH NEMA WD 1, NEMA WD 6, DSCC W-C-5966, AND UL 498. STRAIGHT-BLADE AND LOCKING RECEPTACLES: HEAVY-DUTY GRADE.
- GFI RECEPTACLES: STRAIGHT BLADE, HEAVY-DUTY GRADE, WITH INTEGRAL NEMA WD 6, CONFIGURATION 5-20R DUPLEX RECEPTACLE; COMPLYING WITH UL 498 AND UL 943. DESIGN UNITS FOR INSTALLATION IN A 2-3/4-INCH-(70-MM-) DEEP OUTLET BOX WITHOUT AN ADAPTER.
- SNAP- AND DOUBLE-POLE SWITCHES: COMPLY WITH DSCC W-C-896F AND UL 20.
- SNAP SWITCHES: HEAVY-DUTY GRADE, QUIET TYPE.
- FINISHES: WHITE, UNLESS OTHERWISE INDICATED OR REQUIRED BY NFPA 70. PROVIDE STAINLESS COVERPLATES.
- INSTALL DEVICES AND ASSEMBLIES LEVEL, PLUMB, AND SQUARE WITH BUILDING LINES.
- ARRANGEMENT OF DEVICES: UNLESS OTHERWISE INDICATED, MOUNT FLUSH, WITH LOW DIMENSION VERTICAL. GROUP ADJACENT SWITCHES UNDER SINGLE, MULTIGANG WALL PLATES.
- REMOVE WALL PLATES AND PROTECT DEVICES AND ASSEMBLIES DURING PAINTING.
- ADJUST LOCATIONS OF FLOOR SERVICE OUTLETS AND SERVICE POLES TO SUIT ARRANGEMENT OF PARTITIONS AND FURNISHINGS.
- AFTER INSTALLING WIRING DEVICES AND AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, TEST FOR PROPER POLARITY, GROUND CONTINUITY, AND COMPLIANCE WITH REQUIREMENTS.
- TEST GFCI OPERATION WITH BOTH LOCAL AND REMOTE FAULT SIMULATIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

ENCLOSED SWITCHES

- ENCLOSED SWITCHES SHALL BE MANUFACTURED BY SQUARE-D, CUTLER-HAMMER, GE, OR SIEMENS.
- NEUR ENCLOSED SWITCHES SHALL BE LOCKABLE.
- MOVE INDIVIDUAL WALL-MOUNTING SWITCHES WITH TOPS AT UNIFORM HEIGHT, UNLESS OTHERWISE INDICATED.
- ENCLOSED SWITCHES SHALL BE UL LISTED FOR THE APPLICATION USED; ENCLOSURES SHALL BE NEMA 1 FOR INDOORS, NEMA 3R FOR OUTDOORS.
- PROVIDE FUSES FOR ALL FUSIBLE SWITCHES.
- FIELD-COORDINATE EXACT LOCATION OF SWITCHES WITH EQUIPMENT SERVED, AND OTHER TRADES, TO ASSURE MINIMUM N.E.C. CLEARANCE REQUIREMENTS ARE MET. PROVIDE PERMANENT LABELING OF EACH SWITCH TO INDICATE PANEL AND CIRCUIT SWITCH IS FED FROM (E.G., "A-4.6"). FOR CONDENSER UNITS, ALSO INDICATE AREA EQUIPMENT SERVES (E.G., "RM 101"). PROVIDE WEATHERPROOF LABELING OF EXTERIOR SWITCHES.

PANELBOARDS

- MANUFACTURERS: PANELBOARDS SHALL BE MANUFACTURED BY SQUARE-D, CUTLER-HAMMER, GE, OR SIEMENS.
- ENCLOSURES: FLUSH- AND SURFACE-MOUNTED CABINETS. NEMA PB 1, TYPE 1, OR TYPE 3R AS INDICATED.
- PHASE AND GROUND BUSES: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY.
- SERVICE EQUIPMENT LABEL: UL LABELED FOR USE AS SERVICE EQUIPMENT FOR PANELBOARDS WITH MAIN SERVICE DISCONNECT SWITCHES.
- FUTURE DEVICES: MOUNTING BRACKETS, BUS CONNECTIONS, AND NECESSARY APPURTENANCES REQUIRED FOR FUTURE INSTALLATION OF DEVICES.
- PANELBOARD SHORT-CIRCUIT RATING: SERIES RATED TO INTERRUPT SYMMETRICAL SHORT-CIRCUIT CURRENT AS NOTED ON THE PANEL SCHEDULES.
- MAIN OVERCURRENT PROTECTIVE DEVICES: CIRCUIT BREAKER.
- MOLDED-CASE CIRCUIT BREAKER: UL 489, WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS.
- PROVIDE AS-BUILT PANEL DIRECTORIES, CLEARLY INDICATING DEVICES/EQUIPMENT SERVED AND LOCATION (E.G., "RECEPTACLES-RM 101"). IN THE CASE OF CONDENSER UNITS, PANEL DIRECTORIES SHALL INDICATE MECHANICAL DESIGNATION AS WELL AS THE AREA THE MECHANICAL UNIT SERVES (E.G., "HP-1 RM 101").

LIGHTING

- LIGHTING FIXTURES: PER LIGHTING FIXTURE SCHEDULE.
- PROVIDE LOW-VOLTAGE CABLING AS REQUIRED FOR DIMMING AND CONTROL.
- WHERE EXIT SIGNS ARE USED, THEY SHALL BE LED-TYPE.
- FIXTURES: SET LEVEL, PLUMB, AND SQUARE WITH CEILING AND WALLS. INSTALL LAMPS IN EACH FIXTURE.
- PROVIDE BLOODING, BACKBOXES, SUPPORTS, STEMS, COUPLINGS, AND OTHER HARDWARE AS NEEDED FOR A COMPLETE FUNCTIONAL INSTALLATION.
- FOR EMERGENCY LIGHTING, PROVIDE UNSWITCHED NORMAL POWER CONDUCTOR AS INDICATED ON THE PLANS.

FIRE ALARM

- THE CONTRACTOR SHALL FURNISH ALL LABOR AND EQUIPMENT FOR A COMPLETE NEW ADDRESSABLE FIRE ALARM SYSTEM AND SHALL POSSESS THE APPROPRIATE EC OR E.F. LICENSE AS REQUIRED BY THE STATE OF FLORIDA.
- THE FIRE ALARM SYSTEM SHALL BE INSTALLED, INSPECTED, TESTED AND CERTIFIED PER APPROPRIATE NFPA 12, 12A, 70, 72, 72E, 90A AND 101. ANY OTHER APPLICABLE CODE SHALL APPLY TO MEET STATE OF FLORIDA AND FIRE MARSHAL REQUIREMENTS. THE EQUIPMENT SHALL BE APPROVED BY UNDERWRITERS LABORATORIES, INC., SHALL COMPLY WITH NFPA CODES AND REGULATIONS AND MEET REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- IN ADDITION TO DEVICES SHOWN ON THE PLAN, THE CONTRACTOR SHALL PROVIDE ALL CARDS, MODULES, POWER SUPPLIES, AMPLIFIERS, CABLING, AND OTHER EQUIPMENT AS MAY BE NECESSARY TO SERVE ALL DEVICES SHOWN.
- THE FIRE ALARM SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR A PERIOD OF ONE YEAR FOR EQUIPMENT, MATERIALS AND WORKMANSHIP OF THE MODIFICATIONS OF THE SYSTEM, AS SHOWN ON THESE PLANS.
- ALL CIRCUITS SHALL BE CLASS B. PROVIDE SURGE SUPPRESSION ON ALL CIRCUITS ENTERING THE BUILDING.
- CONTRACTOR SHALL TEST AND CERTIFY SYSTEM PRIOR TO COMPLETION OF THE PROJECT.
- THE FIRE ALARM CONTRACTOR SHALL APPLY FOR, AND OBTAIN, A SEPARATE PERMIT FOR ALL FIRE ALARM WORK. PROVIDE ALL SHOP DRAWINGS REQUIRED FOR PERMITTING, INCLUDING:
 - PLANS SHOWING NEW ALARM DEVICE, MODULE AND PANEL LAYOUT, SPECIFICATIONS AND INFORMATION (INCLUDING CANDELA USED IN THE SCOPE OF WORK).
 - THE SPECIFICATIONS SHOULD CLEARLY NOTE OR DEMONSTRATE COMPATIBILITY WITH ANY EXISTING COMPONENTS AND COMPLIANCE WITH THE SYNCHRONIZATION REQUIREMENT OF NFPA 72.
 - A RISER DIAGRAM SHOWING DEVICES AND WIRING NOTES OR SCHEDULE;
 - POWER CALCULATIONS WITH STANDBY POWER VALUES.

PACKAGED ENGINE GENERATORS

- MANUFACTURERS: GENERATOR SHALL BE MANUFACTURED BY CATERPILLAR, CUMMINS, KOHLER, KVA POWER, L.J. POWER GENERATORS, GILLETTE GENERATORS, OR TAYLOR POWER SYSTEMS. OTHER MANUFACTURERS MUST BE APPROVED BY THE ENGINEER PRIOR TO SUBMITTING A BID.
- RATINGS: 120/208V, THREE-PHASE; STANDBY POWER RATING AS NOTED ON PLANS/RISER.
- ENCLOSURES: WEATHERPROOF, SOUND-ATTENUATED ENCLOSURE, RATED FOR 120MPH WIND VELOCITY.
- ENGINE: 4-CYCLE INDUSTRIAL WATER-COOLED, NATURAL GAS FUELED, WITH ELECTRONIC CONTROL, CERTIFIED TO US EPA STATIONARY EMISSION REGULATION 40 CFR, PART 60.
- ALTERNATOR: CLASS H INSULATION, 150 C TEMPERATURE RISE, 1% VOLTAGE REGULATION (NO LOAD TO FULL LOAD), LESS THAN 5% THD, WITH PERMANENT MAGNET EXCITATION.
- LISTINGS AND STANDARDS: UL LISTED TO UL 2200, DESIGNED TO ALLOW FOR INSTALLED COMPLIANCE WITH REQUIREMENTS OF NFPA 110 LEVEL 1.
- MAIN OVERCURRENT PROTECTIVE DEVICES: CIRCUIT BREAKER, 100% RATED.
- GENERATOR-MOUNTED CONTROL PANEL: DESIGNED AND BUILT BY THE SYSTEM MANUFACTURER AND INCORPORATING 100% SOLID-STATE CIRCUITRY, SEALED DUST-TIGHT, WATERTIGHT MODULAR COMPONENTS AND INSTRUMENTATION. THE PANEL SHALL BE SHOCK MOUNTED TO THE GENERATOR.
- MOUNTING: THE ENGINE-GENERATOR SET SHALL BE MOUNTED ON A STRUCTURAL BASE.
- CRITICAL GRADE SILENCER MUST BE ENCLOSED WITHIN THE UNIT IN A SEPARATE DISCHARGE BOX WITH THERMAL GRADE WRAPPING.
- UNIT SHALL BE SUPPLIED WITH A LEAD-ACID STARTING BATTERY, WITH A BATTERY CHARGER, INSTALLED INSIDE UNIT ENCLOSURE.
- PROTECTIVE DEVICES: SAFETY SHUTOFFS FOR HIGH WATER TEMPERATURE, LOW OIL PRESSURE, ELECTRICAL OVER-SPEED, AND ENGINE OVER-CRANK SHALL BE PROVIDED.
- AN ENGINE-MOUNTED THERMAL CIRCULATION WATER HEATER INCORPORATING AN ADJUSTABLE THERMOSTATIC SWITCH SHALL BE FURNISHED TO MAINTAIN ENGINE JACKET WATER TO 90F.
- INSTALLATION SHALL INCLUDE STARTUP AND FOUR-HOUR LOAD-BANK TESTING BY MANUFACTURER-CERTIFIED INSTALLER.
- WARRANTY: MANUFACTURER'S ONE-YEAR WARRANTY.
- PROVIDE EQUIPMENT SUBMITTAL INCLUDING SHOP DRAWINGS, WIRING DIAGRAMS, AND VENDOR'S SELECTION INFO, TO DEMONSTRATE 10% MAXIMUM VOLTAGE DIP.
- PROVIDE OPERATION AND MAINTENANCE AND TRAINING TO OWNER'S REPRESENTATIVE.
- REMOTE ANNUNCIATOR: NFPA 110 COMPLIANT (LEVEL 1).

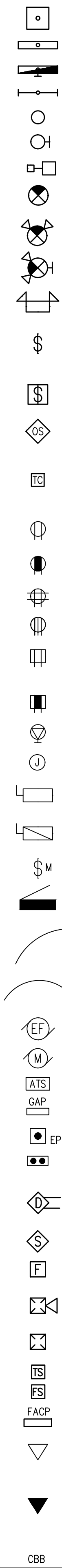
AUTOMATIC TRANSFER SWITCH (ATS)

- MANUFACTURERS: THE SUPPLIER OF THE ATS SHALL BE THE SAME AS THAT OF THE ENGINE-GENERATOR SET. BASIS OF DESIGN IS ASCO SERIES 300 GROUP G.
- ATS SHALL BE 3-POLE, SOLID NEUTRAL, OPEN-TRANSITION (BREAK-BEFORE-MAKE), 208V, COMPLIANT WITH REQUIREMENTS OF NFPA 110 FOR LEVEL 1 SYSTEM, CURRENT RATING AS NOTED ON THE PLAN/RISER.
- ATS CURRENT RATING SHALL BE A CONTINUOUS RATING WHEN THE SWITCH IS INSTALLED IN AN ENCLOSURE, AND SHALL CONFORM TO NEMA TEMPERATURE RISE STANDARDS.
- ATS SHALL BE RATED FOR 42,000 AIC, MINIMUM.
- ATS SHALL INCLUDE AN ELECTRONIC CONTROL PANEL, WITH FIELD-ADJUSTABLE SETTINGS, AND PROGRAMMABLE EXCERISER.
- ATS SHALL INCLUDE ADJUSTABLE TIME DELAY TO OVERRIDE MOMENTARY NORMAL SOURCE FAILURE PRIOR TO ENGINE START. FIELD PROGRAMMABLE 0-10 SECONDS FACTORY SET AT 3 SECONDS.
- ATS SHALL INCLUDE ADJUSTABLE TIME DELAY ON RETRANSFER TO NORMAL SOURCE, PROGRAMMABLE 0-60 MINUTES FACTORY SET AT 30 MINUTES. IF THE EMERGENCY SOURCE FAILS DURING THE RETRANSFER TIME DELAY, THE TRANSFER SWITCH CONTROLS SHALL AUTOMATICALLY BYPASS THE TIME DELAY AND IMMEDIATELY RETRANSFER TO THE NORMAL POSITION.
- ATS SHALL INCLUDE TIME DELAY ON TRANSFER TO EMERGENCY, PROGRAMMABLE 0-5 MINUTES, FACTORY SET AT 1 SECOND.
- A SET OF CUSTOMER CONTACTS SHALL BE PROVIDED TO INDICATE BOTH EMERGENCY AND NORMAL SOURCE POSITION.
- ATS SHALL BE SUPPLIED WITH ONE-YEAR MANUFACTURE'S WARRANTY.

CODES AND STANDARDS

NFPA 70	NATIONAL ELECTRICAL CODE (NEC), 2017 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE, 2016 EDITION
FLORIDA FIRE PREVENTION CODE,	SEVENTH EDITION.
FLORIDA BUILDING CODE,	SEVENTH EDITION.

ELECTRICAL LEGEND



- HIGH BAY FIXTURE.
- 1 X 4 LIGHTING FIXTURE.
- WALL-MOUNTED LIGHTING FIXTURE LENGTH AS INDICATED WITH EMERGENCY BATTERY PACK.
- STRIP LIGHT.
- RECESSED CAN LIGHTING FIXTURE.
- WALL-MOUNTED LIGHTING FIXTURE.
- POLE-MOUNTED AREA LIGHT.
- LED EXIT SIGN WITH INTEGRAL BATTERY AND INVERTER. PROVIDE UNSWITCHED HOT CONDUCTOR.
- COMBINATION LED EXIT SIGN AND EMERGENCY AREA LIGHT WITH INTEGRAL BATTERY. PROVIDE UNSWITCHED HOT CONDUCTOR.
- LED EXIT LIGHT, SAME AS ABOVE, WALL MOUNTED
- WALL-MOUNTED EMERGENCY LIGHTING FIXTURE, WITH INTEGRAL BATTERY. PROVIDE UNSWITCHED HOT CONDUCTOR.
- 120V/20A QUIET-TYPE SNAP SWITCH. SWITCHES SHALL BE MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. "3" INDICATES 3-WAY SWITCH, "4" INDICATES 4-WAY SWITCH.
- WALL-SWITCH WITH OCCUPANCY SENSOR; MOUNT 48" A.F.F., UNLESS NOTED OTHERWISE. WATSTOPPER #PW-101, OR APPROVED EQUAL.
- ROOM OCCUPANCY SENSOR (LOW-VOLTAGE). UNLESS NOTED OTHERWISE, CEILING MOUNTED WATSTOPPER #DT-300, OR APPROVED EQUAL. PROVIDE ROOM CONTROLLER(S) (#RZ-250) AS REQUIRED.
- 2 CHANNEL 24 HOUR/7 DAY PROGRAMMABLE ASTRONOMICAL TIME CLOCK (WITH BATTERY BACKUP) AS MANUFACTURED BY TORK OR APPROVED EQUAL. PROVIDE CONTACTOR(S) AS REQUIRED TO SERVE ALL CIRCUITS SHOWN.
- 20A/120V DUPLEX RECEPTACLE. MOUNT AT 18" A.F.F. UNLESS NOTED OTHERWISE. "USB" INDICATES INTEGRAL DUAL USB CHARGING PORTS.
- 20A/120V DUPLEX RECEPTACLE. MOUNT AT 48" A.F.F., UNLESS NOTED OTHERWISE.
- 120V/20A QUAD RECEPTACLE. NEW RECEPTACLES SHALL BE MOUNTED 18" A.F.F., UNLESS NOTED OTHERWISE.
- 240V/30A DRYER RECEPTACLE WITH 3/4" C.-3 #10, #10 GND, TO PANEL.
- 120V/20A DUPLEX RECEPTACLE, WITH INTEGRAL GFI PROTECTION. RECEPTACLES SHALL BE MOUNTED 18" A.F.F., UNLESS NOTED OTHERWISE. "WP" INDICATES CAST-ALUMINUM WEATHERPROOF IN USE COVER.
- 120V/20A DUPLEX RECEPTACLE, WITH INTEGRAL GFI PROTECTION. RECEPTACLES SHALL BE MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE.
- 240V/50A RANGE RECEPTACLE WITH 1" C.-3 #6, #10 GND, TO PANEL.
- PROVIDE JUNCTION.
- ENCLOSED SAFETY SWITCH NON-FUSED, RATING AND CIRCUITING AS INDICATED ON THE PLANS. FIELD-LOCATE TO ASSURE 36" FRONT CLEARANCE.
- ENCLOSED SAFETY SWITCH FUSED, RATING AND CIRCUITING AS INDICATED ON THE PLANS. FIELD-LOCATE TO ASSURE 36" FRONT CLEARANCE.
- MOTOR RATED 20A SNAP SWITCH FOR DISCONNECT MEANS.
- ELECTRICAL PANEL. SEE RISER PANEL SCHEDULES.
- CIRCUIT CONDUCTORS IN CONDUIT OR CABLE. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. 120V CIRCUIT HOMERUNS LONGER THAN 100FT SHALL BE #10 AWG, MINIMUM. PROVIDE DEDICATED GREEN EQUIPMENT GROUNDING CONDUCTOR IN ALL RACEWAYS. MC CABLE ALLOWED IN CONCEALED LOCATIONS, WHERE ALLOWED BY CODE.
- CONDUCTORS IN CONDUIT, CONCEALED IN WALLS, CEILING, OR BELOW GRADE. HOMERUN TO PANEL INDICATED.
- CEILING-MOUNTED EXHAUST FAN. COORDINATE WITH MECHANICAL.
- ELECTRIC MOTOR.
- AUTOMATIC TRANSFER SWITCH.
- GENERATOR ANNUNCIATOR PANEL.
- EMERGENCY POWER OFF PUSH BUTTON.
- ROLLING DOOR CONTROL UP/DOWN/STOP. FURNISHED WITH ROLLING DOOR. COORDINATE INSTALLATION WITH MANUFACTURER'S RECOMMENDATIONS.
- FIRE ALARM SYSTEM DUCT SMOKE DETECTOR, WITH REMOTE INDICATOR AND SHUTDOWN RELAY. FIELD COORDINATE LOCATION WITH MECHANICAL INSTALLER.
- FIRE ALARM SYSTEM SMOKE DETECTOR
- FIRE ALARM SYSTEM MANUAL PULL STATION MOUNT AT 48" A.F.F.
- FIRE ALARM SYSTEM HORN/STROBE DEVICE. MOUNT 84" A.F.F. 75/110 CANDELA FIELD-SELECTABLE, UNLESS NOTED OTHERWISE.
- FIRE ALARM SYSTEM STROBE DEVICE. MOUNT 84" A.F.F. 75/110 CANDELA FIELD-SELECTABLE, UNLESS NOTED OTHERWISE.
- FIRE ALARM SYSTEM TAMPER SWITCH.
- FIRE ALARM SYSTEM FLOW SWITCH.
- FIRE ALARM CONTROL PANEL.
- COMMUNICATIONS OUTLET, MOUNTED 18" A.F.F. UNLESS NOTED OTHERWISE. PROVIDE DEVICE BOX, WITH 3/4" C. STUBBED INTO ACCESSIBLE CEILING SPACE. PROVIDE (2) CAT-6 CABLES TO TELCOM BACKBOARD.
- COMMUNICATIONS OUTLET, MOUNTED ABOVE WORK SURFACE (44" A.F.F. UNLESS NOTED OTHERWISE). PROVIDE DEVICE BOX, WITH 3/4" C. STUBBED INTO ACCESSIBLE CEILING SPACE. PROVIDE (2) CAT-6 CABLES TO TELCOM BACKBOARD. WHERE "TV" IS INDICATED, ALSO PROVIDE RG6 CABLING TO TELCOM BACKBOARD.
- COMMUNICATIONS BACKBOARD.

ABBREVIATIONS

- EWC
- WP



877 CR 393 North
Santa Rosa Beach, FL 32459
850.267.0759

CHOCTAW BEACH FIRE STATION
BOARD OF COUNTY COMMISSIONERS
WALTON COUNTY
FLORIDA

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FOR CONSTRUCTION

SCALE: AS NOTED

APPLIED RESEARCH AND DESIGN, INC.
2623 S. BLAIR STONE ROAD
TALLAHASSEE, FL 32301
FL CA8948
JAMES M. LAMB, PE#52688
Tel: (850) 668-6324 -- E-mail: jmlamb@ard-eng.com

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY _____ MRC
APPROVED BY _____ JML
CHECKED BY _____ JML
DATE _____ MAY 2022

TITLE

LEGEND & NOTES

PROJECT NO. 50144269

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TALLAHASSEE, FL 32301
FL CA#8948
JAMES M. LAMB, PE#52688
Tel: (850) 668-6324 -- E-mail: jlamb@ard-eng.com

REVISIONS

NO.	DESCRIPTION	DATE

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APPROVED BY	_____	JML
CHECKED BY	_____	JML
DATE	_____	MAY 2022

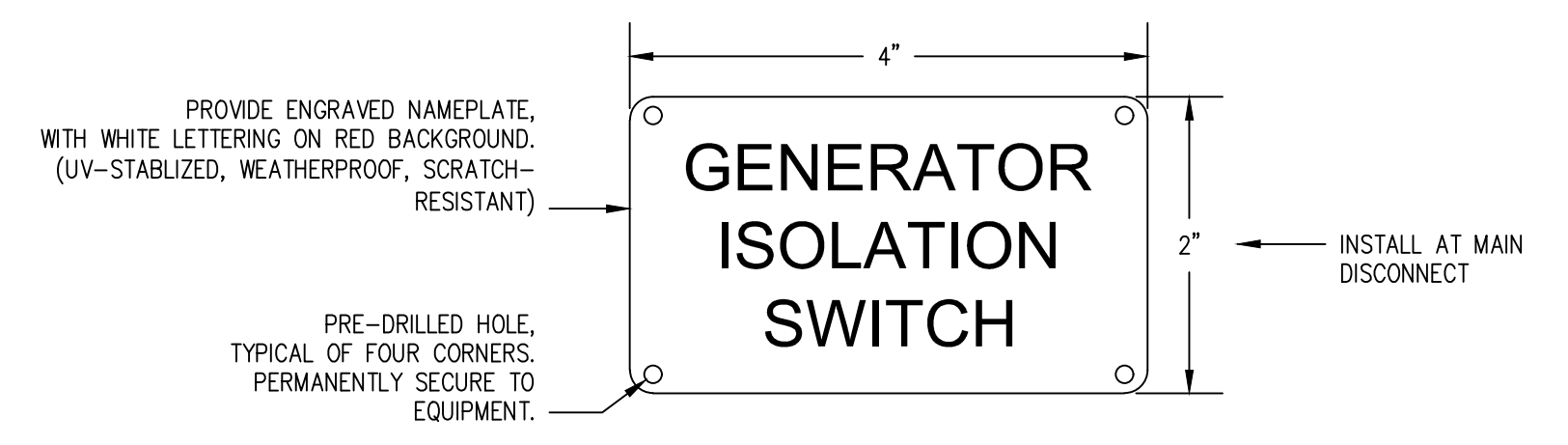
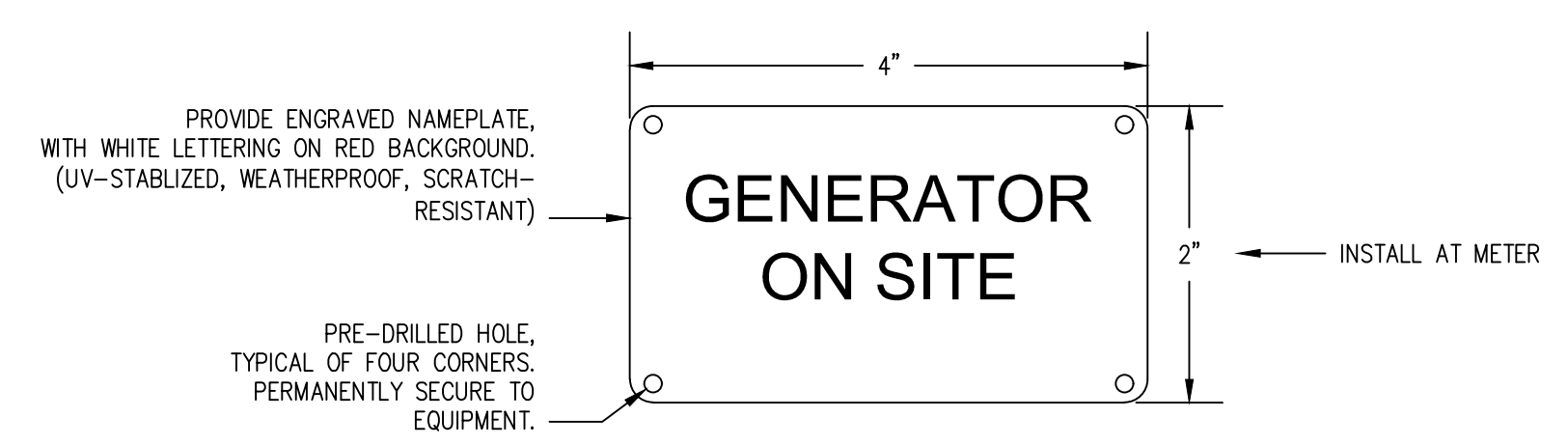
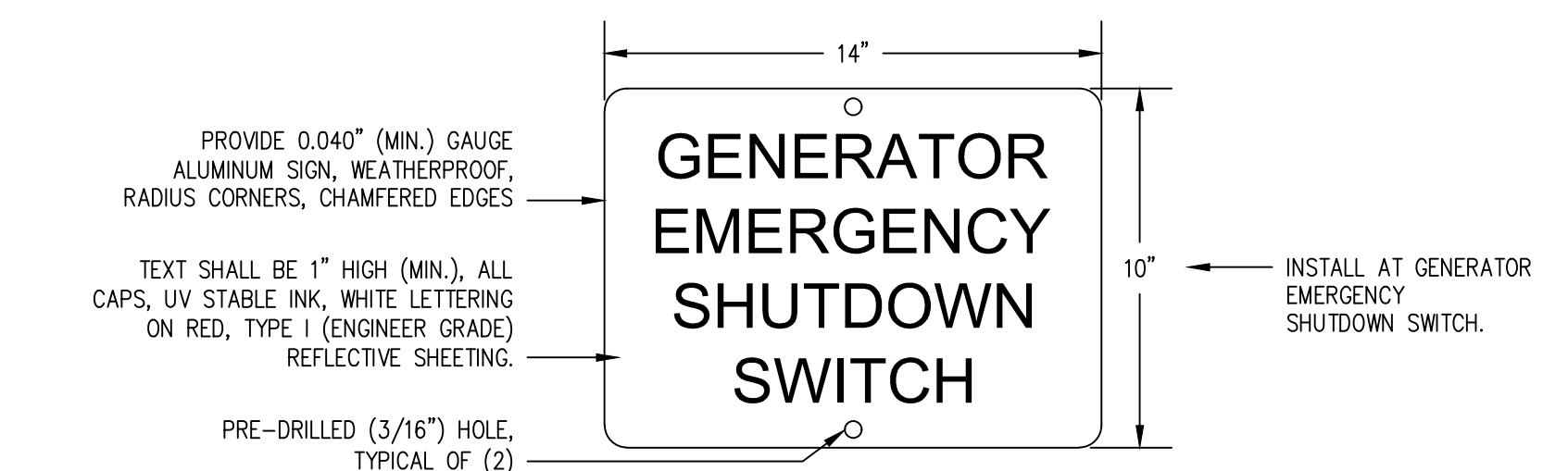
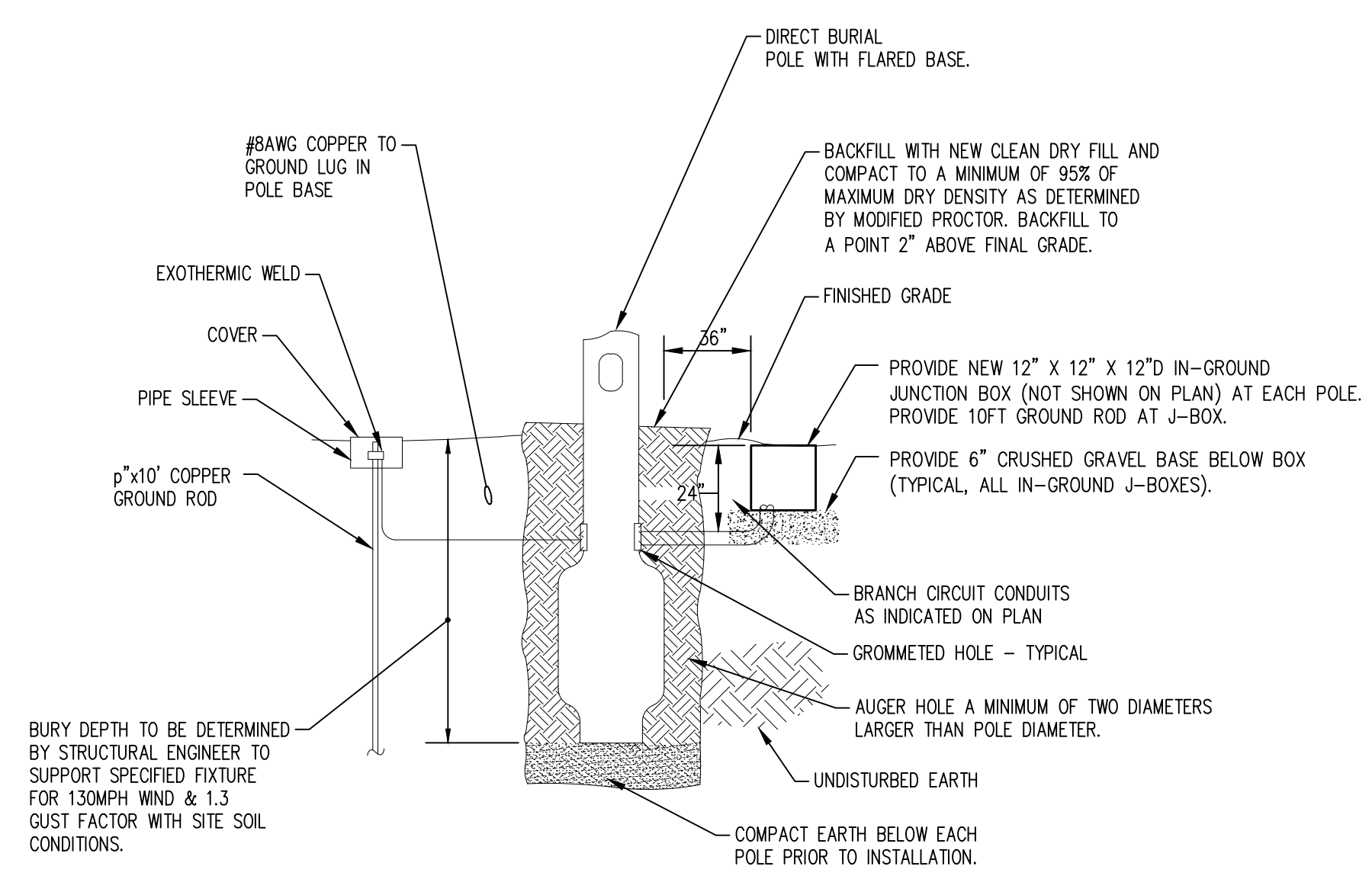
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DETAILS

PROJECT NO. _____ 50144269

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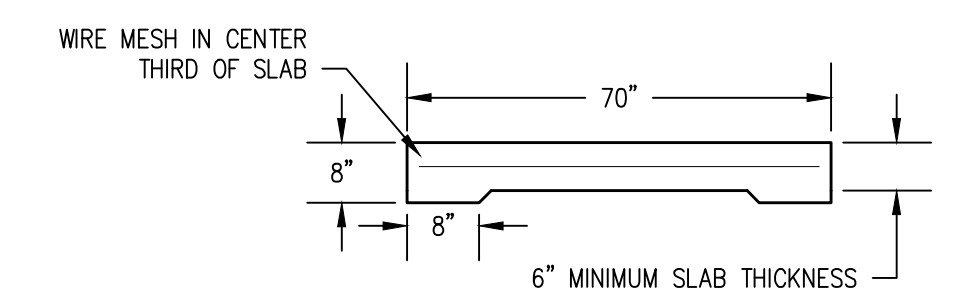
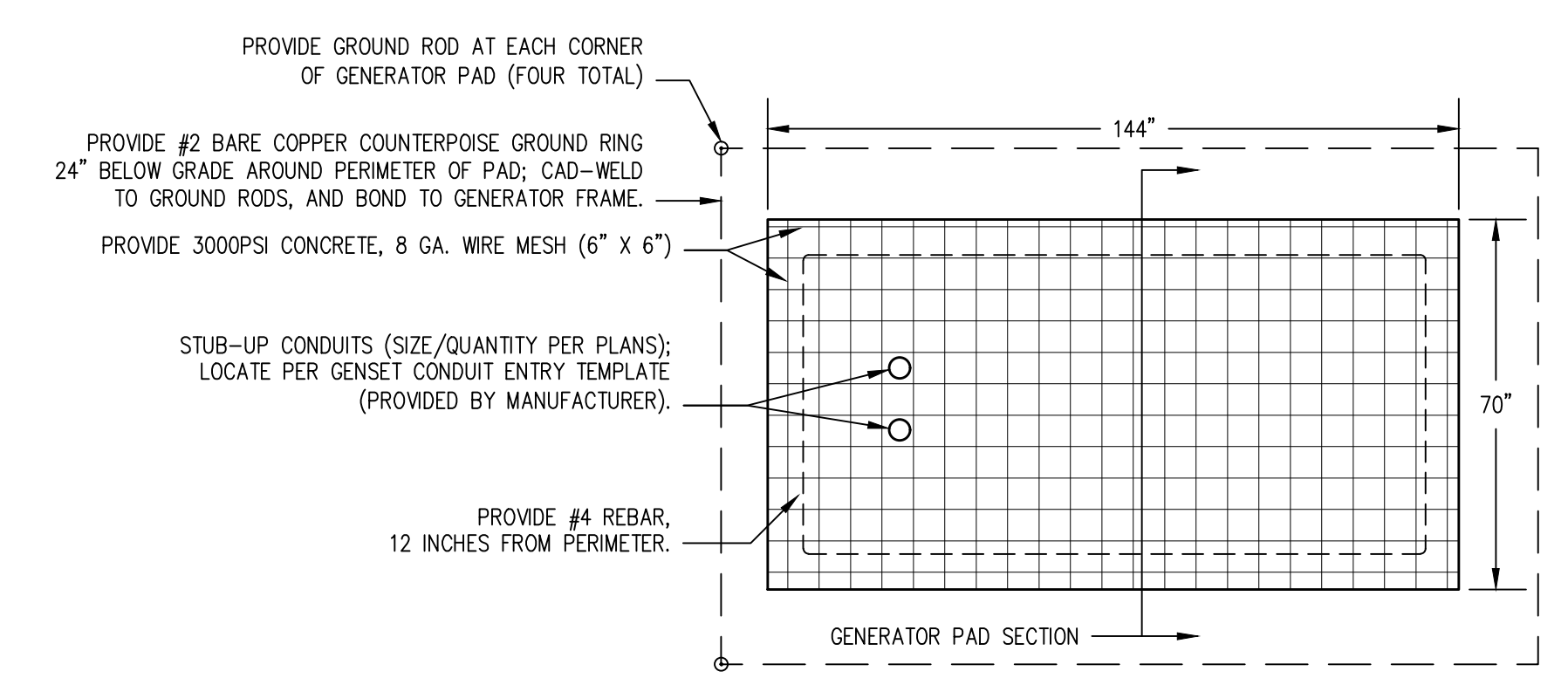
SHEET NO.



GENERAL SIGN NOTES:

- SEE PLANS, ELEVATION, AND RISER FOR SIGN LOCATIONS.
- PROVIDE ATTACHMENT MEANS AS NECESSARY TO PERMANENTLY AND SECURELY ATTACH SIGN TO EQUIPMENT.

GENERATOR SIGN DETAILS
NO SCALE

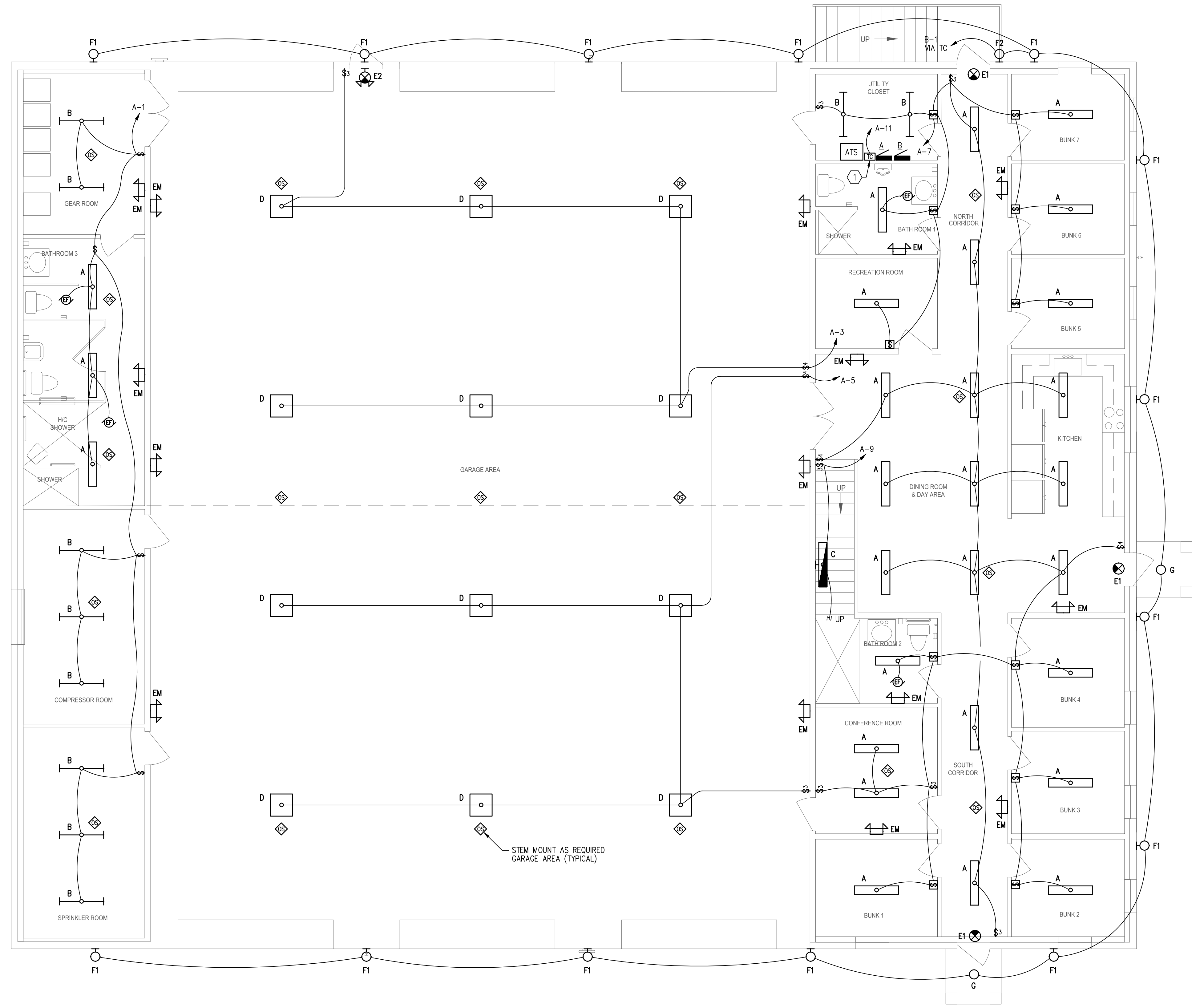


NOTES:

- LEVEL AND COMPACT SITE AS MAY BE REQUIRED PRIOR TO FORMING PAD. GRADE TO ASSURE PAD DOES NOT CREATE DRAINAGE ISSUES.
- ANCHOR BOLTS SHALL BE CAST INTO SURFACE OF PAD; SIZE, QUANTITY, AND LOCATION OF ANCHOR BOLTS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

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- GENERAL NOTES:**
(THIS SHEET ONLY)
1. PROVIDE POWER PACKS AS REQUIRED FOR OCCUPANCY SENSORS.
 2. ALL WALL MOUNTED OCCUPANCY SENSORS ARE MANUAL ON/AUTOMATIC OFF.
 3. PROVIDE ALL LOW VOLTAGE CONTROL CABLING FOR LIGHTING, PLENUM RATED.
 4. PROVIDE SEPARATE NEUTRAL FOR EACH 120V BRANCH CIRCUIT.

- WORK NOTES:**
(THIS SHEET ONLY)
1. 2 CHANNEL 24 HOUR/7 DAY PROGRAMMABLE ASTRONOMICAL TIME CLOCK (WITH BATTERY BACKUP) AS MANUFACTURED BY TORK OR APPROVED EQUAL. PROVIDE CONTACTOR(S) AS REQUIRED TO SERVE ALL CIRCUITS SHOWN.



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FOR CONSTRUCTION

SCALE: AS NOTED

APPLIED RESEARCH AND DESIGN, INC.
2623 S. BLAIR STONE ROAD
TALLAHASSEE, FL 32301
FL CA#8948
JAMES M. LAMB, PE#52688
Tel: (850) 668-6324 -- E-mail: jlamb@ard-eng.com

REVISIONS

NO.	DESCRIPTION	DATE

DRAWN BY	_____	MRC
APPROVED BY	_____	JML
CHECKED BY	_____	JML
DATE	_____	MAY 2022

TITLE

FIRST FLOOR PLAN - LIGHTING

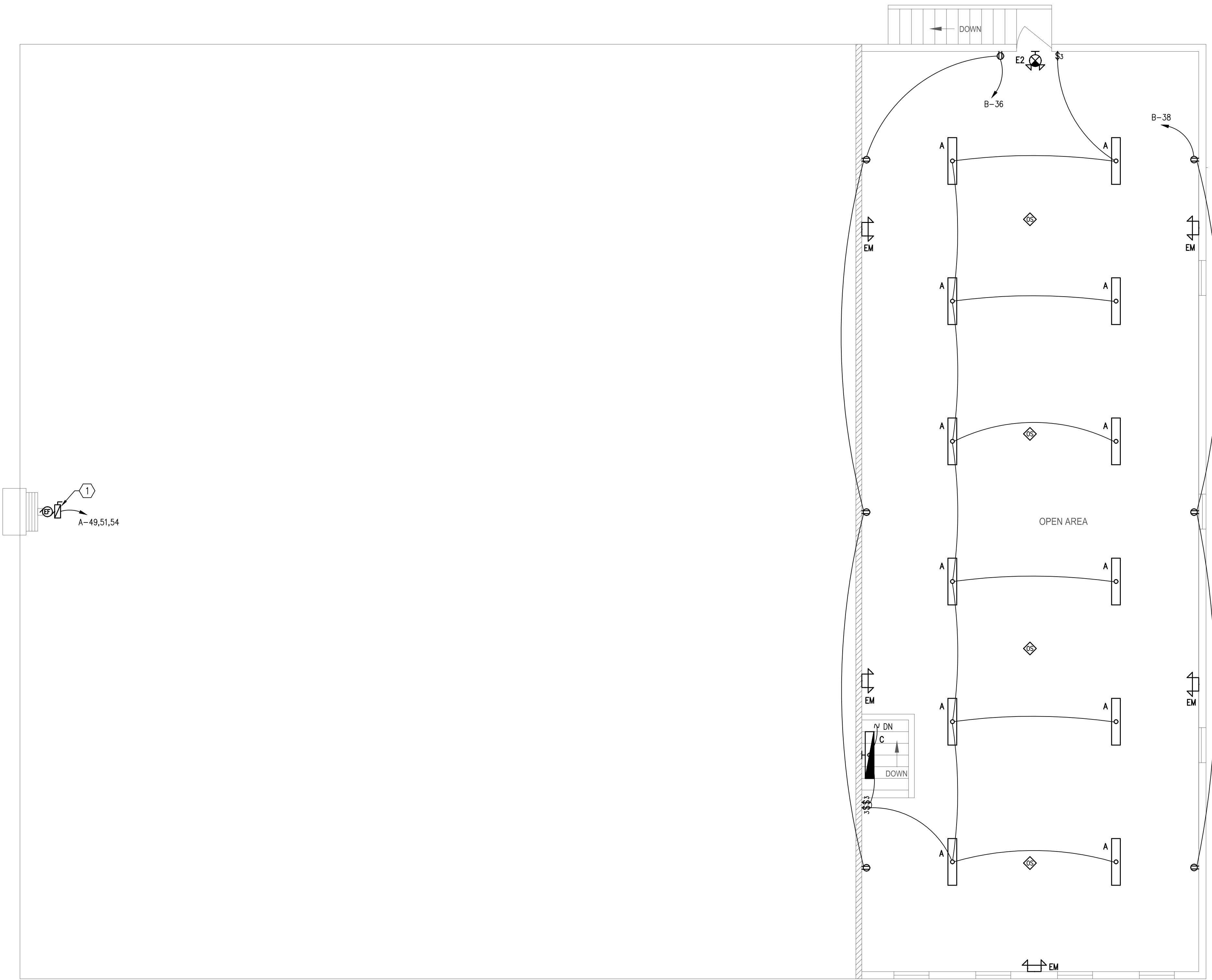
PROJECT NO. _____ 50144269

E1.2

SHEET NO.

FIRST FLOOR PLAN - LIGHTING
SCALE: 3/16" = 1' - 0"

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- GENERAL NOTES:**
(THIS SHEET ONLY)
1. PROVIDE POWER PACKS AS REQUIRED FOR OCCUPANCY SENSORS.
 2. ALL WALL MOUNTED OCCUPANCY SENSORS ARE MANUAL ON/AUTOMATIC OFF.
 3. PROVIDE ALL LOW VOLTAGE CONTROL CABLING FOR LIGHTING, PLENUM RATED.
 4. PROVIDE SEPARATE NEUTRAL FOR EACH 120V BRANCH CIRCUIT.

- WORK NOTES:**
(THIS SHEET ONLY)
- ① VEHICLE EXHAUST SYSTEM; PROVIDE NEW 30A/3P 240V FUSED NEMA-1 SAFETY SWITCH (FUSED AS RECOMMENDED BY MANUFACTURER), WITH 3/4" C.-3 #10, #10 GND, TO PANEL. PROVIDE CONNECTION TO OVERHEAD DOOR SWITCH TO SIGNAL FAN "ON" AND TO RUN A SPECIFIED TIME AFTER DOORS CLOSE (BOOSTER FAN WITH EXHAUST HOOK-UP). VERIFY REQUIREMENTS, VOLTAGE, SIZE, ETC. WITH VENDOR PRIOR TO ROUGH-IN AND MAKE ALL CONNECTIONS AS REQUIRED.



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2623 S. BLAIR STONE ROAD
TALLAHASSEE, FL 32301
FL CA#8948
JAMES M. LAMB, PE#52688
Tel: (850) 668-6324 -- E-mail: jlamb@ard-eng.com

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 CHECKED BY _____ JML
 DATE _____ MAY 2022

TITLE

SECOND FLOOR PLAN - ELECTRICAL

PROJECT NO. 50144269

E1.3

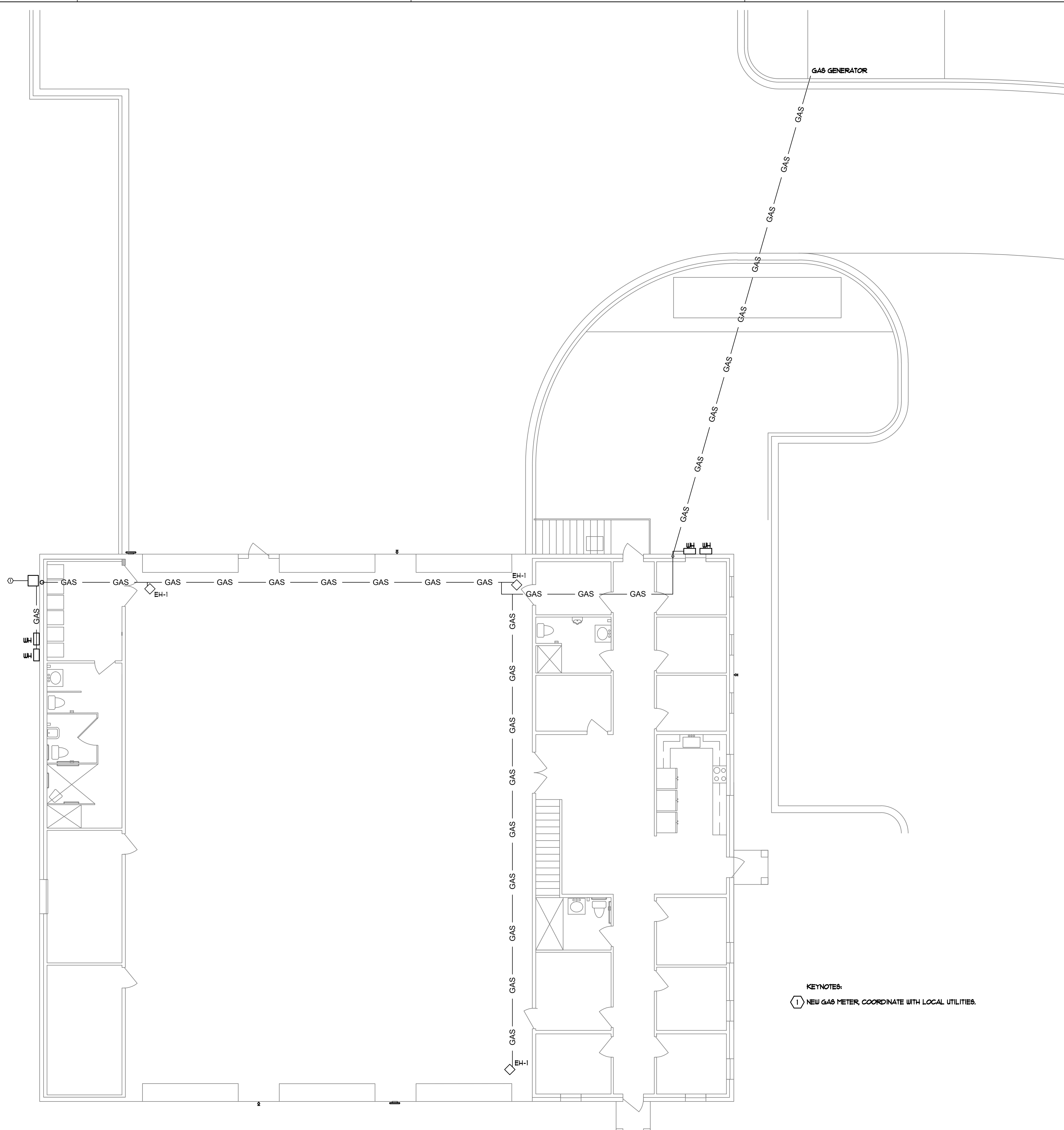
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SECOND FLOOR PLAN - ELECTRICAL
SCALE: 3/16" = 1' - 0"

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KEYNOTES:
① NEW GAS METER, COORDINATE WITH LOCAL UTILITIES.

FUEL GAS PLAN
SCALE: 1/8" = 1'-0"



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ROBIN WINTON PE
PE 56206

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Winton Engineering, P.A.
Robin Winton, P.E.
2201 WOODBINE DR.
TALLAHASSEE, FL 32308 850-894-9376
FL 766206

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FUEL GAS PLAN

PROJECT NO. 50144269

FG1.0

SHEET NO.

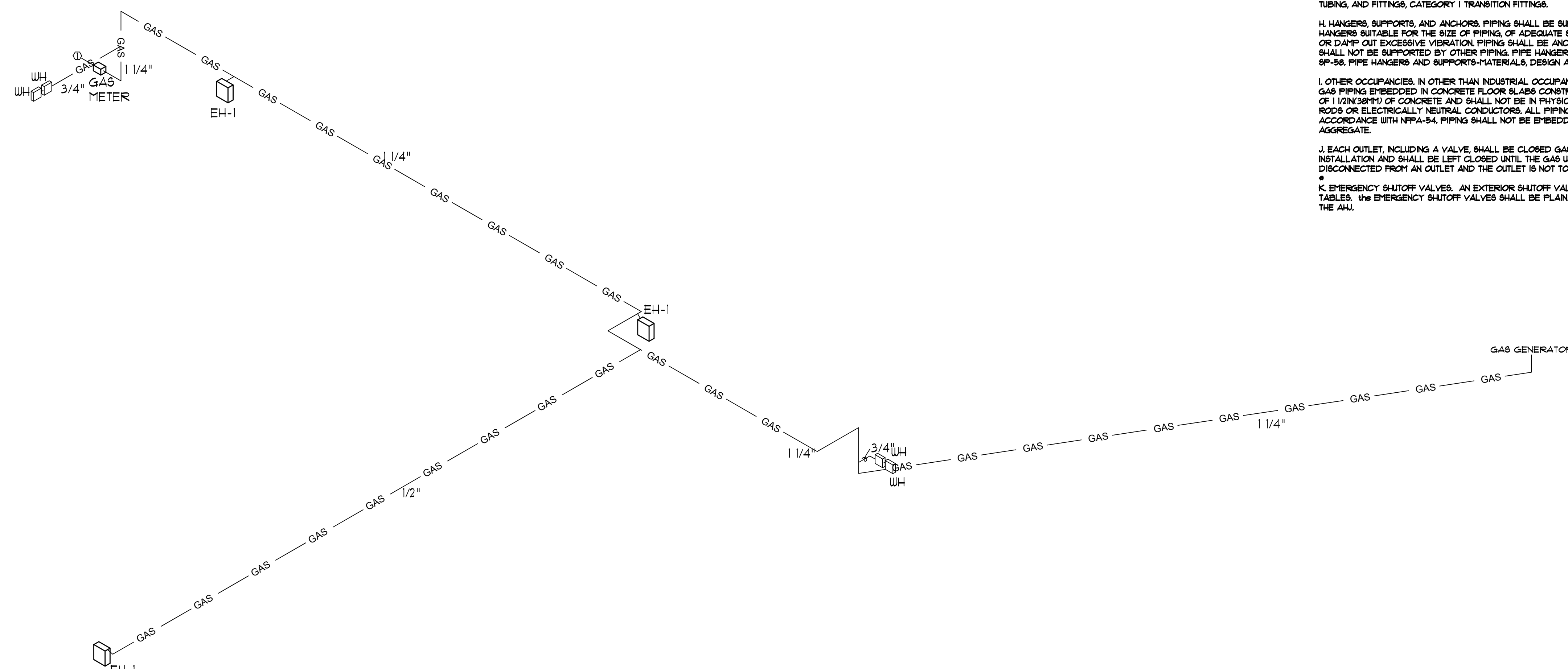
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FUEL GAS RISER
SCALE: NTS

GAS NOTES:

- 1. GENERAL**
- A. INSTALL GAS PIPING, APPLIANCES, AND SPECIALTIES IN ACCORDANCE WITH INTERNATIONAL FUEL GAS CODE 2009, NFPA-54.**
- B. CLEARANCES: UNDERGROUND GAS PIPING SHALL BE INSTALLED WITH SUFFICIENT CLEARANCE FROM ANY OTHER UNDERGROUND STRUCTURE TO AVOID CONTACT THEREWITH, TO ALLOW MAINTENANCE, AND TO PROTECT AGAINST DAMAGE FROM PROXIMITY TO OTHER STRUCTURES. IN ADDITION UNDERGROUND PLASTIC PIPING SHALL BE INSTALLED WITH SUFFICIENT CLEARANCE OR SHALL BE INSULATED FROM ANY SOURCE OF HEAT SO AS TO PREVENT THE HEAT FROM IMPAIRING THE SERVICEABILITY OF THE PIPE.**
- C. COVER REQUIREMENTS: UNDERGROUND PIPING SYSTEMS SHALL BE INSTALLED WITH A MINIMUM OF 18"(460MM) OF COVER WHERE EXTERNAL DAMAGE TO THE PIPE IS NOT LIKELY TO RESULT, THE MINIMUM COVER SHALL BE 12"(300MM) WHERE A MINIMUM OF 12"(300MM) OF COVER CANNOT BE PROVIDED, THE PIPE SHALL BE INSTALLED IN CONDUIT OR BRIDGED(SHIELDED).**
- D. THROUGH FOUNDATION WALL, UNDERGROUND PIPING, WHERE INSTALLED THROUGH THE OUTER FOUNDATION OR BASEMENT WALL OF A BUILDING, SHALL BE ENCASED IN A PROTECTIVE PIPE. THE SPACE BETWEEN THE GAS PIPING AND THE BUILDING SHALL BE SEALED TO PREVENT ENTRY OF GAS OR WATER.**
- E. PIPING UNDERGROUND BENEATH BUILDINGS, WHERE THE INSTALLATION OF GAS PIPING UNDERGROUND BENEATH BUILDINGS IS UNAVOIDABLE, THE PIPING SHALL BE ENCASED IN AN APPROVED CONDUIT DESIGNED TO WITHSTAND THE SUPERIMPOSED LOADS. THE CONDUIT SHALL EXTEND INTO A NORMALLY USABLE AND ACCESSIBLE PORTION OF THE BUILDING AND, AT THE POINT WHERE THE CONDUIT TERMINATES IN THE BUILDING, THE SPACE BETWEEN THE CONDUIT AND THE GAS PIPING SHALL BE SEALED TO PREVENT THE POSSIBLE ENTRANCE OF ANY GAS LEAKAGE WHERE THE END SEALING IS OF A TYPE THAT WILL RETAIN THE FULL PRESSURE OF THE PIPE. THE CONDUIT SHALL BE DESIGNED FOR THE SAME PRESSURE AS THE PIPE. THE CONDUIT SHALL EXTEND AT LEAST 4"(100MM) OUTSIDE THE BUILDING, BE VENTED ABOVE GRADE TO THE OUTSIDE, AND BE INSTALLED SO AS TO PREVENT THE ENTRANCE OF WATER AND INSECTS.**
- F. CONNECTION OF PLASTIC PIPING: PLASTIC PIPE SHALL BE INSTALLED OUTSIDE, UNDERGROUND ONLY.**
- G. CONNECTIONS BETWEEN METALLIC AND PLASTIC PIPING: CONNECTIONS MADE OUTSIDE AND UNDERGROUND BETWEEN METALLIC AND PLASTIC PIPING SHALL BE MADE ONLY WITH ASTM D 2515, STANDARD SPECIFICATION FOR THERMOPLASTIC GAS PRESSURE PIPE, TUBING, AND FITTINGS, CATEGORY 1 TRANSITION FITTINGS.**
- H. HANGERS, SUPPORTS, AND ANCHORS: PIPING SHALL BE SUPPORTED WITH PIPE HOOKS, METAL PIPE STRAPS, BANDS, BRACKETS, OR HANGERS SUITABLE FOR THE SIZE OF PIPING, OF ADEQUATE STRENGTH AND QUALITY, AND LOCATED AT INTERVALS SO AS TO PREVENT OR DAMP OUT EXCESSIVE VIBRATION. PIPING SHALL BE ANCHORED TO PREVENT UNCLE STRAINS ON CONNECTED EQUIPMENT AND SHALL NOT BE SUPPORTED BY OTHER PIPING. PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF ANSI/MSS SP-58. PIPE HANGERS AND SUPPORTS-MATERIALS, DESIGN AND MANUFACTURE.**
- I. OTHER OCCUPANCIES: IN OTHER THAN INDUSTRIAL OCCUPANCIES AND WHERE APPROVED BY THE AUTHORITY HAVING JURISDICTION, GAS PIPING EMBEDDED IN CONCRETE FLOOR SLABS CONSTRUCTED WITH PORTLAND CEMENT SHALL BE SURROUNDED WITH A MINIMUM OF 1"(25MM) OF CONCRETE AND SHALL NOT BE IN PHYSICAL CONTACT WITH OTHER METALLIC STRUCTURES SUCH AS REINFORCING RODS OR ELECTRICALLY NEUTRAL CONDUCTORS. ALL PIPING, FITTINGS, AND RISERS SHALL BE PROTECTED AGAINST CORROSION IN ACCORDANCE WITH NFPA-54. PIPING SHALL NOT BE EMBEDDED IN CONCRETE SLABS CONTAINING QUICKSET ADDITIVES OR CINDER AGGREGATE.**
- J. EACH OUTLET, INCLUDING A VALVE, SHALL BE CLOSED GAS TIGHT WITH A THREADED PLUG OF CAP IMMEDIATELY AFTER INSTALLATION AND SHALL BE LEFT CLOSED UNTIL THE GAS UTILIZATION EQUIPMENT IS CONNECTED THERETO. WHEN EQUIPMENT IS DISCONNECTED FROM AN OUTLET AND THE OUTLET IS NOT TO BE USED AGAIN IMMEDIATELY, IT SHALL BE CLOSED GAS TIGHT.**
- K. EMERGENCY SHUTOFF VALVES: AN EXTERIOR SHUTOFF VALVE TO PERMIT TURNING OFF THE GAS TO EACH LEG SERVING THE GRIDDLE TABLES. THE EMERGENCY SHUTOFF VALVES SHALL BE PLAINLY MARKED AS SUCH AND THEIR LOCATIONS POSTED AS REQUIRED BY THE AHJ.**

GAS LOAD:	BTUH
EH-1 GAS HEATER 3 @ 30,000	90,000
WATER HEATERS 4 @ 193,000	772,000
GENERATOR	138,000
TOTAL	220,000

SIZING BASED ON 100 FT. EQUIVALENT LENGTH WITH METAL LESS THAN 2 PSI WITH 0.5 INIC PRESSURE DROP, 60 SPECIFIC GRAVITY, TABLE 402.4(B). PROVIDE REGULATOR AT EACH APPLIANCE AS REQUIRED, REFER TO MANUFACTURERS DATA. UNDERGROUND PIPING SHALL BE MADE OF CORROSION RESISTANT MATERIAL WITH A FACTORY APPLIED ELECTRICALLY INSULATING COATING. PIPE SHALL HAVE A CATHODIC PROTECTION SYSTEM INSTALLED AND MAINTAINED AND MONITORED. PIPE SHALL BE BURIED MINIMUM OF 12" BELOW GRADE. PLASTIC PIPE TO HAVE A COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR.



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ROBIN WINTON PE
PE 56206

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Winton Engineering, P.A.
Robin Winton, P.E.
2201 WOODBINE DR.
TALLAHASSEE, FL 32308 850-894-9376
FL 766206

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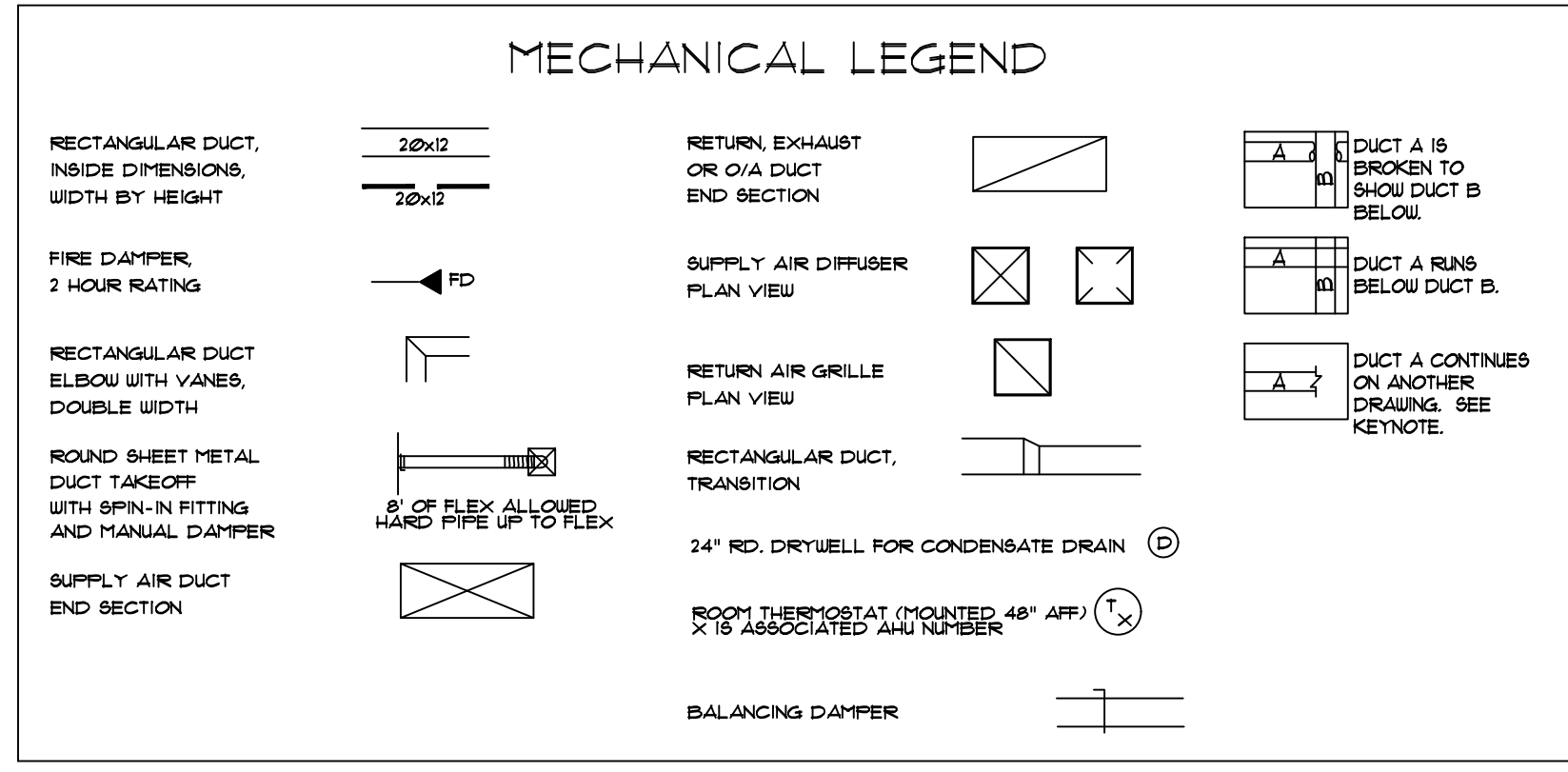
FUEL GAS RISER NOTES

PROJECT NO. 50144269

FG2.0

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CEILING DIFFUSER SCHEDULE

SYMBOL	AIR QUANTITY	NECK SIZE	RUNOUT SIZE	FACE DIMENSION HARD CEILING LAY-IN CEILING
☒	0 - 60	6"	8"	12 x 12 24 x 24
☒	65 - 150	8"	8"	16 x 16 24 x 24
☒	155 - 195	8"	10"	16 x 16 24 x 24
☒	200 - 250	10"	10"	20 x 20 24 x 24
☒	255 - 395	10"	12"	20 x 20 24 x 24
☒	400 - 550	12"	12"	24 x 24 24 x 24
☒	555 - 595	12"	14"	24 x 24 24 x 24
☒	600 - 745	14"	14"	24 x 24 24 x 24
☒	750 - 1000	16"	16"	30 x 30 30 x 30

CEILING RETURN AIR OR EXHAUST REGISTER SCHEDULE

SYMBOL	CFM	SIZE	RUNOUT SIZE
☒	0 - 75	8 x 6	10 x 6
☒	80 - 105	10 x 6	12 x 6
☒	110 - 115	10 x 10	12 x 8
☒	180 - 210	12 x 12	14 x 8
☒	215 - 325	18 x 12	20 x 8
☒	330 - 800	24 x 24	26 x 10
☒	805 - 1200	24 x 24	26 x 12
☒	1205 - 1500	24 x 24	26 x 14

* THESE SIZES ARE TO BE USED UNLESS OTHERWISE NOTED ON DRAWINGS.
 1. ALL DIFFUSERS TO BE TITUS TYPE T16 OR EQUAL.
 2. RETURN GRILLES TO BE TITUS 330RL TYPE.

EXHAUST FAN SCHEDULE

UNIT DESIGNATION	EF-1	EF-2	EF-3	EF-4
AIR FLOW	CFM 140	10	800	380
STATIC PRESSURE	IN. WC 0.5	0.5	0.5	0.5
FAN MOTOR POWER	HP 150W	100W	200 HP	110W
FAN SPEED	RPM 1050	732	1725	1050
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
SONES	3.5	1.5	11	3.5
WEIGHT	LBS 10	10	10	10
ELECTRICAL CHARACTERISTICS	V/PH 115/1	115/1	115/1	115/1
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	COOK
MODEL NUMBER	SP-B150	SP-B10	SE10-440	GC-542

NOTES:
 1. MOUNT ALL EXHAUST FANS IN ACCORDANCE WITH MFG INSTRUCTIONS.
 2. PROVIDE FAN SPEED CONTROLLERS FOR ALL EXHAUST FANS.
 3. WIRE EXHAUST FANS IN ROOM THEY SERVE TO LIGHT SWITCH.
 4. PROVIDE BACK-DRAFT DAMPER FOR ALL EXHAUST EXHAUST FAN FOR ELECTRICAL ROOM TO RUN CONTINUOUSLY.

MECHANICAL GENERAL NOTES

- THE WORK DESCRIBED HEREINAFTER SHALL BE INSTALLED SUBJECT TO THE NON TECHNICAL SPECIFICATIONS, THIS SECTION APPLIES TO ALL AIR CONDITIONING, SHEETMETAL, PIPING, AND AUTOMATIC TEMPERATURE CONTROLS WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF OTHER TRADES. SEE ARCHITECTURAL SECTIONS FOR A DESCRIPTION OF WORK AND SEQUENCE OF CONSTRUCTION. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC IN NATURE. THEY ARE, HOWEVER, AS ACCURATE AS SCALE PERMITS AND THE CONTRACTOR SHALL FOLLOW THEM AS CLOSELY AS POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL CONDITIONS RELATING TO THE WORK IN THE FIELD PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL VERIFY ALL WALLS, PARTITIONS, AND STRUCTURAL SYSTEMS BEFORE INSTALLATION AND FABRICATION OF ANY DUCTWORK OR PIPING SYSTEMS. ALL OFFSETS REQUIRED FOR INSTALLATION OF DUCTWORK, OR PIPING SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO THE OWNER. THE ENGINEER SHALL BE THE SOLE INTERPRETER OF THE DRAWINGS.
- ALL MATERIALS SHALL BE NEW AND OF BEST QUALITY AND SHALL BE THE PRODUCTS OF REPUTABLE MANUFACTURERS. MATERIALS AND EQUIPMENT SHALL BE PROPERLY STORED AND PROTECTED FROM THE WEATHER AT ALL TIMES DURING CONSTRUCTION TO PREVENT UNNECESSARY CORROSION AND FOULING. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER BY SKILLED AND COMPETENT MECHANICS. ANY WORKER CONSIDERED INCOMPETENT OR UNFIT FOR WORK ON THIS CONSTRUCTION PROJECT SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR UNDER THE DIRECTION OF THE ENGINEER.
- THE WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, ORDINANCES, ETC., WHETHER FEDERAL, STATE OR LOCAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ANY PERMITS AND PAYING ANY FEES REQUIRED IN ORDER TO PROCEED WITH THE WORK.
- THE CONTRACTOR IS REQUIRED TO ATTEND ALL CONSTRUCTION CONFERENCES INCLUDING THE PRE-BID CONFERENCE, THE PRE-CONSTRUCTION CONFERENCE AND THE OWNER'S PROGRESS MEETINGS AS SCHEDULED BY THE ARCHITECT OR THE OWNER. FAILURE TO MAKE REFERENCES IN THE SPECIFICATIONS TO ANY ITEMS OF THE WORK SHOWN BY THE DRAWINGS, AND NECESSARY TO THE COMPLETION OF THE WORK, SHALL NOT RELIEVE THE CONTRACTOR OF THE FULL RESPONSIBILITY TO FURNISH THE MATERIALS AND PERFORM THE WORK OF SUCH ITEMS, IN A MANNER COMPARABLE TO OTHER ITEMS OF SIMILAR NATURE FOR WHICH DETAILED SPECIFICATIONS ARE INCLUDED. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO CLEARLY SET FORTH ALL WORK, AND THE DETAILED DESCRIPTION IS ADDED TO ASSIST IN ESTABLISHING THE SCOPE AND THE LOCATION OF THE SEVERAL PARTS OF THE WORK. COLLECTIVELY, THEY SHALL GOVERN AND CONTROL THE SCOPE, CHARACTER AND DESIGN OF THE WORK, AND ANY ITEM CALLED FOR IN ANY ONE OF THE DOCUMENTS SHALL BE AS THOUGH REQUIRED IN ALL.
- ALL CUTTING AND PATCHING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADES INVOLVED. ALL CUTTING SHALL BE DONE IN SUCH A MANNER AS NOT TO ENDANGER OR DAMAGE FACILITIES. ALL PATCHING SHALL FINISH FLUSH AND SMOOTH AND SHALL MATCH EXISTING ADJOINING SURFACES.
- SEE GENERAL REQUIREMENTS FOR ELECTRICITY AND WATER. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL FUEL REQUIRED FOR THE OPERATION OF HIS CONSTRUCTION EQUIPMENT.
- ALL FINISHED FIELD INSTALLED PRESSURE PIPING SYSTEMS SHALL BE TESTED.
- WORK CONSISTS OF FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, SCAFFOLDING SERVICES, SUPERVISION, PLANT, AND PERFORMING ALL OPERATIONS REQUIRED TO PROPERLY COMPLETE ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS AND AS INDICATED ON THE APPLICABLE DRAWINGS, SUBJECT TO TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR IS REQUIRED TO HAVE A QUALIFIED AND EXPERIENCED GENERAL SUPERINTENDENT AND EXPERIENCED SUPERINTENDENT FOR EACH TRADE INVOLVED ON THE JOB WHEN ANY WORK IS IN PROGRESS. ALL WORK SHALL CONFORM WITH ALL LOCAL AND STATE ORDINANCES OR REGULATIONS GOVERNING THE INSTALLATION OF SUCH EQUIPMENT. IF WORK IS LAID OUT, INDICATED OR SPECIFIED IS RECOGNIZED TO BE CONTRARY TO OR CONFLICTING WITH LOCAL ORDINANCES OR REGULATIONS, THE CONTRACTOR SHALL REPORT SAME TO THE ENGINEER BEFORE SUBMITTING A BID. THE ENGINEER WILL THEN ISSUE INSTRUCTIONS AS TO PROCEDURE. IF CONTRACTOR FAILS TO NOTIFY THE ENGINEER OF CONFLICTS OR OMISSIONS NOTED ABOVE, ALL CHANGES REQUIRED TO COMPLY WITH ORDINANCES AND REGULATIONS SHALL BE MADE WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- THE LATEST EDITIONS OF THE ESTABLISHED STANDARDS OF THE FOLLOWING ORGANIZATIONS, AND INDIVIDUAL STANDARDS NAMED HEREIN AND CONSTITUTE A PART OF THE SPECIFICATION REQUIREMENTS EXCEPT WHERE OTHERWISE SPECIFIED:
 1. FLORIDA BUILDING CODE, 2020 1TH EDITION.
 2. FLORIDA PLUMBING CODE, 2020 1TH EDITION.
 3. FLORIDA MECHANICAL CODE, 2020 1TH EDITION.
 4. NFPA 10 NATIONAL ELECTRICAL CODE
 5. NFPA 101 LIFE SAFETY CODE
 6. NFPA 30A STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
 7. NFPA 91 STANDARD FOR THE INSTALLATION OF BLOWER AND EXHAUST SYSTEMS
 8. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
 THE FOREGOING RULES, STANDARDS, REGULATIONS, SPECIFICATIONS, RECOMMENDATIONS AND REQUIREMENTS SHALL BE FOLLOWED BY THE CONTRACTOR AS MINIMUM REQUIREMENTS. THEY SHALL NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING HIGHER GRADES OF MATERIALS AND WORKMANSHIP WHICH ARE SPECIFIED HEREIN OR INDICATED ON THE DRAWINGS.
- THE INTERIOR FACE OF DUCTWORK HOUSING SUPPLY, RETURN OR EXHAUST AIR DIFFUSERS, REGISTERS OR GRILLES SHALL BE PAINTED "FLAT-BLACK" SO WHEN VIEWED FROM BELOW AND ABOVE NOTHING BEYOND SURFACE OF AIR DEVICE IS VISIBLE.
- THERMOSTAT/SENSOR WIRING TO BE RUN INSIDE WALLS/COLUMNS OR IN ATTIC SPACE. THE USE OF WIRETOLD OR EXTERNAL RACEWAY SHALL BE APPROVED BY THE ENGINEER.
- A COMPLETE CERTIFIED TEST AND BALANCE REPORT SHALL BE SUPPLIED BY AN INDEPENDENT CERTIFIED TEST AND BALANCE AGENCY TO THE ENGINEER IN WRITING PER AAAC TEST AND BALANCE REPORT MANUAL (LATEST EDITION) PRIOR TO JOB ACCEPTANCE BY OWNER. THE REPORT SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF FLORIDA.
- THE SUBMISSION OF A BID OR PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS, SPECIFICATIONS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND/OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS THE DIFFICULTIES COULD NOT HAVE BEEN FORESEEN EVEN THOUGH PROPER EXAMINATION HAD BEEN MADE.
- ALL POWER WIRING, RELAYS, PANELS, TRANSFORMERS, DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. ALL CONTROL WIRING, RELAYS, PANELS SENSORS (OR THERMOSTATS) SHALL BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. ALL MOTOR STARTERS SHALL BE FURNISHED BY THE HVAC CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- ALL DUCTS TO HAVE AIR EXTRACTORS (ADJUSTABLE TYPE) ON SQUARE OR RECTANGULAR AIR TAKEOFFS WITH SPIN-IN VOLUME DAMPERS ON ROUND OR OVAL TAKE-OFFS. SPIRAL DUCT TAKE-OFFS HAVE NO EXTRACTORS. INSTALL FLEXIBLE DUCT CONNECTORS AT ALL FANS AND AIR HANDLING UNITS.
- FLEXIBLE DUCTS MUST COMPLY WITH UL 181 AND SHALL NOT EXCEED EIGHT FEET IN LENGTH REMAINING BRANCH LINE SHALL BE GALVANIZED METAL WITH 2" EXTERNAL INSULATION. FLEXIBLE DUCTS SHALL HAVE FOIL BACKING (FKB TYPE).
- ANY CONDENSATION ON SURFACES OF HVAC EQUIPMENT, DUCTWORK OR PIPING WILL BE CORRECTED BY THE CONTRACTOR. WRAP WITH INSULATING TAPE OR EXTERNAL INSULATION HAVING A VAPOR BARRIER.
- INSULATION OUTSIDE OF THE BUILDING SHALL BE WRAPPED WITH ALUMINUM INSIDE ALL SUPPLY, RETURN, EXHAUST AND FRESH AIR DUCTS SHALL BE GALVANIZED METAL, COMPLETELY SEALED, FINISHED WITH 2" EXTERNAL INSULATION HAVING VAPOR RETARDING JACKET (FKB TYPE). INSULATION SHALL COMPLY WITH UL 181 AND MUST HAVE FLAME SPREAD RATINGS OF 25 AND A SMOKE DEVELOPED RATING NO HIGHER THAN 50.
- ROOM SENSORS OR THERMOSTATS SHALL BE MOUNTED AT 48 INCHES ABOVE FINISHED FLOOR.
- THERMOSTATS TO BE 1 DAY PROGRAMMABLE WITH DIGITAL DISPLAY. PROVIDE AND INSTALL A LOCK BOX FOR ALL THERMOSTATS.
- SHOKE DETECTORS (SEE DRAWINGS) SHALL BE IONIZATION TYPE AS APPROVED BY THE ENGINEER. COORDINATE THE INSTALLATION WITH THE ELECTRICAL CONTRACTOR. CONTRACTOR SHALL VERIFY THAT DETECTORS ARE COMPATIBLE WITH FIRE ALARM SYSTEMS. IF UNIT SELECTION IS NOT COMPATIBLE THE CONTRACTOR SHALL PURCHASE AND INSTALL PROPER UNIT TO INSURE LIFE SAFETY PROTECTION. SHOKE DETECTORS SHALL AUTOMATICALLY SOUND AUDIBLE ALARM AND TURNOFF FANS.
- FURNISH AND INSTALL ACCESS DOORS (18"x18" MINIMUM) IN ALL DRYWALL CEILINGS FOR ACCESS TO MECHANICAL EQUIPMENT.
- COORDINATE THE INSTALLATION OF ALL AUX. COND. DRAINS LOCATED IN WALLS WITH THE GENERAL CONTRACTOR. COORDINATE THE INSTALLATION OF ALL MAIN COND. DRAINS LOCATED IN WALLS AND CHASES WITH THE PLUMBING CONTRACTOR.
- THE CONTRACTOR SHALL NOT FABRICATE ANY AIR DISTRIBUTION DUCTWORK UNTIL IT HAS BEEN VERIFIED THAT SUFFICIENT CLEARANCES ARE AVAILABLE FOR THE INSTALLATION OF HVAC SYSTEMS. CONSIDERING REQUIREMENTS FOR PIPING, LIGHT FIXTURES, CEILING SYSTEMS, FLOOR SYSTEMS, FOUNDATIONS, AND STRUCTURES. IF A CONFLICT ARISES CONTACT THE ENGINEER FOR PERMISSION. IF REROUTE SYSTEM, ALL DUCTWORK SHALL BE ROUTED AT THE EXPENSE OF THE CONTRACTOR.
- DEVIATION FROM MATERIALS, METHODS, AND PROCEDURES SET FORTH HEREIN MUST BE APPROVED IN WRITING BY THE ENGINEER. APPROVAL WILL NOT BE GIVEN UNLESS THE ENGINEER IS SATISFIED THAT THE PROPOSED SYSTEMS ARE SUPERIOR IN PERFORMANCE, DURABILITY, LONGEVITY, AND RELIABILITY TO THAT SPECIFIED.
- APPROVALS OF EQUIPMENT OR SYSTEMS OTHER THAN THAT SHOWN MUST BE WITHIN TEN (10) WORKING DAYS PRIOR TO BID DATE.
- ALL DUCT AND PIPE SIZES SHOWN ARE CLEAR NET INSIDE DIMENSIONS.
- ALL AIR DISTRIBUTION DUCTWORK SHALL BE AIR TIGHT AND FREE OF LEAKS, AND SHALL BE INSPECTED FOR LEAKS PRIOR TO INSTALLATION OF FAN UNITS OR FINISHED FLOOR/CEILING SYSTEM. DUCTWORK SHALL BE SEALED WITH AIR DUCT SEALER PER SMACNA STANDARDS AND UL RATING.
- EQUIPMENT, DUCTWORK, DAMPERS, LOUVERS, GRILLES, REGISTERS, DIFFUSERS, OTHER AIR DISTRIBUTION EQUIPMENT AND MATERIALS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING:
 (A) ASHRAE
 (B) SECCI
 (C) SMACNA
 (D) NFPA
 (E) AMCA STANDARD HANDBOOK 99
 (F) AIR DIFFUSION COUNCIL TEST CODE 1062R3
 (G) SECCI STANDARD MECHANICAL CODE
 (H) ANSI
 (I) ASME
 (K) ASA
 (L) UL FIRE RESISTANCE DIRECTORY

DUCTLESS SPLIT SYSTEM SCHEDULE

INDOOR UNIT DESIGNATION	DFU-1
OUTDOOR UNIT DESIGNATION	DFU-1
HEATING AND COOLING CAPACITIES	
TOTAL COOLING CAPACITY	BTUH 8260
INDOOR UNIT DATA	
AIR QUANTITY (HIGH SPEED)	CFM 321
ELECTRICAL CHARACTERISTICS	V/PH 115/1
CONDENSATE DRAIN SIZE	IN. 0.65
UNIT WEIGHT	LBS. 18
OUTDOOR UNIT DATA	
ELECTRICAL CHARACTERISTICS	V/PH 115/1
MIN. CIRCUIT AMPACITY	AMPS 12
REFRIGERANT TYPE	R-410A
SEER	16
MANUFACTURER	CARRIER
MODEL NUMBER (INDOOR UNIT)	48MVC009
MODEL NUMBER (OUTDOOR UNIT)	38MVC009

NOTES:
 1. WALL MOUNTED UNIT.
 2. PROVIDE LONG LINE ACCESSORY FOR REFRIGERANT LINE IF NEEDED.
 3. PROVIDE CONDENSATE PUMP FOR ALL AHU'S.

HEAT PUMP SPLIT SYSTEM SCHEDULE

INDOOR UNIT DESIGNATION	AHU-1	AHU-2	
OUTDOOR UNIT DESIGNATION	HP-1	HP-2	
AIR QUANTITIES			
TOTAL SUPPLY AIR	CFM 1660	110	
OUTSIDE AIR	CFM 140	10	
HEATING AND COOLING CAPACITIES			
TOTAL HEATING CAPACITY	BTUH 42,000	22,000	
SENSIBLE COOLING CAPACITY	BTUH 36,000	10,000	
TOTAL COOLING CAPACITY	BTUH 48,000	24,000	
AIR TEMPERATURES			
COOLING COIL ENTERING	Fdb - Fdb	80-67	80-67
COOLING COIL LEAVING	Fdb - Fdb	55-54	55-54
HEATING COIL ENTERING AND LEAVING	Fdb - Fdb	52-55	52-55
INDOOR UNIT DATA			
EXTERNAL STATIC PRESSURE (INCL. FILTER)	IN. H2O 0.1	0.1	0.1
BLOWER MOTOR	HP 1/3	1/3	1/3
ELECTRICAL CHARACTERISTICS	V/PH 208-230/1	208-230/1	208-230/1
CONDENSATE DRAIN SIZE	IN. 3/4"	3/4"	3/4"
FILTER LOCATION	UNIT	UNIT	UNIT
ELECTRIC HEAT DATA			
HEATING TYPE	ELECTRIC	ELECTRIC	ELECTRIC
LOCATION	SUPPLY	SUPPLY	SUPPLY
ACTUAL HEATING CAPACITY (NOMINAL CAP.)	KW 8	4	4
VOLTAGE	V/PH 208-230/1	208-230/1	208-230/1
OUTDOOR UNIT DATA			
NUMBER OF COMPRESSORS/NUMBER OF STAGES	NO. 1	1	1
ELECTRICAL CHARACTERISTICS	V/PH 208-230/1	208-230/1	208-230/1
MCA/MOCP	AMPS (EACH) 24.6/16.0	14.6/25	14.6/25
UNIT WEIGHT	LBS. 231	184	184
REFRIGERANT TYPE	R-410A	R-410A	R-410A
REFRIGERANT SUCTION AND LIQUID LINE SIZES	IN.-IN. MFG MFG	MFG MFG	MFG MFG
SEER/SEER	14/15	14/15	14/15
COP (HEATING)	-	-	-
HSPF (HEATING)	82	82	82
MANUFACTURER	DAIKIN	DAIKIN	DAIKIN
MODEL NUMBER (INDOOR UNIT)	ARUF48	ARUF24C	ARUF24C
MODEL NUMBER (OUTDOOR UNIT)	DZ14SD48	DZ14SD24	DZ14SD24

NOTES:
 1. ALL AHU'S TO BE VARIABLE SPEED WITH HUMIDITY CONTROL.
 2. TSTAT TO BE HONEYWELL VISION PRO 8000 TYPE WITH HUMIDITY CONTROL.
 3. PROVIDE SINGLE POINT OF POWER.
 4. PROVIDE 2" FILTER 4 RACK.
 5. MANUFACTURE TO PROVIDE TRANSFORMER FOR ELECTRIC HEATERS.
 6. PROVIDE LONG LINE ACCESSORY FOR REFRIGERANT LINE IF NEEDED.
 7. PROVIDE CONDENSATE PUMP FOR ALL AHU'S.
 8. REFER TO MANUFACTURE FOR INSTALL AND SERVICE CLEARANCE.



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 PE 56206

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 Robin Winton, P.E.
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 FL 766206

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 DATE _____ MAY 2022

TITLE

MECHANICAL NOTES

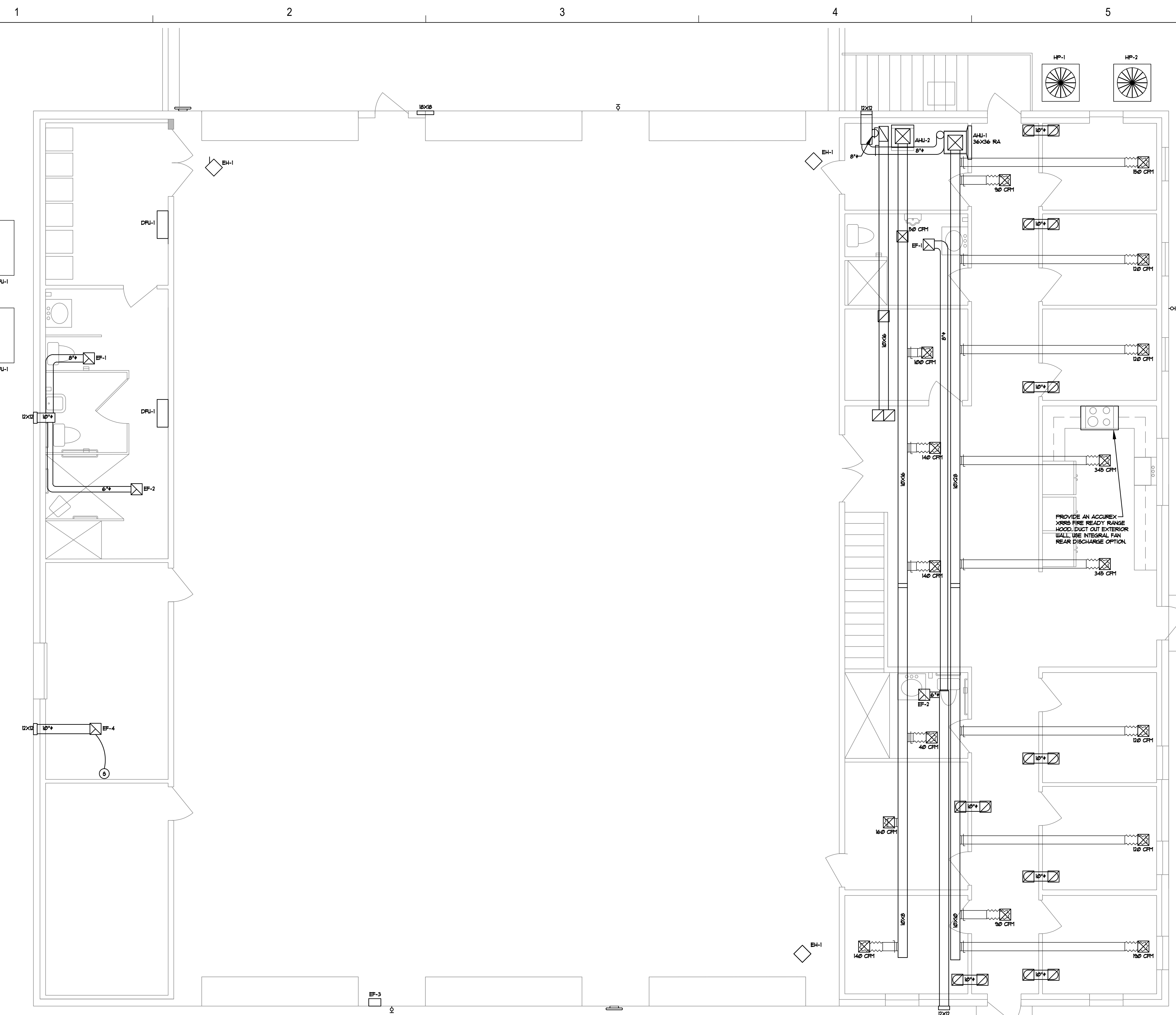
PROJECT NO. 50144269

M1.0

SHEET NO.

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



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TITLE
MECHANICAL PLAN

PROJECT NO. 50144269

M2.0

SHEET NO.

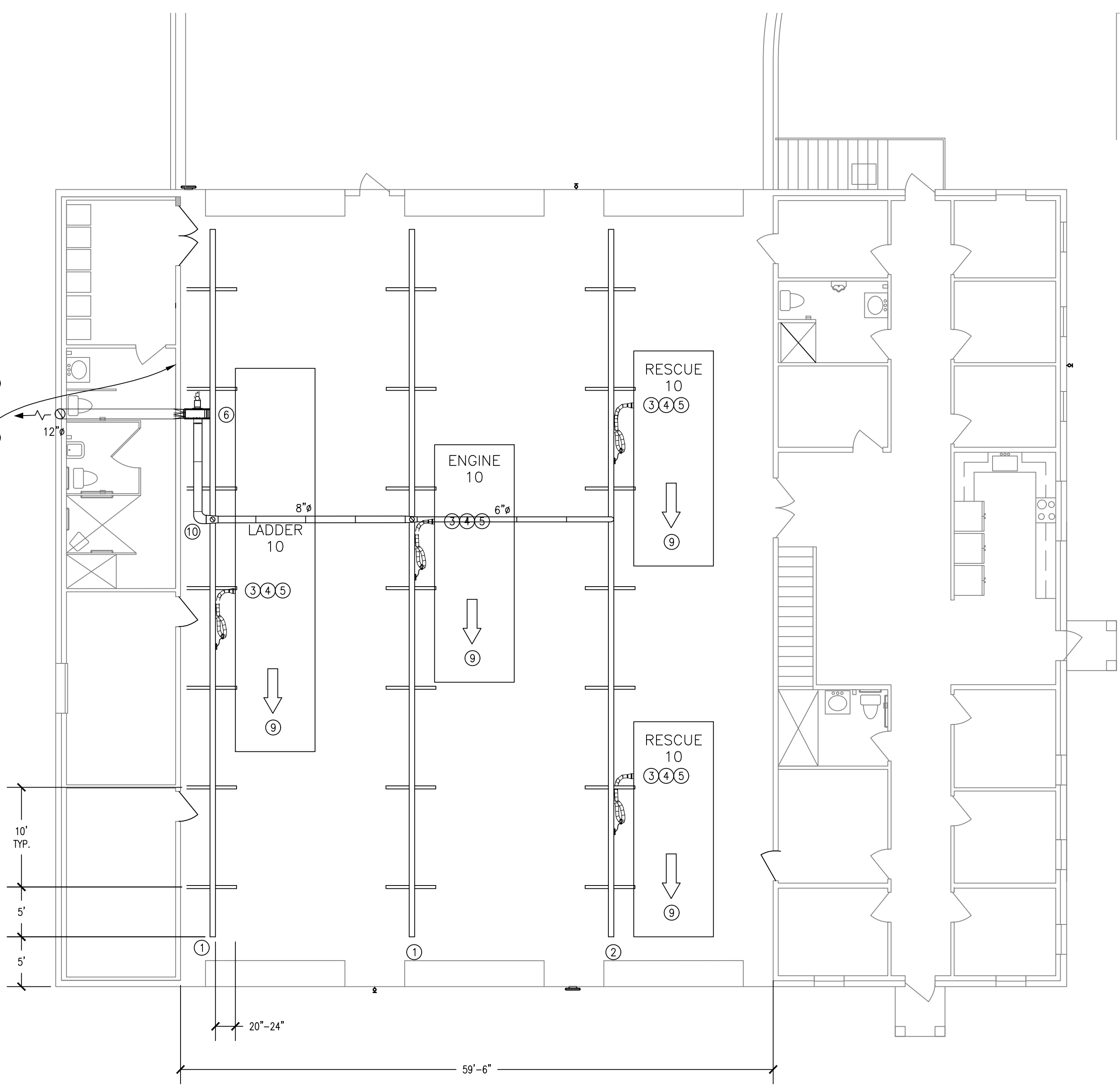
SAFE AIR CLAMPING DUCTWORK SYSTEM SPECIFICATIONS		QTY.
DUCT SIZES	4-16" DIA. ROUND	1
DUCT GAUGE	18	
JOINT TYPE	BEAD AND CLAMP	
STEEL TYPE	GALV. ROLLED	
PIPE SEAM TYPE	LASER WELDED	
BRANCH TYPE	REDUCING/NON-REDUCING	
BRANCH ANGLE	30 DEGREE	
ADJUSTMENT DAMPER	MANUAL W/LOCK SCREW	
DUCT HANGER TYPE	THREADED ROD W/ HJ HANGER	
EXHAUST STACK TYPE	EPA FREE FLOW JET CAP	
DUCT PENETRATION	WALL DISCHARGE/CORE DRILL	
ASTM RATING	A527-G90	

SAFE AIR/PLYMOVENT EXHAUST EQUIPMENT SPECIFICATIONS		QTY.
MODEL	MRP-75-1/MRP-75-2	2/1
HOSE DROP SIZE	4-5" DIA.	
HOSE TEMP.	850-1050 DEG.	
SAFETY DISCONNECT	ADJUSTABLE 88 LBS/3-5" HS	
MAGNETIC GRABBER NOZZLE	MRP/YSRX/4-7" TAILPIPE	
TAILPIPE ADAPTOR PLATE	STAINLESS STEEL/CONTROLLED FLOW	
EXHAUST RAIL LENGTH	71'	
HANGING WEIGHT	328 LBS./358 LBS.	
MATERIAL	ALUMINUM	
RAIL TYPE	6063-T6	
RAIL OPEN AREA	28.3 SQ. IN./6 IN. ROUND	
WALL THICKNESS	5/32"/4MM	
LEG SUPPORTS	7	
SUPPORT TYPE	ALUMINUM	
SPICE TYPE	STEEL	
SPICE FASTENERS	3/8"x1" HEX CAP GRADE 5	
RAIL SETBACK FROM DOOR	5'	
RAIL MOUNTING HEIGHT	13'	
RAIL LOCATION OFF VEHICLE	20-24"	

SAFE AIR/PLYMOVENT DIRECT CAPTURE BLOWER SPECIFICATIONS		QTY.
MODEL	TEV-559-3	1
HOSE DROPS	4/5	
HANGING WEIGHT	175 LBS.	
CFM	2250	
SP wg	7" wg	
MOTOR HP	5 HP	
RPM	3450	
VOLTAGE	208-230 V	
PHASE	3 PH	
HERTZ	60 Hz	
MOTOR FLA	17.5-15.2 AMP	
MOTOR TYPE	TEFC	
MOTOR MFG.	LESSON	
BLOWER HOUSING	STEEL	
FAN INLET SIZE	10"	
FAN OUTLET SIZE	12"	
FINISH	EPOXY POWDER COAT	
COLOR	GRAY	
WHEEL STYLE	BACKWARD INCLINE	
WHEEL TYPE	ALUMINUM	
AMCA CLASS	B	
AMCA TESTED	YES	

SAFE AIR BLOWER/FAN CONTROLLER SPECIFICATIONS		QTY.
MODEL	WD-4E-UL CONTROL BOX	1
PATENT NUMBER	US 10,451,301 B2	
CONTROL BOX TYPE	NEMA 4 X	
BOX SIZE LxHxD	16"x18"x8"	
MOTOR STARTER	ALLEN BRADLY-100	
MOTOR OVERLOAD	ALLEN BRADLY-AUTO	
SC BLOWER AFTER RUN TIME	1-3 MIN. VARIABLE	
GE FAN AFTER RUN TIME	5-15 MIN. VARIABLE	
ACD AFTER RUN TIME	10-20 MIN. VARIABLE	
EMAIL DIALER	6 CHANNEL OUTPUT	
DATA PORT	CAT 5-STD	
WIFI DATA PORT	OPTIONAL	
CELLULAR HOTSPOT	OPTIONAL	
MODBUS/BACNET COMPATIBLE	OPTIONAL	
EMAIL ADDRESSES	UNLIMITED	
SERVICE CALL BUTTON	YES	
DUCTWORK TEMP PROBE	YES/0-2000 DEG.	
FILTER CHANGE ALARM	YES	
ELAPSED TIME TIMER	YES	
AFTER RUN TIME	1-3 MIN.	
CONTROL SWITCH	AUTO/MANUAL	
CONTROL LIGHT	GREEN	
TAG OUT/LOCK OUT	YES	
UL RATED	YES	
TOXIC GAS ALARM	YELLOW/RED STROBE LIGHT	
TOXIC GAS HORN	94 dBA	
MULTIPLE FAN CONTROL	YES UP TO 10	
FIRE ALARM SHUTDOWN	YES	
REMOTE DIAL-IN	OPTIONAL	
AUTO START TRANSMITTER	VTK-2/UNLIMITED TRUCKS	

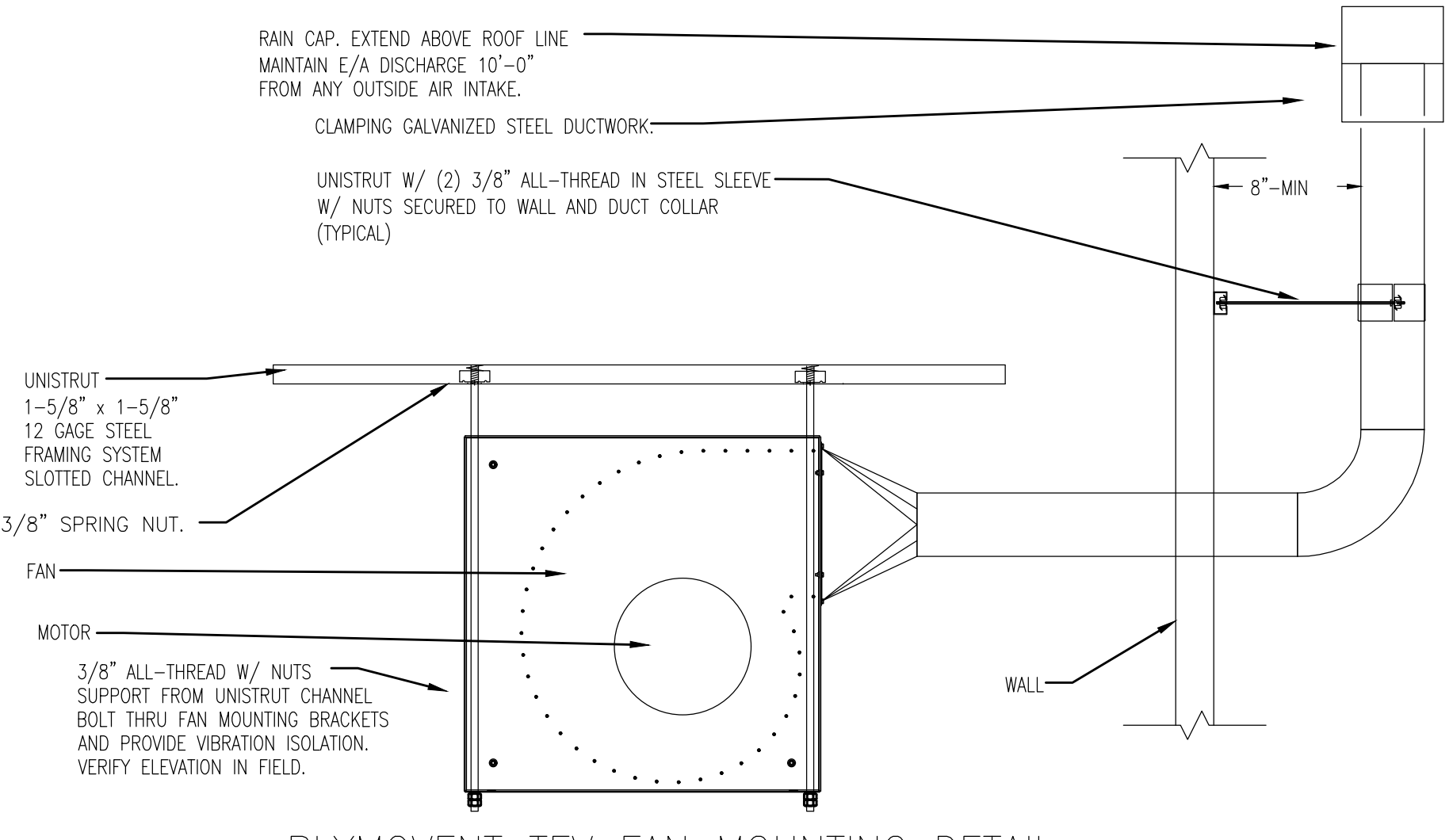
- SAFE AIR WD-4E-UL
US PAT # US 10,451,301 B2
CONTROLLER BOX W/
LOCKOUT/TAGOUT
DISCONNECT
115V 1PH 60HZ
- 2# 12THWN &
1 #12(G)THWN
FOR POWER 1P-20A
PANEL "8" IN 1/2" C.
2# 14THHN 24V &
4# 14THHN FOR
CONTROLS IN 1/2" C.
- SAFEAIR/PLYMOVENT CODED NOTES:**
- ① MRP-75-1 EXHAUST RAIL SYSTEM
 - ② MRP-75-2 EXHAUST RAIL SYSTEM
 - ③ MAGNETIC GRABBER TAILPIPE NOZZLE
 - ④ SAFETY BREAKAWAY HANDLE
 - ⑤ MG TAILPIPE ADAPTER
 - ⑥ SOURCE CAPTURE BLOWER TEV-559-3
5 HP TEFC-240 VAC 3 PH
 - ⑦ WD-4E-UL ELECTRICAL CONTROL BOX
 - ⑧ HONEYWELL CO/NO2 DETECTOR
 - ⑨ AUTO START TRANSMITTER
 - ⑩ CLAMPING DUCTWORK SYSTEM



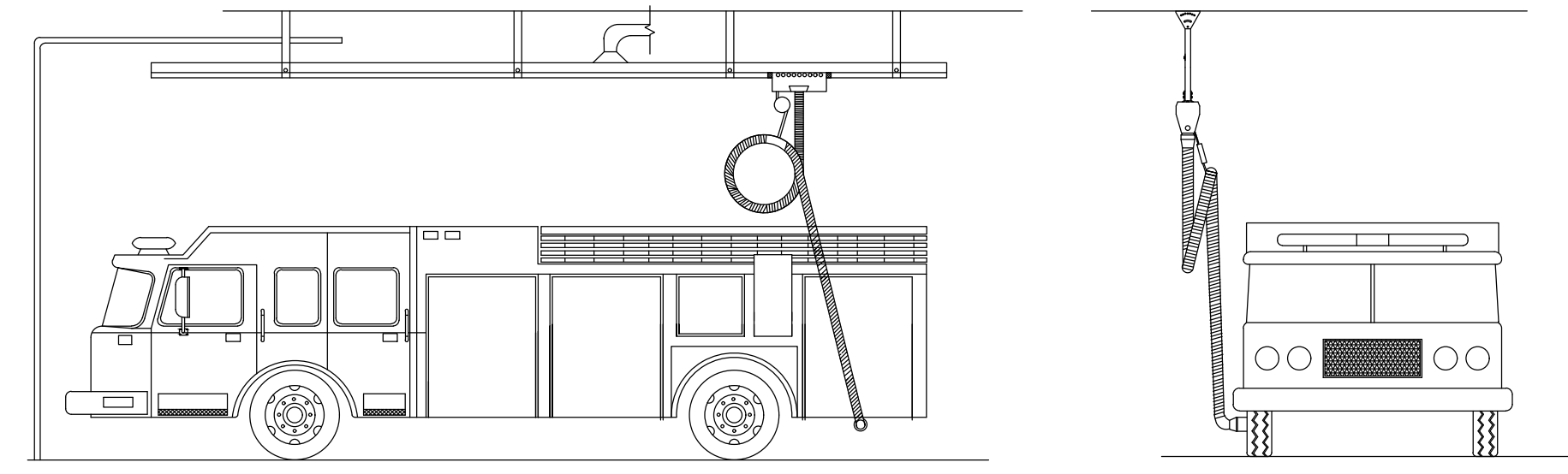
VEHICLE EXHAUST FLOOR PLAN
SCALE: 1/8" = 1'0"

EXHAUST SYSTEM-GENERAL NOTES & SPECIFICATIONS

- THIS PROJECT IS DESIGNED AND PROVIDED BY SAFE AIR CORPORATION. FOR DETAILS ON PROJECT PLEASE CONTACT THE FOLLOWING: SAFE AIR CORPORATION - sales@safeairco.com-WAYNE LUTZ-wlutz@safeairco.com-800-798-8820.
- THE EQUIPMENT SPECIFICATIONS LISTED IN DRAWINGS ARE TO BE PROVIDED IN FULL WITH NO CHANGES OR EXCEPTIONS.
- THE FINAL SHOP DRAWING MUST SHOW THE DETAILS OF VEHICLE LOCATIONS, NUMBER OF VEHICLES, DIRECTION OF EXIT FROM STATION AND BE APPROVED BY OWNER.
- ALL EXHAUST FANS AND BLOWERS SHALL MEET AMCA TEST STANDARDS FOR PERFORMANCE AND BE MOUNTED IN THE BAY AREA OR BE NOA RATED FOR OUTSIDE INSTALLATION.
- ALL ELECTRICAL CONTROLS AND WIRING COMPONENTS SHALL BE UL OR ETL LISTED.
- ALL ELECTRICAL (120-460V), CONTROL WIRE (24V) AND DATA (CAT-5) IS THE SCOPE OF WORK OF THE ELECTRICAL/CONTROLS CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH SAFE AIR AND ALL OTHER TRADES WITH ANY UPDATES OR CHANGES TO ELECTRICAL SUPPLY THAT MAY CHANGE AND EFFECT BLOWER/EXHAUST FANS/MOTORIZED DAMPER POWER REQUIREMENT BY EMAIL TO ALL TRADES.
- ALL WIRING WILL BE RUN IN EMT CONDUIT WITH WATER-TIGHT FITTING. THE MINIMUM WIRE SIZE SHALL BE #12 THHN MULTI-STRAND COPPER WIRE OR LARGER BASED ON NEC LOAD CHART FOR HORSE POWER FULL LOAD AMPERAGE AND SIZED ONE CONDUCTOR LARGER AND #14 THHN MULTI-STRAND COPPER WIRE FOR LOW VOLTAGE CONTROL WIRING.
- ALL WIRING SHALL BE COLOR CODED AS NOTED OR LABELED ON BOTH ENDS AND CONTROL SYSTEMS LABELED WITH THE PANEL/BREAKER THAT SUPPLIES THE CONTROLLER.
- ALL MECHANICAL INSTALLATION OF SOURCE CAPTURE EQUIPMENT AND DUCTWORK IS THE SCOPE OF WORK OF MECHANICAL CONTRACTOR OR SAFE AIR AS NOTED.
- ALL TRADES MUST MEET FEDERAL, STATE AND CITY CODES FOR THE TRADE THAT YOU REPRESENT.
- LOCATIONS ON DOCUMENTS ARE APPROXIMATE LOCATIONS OF TYPICALLY REQUIRED EQUIPMENT AND MAY NOT IDENTIFY ALL SCHEDULED EQUIPMENT FROM SAFE AIR.
- FINAL START-UP, TRAINING AND COMMISSIONING IS PROVIDED BY SAFE AIR.



PLYMOVENT TEV FAN MOUNTING DETAIL
NTS



System Specifications				
Type	Length	Number of supports	Weight	Qty.
MRP-75-1	71'	7	328 lbs	2
MRP-75-2	71'	7	358 lbs	1

SAFE AIR/PLYMOVENT MRP TYPICAL DETAIL
NTS



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APPROVED BY _____ RPW
CHECKED BY _____ RPW
DATE _____ MAY 2022

**VEHICLE EXHAUST
PLAN**

PROJECT NO. 50144269

M4.0

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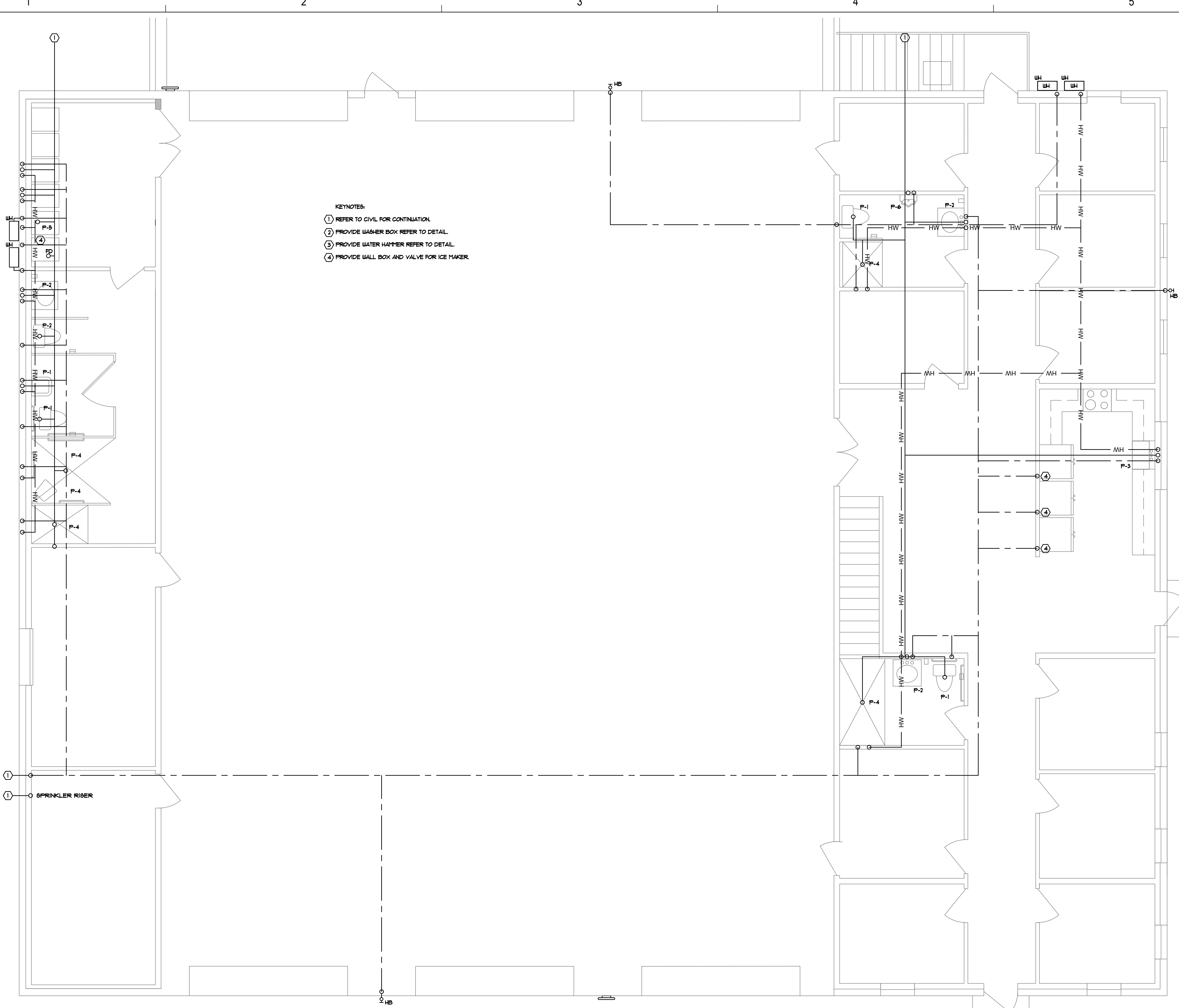
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TITLE
PLUMBING PLAN

PROJECT NO. _____ 50144269

P2.0

SHEET NO.



- KEYNOTES:
- ① REFER TO CIVIL FOR CONTINUATION.
 - ② PROVIDE WASHER BOX REFER TO DETAIL.
 - ③ PROVIDE WATER HAMMER REFER TO DETAIL.
 - ④ PROVIDE WALL BOX AND VALVE FOR ICE MAKER.

PLUMBING PLAN
 SCALE: 1/4" = 10"

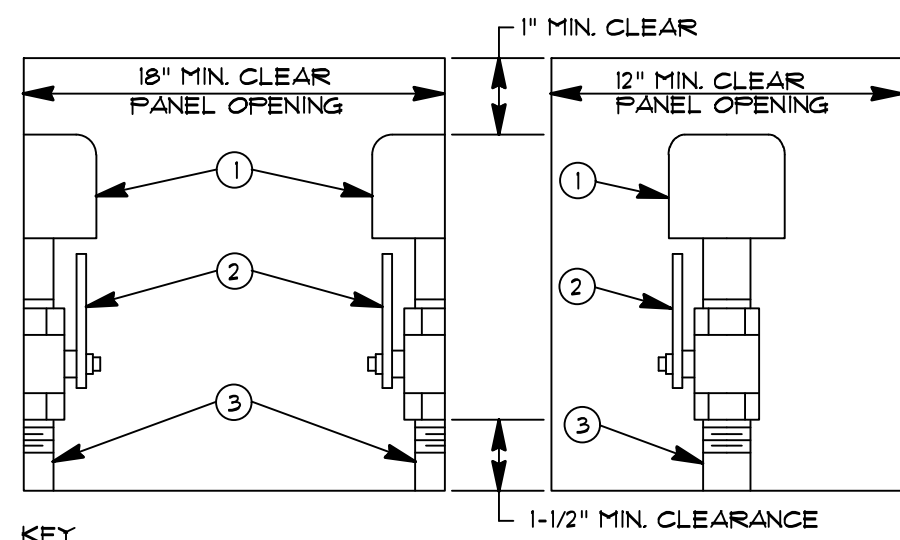
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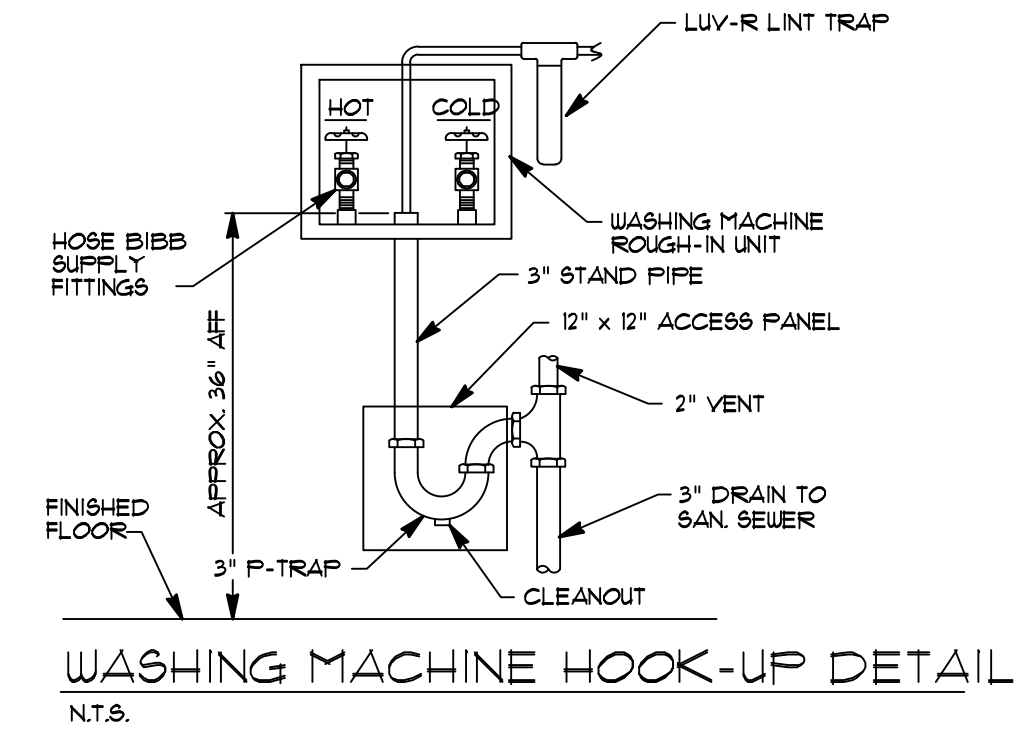


- KEY**
- ① WATER HAMMER ARRESTOR
 - ② BALL VALVE, SAME NOMINAL SIZE AS PIPE BRANCH IN CHASE. OPENING IN BALL VALVE TO MATCH PIPE I.D.
 - ③ PIPE SAME SIZE AS BRANCH IN CHASE TO WHICH IT IS ATTACHED.
- NOTE: PROVIDE REDUCER IF REQUIRED BETWEEN VALVE AND WATER HAMMER ARRESTOR.

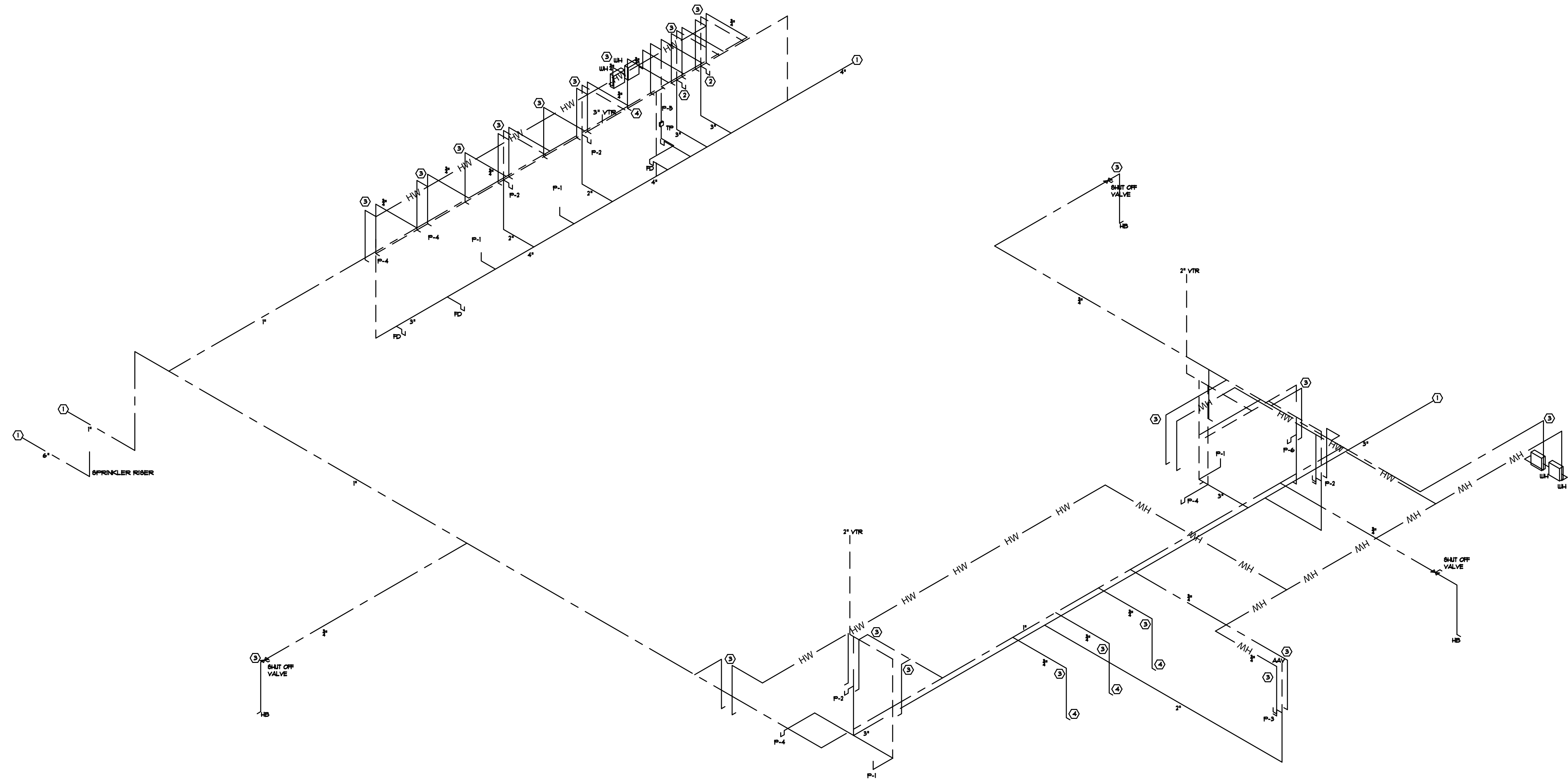
TYPICAL WATER HAMMER PANEL INSTALLATION
SINGLE AND DOUBLE APPLICATION
N.T.S.

KEYNOTES:

- ① REFER TO CIVIL FOR CONTINUATION.
- ② PROVIDE WASHER BOX REFER TO DETAIL.
- ③ PROVIDE WATER HAMMER REFER TO DETAIL.
- ④ PROVIDE WALL BOX AND VALVE FOR ICE MAKER.



WASHING MACHINE HOOK-UP DETAIL
N.T.S.



PLUMBING RISER
SCALE: N.T.S.



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TITLE
PLUMBING RISERS

PROJECT NO. _____ 50144269

P3.0

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