SLIDERS DRIVE-IN

GENERAL PROJECT NOTES

1. IN ADDITION TO THESE GENERAL NOTES, THE BUILDING MANUFACTURER SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR OTHER SPECIFIC INSTRUCTIONS AS THEY MAY AFFECT THE GENERAL CONSTRUCTION OF THIS PROJECT. DISCREPANCIES BETWEEN PORTIONS OF THE CONTRACT DOCUMENTS ARE NOT INTENDED. THE MANUFACTURER IS TO CLARIFY WITH THE ARCHITECT AND OWNER ANY SUCH DISCREPANCIES PRIOR TO COMMENCING WORK.
2. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE STATE BUILDING CODES AND LOCAL RESTRICTIONS. SITE CONTRACTORS MUST COMPLY WITH CONTRACTOR REGISTRATION REQUIREMENTS OF ALL GOVERNING AUTHORITIES. ALL REQUIRED CITY / COUNTY / STATE PERMITS SHALL BE ACQUIRED BEFORE COMMENCING ANY CONSTRUCTION.
3. BUILDING MANUFACTURER SHALL MAINTAIN ONE COMPLETE SET OF PLANS OF APPROVED PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS IN GOOD CONDITION WITH EACH BUILDING MANUFACTURED AT ALL TIMES.
4. THE BUILDING MANUFACTURER SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUBCONTRACTORS AND OWNER.
5. STATED DIMENSIONS TAKE PRECEDENCE OVER GRAPHICS. DO NOT SCALE DRAWINGS TO DETERMINE LOCATIONS. THE ARCHITECT SHALL BE NOTIFIED PRIOR TO CONTINUING WITH WORK IF ANY DISCREPANCIES OCCUR.
6. IT SHALL BE THE RESPONSIBILITY OF THE SITE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREIN OR NOT AND TO PROTECT THEM FROM DAMAGE. THE SITE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE WORK.
7. MEANS, METHODS, SAFETY MEASURES AND TEMPORARY SERVICES REQUIRED DURING CONSTRUCTION SHALL BE AT THE SOLE EXPENSE AND THE RESPONSIBILITY OF THE BUILDING MANUFACTURER AND SITE CONTRACTOR
8. ANY DETAILS OR NOTES REQUIRING FIELD VERIFICATION ARE TO BE DONE DURING THE BID PROCESS.
9. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS APPROVED BY A REGISTERED THIRD PARTY AGENCY
10. SEE SHEET A1.1 FOR LOCATIONS OF DATA PLATE AND STATE LABEL IF APPLICABLE
11. PLANS MAY BE MIRRORED.
12. IF NECESSARY TO MEET ADA. REMOVE THE DOOR CLOSER FROM THE BATHROOM CLOSEST TO THE FAUX CONTAINER DOOR.

DESCRIPTIVE SUMMARY OF WORK

THE WORK INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT TO BUILD, FINISH, AND PROVIDE ALL SITE WORK AND UTILITIES, FOR A PROPOSED NEW RESTAURANT FOR THE "OWNER". THE WORK SHALL INCLUDE ALL ITEMS REQUIRED AS SHOWN ON THE DRAWINGS. IN ADDITION, ALL WORK ASSOCIATED WITH THE SITE DEVELOPMENT PAVING, PARKING, WALKWAYS, PATIO SLAB, AND SITE UTILITIES TO THE BUILDING ARE TO BE PROVIDED IN THIS CONTRACT. ALL MECHANICAL EQUIPMENT AND SYSTEMS, AS WELL AS ALL ELECTRICAL EQUIPMENT AND SYSTEMS ARE TO BE INCLUDED FOR A COMPLETE OPERATING SYSTEM WITH COORDINATION AND INSTALLATION INCLUDED.

ABBREVIATIONS

A.B.	ANCHOR BOLT	MAX	MAXIMUM
ABV	ABOVE	MFG	MANUFACTURE(R)
A.F.F.	ABOVE FINISHED FLOOR	MECH	MECHANICAL
A/C	AIR CONDITIONING	MIN	MINIMUM
ADA	AMERICANS W/ DISABILITIES ACT	MISC	MISCELLANEOUS
ADJ	ADJUSTABLE	M.R.	MOISTURE RESISTANT
ALUM	ALUMINUM	MTL	METAL
ARCH	ARCHITECT(URAL)	M.V.	MILLWORK VENDOR
@	AT		
BD	BOARD	N.I.C.	NOT IN CONTRACT
BLK	BLOCK(ING)	NO.	NUMBER
BM	BEAM	NOM.	NOMINAL
BOT	BOTTOM	NTS	NOT TO SCALE
B.O.	BOTTOM OF		
BLDG	BUILDING	O.C.	ON CENTER(S)
		OD	OUTSIDE DIMENSION
℄	CENTERLINE	OPN'G	OPENING
CLG	CEILING	OPH	OPPOSITE HAND
CIRC	CIRCUIT	OPP	OPPOSITE
CLR	CLEAR		
C.O.	CLEANOUT	PNT	PAINT(ED)
COL	COLUMN	PL	PLATE
CONC	CONCRETE	PLAM	PLASTIC LAMINATE
CONST	CONSTRUCTION	PLYWD	PLYWOOD
CONT	CONTINUOUS (OR) CONTINUE	P.O.R.	PROFESSIONAL OF RECORD
C/T	CURRENT TRANSFORMER	PROJ	PROJECT
CTR	COUNTER	PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
(D)	DEMO/DEMOLISH(ED)	PT	PRESSURE TREATED
DBL	DOUBLE		
DIA	DIAMETER	(R)	RELOCATE(D)
DIM	DIMENSION	RAD	RADIUS
DN	DOWN	RE	REFERENCE
DS	DOWNSPOUT	REFR	REFRIGERATOR
DTL	DETAIL	REM	REMOVE(D)(ABLE)
DWR	DRAWER	REQD	REQUIRED
DWG	DRAWING	RESLS	RESILIENT
		REV	REVISION(S), REVISED
(E)	EXISTING	RM	ROOM
EA	EACH	RO	ROUGH OPENING
ELEV	ELEVATION	RND	ROUND
EMER	EMERGENCY		
EQ	EQUAL	SCH	SCHEDULE
EQPT	EQUIPMENT	SECT	SECTION
EXP	EXPOSED	S.F.	SQUARE FOOTAGE
EXT	EXTERIOR	SHT	SHEET
		SHTHG	SHEATHING
F.P.	FIRE EXTINGUISHER	SIM	SIMILAR
FD	FLOOR DRAIN	SC	SOLID CORE
FIN	FINISH(ED)	SLD SUR	SOLID SURFACE
FL	FLOOR(ING)	SP	SPACE(S)
FLUOR	FLUORESCENT	SPEC	SPECIFICATION
F.R.T.	FIRE RETARDANT TREATED	SS	STAINLESS STEEL
FT (')	FEET, FOOT	STL	STEEL
FNDN	FOUNDATION	STO	STORAGE
FUR	FURRED(ING)	STR	STRUCTURAL(STRUCTURE)
F.V.	FIELD VERIFY	SUSP	SUSPENDED
GL	GLASS	TEL	TELEPHONE
GYP	GYPSUM	TEMP	TEMPERED
		T.O.	TOP OF
H.C.	HANDICAPPED	T/O	TOP OF
HDW	HARDWARE	TYP	TYPICAL
HDWD	HARDWOOD		
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HT/HGT	HEIGHT	U/S	UNDERSIDE
HVAC	HEATING/VENTILATION AIR CONDITIONING	V.I.F.	VERIFY IN FIELD
		VCT	VINYL COMPOSITION TILE
I.D.	INSIDE DIMENSION / DIAMETER	VERT	VERTICAL
I.L.O.	IN LIEU OF		
IN (")	INCH	W/	WITH
INSUL	INSULATION	W/C	WATER CLOSET
INT	INTERIOR	W/O	WITHOUT
		WD	WOOD
LAM	LAMINATE	WDB	WOOD BASE
LBS	POUNDS		

SYMBOLS

EXTERIOR ELEVATION REFERENCE — X (ELEVATION LETTER) / A# (SHEET NUMBER)

WINDOW SCHEDULE REFERENCE — W1 (WINDOW NUMBER; INDICATES 'WINDOW')

DETAIL REFERENCE — X (DETAIL LETTER/ NUMBER) / A# (SHEET NUMBER)

DOOR SCHEDULE REFERENCE — 100 (DOOR NUMBER)

WALL/BUILDING SECTION REFERENCE — X (SECTION LETTER) / A# (SHEET NUMBER)

CODED NOTE REFERENCE — # (CODED NOTE NUMBER IN LIST; SUPPLEMENTARY NOTE)

ENLARGEMENT PLAN/SECTION REFERENCE — # (DETAIL LETTER/ NUMBER) / # (SHEET NUMBER)

EQUIPMENT REFERENCE — EQUIPMENT NUMBER IN SCHEDULE; "F" = 'FUTURE'; "R" = 'RELOCATED'

REVISION SYMBOL — # (REVISION NUMBER)

FINISH DESIGNATION — X.## (FINISH MATERIAL & SCHEDULE NUMBER; X APPLIED LOCATION OF FINISH)

ELEVATION HEIGHT REFERENCE — #' - #" / ITEM (HEIGHT; ITEM REFERENCED)

CEILING REFERENCE — X / # (CEILING MATERIAL; CEILING HEIGHT)

INTERIOR ELEVATION REFERENCE — #/A9 (ELEVATION LETTER & SHEET NUMBER; ELEVATION DIRECTION)

SPACE DESIGNATION — ROOM / # (SPACE NAME)

ISSUE DATES

ISSUED FOR CLIENT REVIEW: --/--/----

ISSUED FOR PERMITS: --/--/----

ISSUED FOR CONSTRUCTION: --/--/----

LAST DESIGN BULLETIN: --/--/----

SCHEDULE OF ALTERNATES

	ALTERNATE	DESCRIPTION
2	FLOOR	EPOXY FLOORS ILO TILE
3	ROOF	SINGLE-PLY MEMBRANE ROOF SYSTEM
4	IRRIGATION SYSTEM	REMOVE AND USE INDIGENOUS PLANTS AND GRASSES
5	PLUMBING FIXTURE	BATTERY OPERATED AUTOMATIC FAUCET
6	FOUNDATION	TURN DOWN SLAB w/ SHALLOW FROST PROTECTION
7	SIGNAGE FOUNDATION	G.C. TO PROVIDE ESTIMATE FOR MENU BOARDS, SPEAKER POST AND DETECTOR LOOP FOUNDATION AND CONDUITS. SEE RESPONSIBILITY SCHEDULE.
8	PAVING	ASPHALT ILO CONCRETE

CODE INFORMATION

STORE TYPE: SLIDERS DRIVE-IN

LOCATION: Lee's Summit, MO

BUILDING LEVEL: 1 OF 1

APPLICABLE CODES:

BUILDING:	2021 INTERNATIONAL BUILDING CODE
PLUMBING:	2021 INTERNATIONAL PLUMBING CODE
FUEL GAS CODE:	2021 INTERNATIONAL FUEL GAS CODE
MECHANICAL:	2021 INTERNATIONAL MECHANICAL CODE
ELECTRIC:	2020 NATIONAL ELECTRIC CODE (NFPA)
ACCESSIBILITY:	2010 ADAAG, 2021 IBC CHAPTER 11, & 2017 ICC/ANSI A117.1
ENERGY:	2021 INTERNATIONAL ENERGY CODE
FIRE:	2018 INTERNATIONAL FIRE CODE

ZONING CLASSIFICATION: C1 - COMMERCIAL

OCCUPANCY CLASSIFICATION: B (BUSINESS) PER A (ASSEMBLY) LESS THAN 50 OCCUPANTS

CONSTRUCTION TYPE: VB COMBUSTIBLE MATERIALS, UNPROTECTED

AREA / HEIGHT LIMITATIONS: ALLOWED: ONE STORY, 40' HIGH, MAXIMUM 6,000 SQ. FT.
PROVIDED: ONE STORY, 16'-0" HIGH, 800 SQ. FT

SCOPE OF WORK STATEMENT: NEW BUILDING

BUILDING SUMMARY:

BASE BUILDING:	800 SQ. FT.
:	
TOTAL AREA:	800 SQ. FT.

OCCUPANCY CALCULATIONS:

FLOOR	USE	SQUARE FOOTAGE	OCCUPANT LOAD FACTOR	NUMBER OF OCCUPANTS	NUMBER OF SEATS
1 OF 1	KITCHEN USE	800 SQ.FT.	1:100	8	-
1 OF 1			-	0	-
1 OF 1			-	0	-
1 OF 1	OUTDOOR SETTING	T.B.D.	-	0 **	-
			TOTAL NUMBER OF OCCUPANTS:	8	-

* UNOCCUPIED AREAS INCLUDE: FREEZER/COOLER, WALLS, CLOSET, AND VESTIBULE.

** OWNER INDICATES MAY BE AS MANY AS 10 EMPLOYEES DURING PEAK TIMES.

TOTAL EXITS REQUIRED:	1	TOTAL EXITS PROVIDED	2
		EGRESS WIDTH PROVIDED PER EXIT:	34" CLEAR

THE LOSS OF ONE REQUIRED MEANS OF EGRESS SHALL NOT REDUCE THE EGRESS CAPACITY TO LESS THAN 50% OF REQUIRED

FIRE RESISTIVE REQUIREMENTS: EXTERIOR BEARING WALL .....(0 HOUR)
ROOF CONSTRUCTION .....(0 HOUR)
CEILING .....(0 HOUR)

FIRE SPRINKLERS: NO — FIRE ALARM: NO FIRE ALARM SYSTEM REQUIRED

MAX. TRAVEL DISTANCE: 200' (250' WITH SPRINKLER SYSTEM)

RESTROOM REQUIREMENTS:
WATER CLOSETS.....1 REQUIRED UNISEX
LAVATORIES.....1 REQUIRED UNISEX
URINALS: .....NOT REQUIRED
DRINKING FOUNTAINS.....NOT REQUIRED
PUBLIC ACCESS.....PROVIDED
UNISEX IS PERMITTED...YES

SPECIAL INSPECTIONS: NONE

KITCHEN HOODS: TYPE 1

HOOD SUPPRESSION: YES

FUEL GAS TYPE: NATURAL GAS

SITE NOTES FOR G.C.

1. THE SITE MUST BE GRADED AND COMPACTED ALLOWING FOR FULL ACCESS AND FOR THE UNITS AND CRANES TO BE STAGED.
2. THE AREA AROUND THE FOUNDATION, PRIOR TO THE INSTALLATION OF THE MODULAR UNIT, MUST BE CLEAR OF THE FOLLOWING:
   - SIDEWALKS
   - CURBS
   - OBSTRUCTIONS
3. THE SITE MUST BE LEVEL AND STONED SO THE TRUCKS AND CRANES DO NOT SINK. TYPICAL TRUCKS AND CRANES USED ARE OVERALL 100' LOWBOY TRAILER, STEP DECK TRAILER, AND APPROXIMATELY 150T CRANE.
4. IF THE SITE IS NOT ACCESSIBLE TO THE TRUCKS AND/OR CRANES, AND/OR THE SITE IS NOT GRADED, COMPACTED, LEVELED, AND STONED, CAUSING DELAYS FOR THE TRUCKS OR CRANES OR CAUSEING THEM TO GET STUCK, THE ADDITIONAL EXPENSE WILL BE CHARGED BACK TO THE OWNER.

SITE INSTALLED ITEMS

SITE INSTALLED ITEMS

NOTE THAT THIS LIST DOES NOT NECESSARILY LIMIT THE ITEMS OF WORK AND MATERIALS THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SITE RELATED ITEMS ARE SUBJECT TO LOCAL JURISDICTION APPROVAL.

1. THE COMPLETE FOUNDATION SUPPORT AND TIE DOWN SYSTEM.
2. RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING.
3. PORTABLE FIRE EXTINGUISHER(S).
4. BUILDING DRAINS, CLEANOUTS, AND HOOK-UP TO THE PLUMBING SYSTEM BELOW THE FLOOR. FREEZE PROTECTION OF ALL WATER, SOIL AND WASTE PIPES LOCATED OUTSIDE OF THE BUILDING THERMAL ENVELOPE.
5. ELECTRICAL SERVICE HOOK-UP (INCLUDING FEEDERS) TO THE BUILDING.
6. THE ELECTRICAL SERVICE DISCONNECTING MEANS INCLUDING CT CABINET AND FEEDERS TO ALL PANELS.
7. ALL METAL FRAMING MEMBERS SHALL BE BONDED TO THE BUILDINGS ELECTRICAL SYSTEM. THE BUILDING OWNER IS RESPONSIBLE FOR RETAINING APPROPRIATELY QUALIFIED AND LICENSED ENTITIES TO DESIGN AND INSTALL REQUIRED BONDING.
8. DUAL ELEMENT EXTERIOR EXIT DISCHARGE LIGHTING WHEN NOT SHOWN ON PLANS.
9. HURRICANE SHUTTERS – EXTERIOR GLAZING AND DOOR PROTECTION.
10. RESTAURANT EQUIPMENT
11. ALL SIGNS, INCLUDING TACTILE SIGNS, UNLESS OTHERWISE SPECIFIED.
12. CONNECTIONS OF ELECTRICAL CIRCUITS CROSSING OVER MODULE MATING LINE(S) – (MULTI-UNITS ONLY).
13. STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES (MULTI-UNITS ONLY).
14. CANOPIES & ROOF CONTAINER
15. ALL ROOF TOP HVAC UNITS AND FANS AND COOLER/FREEZER ROOF TOP EQUIPMENT
16. ROOF PARAPET WALLS.
17. COOLER AND FREEZER.

SPECIAL CONDITIONS/ LIMITATIONS

1. ANY AIR GAPS BETWEEN MODULES AT FLOOR AND CEILING LINES AND ANY OTHERS PENETRATIONS THROUGH THE BUILDING ENVELOPE SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED, WRAPPED OR OTHERWISE SEALED TO LIMIT UNCONTROLLED AIR MOVEMENT.
2. RODENT PROOFING IN ACCORDANCE WITH IBC APPENDIX F SHALL BE INSTALLED. RODENT PROOFING IS DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO THE APPROVAL OF THE JURISDICTION HAVING AUTHORITY.
3. ONLY FACTORY BUILT PORTIONS OF THE PLUMBING, ELECTRICAL AND GAS SYSTEMS HAVE BEEN TESTED BY THE BUILDING MANUFACTURER. ADDITIONAL TESTING IS REQUIRED FOR COMPLETED SYSTEMS ON SITE.
4. HVAC SYSTEM BALANCING SHALL BE ON SITE

STRUCTURAL NOTES

NOTE: WIND LOAD CODE DATA APPLIES TO COMPONENTS AND CLADDING FOR NEW ITEMS ONLY.

1. DESIGN CRITERIA
   A. WIND LOADING
      1. WIND SPEED.....115 MPH ULTIMATE, 89 MPH ASD
      2. RISK CATEGORY II, WIND IMPORTANCE FACTOR.....1.0
      3. OCCUPANCY CATEGORY.....II
      4. WIND EXPOSURE CATEGORY.....C
      5. INTERNAL PRESSURE COEFFICIENT.....+0.18, -0.18
      6. COMPONENTS AND CLADDING (DESIGN PRESSURES INDICATED ARE EDGE ZONE (BUILDING CORNER) PRESSURES BASED ON A MINIMAL EFFECTIVE AREA AND MAY BE REDUCED ACCORDINGLY FOR INTERIOR ZONES AND LARGER EFFECTIVE AREAS):
         a. ROOF.....Pasd =+8.1 -57.2 PSF
         b. WALLS.....Pasd =+20.0, -26.8 PSF
   B. ROOF LOADING
      1. DESIGN ROOF LIVE LOAD (MINIMUM).....20 PSF.
      2. ROOF SNOW LOAD:
         a. GROUND SNOW LOAD.....20 PSF
         b. FLAT-ROOF SNOW LOAD.....20 PSF
         c. SNOW EXPOSURE FACTOR.....1.0
         d. SNOW LOAD IMPORTANCE FACTOR.....1.0
         e. THERMAL FACTOR.....1.0
         f. THE EFFECTS OF DRIFTING SNOW HAVE BEEN INCLUDED IN THE DESIGN.
         g. THE ROOF STRUCTURE HAS BEEN DESIGNED FOR THE ROOF LOADINGS INDICATED ABOVE SUCH THAT AN ADEQUATE ROOF SLOPE AND DRAINAGE SYSTEMS ARE REQUIRED TO PREVENT PONDING LOADS WHICH MAY EXCEED THE DESIGN ROOF LOADS.
   C. SEISMIC
      1. RISK CATEGORY.....II
      2. SEISMIC IMPORTANCE FACTOR.....1.0
      3. MAPPED SPECTRAL RESPONSE ACCELERATIONS:
         a. SHORT PERIODS.....0.441
         b. 1 SECOND PERIOD.....0.158
      4. SITE CLASS.....D(ASSUMED)
      5. DESIGN SPECTRAL ACCELERATION:
         a. SHORT PERIODS.....0.425
         b. 1 SECOND PERIOD.....0.240
   6. SEISMIC DESIGN CATEGORY.....D
      7. BASIC SEISMIC-FORCE-RESISTING-SYSTEM_LIGHT-FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANEL RATED FOR SHEAR RESISTANCE
      8. DESIGN BASED SHEAR.....3.4 KIPS
      9. SEISMIC RESPONSE COEFFICIENT, CS.....0.13
      10. RESPONSE MODIFICATION FACTOR, R.....7
      11. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE.

SHEET INDEX

NO	NAME
G0.1	COVER SHEET
A1.1	FLOOR PLAN
A2.1	REFLECTED CEILING PLANS
A3.1	ROOF PLAN & ROOF DETAILS
A4.1	FINISH PLAN
A5.1	EXTERIOR ELEVATIONS
A6.1	LIFE SAFETY
A9.1	EQUIPMENT PLAN
A9.2	EQUIPMENT UTILITY SCHEDULE
A9.3	EQUIPMENT ELEVATIONS
A9.4	RESTROOM ELEVATIONS
A9.5	HANGING SHELVES
A11.1	DOOR & WINDOW SCHEDULE
M1.1	MECHANICAL LEGEND
M1.2	MECHANICAL SPECIFICATIONS
M2.1	MECHANICAL PLAN
M3.1	MECHANICAL SCHEDULE AND DETAILS
C1-4	CAPTIVE-AIRE
FW	FIREWALL
E1.1	LIGHTING PLAN
E2.1	POWER PLAN & ROOF POWER PLAN
E3.1	PANEL SCHEDULES & ELECT. RISER DIAGRAM
E4.1	ELECTRICAL ELEVATIONS
P1.1	PLUMBING PLAN
P2.1	PLUMBING SCHEDULES & DETAILS
P2.1B	SPECIAL CONDITIONS
P2.1C	PLUMBING SPOTTING
P3.1	PLUMBING PLAN - DOMESTIC WATER/GAS
P4.1	PLUMBING DETAILS
P5.1	FLOOR PENETRATIONS
P6.1	PLUMBING ELEVATIONS
S2.1	ROOF FRAMING PLAN
S2.2	FLOOR FRAMING PLAN
S2.3	FRAMING DETAILS

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

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6/23/2022

DATE	DESCRIPTION

smalls SLIDERS

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI — WALTER E. WOOD — NUMBER PE-2007020973 — PROFESSIONAL ENGINEER
VALID UNTIL 12-03-2025

THIRD PARTY ENGINEER: HWC & ASC, INC.
1627 SOUTH MYRTLE AVE.
CLEARWATER, FL 34616
(717) 584-8151

APPROVED — 12-3-2025 — HWC — WEIMER, CARTER & ASSOCIATES, INC.

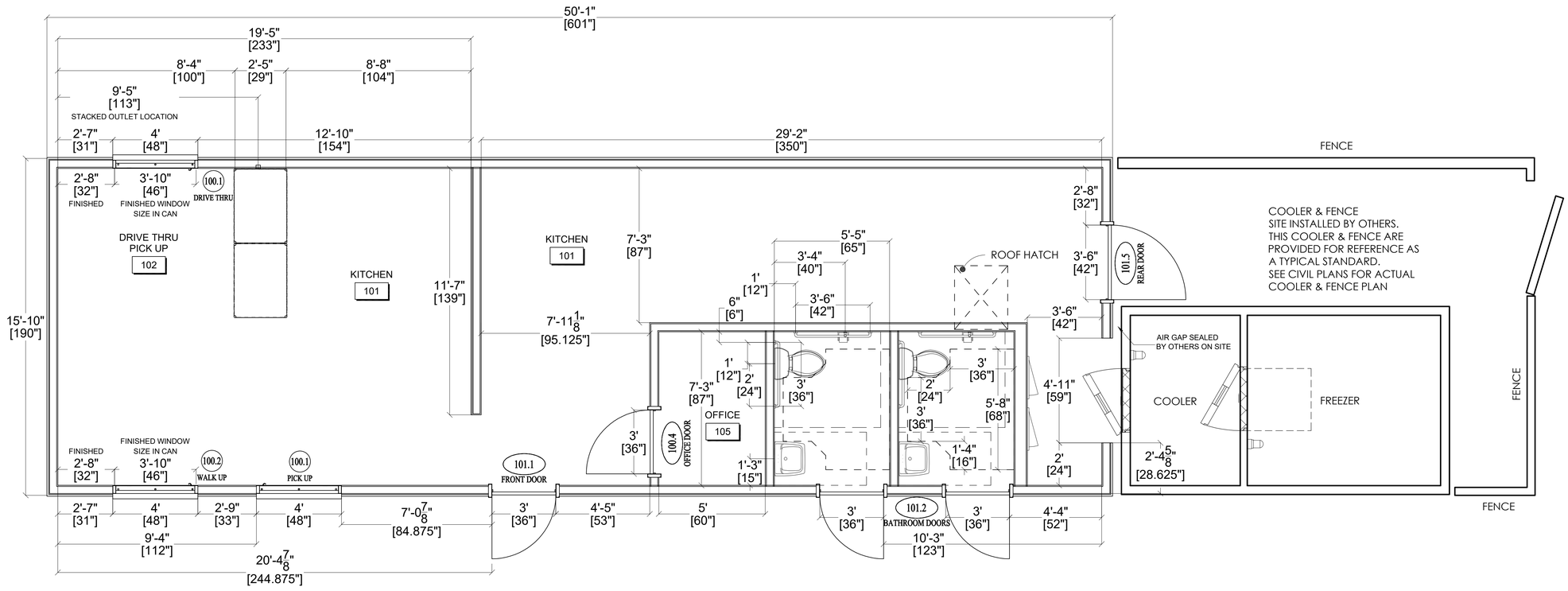
HWC# 2581-0265

SHEET NAME

COVER SHEET

SHEET NUMBER

G.01



1 FLOOR PLAN
3/8" = 1'-0"

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/9/24	BATHROOM WIDTH GREW 2"

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER
STAMP

STATE OF MISSOURI
PROFESSIONAL ENGINEER
WALTER E. WOOD
NUMBER
PE-2017022071
VALID
02-23-2 024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

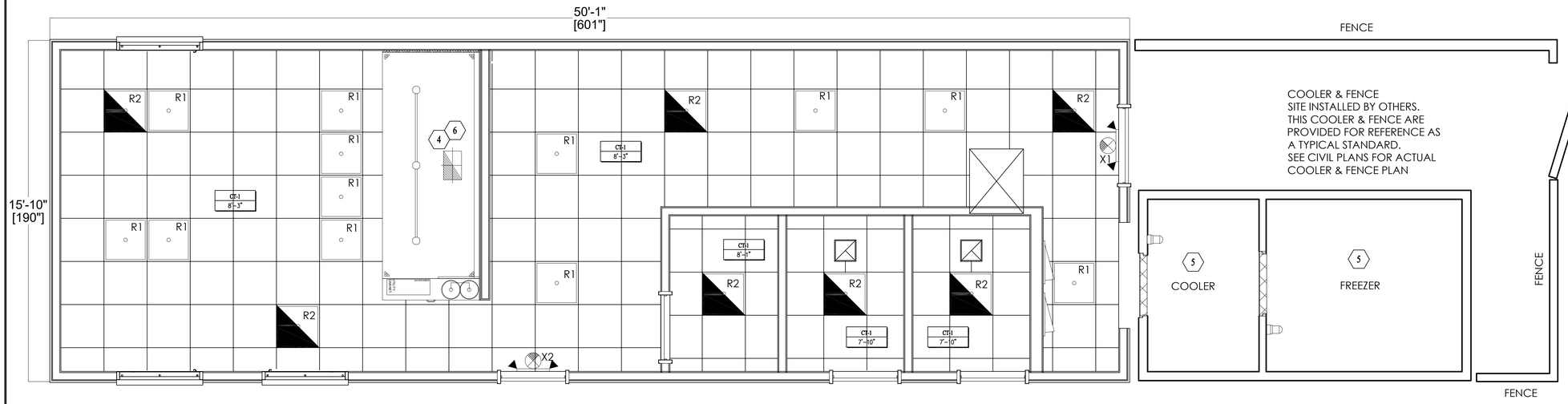
APPROVED
2-23-2024
HWC
HOUSING WEEKER CARTER & ASSOCIATES

SHEET NAME

FLOOR PLAN

SHEET NUMBER

A1.1



1 REFLECTED CEILING PLAN
3/8" = 1'-0"

CEILING PLAN GENERAL NOTES

1. SEE SHEET E1.1 FOR LIGHTING PLAN DETAILS AND CIRCUITRY.
2. GENERAL CONTRACTOR TO VERIFY CLOCKING DETAIL WITH JOIST MANUFACTURER PRIOR TO HANGING ITEMS FROM ROOF TRUSS SYSTEM.
3. BULKHEAD DIMENSIONS ARE FROM FINISH FACE TO FINISH FACE - NOT FRAMING TO FRAMING.
4. REFER TO LIGHTING PLAN FOR LOCATIONS OF EXTERIOR LIGHT FIXTURES.
5. LAY IN CEILING SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS. IF NOT NOTED CEILING TO BE CENTERED IN AREA

CEILING PLAN CODED NOTES (#)

1. N/A
2. N/A
3. N/A
4. EXTEND NFPA WELDED KITCHEN EXHAUST DUCT WITH FIRE BLANKET UP FROM HOOD TO FAN. (SEE MECHANICAL SHEETS)
5. LIGHT NOT SHOWN BY COOLER / FREEZER MANUFACTURER. ALL CONNECTIONS BY ELECTRICAL CONTRACTOR. E.C. SEAL CONDUITS AT BOTH ENDS AND SEAL ALL PENETRATIONS THRU BOX.
6. TYPE 1 KITCHEN EXHAUST HOOD
7. N/A
8. N/A
9. N/A

CEILING PLAN LEGEND

2' x 2' LIGHT FIXTURE

2' x 2' LIGHT FIXTURE, WITH POWER PACK BACK UP

BATHROOM EXHAUST FAN

CEILING MOUNTED EMERGENCY EXIT SIGN

CT-1, 2' X 2' FIRE RATED VINYL COVERED GYPSUM (ACT)
SACT SUSPENDED ACOUSTIC CEILING TILE

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R1	10/26/23	MOVED ROOF HATCH
R2	1/9/24	BATHROOM WIDTH GREW 2"

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017027073
PROFESSIONAL ENGINEER
VALID
02-23-2 024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

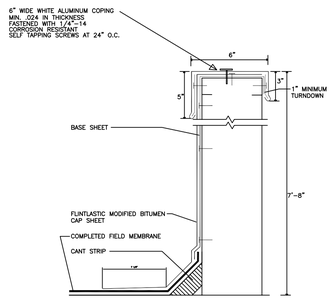
APPROVED
2-23-2024
HWC
HOUSING WERNER CARTER & ASSOCIATES

SHEET NAME

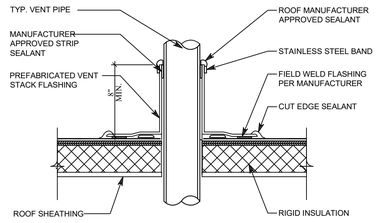
REFLECTIVE CEILING PLAN

SHEET NUMBER

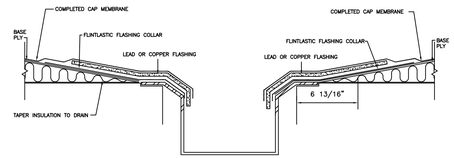
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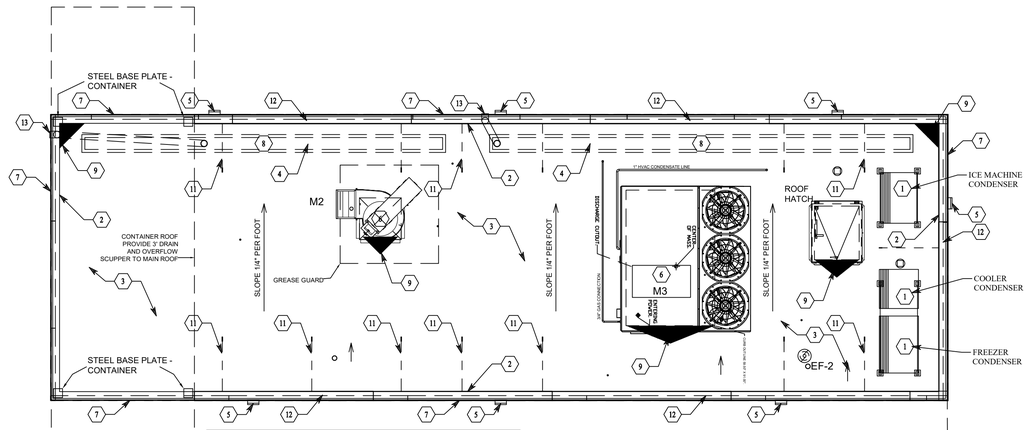
PARAPET DETAIL C



VENT PENETRATION DETAIL B



STAINLESS GUTTER DETAIL A



CONTAINER ON ROOF, HOOD EXHAUST FAN (EF-1), AND DOAS RTU (MUA-1) SUPPLIED BY VALIANT. REFRIGERATION CONDENSERS AND DISCONNECTS FOR THE REFRIGERATION CONDENSERS ARE NOT SUPPLIED BY VALIANT. PATIO CANOPY NOT BY VALIANT. SITE INSTALLED BY OTHERS.

U.L. REPORT - TGFU.R11656 (CLASS A - FULLY ADHERED) (SYSTEM 43)
ICC-ES EVALUATION REPORT - ESR-1388 (TABLE 1C) (SYSTEM C-8) (TABLE 2C) (SYSTEM C-4)
FLORIDA PRODUCT APPROVAL - FL2533.1 (TABLE 10C) (SYSTEM SC-75)
MIAMI-DADE N.O.A. - 24-0906.04

1 ROOF PLAN
1/4" = 1'-0"

ICC-ES ESR-1388 TABLE 1C - EXTERNAL ROOF FIRE CLASSIFICATION

SYSTEM NO.	CLASS	MAX. ROOF SLOPE	VAPOR BARRIER OR ANCHOR SHEET	INSULATION / THICKNESS	ROOF COVER			
					BASE SHEET	PLY SHEET	MEMBRANE	SURFACING
C-8	A	1/2:12	NONE	POLYISOCYANURATE, PERLITE, GLASS FIBER, OR WOOD FIBER / ANY THICKNESS. DENSDECK / MIN. 1/4-INCH	FLINTLASTIC SA NAILBASE (MA) OR FLINTLASTIC SA PLYBASE (SA TO PRIMED DENSDECK OR DENSDECK DURAGUARD ONLY)	FLINTLASTIC SA PLYBASE (SA)	FLINTLASTIC SA CAP FR, FLINTLASTIC SA CAP FR COOLSTAR (SA)	NONE

ICC-ES ESR-1388 TABLE 2C - WIND UPLIFT RESISTANCE

SYSTEM NO.	SUBSTRATE	INSULATION		COVERBOARD		ROOF COVER			ALLOWABLE UPLIFT CAPACITY (PSF)
		TYPE	ATTACH	TYPE	ATTACHMENT METHOD	BASE	PLY	CAP	
C-4	MIN. 22 GA. STEEL OR MIN. 2,500 PSI CONCRETE	MIN. 1.5-INCH, MIN. 2.0 PCF POLYISOCYANURATE	LOOSE LAID	(OPTIONAL) FM APPROVED MIN. 3/4-INCH PERLITE, MIN. 1/2-INCH WOOD FIBERBOARD, OR MIN. 1/4-INCH DENSDECK	LOOSE LAID	FLINTLASTIC SA NAILBASE ATTACHED 12-INCH O.C. IN A 4-INCH LAP AND 12-INCH O.C. IN TWO, EQUALLY SPACED, STAGGERED CENTER ROWS	(OPTIONAL) FLINTLASTIC SA MID PLY, SELF-ADHERED	SELF-ADHERED	60

ROOF PLAN GENERAL NOTES

A. N/A

B. THE BUILDING MANUFACTURER SHALL VERIFY EXISTING CONDITIONS, LOAD BEARING WALLS, AND STRUCTURAL ITEMS PRIOR TO STARTING WORK. NOTIFY AND COORDINATE WITH ARCHITECT ALL DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS.

C. ROOF WORK TO BE INSTALLED WITH APPROVED ROOF MATERIAL SPECIFICATIONS. PROVIDE AND INSTALL ROOF INCLUDING BUT NOT LIMITED TO, INSULATION BOARD, EDGE FLASHING(S), COPINGS, SEALED TERMINATIONS AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. AT PENETRATIONS/ ATTACHMENTS IN THE ROOF, FLASH/ PROVIDE WEATHER TIGHT SEAL PER ROOFING SYSTEM MANUFACTURER'S WARRANTY REQUIREMENTS. METHOD AND HARDWARE FOR ATTACHMENTS TO STRUCTURE TO BE REVIEWED AND VERIFIED BY A.O.R. UPON COMPLETION. THE ROOFING CONTRACTOR SHALL ENSURE THE ENTIRE ROOF SHALL BE WEATHER AND WATER TIGHT WITH POSITIVE DRAINAGE TO THE ROOF DRAINS AND NO STANDING WATER/ PONDING.

D. BUILDING MANUFACTURER SHALL INSTALL RIGID INSULATION TO MEMBRANE INSTALLATION IN ACCORDANCE WITH THE ROOFING MATERIAL LISTING. SYSTEM TO BE COMPLETE WITH ALL ACCEPTABLE PRODUCTS AND INSTALLATION REQUIRED TO PROVIDE A FULL MANUFACTURER'S WARRANTY.

E. ROOFING DESIGN:
E.• CERTAINTEED - SELF-ADHERED ROOF SYSTEM

ROOF PLAN CODED NOTES

1. FREEZER/ COOLER AND ICE MAKER CONDENSER UNITS BY OWNER, G.C. TO CONNECT ELECTRICAL. PIPING CONTRACTOR TO BRAZE ANY ROOF PENETRATIONS FOR REMOTE EQUIPMENT. G.C. TO VERIFY AND BE RESPONSIBLE FOR ANY AND ALL MECHANICAL AND ELECTRICAL CONNECTIONS.
2. EXTEND ROOF MEMBRANE UP ROOF EDGE AND OVER TOP OF FRAMING (TYPICAL). SECURE PREFABRICATED DRIP EDGE THROUGH MEMBRANE AS SPECIFIED BY MANUFACTURER. SEE DETAIL C.
3. SELF-ADHERED ROOF SYSTEM. SEE SPECIFICATIONS.
4. ROOF DRAIN TROUGH - STAINLESS STEEL 4" X 8".
5. EXTERIOR LIGHTING FIXTURES. (REFER TO ELECTRICAL)
6. HVAC UNITS AND EXHAUST FANS. (REFER TO MECHANICAL)
7. METAL ROOF EDGE: DRIP EDGE.
8. TAPER INSULATION OVER RIGID INSULATION AT ROOF DRAIN (TYPICAL). FIELD VERIFY ROOF DRAIN LOCATIONS PRIOR TO INSTALLATION, AND INSTALL PER ROOF MANUFACTURER'S SPECIFICATIONS. G.C. TO COORDINATE ACTUAL EXTENTS OF TAPERED INSULATION MATERIALS WITH ROOF INSTALLER AND VERIFY INSTALLED COUNTER-SLOPE OF 1/4" PER FOOT TO DIRECT STORM WATER TOWARD ROOF DRAINS AS INDICATED ON PLAN.
9. ROOF CRICKETS. (TYPICAL).
10.
11. DASHED LINE INDICATES EXTENTS OF PARAPET BRACING, 1:1 SLOPE. (REFER TO STRUCTURAL)
12. ROOFTOP PARAPET. (REFER TO STRUCTURAL)
13. 3" DIA. MIN. ROOF DRAIN FROM ROOF DRAIN TROUGH.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022071
PROFESSIONAL ENGINEER
VALID
Walter E. Wood
02-23-2 O24

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED - 2-23-2024 - HWC - WEBER CARTER & ASSOCIATES

SHEET NAME
ROOF PLAN DETAIL

SHEET NUMBER
A3.1

ROOM FINISH SCHEDULE

ROOM	FLOORS	WALLS		BASE	CEILING/SOFFIT		
NAME	FT-1	WF-1	WF-2	WB-1	CT-1	PT-1	HEIGHT
KITCHEN	•	•	•	•	•		8'-3"
DRIVE THRU	•	•		•	•		8'-3"
UNISEX RESTROOM	•	•		•	•		7'-10"
UTILITY/OFFICE	•	•		•	•		8'-1"

CT-1 C CLASS A: = FLAME SPREAD INDEX 0-25; SMOKE-DEVELOPED INDEX 0-450.

WF-1 W CLASS C: = FLAME SPREAD INDEX 76-200; SMOKE-DEVELOPED INDEX 0-450.

WB-1 B FIRE TEST NFPA TYPE 1 RATED

FT-1 F FIRE TEST NFPA TYPE 1 RATED

INTERIOR WALL AND CEILING FINISH MATERIAL; FLAME SPREAD AND SMOKE-DEVELOPED INDEXES

CLASS A: = FLAME SPREAD INDEX 0-25; SMOKE-DEVELOPED INDEX 0-450.
CLASS B: = FLAME SPREAD INDEX 26-75; SMOKE-DEVELOPED INDEX 0-450.
CLASS C: = FLAME SPREAD INDEX 76-200; SMOKE-DEVELOPED INDEX 0-450.

INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIAL;
-MINIMUM CRITICAL RADIANT FLUX

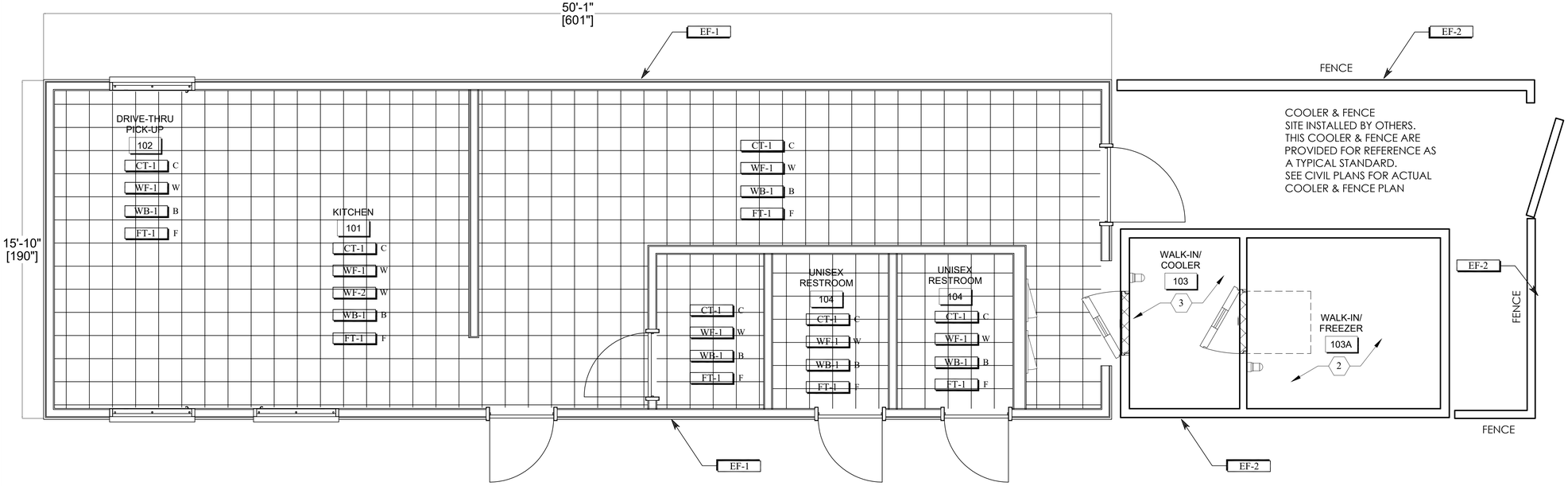
NOT LESS THAN CLASS II IN ACCORDANCE WITH NFPA 253
CLASS II, 0.22 WATTS/CM² OR GREATER

FINISH PLAN CODED NOTES ⑥

1. NOT USED
2. FREEZER TO HAVE INSULATED METAL FLOOR BY UNIT MANUFACTURER.
3. COOLER TO RECEIVE TILE FLOOR & BASE BY G.C. AFTER THE UNIT HAS BEEN INSTALLED.
4. NOT USED
5. NOT USED
6. NOT USED

FINISH SCHEDULE: INTERIOR MATERIALS

CT-1	CEILING TILE	USG SHEETROCK: GYPSUM CEILING PANELS - VINYL COATED 24" X 24" SQUARE EDGE LAY IN - WHITE
EF-1	EXTERIOR FINISH	SEE EXTERIOR FINISH SCHEDULE ON ELEVATION SHEET A5.1
EF-2	EXTERIOR FENCE FINISH	MATCH EF-1
FT-1	FLOOR FINISH	PROTECT-ALL: FLOORING - DARK GRAY
PT-1	PAINT	SHERWIN WILLIAMS COLLECTION: HARMONY #SW7006 EXTRA WHITE, EGGSHELL
WB-1	WALL BASE	PROTECT-ALL: COVE BASE - DARK GRAY
WF-1	WALL FINISH	FRP: LP-S9 - SMOOTH FINISH, WHITE
WF-2	WALL FINISH	14GA. STAINLESS STEEL, FULL HEIGHT OF WALL TO MIN. 18" BEYOND HOOD



1 FINISH PLAN
3/8" = 1'-0"

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/9/24	BATHROOM WIDTH GREW 2"

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER
STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER
PE-2017027071
PROFESSIONAL ENGINEER
VALID
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

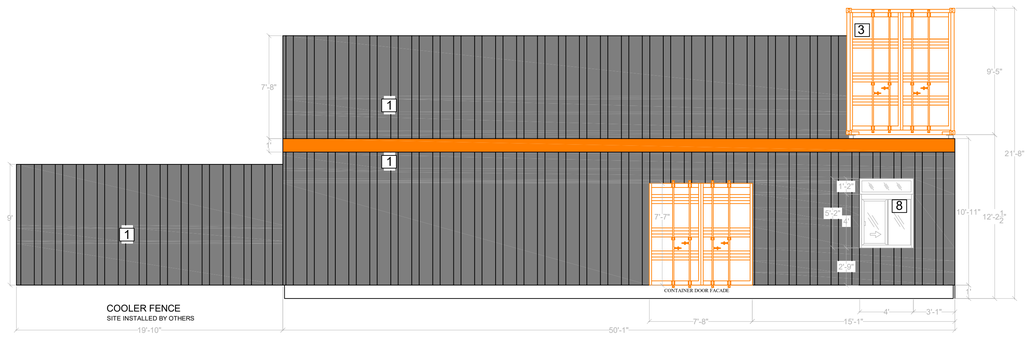
APPROVED
2-23-2024
HWC
WITMER-CARTER & ASSOCIATES, INC.

SHEET NAME

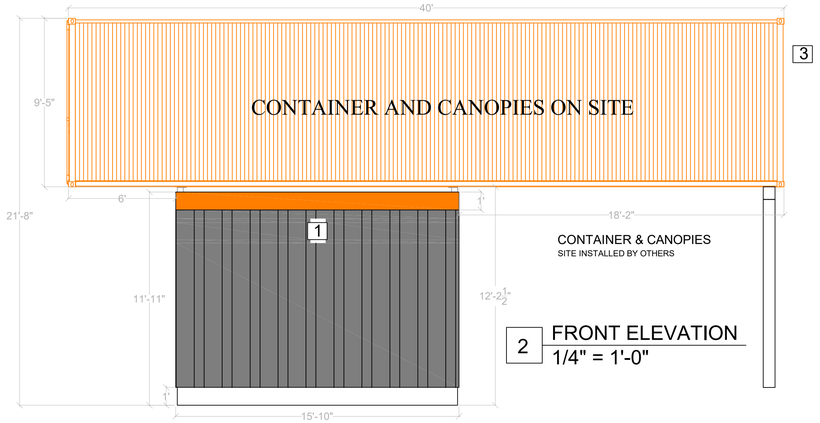
FINISH PLAN

SHEET NUMBER

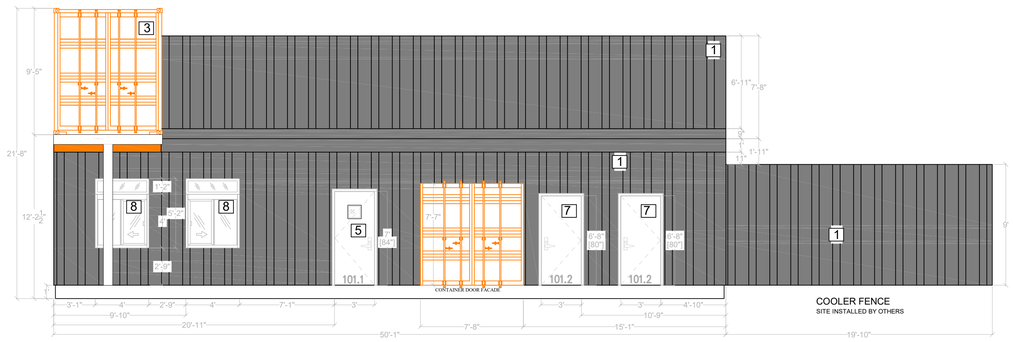
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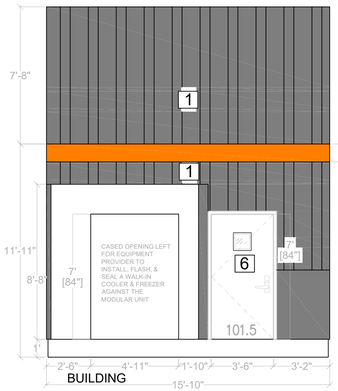
1 DRIVE THRU ELEVATION
3/16" = 1'-0"



2 FRONT ELEVATION
1/4" = 1'-0"



3 PATIO SIDE ELEVATION
3/16" = 1'-0"



4 REAR ELEVATION
1/4" = 1'-0"

HOME DEPOT PAINT CODE NUMBER
3866898719

Available Colors: Orange

SHERWIN WILLIAMS PAINT CODE NUMBER
3866779316

Available Colors: Midnight Bronze
Drizzling Mist

Colors/Material

	Material	Color	Description
1	Metal Siding	Bronze	Vertical MASTERLINE 16, 24 GA. OR EQUAL
2	Fiber Cement	Bronze	Alternate Material to the Metal Siding = 1 x 4 Painted Hardie plank over Hardie board
3	Steel	Slider's Colors Orange/White	40 Ft shipping Container
5	Steel Door	Bronze	(1) 36"/7' W/ LAMINATED SAFETY GLASS WINDOW
6	Rear Service Steel Door	Bronze	(1) 42"/7' W/ LAMINATED SAFETY GLASS WINDOW
7	Bath Room Steel Door	Bronze	(2) 36"/6'8"
8	Aluminum Order Window	Bronze	QuikServ WINDOWS WITH TRANSOM

MISSOURI
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ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
02-23-2 O24

Third Party: HWC & Assc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
2-23-2024
HWC
HOUSING INSPECTION, INC.
WEBBER, CARTER & ASSOCIATES

SHEET NAME

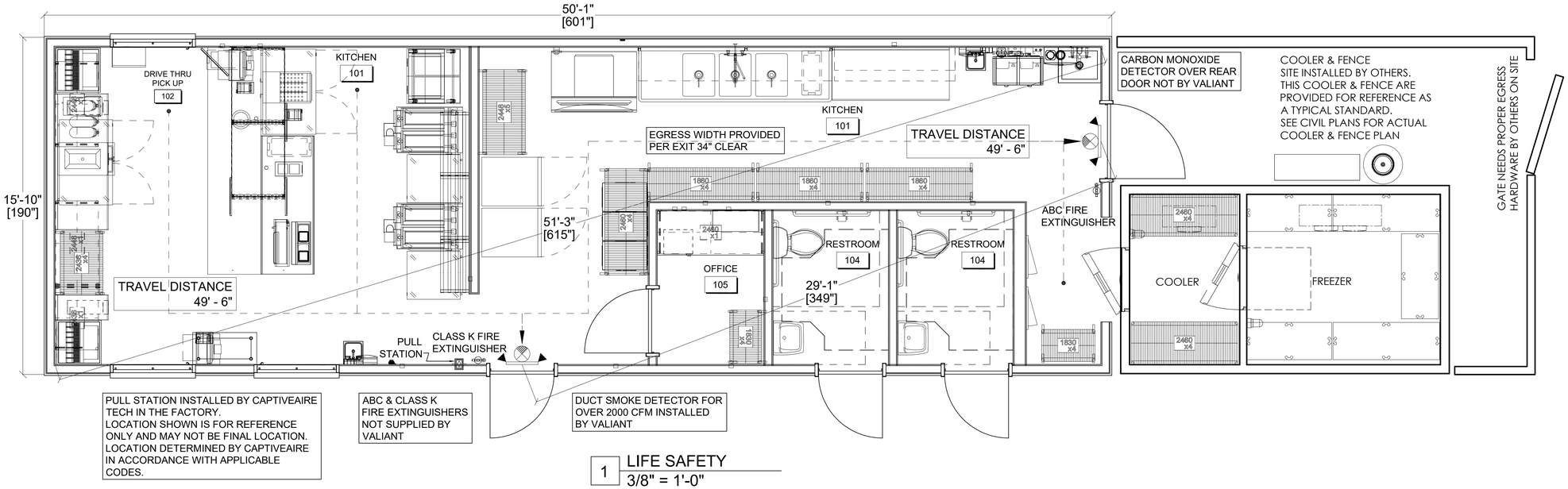
ELEVATIONS

SHEET NUMBER

A5.1

GENERAL NOTES

1. ALL INTERIOR NON-STRUCTURAL PARTITIONS SHALL BE 3 5/8" 20G METAL STUDS @ 16" O.C. FROM FLOOR TO 6" ABOVE FINISHED CEILING, U.N.O. DIAGONALLY BRACE TOP OF WALL TO ROOF STRUCTURE AS REQUIRED TO SUPPORT ADDITIONAL LOADS.
2. INTERIOR SOFFITS (SHOWN DASHED) ARE DIMENSIONED ON REFLECTED CEILING PLAN.
3. SEE SITE PLAN FOR LOCATIONS & EXTENTS OF SIDEWALKS, ETC.
4. ALL EXTERIOR WALLS SHALL BE FRAMED WITH 3 5/8" or (6"as noted on plan) METAL STUDS @ 16" O.C. SEE STRUCTURAL DRAWINGS & SPECIFICATIONS FOR LAYOUT DIMENSIONS, DETAILS, MATERIALS INFORMATION, & SPECIFIC STRUCTURAL DESIGN REQUIREMENTS.
5. PROVIDE SOLID WOOD BLOCKING BEHIND ALL WALL MOUNTED FIXTURES AND ACCESSORIES.
6. EXTERIOR DIMENSIONS ARE FROM FACE OF SHEATHING U.N.O INTERIOR DIMENSIONS ARE TO FACE OF SHEATHING U.N.O
7. COORDINATE CURB CUTS AT DOOR WITH STOREFRONT MANUFACTURER PRODUCT DETAILS AND SHOP DRAWINGS.
8. EXTERIOR WALLS SHALL BE INSULATED WITH CLOSED CELL SPRAY FOAM INSULATION AND HAVE A 15/32" PLYWOOD THERMAL BARRIER ON INTERIOR SIDE OF WALL
9. EXTERIOR FINISHES ARE NOTED ON EXTERIOR ELEVATIONS.
10. SEE FINISH PLAN AND INTERIOR ELEVATIONS FOR EXTENT OR INTERIOR FINISHES.
11. INSTALL TYVEK COMMERCIAL WRAP WEATHER BARRIER OVER SHEATHING BEHIND METAL PANELS. PROVIDE FLUID-APPLIED WEATHER BARRIER TO SHEATHING AT E.I.F.S LOCATIONS. PROVIDE TILE MANUFACTURER APPROVED WEATHER BARRIER BEHIND NEW CERAMIC TILE. APPROVE ALTERNATES INSTALL STO FLUID APPLIED AIR & MOISTURE BARRIER BEHIND ALL EXTERIOR FINISHES.
12. HOLD DOWN CLIPS SHALL BE PROVIDED FOR CEILING TILES IN THE VESTIBULES.
13. SEE INTERIOR FINISH SPECIFICATIONS FOR CEILING TILE.
14. DO NOT SCREW THE CEILING GRID TO THE STAINLESS STEAL HOODS. USE DOUBLE-FACED TAPE.
15. REFER TO ELECTRICAL AND/OR HVAC DRAWINGS FOR ADDITIONAL INFORMATION. REGARDING FIXTURES, DEVICES. AND EQUIPMENT SHOWN ON THIS PLAN.
16. TYPICAL RECESSED FIXTURES TO BE CENTERED IN CEILING TILE, U.N.O
17. CENTER CEILING GRID WITHIN ROOM ARE UNLESS NOTED/ DIMENSIONED OTHERWISE.
18. VOIDED
19. SEE FINAL APPROVED SECURITY PLAN FOR LOCATIONS OF CEILING MOUNTED CAMERAS AND MONITORS.



1 LIFE SAFETY
3/8" = 1'-0"

COOLER & FENCE PLAN

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
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MANUFACTURED HOUSING

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R2	1/11/24	BATHROOM WIDTH GREW 2"

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VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
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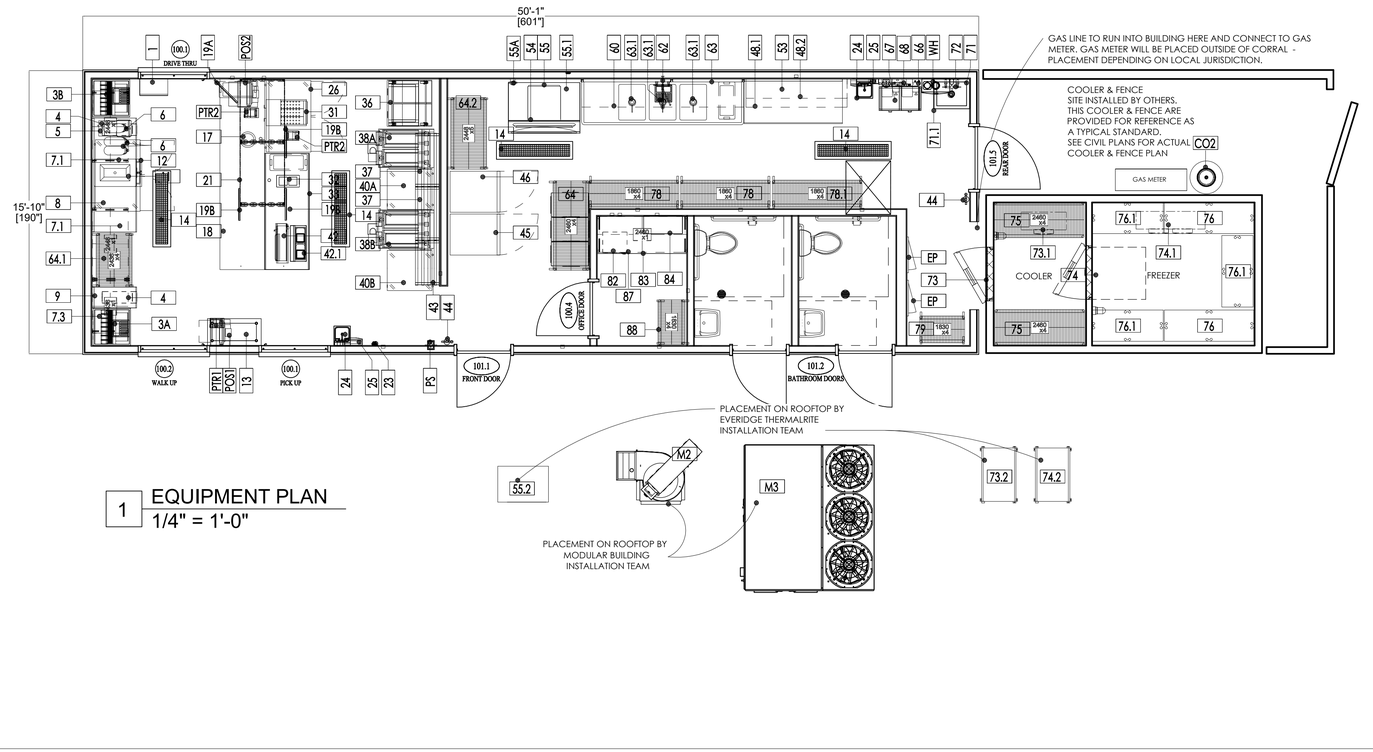
APPROVED
2-23-2024
HWC
REHDER-CARTER & ASSOCIATES, INC.

SHEET NAME
LIFE SAFETY

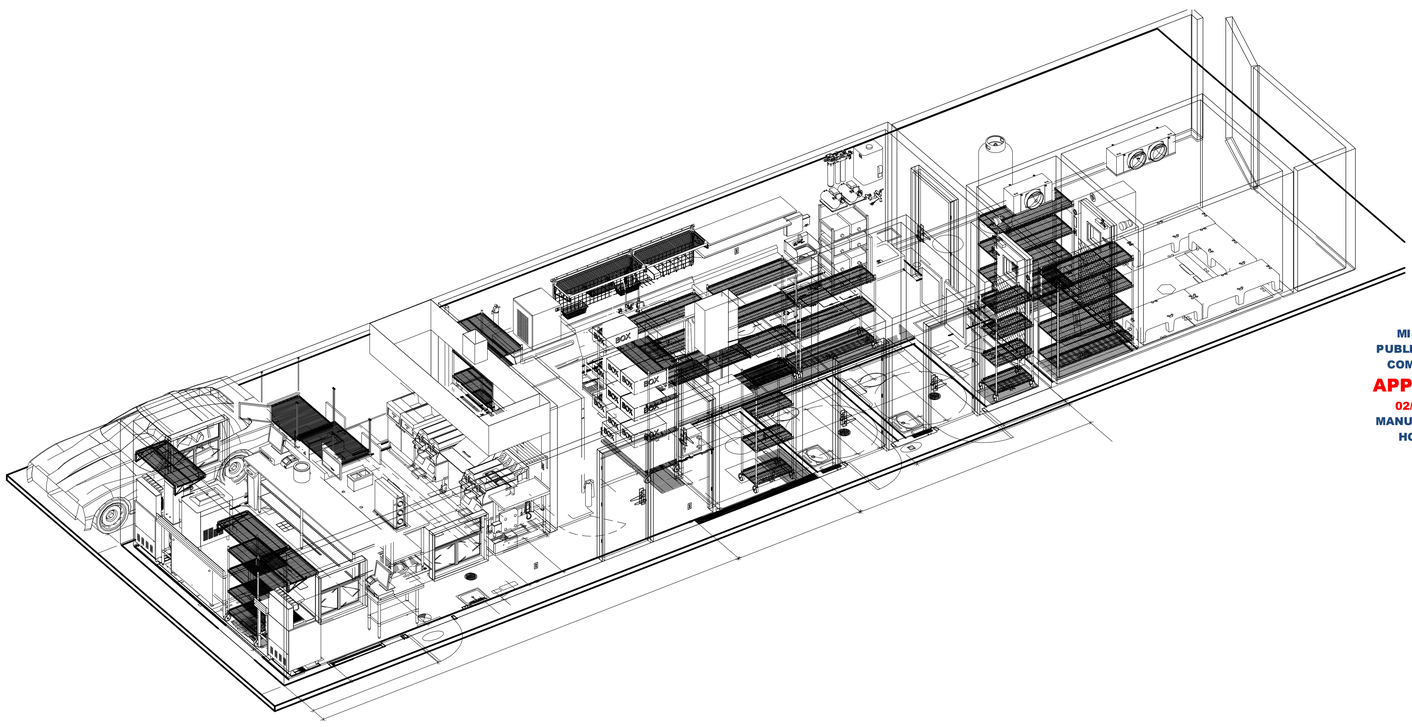
SHEET NUMBER
A6.1

Equipment Schedule

Item Number	Qty	Description	Manufacturer	Model	Furnished By
1	1	Shelving, Wall Mounted	JLS	Custom	DON
2	1	Spare Number	--	--	
3A	1	Soda Dispenser - Patio	By Vendor	By Vendor	VENDOR
3B	1	Soda Dispenser - Drive Thru	By Vendor	By Vendor	VENDOR
4	2	Cup Dispenser	San Jamar	C2903BK	DON
5	1	Tea Brewer	By Owner	TBD	VENDOR
6	3	Tea Dispenser	By Owner	TBD	VENDOR
7.1	2	Shelving, Wall Mounted	Quantum	2448C/DWB24/DWBD24	DON
7.3	1	Shelving, Wall Mounted	Quantum	2436C/DWB24	DON
8	1	Beverage Counter	JLS	Custom	DON
9	1	Stainless Steel Work Table w/ Base	JLS	Custom	DON
10	1	Spare Number	--	--	
11	1	Shake Machine	Taylor	490-A	DON
12	1	Refrigerator, Undercounter	Hoshizaki	UR48B	DON
13	1	POS Table	JLS	Custom	DON
14	4	Floor Trough Drain	By Others	Custom 6x48	VALIANT
15	1	Spare Number	--	--	
16	1	Spare Number	--	--	
17	1	Warmer	APW Wyott	RCW-7SP	DON
18	1	Stainless Steel Top Work Tables	JLS	Custom	DON
19A	1	Kitchen Display System	By Owner	TBD	OWN
19B	3	Kitchen Display System	By Owner	TBD	OWN
20	1	Spare Number	--	--	
21	1	Overhead Shelving, Ceiling Mounted	Quantum	3042C/P63C/S-Hook/FP	DON
22	1	Spare Number	--	--	
23	1	Phone	By Owner	TBD	OWNER
24	2	Hand Sink	By Contractor	By Contractor	VALIANT
25	2	Soap & Towel Dispensers	Smallwares	Custom	VENDOR
26	1	Freezer, Worktop	Hoshizaki	WF48B	DON
27-30	1	Spare Number	--	--	
31	1	Hot Food Holding Station	Carter-Hoffmann	CNH1B	DON
32	1	Food Pan Warmer	Server Products	86090	DON
33	1	Stainless Steel Work Table w/ Undershelf	JLS	Custom	DON
34-35	1	Spare Number	--	--	
36	1	Fryers	Vulcan	2TR45DF	DON
37	2	Shelving, Tubular	JLS	Custom	DON
38A	1	2 Platen Electric Double-Sided Grill - Fryer Side	Taylor	L852	DON
38B	1	2 Platen Electric Double-Sided Grill	Taylor	L852	DON
39	1	Spare Number	--	--	
40A	1	Refrigerator, Worktop - Fryer Side	Hoshizaki	WR27B-D2	DON
40B	1	Refrigerator, Worktop	Hoshizaki	WR27B-D2	DON
41	1	Spare Number	--	--	
42	1	Toaster, Vertical	Prince Castle	297-T20	DON
42.1	1	Butter Wheel	Smallwares	TBD	VENDOR
43	1	Shelving, Tubular	JLS	Custom	DON
44	2	Fire Extinguisher	By Contractor	Per Code	OWNER
45	1	Freezer	Hoshizaki	F1A-FS	DON
46	1	Refrigerator	Hoshizaki	R1A-FS	DON
48.1	1	Shelving, Wall Mounted	JLS	Custom	DON
48.2	1	Shelving, Wall Mounted	JLS	Custom	DON
49	1	Spare Number	--	--	
50	1	Spare Number	--	--	
51	1	Spare Number	--	--	
52	1	Spare Number	--	--	
53	1	Work Table, Stainless Steel Top	JLS	Custom	DON
54	1	Ice Bin	Manitowoc Ice	D-970	DON
55	1	Ice Cube Machine, Remote w/ 50' Line Set	Manitowoc Ice	RNF1020C/RC51	DON
55.1	1	Ice Bin Adapter	Manitowoc Ice	K00473	DON
55.2	1	Icemaker Condenser, Remote	Manitowoc Ice	RCUF1000-261	DON
55A	1	Filter System, Ice Maker	Manitowoc Ice	AR-20000-P	DON
56-59	1	Spare Number	--	--	
60	1	Smart Wall Dish Station Kit	Quantum	Lot	DON
61	1	Spare Number	--	--	
62	1	Pre-Rinse Faucet Assembly, With Add-On Faucet	T&S Brass	B-0133-ADF12-B	DON
63	1	Three (3) Compartment Sink	JLS	Custom	DON
63.1	3	Drain, Lever Handle	T&S Brass	B-3952	DON
64	1	Wire Shelving	Quantum	2460C/P86C/WR-00H/DB	DON
64.1	1	Wire Shelving	Quantum	2436C/P54C/WR-00H/DB	DON
64.2	1	Wire Shelving	Quantum	2448C/P86C/WR-00H-DB	DON
65	1	Spare Number	--	--	
66	2	Soda Carbonator	By Vendor	E2000 Big Mac	VENDOR
67	2	BIB Rack	By Vendor	By Vendor	VENDOR
68	1	Water Filtration System	Everpure	EV929322	DON
69-70	1	Spare Number	--	--	
71	1	Mop Sink	By Contractor	By Contractor	VALIANT
71.1	1	Stainless Steel Splash Shield	By Contractor	By Contractor	VALIANT
72	1	Service Faucet	By Contractor	By Contractor	VALIANT
73	1	Walk-In Cooler	Thermalrite	Custom	DON
73.1	1	Evaporator Coil (Refrigerator)	Thermalrite	Custom	DON
73.2	1	Cooler Condenser	Thermalrite	Custom	DON
74	1	Walk-In Freezer	Thermalrite	Custom	DON
74.1	1	Evaporator Coil (Freezer)	Thermalrite	Custom	DON
74.2	1	Freezer Condenser	Thermalrite	Custom	DON
75	2	Wire Shelving	Quantum	2460P/P74P	DON
76	2	Dunnage Rack	Quantum	QFSD-2260	DON
76.1	3	Dunnage Rack	Quantum	QFSD-2248	DON
77	1	Spare Number	--	--	
78	2	Wire Shelving	Quantum	1860C/P86C/WR-00H/DB	DON
78.1	1	Wire Shelving	Quantum	1860C/P54C/WR-00H/DB	DON
79	1	Wire Shelving	Quantum	1830C/P74C/WR-00H/DB	DON
80-81	1	Spare Number	--	--	
82	1	Safe	By Owner	TBD	OWN
83	1	Formica Desktop	By Contractor	Custom	VALIANT
84	1	Networking Box	By Vendor	TBD	VENDOR
85-86	1	Spare Number	--	--	
87	1	Shelving, Wall Mounted	Quantum	2460C/DQB24	DON
88	1	Wire Shelving	Quantum	1830C/P74C/WR-00H/DB	DON
CO2	1	Bulk CO2	By Vendor	TBD	VENDOR
EP	2	Electrical Panel	By EC	--	VALIANT
M1	1	Hood System	CaptiveAire	By Contractor	VALIANT
M2	1	Exhaust Fan	CaptiveAire	By Contractor	VALIANT
M3	1	Dedicated Outside Air System RTU	CaptiveAire	By Contractor	VALIANT
POS1	1	POS - Patio	By Owner	TBD	OWN
POS2	1	POS - Drive Thru	By Owner	TBD	OWN
PS	1	Fire System Pull Station	Ansul	PS	VALIANT
PTR1	1	PTR - Patio	By Owner	TBD	OWN
PTR2	2	PTR - Drive Thru	By Owner	TBD	OWN
WH	1	Water Heater	By PC	By PC	VALIANT



1 EQUIPMENT PLAN
1/4" = 1'-0"



MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/11/24	BATHROOM WIDTH GREW 2"
R2	1/11/24	EQUIPMENT UPDATED

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
Walter E. Wood
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED - 2-23-2024 - HWC - WEIMER - CARTER & ASSOCIATES

SHEET NAME

EQUIPMENT PLAN

SHEET NUMBER

A9.1

Equipment Utility Schedule

Item Number	Qty	Description	Manufacturer	Model	FL Amps	Watts	HP	Volts	Phase	Conn Plug	Electrical RI	Electrical Remarks	Cold Water Size	Cold Water RI	Hot Water Size	Hot Water RI	Filtered Water Size	Indirect Waste Size	Direct Waste Size	Direct Waste RI	Gas Size	Gas Input Btu/h	Gas RI	Plumbing Remarks	Item Number
1	1	Shelving, Wall Mounted	JLS	Custom																					1
2	1	Spare Number	--	--																					2
3A	1	Soda Dispenser - Patio	By Vendor	By Vendor	10.0 A			120 V	1	5-15P	18"	E.C. To Verify Loads w/ Vendor Supplied Equipment						3/4"						Verify Requirements w/ Owner, Air-Gap To FS	3A
3B	1	Soda Dispenser - Drive Thru	By Vendor	By Vendor	10.0 A			120 V	1	5-15P	18"	E.C. To Verify Loads w/ Vendor Supplied Equipment						3/4"						Verify Requirements w/ Owner, Air-Gap To FS	3B
4	2	Cup Dispenser	San Jamar	C2903BK																					4
5	1	Tea Brewer	By Owner	TBD	14.0 A			120 V	1	5-15P	48"	By Owner-Verify w/ Owner					1/4"							Filtered Water From 68, By Vendor - Verify w/ Vendor	5
6	3	Tea Dispenser	By Owner	TBD																					6
7.1	2	Shelving, Wall Mounted	Quantum	2448C/DWB24/DWBD24																					7.1
7.3	1	Shelving, Wall Mounted	Quantum	2436C/DWB24																					7.3
8	1	Beverage Counter	JLS	Custom															1 1/2"	19"					8
9	1	Stainless Steel Work Table w/ Base	JLS	Custom																					9
10	1	Spare Number	--	--																					10
11	1	Shake Machine	Taylor	490-A	12.0 A	2496 W	1/2	208 V	1	L6-15P	48"	Verify plug connection w/ Vendor													11
12	1	Refrigerator, Undercounter	Hoshizaki	UR48B	3.0 A	345 W	1/5	115 V	1	5-15P	18"														12
13	1	POS Table	JLS	Custom																					13
14	4	Floor Trough Drain	By Others	Custom 6x48															3"					Verify w/ Fabricator	14
15	1	Spare Number	--	--																					15
16	1	Spare Number	--	--																					16
17	1	Warmer	APW Wyott	RCW-7SP	8.3 A	1000 W		120 V	1	5-15P	24"	3+WIRE													17
18	1	Stainless Steel Top Work Tables	JLS	Custom																					18
19A	1	Kitchen Display System	By Owner	TBD				120 V	1	5-20P	<varies>	By Owner - Verify w/ Owner, Data required													19A
19B	3	Kitchen Display System - Ceiling	By Owner	TBD				120 V	1	5-20P	<varies>	By Owner - Verify w/ Owner, Data required													19B
20	1	Spare Number	--	--																					20
21	1	Overhead Shelving, Ceiling Mounted	Quantum	3042C/P63C/S-Hook/FP																					21
22	1	Spare Number	--	--																					22
23	1	Phone	By Owner	TBD							62"	By Owner - Verify w/ Owner													23
24	2	Hand Sink	By Contractor	By Contractor									1/2"	19"	1/2"	19"			1 1/2"	21"					24
25	2	Soap & Towel Dispensers	Smallwares	Custom																					25
26	1	Freezer, Worktop	Hoshizaki	WF48B	3.6 A	414 W	1/5	115 V	1	5-15P	18"														26
27-30	1	Spare Number	--	--																					27-30
31	1	Hot Food Holding Station	Carter-Hoffmann	CNH18	15.1 A	1820 W		120 V	1	5-20P	42"														31
32	1	Food Pan Warmer	Server Products	86090	4.2 A	500 W		120 V	1	5-15P															32
33	1	Stainless Steel Work Table w/ Undershelf	JLS	Custom																					33
34-35	1	Spare Number	--	--																					34-35
36	1	Fryers	Vulcan	2TR45DF	6.0 A			120 V	1	5-15P	18"										1 1/4"	140000	28"		36
37	2	Shelving, Tubular	JLS	Custom																					37
38A	1	2 Platen Electric Double-Sided Grill - Fryer Side	Taylor	L852	48.0 A	16800 W		208 V	3	15-60P	18"														38A
38B	1	2 Platen Electric Double-Sided Grill	Taylor	L852	48.0 A	16800 W		208 V	3	15-60P	18"														38B
39	1	Spare Number	--	--																					39
40A	1	Refrigerator, Worktop - Fryer Side	Hoshizaki	WR27B-D2	3.0 A	345 W	1/6	115 V	1	5-15P	18"														40A
40B	1	Refrigerator, Worktop	Hoshizaki	WR27B-D2	3.0 A	345 W	1/6	115 V	1	5-15P	18"														40B
41	1	Spare Number	--	--																					41
42	1	Toaster, Vertical	Prince Castle	297-T20	13.0 A	1500 W		120 V	1	5-15P		Plug into work table outlet													42
42.1	1	Butter Wheel	Smallwares	TBD																					42.1
43	1	Shelving, Tubular	JLS	Custom																					43
44	1	Fire Extinguisher	By Contractor	Per Code																					44
45	1	Freezer	Hoshizaki	F1A-FS	8.5 A	973 W		115 V	1	5-15P	84"														45
46	1	Refrigerator	Hoshizaki	R1A-FS	5.0 A	575 W		115 V	1	5-15P	84"														46
48.1	1	Shelving, Wall Mounted	JLS	Custom																					48.1
48.2	1	Shelving, Wall Mounted	JLS	Custom																					48.2
49	1	Spare Number	--	--																					49
50	1	Spare Number	--	--																					50
51	1	Spare Number	--	--																					51
52	1	Spare Number	--	--																					52
53	1	Work Table, Stainless Steel Top	JLS	Custom																					53
54	1	Ice Bin	Manitowoc Ice	D-970														3/4"						Air-Gap to FS	54
55	1	Ice Cube Machine, Remote w/ 50' Line Set	Manitowoc Ice	RNF1020C/RC51	2.9 A	334 W		115 V	1	Direct	72"		3/8"				1/2"	3/4"							55
55.1	1	Ice Bin Adapter	Manitowoc Ice	K00473																					55.1
55.2	1	Icemaker Condenser, Remote	Manitowoc Ice	RCUF1000-261	15.0 A	3120 W		208 V	1	Direct		208-230V/60/1													55.2
55A	1	Filter System, Ice Maker	Manitowoc Ice	AR-20000-P									3/8"	78"			1/2"	3/8"						Filtered water to 55	55A
56-59	1	Spare Number	--	--																					56-59
60	1	Smart Wall Dish Station Kit	Quantum	Lot																					60
61	1	Spare Number	--	--																					61
62	1	Pre-Rinse Faucet Assembly, With Add-On Faucet	T&S Brass	B-0133-ADF12-B									1/2"	14"	1/2"	14"									62
63	1	Three (3) Compartment Sink	JLS	Custom														2"						Air-Gap To FS, Waste Per Code	63
63.1	3	Drain, Lever Handle	T&S Brass	B-3952														3/4"							63.1
64	1	Wire Shelving	Quantum	2460C/P86C/WR-00H/DB																					64
64.1	1	Wire Shelving	Quantum	2436C/P54C/WR-00H/DB																					64.1
64.2	1	Wire Shelving	Quantum	2448C/P86C/WR-00H-DB																					64.2
65	1	Spare Number	--	--																					65
66	2	Soda Carbonator	By Vendor	E2000 Big Mac	15.0 A		1/3	120 V	1	5-20P		By Vendor - verify requirements	1/2"											By Vendor - verify requirements	66
67	2	BIB Rack	By Vendor	By Vendor				120 V	1	5-15P	18"	By Vendor - Verify w/ Vendor					3/4"							By Vendor - Verify w/ Vendor	67
68	1	Water Filtration System	Everpure	EV929322									3/4"	90"			3/4"							Filtered Water To 5 and 66	68
69-70	1	Spare Number	--	--																					69-70
71	1	Mop Sink	By Contractor	By Contractor															2"	0"					71
71.1	1	Stainless Steel Splash Shield	By Contractor	By Contractor																					71.1
72	1	Service Faucet	By Contractor	By Contractor									1/2"	36"	1/2"	36"									72
73	1	Walk-In Cooler	Thermalrite	Custom				120 V	1	Direct	102"	See Shop Drawings													73
73.1	1	Evaporator Coil (Refrigerator)	Thermalrite	Custom						Direct	80"	See Shop Drawings						3/4"						Air-Gap To FS, See Shop Drawings	73.1
73.2	1	Cooler Condenser	Thermalrite	Custom						Direct		See Shop Drawings												See Shop Drawings	73.2
74	1	Walk-In Freezer	Thermalrite	Custom				120 V	1	Direct	102"	See Shop Drawings													74
74.1	1	Evaporator Coil (Freezer)	Thermalrite	Custom						Direct	80"	See Shop Drawings						3/4"						Air-Gap To FS, See Shop Drawings	74.1
74.2	1	Freezer Condenser	Thermalrite	Custom						Direct		See Shop Drawings												See Shop Drawings	74.2
75	2	Wire Shelving	Quantum	2460P/P74P																					75
76	2	Dunnage Rack	Quantum	QFSD-2260																					76
76.1	3	Dunnage Rack	Quantum	QFSD-2248																					76.1
77	1	Spare Number	--	--																					77
78	2	Wire Shelving	Quantum	1860C/P86C/WR-00H/DB																					78
78.1	1	Wire Shelving	Quantum	1860C/P54C/WR-00H/DB																					78.1
79	1	Wire Shelving	Quantum	1830C/P74C/WR-00H/DB																					79
80-81	1	Spare Number	--	--																					80-81
82	1	Safe	By Owner	TBD								Verify electrical requirements w/ Vendor													82
83	1	Desktop	By Contractor	Custom																					83
84	1	Networking Box	By Vendor	TBD						Direct		Data, By Vendor - Verify w/ Vendor													84
85-86	1	Spare Number	--	--																					85-86
87	1	Shelving, Wall Mounted	Quantum	2460C/DQ824																					87
88	1	Wire Shelving	Quantum	1830C/P74C/WR-00H/DB																					88
C12A	3	Duplex Convenience Outlet - Rear	By EC	--				120 V	1	5-20R	12"	By EC													C12A
C12B	2	Duplex Convenience Outlet - Front Door	By EC	--				120 V	1	5-20R	12"	By EC													C12B
C12C	2	Duplex Convenience Outlet - Office	By EC	--				120 V	1	5-20R	12"	By EC													C12C
C18	1	Duplex Convenience Outlet	By EC	--				120 V	1	5-20R	18"	By EC													C18
C44A	1	Duplex Convenience Outlet - Office	By EC	--				120 V	1	5-20R	44"	By EC													C44A
C44B	2	Duplex Convenience Outlet - Bathrooms	By EC	--				120 V	1	5-20R	44"	By EC													C44B
C48A	1	Duplex Convenience Outlet - Drive Thru	By EC	--				120 V	1	5-20R	48"	By EC													C48
C48B	1	Duplex Convenience Outlet - Hood	By EC	--				120 V	1	5-20R	48"	By EC													C48
C48C	1	Duplex Convenience Outlet - Office	By EC	--				120 V	1	5-20R	48"	By EC													C48
C48D	1	Duplex Convenience Outlet - Rear	By EC	--				120 V	1	5-20R	48"	By EC													C48
CO2	1	Bulk CO2	By Vendor	TBD																					CO2
EP	2	Electrical Panel	By EC	--																					EP
M1	1	Hood System	CaptiveAire	By Contractor				120 V	1	Direct		See Shop Drawings													M1
M2	1	Exhaust Fan	CaptiveAire	By Contractor				208 V	3	Direct		See Shop Drawings													M2
M3	1	Dedicated Outside Air System RTU	CaptiveAire	By Contractor				208 V	3	Direct		See Shop Drawings									1"	181461		See Shop Drawings	M3
POS1	1	POS - Patio	By Owner	TBD				120 V	1	5-15P	<varies>	By Owner - Verify w/ Owner, Data required													POS1
POS2	1	POS - Drive Thru	By Owner	TBD				120 V	1	5-15P	<varies>	By Owner - Verify w/ Owner, Data required													POS2
PS	1	Fire System Pull Station	Ansul	PS				120 V	1	Direct	48"	Final Conn. By Fire Safety Contractor													PS
PTR1	1	PTR - Patio	By Owner	TBD				120 V	1	5-15P	<varies>	By Owner - Verify w/ Owner, Data required													PTR1
PTR2	2	PTR - Drive Thru	By Owner	TBD				120 V	1	5-15P	<varies>	By Owner - Verify w/ Owner, Data required													PTR2
Q24	1	Quadplex Convenience Outlet - BIB Rack	By EC	--				120 V	1	5-20R	24"	By EC												By Vendor-Verify w/ Vendor	Q24
Q48	1	Quadplex Convenience Outlet - Front	By EC	--				120 V	1	5-20R	48"	By EC												By Vendor-Verify w/ Vendor	Q48
Q66	2	Quadplex Convenience Outlet - Office	By EC	--				120 V	1	5-20R	66"	By EC												By Vendor-Verify w/ Vendor	Q66
Q72	1	Quadplex Convenience Outlet - Soda Carbonator	By EC	--				120 V	1	5-20R	72"	By EC												By Vendor-Verify w/ Vendor	Q72
WH	1	Water Heater	By PC	By PC						Direct	72"	By Vendor - Verify w/ Vendor	3/4"		3/4"										WH

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/11/24	EQUIPMENT UPDATED

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI · WALTER E. WOOD NUMBER PE-2011022073 · PROFESSIONAL ENGINEER

VALID

02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED · 2-23-2024 · HWC · HILBORN, WEIMER, CARTER & ASSOCIATES

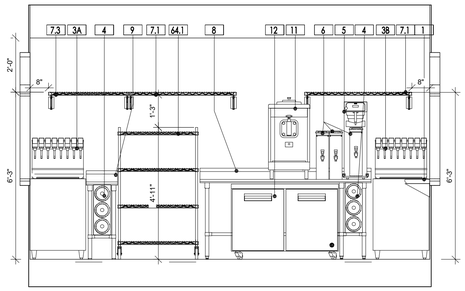
MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

SHEET NAME

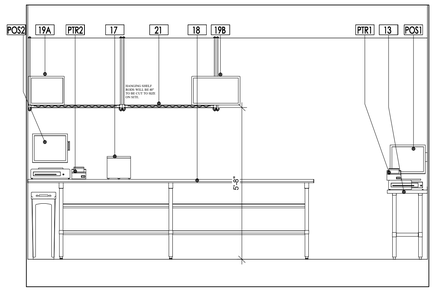
EQUIPMENT UTILITY SCHEDULE

SHEET NUMBER

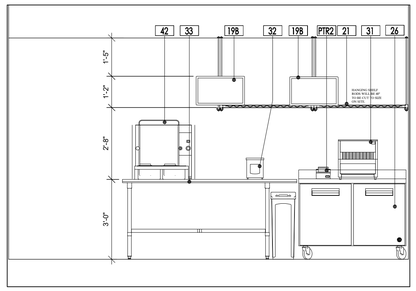
A9.2



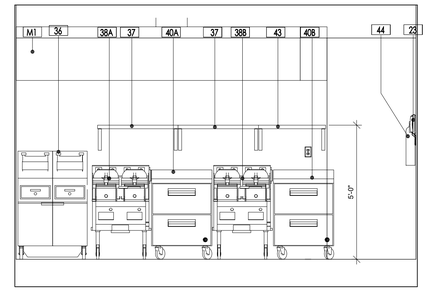
1 ELEVATION 1
3/8" = 1'-0"



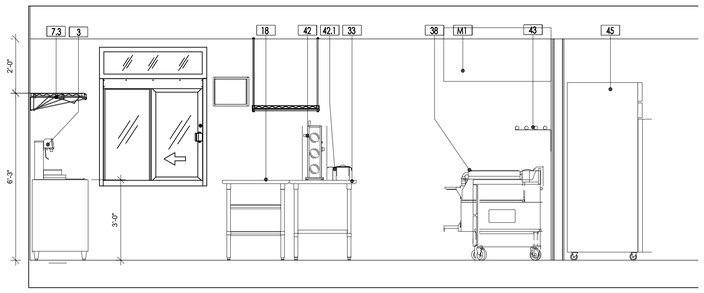
2 ELEVATION 2
3/8" = 1'-0"



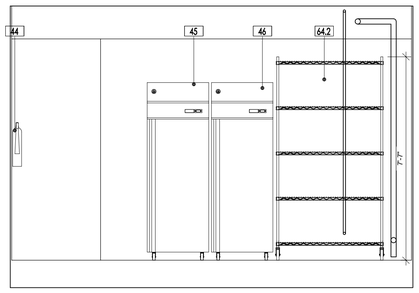
3 ELEVATION 3
3/8" = 1'-0"



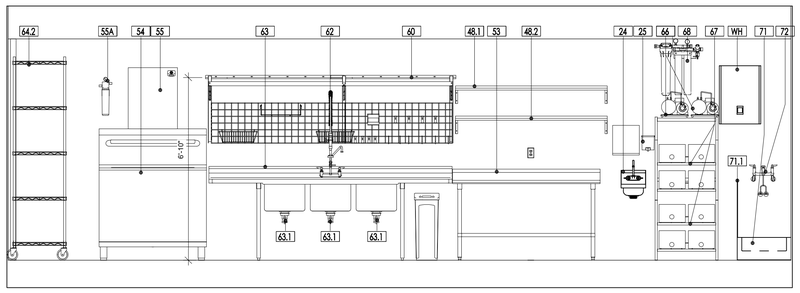
4 ELEVATION 4
3/8" = 1'-0"



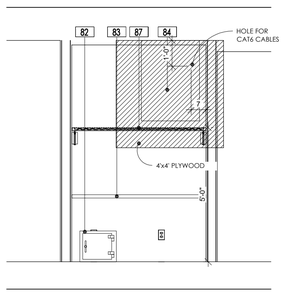
5 ELEVATION 5
3/8" = 1'-0"



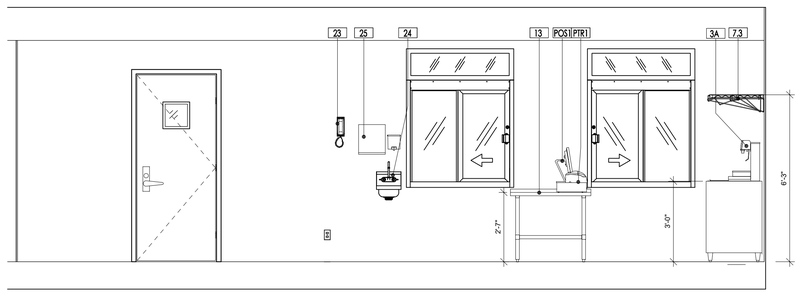
6 ELEVATION 6
3/8" = 1'-0"



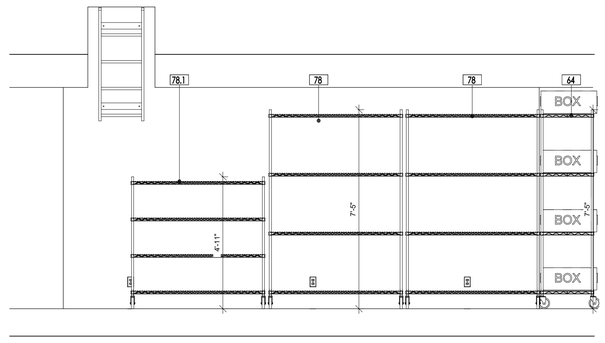
7 ELEVATION 7
3/8" = 1'-0"



8 ELEVATION 8
3/8" = 1'-0"



9 ELEVATION 9
3/8" = 1'-0"



10 ELEVATION 10
3/8" = 1'-0"

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/12/24	EQUIPMENT UPDATED

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
02-23-2024

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
2-23-2024
HWC
INDUSTRIAL WERNER CARTER & ASSOCIATES

SHEET NAME

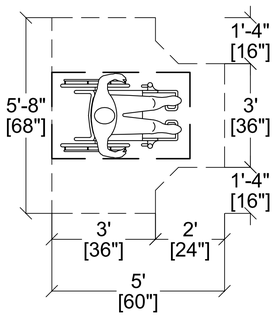
EQUIPMENT ELEVATIONS

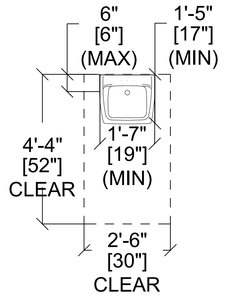
SHEET NUMBER

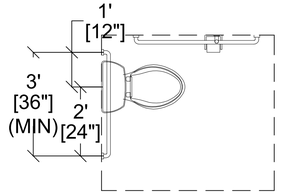
A9.3

Fixture Heights And Clearances

NOTE: ALL ACCESSIBLE FIXTURES SHALL COMPLY WITH ANSI A117.1-17

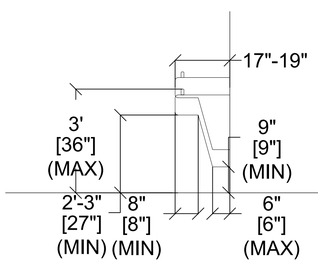




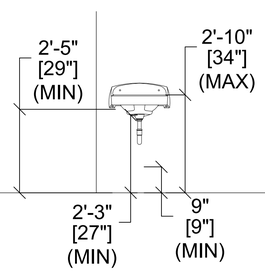


DRINKING FOUNTAINS SHALL CONFORM TO ASME A112,19,1M, ASME A112,19,2M, OR ASME A112,19,9M; AND WATER COOLERS SHALL CONFORM TO ARI 1010. DRINKING FOUNTAINS AND WATER COOLERS SHALL CONFORM TO NSF 61, SECTION 9. **WHERE WATER IS SERVED IN RESTAURANTS, DRINKING FOUNTAINS SHALL NOT BE REQUIRED.** IN OTHER OCCUPANCIES, WHERE DRINKING FOUNTAINS ARE REQUIRED, BOTTLED WATER DISPENSERS SHALL BE PERMITTED TO BE SUBSTITUTED FOR NOT MORE THAN 50 PERCENT OF THE REQUIRED DRINKING FOUNTAIN. PROVIDE HI-LOW ACCESSIBLE DRINKING FOUNTAIN AS PER THE FBC 2020-PLUMBING SECTION 410.3. DRINKING FOUNTAINS ARE NOT REQUIRED FOR AN OCCUPANT LOAD OF 15 OR FEWER PER 410.2.

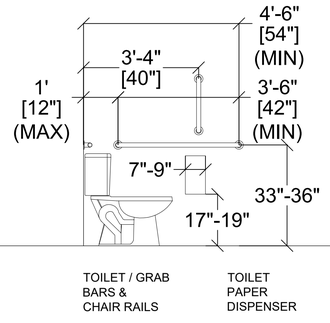
IF FIRE EXTINGUISHER CABINET IS OVER 40LBS, IT SHALL BE INSTALLED SO THAT THE TOP OF THE FIRE EXTINGUISHER IS NOT MORE THAN 3'-6" A.F.F. PER NFPA 10.



DRINKING FOUNTAIN

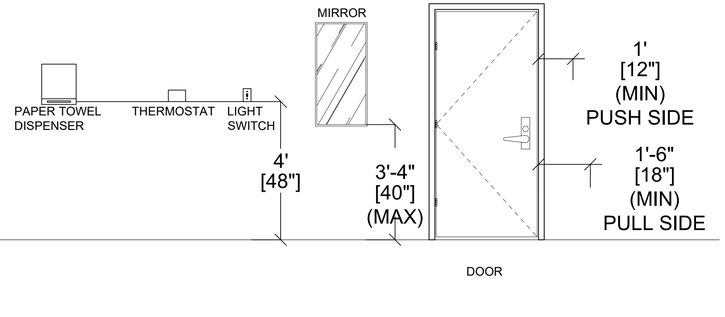


HC LAV



TOILET / GRAB BARS & CHAIR RAILS

TOILET PAPER DISPENSER

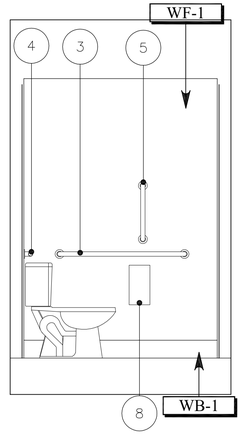


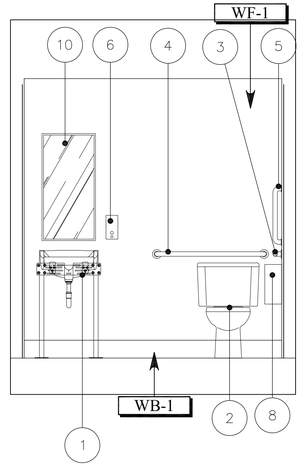
DOOR

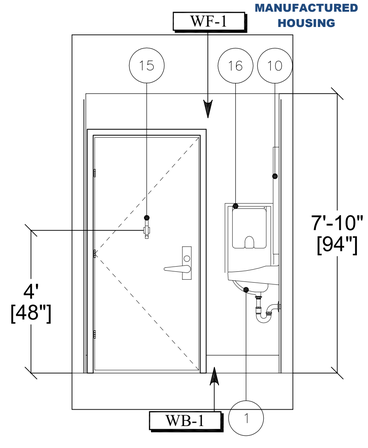
ACCESSORY SCHEDULE (#)

DIVISION 10

ITEM NO.	QUANTITY	SUPPL'D	INSTL'D	DESCRIPTION	MODEL NO. AS SHOWN OR EQUIVALENT
1	1	G.C.	G.C.	LAVATORY FAUCET	AMERICAN STANDARD – ADA COMPLAINT SEE PLUMBING DRAWINGS
2	1	G.C.	G.C.	WATER CLOSET	AMERICAN STANDARD – ADA COMPLAINT SEE PLUMBING DRAWINGS
3	1	G.C.	G.C.	GRAB BAR 36" LONG	BOBRICK – B-5806.99 x 36 – SEE SPECIFICATIONS
4	1	G.C.	G.C.	GRAB BAR 42" LONG	BOBRICK – B-5806.99 x 42 – SEE SPECIFICATIONS
5	1	G.C.	G.C.	GRAB BAR 18" LONG	BOBRICK – B-5806.99 x 18 – SEE SPECIFICATIONS
6	1	G.C.	G.C.	SOAP DISPENSER 15 oz. LIQUID	BOBRICK – B-4112 – SEE SPECIFICATIONS
7	1	O.W.	G.C.	PAPER TOWEL DISPENSER	BOBRICK – B-4262 – SEE SPECIFICATIONS
8	1	O.W.	G.C.	TOILET PAPER DISPENSER	BOBRICK – B-2892 – SEE SPECIFICATIONS
9	0	O.W.	G.C.	WATER FILTRATION SYSTEM	AQUAPURE – DP-290 – SEE SPECIFICATIONS
10	1	G.C.	G.C.	MIRROR	BOBRICK – B-165-1836 – SEE SPECIFICATIONS
11	0	G.C.	G.C.	EMPLOYEE LOCKERS	REPUBLIC STORAGE SYSTEMS LLC. – SEE SPECIFICATIONS
12	0	O.W.	G.C.	SANITARY NAPKIN RECEPTACLE	BOBRICK – B-270 – SEE SPECIFICATIONS
13	0	G.C.	G.C.	SEAT COVER DISPENSER	BOBRICK – B-4221 – SEE SPECIFICATIONS
14	0	G.C.	G.C.	FLUSH VALVE	ZURN – Z6000AV – AQUAVANTAGE – SEE PLUMBING DRAWINGS
15	0	G.C.	G.C.	COAT HOOK	BOBRICK – B-6707 – SEE SPECIFICATIONS
16	0	G.C.	G.C.	HAND DRYER	XLERATOR HAND DRYERS – XL-GR – SEE SPECIFICATIONS
17	0	G.C.	G.C.	BABY CHANGING TABLE	KOALA – KB101-05-VERTICAL
				INSULATION FOR DRAIN AND WATER LINES IN LAVATORY =	TRUEBRO LAV GUARD 2 MOLDED P-TRAP & SUPPLY COVER







1 RESTROOM ELEVATIONS
1/2" = 1'-0"

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/15/24	BATHROOM WIDTH GREW 2"

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
CE-23-2 O24

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

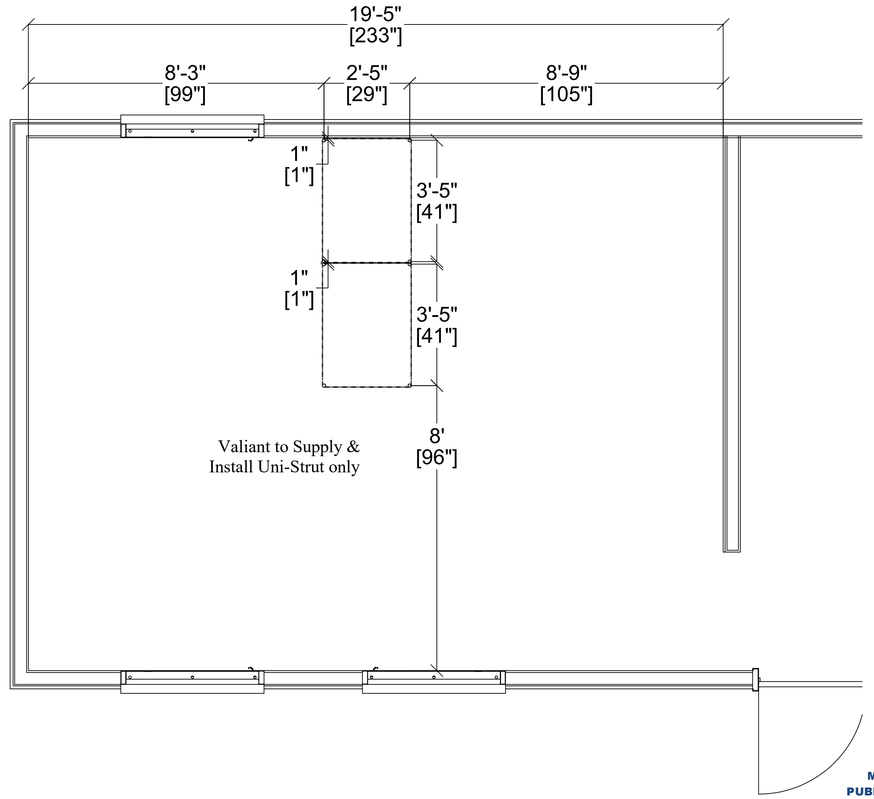
APPROVED
2-23-2024
HWC
WEIMER-CARTER & ASSOCIATES, INC.

SHEET NAME

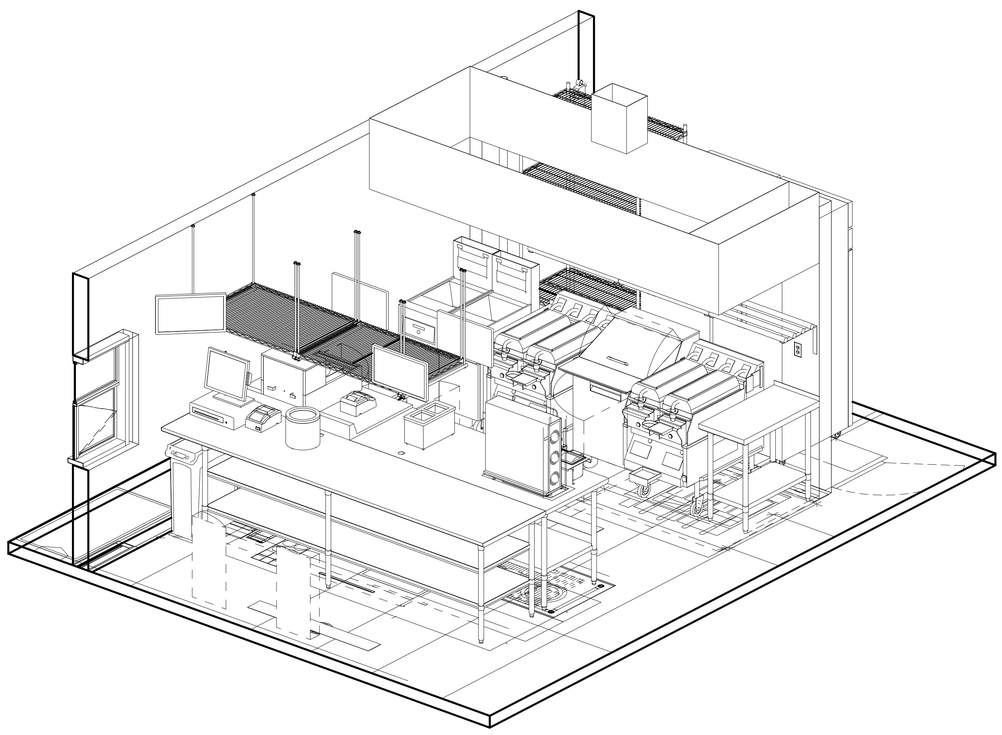
RESTROOM ELEVATIONS

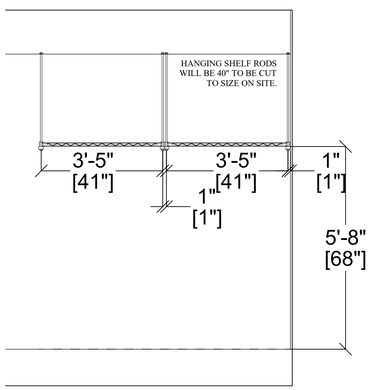
SHEET NUMBER

A9.4

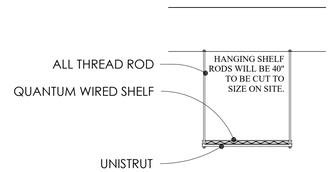


1 OVERHEAD SHELVING - HANGING POINTS
1/2" = 1'-0"





3 ELEVATION 1
1/2" = 1'-0"



2 ELEVATION 2
1/2" = 1'-0"

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER
STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2010022071
PROFESSIONAL ENGINEER
VALID
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
02-23-2024
HWC
HILBORN, WEBBER, CARTER & ASSOCIATES, INC.

SHEET NAME
HANGING SHELVES

SHEET NUMBER
A9.5

DOOR HARDWARE SCHEDULE AS SHOWN OR EQUIVALENT — DIVISION 8

QTY.	DESCRIPTION	MANUFACTURER	MODEL #	FINISH	REMARKS
1	SET-01 - REAR				
3	HINGES	CAL-ROYAL	BB31	US32D	NRP
1	PANIC DEVICE	MARKS USA (OR CAL-ROYAL)	M9900H (OR A7700)	US32D	
1	KEYPAD ACCESS LOCK	ALARM LOCK	ETDL27-S1G-26D-M99	US26D	TRILOGY T2 SERIES
1	CLOSER	CAL-ROYAL	300	ALUM	PCOV
1	WEATHER-STRIPPING	PEMKO	303	MILL FINISH	ECO-V
1	DOOR SWEEP	PEMKO	3452	MILL FINISH	ECO-V
1	THRESHOLD	PEMKO	270	ALUM	
1	KICKPLATE	DIAMOND PLATE SHEET	.06 THICK		32" X 39.5"
2	SET-02 - WATER CLOSET				
3	HINGES	CAL-ROYAL	BB31	US32D	NRP
1	CYLINDRICAL LOCKSET	CAL-ROYAL	SL101	US26D	
1	CLOSER	CAL-ROYAL	300	ALUM	PCOV
1	WEATHER-STRIPPING	PEMKO	303	MILL FINISH	ECO-V
1	DOOR SWEEP	PEMKO	3452	MILL FINISH	ECO-V
1	THRESHOLD	PEMKO	270	ALUM	
1	KICKPLATE	DIAMOND PLATE SHEET	.06 THICK		12" X 34"
1	SET-03 - OFFICE				
3	HINGES	CAL-ROYAL	BB31	US32D	NRP
1	CYLINDRICAL LOCKSET	CAL-ROYAL	SL05	US26D	
1	KICKPLATE	DIAMOND PLATE SHEET	.06 THICK		12" X 34"
1	SET-04 - FRONT				
3	HINGES	CAL-ROYAL	BB31	US32D	NRP
1	PANIC DEVICE	CAL-ROYAL (OR MARKS USA)	A7700 (OR M9900H)	ALUM	
1	CYLINDRICAL LEVER/ CLUTCH	CAL-ROYAL	ENT-00L	US26D	
1	CLOSER	CAL-ROYAL	300	ALUM	PCOV
1	WEATHER-STRIPPING	PEMKO	303	MILL FINISH	ECO-V
1	DOOR SWEEP	PEMKO	3452	MILL FINISH	ECO-V
1	THRESHOLD	PEMKO	270	ALUM	
1	KICKPLATE	DIAMOND PLATE SHEET	.06 THICK		12" X 34"

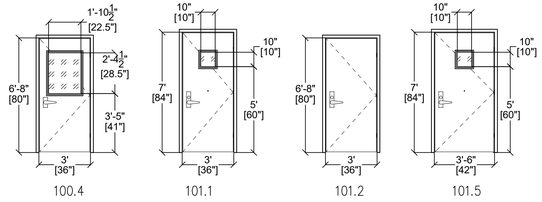
HARDWARE SCHEDULE NOTES:

1. ALL HARDWARE IS NEW (UNLESS NOTED OTHERWISE).
2. ALL DOOR LOCKSETS/LATCHSETS SHALL BE "LEVER TYPE" IN COMPLIANCE WITH ACCESSIBILITY CODES.
3. ALL DOOR HANDLES, PULLS, LATCHES, LOCKS, AND/OR OTHER OPERATING DEVICES SHALL BE INSTALLED BETWEEN 34" MIN. AND 48" MAXIMUM ABOVE FINISHED FLOOR.
4. ALL DOOR THRESHOLDS SHALL BE ½" HIGH MAXIMUM .
5. ALL DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 INCHES FROM THE LATCH, MEASURED TO THE LEAD EDGE.

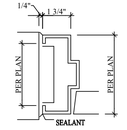
DOOR, FRAME, & HARDWARE SCHEDULE AS SHOWN OR EQUIVALENT — DIVISION 8

DOOR	NO.	SIZE	R.O. SIZE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	SET NO.	REMARKS
OFFICE DOOR (1)	100.4	3'-0" x 6'-8" x 1 3/4" W/ LT KIT & GLASS 1'-10 1/2" X 2'-4 1/2"	DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8"	H.M.	PT	F1	H.M.	PT	03	1,2,3 U=.35 MAX
FRONT DOOR (1)	101.1	3'-0" x 7" x 1 3/4" W/ WIDE-ANGLE DOOR VIEWER	DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8"	H.M.	PT	F1	H.M.	PT	04	1,2,3,4 U=.35 MAX
BATHROOM DOOR (2)	101.2	3'-0" x 6'-8" x 1 3/4"	DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8"	H.M.	PT	F1	H.M.	PT	02	1,2,3 U=.35 MAX
REAR DOOR (1)	101.5	3'-6" x 7' x 1 3/4" W/ WIDE-ANGLE DOOR VIEWER	DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8"	H.M.	PT	F1	H.M.	PT	01	1,2,3,4 U=.35 MAX

DOOR TYPES



FRAME TYPES



F1

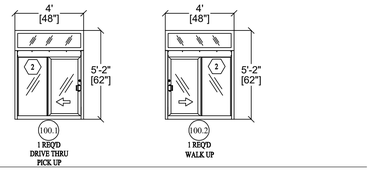
DOOR REMARKS LEGEND

1) UNDER CUT DOOR 5/8"
2) INSULATED, GALVANIZED HOLLOW METAL DOOR AND FRAME.
3) DAYBAR DELTA R-7 HURRICANE UP TO 75PSF
4) DOOR WILL HAVE OPAQUE FILM OVER SAFETY GLASS AND WIDE ANGLE DOOR VIEWER

GENERAL NOTES

1. THE BUILDING MANUFACTURER SHALL COORDINATE ALL WORK WITH RESPECTIVE TRADES, BUILDING / FIRE / HEALTH OFFICIALS AND OWNER.
2. SEAL EXTERIOR WALL AND ROOF PENETRATIONS AND JOINTS BETWEEN DISSIMILAR MATERIALS TO ENSURE A COMPLETELY WEATHER-TIGHT SEAL. SEALANT LOCATIONS INCLUDE BUT ARE NOT LIMITED TO : LIGHT FIXTURE MOUNTS, DOOR AND WINDOW FRAMES, FASCIA EDGES, SIGNAGE MOUNTS, CONDUIT PENETRATIONS, SCUPPERS, ELECTRICAL OUTLETS, HOSE BIBS, AND UTILITY SERVICE ENTRANCES.
3. INSTALL COMMERCIAL GRADE BUILDING WRAP BEHIND RAINSCREEN SYSTEM & OVER EXTERIOR SHEATHING. CONTINUOUS VAPOR RETARDER SHALL BE ON INSTALLED ON THE INTERIOR SIDE OF THE WALL FRAMING CONSTRUCTION AND BEHIND APPLIED WALL FINISH SHEATHING. LAP AND TAPE ALL SEAMS TO ACHIEVE CONTINUOUS COVERAGE OVER THE ENTIRE UNFENESTRATED BUILDING ENVELOPE.
4. EXTERIOR SIDEWALKS AND PAVING ARE SHOWN FOR DESIGN INTENT ONLY. G.C. SHALL BE RESPONSIBLE FOR COORDINATING SCOPE OF WORK WITH OWNER'S REPRESENTATIVE AND OR CIVIL DRAWINGS.
5. GRADES SHALL BE 2" MIN. BELOW FLOOR SLAB AND SHALL SLOPE AWAY FROM BUILDING @ 5% SLOPE EXCEPT @ PEDESTRIAN PATHS WHICH SHALL BE SLOPED AWAY FROM BUILDING @ ¼" PER FOOT MIN. AND ¼" PER FOOT MAX.
6. ITEMS MOUNTED ON TOP OF THE PARAPET ARE TO BE SET IN A FULL BED OF SEALANT AND HAVE FULL DEPTH BLOCKING IMMEDIATELY BELOW CAP, FASCIA, AND DRIP EDGE.
7. SEE STRUCTURAL PLAN AND DETAILS FOR ADDITIONAL FRAMING REQUIREMENTS.
8.

WINDOW ELEVATIONS



ELEVATIONS CODED NOTES

1. (GL-1): 1" INSULATED GLAZING PANEL, CLEAR GLASS
2. (GL-2): 1" INSULATED GLAZING PANEL, CLEAR TEMPERED GLASS
3. (GL-3): 1" INSULATED GLAZING PANEL, CLEAR STORM IMPACT GLASS

WINDOW SCHEDULE AS SHOWN OR EQUIVALENT — DIVISION 8

MARK	ROUGH OPENING SIZE	TYPE	CONSTRUCTION	GLASS TYPE	HEAD HEIGHT	REMARKS
100.1	4'W + ½" x 4'H + ½"	QUICK SERV IFSC – 4040 – B – R MODEL: 181	ALUM.	GL-2	7'-11½"	DARK BRONZE ANODIZED (CLASS II, .4 MILS MINIMUM) FINISH, U=.30 MAX, SHGC=28 MAX
100.2	4'W + ½" x 4'H + ½"	QUICK SERV IFSC – 4040 – B – L MODEL: 180	ALUM.	GL-2	7'-11½"	DARK BRONZE ANODIZED (CLASS II, .4 MILS MINIMUM) FINISH, U=.30 MAX, SHGC=28 MAX

WINDOW SCHEDULE NOTES:

1. REFER TO WINDOW ELEVATIONS FOR SPECIFIC DIMENSIONS AND ADDITIONAL DETAIL INFORMATION.
2. WINDOW CONTRACTOR SHALL FIELD VERIFY ALL ROUGH OPENINGS FOR ALL WINDOWS PRIOR TO PREPARATION OF SHOP DRAWINGS.
3. IF VELOCITY WIND SPEEDS ARE EQUAL TO OR GREATER THAN 140 MPH OR INSTALL LOCATION IS WITHIN A MILE OF THE COAST, STORM IMPACT GLASS WILL BE USED.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

smalls SLIDERS

DATE ISSUED:

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL. 32174
(386) 677-3335

STATE OF MISSOURI — WALTER E. WOOD — NUMBER PE-2017022072 — PROFESSIONAL ENGINEER
VALID
02-23-2 Q24

APPROVED 2-23-2024 HWC HEATHMAN WERNER CARTER & ASSOCIATES

CHECKED BY:
DRAWN BY:

DOOR AND WINDOW SCHEDULE

Project #
DRAWING NUMBER:
A11.1

DEFINE

MECHANICAL ABBREVIATIONS

AD	ACCESS DOOR
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
C	CONDENSATE
CFM	CUBIC FEET PER MINUTE
CT	CHILLER
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
COP	COEFFICIENT OF PERFORMANCE
CT	COOLING TOWER
CU	CONDENSING UNIT
CV	CONSTANT VOLUME
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
DB	DRY BULB
DOAS	DEDICATED 100% OUTSIDE AIR UNIT
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ECO	EXTERIOR CLEANOUT
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FFE	FINISHED FLOOR ELEVATION
FPI	FINS PER INCH
HP	HORSEPOWER
HWS	HEATING HOT WATER SUPPLY
HWR	HEATING HOT WATER RETURN
KH	KITCHEN HOOD
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MVD	MANUAL VOLUME DAMPER
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
NTS	NOT TO SCALE
NC	NOISE CRITERIA
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
PD	PRESSURE DROP
PHWR	PLANT HEATING HOT WATER RETURN
PHWS	PLANT HEATING HOT WATER SUPPLY
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH GAGE
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP A/C UNIT
SA	SUPPLY AIR
SD	STORM DRAIN
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SP	STATIC PRESSURE
SWR	SIDE WALL REGISTER
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
WB	WET BULB
WG	WATER GAGE
WPD	WATER PRESSURE DROP

DESIGN

MECHANICAL LEGEND

GRILLES, REGISTERS, DIFFUSERS, AND LOUVERS

EXISTING	DEMO	NEW	DESCRIPTION
		A100	GRILLE DESIGNATION AND CFM
			SURFACE MOUNT
			LAY-IN SUPPLY CEILING DIFFUSER
			SUPPLY WALL DIFFUSER
			LINEAR SLOT DIFFUSER
			RETURN/EXHAUST CEILING GRILLE
			RETURN/EXHAUST WALL GRILLE
			EXHAUST LOUVER
			EXHAUST WALL CAP
			GRAVITY RELIEF HOOD
			INTAKE LOUVER
			INTAKE WALL CAP
			GRAVITY INTAKE HOOD

DUCTWORK

EXISTING	DEMO	NEW	DESCRIPTION
			RECTANGULAR DUCTWORK. REFER TO PLANS FOR SIZE.
			ROUND DUCTWORK. REFER TO PLANS FOR SIZE.
			ROUND DUCTWORK DROP/RISE.
			DUCT DROP/RISE

PIPING

EXISTING	DEMO	NEW	DESCRIPTION
CWS	CWS	CWS	CHILLED WATER SUPPLY PIPING
CWR	CWR	CWR	CHILLED WATER RETURN PIPING
HWS	HWS	HWS	HOT WATER SUPPLY PIPING
HWR	HWR	HWR	HOT WATER RETURN PIPING
CS	CS	CS	CONDENSER WATER SUPPLY PIPING
CR	CR	CR	CONDENSER WATER RETURN PIPING

DAMPERS

EXISTING	DEMO	NEW	DESCRIPTION
			BALANCING DAMPER
M	M	M	MOTORIZED DAMPER
FD	FD	FD	FIRE DAMPER
SD	SD	SD	SMOKE DAMPER
FDSD	FDSD	FDSD	FIRE & SMOKE DAMPER

EQUIPMENT

EXISTING	DEMO	NEW	DESCRIPTION
			MECHANICAL EQUIPMENT. REFER TO SCHEDULES
			IONIZATION UNIT
SD	SD	SD	SMOKE DETECTOR
MP	MP	MP	MANUAL PULL STATION

CONTROLS

EXISTING	DEMO	NEW	DESCRIPTION
T	T	T	THERMOSTAT
H	H	H	HUMIDISTAT
S	S	S	SENSOR
P	P	P	STATIC PRESSURE SENSOR
RS	RS	RS	REMOTE TEMPERATURE SENSOR
$	$	$	WALL SWITCH
			CONTROL WIRING

NOTES: 1.
2.
3. REFER TO SCHEDULES FOR GRILLE, REGISTER, DIFFUSER, AND LOUVER SIZES.
4. REFER TO DRAWINGS FOR DIRECTION OF AIRFLOW FOR DIFFUSERS. IF DIRECTIONAL ARROWS ARE NOT INCLUDED, AIRFLOW IS IN FOUR DIRECTIONS. (4-WAY GRILLE)
5. WALL MOUNTED CONTROL DEVICES SHALL BE MOUNTED AT 48" A.F.F.
6. NOT ALL ITEMS SHOWN ON THIS LIST MAY BE APPLICABLE TO THIS PROJECT.

DELIVER

MECHANICAL GENERAL NOTES

1.
2.
3.
4. DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. DRAWINGS SHALL NOT BE SCALED. COORDINATE ROUTING OF SERVICES WITH SITE CONDITIONS AND WITH WORK OF OTHER TRADES.
5.
6. VERIFY CLEARANCE REQUIREMENTS AND ROUTING OF DUCTWORK AND PIPING PRIOR TO FABRICATION, AS MINOR MODIFICATIONS SUCH AS DUCT AND/OR PIPING RISES AND DROP MAY BE REQUIRED DUE TO FIELD CONDITIONS. MAKE MINOR MODIFICATIONS TO THE BUILDING, PIPING, SPRINKLER, DUCTWORK, ELECTRICAL, ETC. AS SHOWN ON THE DRAWINGS OR REQUIRED TO COMPLETE THE INSTALLATION OF A COMPLETED WORKABLE SYSTEM.
7.
8. SEAL PENETRATIONS THROUGH THE BUILDING ENVELOPE.
9. PENETRATIONS THROUGH RATED WALLS, FLOORS, PARTITIONS AND ASSEMBLIES SHALL BE INSTALLED AND FIRESAFED TO MEET UL. FIRE RESISTANCE LISTING AND NFPA EQUIREMENTS FOR THE PENETRATION.
10. COORDINATE DEVICES REQUIRING ACCESS PANELS WITH THE ARCHITECT AND OTHER TRADES.COORDINATE DEVICES REQUIRING ACCESS PANELS WITH THE ARCHITECT AND OTHER TRADES.
11. MAINTAIN MINIMUM CLEARANCE 10'-0" BETWEEN OUTSIDE INTAKES AND EXHAUST OUTLETS AND PLUMBING VENTS.
12. COORDINATE FINAL LOCATIONS AND ELEVATIONS WITH THE ARCHITECT PRIOR TO INSTALLATION.
13. COORDINATE FINAL FINISH COLORS OF MATERIALS, DEVICES, DIFFUSER, GRILLES, LOUVERS, AND/OR EQUIPMENT WITH THE ARCHITECT PRIOR TO ORDERING, FABRICATION AND INSTALLATION.
14.
15. INSTALL DEVICES AND EQUIPMENT TO MEET ADA REQUIREMENTS.
16. ROUTE DUCT AND PIPING CONCEALED IN INTERSTITIAL SPACE UNLESS NOTED OTHERWISE.
17. DOCUMENT LOCATIONS OF DEVICES, DUCT, PIPING, AND EQUIPMENT ON "AS-BUILT" RECORD DRAWINGS AS PER THE SPECIFICATIONS.
18.
19. HVAC SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NFPA 90A AND NFPA 101.
20. WORK SHOWN IN THE DRAWINGS SHALL COMPLY WITH APPLICABLE NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES.

MISSOURI
PUBLIC SERVICE
COMMISSION
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ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017023073
PROFESSIONAL ENGINEER
VALID
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
2-23-2024
HWC
HUBBELL WEAVER CARTER & ASSOCIATES

SHEET NAME

MECHANICAL LEGEND

SHEET NUMBER

M1.1

HVAC DUCTWORK INSULATION:

LOW PRESSURE SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST TYPE DUCTS SHALL BE WRAPPED ON OUTSIDE WITH 2.125" MINIMUM THICKNESS, 3/4# DENSITY, MINIMUM INSTALLED R-VALUE OF R-6.0, FIBERGLASS INSULATION WITH ALUMINUM FOIL VAPOR BARRIER. INSULATION SHALL BE TAPED AT ALL JOINTS AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

SECURE INSULATION WITH VAPOR BARRIER AND SEAL JACKET JOINTS WITH VAPOR BARRIER ADHESIVE OR TAPE TO MATCH JACKET. INSTALL WITHOUT SAG ON UNDERSIDE OF DUCTWORK. USE 4"WIDE STRIPS OF ADHESIVE (FOSTER 85-60 OR CHILDERS CP-127 WATER BASED ADHESIVE) ON 8 INCH CENTERS OR MECHANICAL FASTENERS 12" ON CENTER TO PREVENT SAGGING. SEAL VAPOR BARRIER PENETRATIONS BY MECHANICAL FASTENERS WITH VAPOR BARRIER ADHESIVE. STOP AND POINT INSULATION AROUND ACCESS DOORS AND DAMPER OPERATORS TO ALLOW OPERATION WITHOUT DISTURBING WRAPPING. COVER SEAMS, JOINTS, PIN PENETRATIONS AND OTHER BREAKS WITH FOSTER 30-65 OR CHILDERS CP-34 VAPOR BARRIER COATING REINFORCED WITH REINFORCED GLASS CLOTH. REINFORCING MESH SHALL BE FOSTER MAST A FAB OR CHILDERS CHIL GLAS #10.

INSULATION SHALL HAVE A MINIMUM R-VALUE OF R-6 IF LOCATED IN AN UNCONDITIONED SPACE OR R-8 IF LOCATED OUTSIDE OF BUILDING.

LOW PRESSURE DUCTWORK:

ALL DUCTWORK SHALL BE GALVANIZED STEEL AND SHALL BE OF GAUGES AND CONSTRUCTION AS RECOMMENDED BY ASHRAE GUIDE AND DATA BOOK. GAUGES ARE AS FOLLOWS, WITH LONGEST SIDE GOVERNING. (DUCT DIMENSIONS ON PLANS ARE METAL-TO-METAL DIMENSIONS).

DIMENSIONS OF LONGEST SIDE:	SHEET METAL GAUGE:
0" TO 12"	26 GAUGE
13" TO 30"	24 GAUGE
31" TO 54"	22 GAUGE
55" TO 84"	20 GAUGE

ALL DUCTWORK SHALL BE SEALED AT SEAMS AND JOINTS WITH TAPE AND HARDCAST DUCT SEALANT MATERIAL.

JOINTS AND REINFORCING SHALL BE AS PER ASHRAE GUIDE AND DATA BOOK AND ALL SLIPS SHALL BE INSTALLED WITHOUT EDGE OF INTERNAL PART OF SLIP FACING DOWNSTREAM.

CONSTRUCTION STANDARDS OF ARTICLE 110 OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, BULLETIN 90, LATEST EDITION, SHALL APPLY THROUGHOUT.

FLASHINGS SHALL BE SHEET COPPER OR GALVANIZED SHEET METAL, AND SHALL BE FURNISHED AND INSTALLED AROUND ALL OUTSIDE OPENINGS USED FOR DUCTS OF FANS AND WHEREVER REQUIRED. ROOF FLASHINGS SHALL EXTEND AT LEAST 8" ABOVE ROOF. PROVIDE 1/16" THICK RUBBER GASKET MATERIAL BETWEEN FLASHING AND FAN HOUSING AND OR SHEET METAL DUCTWORK. PROVIDE SEPARATION OF DISSIMILAR MATERIALS WITH DIE-ELECTRIC MATERIAL CONNECTION.

ALL DUCTS SHALL BE STRAIGHT AND TRUE AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER.

ALL EDGES SHALL BE STRAIGHT AND TRUE, AND ALL BENDS SHALL BE MADE WITH VANED TURNS. WHERE LONG RADIUS TURNS CANNOT BE USED, THE CONTRACTOR SHALL USE SQUARE TURNS AND USE AIR SPLITTERS SPACED NOT MORE THAN 3" CENTER TO CENTER, AND OF A LENGTH SO AIR WILL BE PROPERLY DISTRIBUTED OVER THE DUCTS.

PROVIDE PAINT GRIP SHEET METAL WHERE INDICATED ON PLANS.

ROUND DUCTWORK:

SHALL BE CONSTRUCTED OF 26 GAUGE GALVANIZED SHEET METAL WITH SCREWED AND TAPED JOINTS.

AT CONTRACTOR'S OPTION , PRE-INSULATED FLEXIBLE DUCTWORK AS MANUFACTURED BY THERMAFLEX MODEL MKE, FLEXMASTER 8M OR PRIOR APPROVED EQUIVALENT (MANUFACTURERS LITERATURE AND SAMPLE WILL BE REQUIRED FOR PRIOR APPROVAL) MAY BE USED TO CONNECT TO CEILING DIFFUSERS (MAXIMUM 5'-0" LENGTH). FLEXIBLE DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED INSTALLATION INSTRUCTIONS. INNER AND OUTER LINER SHALL BE PROPERLY SEALED AND SECURED.

SPIN COLLARS:

ALL ROUND TAKE-OFFS TO ROUND BRANCH DUCT SHALL BE MADE WITH FACTORY FABRICATED SPIN-TYPE COLLAR FITTINGS WITH BALANCING DAMPER AND CONSTRUCTED OF MINIMUM 26 GA GALVANIZED STEEL. THE DAMPER SHALL HAVE A RAISED 2" HANDLE WITH A HIGH QUALITY LOCKING QUADRANT. A 3/8" CONTINUOUS ROD WITH "U" BOLTS CONNECTS THE DAMPER TO THE ROD. NYLON END BEARING ARE REQUIRED WHERE THE ROD PENETRATES THE SPIN COLLAR BARREL. THESE SPIN-COLLARS SHALL BE AS MANUFACTURED BY FLEXMASTER MODEL FLD-B03, DACE #26GA MSD-C03 OR APPROVED EQUAL.

DUCTWORK SEALANT:

ALL DUCTWORK SHALL BE AIR TIGHT. ALL SEAMS, BOTH SHOP MADE AND FIELD INSTALLED, AND SHALL BE SEALED WITH MASTIC. ALL TRANSVERSE JOINTS SHALL BE SEALED AS WELL AS SPIN COLLAR TAKEOFFS AND ROUGH DUCT CONNECTIONS. ALL DUCT CONNECTIONS AND SEAMS SHALL BE SEALED WITH A UL APPROVED NON-FLAMMABLE MASTIC SYSTEM. STRICT ADHERENCE TO MANUFACTURERS INSTALLATION INSTRUCTION IS REQUIRED. THE DUCT SEALANT SHALL BE EQUAL TO HARDCAST SURE-GRIP 404 , UNITED MCGILL SOLVENT BASED DUCT SEALANT, OR PRIOR APPROVED DUCT SEALING SYSTEM. IN RETURN AIR PLENUM SPACES, ALL SURFACES SHALL BE RATED FOR 25/50 FLAME SPREAD AND SMOKE DEVELOPMENT.

ALL LOW PRESSURE DUCTWORK SHALL BE SEALED TO "SEAL CLASS A". SEAL CLASS A IS TRANSVERSE JOINTS AND SEAMS AND WALL PENETRATIONS (SENSORS).

MOTORIZED DAMPERS: (RECTANGULAR TYPE DAMPERS)

MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL MOTORIZED DAMPERS AT OUTDOOR INTAKES AS INDICATED ON MECHANICAL AND ARCHITECTURAL DRAWINGS. DAMPER SHALL BE PARALLEL BLADE MOTORIZED TYPE EQUIVALENT TO RUSKIN CD36/PB, ARROW SERIES 1770, GREENHECK MODEL VCD-23 OR EQUAL. MOTORIZED DAMPERS SHALL BE OPERATED BY 120/1/60 ELECTRIC ACTUATORS PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR OR 120/1/60 ELECTRIC ACTUATOR AS INDICATED ON PLANS. DAMPER SHALL BE COMPLETE WITH OUTBOARD SUPPORT BEARING, BLADE AND JAMB SEALS. DAMPERS SHALL BE LOW - LEAKAGE TYPE.

MANUAL DAMPERS:

MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL MANUAL DAMPERS AT OUTDOOR AIR INTAKES AND IN OTHER RECTANGULAR DUCTWORK AS INDICATED ON PLANS. DAMPER SHALL BE COMPLETE WITH OUTBOARD SUPPORT BEARING, AND MANUAL LOCKING QUADRANT LEVER FOR BALANCING. DAMPERS SHALL BE MANUFACTURED BY RUSKIN MODEL MD25, GREENHECK MODEL MBD-10M OR PRIOR APPROVED EQUAL.

VENTILATING SYSTEM:

THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL EXHAUST FANS SHOWN AND SCHEDULED ON PLANS. FANS SHALL BE OF THE TYPE INDICATED AND SHALL BE CAPTIVEAIRE, COOK, GREENHECK, ACME OR APPROVED EQUIVALENT.

ALL EXHAUST FANS SHALL BE EQUIPPED WITH BIRD SCREEN, AUTOMATIC BACK-DRAFT DAMPERS, SOLID STATE SPEED CONTROLLER (DIRECT DRIVE) AND INTEGRAL DISCONNECT SWITCH UNLESS NOTED OTHERWISE. FAN MOTORS SHALL BE OF THE 40 DEG C AMBIENT TEMPERATURE RISE TYPE AND SHALL BE SUITABLE FOR CONTINUOUS DUTY OPERATION.

DIRECT DRIVE FANS SHALL BE COMPLETE WITH SOLID STATE SPEED CONTROL SWITCH MOUNTED ON UNIT FOR BALANCING. INTERLOCK WITH REMOTE ON/OFF SWITCH.

THERMOSTAT:

PROVIDE FULLY AUTOMATIC PROGRAMMABLE (7 DAY) ROOM TYPE THERMOSTAT AS INDICATED ON PLANS TO CYCLE COMPRESSOR ON COOLING CYCLE, AND COMPRESSOR AND/OR ELECTRIC STRIPS IN STAGES ON HEATING CYCLE AS REQUIRED TO MAINTAIN SPACE CONDITIONS. UNIT SHALL BE WIRED FOR CONSTANT OR AUTOMATIC FAN OPERATION AND SHALL BE ELECTRICALLY INTERLOCKED SUCH THAT THE COMPRESSOR MAY NOT RUN NOR THE ELECTRIC STRIP HEATERS BE ENERGIZED UNLESS THE EVAPORATOR FAN IS OPERATING. THERMOSTAT SHALL BE COMPLETE WITH FAN "AUTO-ON" SWITCH AND SYSTEM "AUTO-HEAT-OFF-COOL" SWITCH. THERMOSTATS SHALL BE MOUNTED TO MEET LATEST A.D.A. REQUIREMENTS.

SMOKE DETECTOR:

THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A SMOKE DETECTOR IN THE SUPPLY DUCT AND RETURN DUCT OF ALL AIR HANDLERS DELIVERING IN EXCESS OF 2000 C.F.M. AND SHALL BE INTERLOCKED TO DE-ENERGIZE FAN ON ACTUATION OF DETECTOR.

SMOKE DETECTORS SHALL HAVE AUXILIARY CONTACTS FOR INTERLOCK WITH THE FIRE ALARM SYSTEM. COORDINATE INSTALLATION AND SELECTION OF SMOKE DETECTORS. ENTIRE INSTALLATION SHALL MEET UL REQUIREMENTS FOR INTERLOCK WITH BUILDING FIRE ALARM AND SECURITY SYSTEM.

PROVIDE REMOTE AUDIBLE AND VISUAL ALARM UNIT (ONE PER AHU WITH SMOKE DETECTOR) IN ACCORDANCE WITH LATEST N.F.P.A. 90A REQUIREMENTS.

DUAL-CHAMBER, IONIZATION SMOKE DETECTORS: THE COMBINATION DETECTOR HEAD AND TWIST-LOCK BASE SHALL BE UL LISTED COMPATIBLE WITH A UL LISTED FIRE ALARM PANEL.

THE SMOKE DETECTOR SHALL HAVE A FLASHING STATUS INDICATION LED OR VISUAL SUPERVISION. WHEN THE DETECTOR IS ACTUATED, THE FLASHING LED SHALL LATCH ON STEADY AND AT FULL BRILLIANCE. THE DETECTOR MAY BE RESET BY ACTIVATING THE CONTROL PANEL RESET SWITCH.

THE SENSITIVITY OF THE DETECTOR SHALL BE MONITORED WITHOUT REMOVAL OF THE DETECTOR HEAD. METERING SETPOINTS SHALL BE ACCESSIBLE ON THE EXTERIOR OF THE DETECTOR HEAD. FIELD ADJUSTMENT THE SENSITIVITY SHALL BE POSSIBLE WHEN CONDITIONS REQUIRE A CHANGE.

IT SHALL BE POSSIBLE TO PERFORM A FUNCTIONAL TEST OF THE DETECTOR WITHOUT THE NEED OF GENERATING SMOKE. THE TEST METHOD MUST SIMULATE EFFECTS OF PRODUCTS OF COMBUSTION IN THE CHAMBER TO ENSURE TESTING OF ALL DETECTOR CIRCUITS.

VOLTAGE AND RF TRANSIENT SUPPRESSION TECHNIQUES SHALL BE EMPLOYED TO MINIMIZE FALSE ALARM POTENTIAL. A GATED ALARM OUTPUT SHALL BE USED FOR ADDITIONAL DETECTOR STABILITY.

AUXILIARY SPDT RELAYS AND/OR REMOTE LED ALARM INDICATORS SHALL BE INSTALLED AS REQUIRED.

DUCT MOUNTED SMOKE DETECTORS SHALL SHUT DOWN THE ASSOCIATED AIR HANDLING UNIT FAN MOTOR AN FIRE/SMOKE DAMPER. THIS CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND LABOR AS REQUIRED TO ACCOMPLISH SAME.

FLOAT SWITCH:

PROVIDE FLOAT SWITCH TO EMERGENCY DRAIN PAN OF EACH AHU. SWITCH SHALL BE INTERLOCKED WITH AHU TO DE-ENERGIZE THE UNIT WHEN THE WATER LEVEL IN THE PAN RISES ABOVE A SET LEVEL. FLOAT SWITCH SHALL MEET UL 508 REQUIREMENTS.

MOTORIZED DAMPERS:

O.A. MOTORIZED DAMPERS SHALL BE INTERLOCKED WITH THEIR RESPECTIVE UNIT TO OPEN WHEN THE A/C UNIT'S SUPPLY FAN IS ENTERGIZED(ON), AND SHALL CLOSE WHEN THE UNIT'S SUPPLY FAN IS DE-ENETERGIZED(OFF). PROVIDE ALL NECESSARY RELAYS, SWITCHES, TRANSFORMERS, ETC. AS REQUIRED.

MOTORIZED DAMPERS SHALL BE FURNISHED AND SET IN PLACE BY CONTRACTOR INSTALLING THE DOAS UNIT.

DAMPER ACTUATORS SHALL BE 120/1/60 ELECTRIC ACTUATORS SPECIFICALLY SELECTED FOR DAMPER MANUFACTURER'S REQUIREMENTS. CONTROLS CONTRACTOR SHALL FURNISH AND INSTALL ACTUATORS. COORDINATE ALL WORK WITH CONTRACTOR INSTALLING DAMPERS.

CONTROL WIRING:

ALL WIRING REQUIRED IN THE CONTROL SYSTEMS, INCLUDING ELECTRICAL CONNECTIONS FOR THE THERMOSTATS, FIRESTATS, SMOKE DETECTORS, EXHAUST FANS AND ALL INTERLOCKING MOTOR CONTROL WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.

ALL WIRING SHALL BE IN CONDUIT AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.).

ALL CONTROL WIRING LOCATED OUTDOORS SHALL BE INSTALLED IN RIGID OR INTERMEDIATE METAL CONDUIT.

ALL CONTROL WIRING LOCATED INDOORS WHERE AN ACCESSIBLE CEILING IS NOT AVAILABLE SHALL BE INSTALLED IN E.M.T. CONDUIT.

ALL CONTROL WIRING LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE N.E.C. APPROVED CABLE. ALL CONTROL WIRING LOCATED ABOVE ACCESSIBLE CEILINGS USED AS AIR PLENUMS SHALL BE N.E.C. APPROVED "PLENUM CABLE".

ALL CONDUCTORS SHALL BE COPPER. CONDUCTORS USED FOR POWER CIRCUITS SHALL BE #12 TW MINIMUM. CONDUCTORS USED FOR CONTROL CIRCUITS SHALL BE #18 TW (SINGLE STRAND) MINIMUM. CONDUCTORS USED FOR SENSOR CIRCUITS SHALL BE #18 TW (SINGLE STRAND) MINIMUM. CONTROL WIRING FOR DX EQUIPMENT THERMOSTATS SHALL BE 10 CONDUCTOR CABLES.

OUTSIDE AIR HANDLING UNIT:

SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPLACE COMPONENTS OF RTUS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

WARRANTY PERIOD FOR COMPRESSORS: MANUFACTURER'S STANDARD, BUT NOT LESS THAN FIVE YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

WARRANTY PERIOD FOR GAS FURNACE HEAT EXCHANGERS: MANUFACTURER'S STANDARD, BUT NOT LESS THAN 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

WARRANTY PERIOD FOR VARIABLE FREQUENCY DRIVES: NOT LESS THAN 24 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION.

PRODUCTS

PACKAGED A/C UNIT (MARKED "OAU-1")

ROOF MOUNTED , DOUBLE WALL, ELECTRONICALLY CONTROLLED HEATING AND COOLING UNIT UTILIZING HERMETIC SCROLL COMPRESSORS WITH CRANKCASE HEATERS FOR COOLING DUTY, DUAL REFRIGERANT CIRCUIT, STAGED AIR VOLUME CONTROL, AND WITH ELECTRIC HEAT. UNITS SHALL HAVE HORIZONTAL DISCHARGE SUPPLY AND RETURN AIR AS SHOWN ON DRAWINGS.

MANUFACTURERS SHALL BE ONE OF THE FOLLOWING OR PRIOR APPROVED EQUAL:
BASIS OF DESIGN: CAPTIVEAIRE.

RTU CASING

GENERAL FABRICATION REQUIREMENTS FOR CASINGS: FORMED AND REINFORCED DOUBLE-WALL INSULATED PANELS, FABRICATED TO ALLOW REMOVAL FOR ACCESS TO INTERNAL PARTS AND COMPONENTS, WITH JOINTS BETWEEN SECTIONS SEALED.

EXTERIOR CASING MATERIAL: GALVANIZED STEEL WITH FACTORY-PAINTED FINISH, WITH PITCHED ROOF PANELS AND KNOCKOUTS WITH GROMMET SEALS FOR ELECTRICAL AND PIPING CONNECTIONS AND LIFTING LUGS.

EXTERIOR CASING THICKNESS: 0.0626 INCH THICK.

TOP COVER SHALL BE 18 GAGE SHEET METAL WITH 0.75 INCH THICK, 1.5 LB DENSITY, FIBERGLASS INSULATION.

INTERIOR CASING SHALL BE GALVANIZED STEEL INNER PANELS.

CASING INSULATION AND ADHESIVE: COMPLY WITH NFPA 90A OR NFPA 90B.

MATERIALS: ASTM C 1071, TYPE I.

THICKNESS: 1/2 INCH, 1.5 LB DENSITY.

LINER MATERIALS SHALL HAVE AIR-STREAM SURFACE COATED WITH AN EROSION- AND TEMPERATURE-RESISTANT COATING OR FACED WITH A PLAIN OR COATED FIBROUS MAT OR FABRIC.

LINER ADHESIVE: COMPLY WITH ASTM C 916, TYPE I.

CONDENSATE DRAIN PANS: FORMED SECTIONS OF STAINLESS-STEEL SHEET, A MINIMUM OF 2 INCHES DEEP, AND COMPLYING WITH ASHRAE 62.1.

DOUBLE-WALL CONSTRUCTION: FILL SPACE BETWEEN WALLS WITH FOAM INSULATION AND SEAL MOISTURE TIGHT.
DRAIN CONNECTIONS: THREADED NIPPLE BOTH SIDES OF DRAIN PAN.

RTU FANS

DIRECT-DRIVEN SUPPLY-AIR FANS: DOUBLE WIDTH, FORWARD CURVED, CENTRIFUGAL; WITH PERMANENTLY LUBRICATED, MOTOR RESILIENTLY MOUNTED IN THE FAN INLET. ALUMINUM OR PAINTED-STEEL WHEELS, AND GALVANIZED- OR PAINTED-STEEL FAN SCROLLS.

CONDENSER-COIL FAN: PROPELLER, MOUNTED ON SHAFT OF PERMANENTLY LUBRICATED MOTOR.

FAN MOTOR: COMPLY WITH REQUIREMENTS IN SECTION 230513 "COMMON MOTOR REQUIREMENTS FOR HVAC EQUIPMENT." FANS SHALL BE STATICALLY AND DYNAMICALLY BALANCED.

FAN DRIVE FOR THE STAGED AIR VOLUME UNITS SHALL BE EQUIPPED WITH VARIABLE FREQUENCY DRIVE INVERTER (VFDS). THE VFD SHALL CONTROL MOTOR SPEED TO USER CONFIGURABLE SPEEDS. THE CONTROLS SHALL ALLOW USER CONFIGURABLE SPEEDS FOR COOLING AND HEATING MODES. THE VFD SHALL BE FACTORY-MOUNTED, WIRED, AND TESTED.

RTU COILS

SUPPLY-AIR REFRIGERANT COIL: COPPER-PLATE FIN AND SEAMLESS INTERNALLY GROOVED COPPER TUBE IN STEEL CASING WITH EQUALIZING-TYPE VERTICAL DISTRIBUTOR.

CONDENSATE DRAIN PAN: STAINLESS STEEL FORMED WITH PITCH AND DRAIN CONNECTIONS COMPLYING WITH ASHRAE 62.1.

RTU CIRCUIT COMPONENTS

NUMBER OF REFRIGERANT CIRCUITS: TWO.

COMPRESSOR: HERMETIC, SCROLL, MOUNTED ON VIBRATION ISOLATORS; WITH INTERNAL OVERCURRENT AND HIGH-TEMPERATURE PROTECTION, INTERNAL PRESSURE RELIEF, AND CRANKCASE HEATER.
REFRIGERATION SPECIALTIES:

REFRIGERANT: R-410A.
EXPANSION VALVE WITH REPLACEABLE THERMOSTATIC ELEMENT.
REFRIGERANT FILTER/DRYER.
MANUAL-RESET HIGH-PRESSURE SAFETY SWITCH.
AUTOMATIC-RESET LOW-PRESSURE SAFETY SWITCH.
MINIMUM OFF-TIME RELAY.
AUTOMATIC-RESET COMPRESSOR MOTOR THERMAL OVERLOAD.
BRASS SERVICE VALVES INSTALLED IN COMPRESSOR SUCTION AND LIQUID LINES.
LOW-AMBIENT KIT HIGH-PRESSURE SENSOR.

RTU AIR FILTRATION

MINIMUM ARRESTANCE ACCORDING TO ASHRAE 52.1, AND A MINIMUM EFFICIENCY REPORTING VALUE (MERV) ACCORDING TO ASHRAE 52.2.

PLEATED: MINIMUM 2 " THICK DISPOSABLE FIBERGLASS FILTERS WITH 90 PERCENT ARRESTANCE, AND MERV 7.

RTU ELECTRIC HEATER SECTION

PROVIDE AN ELECTRIC RESISTANCE HEATER SECTION WITH CAPACITY AS SCHEDULED ON DRAWINGS.

RTU DAMPERS

OUTDOOR-AIR DAMPER: LINKED DAMPER BLADES, FOR 0 TO 25 PERCENT OUTDOOR AIR, WITH MOTORIZED DAMPER FILTER. DAMPER SHALL OPEN WHEN UNIT IS RUNNING AND SHALL CLOSE WHEN FAN IS OFF.

RTU ELECTRICAL POWER CONNECTION

PROVIDE FOR SINGLE CONNECTION OF POWER TO UNIT WITH UNIT-MOUNTED DISCONNECT SWITCH ACCESSIBLE FROM ADJACENT TO OUTSIDE UNIT AND CONTROL-CIRCUIT TRANSFORMER WITH BUILT-IN OVERCURRENT PROTECTION. DO NOT MOUNT DISCONNECT ON OUTDOOR UNIT.

CONTROLS

RTU BASIC UNIT CONTROLS:

CONTROL-VOLTAGE TRANSFORMER.

NON PROGRAMMABLE - WALL-MOUNTED THERMOSTAT OR SENSOR WITH THE FOLLOWING FEATURES:

HEAT-COOL-OFF SWITCH.
FAN ON-AUTO SWITCH.
FAN-SPEED SWITCH.
AUTOMATIC CHANGEOVER.
ADJUSTABLE DEADBAND.
CONCEALED SET POINT.
CONCEALED INDICATION.
DEGREE F INDICATION.
UNOCCUPIED-PERIOD-OVERRIDE PUSH BUTTON.

SUPPLY AIR SENSOR SHALL BE LOCATED IN THE UNIT AND SHALL BE USED FOR COMPRESSOR STAGE CONTROL.
VARIABLE CAPACITY COMPRESSOR CONTROL:

VARIABLE COMPRESSOR CONTROL SHALL BE CAPABLE OF UNLOADING THIS COMPRESSOR IN AN INFINITE NUMBER OF STEPS FROM 100% OF COMPRESSOR CAPACITY DOWN TO 50% OF COMPRESSOR CAPACITY TO MEET THE DEMAND FOR THE STAGED AIR VOLUME CONTROL.

RTU ACCESSORIES

LOW-AMBIENT KIT USING STAGED CONDENSER FANS FOR OPERATION DOWN TO 35 DEG F.

FILTER DIFFERENTIAL PRESSURE SWITCH WITH SENSOR TUBING ON EITHER SIDE OF FILTER. SET FOR FINAL FILTER PRESSURE LOSS.

COIL GUARDS OF PAINTED, GALVANIZED-STEEL WIRE.

HAIL GUARDS OF GALVANIZED STEEL, PAINTED TO MATCH CASING.

HUMIDITY SENSOR.

SECURITY GRILLES.

INSTALLATION

EQUIPMENT CURB: INSTALL ON CONCRETE BASE, LEVEL AND SECURE. SECURE RTUS TO UPPER CURB RAIL, AND SECURE CURB BASE TO CONCRETE BASE WITH ANCHOR BOLTS.

CONNECTIONS

INSTALL CONDENSATE DRAIN, MINIMUM CONNECTION SIZE, WITH TRAP AND INDIRECT CONNECTION TO NEAREST ROOF DRAIN OR AREA DRAIN.

INSTALL PIPING ADJACENT TO RTUS TO ALLOW SERVICE AND MAINTENANCE.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2010020973
PROFESSIONAL ENGINEER
VALID
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
2-23-2024
HWC
WEIMER CARTER & ASSOCIATES

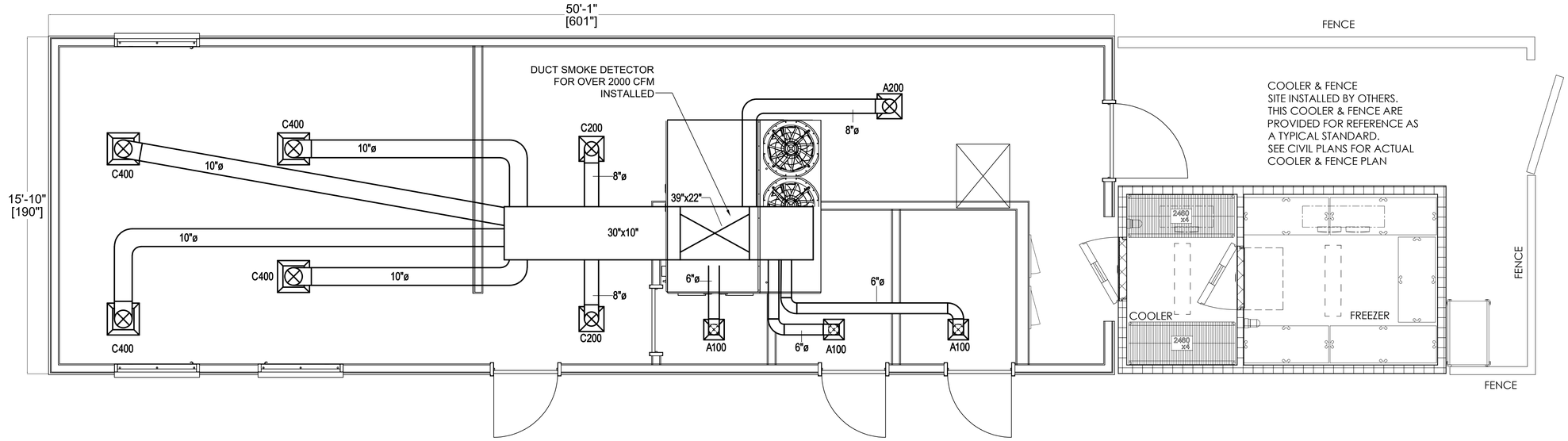
SHEET NAME

MECHANICAL SPECIFICATIONS

SHEET NUMBER

M1.2

AIR BALANCE SCHEDULE		
	EXHAUST	SUPPLY
EXHAUST HOOD	2152 CFM	
DOAS		2550 CFM
BATHROOM	160 CFM	
OVERALL BALANCE		238 CFM



1 MECHANICAL PLAN
3/8" = 1'-0"

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

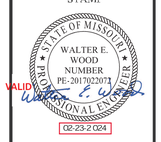
REV.	DATE	DESCRIPTION
R1	10/26/23	UPDATED HVAC
R2	1/15/24	BATHROOM WIDTH GREW 2"

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER
STAMP



Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

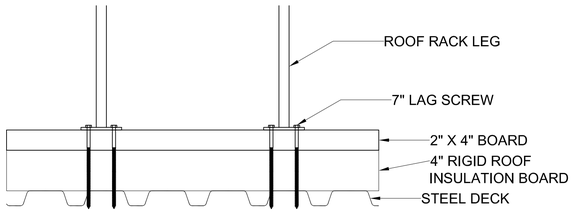


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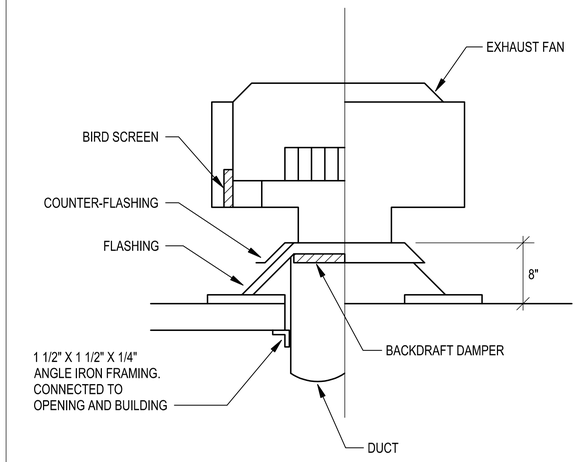
MECHANICAL PLAN

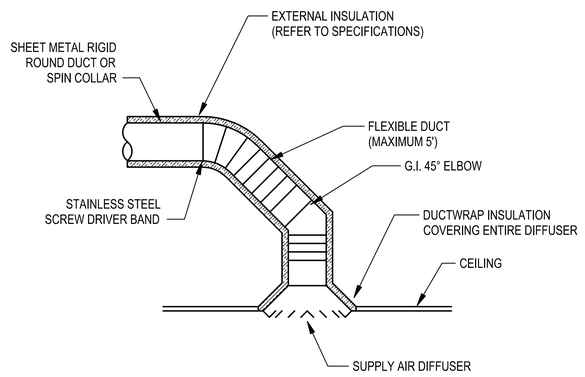
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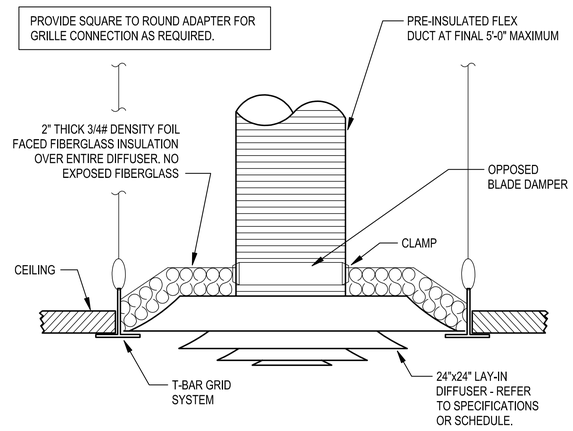
M2.1



ROOF RACK
FLORIDA PRODUCT APPROVAL
FL16921

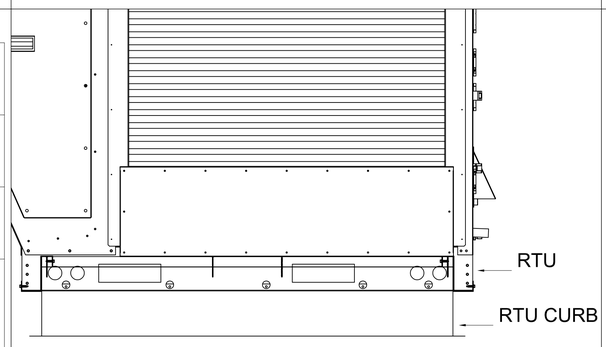




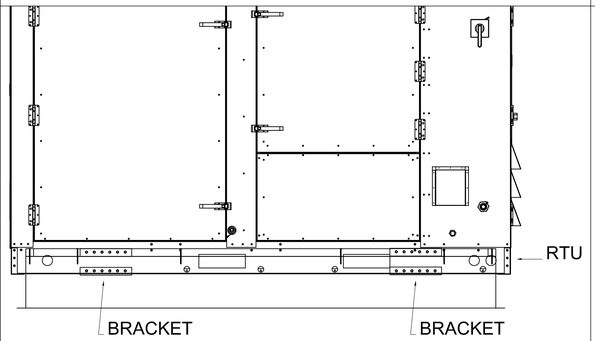


DETAIL LEGEND	
X48	#10 X 1" SELF TAPPING PLATED SCREW
X20	#8 X 3" WOOD SCREW
X4	WIND & SEISMIC BRACKET

RTU CURB SPOT WELDED 6" O.C. TO RED IRON STEEL ROOF

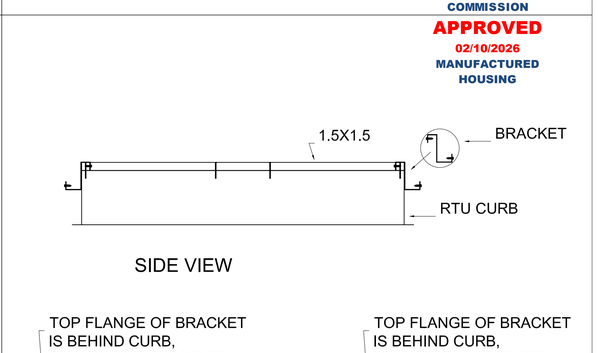


SIDE VIEW

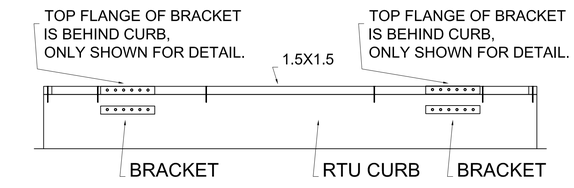


FRONT VIEW

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING



SIDE VIEW



FRONT VIEW

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2010022073
PROFESSIONAL ENGINEER
VALID
02-23-2-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED 2-23-2024 HWC WEBER-CARTER & ASSOC. LTD.

SHEET NAME

MECHANICAL SCHEDULE & DETAILS

SHEET NUMBER

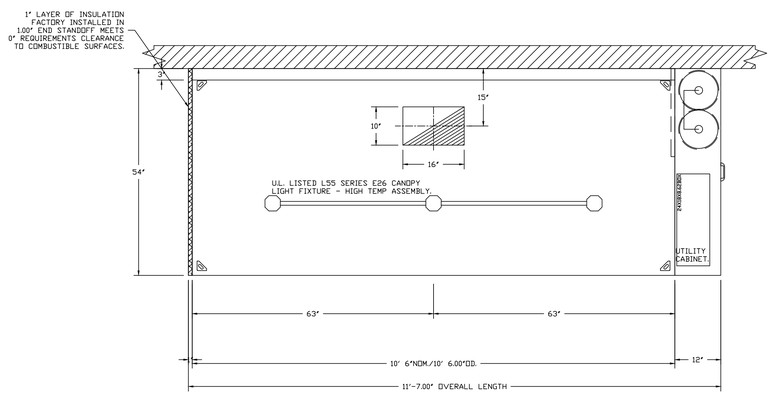
M3.1

HOOD INFORMATION – JOB#8381394

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1		5424 AH-ND-2	ADVANCED HOOD	10' 6"	450 DEG	I	MEDIUM	205	2152	10"	16"	4"		2152	1937	-0.872"	430 SS WHERE EXPOSED	ALONE	ALONE

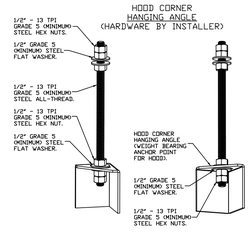
HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0	SC-311110MA	1 LIGHT 1 FAN	YES	767 LBS



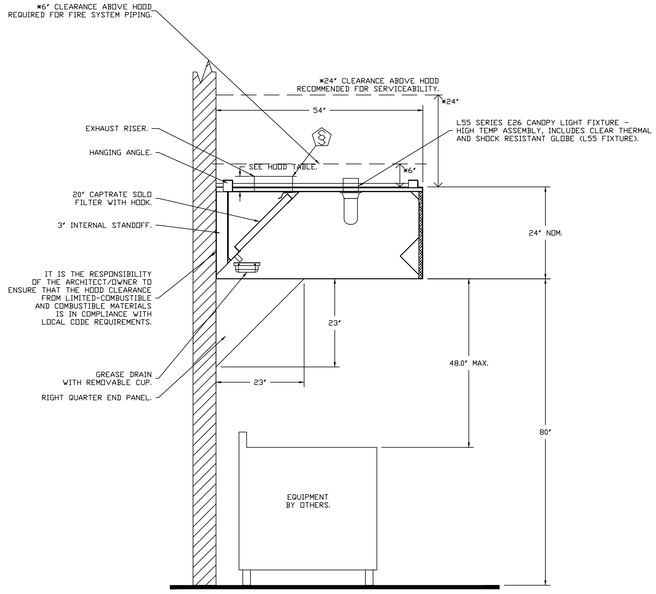
PLAN VIEW – HOOD #1
10' 6.00" LONG 5424AH-ND-2

EXHAUST HOOD WELD INSPECTION, 200W LIGHT TEST, INSTALLATION INSPECTION, AND GAS LINE INSPECTION ARE PERFORMED IN THE FACTORY BY:
JOSEPH SMALLWOOD
FLORIDA FIRE SAFETY INSPECTOR GRADE I #145324
FLORIDA FIRE SAFETY INSPECTOR GRADE II #176236
CERTIFICATES REGISTERED WITH PRO BOARD



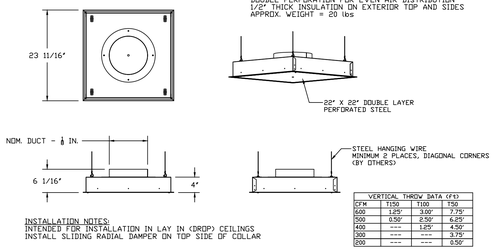
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



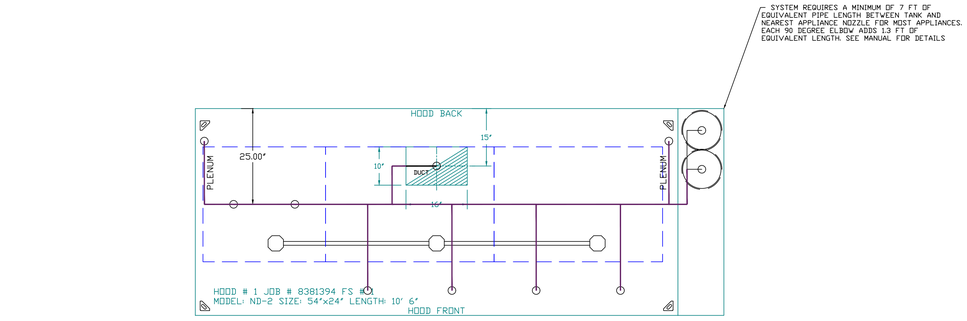
SECTION VIEW – MODEL 5424AH-ND-2 HOOD – #1

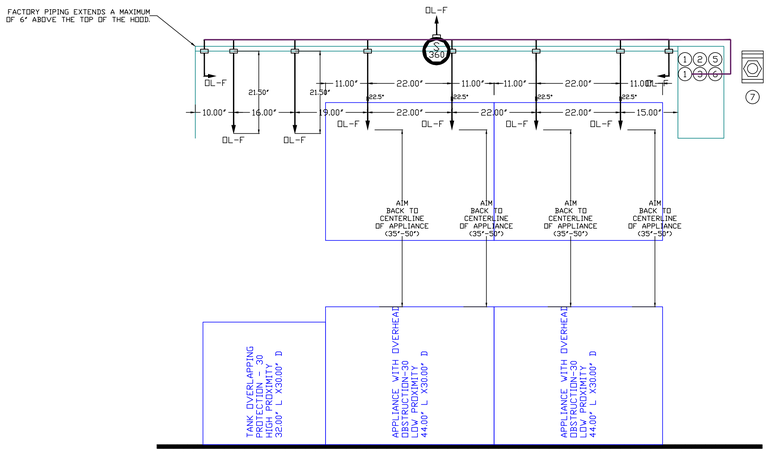
QTY 7-DROP-IN PERFORATED SUPPLY PLENUM DIFFUSER (DI-PSP)



INSTALLATION NOTES:
INTENDED FOR INSTALLATION IN LAY IN (DROP) CEILINGS
INSTALL SLIDING RADIAL DAMPER ON TOP SIDE OF COLLAR

VERTICAL THROW DATA (Ft)			
CFM	T150	T100	T50
600	1.25"	3.00"	7.75"
500	0.50"	2.50"	6.25"
400	---	1.25"	4.50"
300	---	---	3.75"
200	---	---	0.50"





NOTES
- FIELD PIPE DROPS AS SHOWN
  PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

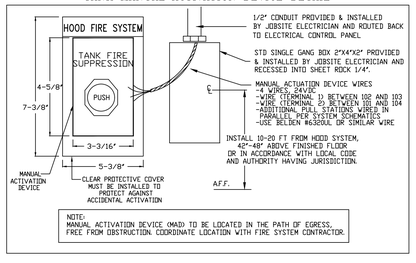
- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 8381394.
JOB NAME: SLIDERS SOUTH LEE SUMMIT, MO.

SYSTEM SIZE: TANK-SP-2 DESIGN FP: 38. MAXIMUM FP: 40.
HOOD # 1 10' 6.00" LONG x 54" WIDE x 24" HIGH.
RISER # 1 SIZE: 10" x 16".
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

TANK MANUAL ACTIVATION DEVICE DETAIL



FIRE SYSTEM INFORMATION – JOB#8381394

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION SYSTEM	INSTALLATION LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	38	FIRE CABINET RIGHT	RIGHT, HOOD 1

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

APPROVED 2-23-2024 HWC ENGINEERING, CARTER & ASSOCIATES, LLC

STATE OF MISSOURI WALTER E. WOOD NUMBER PE-2010022073 PROFESSIONAL ENGINEER VALID 02-23-2 024

FOR QUESTIONS, CALL THE
Advanced Hoods Systems, LLC
REGION 140
PHONE: 407-269-4813
EMAIL: scott@advancedhoodsystems.com

REVISIONS

DESCRIPTION	DATE:

ADVANCED HOOD SYSTEMS
Advanced Hoods Systems, LLC
. FL. PHONE: FAX: 9782275974 EMAIL: justin@advancedhoodsystems.com

SLIDERS

DATE:
DWG.#:
DRAWN BY:
SCALE:
MASTER DRAWING

SHEET NO.
1

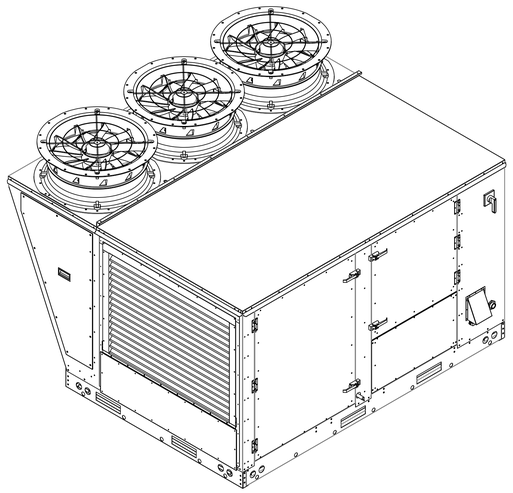
FAN #2 AHRTU3-I.200-15-17.5T-DOAS - HEATER

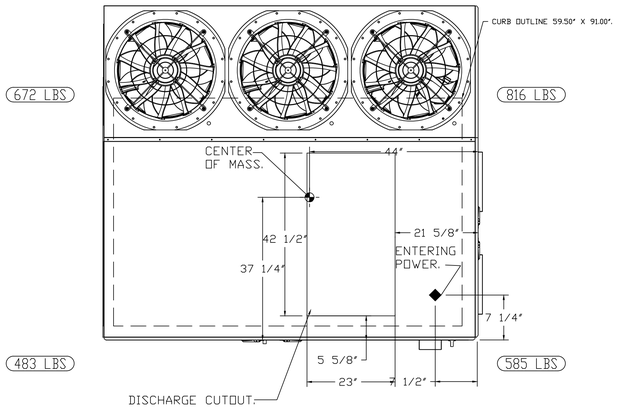
NOTES:
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
4. EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

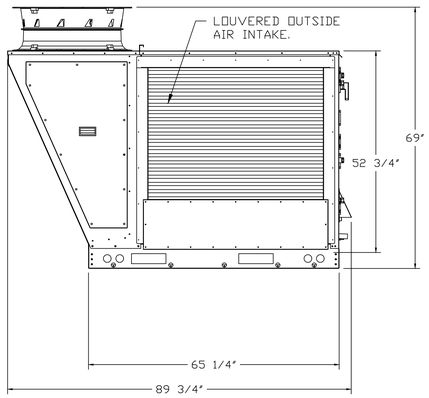
*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

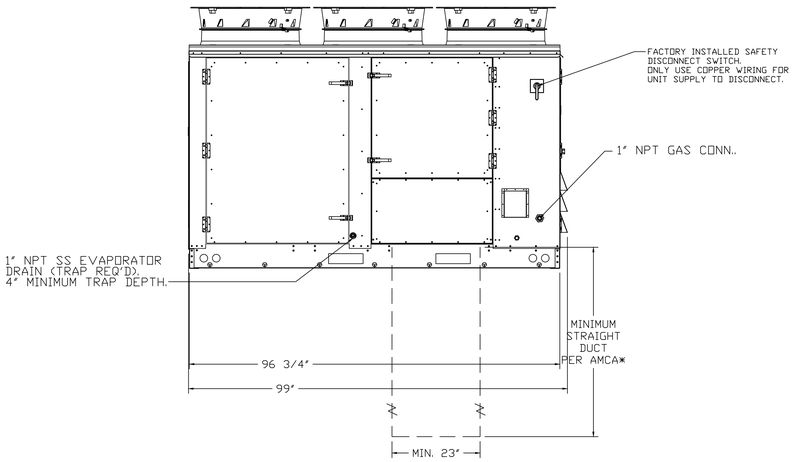
***NOTE: THIS UNIT IS INTENDED TO SERVE IN PLACE OF THE KITCHEN HVAC ROOF TOP UNIT (RTU) IN ADDITION TO PROVIDING APPROPRIATE MAKE-UP AIR FOR THE KITCHEN HOOD(S). RTU AND ASSOCIATED DUCTWORK SHALL BE REMOVED FROM SCOPE UNLESS REQUIRED FOR INTERNAL LOAD ESTIMATES. FINAL DESIGN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD.**

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED SUPPLY STRAIGHT DUCT SIZE IS 23" x 39".





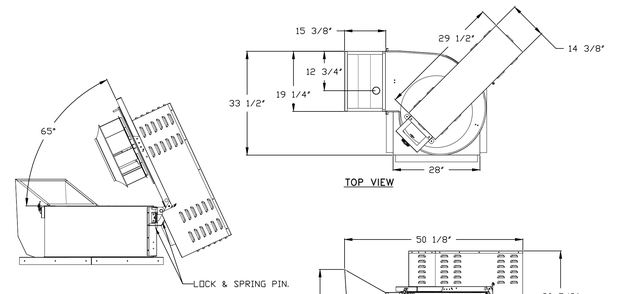




EXHAUST FAN INFORMATION - JOB#8381394

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	AH-RE18DD	ADVANCED HOOD	2152	1.000	1251	ODP	2.000	1.0790	3	208	5.9	1248 FPM	286	16.4

FAN #1 AH-RE18DD - EXHAUST FAN



FEATURES:

- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL762 AND ULC-S645.
- HIGH HEAT OPERATION DIRECT DRIVE 300°F (149°C).
- HEAT SLINGER.
- GREASE CLASSIFICATION TESTING.
- TILT OUT WHEEL.
- LOCKING PIN FOR POWER PACK.
- MOTOR WEATHER COVER.
- INTERLOCKED DISCONNECT SWITCH.
- NEMA 4X SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST DIRECT DRIVE
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

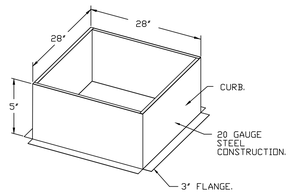
ABNORMAL FLARE-UP TEST BELT & DIRECT DRIVE
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS
- UTILITY SET GREASE CUP.
- RE1B - DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE.
- 2 YEAR PARTS WARRANTY.

AIR BALANCE SCHEDULE

	EXHAUST	SUPPLY
EXHAUST HOOD	2152 CFM	
DOAS		2550 CFM
BATHROOM	160 CFM	
OVERALL BALANCE		238 CFM

CURB #1 CRB28X5E



MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

APPROVED 2-23-2024 IWC INSPECTION WEIGHER CARTER & ASSOCIATES

STATE OF MISSOURI WALTER E. WOOD NUMBER PE-2017022072 PROFESSIONAL ENGINEER
VALID
02-23-2024

FOR QUESTIONS, CALL THE
Advanced Hoods Systems, LLC
REGION 140
PHONE: 407-269-4813
EMAIL: scott@advancedhoodsystems.com

REVISIONS

DESCRIPTION	DATE:

ADVANCED HOOD SYSTEMS

Advanced Hoods Systems, LLC
. FL PHONE: FAX: 9782275974 EMAIL: justin@advancedhoodsystems.com

SLIDERS

DATE:
DWG.#:
DRAWN BY:
SCALE:
MASTER DRAWING

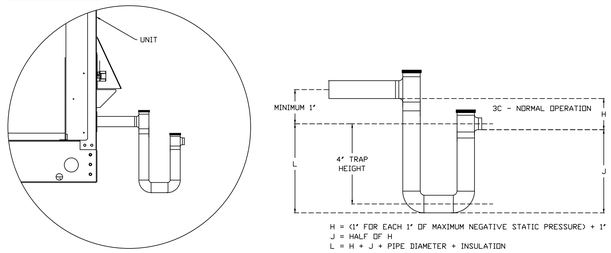
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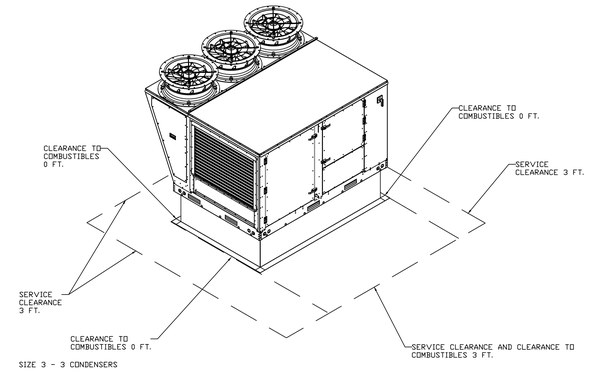
FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	UTILITY SET GREASE CUP
		1	RE18 - DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE
		1	2 YEAR PARTS WARRANTY
2		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	COOLING OVERRIDE
		1	RTU BLOWER DOOR SWITCH
		1	RTU3 DOWN DISCHARGE
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	TOTAL CFM MONITORING
		1	SPECIAL ORIFICES FOR IF HEATERS ABOVE 2,000'
		1	RTU FIXED 100% OA INTAKE CONTROL
		1	OCCUPIED SCHEDULING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	120V FIRE INPUT
		1	RTU3 HAIL GUARD
		1	RTU3 NO RETURN - 100% OA
		1	2" METAL MESH FILTERS FOR RTU3 OUTDOOR INTAKE
		1	BLOWER STOP DELAY. ALLOWS RESIDUAL HEAT TO BE TRANSFERRED INTO THE SUPPLY AIR AFTER HEATING HAS STOPPED. FACTORY SET AT: 90 SECS FOR 1BT, 30 SECS FOR DF
		1	VAV PACKAGE W/ 0-10VDC INPUT CONTROL (571 VFD INCLUDED)
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	17.5 TON MODULATING COOLING OPTION, 208/230V. R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 0F AMBIENT
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	17.5 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL - R454B
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET

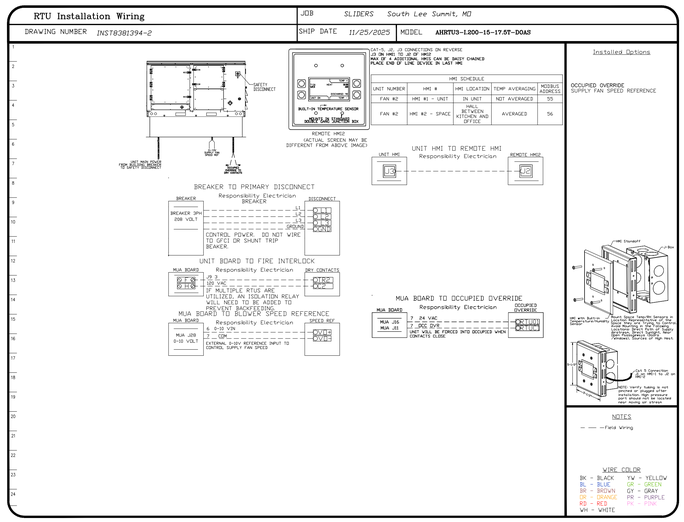
HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #2	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #2	HMI #2 - SPACE	HALL BETWEEN KITCHEN AND OFFICE	AVERAGED	56

RTU CONDENSATE DRAIN TRAP DETAIL





SIZE 3 - 3 CONDENSERS



DOAS/RTU FAN SCHEDULE - JOB#8381394

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	TOTAL CFM	MAX OUTSIDE AIR CFM	RETURN AIR CFM	WEIGHT (LBS)	ESP	ELECTRICAL INFORMATION HP	PHASE	VOLT	MCA	MOCP	COOLING INFORMATION OUTSIDE AIR DB	OUTSIDE AIR WB	LEAVING AIR DB	LEAVING AIR WB	LEAVING AIR DP	CAPACITY TOTAL	CAPACITY SENS.	IEER	ISMRE2	REHEAT INFORMATION DISCHARGE DB	DISCHARGE WB	CAPACITY DESIRED	CAPACITY MAX	MOISTURE REMOVAL RATE	GAS HEAT INFORMATION GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	A2L MINIMUM ROOM VOLUME ROOM AREA (FT2)	AIRFLOW (CFM)	HEIGHT (FT)	NOTES
2		1	AHRTU3-1.200-15-17.5T-DOAS	ADVANCED HOOD	15P-3	2550	2550	0	2556	0.500	2.00	3	208	74.2A	80A	89.8°F	77.1°F	48.0°F	48.0°F	48.0°F	224.1 MBH	102.6 MBH	18.2	8.0	70.0°F	56.8°F	57.6 MBH	113.4 MBH	111.7 LBS/HR	NATURAL	183616	148729	55°F	7 IN. W.C. - 14 IN. W.C.	618.5	1031	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FULLY MODULATING HOT GAS REHEAT
14. 15 DEGREE LOW AMBIENT OPERATION
15. HAIL GUARD FOR CONDENSING COIL
16. DOWN DISCHARGE/NO RETURN
17. MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER UL60335-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.
18. SCCR RATING OF 10kAMP

CAPTIVEAIRE TO COMMISSION THE HVAC UNITS AND THEIR MECHANICAL SUB TO T&B.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

APPROVED 12-23-2024 HWC KNOWLTON WEAVER CARTER & ASSOCIATES

STATE OF MISSOURI WALTER E. WOOD NUMBER PE-2017022073 PROFESSIONAL ENGINEER
VALID
12-23-2024

FOR QUESTIONS, CALL THE
Advanced Hoods Systems, LLC
REGION 140
PHONE: 407-269-4813
EMAIL: scott@advancedhoodsystems.com

REVISIONS

	DESCRIPTION	DATE:
1		
2		
3		
4		
5		

ADVANCED HOOD SYSTEMS
Advanced Hoods Systems, LLC
. FL PHONE: FAX: 9198272597# EMAIL: justin@advancedhoodsystems.com

SLIDERS

DATE:

DWG.#:

DRAWN BY:

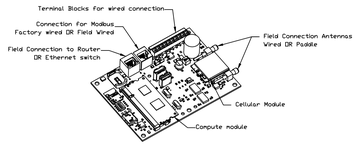
SCALE:

MASTER DRAWING

SHEET NO. 3

ELECTRICAL PACKAGE – JOB#8381394

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	Φ	HP	VOLT	FLA
1		SC-311110MA	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EXHAUST	3	2.000	208	5.9
				HOOD # 1	1 FAN		SUPPLY	3	2.000	208	6.1



CASlink Monitor and Control

- *Hood control panel to support communications to cloud-based Building Management System.*
- *Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.*
- *Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.*
- *Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.*

MONITORING AND CONTROL POINTS LIST

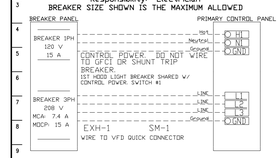
DCV Packages	*Function*
Room Temperature	*MONITOR*
Duct Temperature(s)	*MONITOR*
MUA Discharge Temperature	*MONITOR*
Kitchen RTU Discharge Temperature	*MONITOR*
Fan Speed	*MONITOR*
Fan Amperage	*MONITOR*
Fan Power	*MONITOR*
VFD Faults	*MONITOR*
Controller Faults	*MONITOR*
Fan Faults	*MONITOR*
Fan Status	*MONITOR*
PCU Faults	*MONITOR*
PCU Filter Clog Percentages	*MONITOR*
Fire Condition.	*MONITOR*
CORE Fire System	*MONITOR*
Building Pressures	*MONITOR*
Prep Time Button	*MONITOR & CONTROL*
Fans Button	*MONITOR & CONTROL*
Lights Button	*MONITOR & CONTROL*
Wash Button	*MONITOR & CONTROL*

SC Packages	*Function*
Room Temperature(s)	*MONITOR*
Duct Temperature(s)	*MONITOR*
MUA Discharge Temperature	*MONITOR*
Kitchen RTU Discharge Temperature	*MONITOR*
Controller Faults	*MONITOR*
Fan Faults	*MONITOR*
Fan Status	*MONITOR*
PCU Faults	*MONITOR*
PCU Filter Clog Percentages	*MONITOR*
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CORE Fire System	*MONITOR*
Building Pressures	*MONITOR*
Fans Button(s)	*MONITOR & CONTROL*
Lights Button(s)	*MONITOR & CONTROL*
Wash Button	*MONITOR & CONTROL*

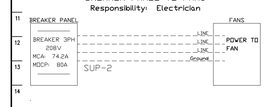
JOB NO 8381394 | MODEL NUMBER SC-311110MA | JOB NAME SLIDERS South Lee Summit, M… | DRAWN BY | DATE 11/25/2025 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-1

DESCRIPTION OF OPERATION:
3 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Relay On/Off with Supply Fan, Fanta1 On/Off Thermostatically Controlled. Room temperature sensor shipped loose for Field Installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.

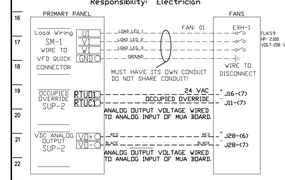
BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



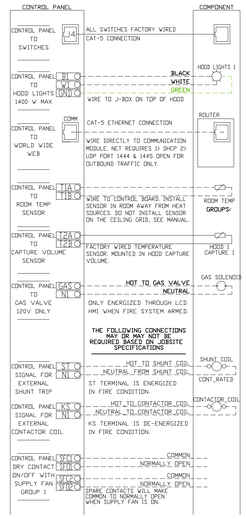
BREAKER PANEL TO FANS
Responsibility: Electrician

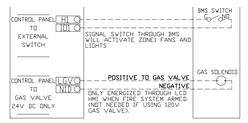


CONTROL PANEL TO FANS
Responsibility: Electrician

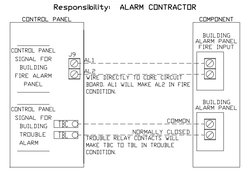


CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician

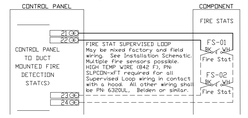




CONTROL PANEL TO FIRE SYSTEM
Responsibility: ALARM CONTRACTOR

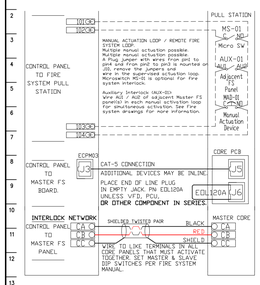


CONTROL PANEL TO FIRE SYSTEM
Responsibility: CERTIFIED INSTALLER



JOB NO 8381394 | MODEL NUMBER SC-311110MA | JOB NAME SLIDERS South Lee Summit, M… | DRAWN BY | DATE 11/25/2025 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-2

DESCRIPTION OF OPERATION:
3 Phase w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Relay On/Off with Supply Fan, Fanta1 On/Off Thermostatically Controlled. Room temperature sensor shipped loose for Field Installation. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD.



JOB NO 8381394 | MODEL NUMBER SC-311110MA | JOB NAME SLIDERS South Lee Summit, M… | DRAWN BY | DATE 11/25/2025 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 42/43 Tank-based Fire Protection System equipped with Electronic Detection utilizing CORE board as a Listed Release Mechanism. Installed in Hood Utility Cabinet with integral hood prewire panel.

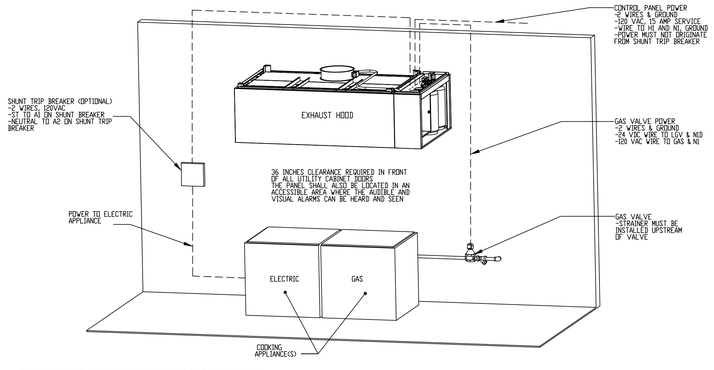
TANK PROTECTION ELECTRICAL DETAIL

02/10/2021 Rev. 2

ELECTRICIAN
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

FS-1: MASTER

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL A1 & A2	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1D (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1D TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

JOB NO 8381394 | MODEL NUMBER SC-311110MA | JOB NAME SLIDERS South Lee Summit, M… | DRAWN BY | DATE 11/25/2025 | SCHEMATIC TYPE INSTALL | DWG NO ECP #1-4

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS - 42/43 Tank-based Fire Protection System equipped with Electronic Detection utilizing CORE board as a Listed Release Mechanism. Installed in Hood Utility Cabinet with integral hood prewire panel.

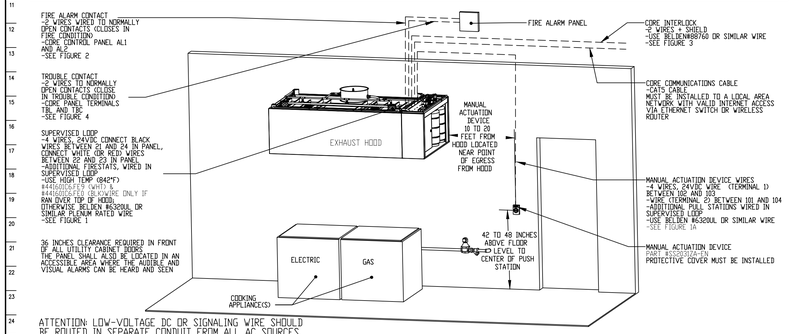
TANK PROTECTION LOW-VOLTAGE DETAIL

10/01/2023 Rev. 3

ALARM CONTRACTOR
1. WIRE MANUAL ACTUATION DEVICE(S), *REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST
*REMOTE FIRESTAT(S) MAYBE BE REQUIRED DEPENDING ON THE DUCT LAYOUT AND HOOD TEMPERATURE RATING. REFERENCE MANUAL FOR LOCATION AND GUIDELINES.

FS-1: MASTER

ALARM CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION ST-65518
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (842°F) #4416GIOGSFE9 (WHITE) & #4416GIOGSFE10 (BLACK)WIRE OR SIMILAR ONLY IF RAN OF HOOD. OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE. SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA. CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB. CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDEN# 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TBK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

APPROVED 12-23-2024 IAPMO IAPMO UPC ERIC CARTER & ASSOCIATES

STATE OF MISSOURI WALTER E. WOOD NUMBER PE-2007020973 PROFESSIONAL ENGINEER
VALID 12-23-24

FOR QUESTIONS, CALL THE
Advanced Hoods Systems, LLC
REGION 140
PHONE: 407-269-4813
EMAIL: scott@advancedhoodsystems.com

REVISIONS

	DESCRIPTION	DATE:
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2		
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ADVANCED HOOD SYSTEMS
Advanced Hoods Systems, LLC
. FL PHONE: FAX: 9198275974 EMAIL: justin@advancedhoodsystems.com

SLIDERS

DATE:

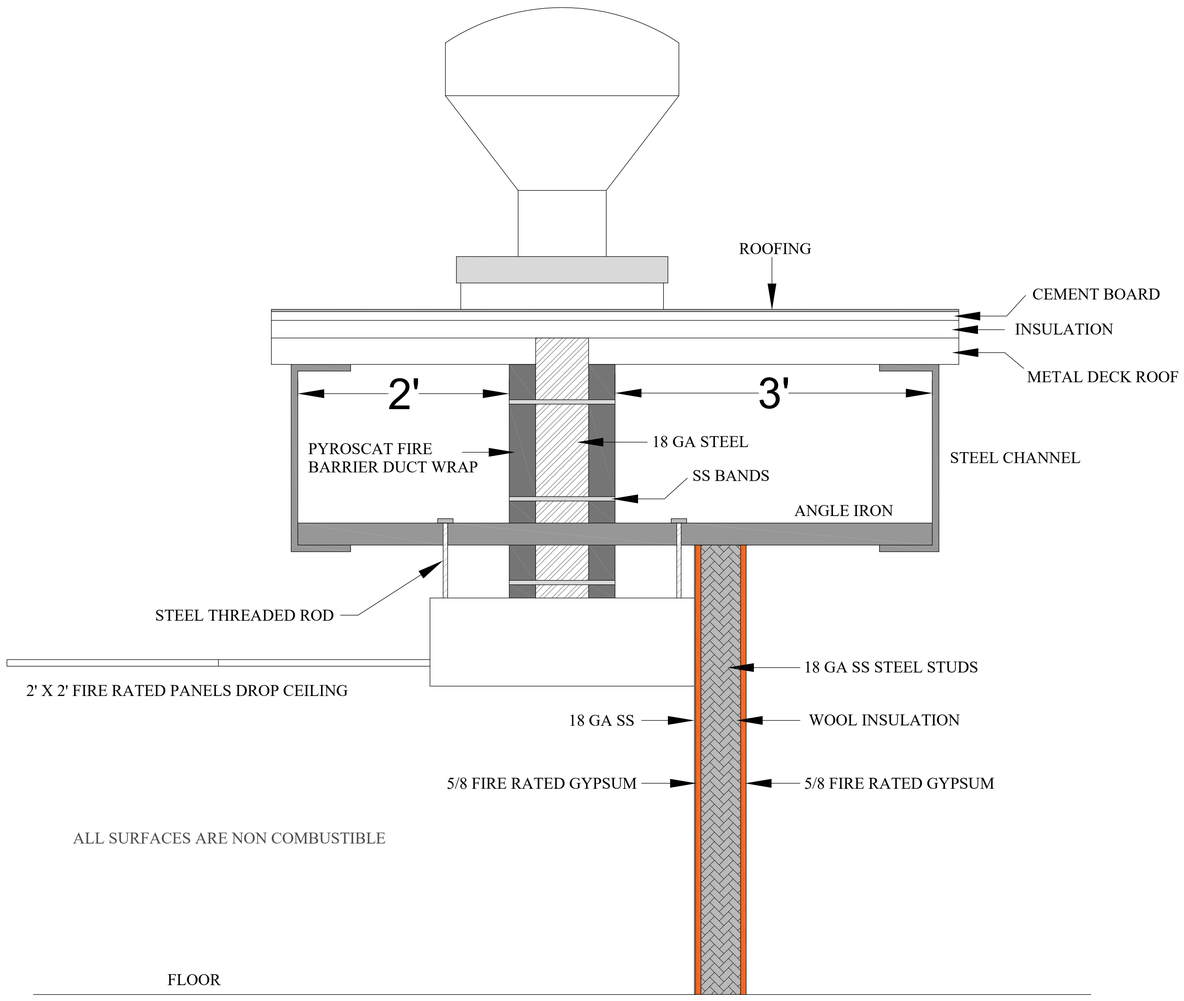
DWG.#:

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SCALE:

MASTER DRAWING

SHEET NO. 4



FIREWALL CONSTRUCTED TO UL DESIGN NO. W440



PYROSCAT DUCT WRAP IS A FLEXIBLE, LIGHTWEIGHT FIRE BARRIER SYSTEM DESIGNED TO PROVIDE ONE AND TWO HOUR RATED FIRE PROTECTION AND ZERO CLEARANCE TO COMBUSTIBLE PROTECTION IN GREASE AND AIR DUCT APPLICATION. PYROSCAT DUCT WRAP HAS BEEN TESTED AT UNDERWRITERS LABORATORIES® AND MEETS REQUIREMENTS OF UL UUET CLASSIFICATION FOR GREASE DUCT ENCLOSURES AND ULC GREASE AND VENTILATIONN DUCT ISULATION UNDER FILES FRD-6 AND FRD-7. UL YYET CLASSIFICATION REQUIRES THAT THE SYSTEM MEET THE FOLLOWING:

1. EXTERNAL FULL SCALE FIRE TEST FOR 1 AND/OR 2 HR FIRE RESISTANCE DUCT ENCLOSURE AND THROUGHPENETRATION PER UL 263 (ASTM E-119)/ UL 1479 (ATM E-814) WITH HOSE STREAM.
2. MINIMUM TEMPERATURE RISE STANDARDS DURING THE 2000° F ABNORMAL TEMPERATURE TEST PER "UL SUBJECT 1978 PROPOSED FIRST EDITION OF THE STANDARD FOR GREASE DUCTS".
3. SURFACE BURNING CHARACTERISTICS PER UL 723 (ASTM E-84) WITH FSI NOT OVER 25 AND SDI NOT OVER 50.

NOMINAL THICKNESS: 1 1/2"
NOMINAL DENSITY: 6LB/FT3

PYROSCAT DUCT WRAP IS CLASSIFIED IN TWO PRODUCT TYPES. PYROSCAT FP DUCT WRAP INCORPORATES FIRE PROTECTION GRADE CERAMIC FIBER BLANKET MANUFACTURED FROM INORGANIC OXIDES TO FORM A SUPER STRONG, FLEXIBLE, LIGHTWEIGHT PRODUCT THAT IS INHERENTLY FIRE RESISTANT. PYROSCAT CSM DUCT WRAP IS AN ALKALINE EARTH SILICATE(AES) PRODUCT MADE FROM CALCIA, SILICA, AND MAGNESIA RAW MATERIALS.

PYROSCAT DUCT WRAP MATERIALS ARE AVAILABLE IN THREE GRADES - F0 (UNFACED), F1 (FOIL FACING ONE SIDE), AND F2E (TOTALLY ENCAPSULATED). ALL PYROSCAT PRODUCTS ARE MANUFACTURED IN AN ISO 9002 CERTIFIED FACILITY TO CLOSE TOLERANCES PER UL® FOLLOW-UP PROCEDURES TO ENSURE THE HIGHEST QUALITY FINISHED PRODUCTS FOR FIRE CRITICAL APPLICATIONS.
WHEN COMPARED TO OTHER WRAP SYSTEMS, PYROSCAT DUCT WRAP EXHIBITS GREATER PHYSICAL STRENGTH - PLUS IN THE CASE OF THE FOIL FACED GRADES (F1/F2E) THE ALUMINUM FOIL/SCRIM IS BONDED DIRECTLY TO THE FIBER BLANKET. THIS GIVES INSTALLERS A MORE RUGGED, EASIER TO HANDLE, AND FASTER TO INSTALL WRAP.

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

APPROVED
02-23-2024
IWC
INTERNATIONAL WIENER, CARTER & ASSOCIATES

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
02-23-2024

REVISION/UPLOAD DATE
REV. | DATE | DESCRIPTION
LAST DESIGN BULLETIN

smalls SLIDES

DATE ISSUED:

VALIANT EQUIPMENT, LLC
15 WEST TOWER CIRCLE ORMOND BEACH, FL 32174
(386) 677-4006

DRAWN BY:
CHECKED BY:

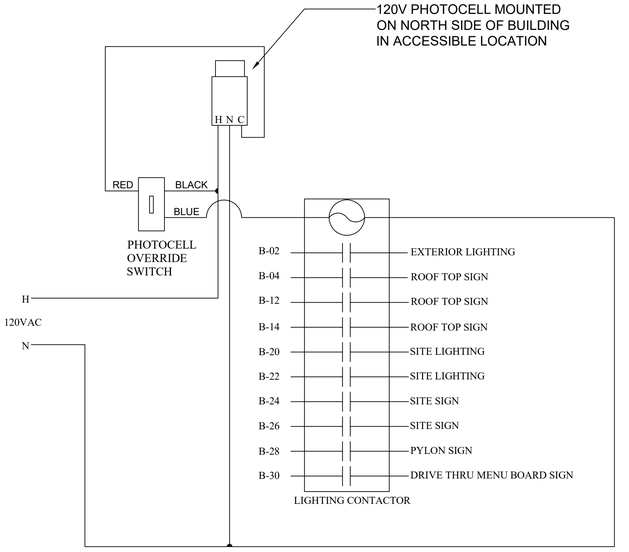
Third Party: IWC & Assc. Inc.
2627 SouthMyrtle Ave.
Clearwater, FL 34616
(717)-584-8151

Project #

DRAWING NUMBER:
FIRE WALL

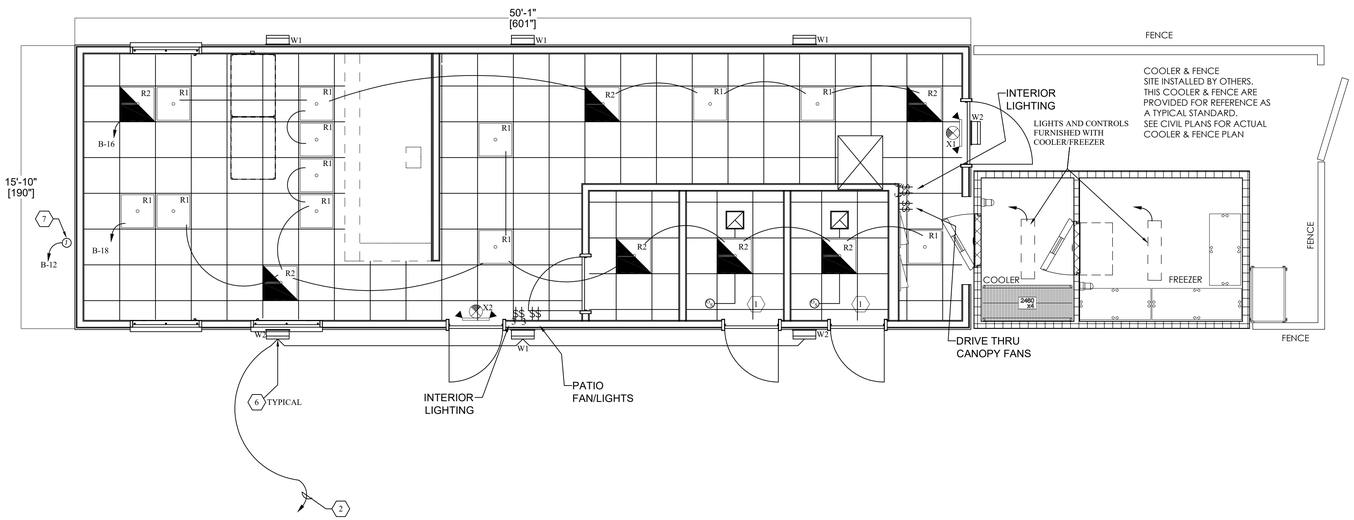
LIGHT FIXTURE SCHEDULE AS SHOWN OR EQUIVALENT

FIXTURE ID	DESCRIPTION	LAMP TYPE	LAMP QTY	WATTS	ADDITIONAL INFORMATION
W1	EXTERIOR WALL PACK - RZ LIGHTING WP10-30L-D-30 , 120V, 3000K	LED	4	30	
W2	EXTERIOR EMERGENCY BACKUP - RAB WPLED26Y/E, 120V, 3000K	LED	3	26	
X1	EMERGENCY EXIT SIGN - HUBBELL CE SERIES, 120V	LED	1	-	
X2	EMERGENCY EXIT SIGN W/ EMERGENCY FLOOD LIGHT - HUBBELL CC SERIES, 120V	LED	1	-	
R1	INTERIOR 2' X 2' ADJUSTABLE PANEL LIGHT - RZ LIGHTING ILPNLDPHYZXZWTCCT, 120V, 5000K	LED	12	40	
R2	INTERIOR 2' X 2' ADJUSTABLE EMERGENCY PANEL LIGHT - RZ LIGHTING ILPNLDPHYZXZWTCCT, 120V, 5000K, POWER PACK FOR BACKUP	LED	7	40	



EXTERIOR LIGHTING CONTROL WIRING DIAGRAM

N.T.S A



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

GENERAL NOTES

1. "EM" UNITS SHALL BE FOR OPERATION ON 120 VOLT SINGLE PHASE WITH NUMBER OF HEADS AS INDICATED ON THE PLAN. UNITS SHALL BE PLUG-IN TYPE WITH SEALED PURE LEAD BATTERIES. THE CHARGER SHALL BE COMPLETE AUTOMATIC, SOLID STATE TYPE CAPABLE OF FULLY RECHARGING DISCHARGED BATTERY IN 24 HRS. TRANSFER DEVICE SHALL AUTOMATICALLY SWITCH LOAD ON AT POWER FAILURE AND OFF ON RETURN OF NORMAL POWER. UNITS SHALL HAVE LOW VOLTAGE DISCONNECT FEATURE. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
2. ALL CIRCUITS SHALL HAVE AN INDIVIDUAL NEUTRAL CONDUCTOR. NO SHARED NEUTRALS ARE PERMITTED.
3. UPON COMPLETION OF ALL WORK (INCLUDES WORK BY OTHERS). PROVIDE ALL STAINLESS STEEL COVER PLATES, INCLUDING BLANKS AND THOSE REQUIRED FOR DATA CABLES.

LIGHTING PLAN CODED NOTES ⟨#⟩

1. PROVIDE FINAL CONNECTION FOR CEILING MOUNTED EXHAUST FAN. FAN TO BE CONTROLLED BY ROOM LIGHT CONTROL.
2. SEE SITE PLAN FOR LOCATION AND QUANTITY OF SITE POLES. REFER TO DETAIL A/E1.1 FOR CONTROLS.
3. WIRE ALL EXIT LIGHTS AND EMERGENCY LIGHTS AHEAD OF LOCAL SWITCH AS SHOWN.
4. SITE ELECTRICAL CONTRACTOR TO CONNECT TO LINE VOLTAGE WHIP OF LED TRANSFORMER. LED FIXTURES, TRANSFORMERS AND ALL LOW VOLTAGE WIRING SHALL BE FURNISHED AND INSTALLED BY LED INSTALLER.
5. HOOD MOUNTED SWITCHES BY HOOD MANUFACTURE. ELECTRICAL CONTRACTOR SHALL INSTALL WIRING AS NECESSARY TO SWITCHES AND HOOD LIGHTING TO MAKE FULLY FUNCTIONAL.
6. SITE ELECTRICAL CONTRACTOR SHALL CENTER FIXTURE AND MOUNT IN WHITE TILE. COORDINATE LOCATION WITH OWNER PRIOR TO INSTALLATION. TYPICAL OF ALL 'W1' FIXTURES.
7. SITE ELECTRICAL CONTRACTOR SHALL WIRE EXTERIOR ILLUMINATED BUILDING MOUNTED SIGN.
8. SEE SITE PLAN FOR LOCATION AND QUANTITY OF SITE DIRECTIONAL SIGNS AND PYLON SIGNS. REFER TO DETAIL A/E1.1 FOR CONTROLS.
9. SEE SITE PLAN FOR LOCATION OF DRIVE THRU MENU BOARD AND SIGN. REFER TO DETAIL A/E.1 FOR CONTROLS.

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

ELECTRICAL SYMBOLS

NOTE: ALL MOUNTING HEIGHTS SHALL BE AS INDICATED, UNLESS NOTED OTHERWISE. ALL MOUNTING HEIGHTS FOR KITCHEN EQUIPMENT SHALL BE AS INDICATED ON THE KITCHEN EQUIPMENT WIRING SCHEDULE, SHEET E3.

- CEILING MOUNTED OCCUPANCY SEE DETAIL 3/E1.1. SENSOR: HUBBELL #ATP600C.
- WALL MOUNTED PUSH BUTTON @ 48"
- PHOTO/IONIZATION DETECTOR-DUCT MOUNTED
- REMOTE ANNUNCIATOR/TEST STATION @ 60"
- SINGLE PHASE MOTOR
- THREE PHASE MOTOR
- 120 VOLT SIMPLEX RECEPTACLE @ 16"
- 120 VOLT DUPLEX RECEPTACLE @ 16"
WP = WEATHERPROOF
GFI = GROUND FAULT INTERRUPTER
IG = ISOLATED GROUND
- 120 VOLT DOUBLE DUPLEX (QUAD) RECEPTACLE @ 16"
- 120 VOLT SIMPLEX CEILING MOUNTED RECEPTACLE
- 120 VOLT DOUBLE DUPLEX CEILING MOUNTED RECEPTACLE
- DATA/TELEPHONE OUTLET BOX @ 16"
- DATA OUTLET BOX @ 16"
- TELEPHONE OUTLET BOX @ 16"
- 208V OR 120/208V RECEPTACLE @16"
- JUNCTION OR PULL BOX
- EQUIPMENT DISCONNECT SWITCH @ 60"
- LIGHTING/POWER PANELBOARD TOP BREAKER @ 72"

- CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE.
- WALL MOUNTED EXTERIOR LIGHTING FIXTURE.
- CEILING MOUNTED RECESSED LIGHTING FIXTURE 2'X4'.
- CEILING MOUNTED RECESSED LIGHTING FIXTURE 2'X2'.
- CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE 1'X4'.
- CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. EMERGANCY LIGHT.
- CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. EMERGANCY LIGHT.
- CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. EMERGANCY LIGHT.
- WALL/CEILING MOUNTED COMBINATION EMERGENCY LIGHTING / EXIT SIGN FIXTURE-BATTERY TYPE. SHADED QUADRANT INDICATES ILLUMINATED FACE, ARROW INDICATES "DIRECTIONAL ARROW" POSITION(S).
- REMOTE MOUNTED EMERGENCY LIGHTING FIXTURE.
- POLE MOUNTED LIGHTING FIXTURE
- WALL SWITCH, NUMBER INDICATES 2, 3, OR 4 POLE. LETTER INDICATES FIXTURE(S) TO BE CONTROLLED BY SWITCH @ 48"
- PP1-1,3,5 CIRCUIT RUN TO PANELBOARD DESIGNATION.
INDICATES CIRCUIT NUMBERS .
INDICATES PANEL DESIGNATION.
- CIRCUIT RUN TO PANELBOARD NUMBER OF ARROWS INDICATE QUANTITY OF CIRCUITS.
- CONDUIT RUNS ABOVE GRADE.
- CONDUIT RUN BELOW GRADE OR IN CONCRETE SLAB.
- CONDUIT RISE
- CONDUIT DROP
- UNSWITCHED LEG
- SWITCHED LEG

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/15/24	BATHROOM WIDTH GREW 2"
R2	1/15/24	INTERIOR LIGHT SWITCH @ REAR

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

WALTER E. WOOD NUMBER PE-2017022073
STATE OF MISSOURI · PROFESSIONAL ENGINEER
VALID
02-23-2-024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, FL 34616
(717)-584-8151

APPROVED · 2-23-2024 · HWC · HILBURN, WERNER, CARTER & ASSOCIATES, INC.

SHEET NAME

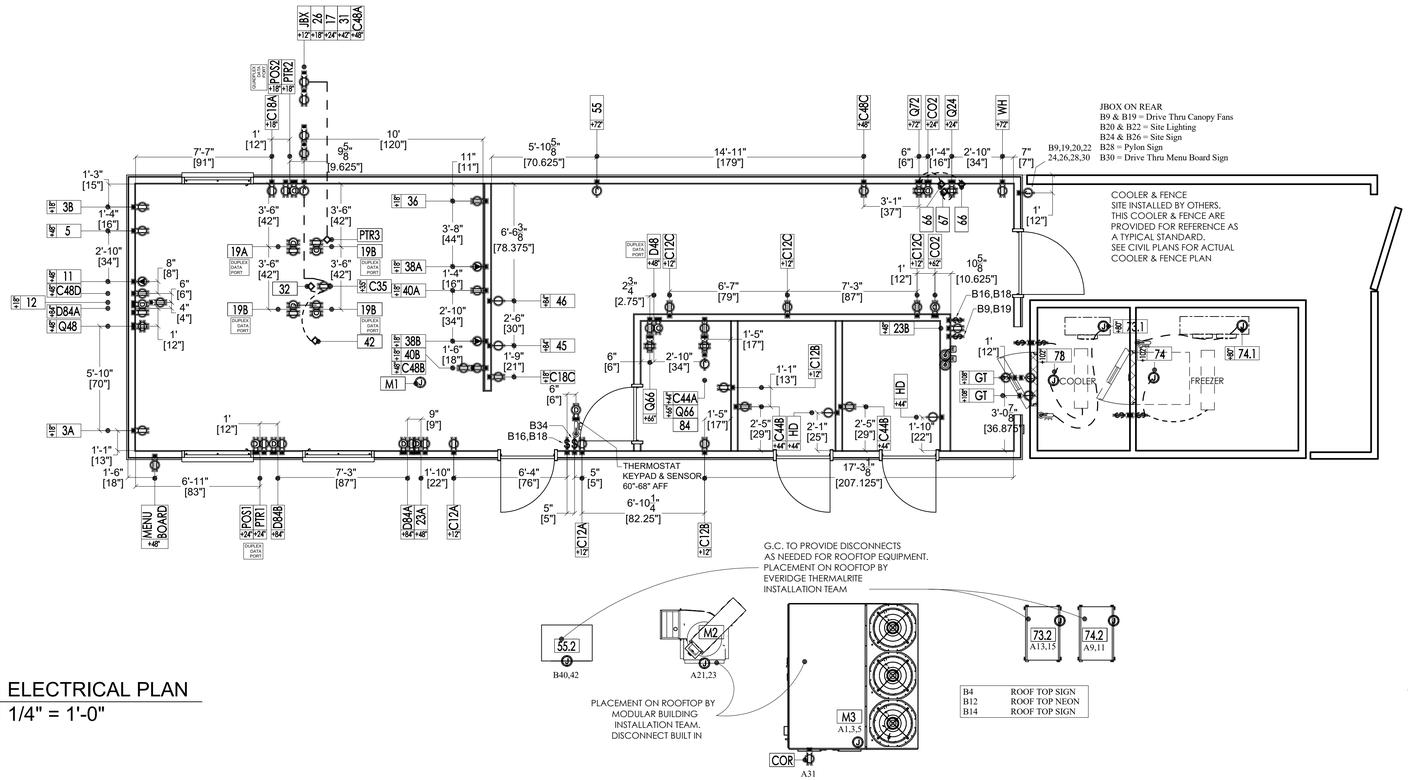
LIGHTING PLAN

SHEET NUMBER

E1.1

ELECTRICAL LEGEND

Plan	Elevation	Description
		120V Dedicated; Single, Duplex & Quadplex Outlet
		120V Duplex Drop Cord
		120V Duplex & Quadplex Floor Outlet
		High Voltage Outlet 208-480V
		J-Box Fixture Mounted & Wall Mounted
		Data Point
		Duplex Data Point
		Quad Data Point
		Electrical Stub-Up
		Electrical Connection Point
		Fire Pull Station — To Be Verified By Fire Inspector
		Light Switch
		Light Fixture
		Electrical Disconnect Point
		Thermostat
		Blower Fixture Mounted
		Alarm Connection Point
		Electrical Lines



1 ELECTRICAL PLAN
1/4" = 1'-0"

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Electrical Schedule

Item Number	Circuit Number	Count	Equipment Description	Connection Description	FL Amp	Watts	HP	Volts	Phase	Conn Plug	Elec RI Height	Electrical Remarks
3A	A30	1	Soda Dispenser - Patio	Duplex Outlet	10.0 A			120 V	1	5-15P	18"	E.C. To Verify Loads w/ Vendor Supplied Equipment
3B	A36	1	Soda Dispenser - Drive Thru	Duplex Outlet	10.0 A			120 V	1	5-15P	18"	E.C. To Verify Loads w/ Vendor Supplied Equipment
5	B41	1	Tea Brewer	Duplex Outlet	14.0 A			120 V	1	5-15P	48"	By Owner-Verify w/ Owner
11	A2,A4	1	Shake Machine	High Voltage Outlet	12.0 A	2496 W	1/2	208 V	1	L6-15P	48"	Verify plug connection w/ Vendor
12	A39	1	Refrigerator, Undercounter	Duplex Outlet	3.0 A	345 W	1/5	115 V	1	5-15P	18"	
17	B17	1	Warmer	Duplex Outlet	8.3 A	1000 W		120 V	1	5-15P	24"	3+WIRE
19A	A35	1	Kitchen Display System - Drive Thru/Ceiling	Duplex Outlet & Data				120 V	1	5-20P		By Owner - Verify w/ Owner, Data required
19B	B3	3	Kitchen Display System - Ceiling	Duplex Outlet & Data				120 V	1	5-20P		By Owner - Verify w/ Owner, Data required
23A	B35	1	Phone - Front	Duplex Outlet & Data				120 V	1	5-15P	48"	By Owner - Verify w/ Owner
23B	B25	1	Phone - Rear	Duplex Outlet				120V	1	5-15P	48"	By Owner - Verify w/ Owner
26	B31	1	Freezer, Worktop	Duplex Outlet	3.6 A	414 W	1/5	115 V	1	5-15P	18"	
31	B15	1	Hot Food Holding Station	Duplex Outlet	15.1 A	1820 W		120 V	1	5-20P	42"	
32	B23	1	Food Pan Warmer	Power Connection	4.2 A	500 W		120 V	1	5-15P		Plug into work table outlet
36	A8	1	Fryers	Duplex Outlet	6.0 A			120 V	1	5-15P	18"	
38A	A46,A48,A50	1	2 Platen Electric Double-Sided Grill - Fryer Side	High Voltage Outlet	48.0 A	16800 W		208 V	3	15-60P	18"	
38B	A38,A40,A42	1	2 Platen Electric Double-Sided Grill	High Voltage Outlet	48.0 A	16800 W		208 V	3	15-60P	18"	
40A	A16	1	Refrigerated Prep Table - Fryer Side	Duplex Outlet	3.0 A	345 W		115 V	1	5-15P	18"	
40B	A12	1	Refrigerated Prep Table	Duplex Outlet	3.0 A	345 W		115 V	1	5-15P	18"	
42	B23	1	Toaster, Vertical	Power Connection	13.0 A	1500 W		120 V	1	5-15P		Plug into work table outlet
45	A43	1	Freezer, Reach-In	Dedicated Outlet	8.5 A	973 W		115 V	1	5-15P	84"	
46	A41	1	Refrigerator, Reach-In	Dedicated Outlet	5.0 A	575 W		115 V	1	5-15P	84"	
55	B36	1	Ice Cube Machine, Remote w/ 50' Line Set	JBox	2.9 A	334 W		115 V	1	Direct	72"	
55.2	B40,B42	1	Icemaker Condenser, Remote	JBox	15.0 A	3120 W		208 V	1	Direct		208-230V/60/1
66	A51	2	Soda Carbonator	Power Connection	7.0 A		1/3	120 V	1	5-20P		By Vendor - verify requirements
67	B13	2	BIB Rack	Power Connection				120 V	1	5-15P		By Vendor - Verify w/ Vendor
73	A37	1	Walk-In Cooler	JBox		61 W		120 V	1	Direct	102"	See Shop Drawings
73.1	A37	1	Evaporator Coil (Refrigerator), Walk-In	JBox	0.8 A	92 W		115 V	1	Direct	80"	See Shop Drawings
73.2	A13,A15	1	Cooler Condenser, Walk-In	JBox	5.9 A	1227 W		208 V	1	Direct		See Shop Drawings
74	A37	1	Walk-In Freezer	JBox		61 W		120 V	1	Direct	102"	See Shop Drawings
74.1	A17,A19	1	Evaporator Coil (Freezer)	JBox	10.8 A	2246 W		208 V	1	Direct	80"	See Shop Drawings
74.2	A9,A11	1	Freezer Condenser	JBox	12.4 A	2587 W		208 V	1	Direct		See Shop Drawings
84	-	1	Networking Box	JBox						Direct		Data, By Vendor - Verify w/ Vendor

Electrical Schedule

Item Number	Circuit Number	Count	Equipment Description	Connection Description	FL Amp	Watts	HP	Volts	Phase	Conn Plug	Elec RI Height	Electrical Remarks
C12A	B21	2	Duplex Convenience Outlet - Front Door	Duplex Outlet				120 V	1	5-20R	12"	By EC
C12B	B1	2	Duplex Convenience Outlet - Office	Duplex Outlet				120 V	1	5-20R	12"	By EC
C12C	A45	3	Duplex Convenience Outlet - Rear	Duplex Outlet				120 V	1	5-20R	12"	By EC
C18A	B29	1	Duplex Convenience Outlet - Drive Thru	Duplex Outlet				120 V	1	5-20R	18"	By EC
C18C	A33	1	Duplex Convenience Outlet - Rear Hood	Duplex Outlet				120 V	1	5-20R	18"	By EC
C35	-	1	Duplex Convenience Outlet - Work Table	Duplex Outlet				120 V	1	5-20R	35"	By EC
C44A	B1	1	Duplex Convenience Outlet - Office	Duplex Outlet				120 V	1	5-20R	44"	By EC
C44B	B37	2	Duplex Convenience Outlet - Bathrooms	Duplex Outlet				120 V	1	5-20R	44"	By EC
C48A	B33	1	Duplex Convenience Outlet - Drive Thru	Duplex Outlet				120 V	1	5-20R	48"	By EC
C48B	A12	1	Duplex Convenience Outlet - Hood	Duplex Outlet				120 V	1	5-20R	18"	By EC
C48C	A47	1	Duplex Convenience Outlet - Rear	Duplex Outlet				120 V	1	5-20R	48"	By EC
C48D	A39	1	Duplex Convenience Outlet - Front	Duplex Outlet				120 V	1	5-20R	48"	By EC
CO2	-	2	Data Outlet - CO2 Sensor	Data						Data	24",62"	By EC
COR	A31	1	Duplex Convenience Outlet - Roof	Duplex Outlet				120 V	1	5-20R		By EC
D48	B1	1	Duplex Convenience Outlet & Data - Office	Duplex Outlet & Data				120 V	1	5-20R	48"	By EC
D84A	B27	2	Duplex Convenience Outlet & Data - Front & Patio	Duplex Outlet & Data				120 V	1	5-15P	84"	By EC
D84B	A35	1	Duplex Convenience Outlet & Data - Patio	Duplex Outlet & Data				120 V	1	5-15P	48"	By EC
GT	A6	2	Grease Tank - Used Cooking Oil	JBox				120 V	1	Direct	108"	By EC
HD	A27	2	Hand Dryer - Bathrooms	JBox				120 V	1	Direct	44"	By EC
JBX	-	1	Extended MC Cable JBox	JBox				120 V	1	Direct	12"	By EC
M1	A7	1	Hood System Controls	JBox				120 V	1	Direct		See Shop Drawings
M2	A21,A23,A25	1	Exhaust Fan - Hood	JBox	5.9 A	2126 W	2.00	208 V	3	Direct		See Shop Drawings
M3	A1,A3,A5	1	Dedicated Outside Air System RTU	JBox	76.4 A	27524 W	2.00	208 V	3	Direct		See Shop Drawings
POS1	B5	1	POS - Patio	Pwr & Data				120 V	1	5-15P	24"	By Owner - Verify w/ Owner, Data required
POS2	B5	1	POS - Drive Thru	Pwr & Duplex Data				120 V	1	5-15P	18"	By Owner - Verify w/ Owner, Data required
PTR1	B5	1	PTR - Patio	Pwr & Data				120 V	1	5-15P	24"	By Owner - Verify w/ Owner, Data required
PTR2	B5	1	PTR - Drive Thru	Pwr & Duplex Data				120 V	1	5-15P	18"	By Owner - Verify w/ Owner, Data required
PTR3	B33	1	PTR - Work Table	Pwr Connection & Data				120 V	1	5-15P		By Owner - Verify w/ Owner, Data required
Q24	-	1	QCO - BIB Rack	Quadplex Outlet				120 V	1	5-15P	24"	By EC
Q48	A29	1	QCO - Front	Quadplex Outlet				120 V	1	5-15P	48"	By EC
Q66	B7	2	QCO - Office	Quadplex Outlet				120 V	1	5-15P	66"	By EC
Q72	-	1	QCO - Soda Carbonator	Quadplex Outlet				120 V	1	5-15P	72"	By EC
WH	B11	1	Water Heater	Duplex Outlet	4.0 A	98 W		120 V	1	5-15P	72"	By Vendor - Verify w/ Vendor

REVISION/ UPLOAD DATE

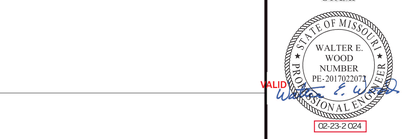
REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP



Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151



SHEET NAME

ELECTRICAL POWER PLAN

SHEET NUMBER

E2.1

PANELBOARD SCHEDULE

PANEL: "A" | RATING: 600 AMP MCB W/ 200 AMP MLO SUB BREAKER | A.I.C.: 42KAIC | MOUNTING: SURFACE
LOCATION: REAR INTERIOR | SERVICE: 120/208V, 3ϕ, 4W | TYPE: SQ-D I LINE OR EQUAL | LUG LOCATION: TOP

-	-	200 AMP SUB PANEL	200	3	3/0	208		8854			-	-	-	-		-	-	-	-	-	-	-	-
-					3/0				12760		-	-		-		-	-	-	-	-	-	-	-
-					3/0					9932	-	-		-	-	-	-	-	-	-	-	-	-

CKT. NO.	EQUIPMENT #	DESCRIPTION	BKR AMP	POLE	WIRE NO.	VOLTS	KW	LEFT PHASE LOAD (VA) A	B	C	CKT. NO.	CKT. NO.	RIGHT PHASE LOAD (VA) A	B	C	KW	VOLTS	WIRE NO.	POLE	BKR AMP	DESCRIPTION	EQUIPMENT #	CKT. NO.
1			80		4			9174			1	2	1248										
3	M3	DOAS RTU (H)	80	3	4	208	27.5		9174		3	4		1248		2.5	208	12	2	20	(K) FROZEN BEVERAGE MACHINE	11	2
5			80		4					9174	5	6			1800			12		20			4
7	M1	HOOD SYSTEM CONTROLS (K)	15	1	12	120	1.4	1350			7	8	720			1.8	120	12	1	20	(O) GREASE TANK	GT	6
9			20		12				1294		9	10		-		0.7	120	12	1	20	(K) FRYER	36	8
11	74.2	WALK-IN FREEZER CONDENSER (K)	20	2	12	208	2.6			1294	11	12			705	-	-	-	-	-	SHUNT	-	10
13			20		12			614			13	14	-			0.7	120	12	1	20	(K) PREP FRIDGE, DUPLEX CONVENIENCE OUTLET - HOOD	40B, C48B	12
15	73.2	WALK-IN COOLER CONDENSER (K)	20	2	12	208	1.2		614		15	16		345		-	-	-	-	-	SHUNT	-	14
17			20		12					1123	17	18			-	0.3	120	12	1	20	(K) PREP FRIDGE - FRYER SIDE	40A	16
19	74.1	EVAPORATOR COIL (FREEZER) (K)	20	2	12	208	2.2	1123			19	20	-			-	-	-	-	-	SHUNT	-	18
21			15		12				709		21	22		-		-	120	-	1	20	SPARE	-	20
23	M2	HOOD EXHAUST FAN (K)	15	3	12	208	2.1			709	23	24			-	-	120	-	1	20	SPARE	-	22
25			15		12			709			25	26	-			-	120	-	1	20	SPARE	-	24
27	HD	HAND DRYER - BATHROOM (O)	20	1	12	120	1.8		1800		27	28		-		-	120	-	1	20	SPARE	-	26
29	Q48	QUAD CONVENIENCE OUTLET - FRONT (R)	20	1	12	120	0.7			720	29	30			1200	1.2	120	12	1	20	SPARE	-	28
31	COR	DUPLEX CONVENIENCE OUTLET - ROOF (R)	20	1	12	120	0.4	360			31	32	-			-	120	-	1	20	(K) SODA DISPENSER - PATIO	3A	30
33	C18C	DUPLEX CONVENIENCE OUTLET - REAR HOOD (R)	20	1	12	120	0.4		360		33	34		-		-	120	-	1	20	SPARE	-	32
35	19A, D84B	KDS - DRIVE THRU, DUPLEX CONVENIENCE OUTLET - PATIO (K)	20	1	12	120	0.5			540	35	36			1200	1.2	120	12	1	20	(K) SODA DISPENSER - DRIVE THRU	3B	34
37	73, 74, 73.1	EVAPORATOR COIL (COOLER), WALK-IN (K)	20	1	12	120	0.2	214			37	38	5600					6		60			36
39	12, C48D	UNDERCOUNTER FRIDGE, DUPLEX CONVENIENCE OUTLET (K)	20	1	12	120	0.7		705		39	40		5600		16.8	208	6	3	60	(K) CLAMSHELL GRILL	38B	38
41	46	REACH-IN FRIDGE (K)	20	1	12	120	0.6			575	41	42			5600			6		60			40
43	45	REACH-IN FREEZER (K)	20	1	12	120	1.0	973			43	44	-			-	-	-	-	-	SHUNT	-	42
45	C12C	DUPLEX CONVENIENCE OUTLET - REAR (R)	20	1	12	120	1.1		1080		45	46		5600				6		60			44
47	C48C	DUPLEX CONVENIENCE OUTLET - REAR (R)	20	1	12	120	0.4			360	47	48			5600	16.8	208	6	3	60	(K) CLAMSHELL GRILL - FRYER SIDE	38A	46
49	-	SPARE	20	1	-	120	-	-			49	50	5600					6		60			48
51	Q72 (66)	SODA CARBONATOR (O)	20	1	12	120	1.6		1610		51	52		-		-	-	-	-	-	SHUNT	-	50
53	-	SPARE	20	1	-	120	-			-	53	54			-	-	120	-	1	20	SPARE	-	52
		SUBTOTAL						23371	30106	24427			13168	12793	16105								54

TOTAL - VA	36539	42899	40532
TOTAL - AMPS	304	357	338
TOTAL PANEL - VA	119970		
TOTAL PANEL - AMPS	333		

PANELBOARD SCHEDULE

PANEL: "B" | RATING: 200 AMP M LO | A.I.C.: 42KAIC | MOUNTING: SURFACE
LOCATION: REAR INTERIOR | SERVICE: 120/208V, 3ϕ, 4W | TYPE: SQ-D I LINE OR EQUAL | LUG LOCATION: TOP

CKT. NO.	EQUIPMENT #	DESCRIPTION	BKR AMP	POLE	WIRE NO.	VOLTS	KW	LEFT PHASE LOAD (VA) A	B	C	CKT. NO.	CKT. NO.	RIGHT PHASE LOAD A	B	C	KW	VOLTS	WIRE NO.	POLE	BKR AMP	DESCRIPTION	EQUIPMENT #	CKT. NO.
1	C12B, C44A, D48	DUPLEX CONVENIENCE OUTLET - OFFICE (R)	20	1	12	120	1.4	1440			1	2	500			0.5	120	12	1	20	(L) EXTERIOR LIGHTING (C)		2
3	19B	KDS - CEILING (K)	20	1	12	120	0.5		540		3	4		500		0.5	120	12	1	20	(L) ROOF TOP SIGN (C)		4
5	PTR1, PTR2, POS1, POS2	POS - DRIVE THRU & PATIO, PTR - DRIVE THRU & PATIO (K)	20	1	12	120	0.7			720	5	6			-	-	120	-	1	20	SPARE	-	6
7	Q66	QUAD CONVENIENCE OUTLET - OFFICE (R)	20	1	12	120	1.4	1440			7	8	-			-	120	-	1	20	SPARE	-	8
9	-	CANOPY FANS - DRIVE THRU (O)	20	1	12	120	1.8		1800		9	10		1440		1.4	120	12	1	20	(R) DUPLEX W/P OUTLET - EXTERIOR		10
11	WH	WATER HEATER (K)	20	1	12	120	0.1			98	11	12			500	0.5	120	12	1	20	(L) ROOF TOP SIGN (C)		12
13	Q24 (67)	BIB (BAG-IN-BOX) RACK (K)	20	1	12	120	0.4	360			13	14	500			0.5	120	12	1	20	(L) ROOF TOP SIGN (C)		14
15	31	HOT FOOD HOLDING STATION (K)	20	1	12	120	1.8		1820		15	16		500		0.5	120	12	1	20	(L) INTERIOR LIGHTING		16
17	17	WARMER (K)	20	1	12	120	1.0			1000	17	18		500		0.5	120	12	1	20	(L) INTERIOR LIGHTING		18
19	-	CANOPY FANS - DRIVE THRU (O)	20	1	12	120	1.8	1800			19	20	500			0.5	120	12	1	20	(L) SITE LIGHTING (C)		20
21	C12A	CONVENIENCE OUTLET - FRONT DOOR (R)	20	1	12	120	0.7		720		21	22		500		0.5	120	12	1	20	(L) SITE LIGHTING (C)		22
23	C35 (32 & 42)	FOOD PAN WARMER & VERTICAL TOASTER (K)	20	1	12	120	2.0			2000	23	24			500	0.5	120	12	1	20	(L) SITE SIGN (C)		24
25	23B	PHONE - REAR (K)	20	1	12	120	0.2	180			25	26	500			0.5	120	12	1	20	(L) SITE SIGN (C)		26
27	D84A	DUPLEX CONVENIENCE OUTLET - FRONT & PATIO (R)	20	1	12	120	0.7		720		27	28		500		0.5	120	12	1	20	(L) PYLON SIGN (C)		28
29	C18A	DUPLEX CONVENIENCE OUTLET - DRIVE THRU (R)	20	1	12	120	0.4			360	29	30			500	0.5	120	12	1	20	(L) MENU BOARD (C)		30
31	26	FREEZER, WORKTOP (K)	20	1	12	120	0.4	414			31	32	500			0.5	120	12	1	20	(L) PHOTO CELL FEED		32
33	C48A	DUPLEX CONVENIENCE OUTLET - DRIVE THRU (R)	20	1	12	120	0.4		360		33	34		1800		1.8	120	12	1	20	(L) PATIO LIGHTS & FANS		34
35	23A	PHONE - FRONT (K)	20	1	12	120	0.2			180	35	36			334	0.3	120	12	1	20	(K) ICE CUBE MACHINE	55	36
37	C44B	DUPLEX CONVENIENCE OUTLET - BATHROOM (R)	20	1	12	120	0.7	720			37	38	-			-	120	-	1	20	SPARE	-	38
39	-	SPARE	20	1	-	120	-		-		39	40		1560		3.1	208	12	2	20	(K) ICE MAKER CONDENSER	55.2	40
41	5	TEA BREWER (K)	20	1	12	120	1.7			1680	41	42			1560			12		20			42
		SUBTOTAL						6354	5960	6038			2500	6800	3894								

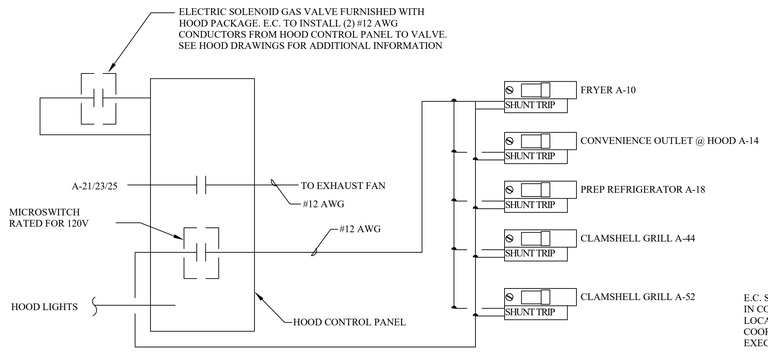
PANEL B - VA	8854	12760	9932
PANEL B - AMPS	74	106	83
TOTAL PANEL B - VA	31546		
TOTAL PANEL B - AMPS	88		

WIREWAY (SITE INSTALLED BY OTHERS) NEEDED TO CONNECT THE FOLLOWING THROUGH THE JBOX ON THE REAR.
B9, B19, B20, B22, B24, B26, B28, & B30

ELECTRIC LOAD SUMMARY			120/208V, 3ϕ, 4W SYSTEM	
DESCRIPTION	ACTUAL CONNECTED	CONNECTED KW	DEMAND FACTOR	DEMAND KW
(L) LIGHTING	8300	8.3	1.25	10.38
(R) RECEPTACLES	10080	10.08	1.0 < 10 KW + 0.5 REMAINING KW	10.04
(K) KITCHEN EQUIPMENT	65258	65.26	0.65	42.42
(O) OTHER	8810	8.81	1	8.81
(H) HVAC SYSTEM	27522	27.52	125% OF LARGEST COMPONENT****	34.4
TOTAL	119970	119.97		106.05

NOTES: *
USE GREATER LOAD OF THE TWO CATEGORIES **
NEC ARTICLE 220-43 REQUIREMENT (200VA/FT OR ACTUAL CONNECTED) ***
NEC ARTICLE 220-43 REQUIREMENT (150VA/2FT OR ACTUAL CONNECTED) ****
125% OF LARGEST MOTOR OR COMPRESSOR IN SYSTEM

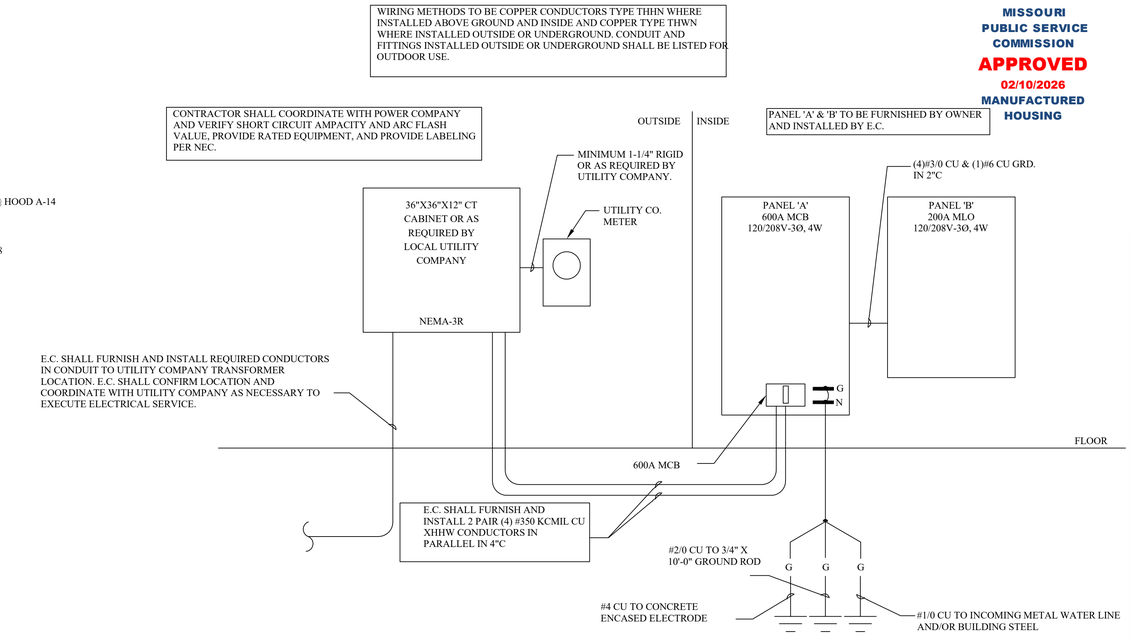
NEC DEMAND KVA X 1000 / SYSTEM VOLTAGE X 1.73		=	MINIMUM FEEDER AMPERAGE
106.05 / 208	X 1000 / X 1.73	=	294 AMPS



WIRING NOTES:

1. E.C. TO WIRE HOOD CONTROL PANEL WHICH WILL AUTOMATICALLY DE-ENERGIZE MAKE-UP AIR FAN, RTU-1, FANS, AND ENERGIZE THE EXHAUST FAN IN THE EVENT OF FIRE UNDER THE HOOD. THIS WILL ALSO DE-ENERGIZE THE ELECTRICAL EQUIPMENT UNDER THE HOOD VIA THE SHUNT TRIP BREAKERS.
2. E.C. TO COORDINATE REQUIREMENTS WITH HAVC CONTRACTOR, IF ANY, FOR A MOTOR STARTER FOR THE NEW ROOF MOUNTED EXHAUST FAN AND MAKE-UP AIR FAN.
3. E.C. SHALL FURNISH AND INSTALL ALL WIRING, UNLESS OTHERWISE NOTED, AND MAKE ALL FINAL CONNECTIONS TO EQUIPMENT SHOWN.

HOOD CONTROL PANEL WIRING DIAGRAM 2
N.T.S.



ELECTRICAL RISER DIAGRAM 1
N.T.S.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

WALTER E. WOOD NUMBER PE-2017022073 PROFESSIONAL ENGINEER STATE OF MISSOURI
VALID 12-31-2026
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, FL 34616
(717)-584-8151

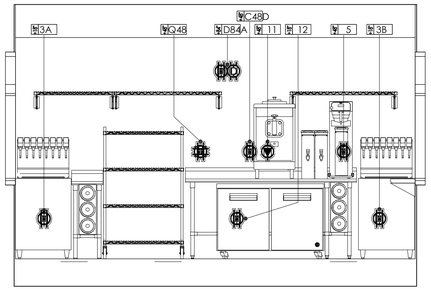
APPROVED 12-23-2024 HWC HARBERT WEINER, CARTER & ASSOCIATES, INC.

SHEET NAME

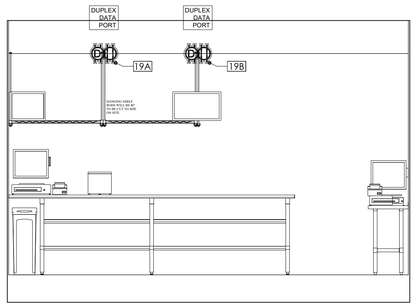
PANEL SCHEDULE

SHEET NUMBER

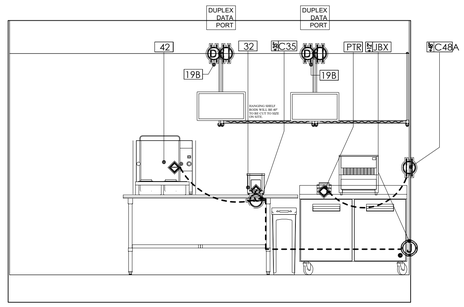
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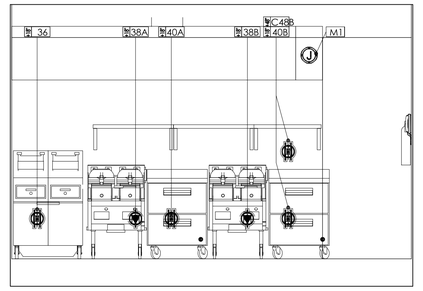
1 ELEVATION 1
3/8" = 1'-0"



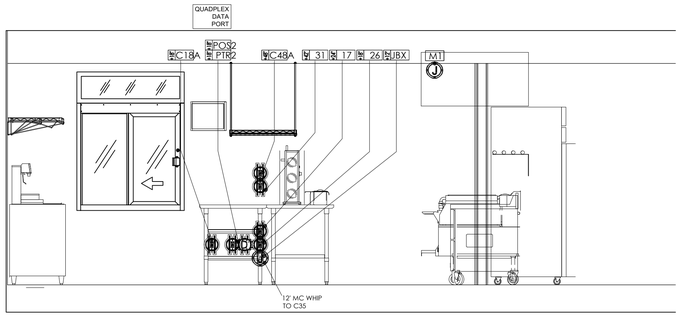
2 ELEVATION 2
3/8" = 1'-0"



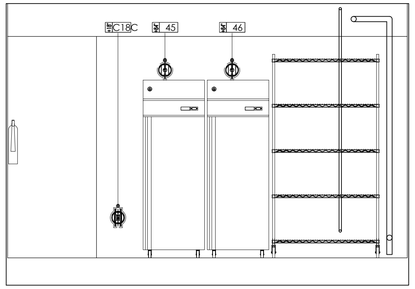
3 ELEVATION 3
3/8" = 1'-0"



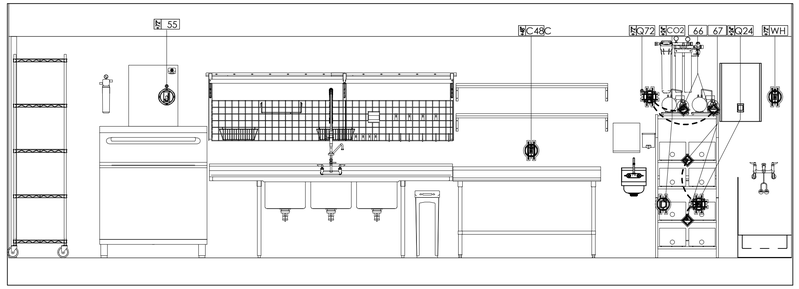
4 ELEVATION 4
3/8" = 1'-0"



5 ELEVATION 5
3/8" = 1'-0"



6 ELEVATION 6
3/8" = 1'-0"

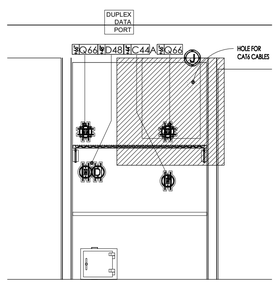


7 ELEVATION 7
3/8" = 1'-0"

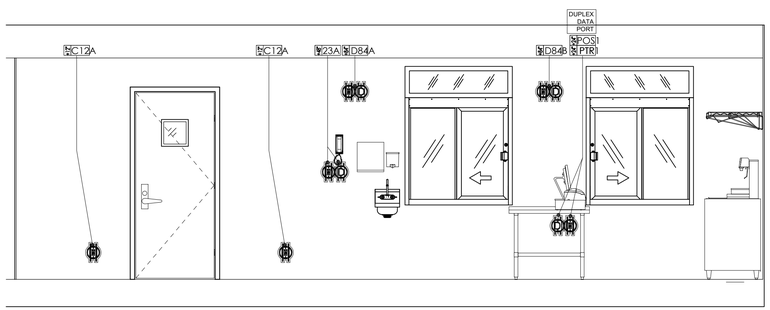
MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

ELECTRICAL LEGEND

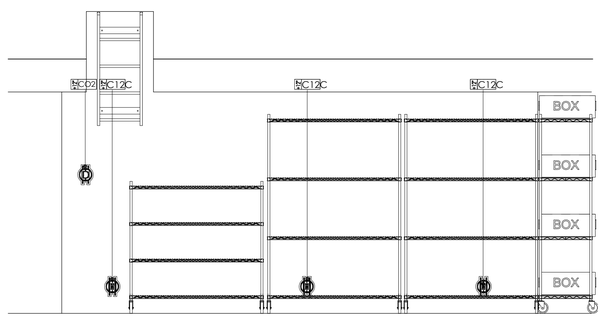
Plan	Elevation	Description
		120V Dedicated; Single, Duplex & Quadplex Outlet
		120V Duplex Drop Cord
		120V Duplex & Quadplex Floor Outlet
		High Voltage Outlet 208-480V
		J-Box Fixture Mounted & Wall Mounted
		Data Point
		Duplex Data Point
		Quad Data Point
		Electrical Stub-Up
		Electrical Connection Point
		Fire Pull Station — To Be Verified By Fire Inspector
		Light Switch
		Light Fixture
		Electrical Disconnect Point
		Thermostat
		Blower Fixture Mounted
		Alarm Connection Point
		Electrical Lines



8 ELEVATION 8
3/8" = 1'-0"



9 ELEVATION 9
3/8" = 1'-0"



10 ELEVATION 10
3/8" = 1'-0"

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R1	10/27/23	CHANGED SOME DATA PORTS TO DUPLEX OR QUADPLEX, MOVED OUTLETS AT PENINSULA.
R1	10/27/23	RIB RACK OUTLETS RAISED 2"
R2	1/15/24	BATHROOM WIDTH GREW 2"
R2	1/15/24	EQUIPMENT UPDATED

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
QE-23-2-024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

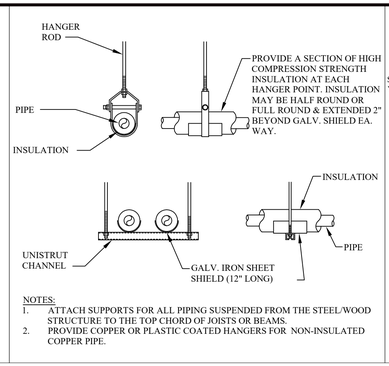
APPROVED 2-23-2024 HWC FLORIDA WEINER CARTER & ASSOCIATES

SHEET NAME

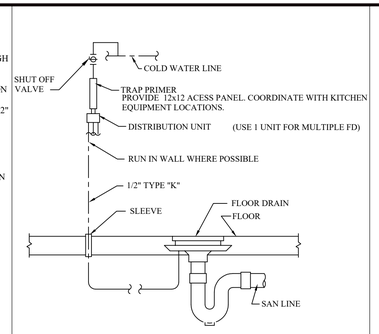
ELECTRICAL ELEVATIONS

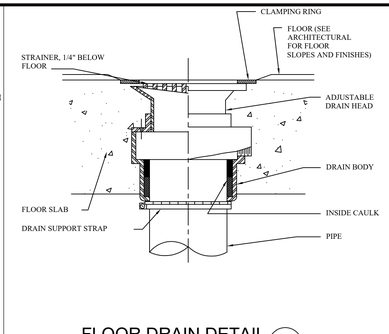
SHEET NUMBER

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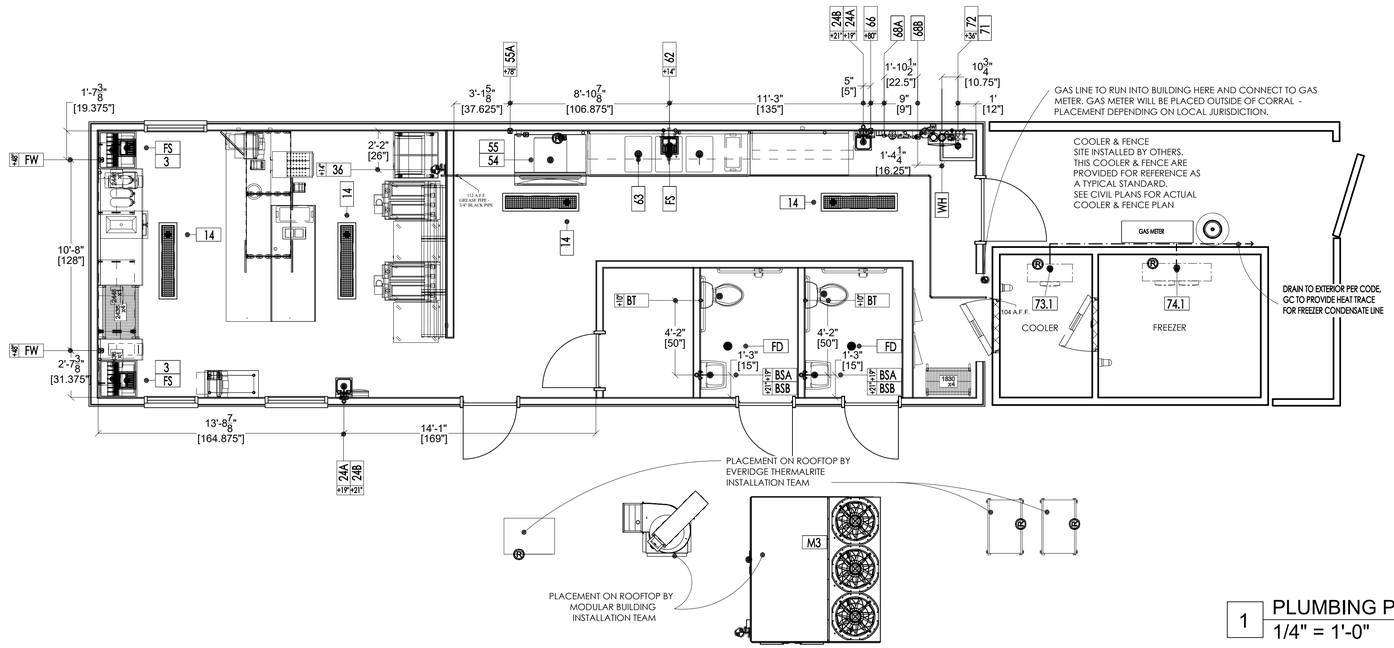


NOTES:
1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL/WOOD STRUCTURE TO THE TOP CHORD OF JOISTS OR BEAMS.
2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.





FLOOR DRAIN DETAIL B
N.T.S



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

PLUMBING LEGEND

Plan	Elevation	Description
		Hotwater Connection Point
		Coldwater Connection Point
		In Wall Direct Drain
		Hot&Cold Water w/Direct Drain
		Filtered Water Stub
		Water Stub-Up
		Plumbing Connection Point
		Gas Supply Line
		Gas Stub-Up
		Beverage Stub-Up
		Fixture Drain
		Water Lines
		Gas Lines
		Waste Lines
		Floor Drain Round & Square
		Funnel Floor Drain
		Floor Sink; 1/2 Grate, 3/4 Grate, Open Grate & Round

Plumbing Schedule

Item Number	Count	Equipment Description	Connection Description	Cold Water Size	Cold Water Rl	Hot Water Size	Hot Water Rl	Filtered Water Size	Indirect Waste Size	Direct Waste Size	Direct Waste Rl	Gas Size	Gas Input Btu/h	Gas Rl	Plumbing Remarks	Item Number
3	2	Soda Dispenser	Fixture Drain Indirect						3/4"						Verify Requirements w/ Owner, By Vendor, Air-Gap To FS	3
14	4	Floor Trough Drain	Penetration Drain							3"	0"				Verify w/ Fabricator	14
24A	2	Hand Sink	Hot & Cold 4"	1/2"	19"	1/2"	19"									24A
24B	2	Hand Sink	Direct Drain							1 1/2"	21"					24B
36	1	Fryers	Gas Supply									1"	140000	14"		36
54	1	Ice Bin	Fixture Drain Indirect						3/4"						Air-Gap to FS	54
55	1	Ice Cube Machine, Remote w/ 50' Line Set	Filtered Water					1/2"								55
55	1	Ice Cube Machine, Remote w/ 50' Line Set	Fixture Drain Indirect						3/4"							55
55A	1	Filter System, Ice Maker	Cold Water Stub	3/8"	78"			3/8"							Filtered water to 55	55A
62	1	Pre-Rinse Faucet Assembly, With Add-On Faucet	Hot & Cold 8"	1/2"	14"	1/2"	14"									62
63	1	Three (3) Compartment Sink	Fixture Drain Indirect						2"						Air-Gap To FS	63
66	1	Soda Carbonator	Filtered Water					1/4"							By Vendor - verify requirements	66
68A	1	Water Filtration System	Cold Water Stub	3/4"											Filtered Water To 5 and 66	68A
68B	1	Water Filtration System	Filtered Water					3/4"							Filtered Water To 5 and 66	68B
71	1	Mop Sink	Penetration Drain							2"	0"					71
72	1	Service Faucet	Hot & Cold 8"	1/2"	36"	1/2"	36"									72
73.1	1	Evaporator Coil (Refrigerator)	Fixture Drain Indirect						3/4"						Air-Gap To FS, See Shop Drawings	73.1
74.1	1	Evaporator Coil (Freezer)	Fixture Drain Indirect						3/4"						Air-Gap To FS, See Shop Drawings	74.1
BSA	2	Bathroom Sink	Hot & Cold 4"	1/2"	19"	1/2"	19"									BSA
BSB	2	Bathroom Sink	Direct Drain							1 1/2"	21"					BSB
BT	2	Bathroom Toilet	Cold Water Stub	1/2"	10"											BT
BT	2	Bathroom Toilet	Penetration Drain							2"	0"					BT
FD	2	Floor Drain	Penetration Drain							3"	0"				Verify w/ Fabricator	FD
FS	3	Floor Sink	Penetration Drain							3"	0"				Verify w/ Fabricator	FS
FW	2	Filtered Water Stub-Out	Filtered Water Stub					1/4"							Filtered Water From 68, By Vendor - Verify w/ Vendor	FW
M3	1	Make Up Air Unit	Gas Connection Point									3/4"	150000		See Shop Drawings	M3
WH	1	Water Heater	Cold Water Stub	3/4"		3/4"						3/4"	200000		By Vendor-Verify w/ Vendor	WH

GENERAL NOTES

1. PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO EXECUTE THE PLUMBING WORK INDICATED ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES AND ORDINANCES.
2. PAY ALL FEES AND ARRANGE FOR EXECUTION OF ALL TAPS, METERS WITH REQUIRED ENCLOSURES (IF ANY), ETC. INHERENT TO THE INSTALLATION OF NEW PLUMBING SERVICE.
3. PLUMBING WORK FOR THIS CONTRACT SHALL INCLUDE ALL PIPING FOR DOMESTIC HOT AND COLD WATER LINES, VENT AND SANITARY LINES, HOOK-UP OF ALL FIXTURES SCHEDULED ON THE DRAWINGS, AND INSULATION OF DESIGNATED PIPING RUNS. WORK SHALL ALSO INCLUDE ALL GAS PIPING AND EQUIPMENT CONNECTIONS WHERE REQUIRED.
4. ALL ITEMS SUCH AS FITTINGS, ETC. NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED.
5. SOIL, WASTE, AND VENT PIPING TO BE OF MATERIAL APPROVED BY LOCAL CODES. PVC, DWV PIPING AND FITTINGS TO BE SCHEDULE 40 AS A MINIMUM.
6. PROVIDE CLEANOUTS FOR SOIL AND WASTE LINES AS SHOWN ON DRAWINGS, AND OF TYPE APPROVED BY LOCAL CODES.
7. ALL WATER SUPPLY PIPING SHALL BE PEX PIPING UNLESS PROHIBITED BY LOCAL CODES IN WHICH CASE COPPER TUBING SHALL BE USED. (AVOID FITTINGS BELOW SLAB WHENEVER POSSIBLE). PEX PIPING PASSING THROUGH CONCRETE SLABS SHALL BE SLEEVED WITH PVC BEND SUPPORT BY MANUFACTURER. PROVIDE UPONOR/WIRSBO SERIES: A5500500 FOR 1/2", PEX A5500750 FOR 3/4" PEX, A5501000 FOR 1" PEX. PROVIDE CORRUGATED PVC TUBING (1) PIPE DIAMETER LARGER THAN THE PEX TUBING FOR SIZES LARGER THAN 1" PEX.
8. PROVIDE FOR DRAINING WATER SYSTEM, AND CAP ALL STUBS UNTIL FINISH WORK IS INSTALLED. INSTALL DRAIN VALVE AT WATER METER WITH 3/4" HOSE THREAD AND VACUUM BREAKER.
9. PROVIDE STOPS ON WATER SUPPLIES TO EACH FIXTURE & EQUIPMENT.
10. GAS PIPING FOR HEATING SYSTEMS WITH GAS-FIRED EQUIPMENT SHALL BE INCLUDED IN THIS CONTRACT. GAS PIPING SHALL BE STANDARD WEIGHT, BLACK STEEL PIPE, SCHEDULE 40. PIPING EXPOSED TO ATMOSPHERE OR RUN BELOW GRADE SHALL HAVE POLYETHYLENE PLASTIC COATING. ALL GAS PIPING, FITTINGS AND INSTALLATION SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF UTILITY COMPANY AND ALL GOVERNING BODIES.
11. IMPORTANT - HOLD ALL COLD AND HOT WATER PIPING TO WARM SIDE OF INSULATION TO PREVENT FREEZING. INSULATION SHALL MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS REQUIRED BY LOCAL CODES.
12. PLUMBING FIXTURES SHALL BE FURNISHED AND INSTALLED WHERE SHOWN ON THE DRAWINGS. ALL FIXTURE FITTINGS AND EXPOSED FIXTURE PIPING SHALL BE BRASS CHROMIUM PLATED. ALL TRAPS SHALL BE CAST BRASS. ALL FIXTURES SHALL BE EQUAL IN ALL RESPECTS TO FIXTURES SPECIFIED.
13. WATER METER TYPE IS TO BE PROVIDED AS REQUIRED BY LOCAL UTILITY COMPANY.
14. ROUGH-IN AND FINAL CONNECTIONS OF REQUIRED WASTE, VENT, AND WATER SUPPLY PIPING BY THIS CONTRACTOR. ALL SUPPLY PIPING SHALL BE VALVED.
15. COORDINATE ALL WORK WITH OTHER CONTRACTORS.
16. THIS CONTRACTOR SHALL GUARANTEE ALL WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, (USUAL WEAR IS EXPECTED), AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE BUILDING BY THE OWNER, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND ALL DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.
17. BACKFLOW PREVENTER TO BE INSTALLED WHEN REQUIRED BY LOCAL CODE.
18. SEE PLUMBING SHEETS FOR KITCHEN EQUIPMENT SCHEDULE, FIXTURE SCHEDULE, DETAILS AND SANITARY ISOMETRIC.
19. THE DIRECTION OF THE SANITARY MAIN AND THE LOCATION OF THE GREASE INTERCEPTOR SHALL BE COORDINATED WITH CIVIL DWGS PRIOR TO ROUGH-IN.
20. COORDINATE LOCATION AND ROUGH-IN HEIGHT OF KITCHEN EQUIPMENT WITH OWNER AND MILLWORK PRIOR TO ROUGH-IN.
21. MAKE ALL CONNECTIONS TO KITCHEN AND MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED. USE MILL HARDWOOD 30B35 BRAIDED FLEXIBLE HOSES FOR ALL COUNTERTOP EQUIPMENT.
22. PROVIDE SHOCK ABSORBERS AT THE END RUN OF ALL WATER PIPING. SIZE AS RECOMMENDED BY PLUMBING AND DRAINAGE INSTITUTE, AND AS RECOMMENDED BY THE MANUFACTURER.
23. ALL PIPING (GAS AND WATER) TO BE CONCEALED IN WALL SPACE WHEN POSSIBLE.
24. ALL SHUT-OFF VALVES TO BE 1/4 TURN SHUT-OFF VALVES.
25. ANY DAMAGES TO ANY EXISTING WALLS, FLOORS, FINISHES ETC. BY THIS CONTRACTOR ARE TO BE REPAIRED AT THIS CONTRACTOR'S EXPENSE.
26. ALL GENERAL USE FLOOR DRAINS NOT INSTALLED UNDER KITCHEN EQUIPMENT TO RECEIVE TRAP PRIMERS.
27. HOSE BIBBS HAVE BUILT IN VACUUM BREAKER
28. HOSE BIBBS AT THE PATIO & REAR OF THE BUILDING WILL HAVE HOT AND COLD WATER AVAILABLE.
29. PROVIDE TRAP PRIMER FOR FLOOR DRAINS. SEE DETAIL ON THIS SHEET FOR MORE INFORMATION.

PLUMBING ABBREVIATIONS

AB	ABOVE
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECT
BEL	BELOW
BLDG	BUILDING
CLG	CEILING
CO	CLEAN OUT
CONT	CONTINUATION
CW	COLD WATER
CONTR	CONTRACTOR
COORD	COORDINATE
DISC	DISCONNECT
DN	DOWN
EA	EACH
EC	ELECTRICAL CONTRACTOR
EX	EXISTING
EWC	ELECTRIC WATER COOLER
ECO	EXTERIOR CLEAN OUT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FIXT	FIXTURE
FLR	FLOOR
FURN	FURNISH
FV	FLUSH VALVE
G	GAS
GAL	GALLON
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HC	HEATING CONTRACTOR
HP	HORSEPOWER
HW	HOT WATER
HWR	HOT WATER RETURN
INV	INVERT
LAV	LAVATORY
MAX	MAXIMUM
MFR	MANUFACTURER
MT	MOUNT
NTS	NOT TO SCALE
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
RD	ROOF DRAIN
RTU	ROOFTOP UNIT
SAN	SANITARY
SS	SERVICE SINK
TYP	TYPICAL
TW	TEMPERED WATER
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WATER HEATER
W/	WITH

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/11/24	BATHROOM WIDTH GREW 2"
R2	1/11/24	EQUIPMENT UPDATED

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP



Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

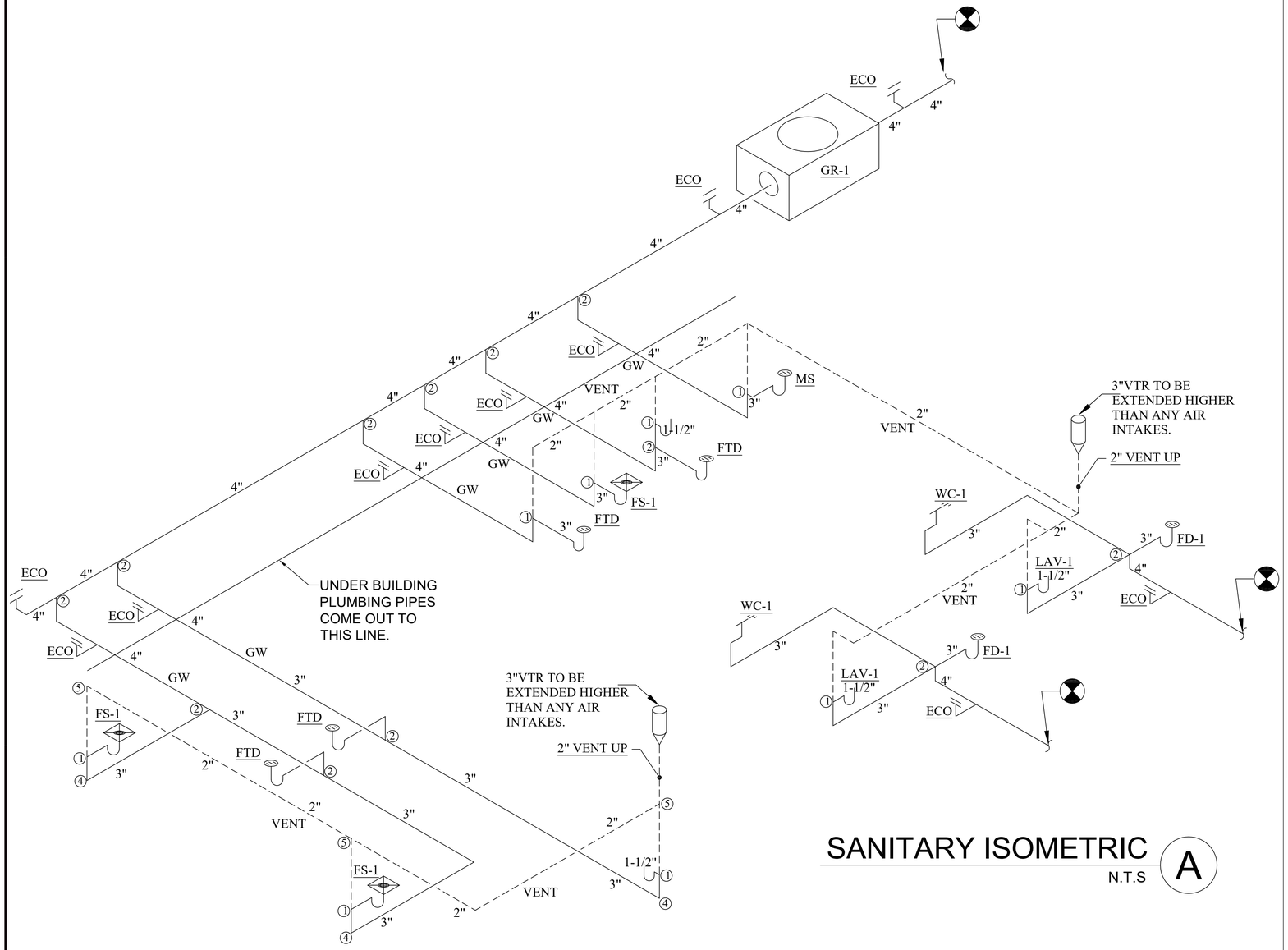


SHEET NAME

PLUMBING PLAN

SHEET NUMBER

P1.1



SANITARY ISOMETRIC A

N.T.S

PLUMBING FIXTURE SCHEDULE AS SHOWN OR EQUIVALENT

MARK	DESCRIPTION	MFG & MDL #		HW	CW	SAN	VENT	NOTES
		FIXTURE OR EQUAL	ACCESSORY					
WC-1	WATER CLOSET (HC)	BOWL = Z5560 TANK = Z5561	VITREOUS CHINA, 1.6 GPF LOW CONSUMPTION, HIGH PERFORMANCE PRESSURE ASSISTED TWO PIECE TOILET, ELONGATED ADA HEIGHT FRONT RIM, SIPHON JET ACTION, FLOOR MOUNTED TOILET W/ 12" STANDARD ROUGH-IN, FLANGE BOLTS, BOLT CAPS, FLOOR FLANGE & GASKET. (1.6/FLUSH).	-	1/2"	4"	1-1/2"	1
LAV-1	WALL HUNG LAV.	K-1728-0	DELTA AUTO FAUCET LESS POP-UP DRAIN, MODEL # 591LF-LGHGMHDF PROVIDE WITH TRUEBRO LAV-GUARD KIT	1/2"	1/2"	1-1/2"	1-1/2"	2,4,5
WCO	WALL CLEAN OUT		CAST IRON BODY WITH 6" DIA SS COVER	-	-	3"	-	3
FCO	FLOOR CLEAN OUT	SIOUX CHIEF 822-CF3PNR	PVC BODY WITH SCORIATED BRONZE COVER	-	-	3"	-	3
FD-1	FLOOR DRAIN	SIOUX CHIEF 822-F3PNR	PVC BODY WITH ROUND CAST IRON STRAINER	-	-	3"	-	3
FS-1	FLOOR SINK	SIOUX CHIEF 861-3P		-	-	3"	-	3
GR-1	GREASE INTERCEPTOR	750 GALLON (REFER TO CIVIL FOR ACTUAL SIZE)	750 GALLON 48" X 96" GREASE INTERCEPTOR (REFER TO CIVIL FOR ACTUAL SIZE)					
MV-1	MIXING VALVE	POWERS LFMM432 (ASSE 1017)	POWERS HYDROGUARD TEMPERING VALVE 3/4" IN 1" OUT	1/2"	1/2"			
WF-1	WATER FILTER	CUNO 260 NSF CERTIFIED	WATER FILTER MOUNTED ABOVE SINK	3/4"	3/4"			
WH-1	WATER HEATER	RINNAI CXP199IN	CONDENSING COMMERCIAL TANKLESS FLOW RATE (MIN-MAX) 0.13-11.0 GPM	3/4"	3/4"			
FTD	FLOOR TROUGH DRAIN							
MS	MOP SINK							

NOTES:
1. PROVIDE: BRASS FLOOR FLANGE, BOLT CAPS, WAX RING, & CHROME SUPPLY STOP.
2. PROVIDE: 2" STRAINER, 1-1/4" MCGUIRE CHROME P-TRAP & CHROME SUPPLY STOPS.
3. COVER TO BE FLUSH WITH FLOOR/GRADE
4. PROVIDE A WALL MOUNTED CONCEALED ARM CARRIER.
5. PROVIDE WITH THERMAL MIXING VALVE BELOW FIXTURE. SET AT 105 DEGREES F.
6. EXTEND RELIEF FROM BFP TO MOP SINK W/ PROPER AIR GAP.
7. FAUCET TO BE PROVIDED W/ VACUUM BREAKER.
8. GREASE TRAP PROVIDED FOR REFERENCE AS A TYPICAL STANDARD, VERIFY WITH CIVIL FOR SIZE.

DWV PIPE FITTING LEGEND:
1. SANITARY TEE
2. WYE
3. SHORT SWEEP
4. LONG SWEEP
5. QUARTER BEND
6. EIGHTH BEND

ALLOWABLE DISTANCE FROM FIXTURE TRAP TO VENT

SIZE OF FIXTURE DRAIN - INCHES	MAXIMUM ALLOWABLE DISTANCE FROM TRAP TO VENT
1 1/4	2 FT 6 IN
1 1/2	3 FT 6 IN
2	4 FT
3	5 FT
4 AND LARGER	6 FT

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

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ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2007022073
PROFESSIONAL ENGINEER
VALID
02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

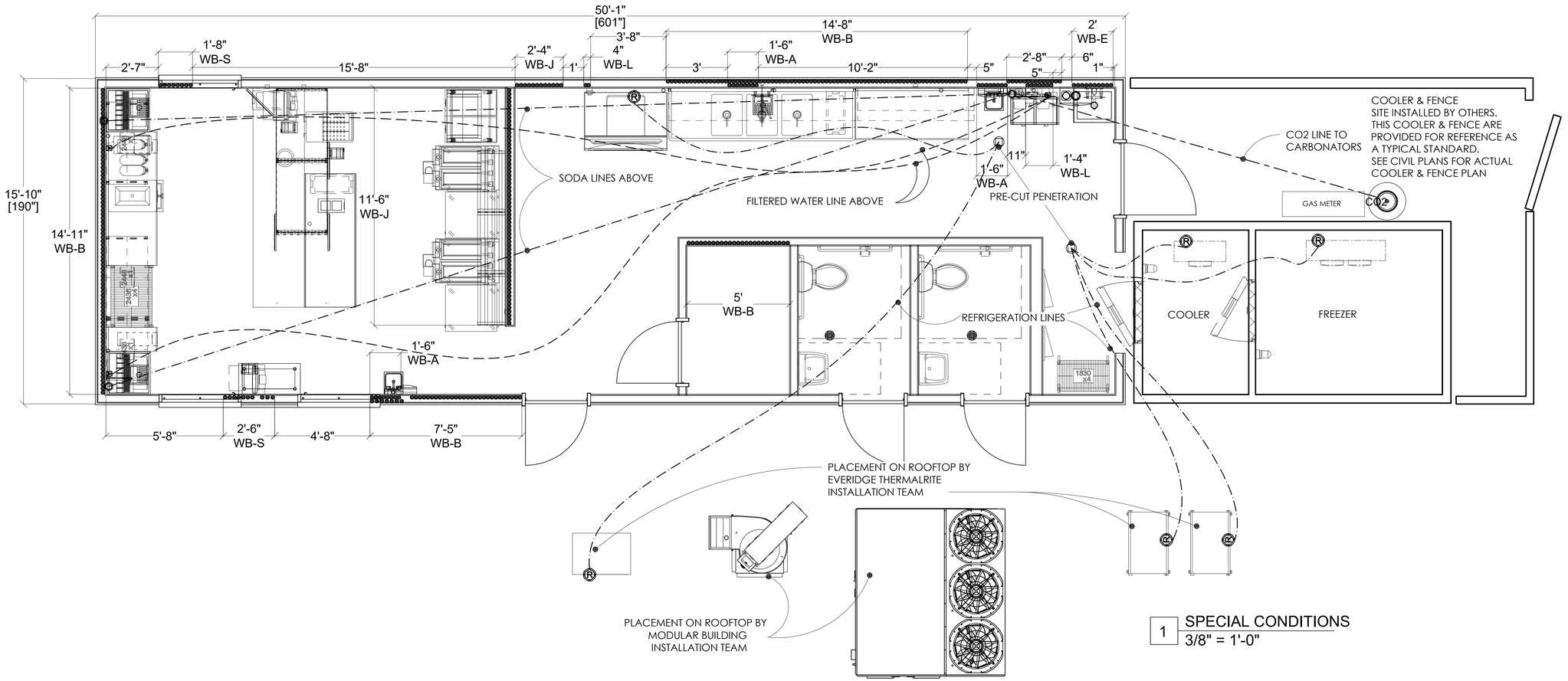
APPROVED
2-23-2024
HWC
WEIMER, CARTER & ASSOCIATES, INC.

SHEET NAME

PLUMBING SCHEDULE

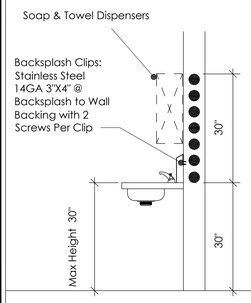
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P2.1

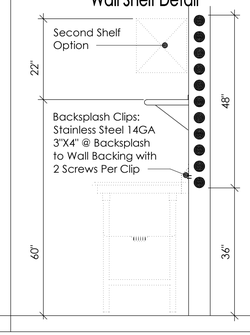


1 SPECIAL CONDITIONS
3/8" = 1'-0"

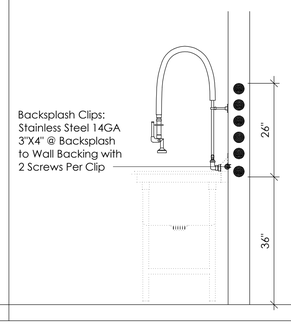
(WB-A)
Hand Sink Detail



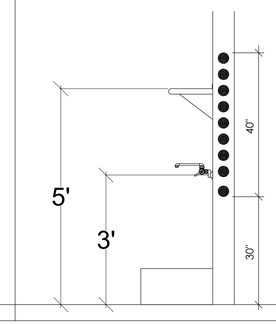
(WB-B)
Wall Shelf Detail



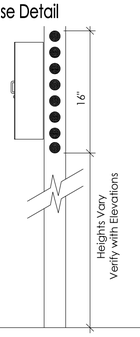
(WB-C)
Pre-Rinse Detail



(WB-E)
Utility Faucet Detail



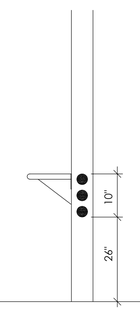
(WB-J)
Ansul Case Detail



(WB-L)
Water Filter Detail



(WB-S)
Walk-Up Shelf Detail



SPECIAL CONDITIONS LEGEND

Plan	Description
●●●●●●	Wall Backing Support
▬▬▬▬▬	Stainless Steel Wall Flashing
XXXXXXXXXX	Hood Hanger Support
▨	Floor Depression
- - - - -	Above Floor Lines
_ _ _ _ _	Below Floor Lines
▨	Hood Ducts

ALL DETAILS ARE TYPICAL AND SHOULD BE VERIFIED WITH ARCHITECTURAL DRAWINGS.

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/11/24	BATHROOM WIDTH GREW 2"
R2	1/11/24	EQUIPMENT UPDATED

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER
STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022071
PROFESSIONAL ENGINEER
VALID
02-23-2 024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
2-23-2024
HWC
HILDEBRAN WERNER CARTER & ASSOCIATES INC

SHEET NAME
SPECIAL CONDITIONS

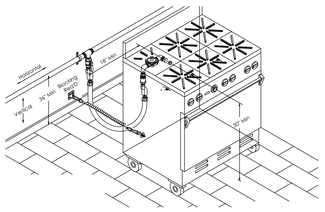
SHEET NUMBER
P2.1B

GAS CONNECTION DETAIL

THE INSTALLATION SHOWN ON THIS DRAWING IS FOR THE EZPRESS PURPOSE OF PROVIDING INSTALLATION GUIDLINES ONLY. THE FINAL INSTALLATION APPROVAL IS THE RESPONSIBILITY OF THE SYSTEM DESIGNER/INSTALLER

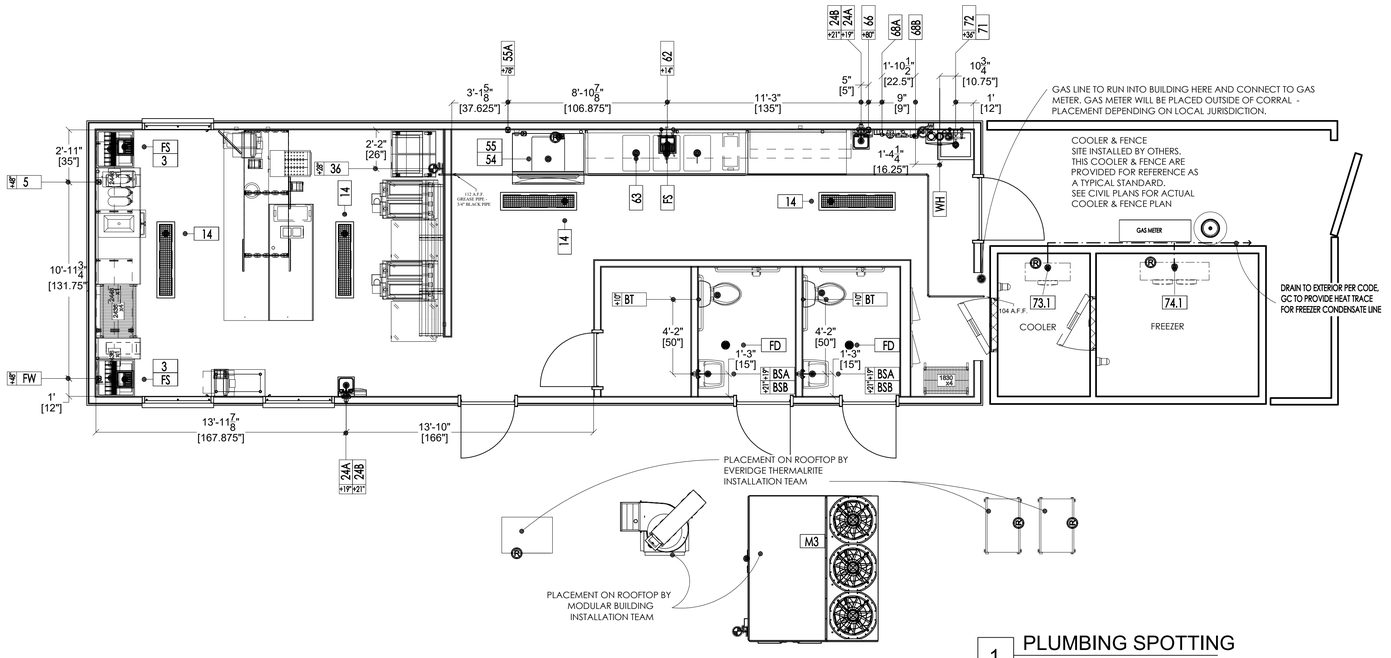
TYPICAL INSTALLATION FOR A CASTER MOUNTED RANGE (CAN BE USED TO SPECIFY CONNECTOR FOR A RANGE WITH ANY NUMBER OF BURNERS).

INSTALLER MUST VERIFY THE SIZE OF THE GAS CONNECTION TO MATCH EQUIPMENT SUPPLY INLET AND EQUIPMENT MANUFACTURER'S RECOMMENDED BTU'S FOR PEAK PERFORMANCE



PLUMBING LEGEND

Plan	Elevation	Description
		Hotwater Connection Point
		Coldwater Connection Point
		In Wall Direct Drain
		Hot&Cold Water w/Direct Drain
		Filtered Water Stub
W	W	Water Stub-Up
		Plumbing Connection Point
		Gas Supply Line
G	G	Gas Stub-Up
B	B	Beverage Stub-Up
		Fixture Drain
		Water Lines
		Gas Lines
		Waste Lines
		Floor Drain Round & Square
		Funnel Floor Drain
		Floor Sink: 1/2 Grate, 3/4 Grate, Open Grate & Round



1 PLUMBING SPOTTING
1/4" = 1'-0"

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

Plumbing Schedule

Item Number	Count	Equipment Description	Connection Description	Cold Water Size	Cold Water RI	Hot Water Size	Hot Water RI	Filtered Water Size	Indirect Waste Size	Direct Waste Size	Direct Waste RI	Gas Size	Gas Input Btu/h	Gas RI	Plumbing Remarks	Item Number
3	2	Soda Dispenser	Fixture Drain Indirect						3/4"						Verify Requirements w/ Owner, By Vendor, Air-Gap To FS	3
5	1	Tea Brewer	Filtered Water Stub					1/4"							Filtered Water From 68, By Vendor - Verify w/ Vendor	5
14	4	Floor Trough Drain	Penetration Drain							3"	0"				Verify w/ Fabricator	14
24A	2	Hand Sink	Hot & Cold 4"	1/2"	19"	1/2"	19"									24A
24B	2	Hand Sink	Direct Drain							1 1/2"	21"					24B
36	1	Fryers	Gas Supply									1"	140000	28"		36
54	1	Ice Bin	Fixture Drain Indirect						3/4"						Air-Gap to FS	54
55	1	Ice Cube Machine, Remote w/ 50' Line Set	Filtered Water					1/2"								55
55	1	Ice Cube Machine, Remote w/ 50' Line Set	Fixture Drain Indirect						3/4"							55
55A	1	Filter System, Ice Maker	Cold Water Stub	3/8"	78"			3/8"							Filtered water to 55	55A
62	1	Pre-Rinse Faucet Assembly, With Add-On Faucet	Hot & Cold 8"	1/2"	14"	1/2"	14"									62
63	1	Three (3) Compartment Sink	Fixture Drain Indirect						2"						Air-Gap To FS	63
66	1	Soda Carbonator	Filtered Water					1/4"							By Vendor - verify requirements	66
68A	1	Water Filtration System	Cold Water Stub	3/4"											Filtered Water To 5 and 66	68A
68B	1	Water Filtration System	Filtered Water					3/4"							Filtered Water To 5 and 66	68B
71	1	Mop Sink	Penetration Drain							2"	0"					71
72	1	Service Faucet	Hot & Cold 8"	1/2"	36"	1/2"	36"									72
73.1	1	Evaporator Coil (Refrigerator)	Fixture Drain Indirect						3/4"						Air-Gap To FS, See Shop Drawings	73.1
74.1	1	Evaporator Coil (Freezer)	Fixture Drain Indirect						3/4"						Air-Gap To FS, See Shop Drawings	74.1
BSA	2	Bathroom Sink	Hot & Cold 4"	1/2"	19"	1/2"	19"									BSA
BSB	2	Bathroom Sink	Direct Drain							1 1/2"	21"					BSB
BT	2	Bathroom Toilet	Cold Water Stub	1/2"	10"											BT
BT	2	Bathroom Toilet	Penetration Drain							2"	0"					BT
FD	2	Floor Drain	Penetration Drain							3"	0"				Verify w/ Fabricator	FD
FS	3	Floor Sink	Penetration Drain							3"	0"				Verify w/ Fabricator	FS
FW	1	Filtered Water Stub-Out	Filtered Water Stub					1/4"								FW
M3	1	Make Up Air Unit	Gas Connection Point									3/4"	150000		See Shop Drawings	M3
WH	1	Water Heater	Cold Water Stub	3/4"		3/4"						3/4"	200000		By Vendor-Verify w/ Vendor	WH

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/11/24	BATHROOM WIDTH GREW 2"
R2	1/11/24	FD ADDED OUTSIDE OFFICE

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP



Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151



SHEET NAME

PLUMBING SPOTTING

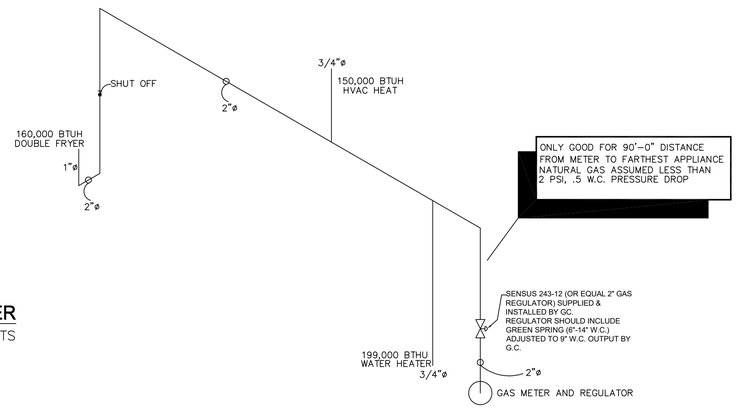
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P2.1C

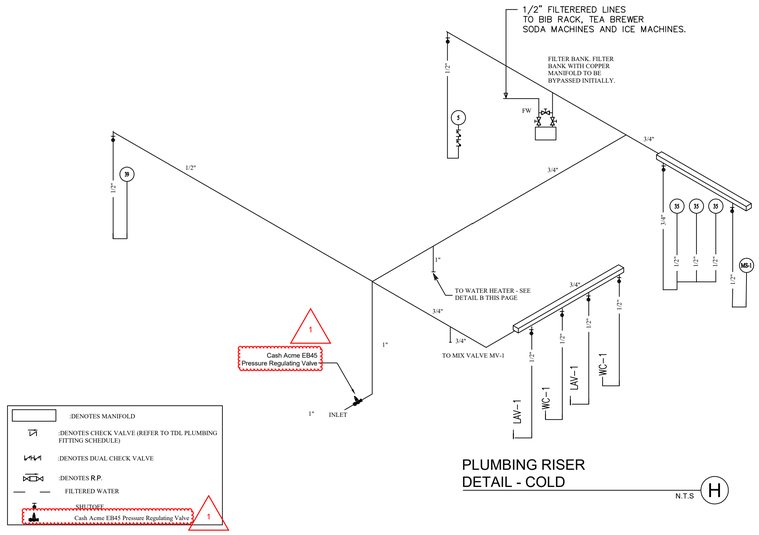
Equipment	Model # (or equal)	BTU/hr Input Rating	Natural Gas Pressure (W.C.)
Water Heater	CXP199IN	199000	5" - 10.5"
DOAS RTU Heater	AHRTU3-I.150-15-20T	150000	7" - 14"
Fryer (Bank 1)	2VHG50F	80000	7" - 10" (No more than 14" supply)
Fryer (Bank 2)	2VHG50F	80000	7" - 10" (No more than 14" supply)
Totals		509,000 BTU/hr	7" - 14"

GAS LOADS

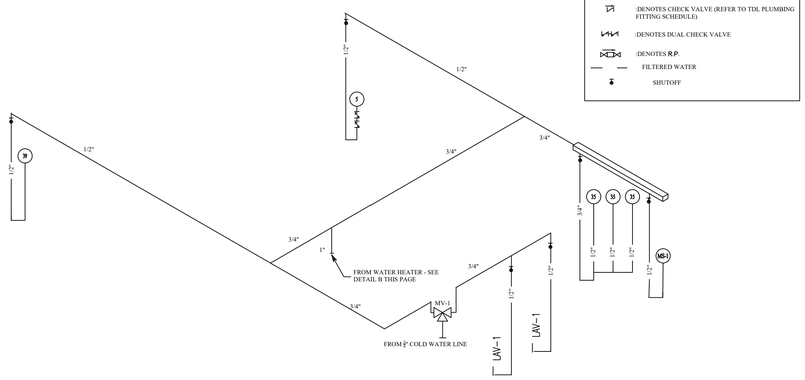
HVAC HTR.	150 MBH
WTR. HTR.	199 MBH
FRYERS	160 MBH
TOTAL	509 MBH



GAS RISER
NTS



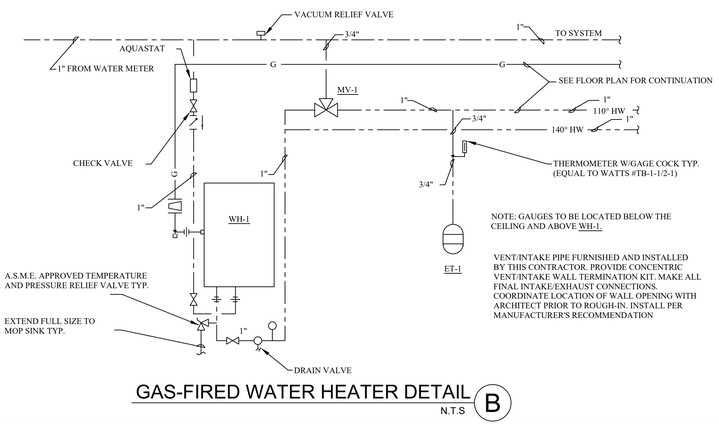
PLUMBING RISER
DETAIL - COLD
N.T.S H



PLUMBING RISER
DETAIL - HOT WATER
N.T.S B

NOTES:
ALL PEX PIPING SHOWN TO BE INSTALLED ABOVE CEILING AS A HOME RUN WITH INDIVIDUAL LINES RUN TO EACH PIECE OF EQUIPMENT UNLESS SHOWN OTHERWISE. EQUIPMENT ON SAME MANIFOLD MAY BE INSTALLED IN A "DAISY CHAIN" FASHION IF WATER PRESSURE FLOW AND COST ARE NOT AFFECTED.

WATER HEATER PACKAGE



NOTE: GAUGES TO BE LOCATED BELOW THE CEILING AND ABOVE WH-1.

VENT/INTAKE PIPE FURNISHED AND INSTALLED BY THIS CONTRACTOR. PROVIDE CONCENTRIC VENT/INTAKE WALL TERMINATION KIT. MAKE ALL FINAL INTAKE/EXHAUST CONNECTIONS. COORDINATE LOCATION OF WALL OPENING WITH ARCHITECT PRIOR TO ROUGH-IN. INSTALL PER MANUFACTURER'S RECOMMENDATION

GAS-FIRED WATER HEATER DETAIL
N.T.S B

DIRECT VENT INSTANTANEOUS WATER HEATER - COMBUSTION AIR TAKEN FROM OUTSIDE OF BUILDING. INSTALL LISTED VENTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. VENTS SHALL TERMINATE THROUGH WALL ADJACENT TO WATER HEATER. TERMINATION OF EXHAUST PIPE SHALL BE A MIN OF 12" ABOVE COMBUSTION AIR INLET.

PER FPC 403.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES FOR RESTAURANTS:
1 WATER CLOSET PER 75 MALES
1 WATER CLOSET PER 75 FEMALES
1 LAVATORY PER 200 MALES & FEMALES
1 SERVICE SINK

PER 410.4:
WHERE WATER IS SERVED IN RESTAURANTS DRINKING FOUNTAINS SHALL NOT BE REQUIRED

NOTES

1. SITE CONTRACTOR TO FURNISH AND INSTALL GAS METER AND REGULATOR PER LOCAL GAS COMPANY. COORDINATE WITH LOCAL GAS COMPANY FOR METER AND REGULATOR STANDARDS PRIOR TO ROUGH-IN.
2. BUILDING MANUFACTURER TO FURNISH AND INSTALL A SEDIMENT TRAP AND SHUT-OFF VALVE AT EACH APPLIANCE. DRIPS SHALL BE PROVIDED WHERE CONDENSATE COULD COLLECT.
3. NOT USED
4. NOT USED
5. SEE WATER HEATER DETAIL ON THIS SHEET FOR SIZES AND CONTINUATION OF WATER LINES.
6. PROVIDE CUT TO LENGTH PEX PIPING SIZED PER EQUIPMENT CONNECTION SCHEDULE. EXTEND FILTERED COLD WATER PEX FROM MANIFOLD SHUTOFF ABOVE CEILING TO EQUIPMENT'S CONNECTION. INSTALL CONNECTION ENDS ON PEX SIZE AND TYPE TO COORDINATE WITH EQUIPMENT CONNECTION. SEE PEX RISERS AND KITCHEN CONNECTION SCHEDULE FOR MORE INFORMATION FOR INSTALLATION DETAILS. COORDINATE WITH OWNERS REPRESENTATIVE & MILLWORK. CONTRACTOR TO INSTALL CODE APPROVED DOUBLE CHECK VALVE ON ICE MAKER SUPPLY LINE.
7. NOT USED
8. PROVIDE CUT TO LENGTH PEX PIPING INSIDE WALL SIZED PER EQUIPMENT CONNECTION SCHEDULE. EXTEND COLD AND 140° HOT WATER PEX FROM MANIFOLD SHUTOFF ABOVE 3 COMP SINK DOWN IN WALL TO EQUIPMENT'S CONNECTION. INSTALL CONNECTION ENDS ON PEX SIZE AND TYPE TO COORDINATE WITH EQUIPMENT CONNECTION. SEE PEX RISERS AND KITCHEN CONNECTION SCHEDULE FOR MORE INFORMATION AND INSTALLATION DETAILS. COORDINATE WITH OWNERS REPRESENTATIVE & EQUIPMENT SUPPLIER.
9. PROVIDE CUT TO LENGTH PEX PIPING SIZED PER EQUIPMENT CONNECTION SCHEDULE. EXTEND COLD AND HOT WATER PEX FROM MANIFOLD ABOVE CEILING AT 3 COMP SINK TO EQUIPMENT'S CONNECTION. INSTALL CONNECTION ENDS ON PEX SIZE AND TYPE TO COORDINATE WITH EQUIPMENT CONNECTION. SEE PEX RISERS AND KITCHEN CONNECTION SCHEDULE FOR MORE INFORMATION AND INSTALLATION DETAILS. COORDINATE WITH OWNERS REPRESENTATIVE & EQUIPMENT SUPPLIER.
10. SITE CONTRACTOR TO FURNISH AND INSTALL WATER METER.
11. EXTEND 1/2" COLD WATER CUT TO LENGTH PEX LINE ABOVE CEILING FROM PEX MANIFOLD IN THE UTILITY ROOM DOWN TO APPROXIMATELY 30"+/- AFF FOR THE WATER CLOSET TANK CONNECTION. SEE RISER DIAGRAMS FOR DETAILS AND ARCHITECTURAL SHEETS FOR MORE INFORMATION. COORDINATE EXACT LOCATION WITH THE MANUFACTURER'S EQUIPMENT PRIOR TO ROUGH-IN.
12. EXTEND 3/4" COLD CPVC WATER LINE TO WATER FILTRATION SYSTEM ABOVE SINK. FURNISH AND INSTALL SHUT-OFF VALVES. INSTALL, HOOK UP AND COMMISSION WATER FILTRATION SYSTEM ITEM PER MANUFACTURER'S RECOMMENDATIONS.
13. DROP 3/4" HOT AND COLD LINES TO WATER HEATER.
14. FURNISH AND INSTALL CHECK VALVES IN THE COLD WATER SUPPLY TO PLUMBING FIXTURE/KITCHEN EQUIPMENT INDICATED. VALVES ARE TO BE LOCATED IN AN ACCESSIBLE LOCATION. GENERAL CONTRACTOR TO INSTALL VACUUM BREAKER AT CHEMICAL DISPENSING UNIT WHERE REQUIRED BY CODE.
15. EXTEND 1/2" HOT AND COLD WATER LINES DOWN TO 30" AFF FOR THE MOP SINK/FAUCET. MAKE ALL FINAL CONNECTIONS. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
16. 2" GAS LINE TO RISE UP IN WALL TO ABOVE CEILING.
17. DROP 2" GAS LINE DOWN TO WATER HEATER.
18. NOT USED
19. NOT USED
20. GAS SUPPLY EMERGENCY SHUTOFF VALVE BY GENERAL CONTRACTOR. VALVE TO BE INSTALLED PER LOCAL CODE REQUIREMENTS.

GENERAL NOTES

1. **PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO EXECUTE THE PLUMBING WORK INDICATED ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES AND ORDINANCES.**
2. **PAY ALL FEES AND ARRANGE FOR EXECUTION OF ALL TAPS, METERS WITH REQUIRED ENCLOSURES (IF ANY), ETC. INHERENT TO THE INSTALLATION OF NEW PLUMBING SERVICE.**
3. **PLUMBING WORK FOR THIS CONTRACT SHALL INCLUDE ALL PIPING FOR DOMESTIC HOT AND COLD WATER LINES, VENT AND SANITARY LINES, HOOK-UP OF ALL FIXTURES SCHEDULED ON THE DRAWINGS, AND INSULATION OF DESIGNATED PIPING RUNS. WORK SHALL ALSO INCLUDE ALL GAS PIPING AND EQUIPMENT CONNECTIONS WHERE REQUIRED.**
4. **ALL ITEMS SUCH AS FITTINGS, ETC. NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED.**
5. **SOIL, WASTE, AND VENT PIPING TO BE OF MATERIAL APPROVED BY LOCAL CODES. PVC, DWV PIPING AND FITTINGS TO BE SCHEDULE 40 AS A MINIMUM.**
6. **PROVIDE CLEANOUTS FOR SOIL AND WASTE LINES AS SHOWN ON DRAWINGS, AND OF TYPE APPROVED BY LOCAL CODES.**
7. **W**ALL WATER SUPPLY PIPING BELOW GROUND SHALL BE PEX PIPING UNLESS PROHIBITED BY LOCAL CODES IN WHICH CASE COPPER TUBING SHALL BE USED. (AVOID FITTINGS BELOW SLAB WHENEVER POSSIBLE). ALL WATER SUPPLY PIPING ABOVE GROUND SHALL BE CPVC TUBING U.N.O. PEX PIPING PASSING THROUGH CONCRETE SLABS SHALL BE SLEEVED WITH PVC BEND SUPPORT BY MANUFACTURER. PROVIDE UPONOR/WIRSBO SERIES: A5500500 FOR 1/2", PEX A5500750 FOR 3/4" PEX, A5501000 FOR 1" PEX. PROVIDE CORRUGATED PVC TUBING (1) PIPE DIAMETER LARGER THAN THE PEX TUBING FOR SIZES LARGER THAN 1" PEX.
8. **PROVIDE FOR DRAINING WATER SYSTEM, AND CAP ALL STUBS UNTIL FINISH WORK IS INSTALLED. INSTALL DRAIN VALVE AT WATER METER WITH 3/4" HOSE THREAD AND VACUUM BREAKER.**
9. **PROVIDE STOPS ON WATER SUPPLIES TO EACH FIXTURE & EQUIPMENT.**
10. **GAS PIPING FOR HEATING SYSTEMS WITH GAS-FIRED EQUIPMENT SHALL BE INCLUDED IN THIS CONTRACT. GAS PIPING SHALL BE STANDARD WEIGHT, BLACK STEEL PIPE, SCHEDULE 40. PIPING EXPOSED TO ATMOSPHERE OR RUN BELOW GRADE SHALL HAVE POLYETHYLENE PLASTIC COATING. ALL GAS PIPING, FITTINGS AND INSTALLATION SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF UTILITY COMPANY AND ALL GOVERNING BODIES.**
11. **INSULATE ALL COLD AND HOT WATER PIPING WITH ARMSTRONG COMPANY ARMAFLEX "11" PIPE INSULATION. SEAL JOINTS WITH ARMSTRONG 520 ADHESIVE. IMPORTANT - HOLD ALL COLD AND HOT WATER PIPING TO WARM SIDE OF INSULATION TO PREVENT FREEZING. INSULATION SHALL MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS REQUIRED BY LOCAL CODES.**
12. **PLUMBING FIXTURES SHALL BE FURNISHED AND INSTALLED WHERE SHOWN ON THE DRAWINGS. ALL FIXTURE FITTINGS AND EXPOSED FIXTURE PIPING SHALL BE BRASS CHROMIUM PLATED. ALL TRAPS SHALL BE CAST BRASS. ALL FIXTURES SHALL BE EQUAL IN ALL RESPECTS TO FIXTURES SPECIFIED.**
13. **WATER METER TYPE IS TO BE PROVIDED AS REQUIRED BY LOCAL UTILITY COMPANY.**
14. **ROUGH-IN AND FINAL CONNECTIONS OF REQUIRED WASTE, VENT, AND WATER SUPPLY PIPING BY THIS CONTRACTOR. ALL SUPPLY PIPING SHALL BE VALVED.**
15. **HOSE BIBBS SHALL BE FREEZELESS AUTOMATIC DRAINING TYPE AS MANUFACTURED BY WOODFORD.**
16. **COORDINATE ALL WORK WITH OTHER CONTRACTORS.**
17. **THE BUILDING MANUFACTURER SHALL GUARANTEE ALL WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, (USUAL WEAR IS EXPECTED), AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE BUILDING BY THE OWNER, THIS CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND ALL DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE OWNER.**
18. **BACKFLOW PREVENTER TO BE INSTALLED WHEN REQUIRED BY LOCAL CODE.**
19. **SEE PLUMBING SHEETS FOR KITCHEN EQUIPMENT SCHEDULE, FIXTURE SCHEDULE, DETAILS AND SANITARY ISOMETRIC.**
20. **THE DIRECTION OF THE SANITARY MAIN AND THE LOCATION OF THE GREASE INTERCEPTOR SHALL BE COORDINATED WITH CIVIL DWGS PRIOR TO ROUGH-IN.**
21. **PROVIDE A TRAP PRIMER ON ALL FLOOR DRAINS. LAYOUT TRAP PRIMER DISTRIBUTION TO CONNECT MULTIPLE FLOOR DRAINS TO ONE TRAP PRIMER.**
22. **ALL COLD, HOT, AND FILTERED WATER LINES SHALL BE INSTALLED UNDER SLAB UNLESS NOTED OTHERWISE. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN OF PIPING TO PREVENT CONFLICT.**
23. **COORDINATE LOCATION AND ROUGH-IN HEIGHT OF KITCHEN EQUIPMENT WITH OWNER AND MILLWORK PRIOR TO ROUGH-IN.**
24. **MAKE ALL CONNECTIONS TO KITCHEN AND MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED. USE MILL HARDWOOD 30B35 BRAIDED FLEXIBLE HOSES FOR ALL COUNTERTOP EQUIPMENT.**
25. **NOT USED**
26. **ALL PIPING (GAS AND WATER) TO BE CONCEALED IN WALL SPACE WHEN POSSIBLE.**
27. **ALL SHUT-OFF VALVES TO BE 1/4 TURN SHUT-OFF VALVES.**
28. **THIS BUILDING MANUFACTURER TO INSTALL PEX MANIFOLDS UNDER COUNTER SPACE AND SHALL BE MOUNTED AT 12" A.F.F. UNLESS NOTED OTHERWISE. COORDINATE LOCATION WITH OWNER.**
29. **ANY DAMAGES TO ANY EXISTING WALLS, FLOORS, FINISHES ETC. BY THIS CONTRACTOR ARE TO BE REPAIRED AT THIS CONTRACTOR'S EXPENSE.**

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
1	12.2.25	Added PRV

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022074
PROFESSIONAL ENGINEER
CE-23-2 O24

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

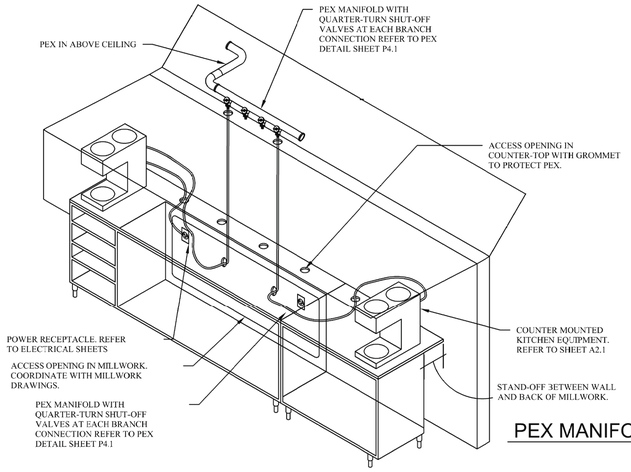
APPROVED 12-23-2024 HWC WILLIAM CARTER & ASSOCIATES INC

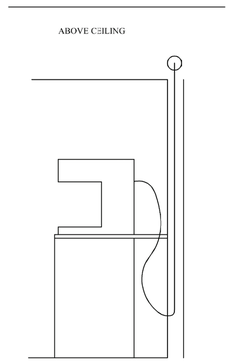
SHEET NAME

PLUMBING WATER & GAS

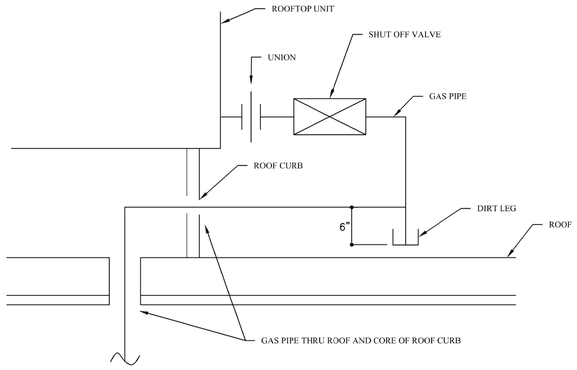
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P3.1

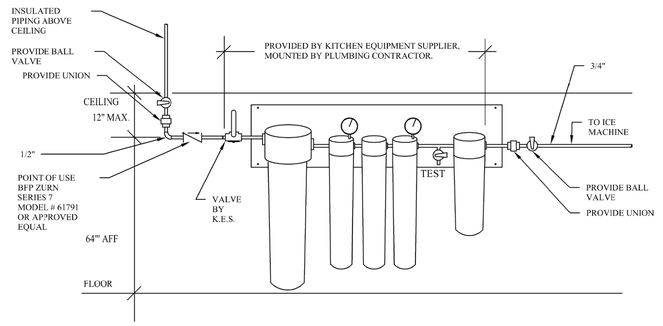




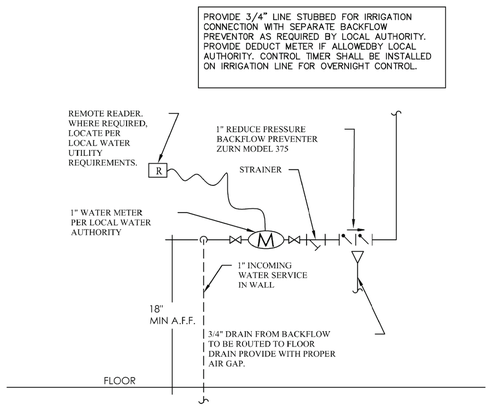
PEX MANIFOLD INSTALLATION DETAIL I
NTS



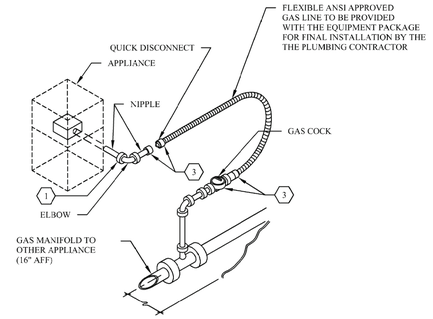
GAS PIPE THRU CURB DETAIL F
N.T.S



CENTRAL WATER FILTER SYSTEM C
N.T.S



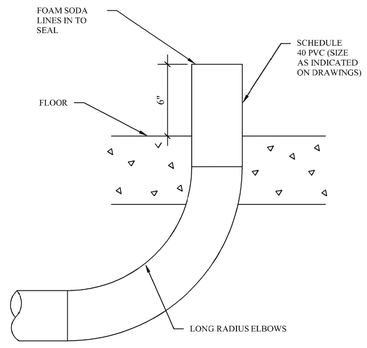
WATER SERVICE ENTRY DETAIL G
N.T.S



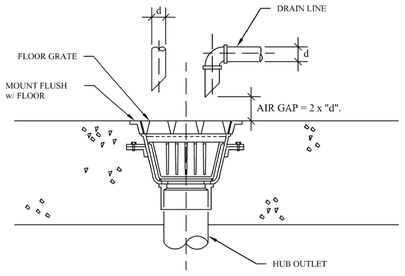
NOTE: MAXIMUM PROJ. FROM WALL = 3"

1. P.C. TO INSTALL A NIPPLE ON APPLIANCE LONG ENOUGH TO CLEAR BACK OF APPLIANCE
2. INSTALL ELBOW ON THE END FACING IN THE DIRECTION OF STUB OUT & SECOND NIPPLE WITH QUICK DISCONNECT
3. CONNECT FLEXIBLE GAS LINE & QUICK DISCONNECT TO GAS COCK OUTSIDE WALL (EACH APPLIANCE TO HAVE SEPARATE GAS COCK)

GAS/ QUICK DISCONNECT E
N.T.S



SODA CHASE DETAIL D
N.T.S



FLOOR SINK DETAIL A
N.T.S

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI · PROFESSIONAL ENGINEER · WALTER E. WOOD NUMBER PE-2010022071

VALID

02-23-2024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

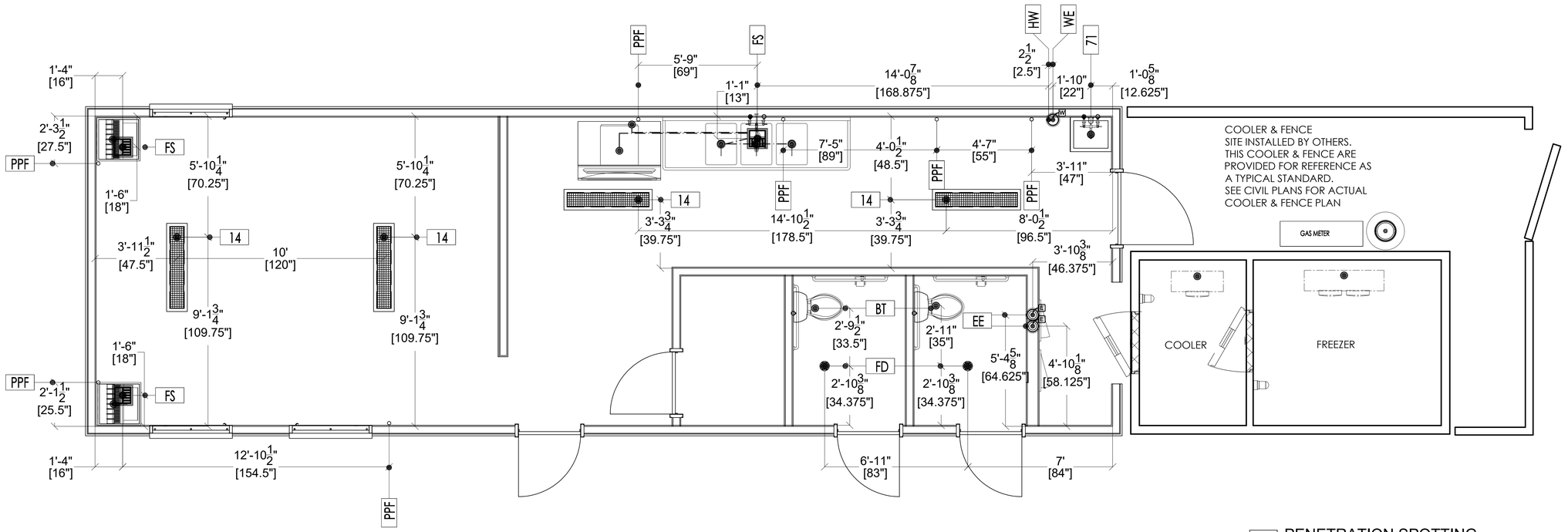
APPROVED · 2-23-2024 · HWC · HOUSING WERNER CARTER & ASSOCIATES

SHEET NAME

PLUMBING DETAILS

SHEET NUMBER

P4.1



1 PENETRATION SPOTTING
3/8" = 1'-0"

Penetration Schedule					
Item Number	Count	Equipment Description	Description	Penetration Size	Penetration RI
14	4	Floor Trough Drain	47" x 8" Floor Trough	47.5" x 8.5"	-6"
71	1	Mop Sink	Penetration Drain	2"	0"
BT	2	Bathroom Toilet	Penetration Drain	2"	0"
EE	2	Electric Entrance	Penetration Entrance	4"	10"
FD	2	Floor Drain	Floor Drain	3"	-5"
FS	3	Floor Sink Half Grate	Floor Sink	3"	-8"
PPF	7	Pipe Penetration through Floor	Direct Drain	3"	6"
WE	1	Water Entrance	Penetration Entrance	1"	0"
HW	1	Hot Water Exit	Hot Water Penetration	.5"	0"

PENETRATION LEGEND

Plan	Elevation	Description
E	E	Electrical Stub-Up
G	G	Gas Line Stub-Up
W	W	Water Stub-Up
B	B	Beverage Stub-Up
		In Wall Direct Drain
		Fixture Drain
		Floor Drain Round & Square
		Funnel Floor Drain
		Floor Sink; 1/2 Grate, 3/4 Grate, Open Grate & Round

MISSOURI
PUBLIC SERVICE
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APPROVED
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HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION
R2	1/11/24	BATHROOM WIDTH GREW 2"
R2	1/11/24	FD ADDED OUTSIDE OFFICE

LAST DESIGN BULLETIN

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ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

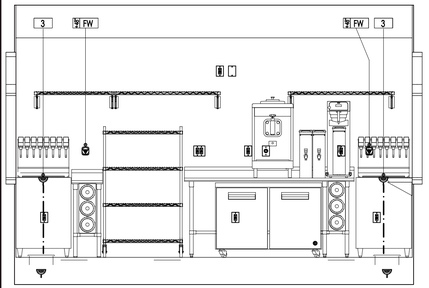
STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
02-23-2 024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

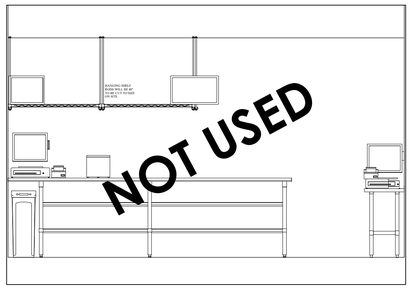
APPROVED
2-23-2024
HWC
HOUSING WEMBER CARTER & ASSOCIATES

SHEET NAME
FLOOR PENETRATION

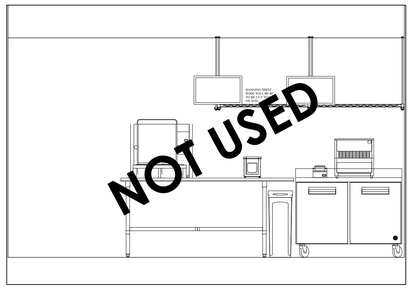
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P5.1



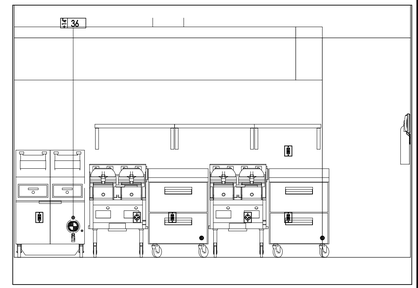
1 ELEVATION 1
3/8" = 1'-0"



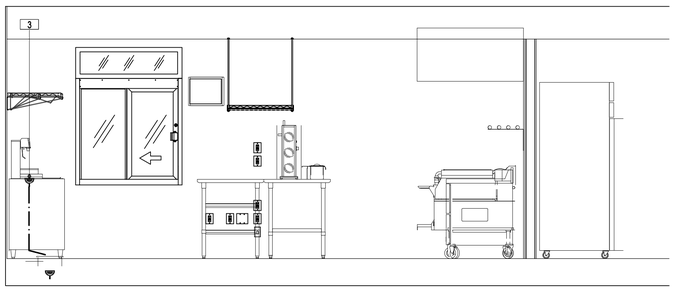
2 ELEVATION 2
3/8" = 1'-0"



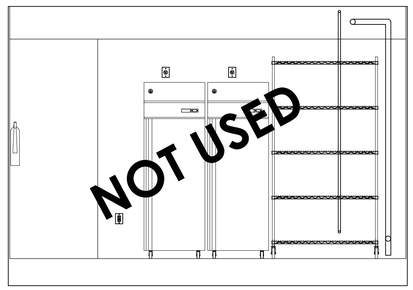
3 ELEVATION 3
3/8" = 1'-0"



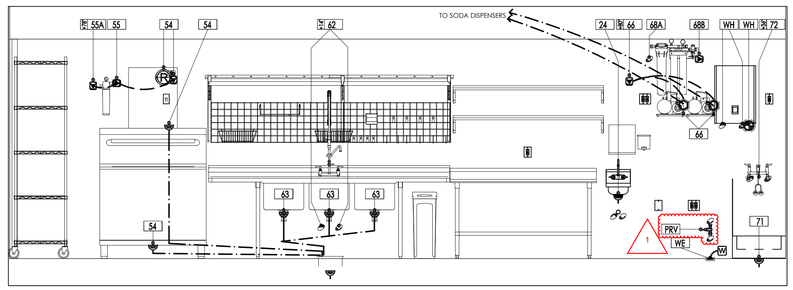
4 ELEVATION 4
3/8" = 1'-0"



5 ELEVATION 5
3/8" = 1'-0"



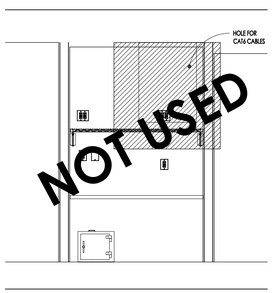
6 ELEVATION 6
3/8" = 1'-0"



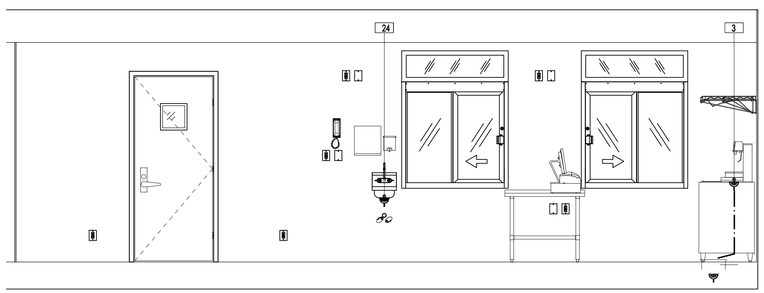
7 ELEVATION 7
3/8" = 1'-0"

PLUMBING LEGEND

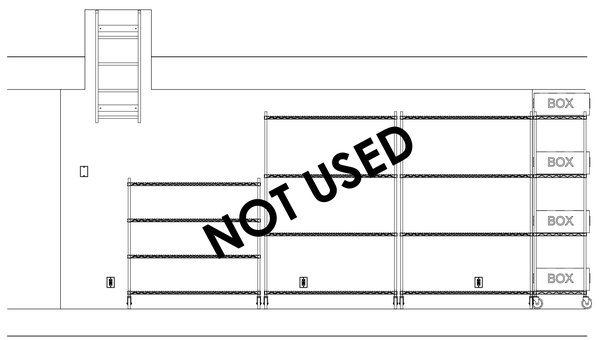
Plan	Elevation	Description
		Hotwater Connection Point
		Coldwater Connection Point
		In Wall Direct Drain
		Hot&Cold Water w/Direct Drain
		Filtered Water Stub
W	W	Water Stub-Up
		Plumbing Connection Point
		Gas Supply Line
G	G	Gas Stub-Up
B	B	Beverage Stub-Up
		Fixture Drain
		Water Lines
		Gas Lines
		Waste Lines
		Floor Drain Round & Square
		Funnel Floor Drain
		Floor Sink: 1/2 Grate, 3/4 Grate, Open Grate & Round



8 ELEVATION 8
3/8" = 1'-0"



9 ELEVATION 9
3/8" = 1'-0"



10 ELEVATION 10
3/8" = 1'-0"

MISSOURI
PUBLIC SERVICE
COMMISSION
APPROVED
02/10/2026
MANUFACTURED
HOUSING

REVISION/ UPLOAD DATE

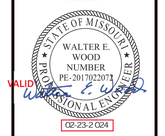
REV.	DATE	DESCRIPTION
1	12.2.25	Added PRV

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NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP



Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

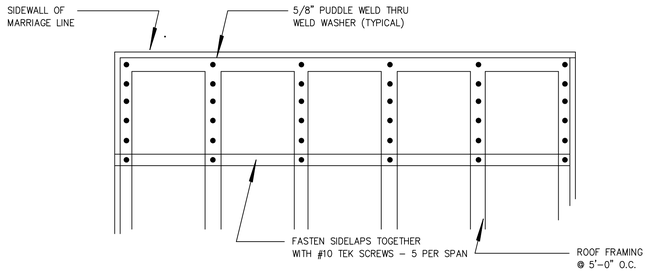


SHEET NAME

PLUMBING ELEVATIONS

SHEET NUMBER

P6.1



NOTE:

Roof Deck Fasting At All Panels

NTS

STRUCTURAL NOTES:

1. ALL LIGHT GAGE STUDS, JOISTS, AND ACCESSORIES SHALL BE FORMED FROM ZINC COATED CORROSION RESISTANT STEEL IN ACCORDANCE WITH ASTM A1003-00 AND THE MANUFACTURER'S SPECIFICATIONS, ALL COLD FORMED MEMBERS SHALL BE BY UNIMAST, INC. OR EQUAL. 12, 14, AND 16 GAGE MINIMUM YIELD STRENGTH SHALL BE 50 KSI. 18 AND 20 GAGE MINIMUM YIELD STRENGTH SHALL BE 33 KSI.

2. WALL STUDS SHALL BE LATERALLY BRACED BY ATTACHMENT OF GYPSUM WALL BOARD ON INTERIOR SURFACES AND STRUCTURAL SHEATHING OR EXTERIOR FINISH MATERIAL ON EXTERIOR SURFACES.

3. STEEL TUBES SHALL HAVE A MINIMUM YIELD STRENGTH OF 46 KSI IN ACCORDANCE WITH ASTM A500 GRADE B.

4. HOT ROLLED STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI IN ACCORDANCE WITH ASTM A36.

5. WELDS ON BASE METALS LESS THAN 1/8 INCH THICK SHALL BE IN ACCORDANCE WITH ANSI/AWS D1.3 ALL OTHER WELDS SHALL BE IN ACCORDANCE WITH ANSI/AWS D1.1.

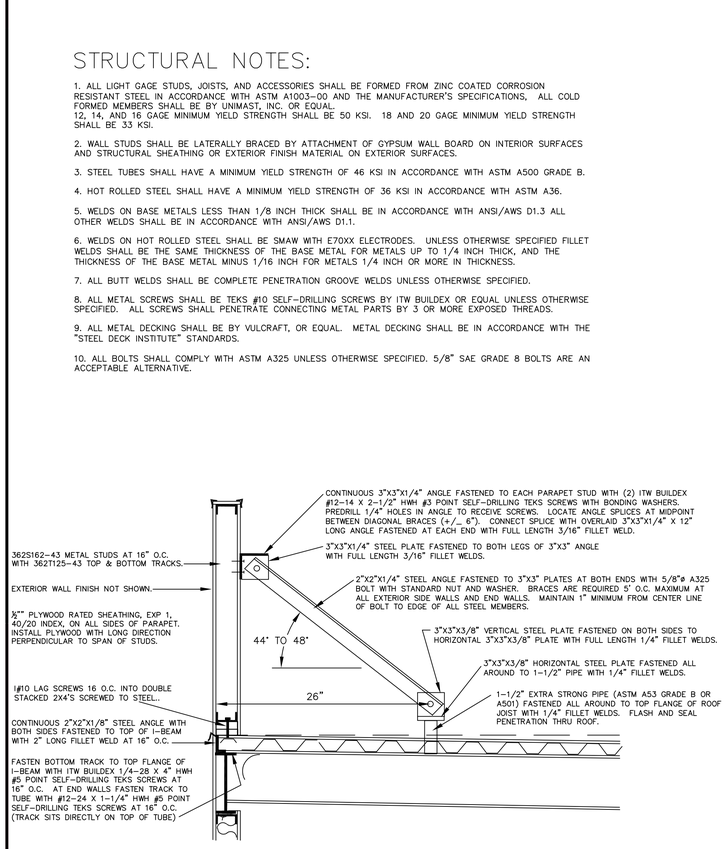
6. WELDS ON HOT ROLLED STEEL SHALL BE SMAW WITH E70XX ELECTRODES. UNLESS OTHERWISE SPECIFIED FILLET WELDS SHALL BE THE SAME THICKNESS OF THE BASE METAL FOR METALS UP TO 1/4 INCH THICK, AND THE THICKNESS OF THE BASE METAL MINUS 1/16 INCH FOR METALS 1/4 INCH OR MORE IN THICKNESS.

7. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION GROOVE WELDS UNLESS OTHERWISE SPECIFIED.

8. ALL METAL SCREWS SHALL BE TEKS #10 SELF-DRILLING SCREWS BY ITW BUILDEX OR EQUAL UNLESS OTHERWISE SPECIFIED. ALL SCREWS SHALL PENETRATE CONNECTING METAL PARTS BY 3 OR MORE EXPOSED THREADS.

9. ALL METAL DECKING SHALL BE BY VULCRAFT, OR EQUAL. METAL DECKING SHALL BE IN ACCORDANCE WITH THE "STEEL DECK INSTITUTE" STANDARDS.

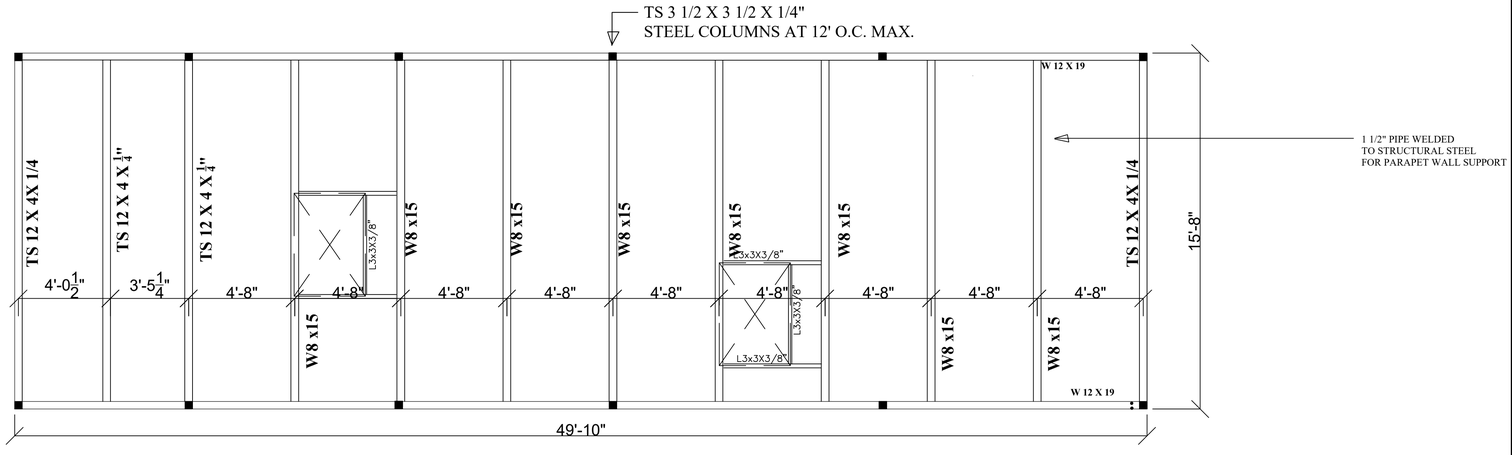
10. ALL BOLTS SHALL COMPLY WITH ASTM A325 UNLESS OTHERWISE SPECIFIED. 5/8" SAE GRADE 8 BOLTS ARE AN ACCEPTABLE ALTERNATIVE.



ROOF PARAPET DETAIL

NTS

Dead load of container above = 28.1 psf (9 kip)



ROOF FRAMING

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

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ENGINEER STAMP



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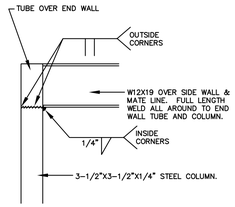


SHEET NAME

ROOF PLAN STEEL

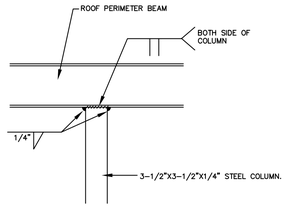
SHEET NUMBER

S2.1



ELEVATION VIEW FROM SIDE WALL OF END WALL CORNER & MATE LINE BEAM TO COLUMN CONNECTION

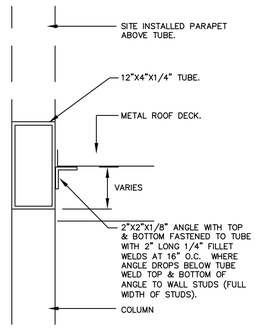
TYPICAL AT ALL END WALL COLUMNS. NTS



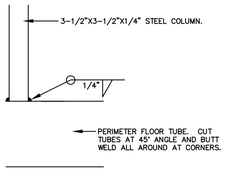
ELEVATION VIEW OF SIDE WALLS AND MATE LINE BEAM TO COLUMN CONNECTION

TYPICAL AT ALL EXTERIOR SIDE WALL AND MATE WALL COLUMNS NOT LOCATED AT END WALLS.

NTS



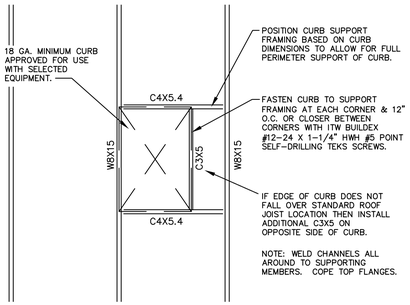
NTS



ELEVATION VIEW OF COLUMN TO FLOOR CONNECTION

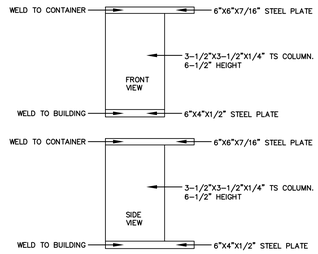
TYPICAL AT ALL COLUMNS.

NTS



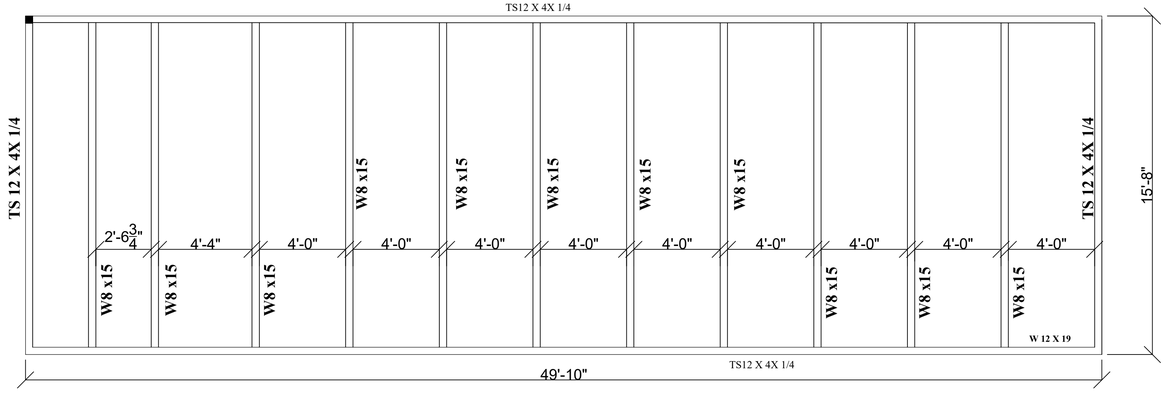
ROOF FRAMING AT HVAC & MUA CURBS

NTS



BUILDING & CONTAINER ATTACHMENT DETAIL

NTS



Floor FRAMING

STRUCTURAL NOTES:

1. ALL LIGHT GAGE STUDS, JOISTS, AND ACCESSORIES SHALL BE FORMED FROM ZINC COATED CORROSION RESISTANT STEEL IN ACCORDANCE WITH ASTM A1003-00 AND THE MANUFACTURER'S SPECIFICATIONS, ALL COLD FORMED MEMBERS SHALL BE BY UNIMAST, INC. OR EQUAL.
12, 14, AND 16 GAGE MINIMUM YIELD STRENGTH SHALL BE 50 KSI. 18 AND 20 GAGE MINIMUM YIELD STRENGTH SHALL BE 33 KSI.

2. WALL STUDS SHALL BE LATERALLY BRACED BY ATTACHMENT OF GYPSUM WALL BOARD ON INTERIOR SURFACES AND STRUCTURAL SHEATHING OR EXTERIOR FINISH MATERIAL ON EXTERIOR SURFACES.

3. STEEL TUBES SHALL HAVE A MINIMUM YIELD STRENGTH OF 46 KSI IN ACCORDANCE WITH ASTM A500 GRADE B.

4. HOT ROLLED STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI IN ACCORDANCE WITH ASTM A36.

5. WELDS ON BASE METALS LESS THAN 1/8 INCH THICK SHALL BE IN ACCORDANCE WITH ANSI/AWS D1.3 ALL OTHER WELDS SHALL BE IN ACCORDANCE WITH ANSI/AWS D1.1.

6. WELDS ON HOT ROLLED STEEL SHALL BE SMAW WITH E70XX ELECTRODES. UNLESS OTHERWISE SPECIFIED FILLET WELDS SHALL BE THE SAME THICKNESS OF THE BASE METAL FOR METALS UP TO 1/4 INCH THICK, AND THE THICKNESS OF THE BASE METAL MINUS 1/16 INCH FOR METALS 1/4 INCH OR MORE IN THICKNESS.

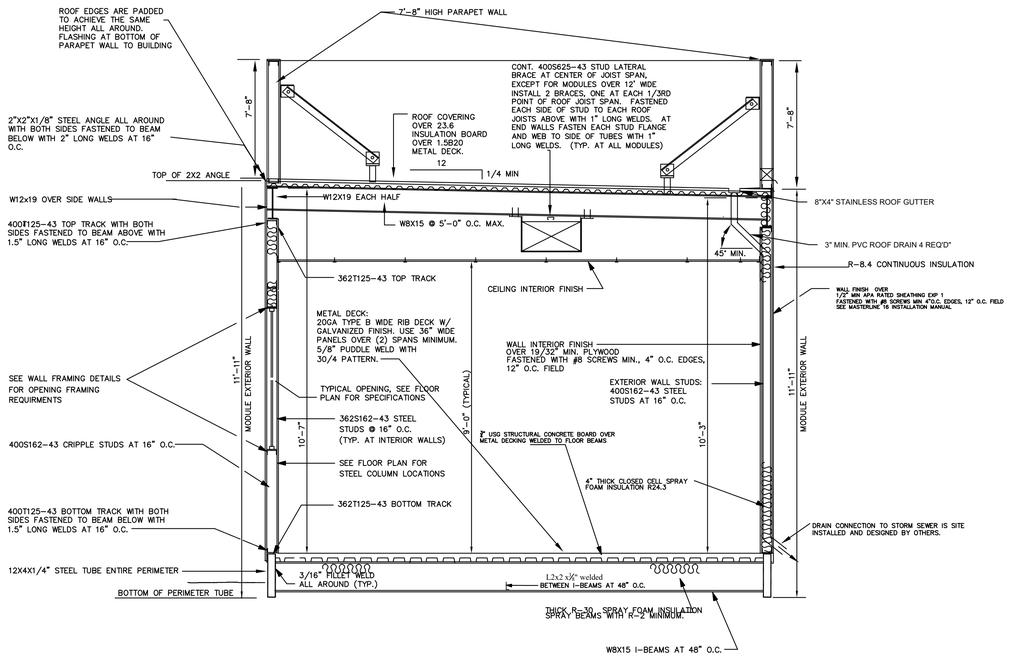
7. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION GROOVE WELDS UNLESS OTHERWISE SPECIFIED.

8. ALL METAL SCREWS SHALL BE TEKS #10 SELF-DRILLING SCREWS BY ITW BUILDEX OR EQUAL UNLESS OTHERWISE SPECIFIED. ALL SCREWS SHALL PENETRATE CONNECTING METAL PARTS BY 3 OR MORE EXPOSED THREADS.

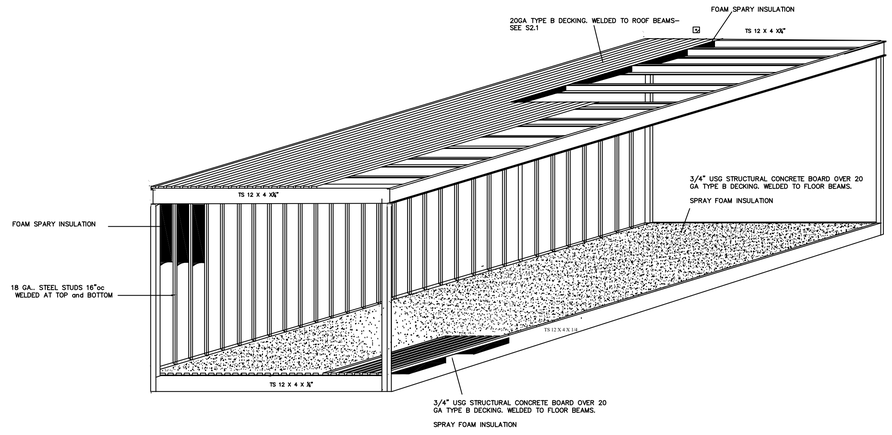
9. ALL METAL DECKING SHALL BE BY VULCRAFT, OR EQUAL. METAL DECKING SHALL BE IN ACCORDANCE WITH THE "STEEL DECK INSTITUTE" STANDARDS.

10. ALL BOLTS SHALL COMPLY WITH ASTM A325 UNLESS OTHERWISE SPECIFIED. 5/8" SAE GRADE 8 BOLTS ARE AN ACCEPTABLE ALTERNATIVE.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING



CROSS SECTION - MODULE A
SCALE: 3/8" ≈ 1'-0"



WALL AIR BARRIERS – EXTERIOR AND INTERIOR PLYWOOD, CEMENT BOARD AND CLOSED CELL FOAM SPRAY

ROOF AIR BARRIER – STEEL DECK AND MEMBRANE ROOF SEALED

FLOOR AIR BARRIER – STEEL DECK AND CLOSED CELL SPRAY FOAM

CONTINUOUS AIR BARRIER IN THERMAL ENVELOPE SHALL BE WRAPPED, SEALED WITH FOAM, CAULKED, GASKETED, AND /OR TAPED INCLUDING DOORS WINDOWS.

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
02-23-2 024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

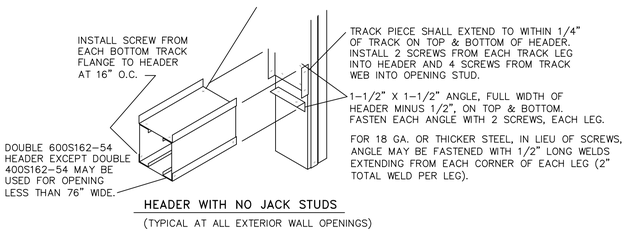
APPROVED
2-23-2024
HWC
WERNER CARTER & ASSOCIATES

SHEET NAME

FLOOR FRAMING PLAN

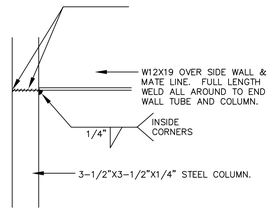
SHEET NUMBER

S2.2



HEADER WITH NO JACK STUDS

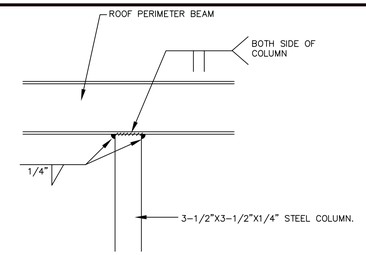
(TYPICAL AT ALL EXTERIOR WALL OPENINGS)



ELEVATION VIEW FROM SIDE WALL OF END WALL CORNER & MATE LINE BEAM TO COLUMN CONNECTION

TYPICAL AT ALL END WALL COLUMNS.

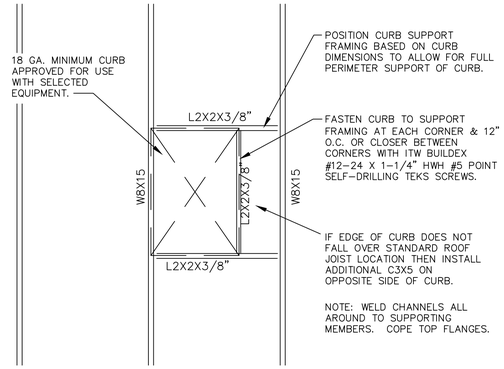
-NTS.-



ELEVATION VIEW OF SIDE WALLS AND MATE LINE BEAM TO COLUMN CONNECTION

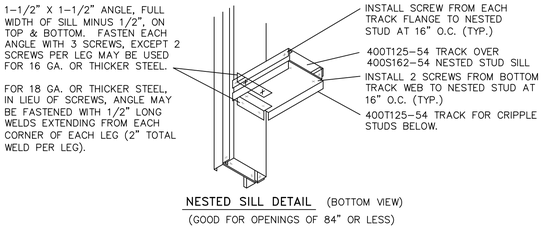
TYPICAL AT ALL EXTERIOR SIDE WALL AND MATE WALL COLUMNS NOT LOCATED AT END WALLS.

-NTS.-



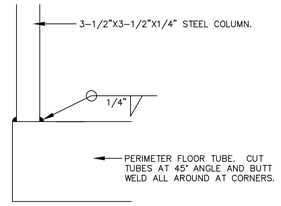
ROOF FRAMING AT HVAC & MUA CURBS

-NTS.-



NESTED SILL DETAIL (BOTTOM VIEW)

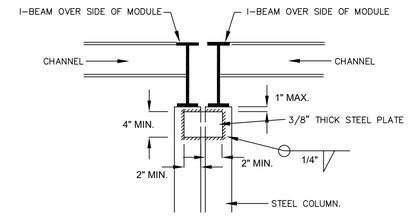
(GOOD FOR OPENINGS OF 84" OR LESS)



ELEVATION VIEW OF COLUMN TO FLOOR CONNECTION

TYPICAL AT ALL COLUMNS.

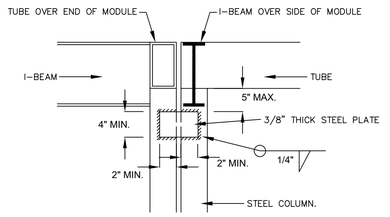
-NTS.-



MATE LINE BEAM TO BEAM CONNECTIONS

SITE CONNECTION AT COLUMNS

-NTS.-



MATELINE TUBE TO BEAM CONNECTIONS

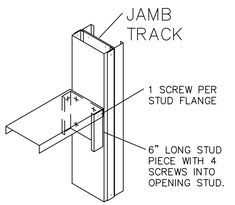
SITE CONNECTION AT COLUMNS

-NTS.-

SITE CONNECTION NOTES:

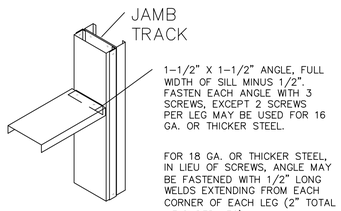
1. SITE INSTALL A STEEL PLATE ACROSS MATE LINE AS SHOWN ABOVE AT ALL MATE LINE COLUMNS.

2. IN LIEU OF DIRECT COLUMN TO COLUMN SITE CONNECTIONS, STEEL PLATES MAY BE WELDED TO BOTTOM SIDE OF MATE LINE OR END WALL ROOF BEAMS WHERE BOTTOM OF ADJACENT BEAMS ARE FLUSH. INSTALL PLATES WITHIN 12 INCHES OF COLUMNS.



SINGLE TRACK SILL DETAIL

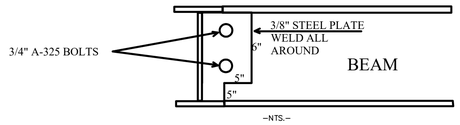
(GOOD FOR OPENINGS OF 50" OR LESS)



ALTERNATE SINGLE TRACK SILL DETAIL

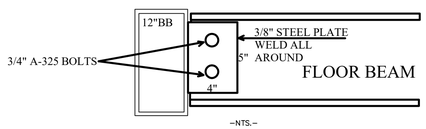
(GOOD FOR OPENINGS OF 50" OR LESS)

ROOF BEAM CONNECTIONS TO SIDE WALL BEAM

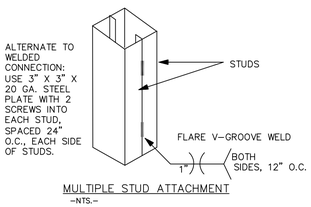


-NTS.-

FLOOR BEAM CONNECTIONS TO SIDE WALL BEAM

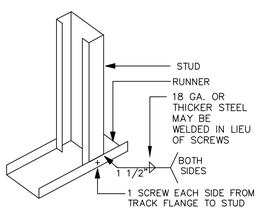


-NTS.-



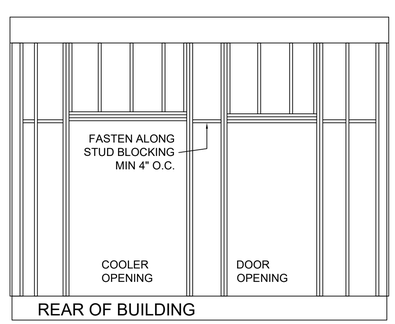
MULTIPLE STUD ATTACHMENT

-NTS.-



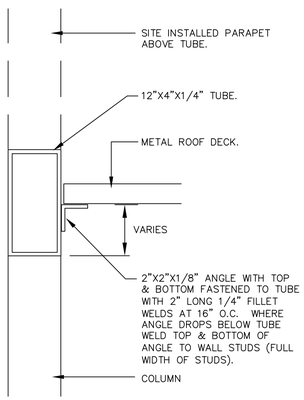
STUD TO TRACK ATTACHMENT TYPICAL AT TOP & BOTTOM OF WALL

-NTS.-



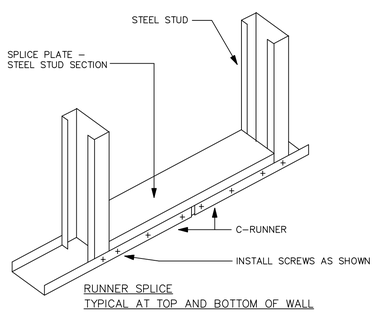
STUD BLOCKING DETAIL REAR OF BUILDING ONLY

-NTS.-



SECTION A-A END WALL ROOF

-NTS.-



RUNNER SPLICE TYPICAL AT TOP AND BOTTOM OF WALL

-NTS.-

MISSOURI PUBLIC SERVICE COMMISSION

APPROVED

02/10/2026

MANUFACTURED HOUSING

REVISION/ UPLOAD DATE

REV.	DATE	DESCRIPTION

LAST DESIGN BULLETIN

NUM.	DATE	DESCRIPTION

ALIANT MODULAR
VALIANT MODULAR, LLC
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174
(386) 677-9316

ENGINEER STAMP

STATE OF MISSOURI
WALTER E. WOOD
NUMBER PE-2017022073
PROFESSIONAL ENGINEER
VALID
02-23-2 024

Third Party: HWC & Asc. Inc.
1627 SouthMyrtle Ave.
Clearwater, Fl. 34616
(717)-584-8151

APPROVED
2-23-2024
HWC
WARNER CARTER & ASSOCIATES

SHEET NAME

FRAMING DETAIL

SHEET NUMBER

S2.3

COMcheck Software Version COMcheckWeb

Envelope Compliance Certificate

MISSOURI PUBLIC SERVICE COMMISSION

APPROVED

02/10/2026

MANUFACTURED HOUSING

Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	Slider Drive-Thru
Location:	Lees Summit, Missouri
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	2%
Performance Sim. Specs:	EnergyPlus 8.1.0.009 (EPW: USA_MO_Kansas.City.Intl.AP.724460_TMY3.epw)

Construction Site:
Lees Summit, Missouri

Owner/Agent:

Designer/Contractor:
Valiant Equipment, LLC
15 West Tower Circle
Ormond Beach 32174
386-677-9316

Building Area	Floor Area
1-Dining: Cafeteria/Fast Food : Nonresidential	952

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Floor 1: Concrete Floor (over unconditioned space), [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	800	---	30.0	0.030	0.057
Roof 1: Insulation Entirely Above Deck, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	800	---	23.6	0.041	0.032
NORTH					
Right Elevation Wall - Tile Finish: Steel-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	600	24.3	8.4	0.053	0.064
(3) Doors 101: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	63	---	---	0.500	0.370
Drive Thru Window: Metal Frame: Operable, Perf. Specs.: Product ID aa, SHGC 0.27, VT 0.62, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	19	---	---	0.290	0.450
EAST					
Front Elevation Wall - Tile Finish: Steel-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	192	24.3	8.4	0.053	0.064
SOUTH					
Left Elevation Wall - Tile Finish: Steel-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	600	24.3	8.4	0.053	0.064
Drive Thru Window: Metal Frame:Operable, Perf. Specs.: Product ID aa, SHGC 0.27, PF 1.00, VT 0.62, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b)	19	---	---	0.290	0.450
WEST					
Rear Elevation Wall - E.I.F.S. Finish: Steel-Framed, 16" o.c., [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	192	24.3	8.4	0.053	0.064
Door 101.5: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]	22	---	---	0.500	0.370

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

STATE OF MISSOURI WALTER E. WOOD NUMBER PE-2017022072 PROFESSIONAL ENGINEER

Walter E. Wood, P.E.	VALID	2-6-2026
Name - Title	Signature	Date

APPROVED 2-9-2026 HWC HILBORN, WERNER, CARTER & ASSOCIATES, INC.

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

COMcheck Software Version COMcheckWeb
Interior Lighting Compliance Certificate

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

Project Information

Energy Code: 90.1 (2019) Standard
Project Title: Slider Drive-Thru
Project Type: New Construction

Construction Site:
Lees Summit, Missouri

Owner/Agent:

Designer/Contractor:
Valiant Equipment, LLC
15 West Tower Circle
Ormond Beach 32174
386-677-9316

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Dining: Cafeteria/Fast Food	952	0.76	724
		Total Allowed Watts =	724

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Dining: Cafeteria/Fast Food				
LED 1: LED Other Fixture Unit 46W:	1	12	35	420
LED 2: LED Other Fixture Unit 46W:	1	7	35	245
LED 3: LED A Lamp 12W:	1	3	12	36
			Total Proposed Watts =	701

Interior Lighting PASSES: Design 3% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Walter E. Wood, P.E. — Name - Title

VALID — Signature

2-6-2026 — Date

STATE OF MISSOURI WALTER E. WOOD NUMBER PE-2017022072 PROFESSIONAL ENGINEER

APPROVED • HILBORN, WERNER, CARTER & ASSOCIATES, INC. • 2-9-2026 HWC

COMcheck Software Version COMcheckWeb
Exterior Lighting Compliance Certificate

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	Slider Drive-Thru
Project Type:	New Construction
Exterior Lighting Zone	2 (Neighborhood business district (LZ2))

Construction Site:
Lees Summit, Missouri

Owner/Agent:

Designer/Contractor:
Valiant Equipment, LLC
15 West Tower Circle
Ormond Beach 32174
386-677-9316

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Pedestrian and vehicular entrances and exits	2 ft of door	14	Yes	28
Drive-up windows/doors	2 windows	200	No	400
			Total Tradable Watts (a) =	28
			Total Allowed Watts =	428
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Pedestrian and vehicular entrances and exits (2 ft of door width): Tradable Wattage				
LED 1: LED Linear 22W:	1	2	22	44
Drive-up windows/doors (2 windows or doors): Non-tradable Wattage				
LED 3: LED Other Fixture Unit 80W:	1	2	75	150
			Total Tradable Proposed Watts =	44

Exterior Lighting PASSES: Design 90% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Walter E. Wood, P.E. — Name - Title

VALID — Signature

2-6-2026 — Date

STATE OF MISSOURI · WALTER E. WOOD · NUMBER PE-2017022072 · PROFESSIONAL ENGINEER

APPROVED · HILLEBORN, WERNER, CARTER & ASSOCIATES, INC. · 2-9-2026 · HWC

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

MISSOURI PUBLIC SERVICE COMMISSION
APPROVED
02/10/2026
MANUFACTURED HOUSING

Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	Slider Drive-Thru
Location:	Lees Summit, Missouri
Climate Zone:	4a
Project Type:	New Construction

Construction Site:
Lees Summit, Missouri

Owner/Agent:

Designer/Contractor:
Valiant Equipment, LLC
15 West Tower Circle
Ormond Beach 32174
386-677-9316

Mechanical Systems List

Quantity	System Type & Description
1	HVAC System 1 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 147 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et (or 80% AFUE) Cooling: 1 each - Single Package DX Unit, Capacity = 264 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 18.20 EER, Required Efficiency = 9.80 EER Proposed Part Load Efficiency = 13.20 IEER, Required Part Load Efficiency = 13.00 IEER
1	Water Heater 3: Electric Instantaneous Water Heater, Capacity: 2 gallons No minimum efficiency requirement applies

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2019) Standard requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

STATE OF MISSOURI · WALTER E. WOOD · NUMBER PE-2017022072 · PROFESSIONAL ENGINEER

Walter E. Wood, P.E.	VALID	2-6-2026
Name - Title	Signature	Date

APPROVED · 2-9-2026 · HWC · HILLBORN, WERNER, CARTER & ASSOCIATES, INC.

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 90.1 (2019) Standard

Requirements: 97.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 5.4.3.1.1, 5.7 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.2, 6.4.4.2.1, 6.7.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.2, 7.7.1, 10.4.2 [PR3][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6][2]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.2, 9.4.3, 9.7 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
9.7 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.5.2 [PR5][1]	Commissioning shall be performed as stated in Sections 5.9.2, 6.9.2, 7.9.2, 8.9.2, 9.9.2, 10.9.2, 11.2(d), and G1.2.1(c). Commissioning must utilize ASHRAE/IES Standard 202 or other generally accepted engineering standards acceptable to the building official. FPT and verification requirements for commissioning are as stated in Section 4.2.5.1. Commissioning shall document compliance of the building systems, controls, and building envelope with required provisions of this standard. Commissioning requirements shall be incorporated into the construction documents.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Buildings, additions, or alterations with less than 10,000 ft2 of conditioned space and combined heating, cooling, and service water heating equipment totaling less than 960,000 Btu/h in capacity.

Additional Comments/Assumptions:

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Section # & Req.ID	Footing / Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [FO1][2]	Installed below-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
4.2.4 [FO3][2]	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-_____ ☐ Unheated ☐ Heated	R-_____ ☐ Unheated ☐ Heated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.7 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.7.3 [FO7][1]	Insulation in contact with the ground has <=0.3% water absorption rate per ASTM C272.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.7 [FO9][3]	Freeze protection and snow/ice melting system sensors for future connection to controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.4.4.1.5 [FO11][3]	Bottom surface of floor structures incorporating radiant heating insulated to >=R-3.5.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply. *See the Envelope Assemblies table for values.*

Additional Comments/Assumptions:

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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.4.3.2 [FR1][3]	Factory-built and site-assembled fenestration and doors are labeled or certified as meeting air leakage requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.5.4.3a [FR8][1]	Vertical fenestration U-Factor.	U-_____	U-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.4.3b [FR9][1]	Skylight fenestration U-Factor.	U-_____	U-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.4.4.1 [FR10][1]	Vertical fenestration SHGC value.	SHGC:_____	SHGC:_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.5.4.4.2 [FR11][1]	Skylight SHGC value.	SHGC:_____	SHGC:_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.2.1, 5.8.2.3, 5.8.2.4, 5.8.2.5 [FR12][2]	Fenestration products rated (U-factor, SHGC, and VT) in accordance with NFRC or energy code defaults are used.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.2.2 [FR13][1]	Fenestration and door products are labeled, or a signed and dated certificate listing the U-factor, SHGC, VT, and air leakage rate has been provided by the manufacturer.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.5.3.6 [FR14][2]	U-factor of opaque doors associated with the building thermal envelope meets requirements.	U-_____ ☐ Swinging ☐ Nonswinging	U-_____ ☐ Swinging ☐ Nonswinging	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.4.3.1 [FR15][1]	Continuous air barrier is wrapped, sealed, caulked, gasketed, and/or taped in an approved manner, except in semiheated spaces in climate zones 1-6.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1][2]	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency:_____	Efficiency:_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.4.3.4.1 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.4.3.4.2, 6.4.3.4.3 [ME4][3]	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.4.5 [ME39][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.4.3.4.4 [ME5][3]	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.8 [ME6][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.5.3.2.1 [ME40][2]	DX cooling systems >= 75 kBtu/h (>= 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp >= ¼ designed to vary supply fan airflow as a function of load and comply with operational requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. *See the Mechanical Systems list for values.*
6.4.4.1.1 [ME7][3]	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.4.1.2 [ME8][2]	HVAC ducts and plenums insulated per Table 6.8.2. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.4.1.3 [ME9][2]	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	_____ in.	_____ in.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.4.1.4 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.4.4.2.1 [ME10][2]	Ducts and plenums having pressure class ratings are Seal Class A construction.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.8.1-15, 6.8.1-16 [ME110][2]	Electrically operated DX-DOAS units meet requirements per Tables 6.8.1-15 or 6.8.1-16.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.4.2.2 [ME11][3]	Ductwork operating >3 in. water column requires air leakage testing.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.1.5 [ME16][1]	Economizer operation will not increase heating energy use during normal operation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.3 [ME19][3]	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.5.2.4.1 [ME68][3]	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.2.4.2 [ME69][3]	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated >= R-0.5.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.2.5 [ME70][3]	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.5.2.6 [ME106][3]	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.3.3 [ME42][3]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply. *See the Mechanical Systems list for values.*

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.5.4.2 [ME25][3]	HVAC pumping systems with >= 3 control values designed for variable fluid flow (see section details).			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.7.2.1 [ME32][2]	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.7.2.4 [ME49][3]	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.5.8.1 [ME34][2]	Unenclosed spaces that are heated use only radiant heat.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.9 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 15% >240 kBtu/h – 10%			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
7.4.2 [ME36][2]	Service water heating equipment meets efficiency requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.9 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.5.10 [ME73][3]	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Building entrances have automatic closing devices.

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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10][2]	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Space type is not private office, open office, or computer classroom.
8.4.3 [EL11][2]	New buildings have electrical energy use measurement devices installed. Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
9.4.1.1 [EL1][2]	Automatic control requirements prescribed in Table 9.6.1, for the appropriate space type, are installed. Mandatory lighting controls (labeled as 'REQ') and optional choice controls (labeled as 'ADD1' and 'ADD2') are implemented.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.1.1 [EL2][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.1.1f [EL13][1]	Daylight areas under skylights and roof monitors that have more than 150 W combined input power for general lighting are controlled by photocontrols.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
9.4.1.4 [EL3][2]	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.1.3 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.6.2 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
10.4.1 [EL9][2]	Electric motors meet requirements where applicable.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	R-____ ☐ Above deck ☐ Metal ☐ Attic	R-____ ☐ Above deck ☐ Metal ☐ Attic	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2, 5.8.1.3 [IN3][1]	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the ceiling slope is <= 3:12.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.4 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ ☐ Mass ☐ Metal ☐ Steel ☐ Wood	R-____ ☐ Mass ☐ Metal ☐ Steel ☐ Wood	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.4 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ ☐ Mass ☐ Steel ☐ Wood	R-____ ☐ Mass ☐ Steel ☐ Wood	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2 [IN9][2]	Floor insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.1 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate has been provided listing R-value and other relevant data.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.9 [IN18][2]	Building envelope insulation extends over the full area of the component at the proposed rated R or U value.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.4 [IN11][2]	Eaves are baffled to deflect air to above the insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.5 [IN12][2]	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.6 [IN13][2]	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.8.1.7.1 [IN15][2]	Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.7.2 [IN16][2]	Foundation vents do not interfere with insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
5.8.1.8 [IN17][3]	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
5.4.3.3 [FI1][1]	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
6.4.3.1.2 [FI3][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.2 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.3.1 [FI21][3]	HVAC systems equipped with at least one automatic shutdown control.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.3.2 [FI22][3]	Setback controls allow automatic restart and temporary operation as required for maintenance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.12 [FI200][3]	Air economizer has a fault detection and diagnostics (FDD) system (see details for configuration and operational requirements).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.4.3.6 [FI6][3]	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.7.2.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.7.2.2 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
6.7.2.3 [FI9][1]	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft2 of conditioned area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
7.4.4.3 [FI11][3]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
8.7.1 [FI16][3]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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HOUSING

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
8.7.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.2.2.3 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
9.4.2 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
9.4.4 [FI20][1]	At least 75% of all permanently installed lighting fixtures in dwelling units have >= 55 lm/W efficacy or a >= 45 lm/W total luminaire efficacy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
10.4.3 [FI24][2]	Elevators are designed with the proper lighting, ventilation power, and standby mode.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
7.4.3 [FI45][2]	First 8 ft of outlet piping in nonrecirculating storage system, or branch piping connected to recirculated, heat traced, or impredance heated piping is insulated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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