



Missouri Public Service Commission  
Manufactured Housing & Modular Units Program  
Application for Modular Unit Plan Approvals

|                                                       |                              |                               |
|-------------------------------------------------------|------------------------------|-------------------------------|
| Transmittal Number (PSC Office)<br><i>3757-800692</i> | Check Number<br><i>18398</i> | Check Amount<br><i>150.00</i> |
|-------------------------------------------------------|------------------------------|-------------------------------|

**INSTRUCTIONS**

Submit the completed application, plans, & fees to your Third Party to forward to:  
Manufactured Housing & Modular Units Program  
P.O. Box 360, Jefferson City, MO 65102 or  
200 Madison St., 5<sup>th</sup> Fl., Jefferson City, MO 65101

Plan Approval Fees (non-refundable): \$150 per model  
Make all checks and money orders payable to:  
Missouri Director of Revenue

How to reach us:  
Phone: 800-819-3180  
Fax: 573-522-2509  
Web Page: [www.psc.mo.gov](http://www.psc.mo.gov)

**MANUFACTURER INFORMATION**

Must use the actual facility name & address where the model will be produced.

|                                           |                                          |                       |
|-------------------------------------------|------------------------------------------|-----------------------|
| Registration Number:                      | Registration Expiration Date:            | <b>MISSOURI</b>       |
| Manufacturer's Name: Valiant Modular, LLC |                                          | <b>PUBLIC SERVICE</b> |
| Contact Name: Dennis Amendolia            | Email Address: Dennis@valiantmodular.com | <b>COMMISSION</b>     |
| Mailing Address: 15 W. Tower Circle       | Physical Location:                       | <b>APPROVED</b>       |
| City/State/Zip: Ormond Beach, FL 32174    |                                          | <b>04/05/2024</b>     |
| Phone Number: 386-310-3495                | Fax Number:                              | <b>MANUFACTURED</b>   |

**THIRD PARTY INSPECTION AGENCY INFORMATION**

NOTE: A letter from the authorized representative approving models listed below must be attached to this Plan Approval Form.

|                                                                  |                                   |                |
|------------------------------------------------------------------|-----------------------------------|----------------|
| Third Party Agency: Hilborn, Werner, Carter and Associates, inc. |                                   | <b>HOUSING</b> |
| Contact Name: Scott Francis                                      | Email Address: modular@hwceng.com |                |
| Mailing Address: 1627 S. Myrtle Avenue                           |                                   |                |
| City/State/Zip: Clearwater, FL 33756                             |                                   |                |
| Phone Number: 727-584-8151                                       | Fax Number: 727-586-3343          |                |

**DEALER OR CONSUMER INFORMATION**

Attach additional sheets if necessary.

|                          |                        |  |
|--------------------------|------------------------|--|
| Dealer or Consumer Name: | Dealer Registration #: |  |
| Physical Address:        | Dealer Email Address:  |  |
| City/State/Zip:          | Phone Number:          |  |

**MODEL INFORMATION**

Please list the models to be approved below.

NOTE: Plans are approved for a period of one year and must be renewed each year until production of the model has ceased.

| Please indicate ✓ |                   |                  | Model Name                     | Model Destination-<br>COMPLETE ADDRESS REQUIRED<br>(Street Address, City, State & Zip Code) | Seismic Design<br>Category |
|-------------------|-------------------|------------------|--------------------------------|---------------------------------------------------------------------------------------------|----------------------------|
| New<br>Model      | Model<br>Revision | Model<br>Renewal |                                |                                                                                             |                            |
| X                 |                   |                  | Sliders Drive-Thru (2581-0265) | St. Peters, MO<br>LEE'S SUMMIT, MO                                                          | D                          |
|                   |                   |                  |                                |                                                                                             |                            |
|                   |                   |                  |                                |                                                                                             |                            |
|                   |                   |                  |                                |                                                                                             |                            |
|                   |                   |                  |                                |                                                                                             |                            |

New models constructed after March 30, 2018, shall be constructed to the criteria set forth in the 2015 International Building Code, the 2015 International Plumbing Code, the 2015 International Mechanical Code, the 2015 International Residential Code, 2015 International Fuel Gas Code, and the 2014 National Electric Code NFPA. Current models approved prior to March 30, 2018, are good until October 1, 2018.

According to the Public Service Commission's Rules 4CSR 240-123.010(I) governing modular units, modular units must be completed structures and must be tagged with a code compliance seal before being shipped and sold in the State of Missouri. Questions, please contact us at the above phone number.

**SIGNATURE**

|                                                       |                  |                    |
|-------------------------------------------------------|------------------|--------------------|
| Authorized Company Official<br><i>Wanda Prutchett</i> |                  | <b>RECEIVED</b>    |
| Title<br>Plans Examiner                               | Date<br>03/11/24 | <b>MAR 14 2024</b> |



ENGINEERING • INSPECTIONS  
CERTIFICATIONS • TESTING

Date: February 23, 2024

Missouri Public Service Commission  
Manufactured Housing Department

We have reviewed and approved the following plans from:

Manufacturer: Valiant Modular, LLC

Job No: Sliders Drive-Thru (2581-0265)

These plans meet or exceed the requirements of:

- (X) 2015 International Building Code
- (X) 2015 International Mechanical Code
- (X) 2015 International Plumbing Code
- (X) 2014 National Electrical Code

On-Line inspection for compliance will be completed for units in accordance to the approved quality control manual.

Third Party Name: Hilborn, Werner, Carter, and Associates, Inc.

Company Address: 1627 South Myrtle Avenue  
Clearwater, FL 33756

Phone: 727-584-8151

Signed: \_\_\_\_\_

Scott Francis  
Plans Examiner

MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING

**HILBORN, WERNER, CARTER AND ASSOCIATES, INC.**  
1627 SOUTH MYRTLE AVENUE CLEARWATER, FLORIDA 33756  
(727) 584-8151  
FAX: (727) 586-3343 / (727) 585-2392 / (727) 587-0447  
Modular Design Inspection





# Missouri Public Service Commission Manufactured Housing & Modular Unit Program Plan Review Form

To be completed by the Third Party Agency.

|                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>We, the Third Party Agency, have reviewed and approved plans from:</b>                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                     |
| Manufacturer Name    Valiant Modular LLC                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                     |
| Project Name    Sliders Drive- Thru                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                     |
| Job Number    2581-0265                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                     |
| Number of Units    1                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                     |
| Location of Project (Exact Location Required)    St. Peters, MO    LEE'S SUMMIT, MO                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                     |
| <b>This unit meets or exceeds the:</b> <ul style="list-style-type: none"><li>• 2015 International Building Code (IBC)</li><li>• 2015 International Residential Code (IRC)</li><li>• 2015 International Plumbing</li><li>• 2015 International Mechanical Code</li><li>• 2015 International Fuel Gas Code</li><li>• 2014 National Electric Code (NFPA)</li></ul> | <b>RECEIVED</b><br><br>MAR 14 2024<br><br>MO PUBLIC SERVICE COMMISSION<br>MAIL ROOM                                                                                                                                                                 |
| Seismic Design Category (Please specify)    C                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                     |
| <b>An on-line inspection for compliance will be completed for the above units.</b>                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                     |
| Third Party Name    Hilborn, Werner, Carter, and Associates                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                     |
| Address    1627 South Myrtle Avenue, Clearwater, FL 33756                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                     |
| Phone    727-584-8151                                                                                                                                                                                                                                                                                                                                          | Fax    727-586-3343                                                                                                                                                                                                                                 |
| Contact Email Address:    modular@hwceng.com                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                     |
| Representative Name:    Scott Francis                                                                                                                                                                                                                                                                                                                          | Representative Title    Plans Examiner                                                                                                                                                                                                              |
| <b>Please send the complete plan approval submission to:</b><br>(See Plan Approval Checklist for Submission Guidelines)                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                     |
| <b>Mailing Address:</b><br><br>Missouri Public Service Commission<br>Manufactured Housing & Modular Unit Program<br>P.O. Box 360<br>Jefferson City, MO 65102<br><br>Phone: 800-819-3180<br>Fax: 573-522-2509                                                                                                                                                   | <b>Street Address:</b><br><br>Missouri Public Service Commission<br>Manufactured Housing & Modular Unit Program<br>200 Madison Street, Suite 500<br>Jefferson City, MO 65101<br><br>Web Address: <a href="http://www.psc.mo.gov">www.psc.mo.gov</a> |
| <b>This form must accompany the plan approval form as well as any other required documentation and fees.</b>                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                     |

# HWC TRANSMITTAL SHEET

ENGINEERING - INSPECTIONS  
CERTIFICATIONS - TESTIN

TO: STATE OF MISSOURI

MOPSC

MANUFACTURED HOUSING AND MODULAR UNITS PROGRAM 200  
MADISON STREET, SUITE 500  
JEFFERSON CITY, MO 65101

DATE: 3/11/2024

TR NO: 59429

SHIP VIA: FEDEX GROUND

SHIP NO

SHIP ACCT:

ATTN: TIM HADEN

SUBJECT: VALIANT MODULAR

## PLEASE FIND ENCLOSED THE FOLLOWING:

| <u>HWC NO.</u> | <u>QTY</u> | <u>ITEM</u>                    | <u>DESCRIPTION</u>                            |
|----------------|------------|--------------------------------|-----------------------------------------------|
| 2581-0265      | 1          | VALIANT CK #18398 FOR<br>\$150 | CHECK                                         |
| 2581-0265      | 1          | 8.5 X 11 COPIES                | R/A:MO NEW MODEL SLIDERS DRIVE-THRU, BUSINESS |

MISSOURI  
PUBLIC SERVICE  
COMMISSION

**APPROVED**

04/05/2024  
MANUFACTURED  
HOUSING

### NOTE

HILBORN, WERNER, CARTER AND ASSOCIATES, INC.  
1627 SOUTH MYRTLE AVENUE - CLEARWATER, FLORIDA 33756  
(727) 584-8151 FAX: (727) 586-3343 FAX (727) 585-2392



SOUTH STATE BANK

18398

VALIANT MODULAR LLC  
15 W TOWER CIR  
ORMOND BEACH, FL 32174-8762

63-1403/631

CHECK ARMOR  
PROTECTED TRANSACTION

2/27/2024

PAY TO THE ORDER OF Missouri Director of Revenue

\$ \*\*150.00

One Hundred Fifty and 00/100\*\*\*\*\*

DOLLARS

Missouri Public Service Commission  
Manufactured Housing & Modular Units Prog  
PO Box 360  
Jefferson City, MO 65102

MEMO PLAN REVIEW

*Donna Stacevic*  
AUTHORIZED SIGNATURE

⑈018398⑈ ⑆063114030⑆ 20460200⑈

VALIANT MODULAR LLC

18398

| Date      | Type | Reference   | Original Amt. | Balance Due | 2/27/2024 Discount | Payment |
|-----------|------|-------------|---------------|-------------|--------------------|---------|
| 2/27/2024 | Bill | PLAN REVIEW | 150.00        | 150.00      |                    | 150.00  |
|           |      |             |               |             | Check Amount       | 150.00  |

RECEIVED

MAR 14 2024

MO PUBLIC SERVICE COMMISSION  
MAIL ROOM

Center State - Checki PLAN REVIEW

150.00

MISSOURI  
PUBLIC SERVICE  
COMMISSION

APPROVED

04/05/2024

MANUFACTURED  
HOUSING



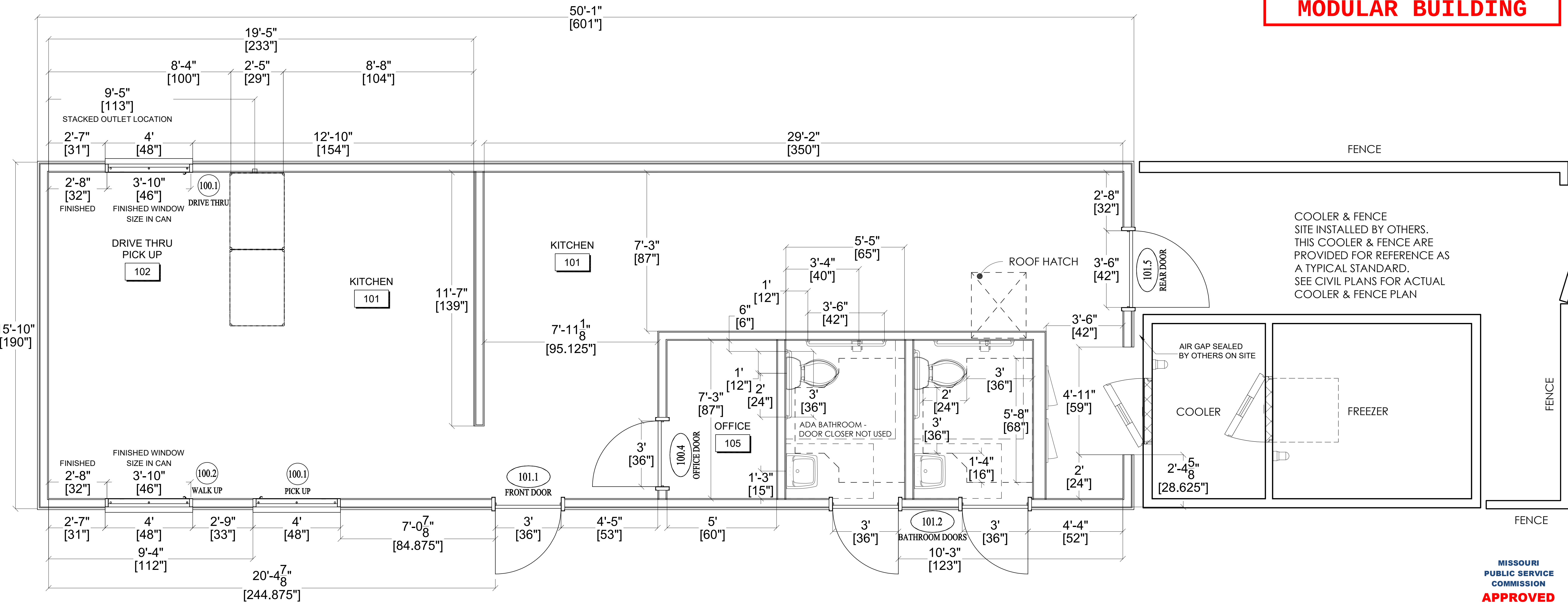
SLIDERS DRIVE-IN

| REVISION/ UPLOAD DATE                                                                                                                                                                                                                                                                                                                                |      |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|
| REV.                                                                                                                                                                                                                                                                                                                                                 | DATE | DESCRIPTION |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
| LAST DESIGN BULLETIN                                                                                                                                                                                                                                                                                                                                 |      |             |
| NUM.                                                                                                                                                                                                                                                                                                                                                 | DATE | DESCRIPTION |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
|                                                                                                                                                                                                                                                                                                                                                      |      |             |
| WALTER E. WOOD, P.E.<br>MO PE # 2017022072<br>168 W. LONGLEAF DR.<br>SYLVESTER, GA 31791                                                                                                                                                                                                                                                             |      |             |
| <br><div style="border: 1px solid red; padding: 2px; display: inline-block;">02-23-2024</div>                                                                                                                                                                     |      |             |
|  <div style="display: inline-block; vertical-align: middle; text-align: center;"> <b>ALIAINT</b><br/> <b>MODULAR</b><br/>           VALIANT MODULAR, LLC<br/>           15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174<br/>           (386) 677-9316         </div> |      |             |
| Third Party: HWC & Asc. Inc.<br>1627 South Myrtle Ave.<br>Clearwater, FL 34616<br>(717)-584-8151                                                                                                                                                                                                                                                     |      |             |
| <br><div style="border: 1px solid black; padding: 2px; display: inline-block;">2-23-2024</div>                                                                                                                                                                  |      |             |
| HWC# 2581-0265                                                                                                                                                                                                                                                                                                                                       |      |             |
| SHEET NAME                                                                                                                                                                                                                                                                                                                                           |      |             |
| COVER SHEET                                                                                                                                                                                                                                                                                                                                          |      |             |
| SHEET NUMBER                                                                                                                                                                                                                                                                                                                                         |      |             |
| G.01                                                                                                                                                                                                                                                                                                                                                 |      |             |



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

THIS IS A STATE  
APPROVED & INSPECTED  
MODULAR BUILDING



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

MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING

**ALIAINT 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

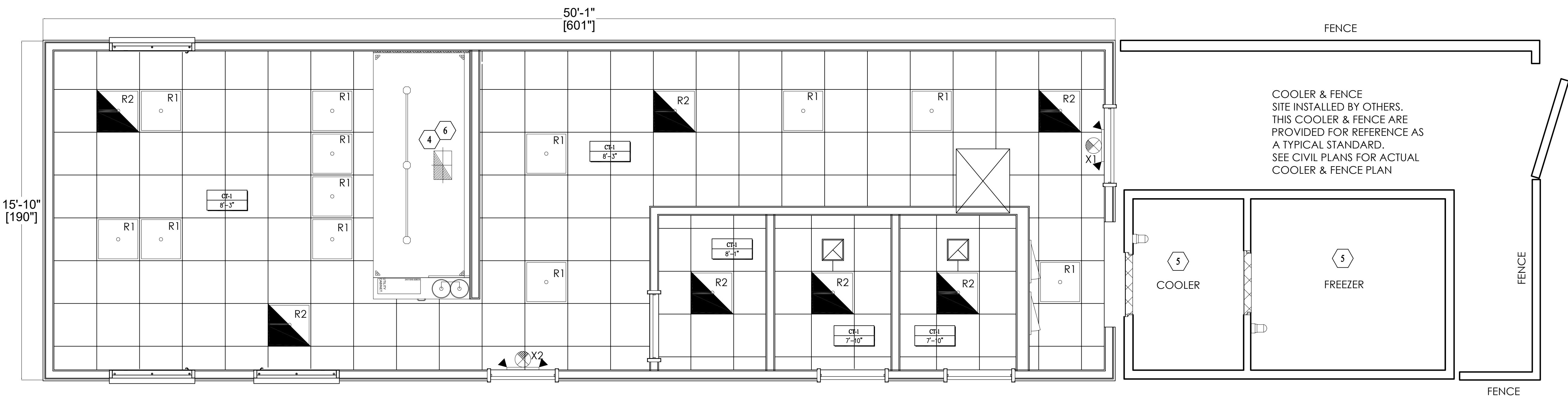
Third Party: HWC & Asc. Inc.  
1627 South Myrtle Ave.  
Clearwater, FL 34616  
(717)-584-8151

APPROVED  
04-23-2024  
HWC  
HENDERSON, CARTER & ASSOCIATES

SHEET NAME  
FLOOR  
PLAN  
SHEET NUMBER

A1.1





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

### CEILING PLAN GENERAL NOTES

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

### CEILING PLAN CODED NOTES

- N/A
- N/A
- N/A
- EXTEND NFPA WELDED KITCHEN EXHAUST DUCT WITH FIRE BLANKET UP FROM HOOD TO FAN. (SEE MECHANICAL SHEETS)
- 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.
- TYPE 1 KITCHEN EXHAUST HOOD
- N/A
- N/A
- 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  
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COMMISSION  
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04/05/2024  
MANUFACTURED  
HOUSING

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

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

ENGINEER  
STAMP  
WALTER E. WOOD  
NUMBER  
PE-2017022072  
02-23-2024

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

APPROVED  
2-23-2024  
HWC  
WALTER CARTER & ASSOCIATES

SHEET NAME

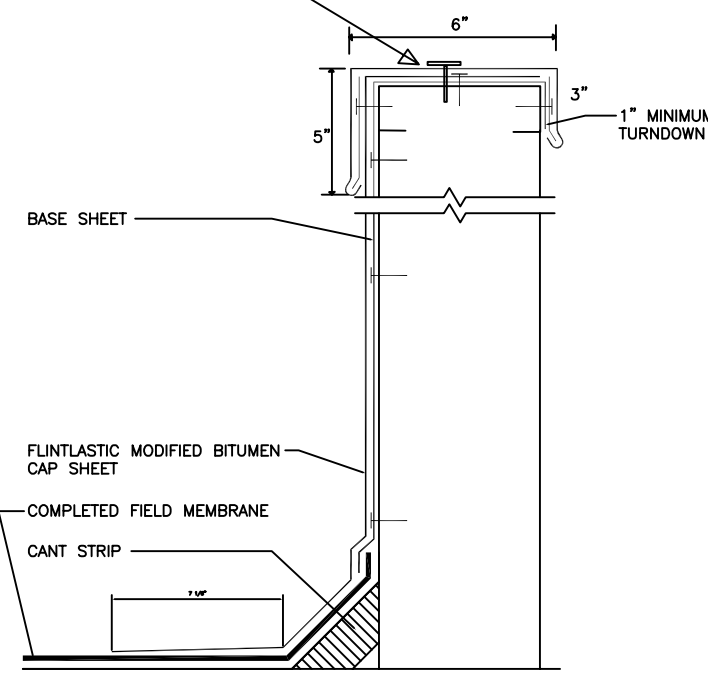
REFLECTIVE  
CEILING  
PLAN

SHEET NUMBER

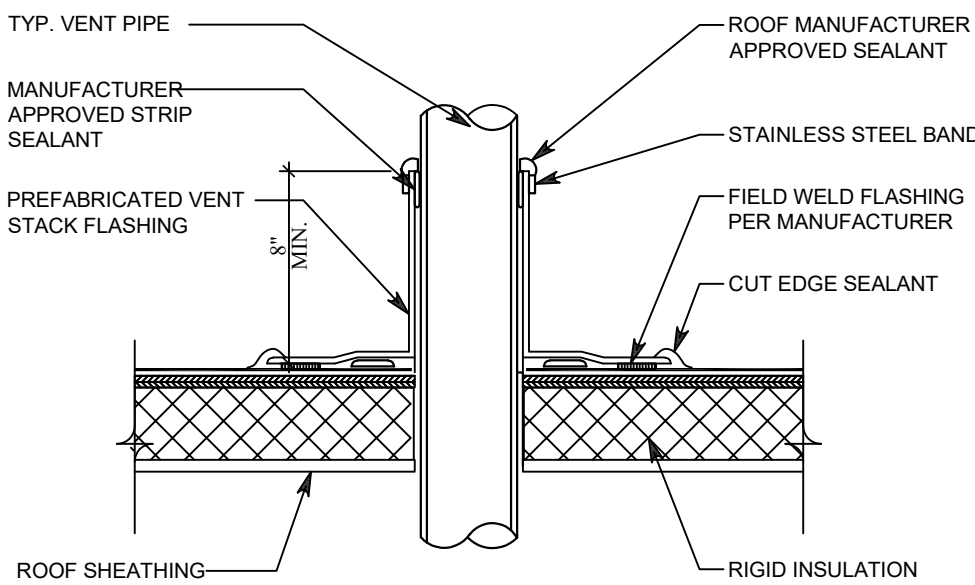
A2.1



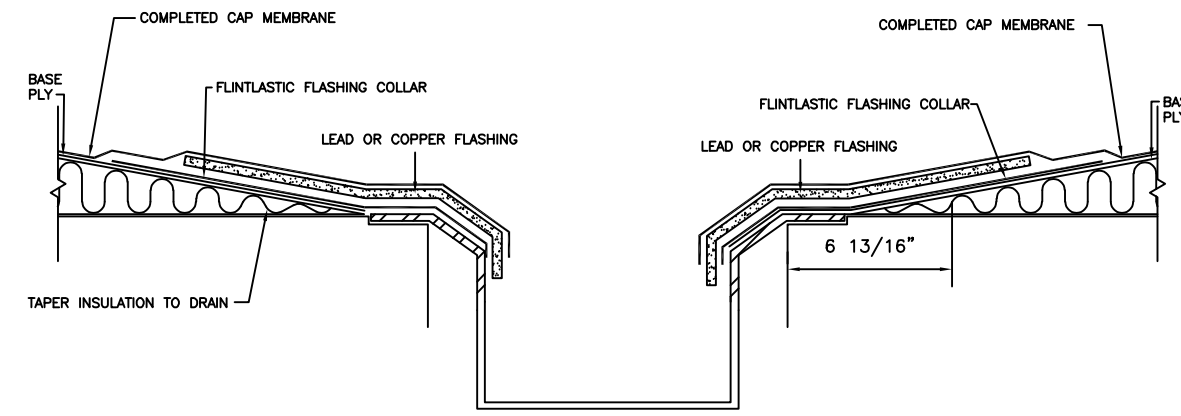
6" WIDE WHITE ALUMINUM COPING  
MIN. .024 IN THICKNESS  
FASTENED WITH 1/4"-14  
CORROSION RESISTANT  
SELF TAPPING SCREWS AT 24" O.C.



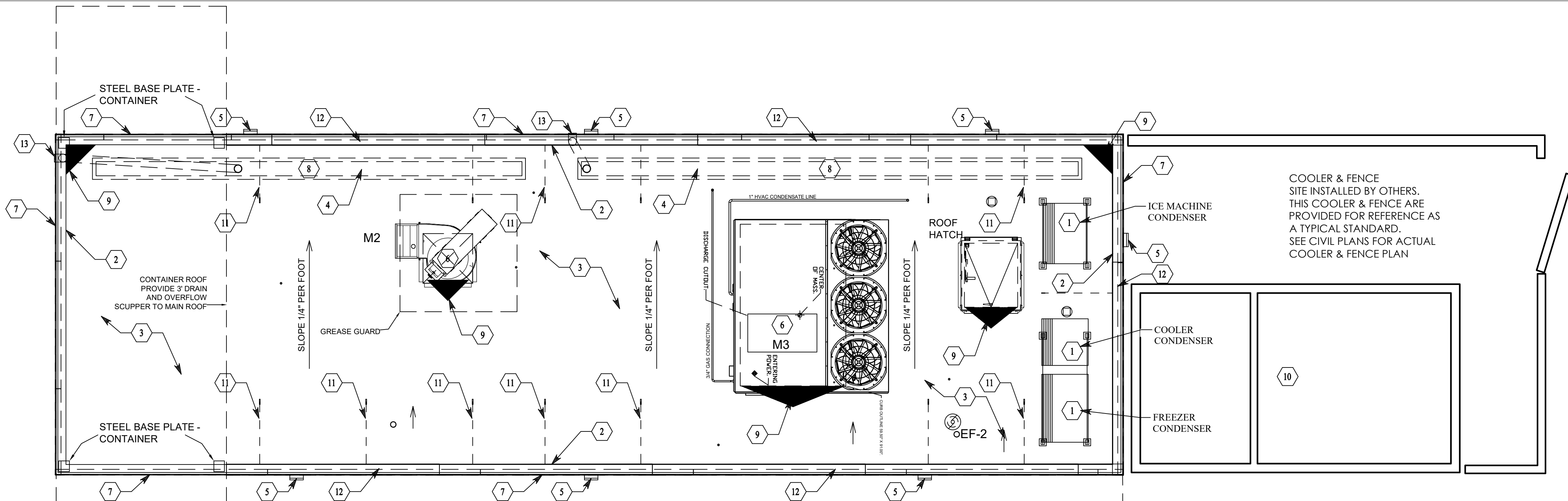
PARAPET DETAIL



VENT PENETRATION DETAIL



STAINLESS GUTTER DETAIL



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 2C) (SYSTEM SC-75)  
MIAMI-DADE N.O.A. - 20-0226.03

1 ROOF PLAN  
3/8" = 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

- THE BUILDING MANUFACTURER SHALL COORDINATE ALL WORK WITH RESPECTIVE TRADES, BUILDING / FIRE / HEALTH OFFICIALS, AND OWNER.
- 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.
- 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.
- 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.
- ROOFING DESIGN:  
E. CERTAINTED - SELF-ADHERED ROOF SYSTEM

## ROOF PLAN CODED NOTES

- 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.
- 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.
- SELF-ADHERED ROOF SYSTEM. SEE SPECIFICATIONS.
- ROOF DRAIN TROUGH - STAINLESS STEEL 4" X 8".
- EXTERIOR LIGHTING FIXTURES. (REFER TO ELECTRICAL)
- HVAC UNITS AND EXHAUST FANS. (REFER TO MECHANICAL)
- METAL ROOF EDGE: DRIP EDGE.
- 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.
- ROOF CRICKETS. (TYPICAL).
- FREEZER/ COOLER BOX AND ROOF BY FRANCHISEE.
- DASHED LINE INDICATES EXTENTS OF PARAPET BRACING, 1:1 SLOPE. (REFER TO STRUCTURAL)
- ROOFTOP PARAPET. (REFER TO STRUCTURAL)
- 3" DIA. MIN. ROOF DRAIN FROM ROOF DRAIN TROUGH.

MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING

**THIS IS A STATE  
APPROVED & INSPECTED  
MODULAR BUILDING**

REVISION/ UPLOAD DATE

| REV.                 | DATE | DESCRIPTION |
|----------------------|------|-------------|
|                      |      |             |
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| LAST DESIGN BULLETIN |      |             |
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ALIAIT  
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-2017022072  
02-23-2024

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

APPROVED - 2024  
2-23-2024  
IWC  
WILSON, 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

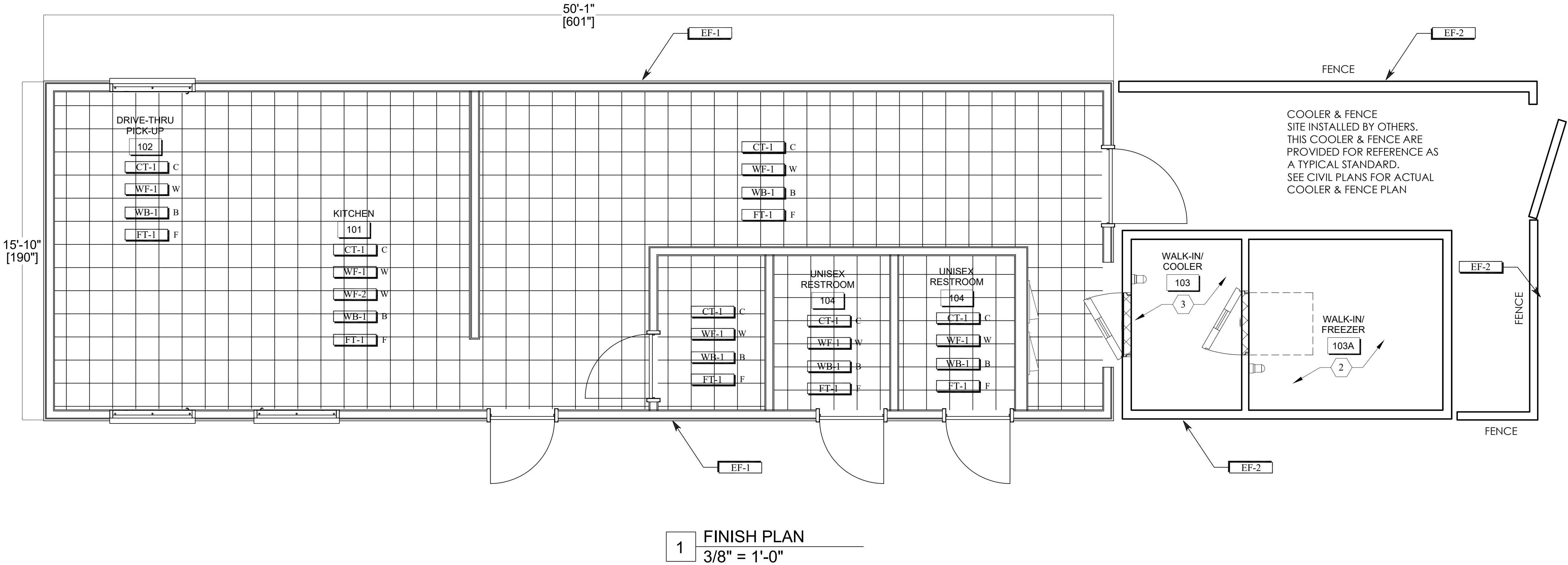
FIRE TEST NFPA TYPE 1 RATED

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



THIS IS A STATE  
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MODULAR BUILDING

FINISH PLAN CODED NOTES ⓘ

- NOT USED
- FREEZER TO HAVE INSULATED METAL FLOOR BY UNIT MANUFACTURER.
- COOLER TO RECEIVE TILE FLOOR & BASE BY G.C. AFTER THE UNIT HAS BEEN INSTALLED.
- NOT USED
- NOT USED
- 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                       |

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IWC

WALTER, CARTER & ASSOCIATES

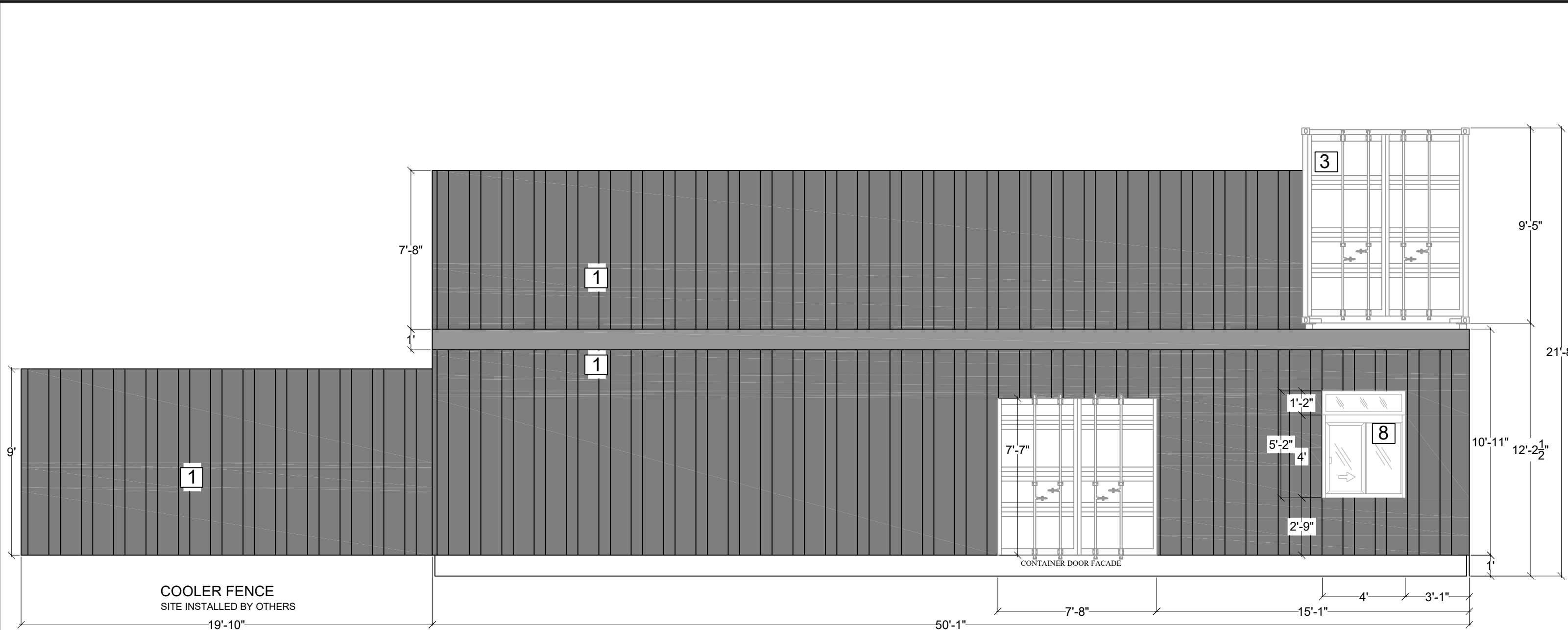
SHEET NAME

FINISH  
PLAN

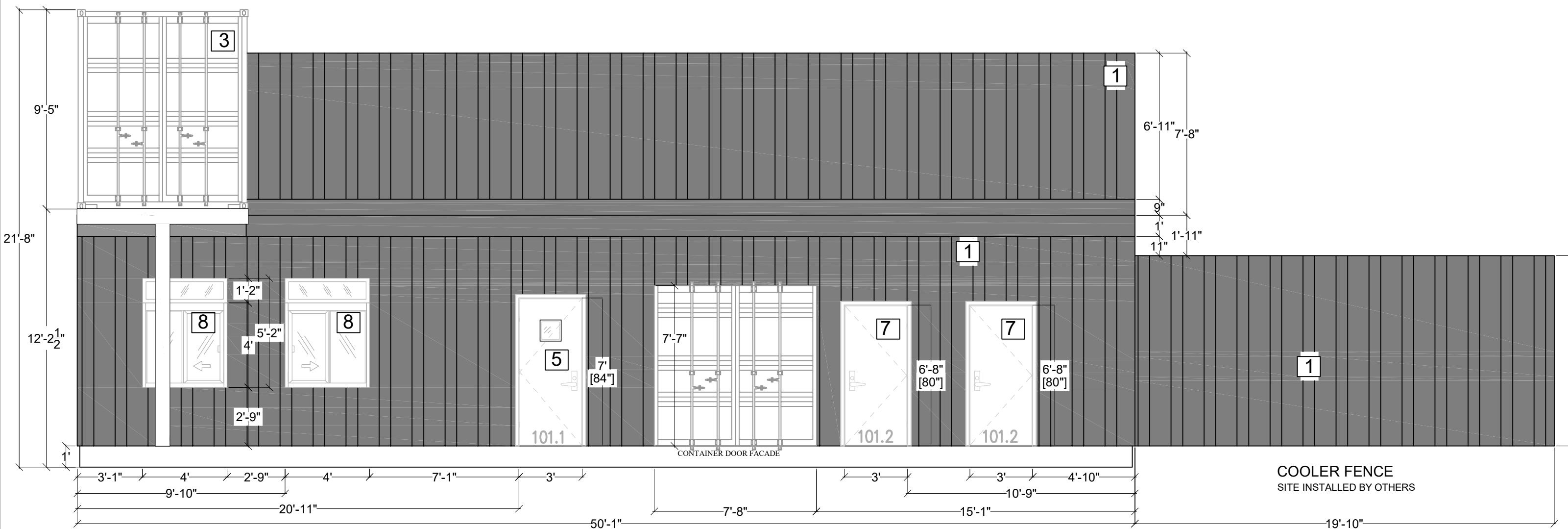
SHEET NUMBER

A4.1

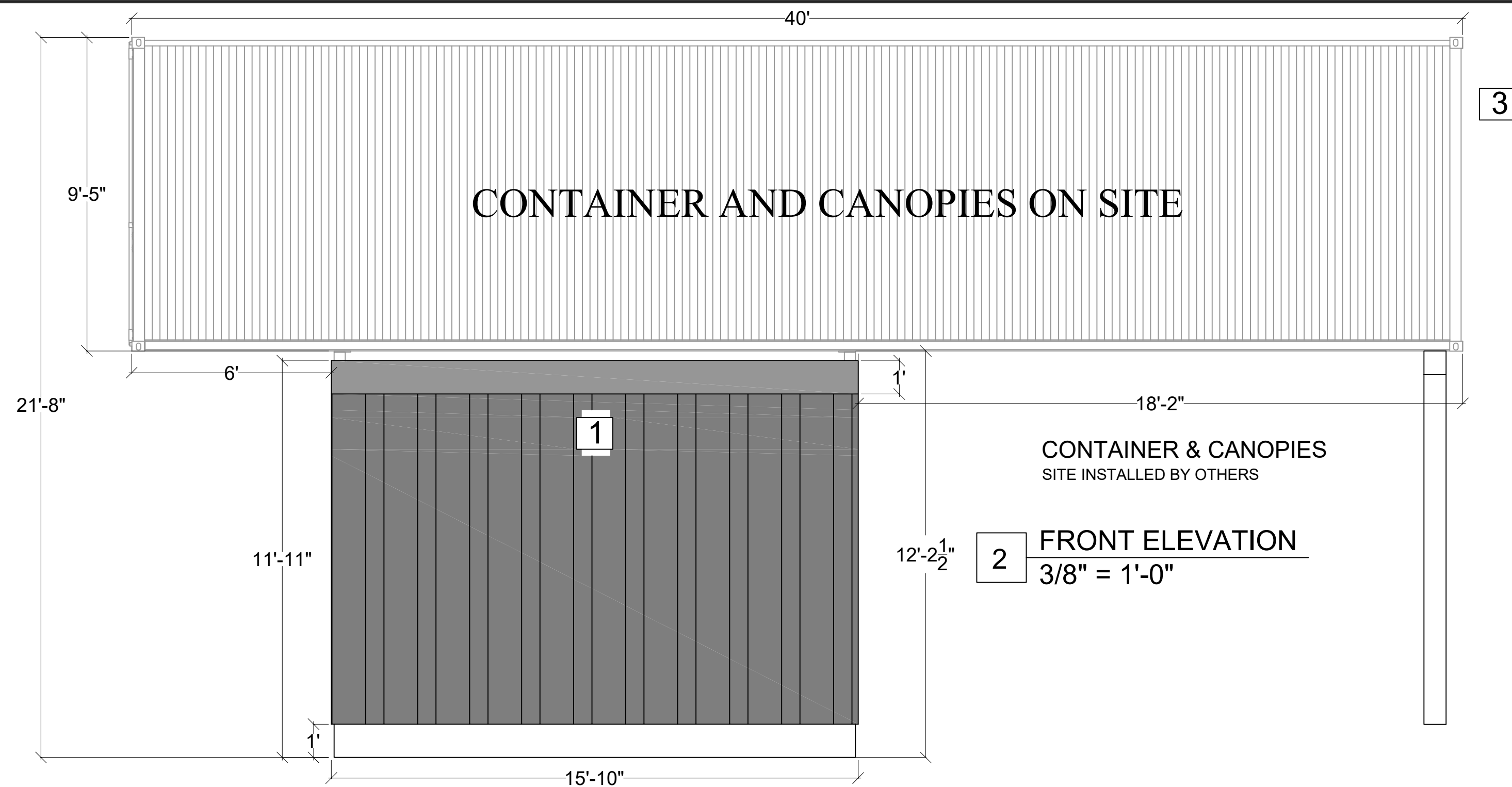




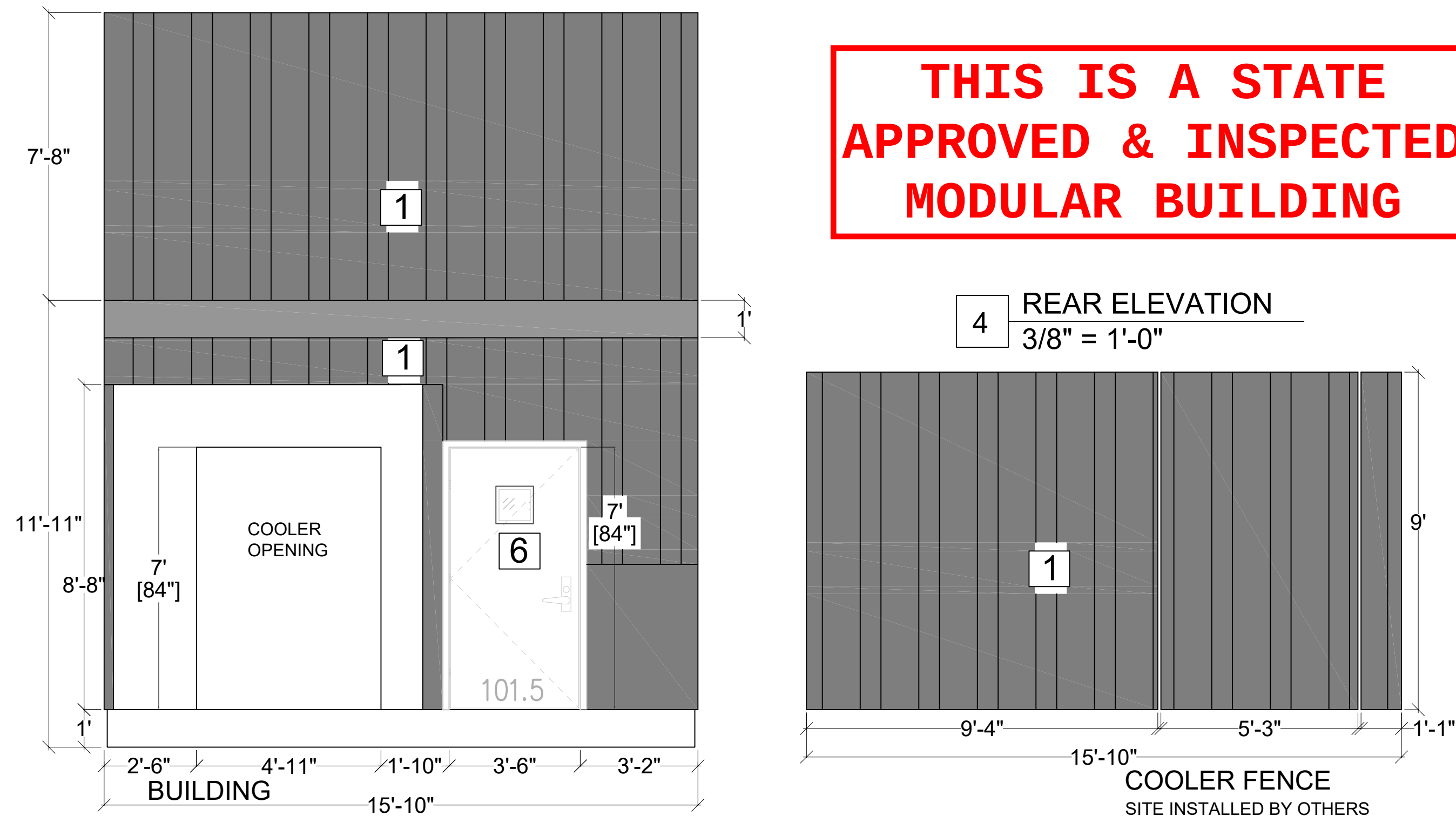
1 DRIVE THRU ELEVATION  
1/4" = 1'-0"



3 PATIO SIDE ELEVATION  
1/4" = 1'-0"



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



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

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ORANGE PAINT FORMULA FOR 1  
GALLON SIZE CANS

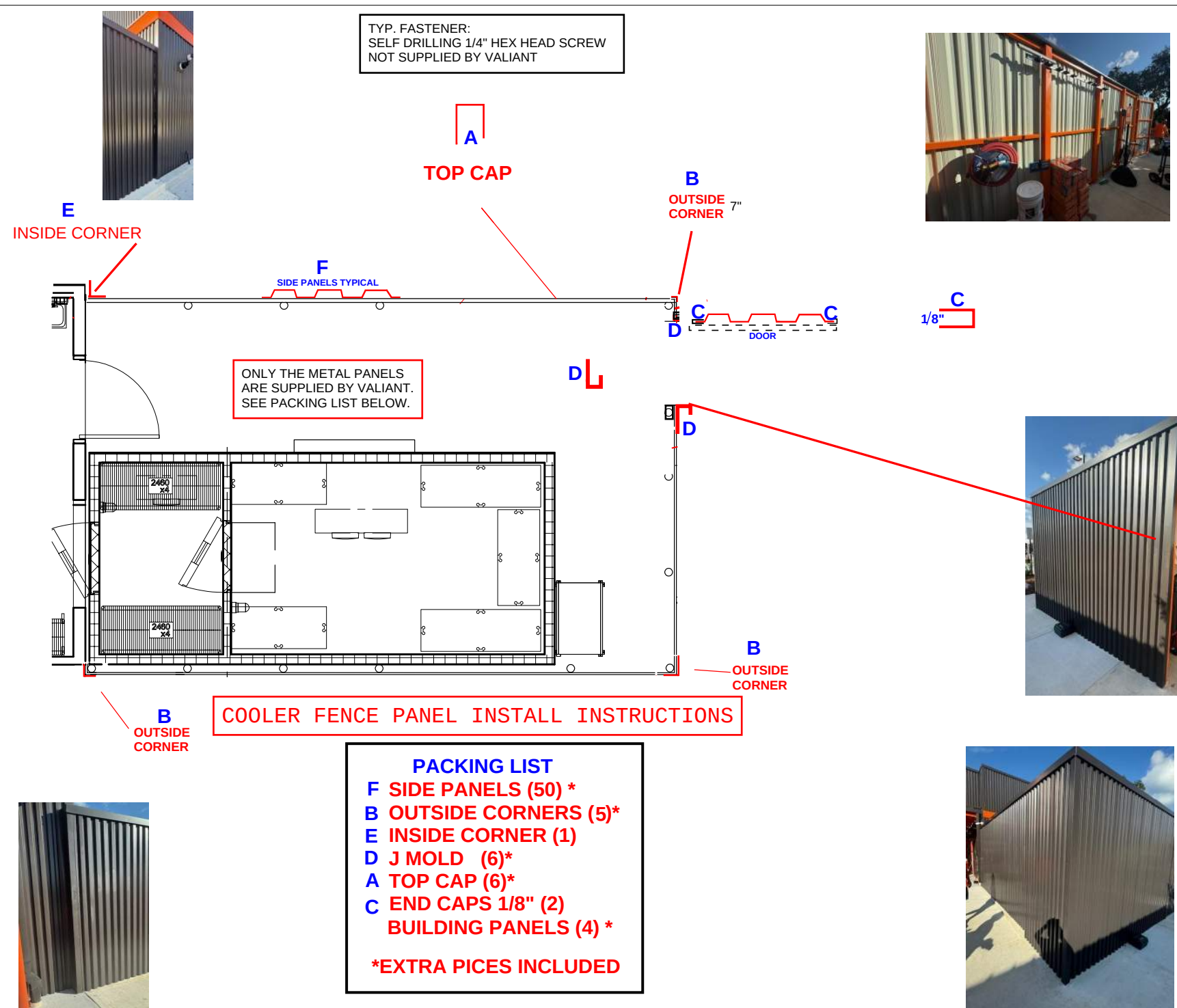
SW HYDROCHROMA PRECISION  
COLOR - LOWE'S ITEM #77957  
EXTERIOR DURAMAX,  
SEMI-GLOSS, BASE 4  
8913-8y25 8964-5y10 8920-.25

VALSPAR EXTERIOR DURAMAX,  
SEMI-GLOSS, BASE 4  
R3, TT-9Y

ORANGE PAINT FORMULA FOR 5  
GALLON SIZE CANS

SW HYDROCHROMA PRECISION  
COLOR - LOWE'S ITEM #10605  
EXTERIOR DURAMAX,  
SEMI-GLOSS, BASE 4  
8913-42y29 8964-26y2 8920-1.25

VALSPAR EXTERIOR DURAMAX,  
SEMI-GLOSS, BASE 4  
R-15Y, TT-45Y

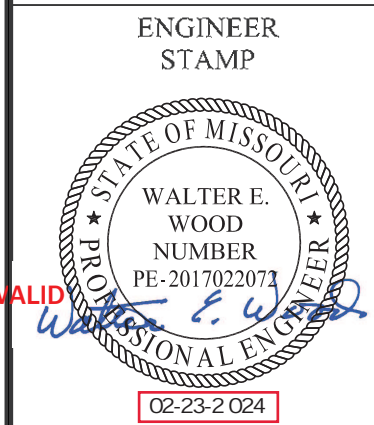


|   | Material                 | Color                        | Description                                                       |
|---|--------------------------|------------------------------|-------------------------------------------------------------------|
| 1 | Metal Siding             | Bronze                       | Vertical MASTERLINE 16, 24 GA. OR EQUAL                           |
| 2 | Fiber Cement             | Bronze                       | Alternate Material = 1 x 4 Painted Hardie plank over Hardie board |
| 3 | Container                | Slider's Colors Orange/White | 40 Ft shipping Container                                          |
| 5 | Door w/Glass             | Bronze                       | (1) 36"/7' WITH GLASS WINDOW                                      |
| 6 | Rear Service Door /Glass | Bronze                       | (1) 42"/7' WITH GLASS WINDOW                                      |
| 7 | Bath Room Door           | Bronze                       | (2) 36"/6'8"                                                      |
| 8 | Order Windows            | Bronze                       | QUIK Serv WINDOWS WITH TRANSOM                                    |

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SHEET NAME

ELEVATIONS

SHEET NUMBER

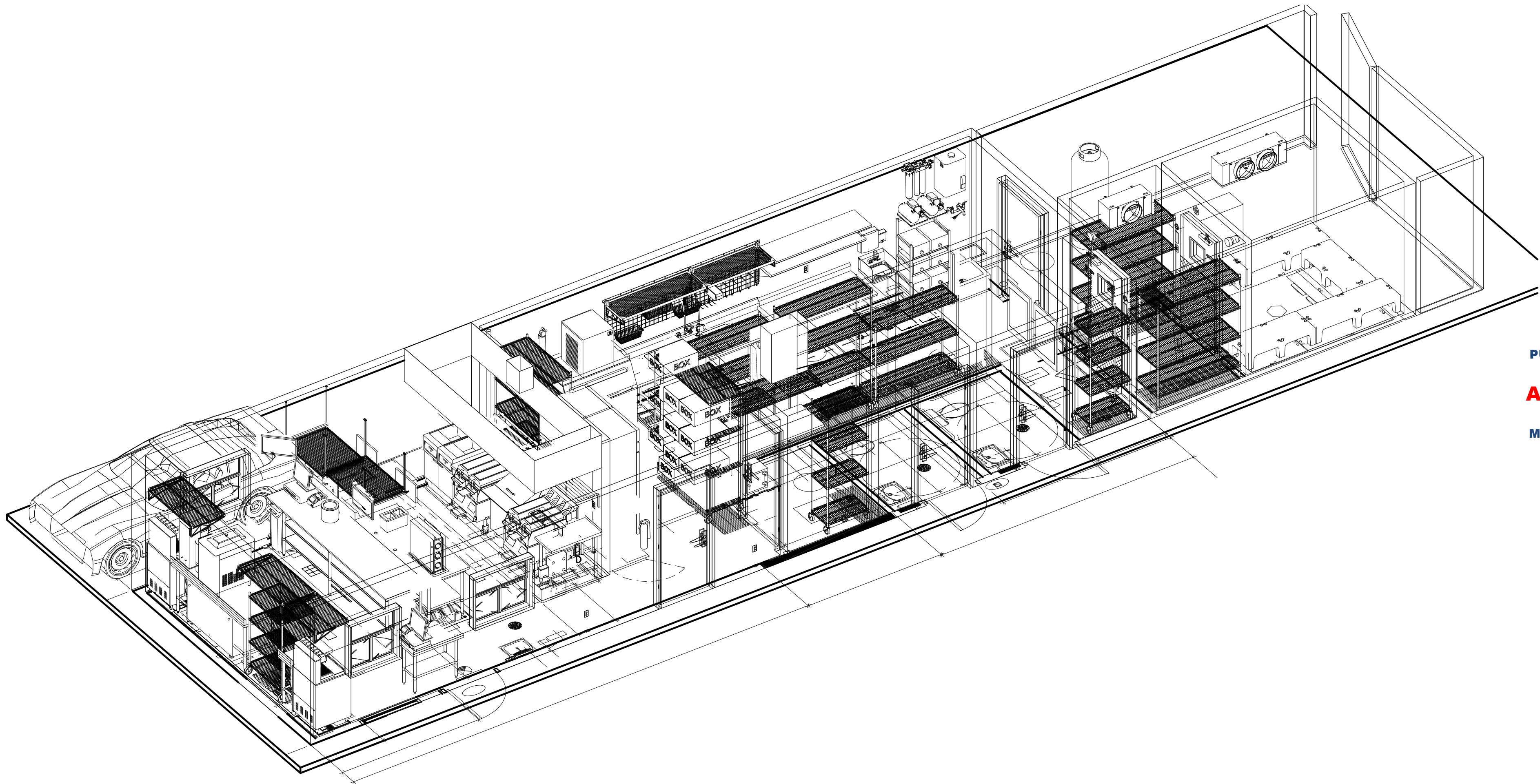
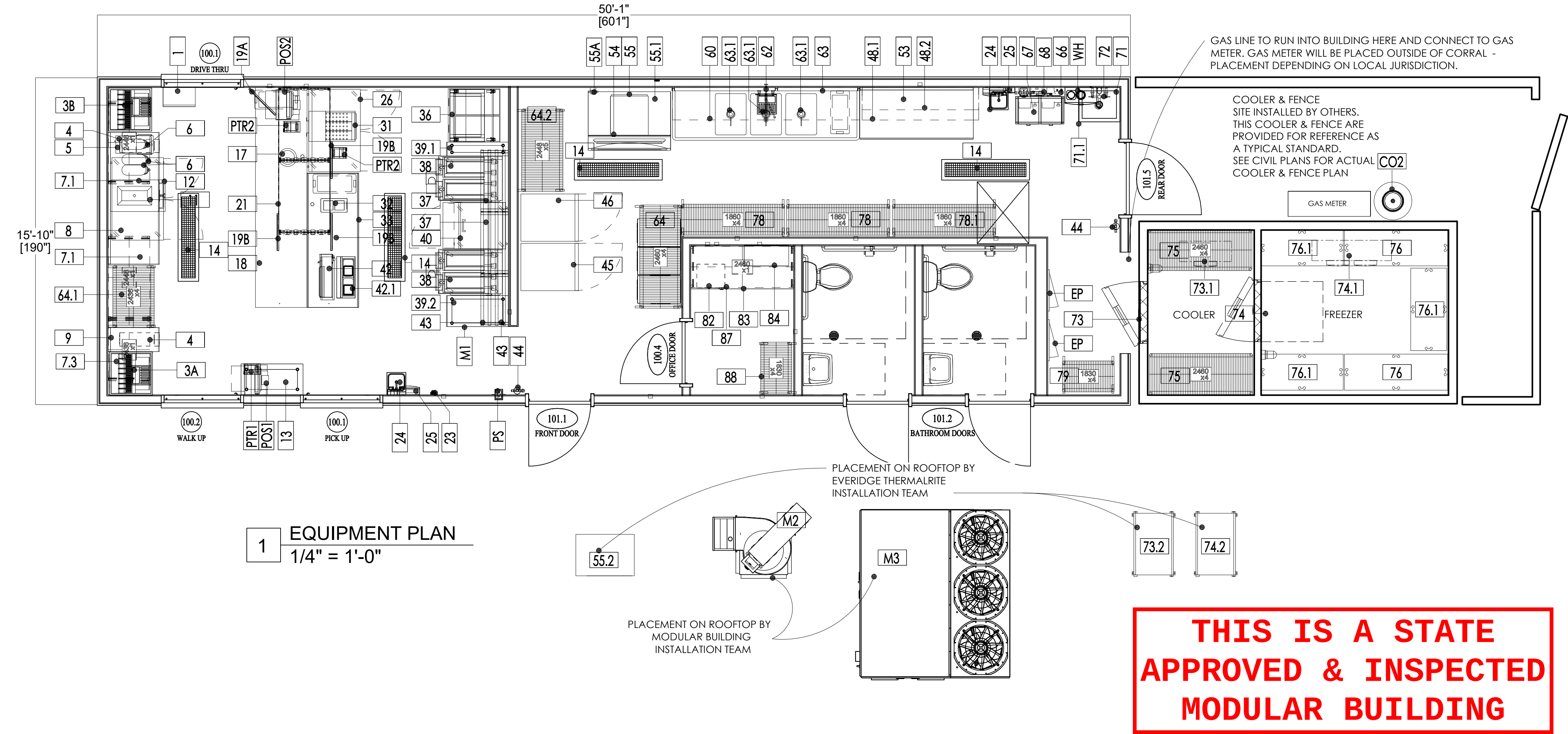
A5.1







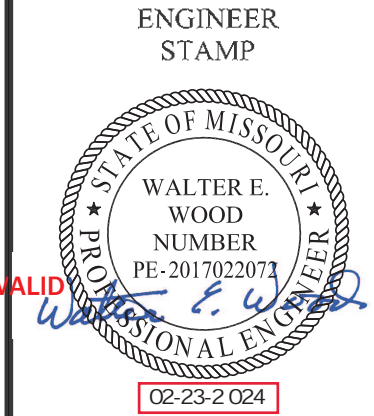
| Equipment Schedule |     |                                               |                 |                      |              |
|--------------------|-----|-----------------------------------------------|-----------------|----------------------|--------------|
| Item Number        | Qty | Description                                   | 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-75P              | 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 | CNH18                | 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          |
| 38                 | 2   | 2 Platen Electric Double-Sided Grill          | Taylor          | L852                 | DON          |
| 39.1               | 1   | Work Top Filler                               | John Boos       | EF18-3608SSK Custom  | DON          |
| 39.2               | 1   | Work Top Filler                               | John Boos       | EF18-3618SSK         | DON          |
| 40                 | 1   | Refrigerated Prep Table                       | Hoshizaki       | SR27B-12M            | DON          |
| 41                 | 1   | Spare Number                                  | --              | --                   | --           |
| 42                 | 1   | Toaster, Vertical                             | Prince Castle   | 297-120              | 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-F5               | DON          |
| 46                 | 1   | Refrigerator                                  | Hoshizaki       | R1A-F5               | 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   | Map 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/DQ824          | 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      |



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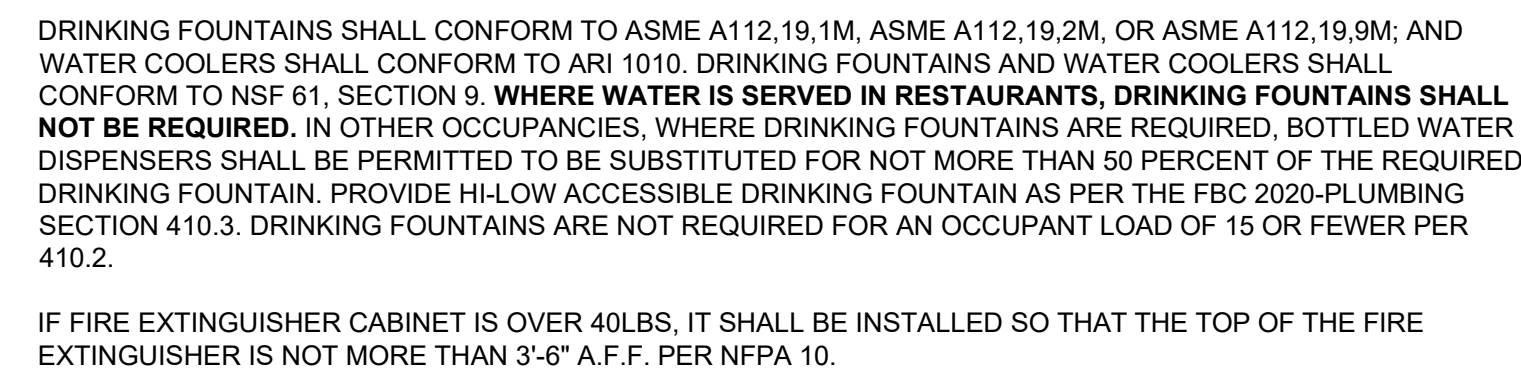
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NOTE: ALL ACCESSIBLE FIXTURES SHALL COMPLY WITH ANSI A17.1-17



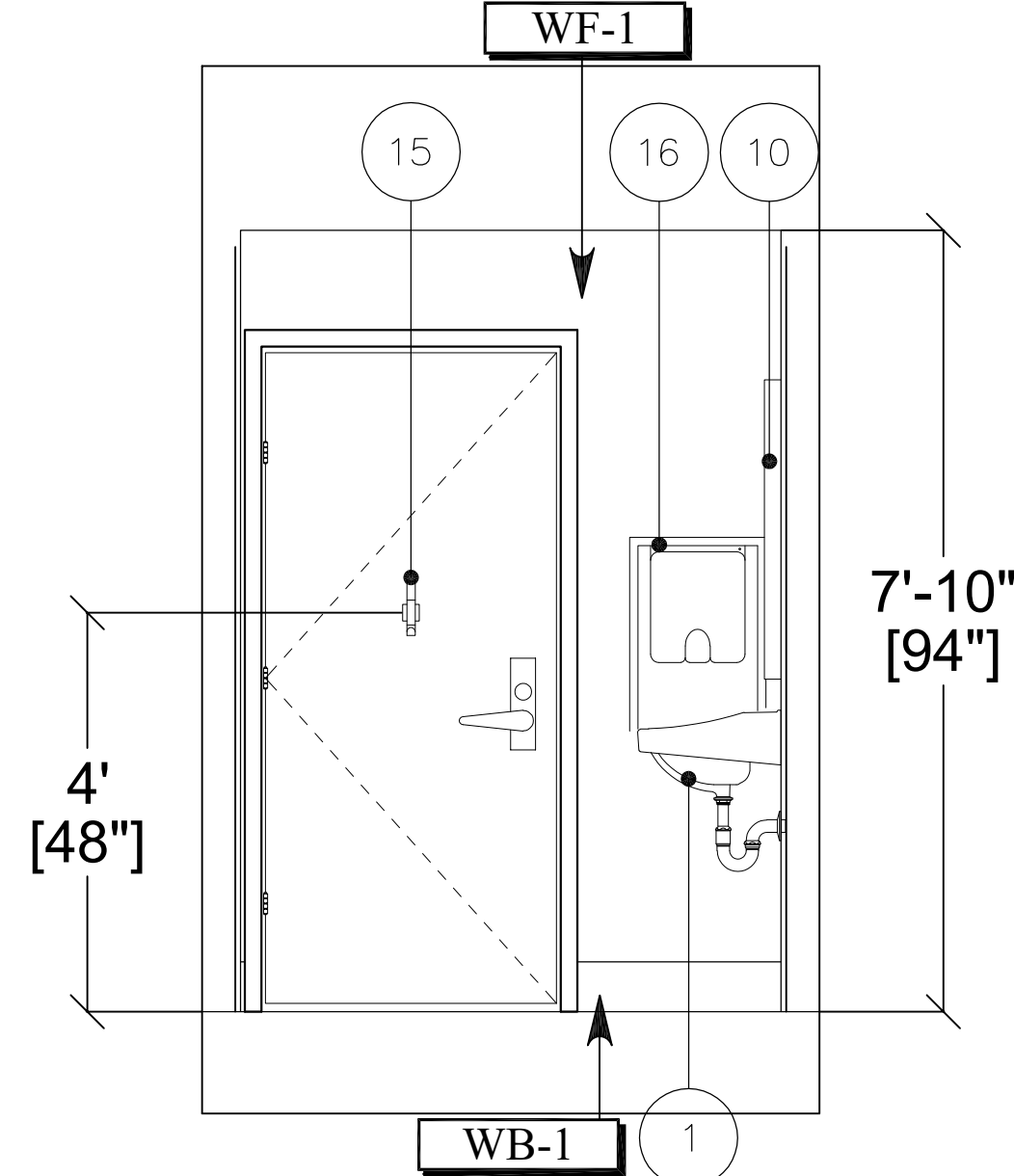
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215 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174  
(386) 677-9196

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

A9.4

## DIVISION 10

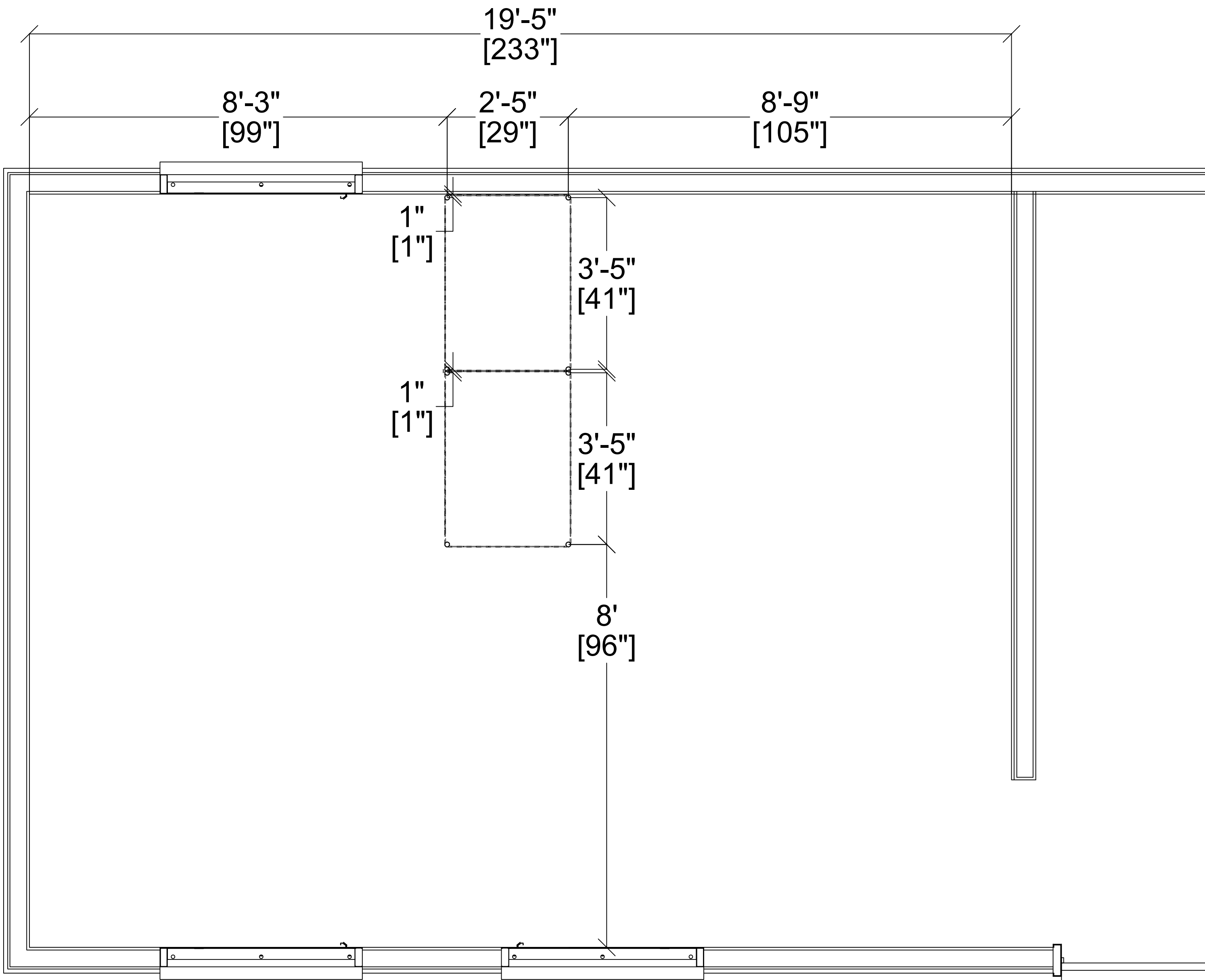
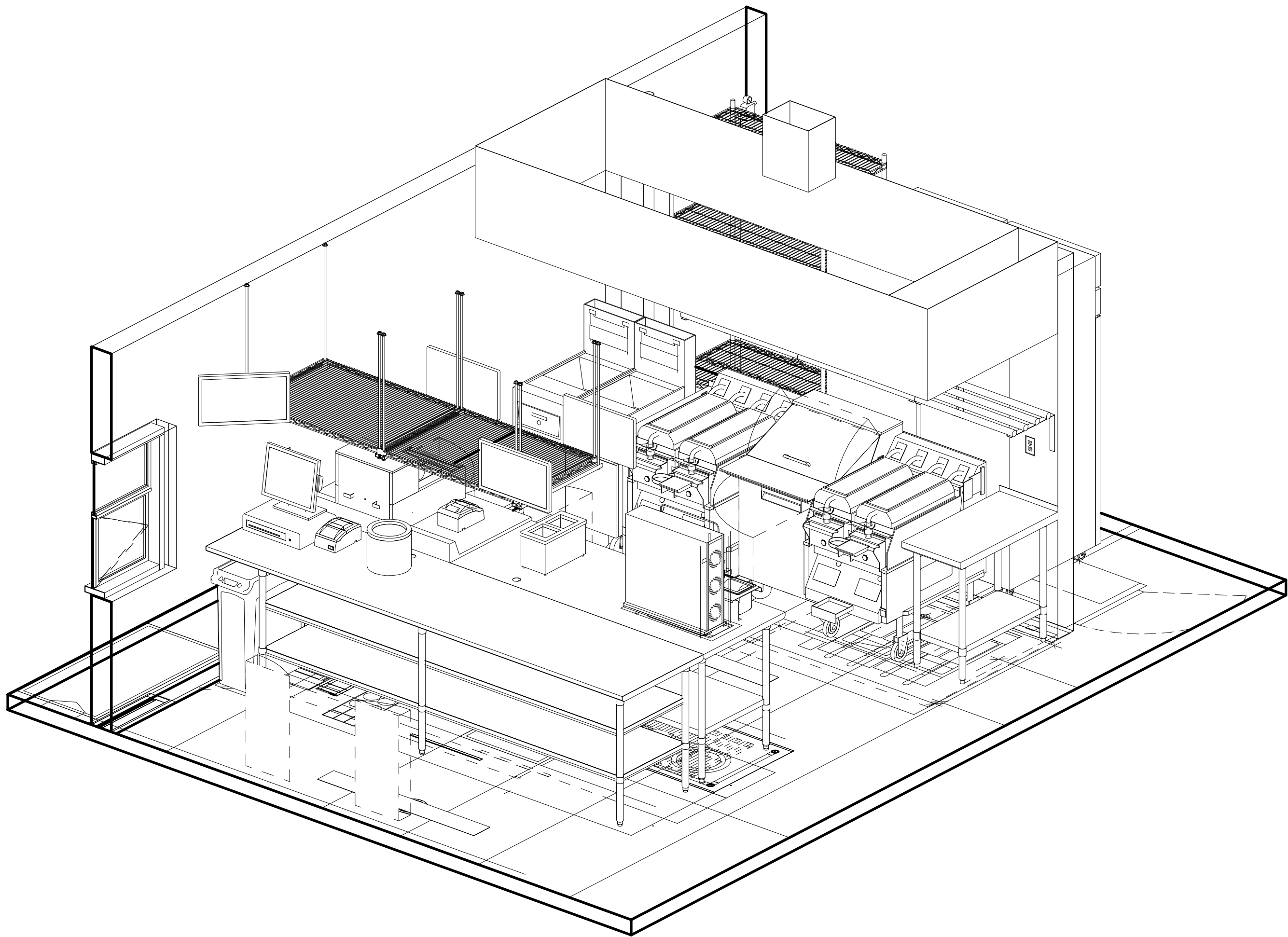
| ITEM NO.                                                                                            | QUANTITY | SUPPL'D | INSTL'D | DESCRIPTION                  | MODEL NO. AS SHOWN OR EQUIVALENT                        |
|-----------------------------------------------------------------------------------------------------|----------|---------|---------|------------------------------|---------------------------------------------------------|
| 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 |          |         |         |                              |                                                         |



**MISSOURI  
PUBLIC SERVICE  
COMMISSION  
APPROVED  
04/05/2024  
MANUFACTURED  
HOUSING**

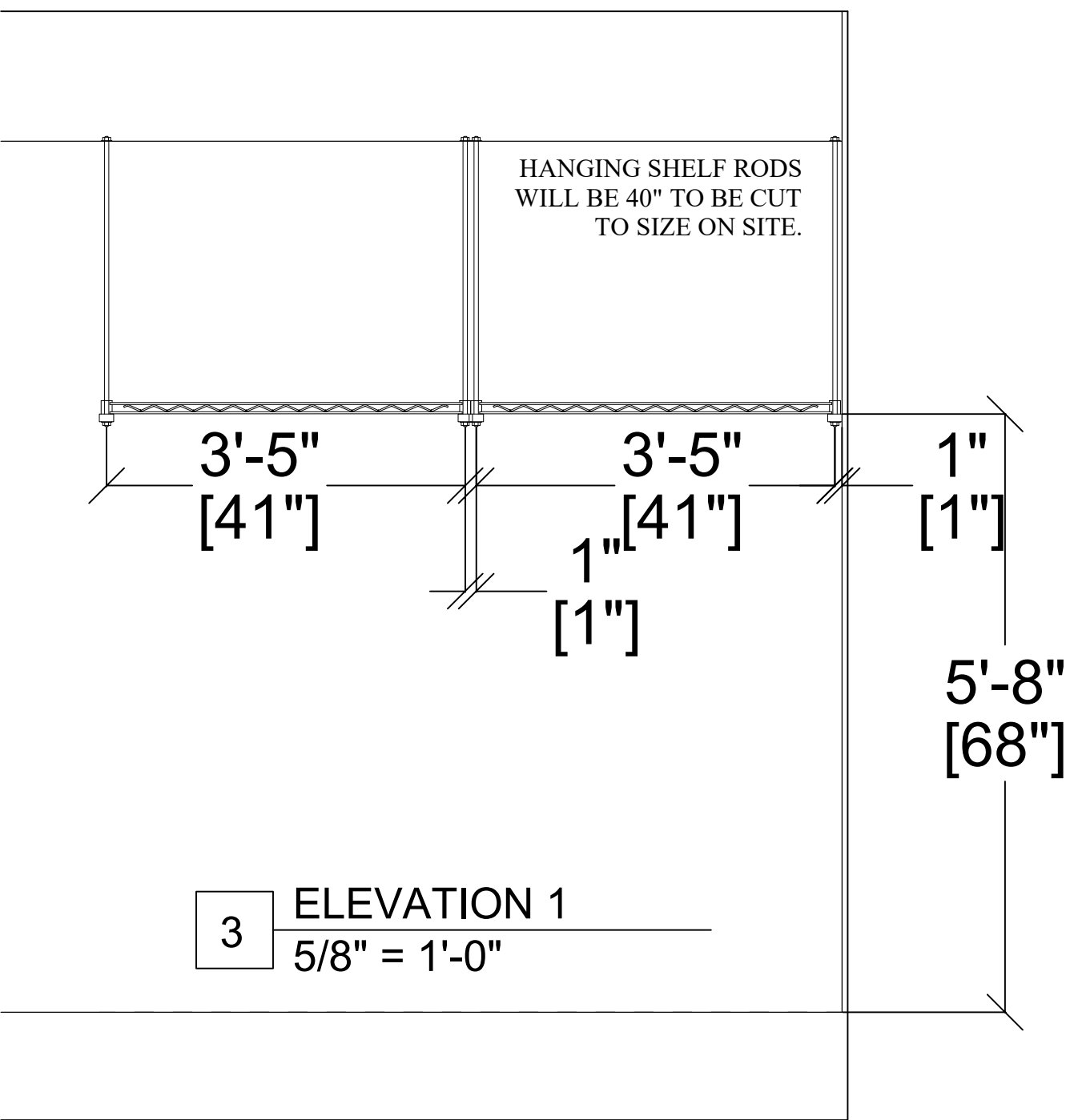
## 1 RESTROOM ELEVATIONS



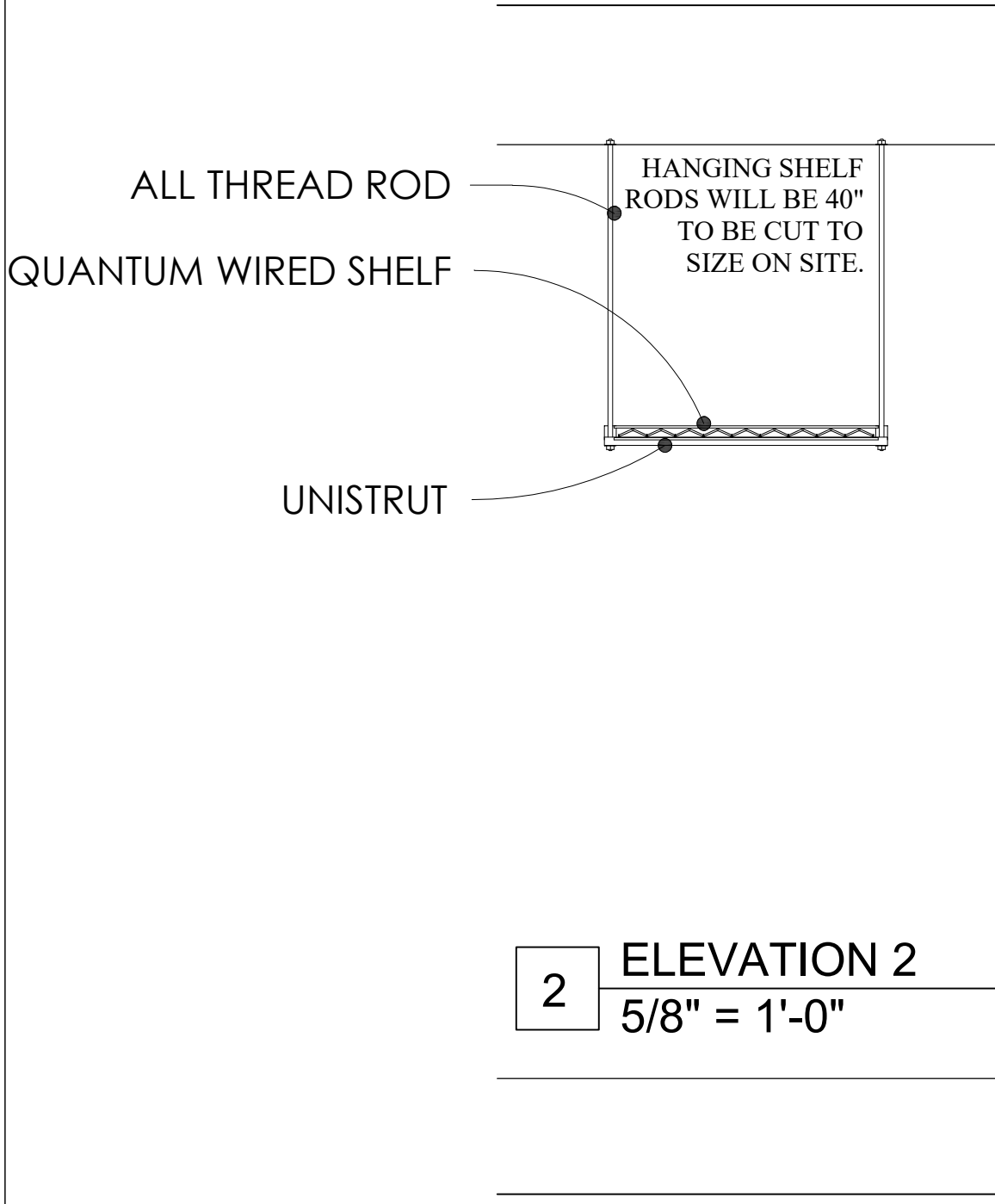


1 OVERHEAD SHELVING - HANGING POINTS  
5/8" = 1'-0"

THIS IS A STATE  
APPROVED & INSPECTED  
MODULAR BUILDING



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



2 ELEVATION 2  
5/8" = 1'-0"

| REVISION/ UPLOAD DATE |      |             |
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**ALIAINT 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-2017022072  
VALID  
02-23-2024

Third Party: HWC & Asoc. Inc.  
1627 South Myrtle Ave.  
Clearwater, FL 34616  
(717)-584-8151

APPROVED  
2-23-2024  
**HWC**  
HARTER, CARTER & ASSOCIATES

MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING

SHEET NAME  
**HANGING  
SHELVES**

SHEET NUMBER  
**A9.5**

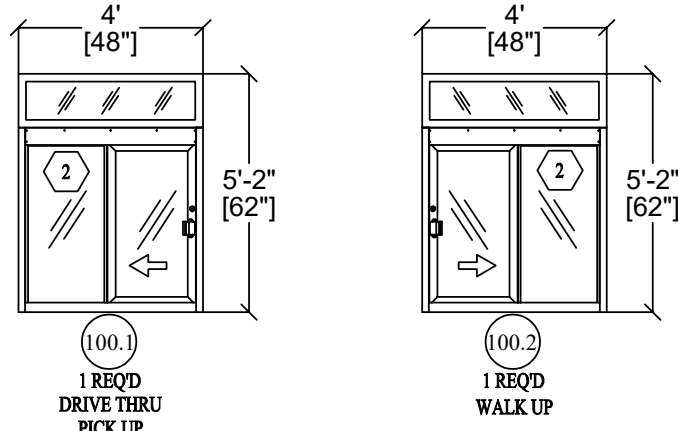


| DOOR HARDWARE SCHEDULE AS SHOWN OR EQUIVALENT |                           |                          |                    | DIVISION 8  |                    |
|-----------------------------------------------|---------------------------|--------------------------|--------------------|-------------|--------------------|
| 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-S10-26D-499 | US26D       | TRIOLOGY 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 TAS 2012.
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.
6. SET-02 - WATER CLOSET - OMIT DOOR CLOSER FOR ONE OF THE BATHROOMS TO COMPLY WITH ADA.

WINDOW ELEVATIONS



| WINDOW SCHEDULE AS SHOWN OR EQUIVALENT |                             |                                              |              |            |             | DIVISION 8                                                                       |
|----------------------------------------|-----------------------------|----------------------------------------------|--------------|------------|-------------|----------------------------------------------------------------------------------|
| MARK                                   | ROUGH OPENING SIZE          | TYPE                                         | CONSTRUCTION | GLASS TYPE | HEAD HEIGHT | REMARKS                                                                          |
| 100.1                                  | 4'W x 3 1/2" x 4'H x 3 1/2" | IFSC QUICK SERV - 4040 - B - R<br>MODEL: 181 | ALUM.        | GL-2       | 7'-11 1/2"  | DARK BRONZE ANODIZED (CLASS II, .4 MILS MINIMUM) FINISH, U=.30 MAX, SHGC=.28 MAX |
| 100.2                                  | 4'W x 3 1/2" x 4'H x 3 1/2" | IFSC QUICK SERV - 4040 - B - L<br>MODEL: 180 | ALUM.        | GL-2       | 7'-11 1/2"  | 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.

DOOR, FRAME, & HARDWARE SCHEDULE AS SHOWN OR EQUIVALENT

| DOOR              |         |                                                             |                                          |          |        | DIVISION 8  |        |
|-------------------|---------|-------------------------------------------------------------|------------------------------------------|----------|--------|-------------|--------|
|                   | NO.     | SIZE                                                        | R.O. SIZE                                | MATERIAL | FINISH | FRAME       |        |
|                   |         |                                                             |                                          |          |        | TYPE        | FINISH |
| OFFICE DOOR (1)   | (100.4) | 3'-0" x 6'-8" x 1 3/4" W/ LT KIT & GLASS 1'-11 1/2" X 2'-6" | DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8" | H.M.     | PT     | F1          | H.M.   |
| FRONT DOOR (1)    | (101.1) | 3'-0" x 7' x 1 3/4" W/ LT KIT & GLASS 10" X 10"             | DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8" | H.M.     | PT     | F1          | H.M.   |
| 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.   |
| REAR DOOR (1)     | (101.5) | 3'-6" x 7' x 1 3/4" W/ LT KIT & GLASS 10" X 10"             | DOOR WIDTH + 1-1/4" X DOOR HEIGHT + 5/8" | H.M.     | PT     | F1          | H.M.   |
|                   |         |                                                             |                                          |          |        |             |        |
|                   |         |                                                             |                                          |          |        |             |        |
| DOOR TYPES        |         |                                                             |                                          |          |        | FRAME TYPES |        |
|                   |         |                                                             |                                          |          |        |             |        |

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

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 EDES, 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 UNPENETRATED 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 @ 1" PER FOOT MIN. AND 1/2" 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. 1/2" COVER BOARD SHALL BE INSTALLED OVER RIGID INSULATION TYP. ALL ROOF SURFACES. ALL VERTICAL PARAPET WALLS CONSTRUCTED OF CONCRETE MASONRY UNITS SHALL ALSO RECEIVE 1/2" COVER BOARD, TYP.

CODED NOTES

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

THIS IS A STATE  
APPROVED & INSPECTED  
MODULAR BUILDING

MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING

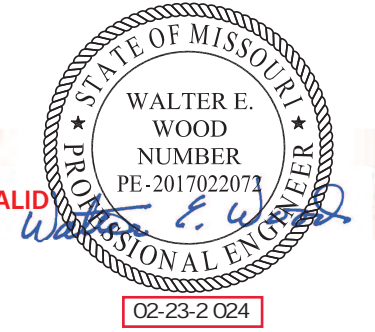
DOOR AND  
WINDOW  
SCHEDULE

Project #  
DRAWING NUMBER:  
**A11.1**

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DATE ISSUED:

VALANT MODULAR, LLC  
15 WEST TOWER CIRCLE, ORLAND BEACH, FL 32174  
(360) 677-3265



CHECKED BY:  
DRAWN BY:



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HVAC DUCTWORK INSULATION:

LOW PRESSURE SUPPLY, RETURN, OUTSIDE AIR, AND EX-HAUST 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 30-85 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-803, DACE #28GA 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 120V/160 ELECTRIC ACTUATORS PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR OR 120V/160 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 EX-HAUST 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-ENERGIZED(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 120V/160 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: .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

04/05/2024

MANUFACTURED  
HOUSING

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MODULAR BUILDING

| REVISION/ UPLOAD DATE |      |             |
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| REV.                  | DATE | DESCRIPTION |
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ALANT  
MODULAR

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

ENGINEER  
STAMP

STATE OF MISSOURI

WALTER E. WOOD  
NUMBER  
PE-2017022073  
VALID  
02-23-2024

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

APPROVED  
2-23-2024  
IWE  
KIM BREWER CARTER & ASSOCIATES

SHEET NAME

MECHANICAL  
SPECIFICATIONS

SHEET NUMBER

M1.2



| REVISION/ UPLOAD DATE |      |             |
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**HWC**

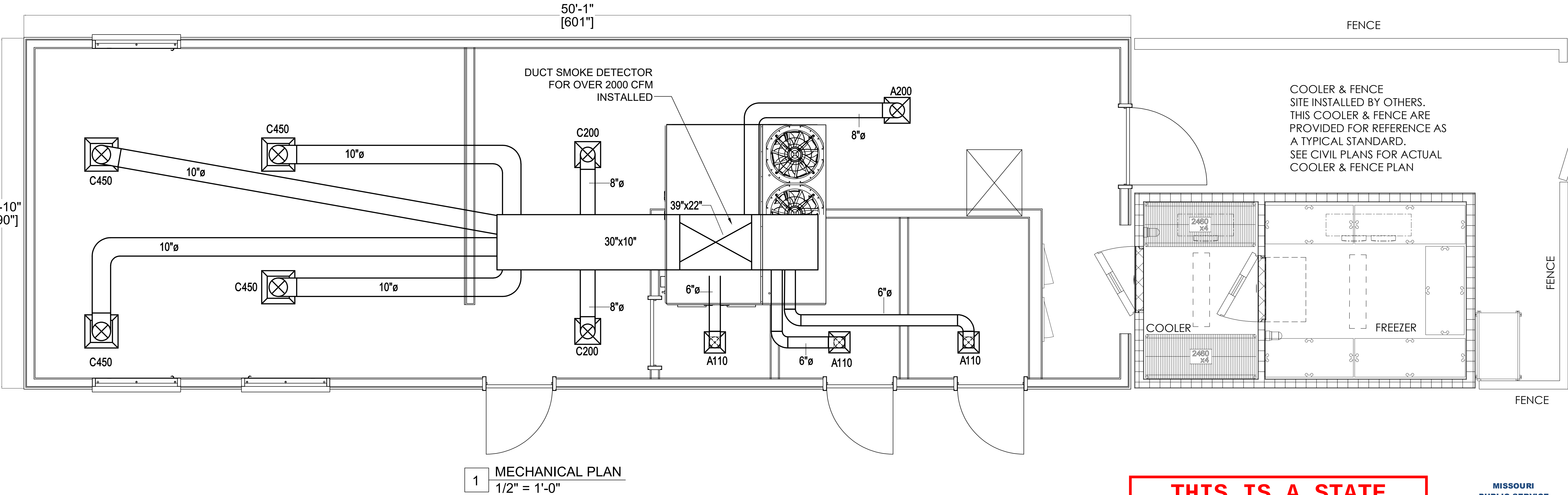
WALTER, CARTER & ASSOCIATES

SHEET NAME

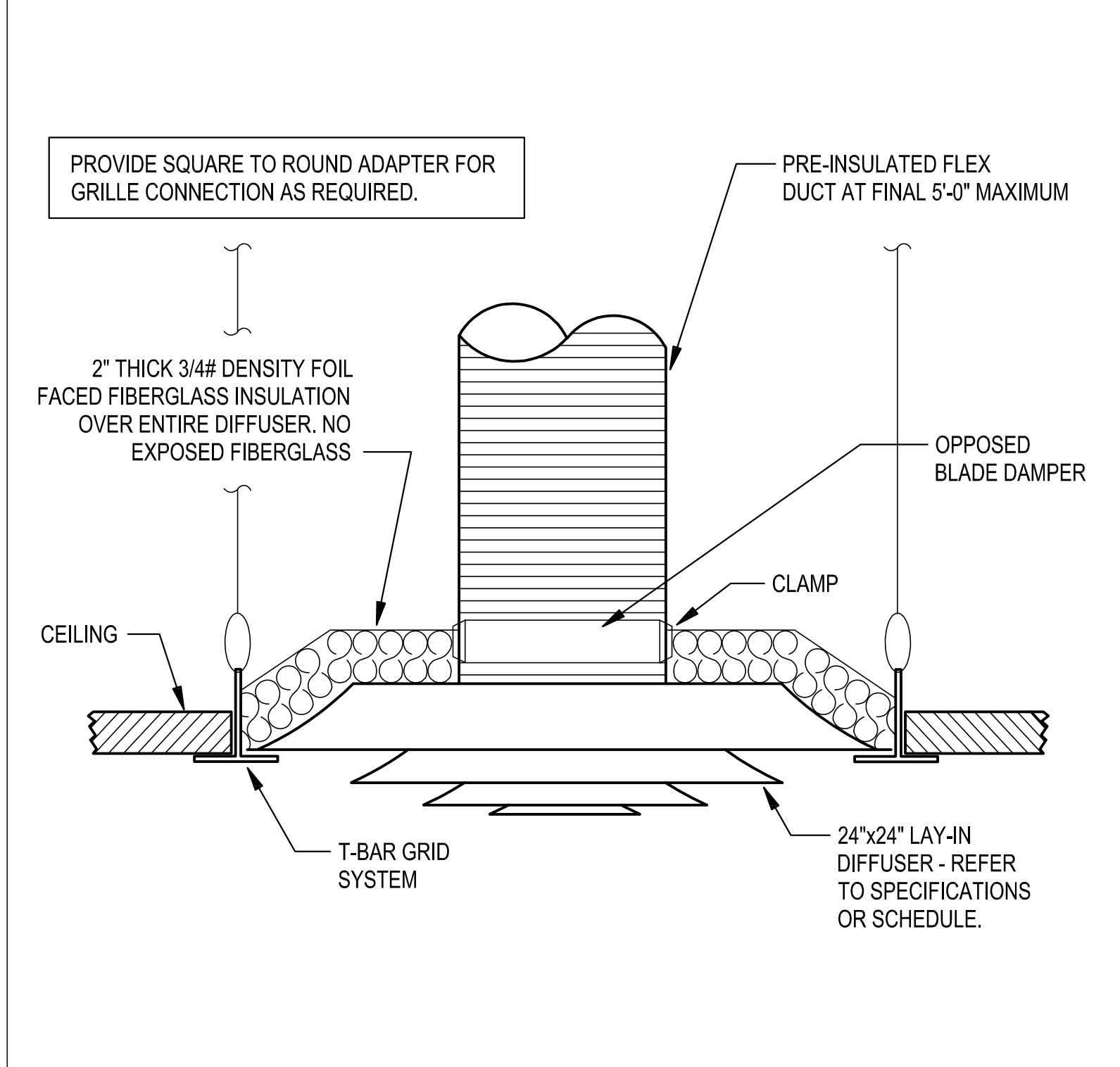
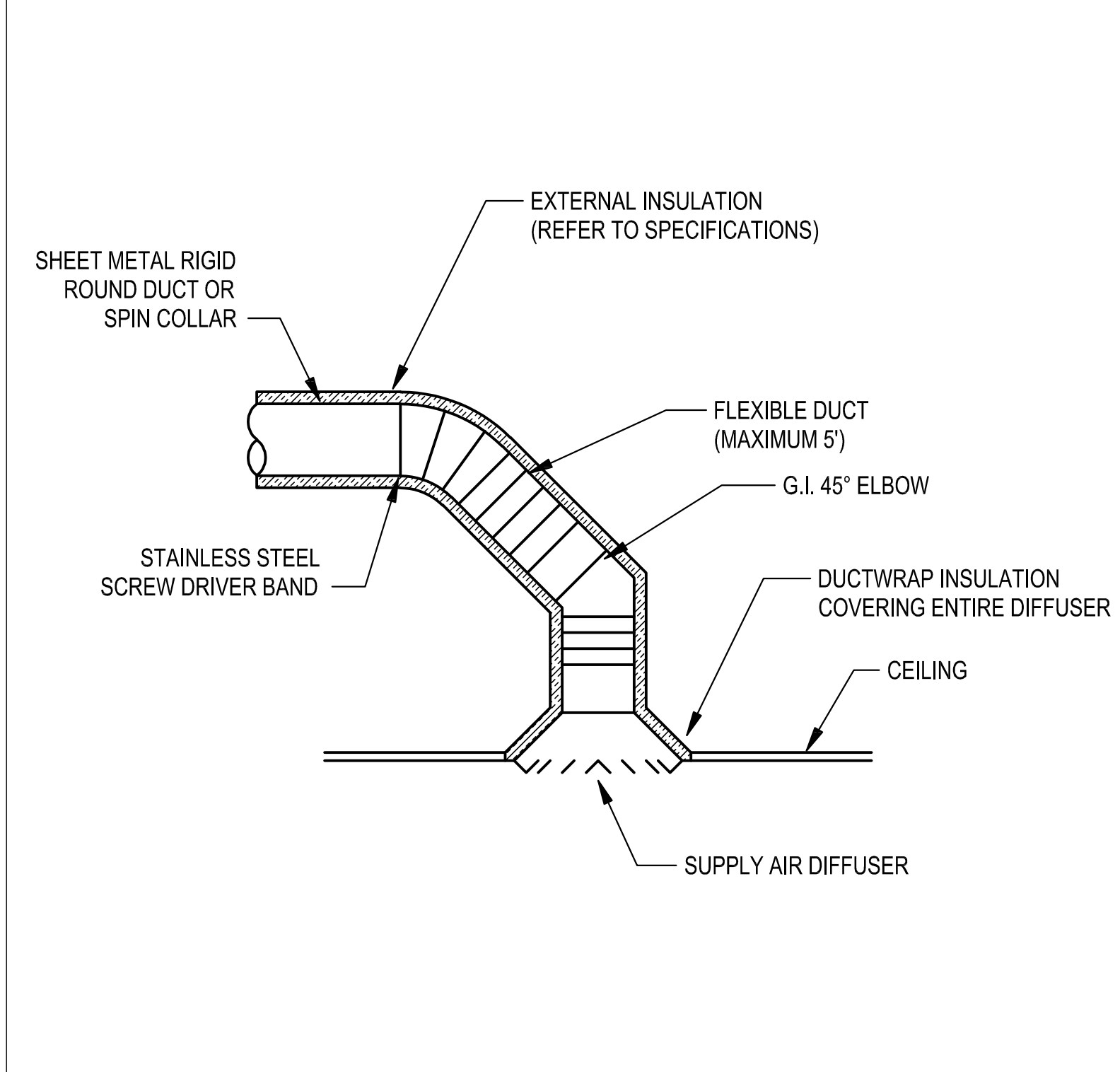
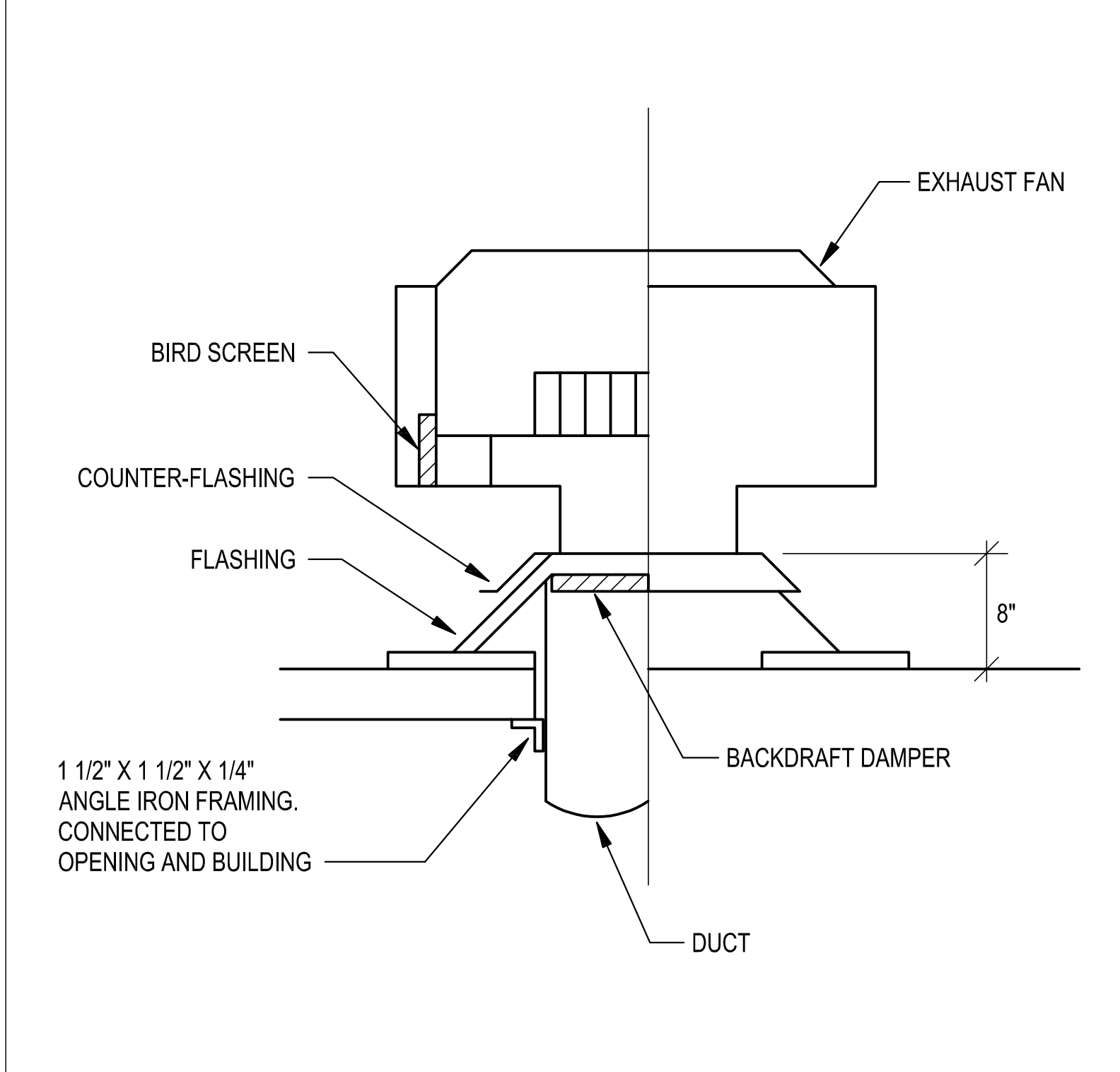
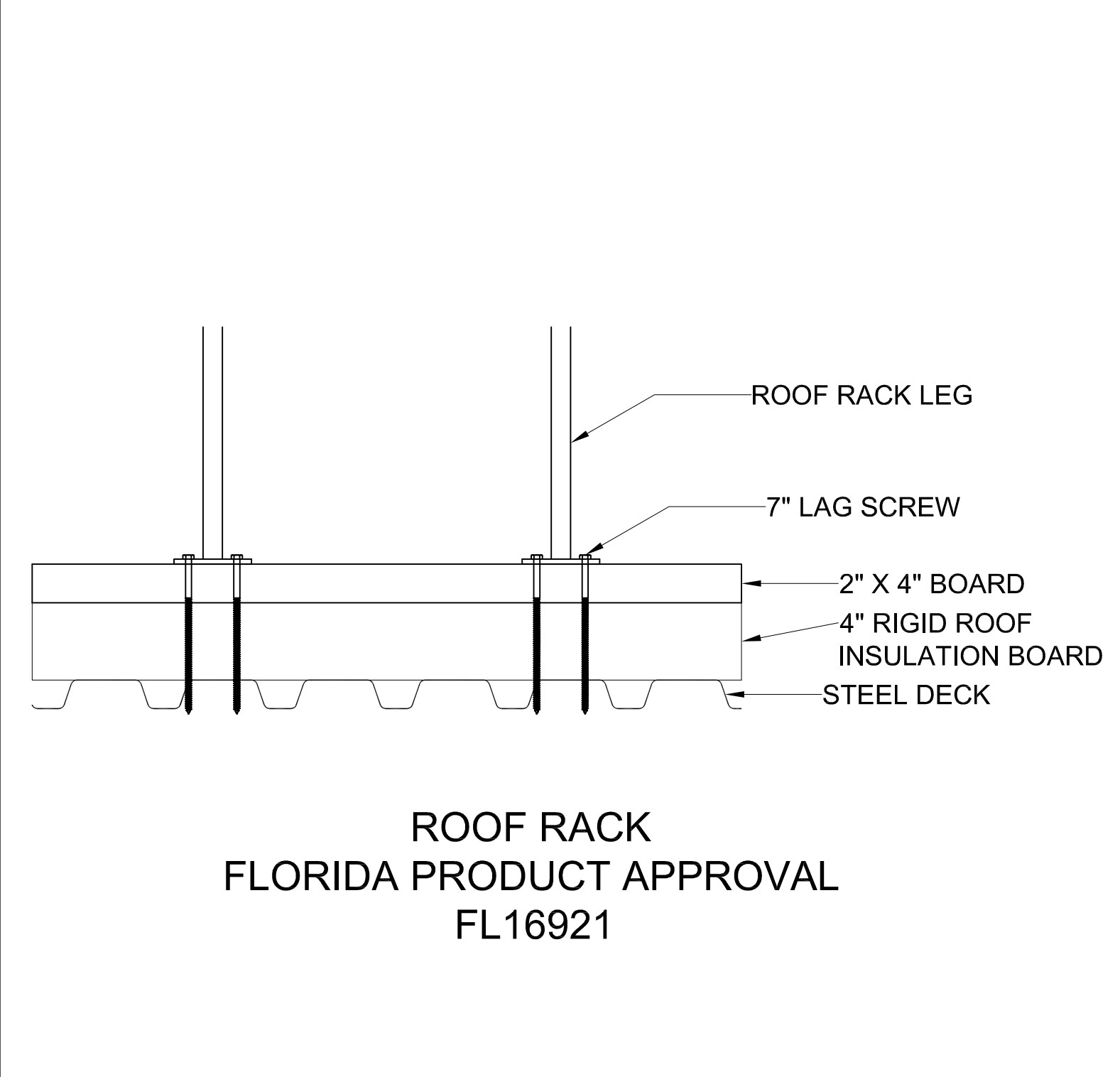
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PLAN

SHEET NUMBER

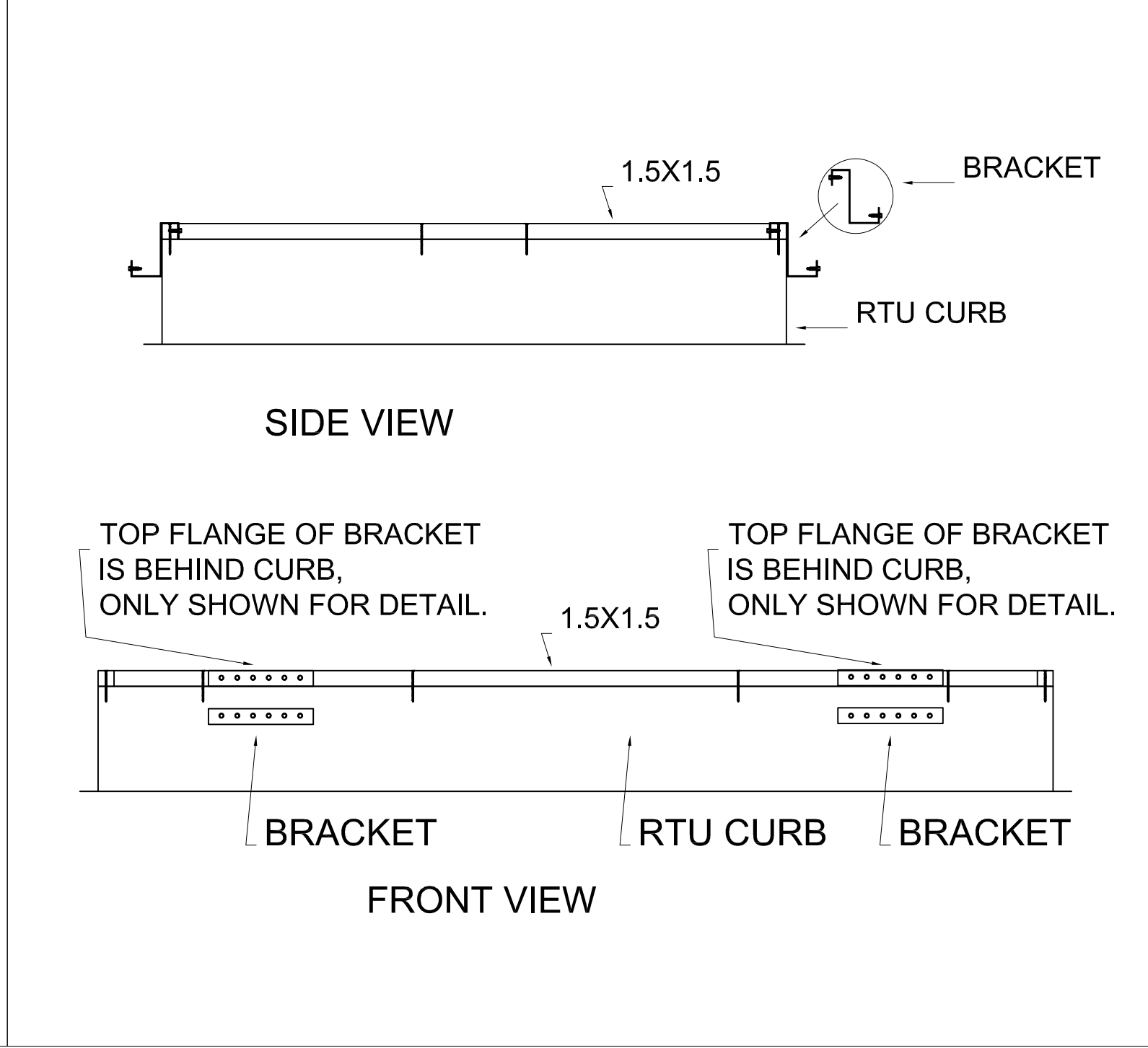
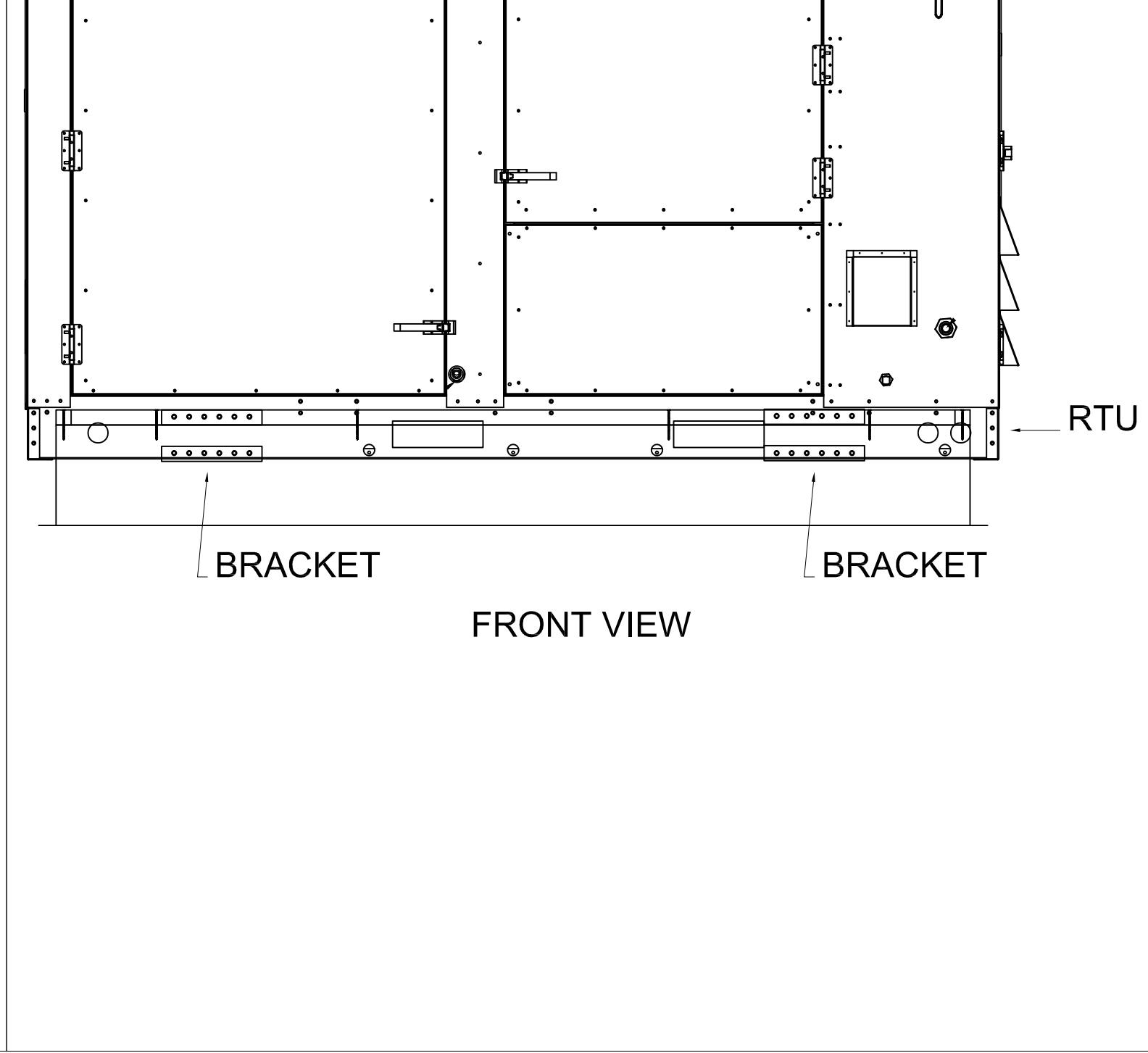
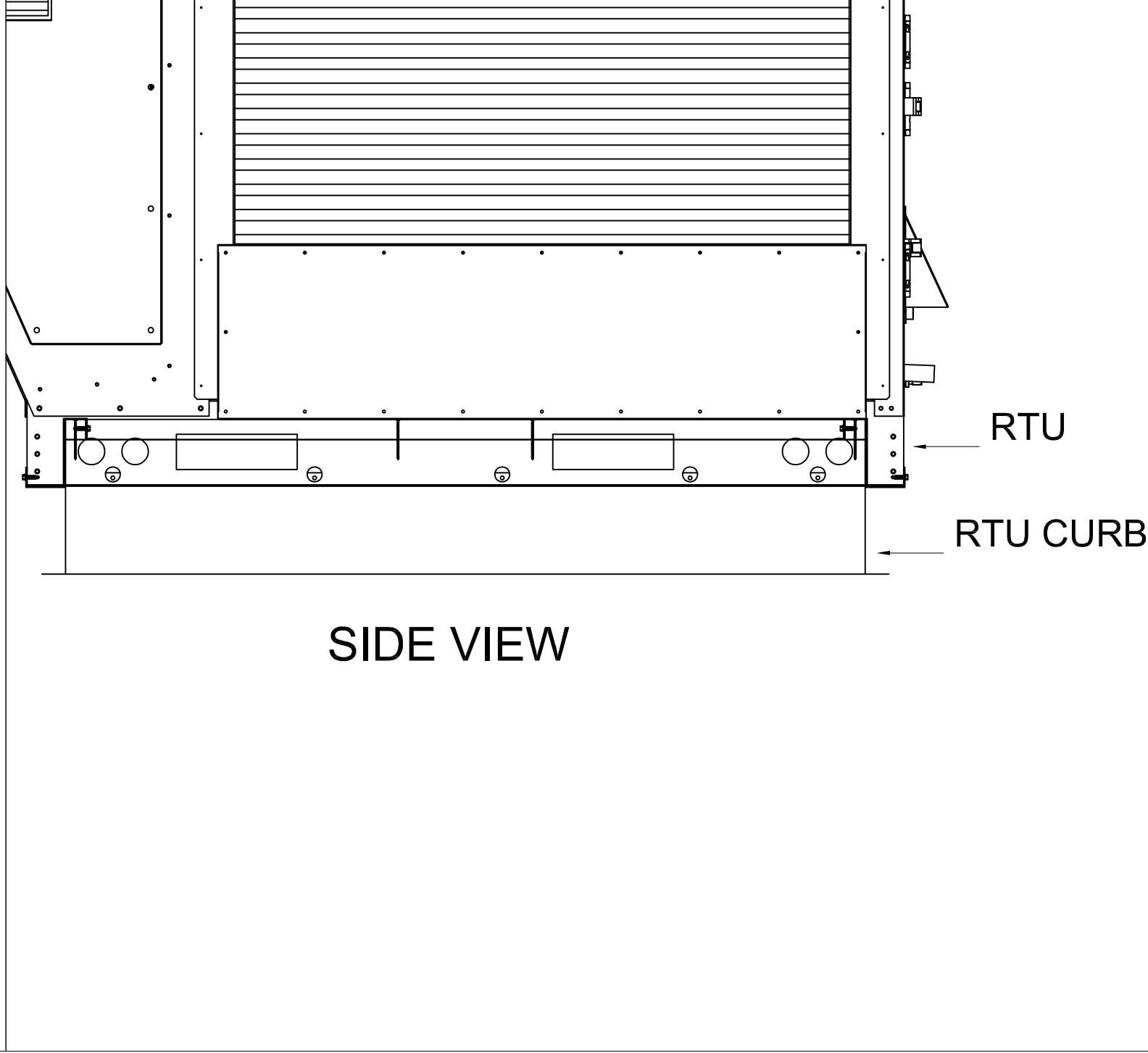
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| DETAIL LEGEND                                       |     |                                    |
|-----------------------------------------------------|-----|------------------------------------|
|                                                     | 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 |     |                                    |



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SHEET NAME

MECHANICAL  
SCHEDULE  
& DETAILS

SHEET NUMBER

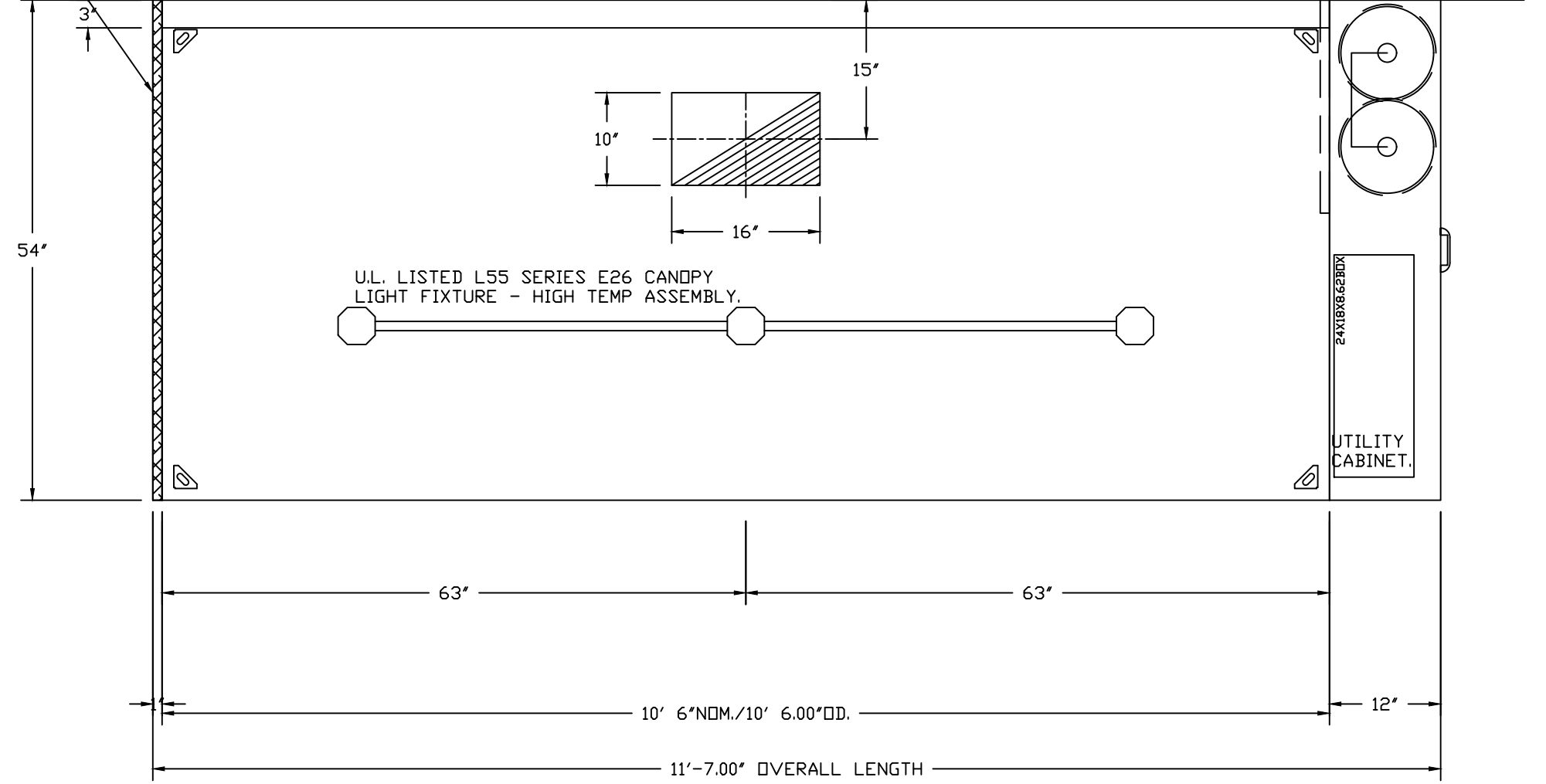
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HOOD INFORMATION - JOB#6580690

| HOOD NO | TAG | MODEL        | MANUFACTURER  | LENGTH | MAX COOKING TEMP | TYPE | APPLIANCE DUTY | DESIGN CFM/FT | TOTAL EXH CFM | EXHAUST PLENUM |      |        |     |      |      |         | HOOD CONSTRUCTION    | HOOD CONFIG |       |
|---------|-----|--------------|---------------|--------|------------------|------|----------------|---------------|---------------|----------------|------|--------|-----|------|------|---------|----------------------|-------------|-------|
|         |     |              |               |        |                  |      |                |               |               | RISER(S)       |      |        |     |      |      |         |                      | END TO END  | RDW   |
|         |     |              |               |        |                  |      |                |               |               | WIDTH          | LENG | HEIGHT | DIA | CFM  | VEL  | SP      |                      |             |       |
| 1       |     | 5424 AH-ND-2 | ADVANCED HOOD | 10' 6' | 450 DEG          | I    | MEDIUM         | 190           | 2000          | 10'            | 16'  | 4'     |     | 2000 | 1800 | -1.004" | 430 SS WHERE EXPOSED | ALONE       | ALONE |

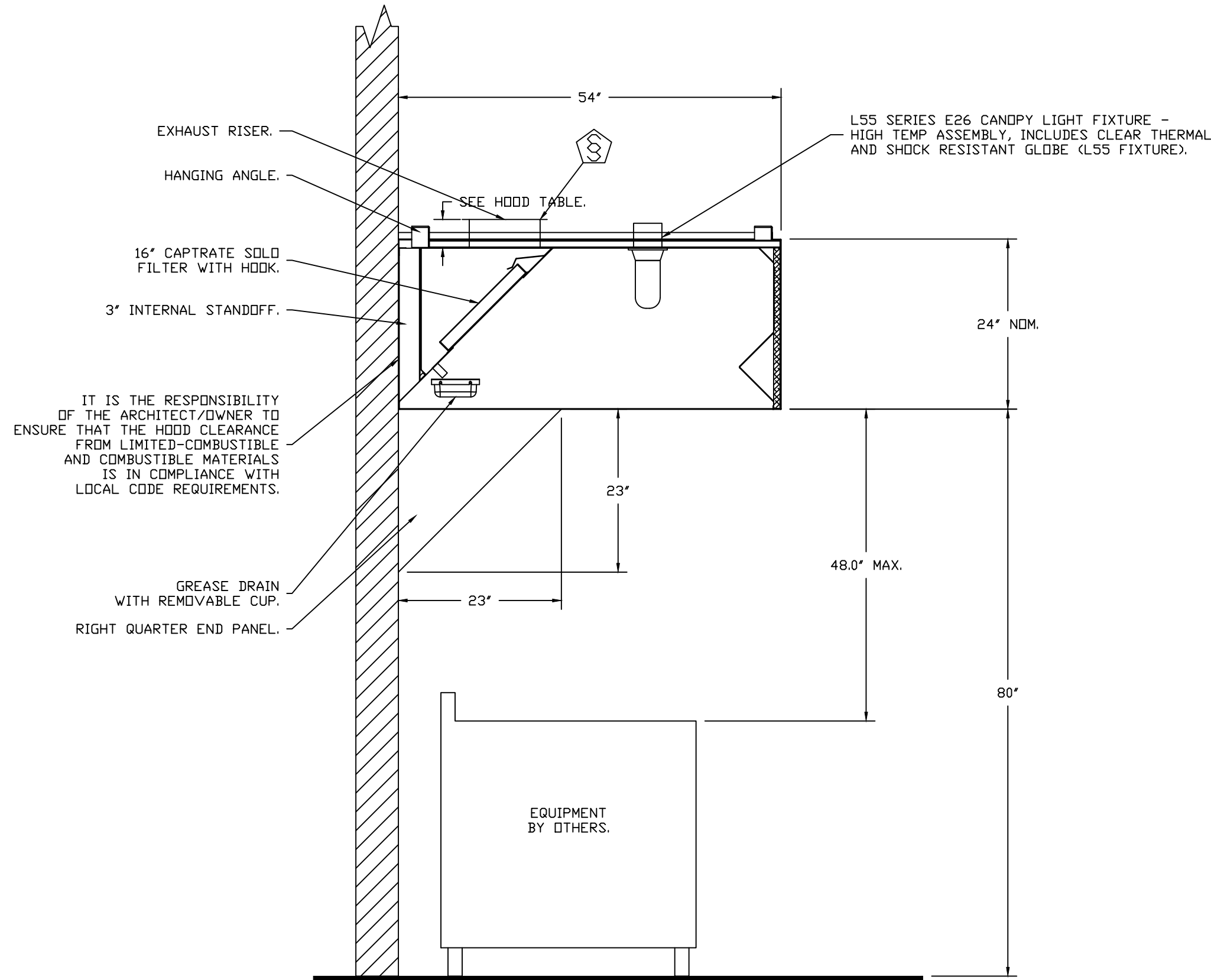
1" LAYER OF INSULATION FACTORY INSTALLED IN 1.00" END STANDOFF MEETS 0" REQUIREMENTS CLEARANCE TO COMBUSTIBLE SURFACES.



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

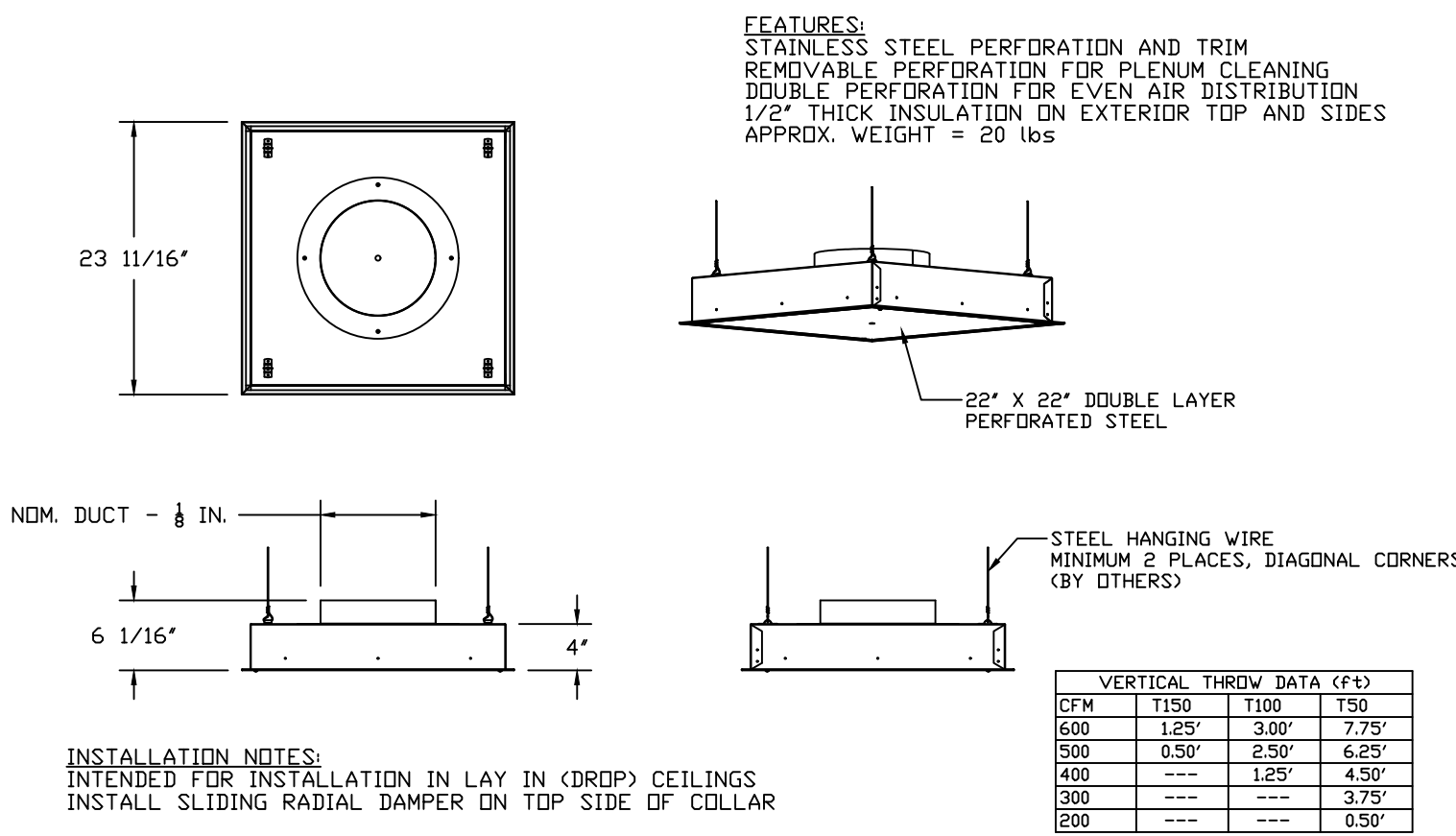
HOOD INFORMATION

| HOOD NO | TAG | TYPE                 | FILTER(S) |        |        | EFFICIENCY @ 7 MICRONS | QTY | LIGHT(S)       |      |  | WIRE GUARD | LOCATION    | SIZE    | UTILITY CABINET(S) |             |                  | ELECTRICAL | FIRE SYSTEM |          | FIRE SYSTEM PIPING | HOOD HANGING WEIGHT |
|---------|-----|----------------------|-----------|--------|--------|------------------------|-----|----------------|------|--|------------|-------------|---------|--------------------|-------------|------------------|------------|-------------|----------|--------------------|---------------------|
|         |     |                      | QTY       | HEIGHT | LENGTH |                        |     | QTY            | TYPE |  |            |             |         | TYPE               | SIZE        |                  | MODEL #    | QUANTITY    | SWITCHES |                    |                     |
| 1       |     | CAPTRATE SOLO FILTER | 7         | 16"    | 16"    | 85% SEE FILTER SPEC    | 3   | L55 SERIES E26 | NO   |  | RIGHT      | 12"x54"x24" | TANK FS | 4.0/4.0            | SC-311110MA | 1 LIGHT<br>1 FAN | YES        | 761 LBS     |          |                    |                     |

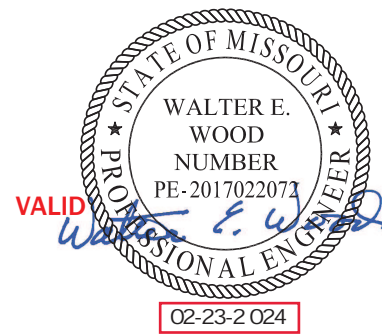


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QTY 7-DROP-IN PERFORATED SUPPLY PLENUM DIFFUSER (DI-PSP)



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REGION 140  
PHONE: 407-269-4813  
EMAIL: scott@advancedhoodsystems.com

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HOOD SYSTEMS  
Advanced Hoods Systems, LLC  
FL PHONE: FAX: 5192275971 EMAIL: juan@advancedhoodsystems.com

SLIDERS

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

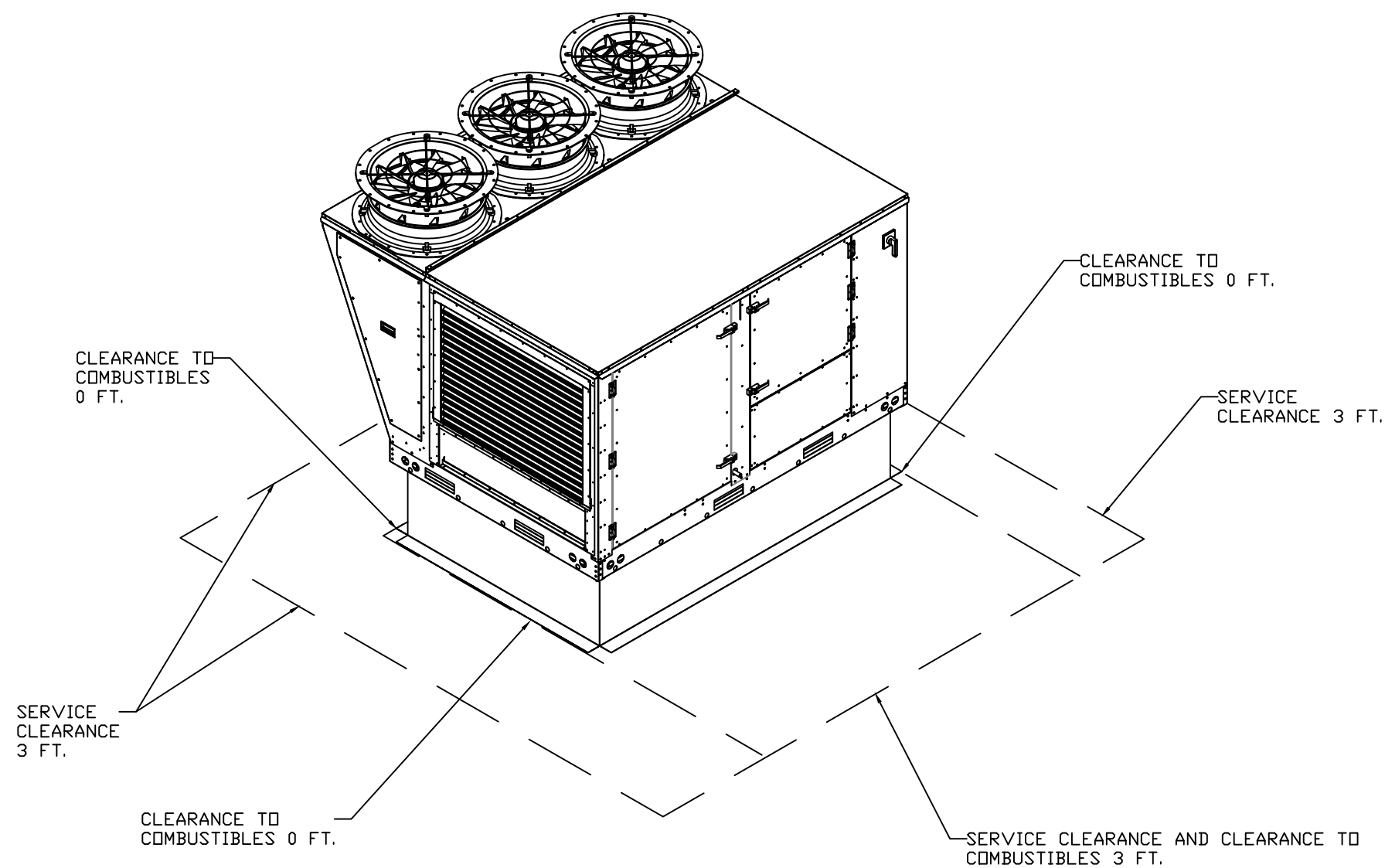
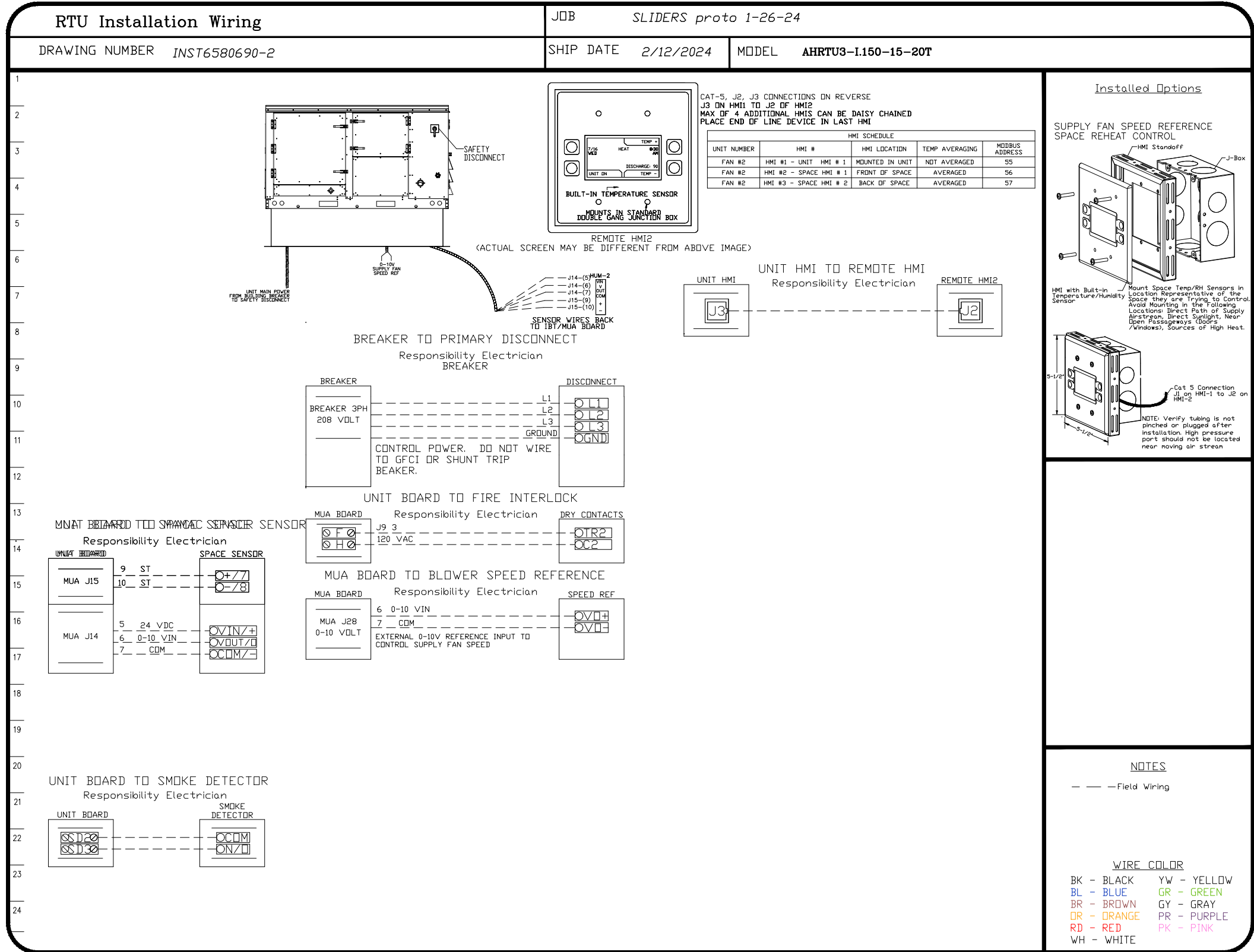


DOAS/RTU FAN SCHEDULE – JOB#6580690

| FAN INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     |                    |               |        |                |                     |           |              |       | ELECTRICAL INFORMATION |       |      |       |      | COOLING INFORMATION |        |             |        |          |        | REHEAT INFORMATION |          |           |     |          | GAS HEAT INFORMATION |                       |           |              |             | NOTES  |           |                             |                          |                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|--------------------|---------------|--------|----------------|---------------------|-----------|--------------|-------|------------------------|-------|------|-------|------|---------------------|--------|-------------|--------|----------|--------|--------------------|----------|-----------|-----|----------|----------------------|-----------------------|-----------|--------------|-------------|--------|-----------|-----------------------------|--------------------------|-------------------------------------|
| FAN UNIT NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TAG | QTY | DOAS/RTU MODEL #   | MANUFACTURER  | BLOWER | RETURN AIR CFM | MAX OUTSIDE AIR CFM | TOTAL CFM | WEIGHT (LBS) | ESP   | HP                     | PHASE | VOLT | MCA   | MDCP | OUTSIDE AIR         |        | LEAVING AIR |        | CAPACITY |        | IEER               | ISMRE    | DISCHARGE |     | CAPACITY |                      | MOISTURE REMOVAL RATE | GAS TYPE  | INPUT BTUS   | OUTPUT BTUS |        | TEMP RISE | REQUIRED INPUT GAS PRESSURE |                          |                                     |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 1   | AHRTU3-1150-15-20T | ADVANCED HOOD | 15P-3  | 0              | 2600                | 2600      | 2494         | 0.500 | 2.00                   | 3     | 208  | 76.4A | 80A  | DB                  | WB     | DB          | WB     | DP       | TOTAL  |                    |          | SENS.     | DB  | WB       | DESIRED              |                       |           |              |             |        |           |                             | MAX                      |                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |     |                    |               |        |                |                     |           |              |       |                        |       |      |       |      |                     | 83.8°F | 79.6°F      | 52.7°F | 48.8°F   | 45.5°F | 264.0 MBH          | 86.3 MBH | 18.2      | 6.0 | 70.0°F   | 56.1°F               | 50.1 MBH              | 129.6 MBH | 159.7 LBS/HR | NATURAL     | 149525 | 121115    | 40°F                        | 7 IN. W.C. - 14 IN. W.C. | 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 |
| NOTES:<br>1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL<br>2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE<br>3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER<br>4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE<br>5. ECM MOTOR CONDENSING FANS<br>6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE<br>7. SUCTION LINE ACCUMULATOR<br>8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER<br>9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)<br>10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE<br>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<br>12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE<br>13. FULLY MODULATING HDT GAS REHEAT<br>14. HAIL GUARD FOR CONDENSING COIL<br>15. DOWN DISCHARGE/NO RETURN |     |     |                    |               |        |                |                     |           |              |       |                        |       |      |       |      |                     |        |             |        |          |        |                    |          |           |     |          |                      |                       |           |              |             |        |           |                             |                          |                                     |

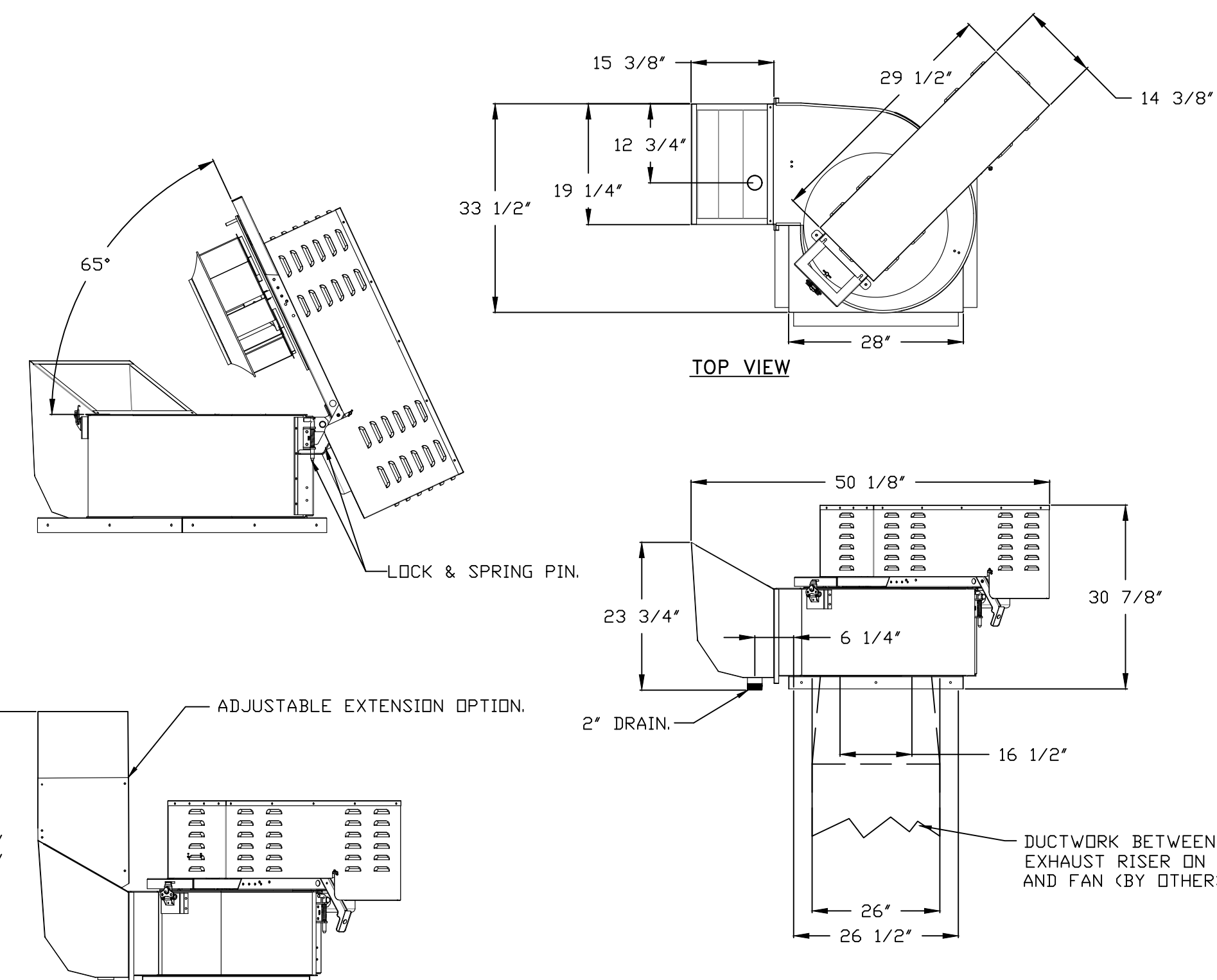
FAN OPTIONS

| 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   | SHIP LOOSE GAS STRAINER 3/4"                                                                                                                                                                           |
|             |     | 1   | CASLINK BUILDING MONITORING SYSTEM – INTERNET OR CELLULAR CONNECTION REQUIRED                                                                                                                          |
|             |     | 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   | RTU FIXED 100% OA INTAKE CONTROL                                                                                                                                                                       |
|             |     | 1   | RTU3 NO RETURN – 100% OA                                                                                                                                                                               |
|             |     | 1   | REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR                                                                                                                                                           |
|             |     | 1   | 120V FIRE INPUT                                                                                                                                                                                        |
|             |     | 1   | OCCUPIED SCHEDULING                                                                                                                                                                                    |
|             |     | 1   | CLOGGED FILTER SWITCH – NOTIFICATION ON HMI                                                                                                                                                            |
|             |     | 1   | RTU3 HAIL GUARD                                                                                                                                                                                        |
|             |     | 1   | 20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS                                                                                          |
|             |     | 1   | 20 TON MODULATING REHEAT OPTION – DISCHARGE DEWPOINT CONTROL                                                                                                                                           |
|             |     | 1   | UNIT MOUNTED VFD CONFIGURED FOR DCV                                                                                                                                                                    |
|             |     | 1   | COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK – ALARM SUPPLIED BY OTHERS                                                                                                                                   |
|             |     | 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) |

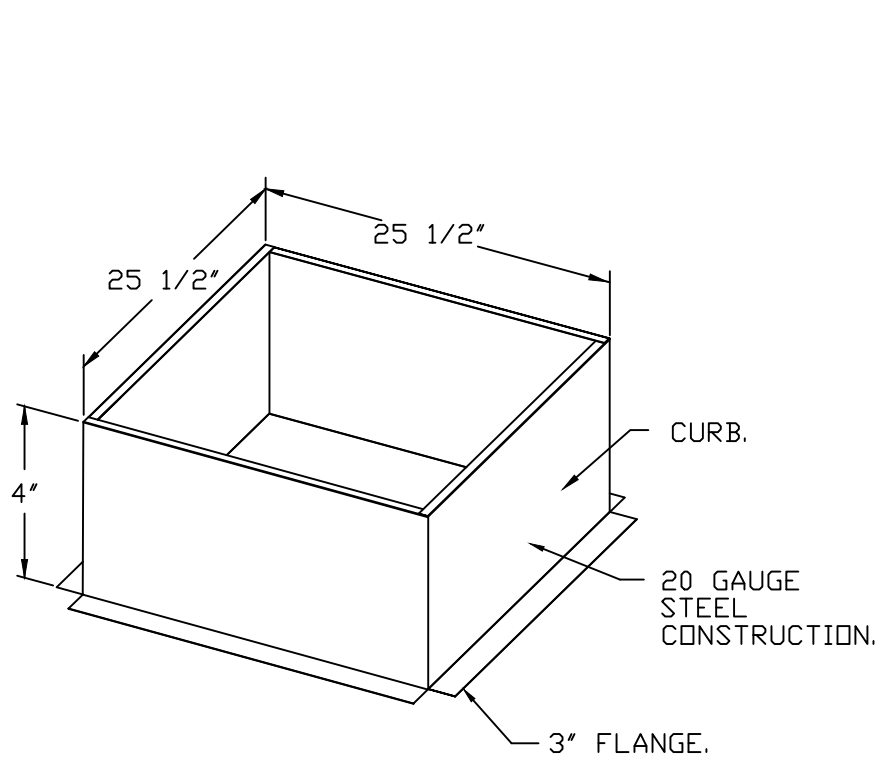


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FAN #1 AH-RE18DD – EXHAUST FAN



CURB #2 CRB25.5X4E



EXHAUST FAN INFORMATION – JOB#6580690

| FAN UNIT NO | TAG | QTY | FAN UNIT MODEL # | MANUFACTURER  | CFM  | ESP   | RPM  | MOTOR ENCL | HP    | BHP    | PHASE | VOLT | FLA | DISCHARGE VELOCITY | WEIGHT (LBS) | SDNES |
|-------------|-----|-----|------------------|---------------|------|-------|------|------------|-------|--------|-------|------|-----|--------------------|--------------|-------|
| 1           |     | 1   | AH-RE18DD        | ADVANCED HOOD | 2000 | 1.000 | 1204 | DDP        | 2.000 | 0.9570 | 3     | 208  | 5.9 | 1160 FPM           | 286          | 15.1  |

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.

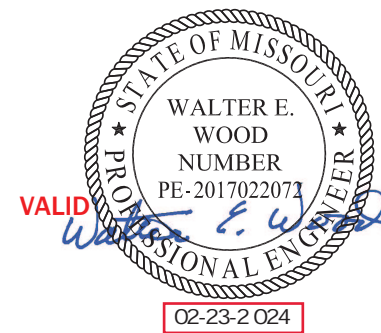
NORMAL TEMPERATURE TEST DIRECT DRIVE EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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.
- RE18 – DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE.
- 2 YEAR PARTS WARRANTY.

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3/4" = 1'-0"

MASTER DRAWING

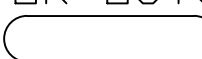
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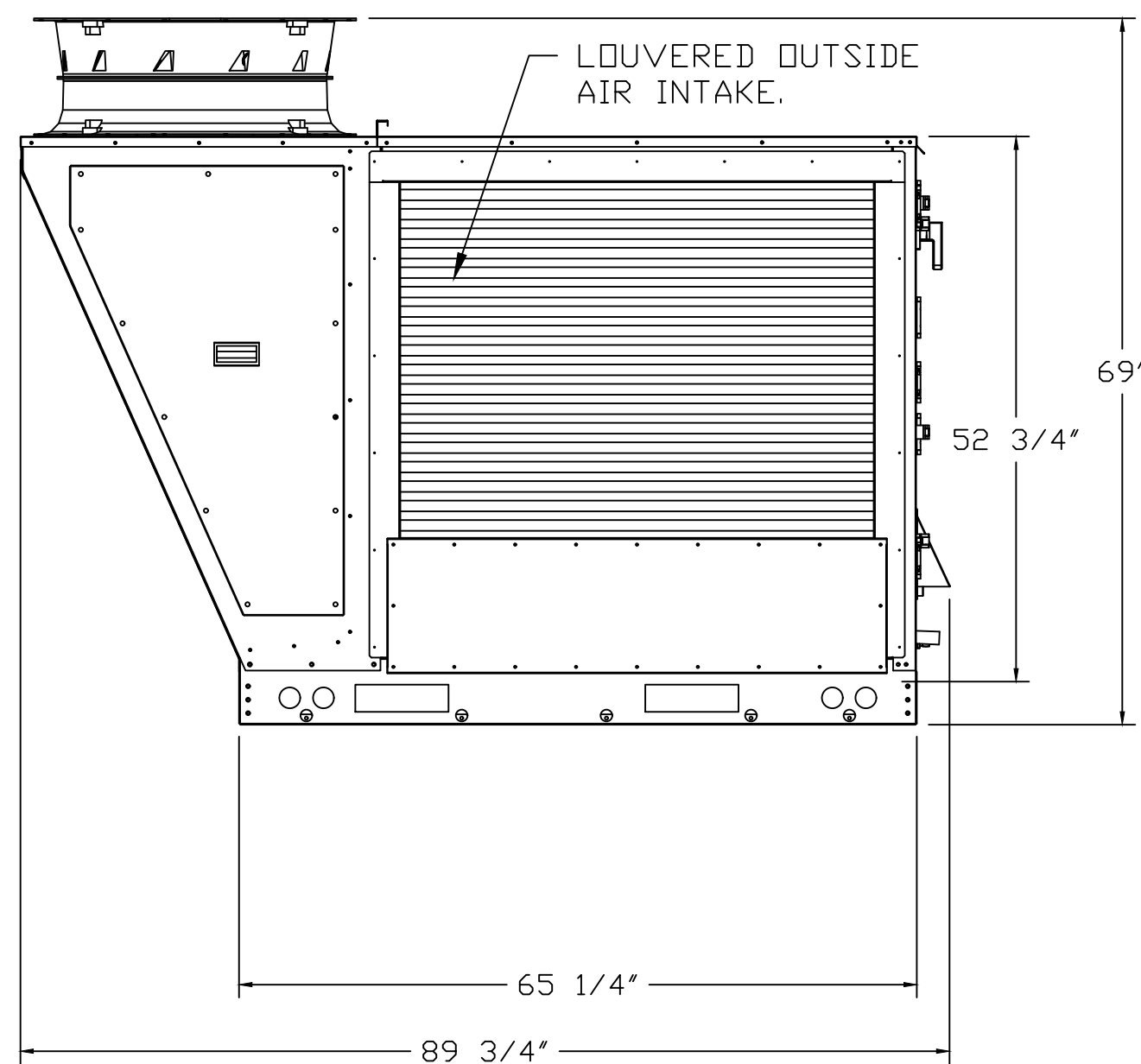
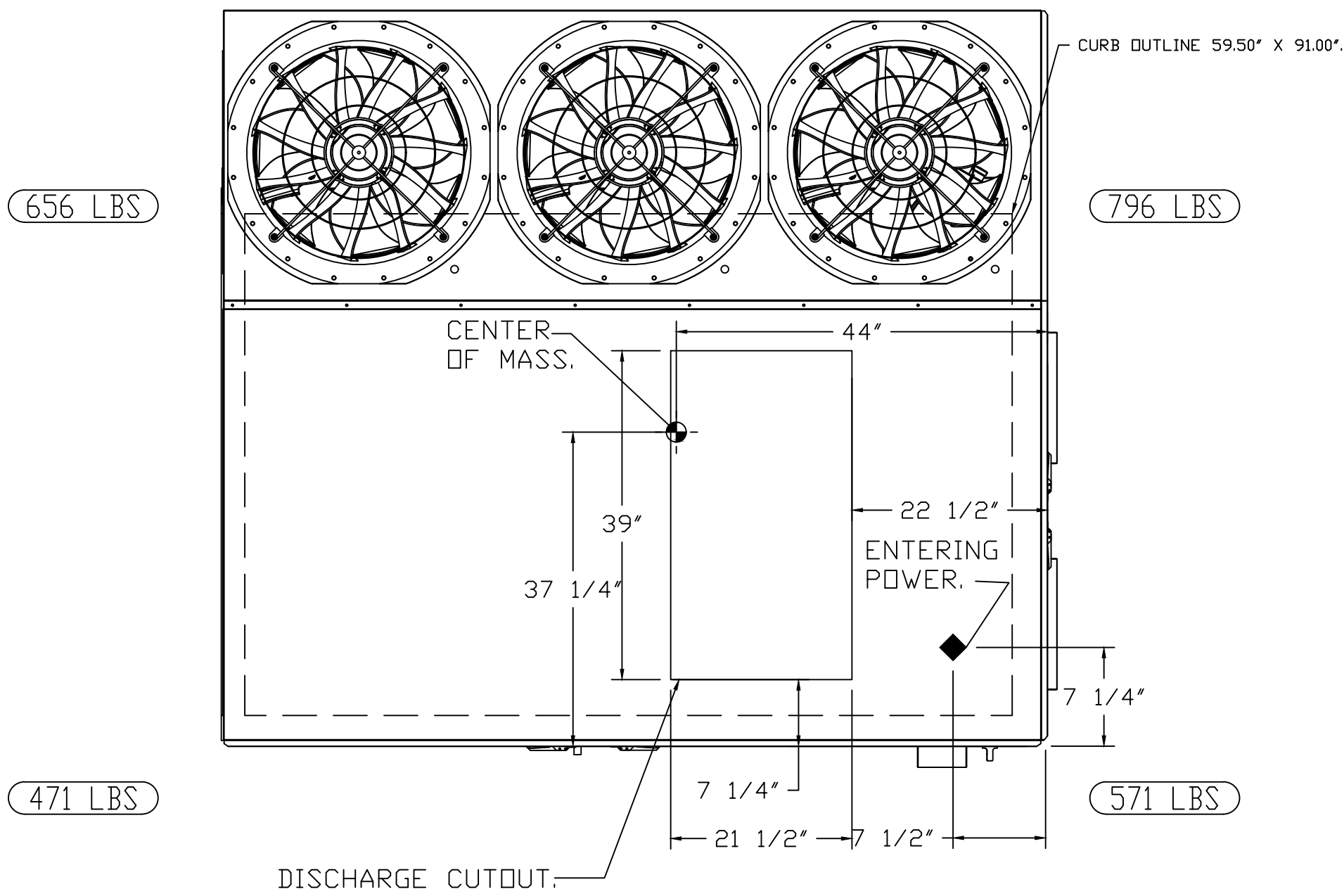
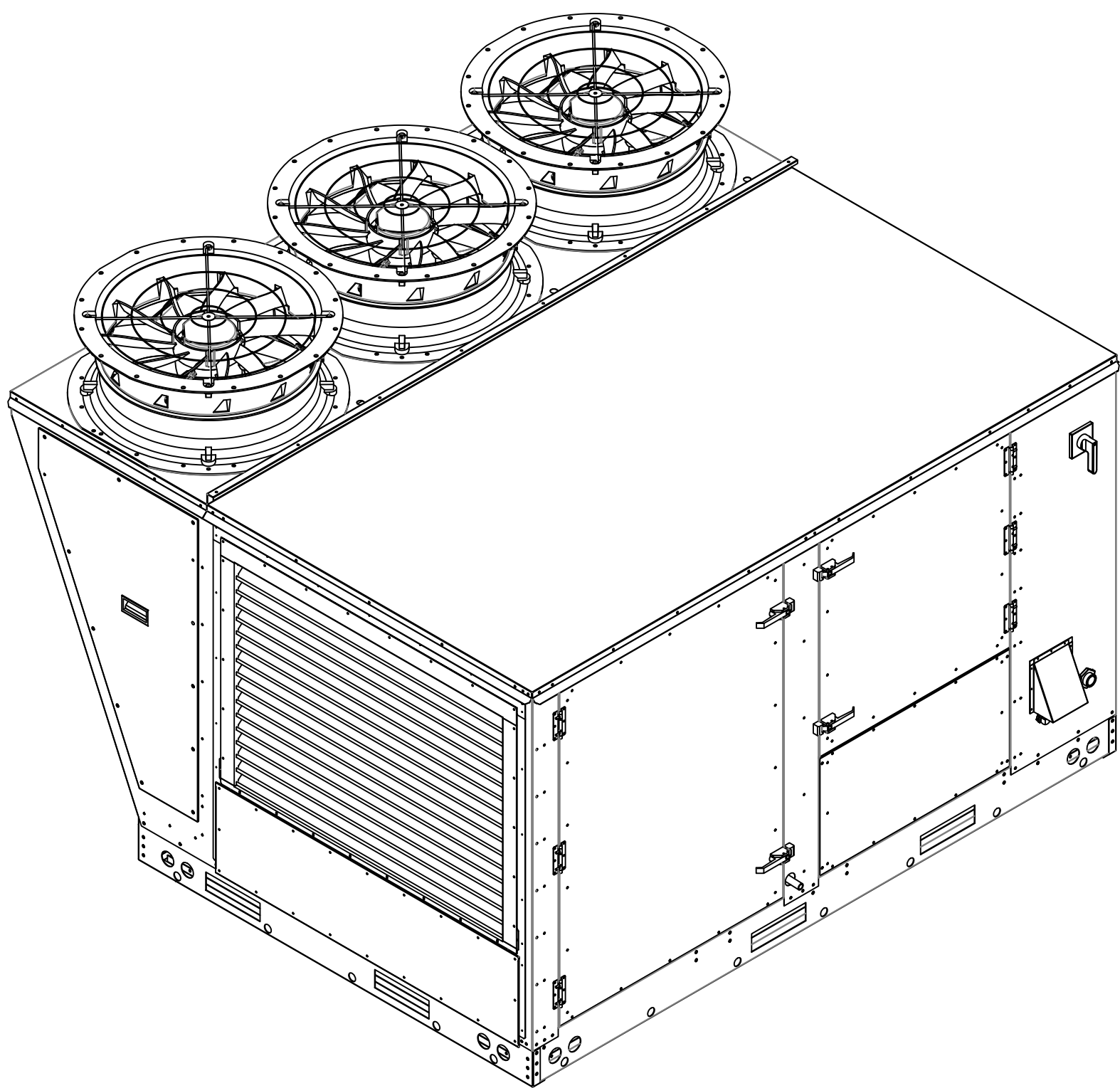


FAN #2 AHRTU3-I.150-15-20T - HEATER

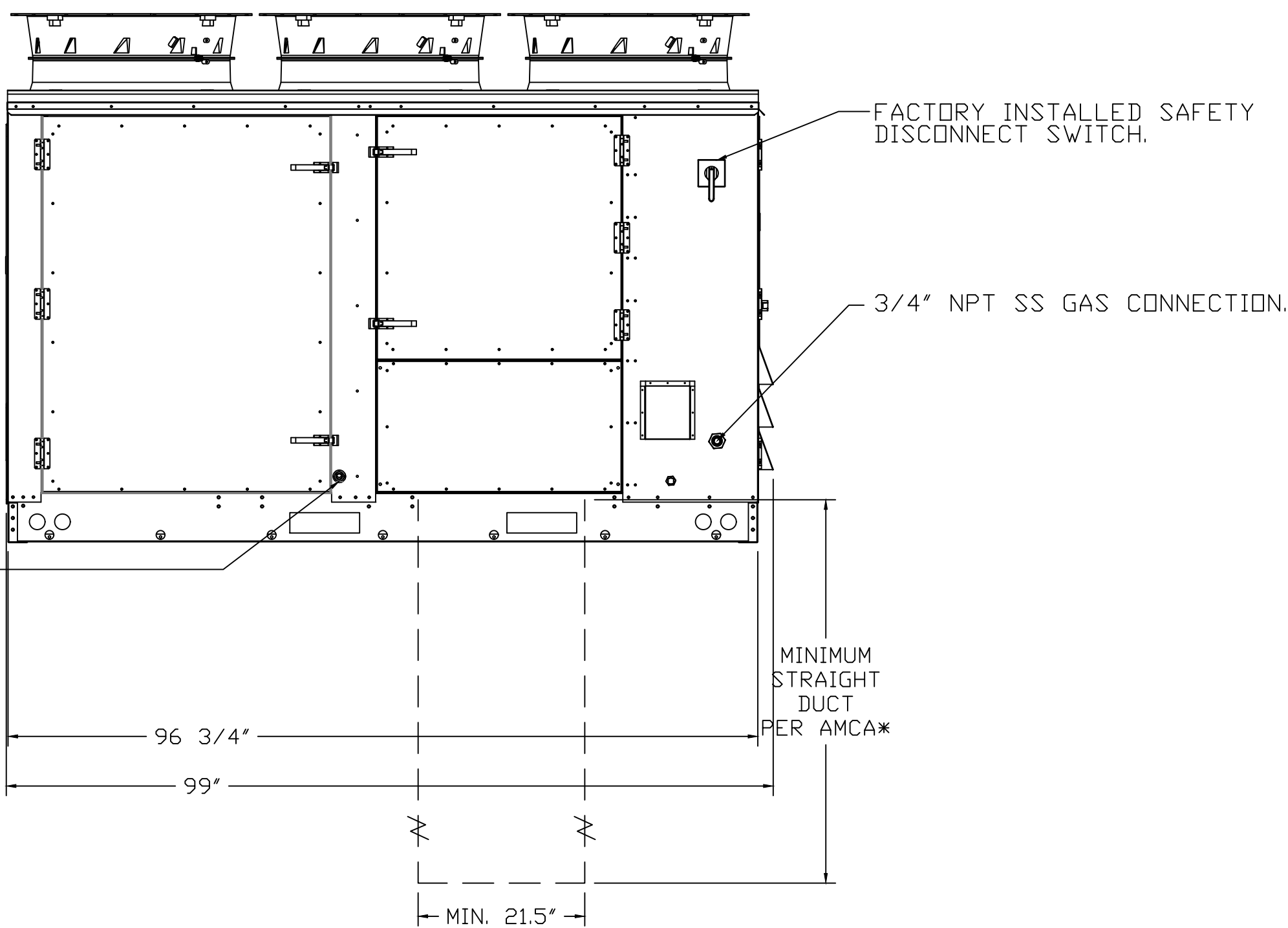
NOTES:

- 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.

\*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 STRAIGHT DUCT SIZE IS 21.5" x 39".

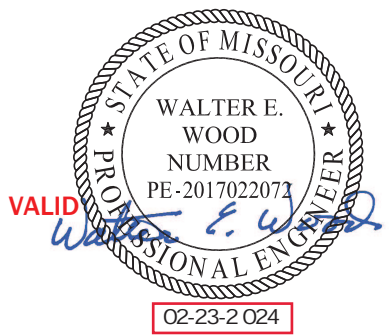


1" NPT SS EVAPORATOR DRAIN (TRAP REQ'D).  
4" MINIMUM TRAP DEPTH.



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BY:

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

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| REVISIONS   |      |
|-------------|------|
| DESCRIPTION | DATE |
|             |      |
|             |      |
|             |      |
|             |      |



| NO | TAG | PACKAGE #   | LOCATION              | SWITCHES              |          | OPTION                                                             | FANS CONTROLLED |   |       |      |     |
|----|-----|-------------|-----------------------|-----------------------|----------|--------------------------------------------------------------------|-----------------|---|-------|------|-----|
|    |     |             |                       | LOCATION              | QUANTITY |                                                                    | TYPE            | ø | HP    | VOLT | FLA |
|    |     |             |                       | UTILITY CABINET RIGHT | 1 LIGHT  |                                                                    |                 |   |       |      |     |
| 1  |     | SC-311110MA | UTILITY CABINET RIGHT | HOOD # 1              | 1 FAN    | SMART CONTROLS THERMOSTATIC CONTROL<br>W/ RELAY ON/OFF WITH SUPPLY | SUPPLY          | 3 | 2,000 | 208  | 6.1 |
|    |     |             |                       |                       |          |                                                                    | EXHAUST         | 3 | 2,000 | 208  | 5.9 |

JOB NO

6580690

MODEL NUMBER

SC-311110MA

DRAWN BY

DOMENIC TIRE

INSTALL

INSTATC

DESCRIPTION OF OPERATION:

2 Phase w/ Control For 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Relay Dr/DRF with Supply Fan, Exhaust Dr/DRF Thermostatically Controlled, Room temperature sensor shipped loose for field installation.

JOB NAME

SLIDERS proto 1-26-24

DATE

8/12/2024

DWG NO

ECF M1-2

The diagram illustrates the electrical connections for the SC-311110MA fire alarm system. It includes four main sections: 1. Pull Station: Shows connections for MS-01 (Micro SW), AUX-01 (Micro SW), Adj-01 (Adj SW), Panel (Panel), and Manual (Manual). 2. Control Panel to Fire System Pull Station: Shows connections for 10100, 10200, 10300, and 10400. 3. Control Panel to Master Fire Board: Shows connections for ECFM02, CAT-5 CONNECTION, and CORE PCB. 4. Interlock Network: Shows connections for SHIELDED TWISTED PAIR, BLACK, RED, and SHIELD, and MASTER CORE.

**JOB NO**: 6580690      **PROJECT NUMBER**: SC-311110MA      **DRAWN BY**: \_\_\_\_\_      **ISOMETRIC TYPE**: \_\_\_\_\_      **DESCRIPTION OF OPERATION:** Fire System M-TANK FS - 40/4.0

**JOB NAME**: SLIDERS proto 1-26-24      **DATE**: 2/12/2024      **DWG NO.**: \_\_\_\_\_      **ECP**: #1-4

# TANK PROTECTION LOW-VOLTAGE DETAIL

10/01/2023 Rev. 3

**ALARM CONTRACTOR:**

- WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCKS(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
- COMPLETE FINAL HOOKUP OF SYSTEM
- VERIFY FINAL FIRE SYSTEM TEST

## FS-1: MASTER

| ALARM CONTRACTOR REQUIREMENT  |                                |                      |                              |              |                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|-------------------------------|--------------------------------|----------------------|------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| ITEM                          | CONNECTION IN PANEL            | CONNECTION IN DEVICE | VOLTAGE                      | AMPERAGE     | COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| MANUAL ACTUATION DEVICE(S)    | 101 AND 104<br>AND 102 AND 103 | 1 & 2                | 24 VDC                       | < 1.0 AMPS   | WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103<br>WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104<br>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<br>IF SURFACE MOUNTED, USE COVER EXTENSION ST1-653B                                                                                                                                                                                                                                                                                                          |  |
| REMOTE FIRESTAT SENSOR(S)     | 21 AND 24<br>22 AND 23         | BLACK AND WHITE      | 24 VDC                       | < 1.0 AMPS   | WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23<br>WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24<br>HIGH TEMP (842°F) #441601GFF9 (WHI) & #441601GFF0 (BLK) WIRE ONLY IF RAN DR HOOD OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE SEE FIGURE 1<br>FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL |  |
| FIRE ALARM CONTACT            | AL1, AL2                       | VARIES               | 20V MAX<br>(AC/DC)           | UP TO 1 AMP  |                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| CORE INTERLOCKS(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,<br>CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC, USE BELDEN 808760 OR SIMILAR WIRE                                                                                                                                                                                                                                        |  |
| TROUBLE CONTACT               | TBC, TBL, TOK                  | VARIES               | MAX 120 VAC                  | UP TO 6 AMPS | WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSURES 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                                                                                                                                                                                                                                                                                    |  |

**FIRE ALARM CONTACT**  
-2 WIRES WIRING TO NORMALLY OPEN CONTACTS CLOSES IN FIRE CONDITION  
-CORE CONTROL PANEL AL1 AND AL2  
-SEE FIGURE 2

**TROUBLE CONTACT**  
-2 WIRES TO NORMALLY OPEN CONTACTS CLOSE IN TROUBLE CONDITION  
-CORE PANEL TERMINALS TBL AND TBC  
-SEE FIGURE 4

**SUPERVISED LOOP**  
-4 WIRES 24VDC CONNECT BLACK WIRES BETWEEN 21 AND 24 IN PANEL, CONNECT WHITE (OR RED) WIRES BETWEEN 22 AND 23 IN PANEL  
-ADDITIONAL FIRESTATS, WIRED IN SUPERVISED LOOP  
-USE HIGH TEMP (842°F) #441601GFF9 (WHI) & #441601GFF0 (BLK) WIRE ONLY IF RAN OVER TOP OF HOOD.  
OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE  
-SEE FIGURE 1

36 INCHES CLEARANCE REQUIRED IN FRONT OF ALL UTILITY CABINET DOORS  
THE PANEL SHALL ALSO BE LOCATED IN AN ACCESSIBLE AREA WHERE THE AUDIBLE AND VISUAL ALARMS CAN BE HEARD AND SEEN

**EXHAUST HOOD**

**FIRE ALARM PANEL**

**CORE INTERLOCK**  
-2 WIRES + SHIELD  
-USE BELDEN 808760 OR SIMILAR WIRE  
-SEE FIGURE 3

**CORE COMMUNICATIONS CABLE**  
-CAT5 CABLE  
-MUST BE INSTALLED TO A LOCAL AREA NETWORK WITH VALID INTERNET ACCESS VIA ETHERNET SWITCH OR WIRELESS ROUTER

**MANUAL ACTUATION DEVICE**  
10 TO 20 FEET FROM HOOD LOCATED NEAR POINT OF EGRESS FROM HOOD

**TROUBLE CONTACT**  
42 TO 48 INCHES ABOVE FLOOR OR LEVEL TO CENTER OF PUSH STATION

**MANUAL ACTUATION DEVICE WIRES**  
-4 WIRES 24VDC WIRE (TERMINAL 1) BETWEEN 102 AND 103  
-WIRE (TERMINAL 2) BETWEEN 101 AND 104  
-ADDITIONAL PULL STATIONS WIRED IN SUPERVISED LOOP  
-USE BELDEN #6320UL OR SIMILAR WIRE  
-SEE FIGURE 1A

**MANUAL ACTUATION DEVICE PART #SC31110Z-FN**  
PROTECTIVE COVER MUST BE INSTALLED

**ELECTRIC**

**GAS**

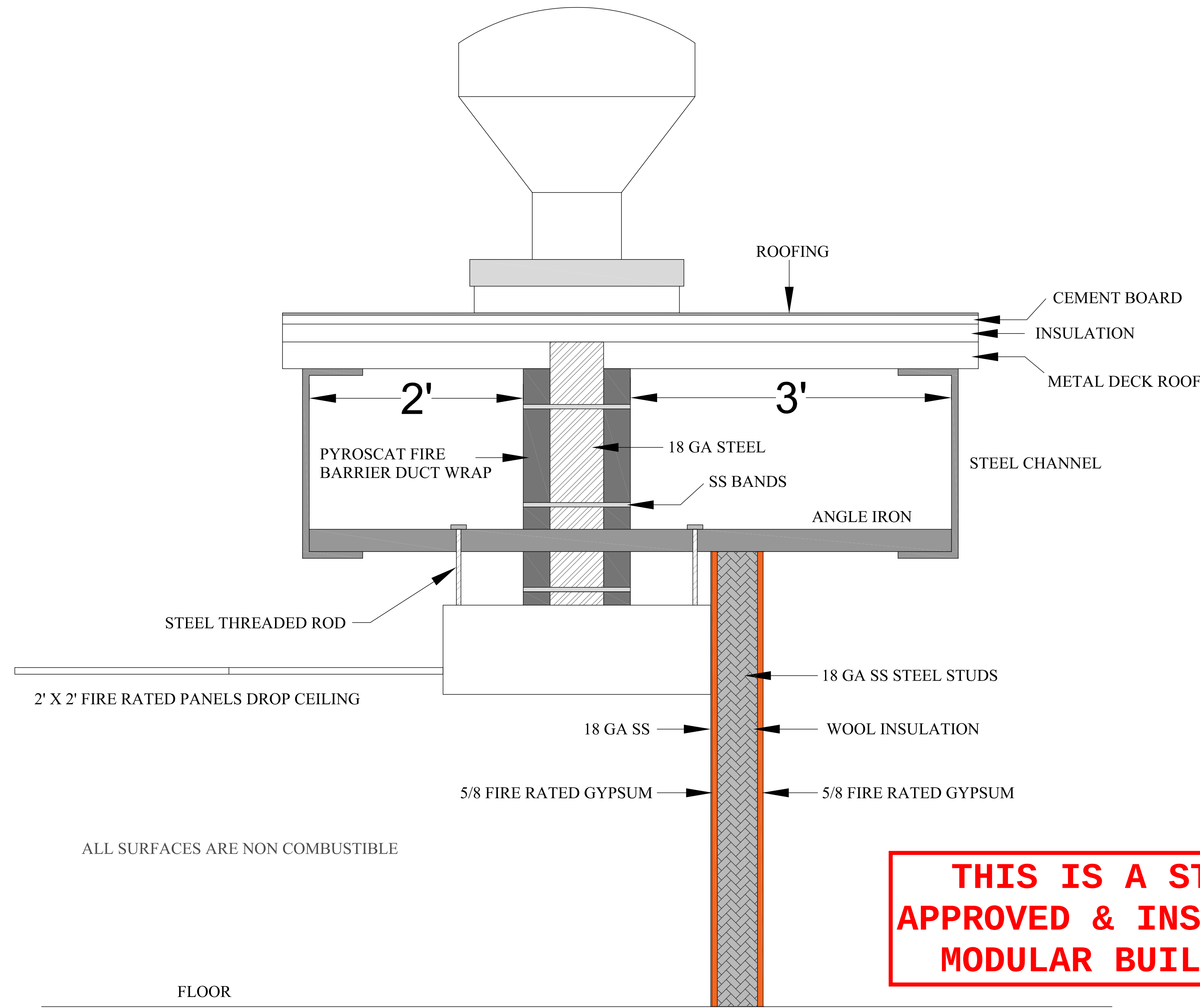
**COOKING APPLIANCES(S)**

**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

**SHEET NO.**





FIREWALL CONSTRUCTED TO  
UL DESIGN NO. W440

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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 UET CLASSIFICATION FOR GREASE DUCT ENCLOSURES AND ULC GREASE AND VENTILATION DUCT ISULATION UNDER FILES FRD-6 AND FRD-7. UL YYET CLASSIFICATION REQUIRES THAT THE SYSTEM MEET THE FOLLOWING:

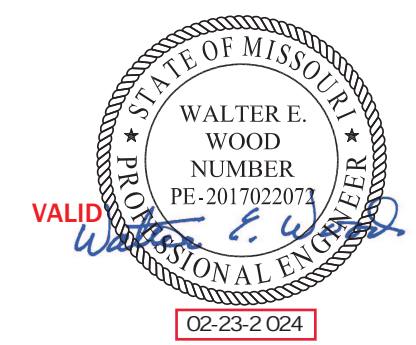
- EXTERNAL FULL SCALE FIRE TEST FOR 1 AND/OR 2 HR FIRE RESISTANCE DUCT ENCLOSURE AND THROUGH PENETRATION PER UL 263 (ASTM E-119) UL 1479 (ATM E-814) WITH HOSE STREAM.
- MINIMUM TEMPERATURE RISE STANDARDS DURING THE 2000° F ABNORMAL TEMPERATURE TEST PER "UL SUBJECT 1978 PROPOSED FIRST EDITION OF THE STANDARD FOR GREASE DUCTS".
- 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.

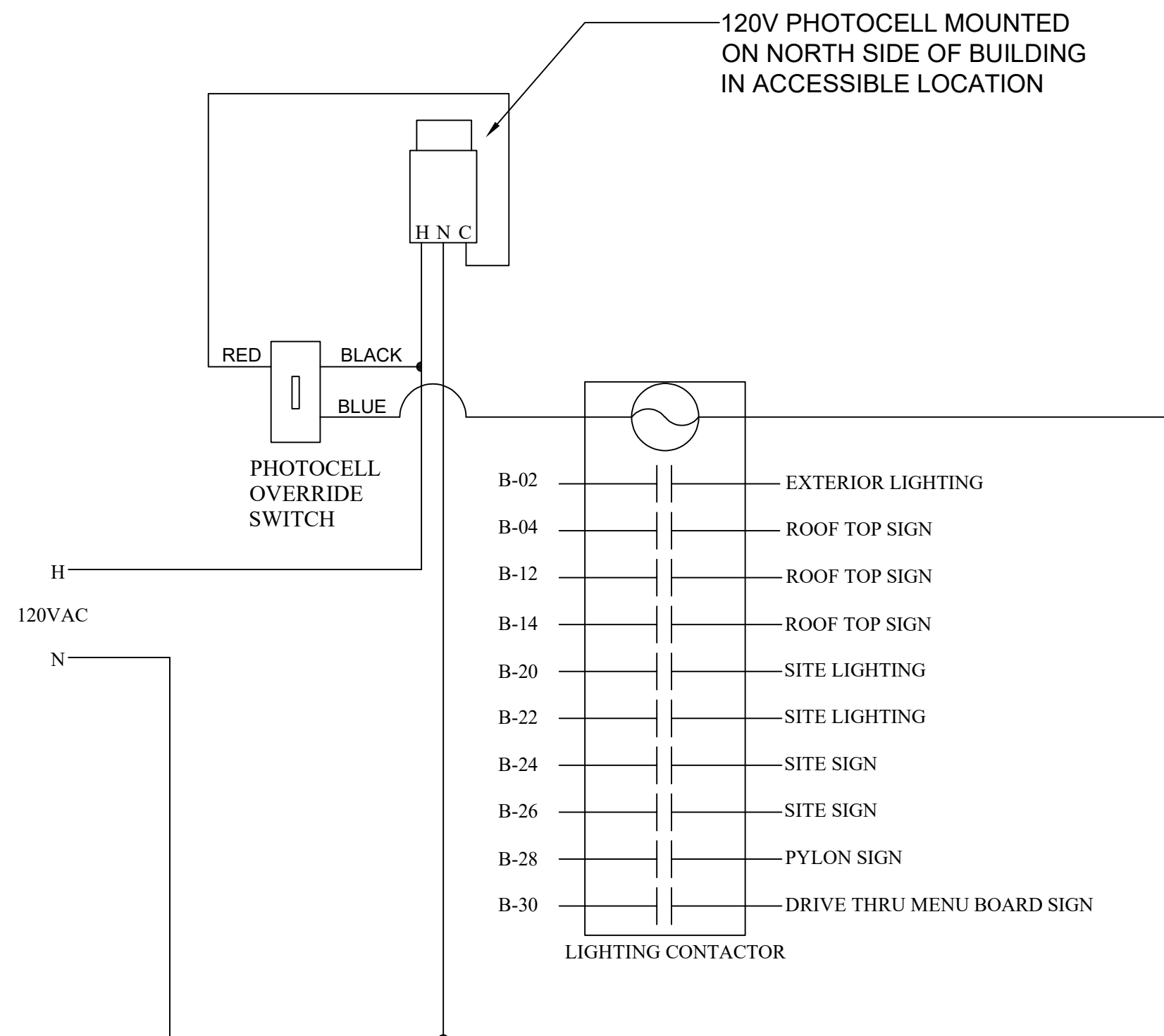
MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING



| REVISION                                                                                           |      | UPLD        | DATE |
|----------------------------------------------------------------------------------------------------|------|-------------|------|
| REV.                                                                                               | DATE | DESCRIPTION |      |
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| LAST DESIGN BULLETIN                                                                               |      |             |      |
|                                                                                                    |      |             |      |
| DATE ISSUED:                                                                                       |      |             |      |
| VALIANT EQUIPMENT, LLC<br>15 WEST TOWER CIRCLE, OAKLAND BEACH, FL 32174<br>CNS 407-468             |      |             |      |
| DRAWN BY:                                                                                          |      |             |      |
| CHECKED BY:                                                                                        |      |             |      |
| Title: Perry, HWC & Ass. Inc.<br>1027 South Florida Ave.<br>Clearwater, FL 34616<br>(717)-384-8151 |      |             |      |
| Project #                                                                                          |      |             |      |
| DRAWING NUMBER:<br><b>FIRE WALL</b>                                                                |      |             |      |



| 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 WPLED26YE, 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 ILPNLDPHYZXZWTCT, 120V, 5000K                                  | LED       | 12       | 40    |                        |
| R2         | INTERIOR 2' X 2' ADJUSTABLE EMERGENCY PANEL LIGHT - RZ LIGHTING ILPNLDPHYZXZWTCT, 120V, 5000K, POWER PACK FOR BACKUP | LED       | 7        | 40    |                        |



# EXTERIOR LIGHTING CONTROL WIRING DIAGRAM

N.T.S. 

## GENERAL NOTES

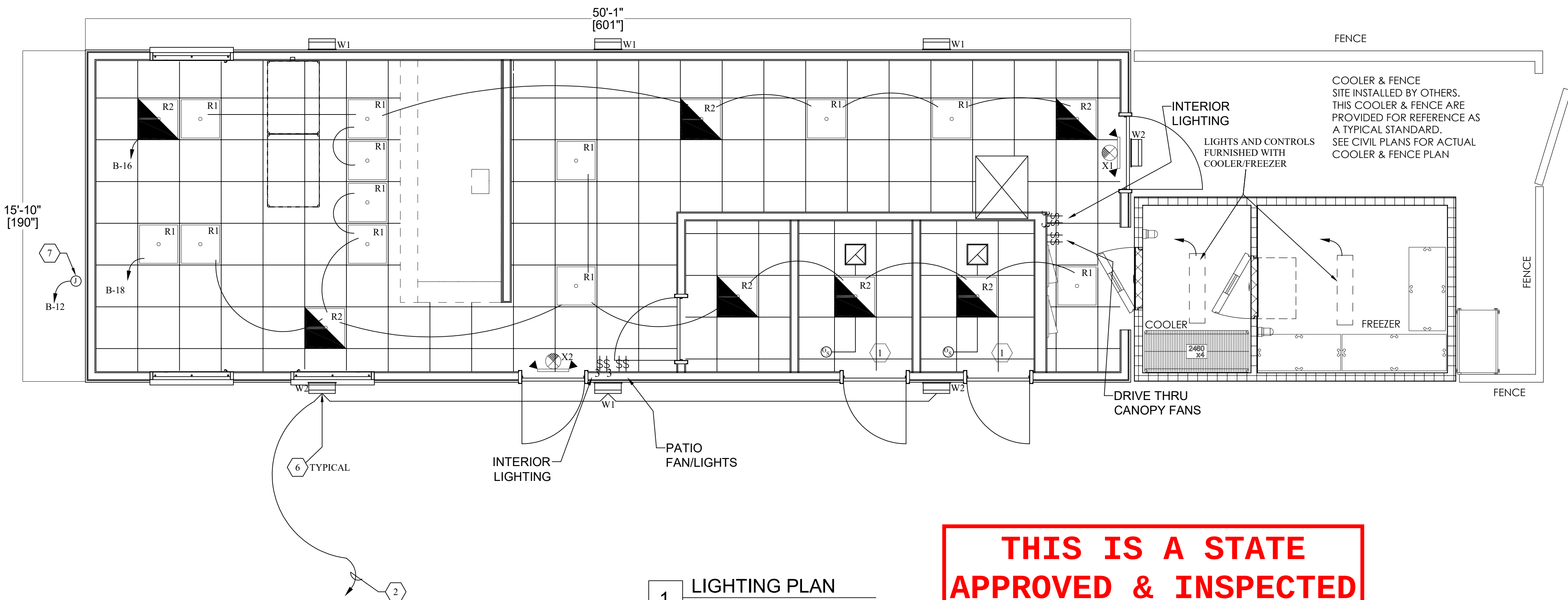
1. "EM" UNITS SHALL BE FOR OPERATION ON 120 VOLT SINGLE PHASE WITH NUMBER OF HEADS AS INDICATED ON THE PLAN. UNITS SHALL BE PLUG-IN TYPE WITH SEALED PURE LEAD BATTERIES. THE CHARGER SHALL BE COMPLETE AUTOMATIC, SOLID STATE TYPE CAPABLE OF FULLY RECHARGING DISCHARGED BATTERY IN 24 HRS. TRANSFER DEVICE 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. SF
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 #

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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/E.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/E.1 FOR CONTROLS.
9. SEE SITE PLAN FOR LOCATION OF DRIVE THRU MENU BOARD AND SIGN. REFER TO DETAIL A/E.1 FOR CONTROLS.

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HOUSING**



**THIS IS A STATE  
APPROVED & INSPECTED  
MODULAR BUILDING**

| SYMBOLS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE:</b> 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.</p> <p>⊕ CEILING MOUNTED OCCUPANCY SEE DETAIL 3/E1.1. SENSOR: HUBBELL #ATP900C.</p> <p>□ WALL MOUNTED PUSH BUTTON @ 48"</p> <p>⊖ PHOTOIONIZATION DETECTOR-DUCT MOUNTED</p> <p>⊡ REMOTE ANNUNCIATOR/TEST STATION @ 60"</p> <p>⊕ SINGLE PHASE MOTOR</p> <p>⊕ THREE PHASE MOTOR</p> <p>⊕ 120 VOLT SIMPLEX RECEPTACLE @ 16"</p> <p>⊕ 120 VOLT DUPLEX RECEPTACLE @ 16"<br/>WP = WEATHERPROOF<br/>GFI = GROUND FAULT INTERRUPTER<br/>IG = ISOLATED GROUND</p> <p>⊕ 120 VOLT DOUBLE DUPLEX (QUAD) RECEPTACLE @ 16"</p> <p>⊕ 120 VOLT SIMPLEX CEILING MOUNTED RECEPTACLE</p> <p>⊕ 120 VOLT DOUBLE DUPLEX CEILING MOUNTED RECEPTACLE</p> <p>▲ DATA/TELEPHONE OUTLET BOX @ 16"</p> <p>△ DATA OUTLET BOX @ 16"</p> <p>▲ TELEPHONE OUTLET BOX @ 16"</p> <p>⊕ 208V OR 120/208V RECEPTACLE @ 16"</p> <p>⊕ JUNCTION OR PULL BOX</p> <p>□ EQUIPMENT DISCONNECT SWITCH @ 60"</p> <p>▭ LIGHTING/POWER PANELBOARD</p> | <p>⊕ CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE.</p> <p>▭ WALL MOUNTED EXTERIOR LIGHTING FIXTURE.</p> <p>⊖ CEILING MOUNTED RECESSED LIGHTING FIXTURE 2'X4'.</p> <p>⊖ CEILING MOUNTED RECESSED LIGHTING FIXTURE 2'X2'.</p> <p>⊖ CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE 1'X4'.</p> <p>▭ CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. EMERGENCY LIGHT.</p> <p>▭ CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. EMERGENCY LIGHT.</p> <p>▭ CEILING MOUNTED SURFACE/RECESSED LIGHTING FIXTURE, TYPE AS INDICATED. EMERGENCY LIGHT.</p> <p>⊕ WALL/CEILING MOUNTED COMBINATION EQUIPMENT LIGHTING / EXIT SIGN FIXTURE-BATTERY TYPE. SHADED QUADRANT INDICATES ILLUMINATED FACE, ARROW INDICATES "DIRECTIONAL ARROW" POSITION(S).</p> <p>⊕ REMOTE MOUNTED EMERGENCY LIGHTING FIXTURE.</p> <p>⊕ POLE MOUNTED LIGHTING FIXTURE</p> <p>⊕ 2 ⊕ a WALL SWITCH, NUMBER INDICATES 2, 3, OR 4 POLE, LETTER INDICATES FIXTURE(S) TO BE CONTROLLED BY SWITCH @ 48"</p> <p>PPI-1,3,5 CIRCUIT RUN TO PANELBOARD DESIGNATION. INDICATES CIRCUIT NUMBERS. INDICATES PANEL DESIGNATION.</p> <p>→ CIRCUIT RUN TO PANELBOARD NUMBER OF ARROWS INDICATE QUANTITY OF CIRCUITS.</p> <p>— CONDUIT RUNS ABOVE GRADE.</p> <p>— CONDUIT RUN BELOW GRADE OR IN CONCRETE SLAB.</p> <p>○ CONDUIT RISE</p> <p>○ CONDUIT DROP</p> <p>— UNSWITCHED LEG</p> <p>— SWITCHED LEG</p> |

| REVISION/ UPLOAD DATE |      |             |
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| LAST DESIGN BULLETIN |      |             |
|----------------------|------|-------------|
| NUM.                 | DATE | DESCRIPTION |
|                      |      |             |

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

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



SHEET NAME

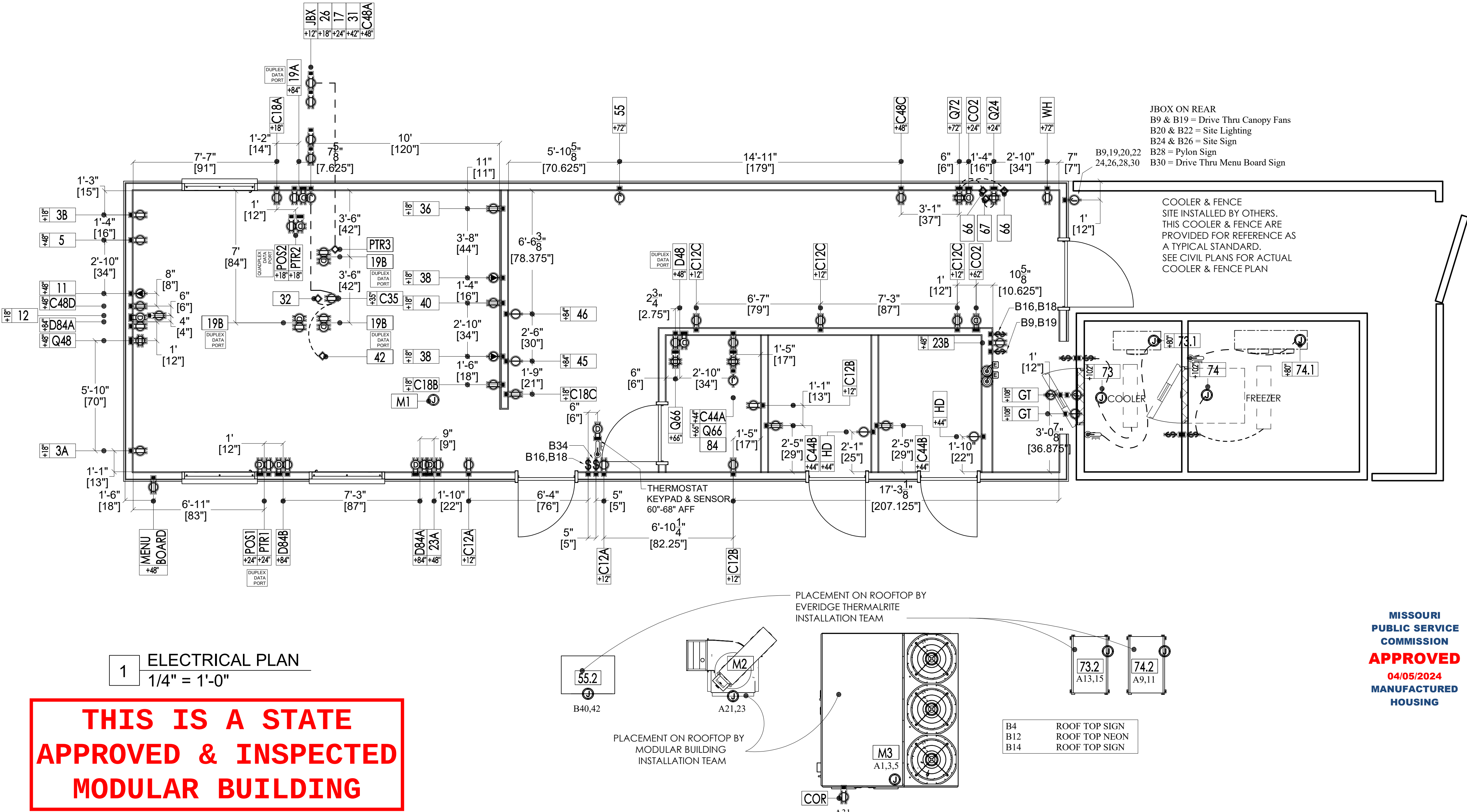
LIGHTING  
PLAN

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                                   |



| 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      | Duplex Outlet & Data   |        |         |     | 120 V | 1     | 5-20P     | 84"            | 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"            |                                                   |
| 38                  | A38,A40,A42    | 1     | 2 Platen Electric Double-Sided Grill     | High Voltage Outlet    | 48.0 A | 16800 W |     | 208 V | 3     | 15-60P    | 18"            |                                                   |
| 38                  | A46,A48,A50    | 1     | 2 Platen Electric Double-Sided Grill     | High Voltage Outlet    | 48.0 A | 16800 W |     | 208 V | 3     | 15-60P    | 18"            |                                                   |
| 40                  | A16            | 1     | Refrigerated Prep Table                  | Duplex Outlet          | 2.3 A  | 265 W   | 1/5 | 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                                     |
| C18B                | A12            | 1     | Duplex Convenience Outlet - Hood                 | 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                                     |
| 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 |      |             |
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| REV.                  | DATE | DESCRIPTION |
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| LAST DESIGN BULLETIN  |      |             |
| NUM.                  | DATE | DESCRIPTION |
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**MODULAR**  
VALIANT MODULAR, LLC  
15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174  
(386) 677-9316

MISSOURI  
PUBLIC SERVICE  
COMMISSION  
**APPROVED**  
04/05/2024  
MANUFACTURED  
HOUSING

ENGINEER  
STAMP

WALTER E. WOOD  
NUMBER  
PE-2017022017  
02-23-2024

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

2-23-2024  
**IWE**  
INSURANCE  
WALTER E. WOOD  
CARTER & ASSOCIATES

SHEET NAME

ELECTRICAL  
POWER  
PLAN

SHEET NUMBER

E2.1



|                      |                        | PANEL BOARD SCHEDULE                                   |                |          |                        |      |          |       |       |                      |               |    |          |          |                  |   |      |     |             |             |          |       |          |      |         |                                 |                         |      |    |    |
|----------------------|------------------------|--------------------------------------------------------|----------------|----------|------------------------|------|----------|-------|-------|----------------------|---------------|----|----------|----------|------------------|---|------|-----|-------------|-------------|----------|-------|----------|------|---------|---------------------------------|-------------------------|------|----|----|
| CKT. NO.             | EQUIPMENT #            | DESCRIPTION                                            | PANEL "B"      |          | RATING: 200 AMP M.L.O. |      |          |       |       |                      | A.I.C.: 42KVA |    |          |          | MOUNTING SURFACE |   |      |     | DESCRIPTION | EQUIPMENT # | CKT. NO. |       |          |      |         |                                 |                         |      |    |    |
|                      |                        |                                                        | LOCATION: REAR | INTERIOR | BKR AMP                | POLE | WIRE NO. | VOLTS | KW    | LEFT PHASE LOAD (VA) |               |    | CKT. NO. | CKT. NO. | RIGHT PHASE LOAD |   |      | KW  |             |             |          | VOLTS | WIRE NO. | POLE | BKR AMP | LUG LOCATION: TOP               |                         |      |    |    |
|                      |                        |                                                        |                |          |                        |      |          |       | A     | B                    | C             |    |          |          | A                | B | C    |     |             |             |          |       |          |      |         |                                 |                         |      |    |    |
| 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) ROOFTOP SIGN (C)            |                         |      | 4  |    |
| 5                    | PT1R, 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                    | -                      | CAN OPLY FANS - DRIVE THRU (O)                         | 20             | 1        | 12                     | 120  | 1.8      |       | 1800  |                      |               | 9  | 10       |          | 1440             |   |      | 1.4 | 120         | 12          | 1        | 20    |          |      |         | (R) DUPLEX WP 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) ROOFTOP 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) ROOFTOP 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                   | -                      | CAN OPLY 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   |       |                      | 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   |       |                      | 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 |     |             |             |          |       |          |      |         |                                 |                         |      | 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

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VALIANT MODULAR, LLC  
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SHEET NUMBER

## E3.1

ELECTRIC SOLENOID GAS VALVE FURNISHED WITH HOOD PACKAGE. E.C. TO INSTALL (2) #12 AWG CONDUCTORS FROM HOOD CONTROL PANEL TO VALVE. SEE HOOD DRAWINGS FOR ADDITIONAL INFORMATION

MICROSWITCH RATED FOR 120V

A-21/23/25

TO EXHAUST FAN

#12 AWG

HOOD LIGHTS

HOOD CONTROL PANEL

FRYER A-10

SHUNT TRIP

CONVENIENCE OUTLET

SHUNT TRIP

PREP REFRIGERATOR A-1

SHUNT TRIP

CLAMSHELL GRILL A-44

SHUNT TRIP

CLAMSHELL GRILL A-52

SHUNT TRIP

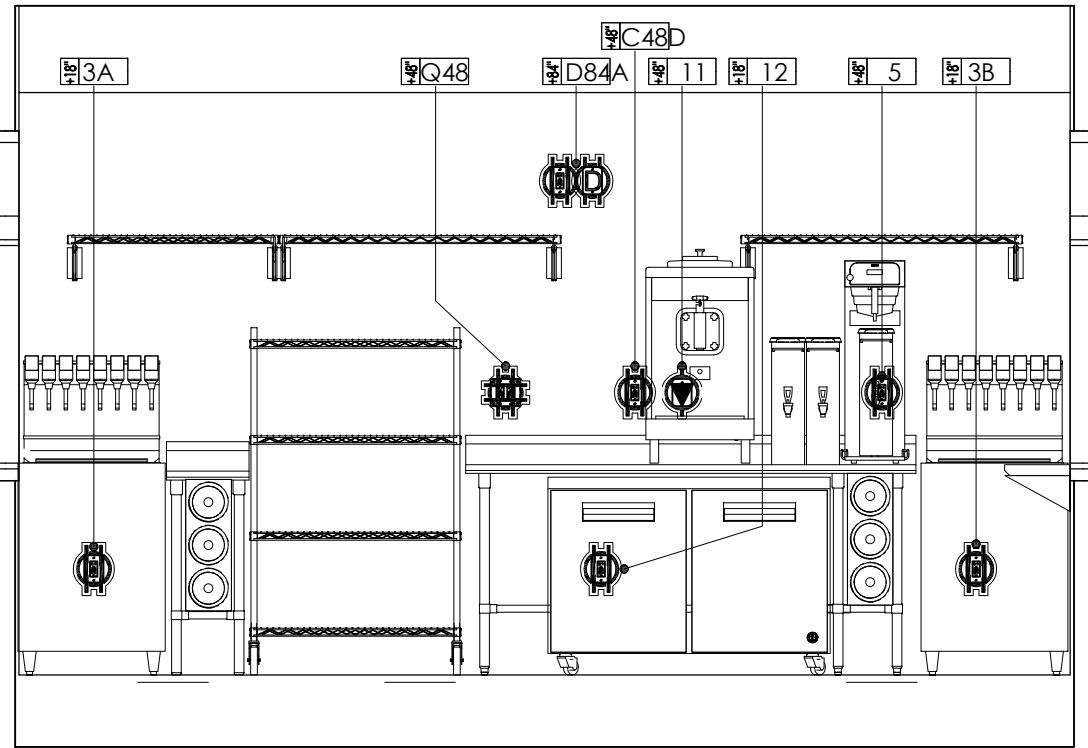
1. E. TO WIRE HOOD CONTROL PANEL WHICH WILL AUTOMATICALLY DE-ENERGIZE MAKE-UP AIR FAN, RTU-1, FANS, AND ENERGIZE THE EXHAUST FAN IN THE EVENT OF A SHORTED OR LOCKED MOTOR. E. ALSO DE-ENERGIZE THE ELECTRICAL EQUIPMENT UNDER THE HOOD VIA THE SHUNT TRIP BREAKERS.
2. E. TO COORDINATE REQUIREMENTS WITH HVAC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

2

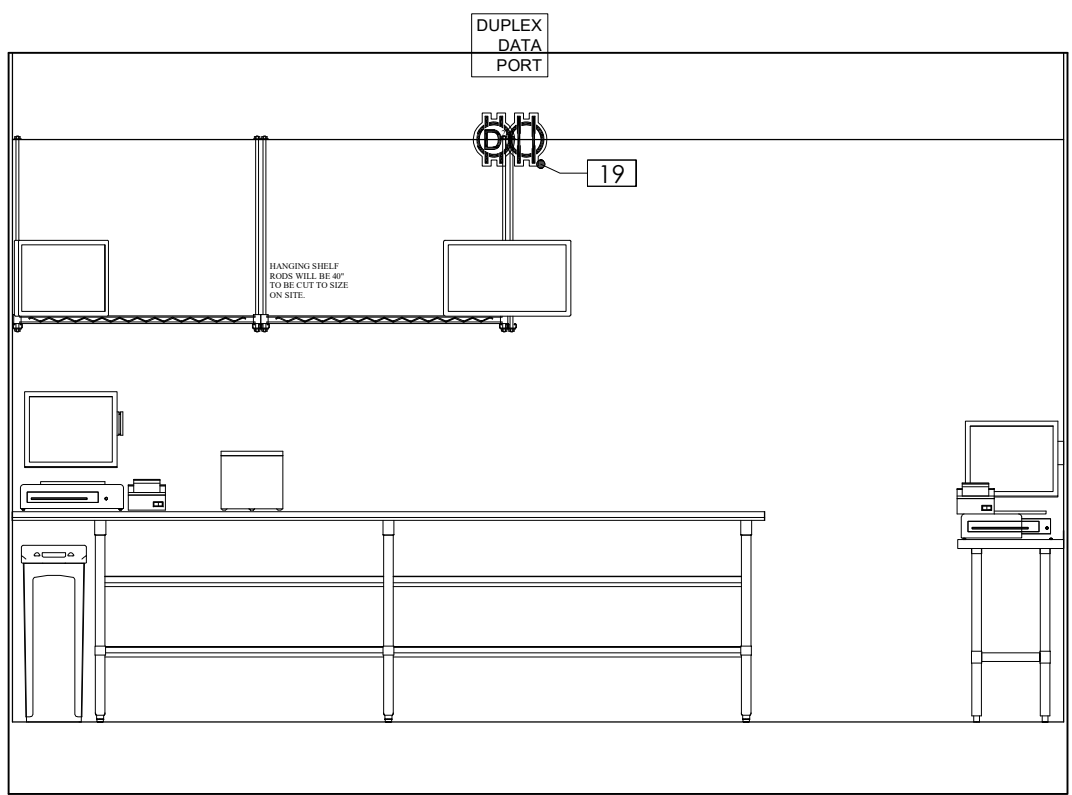


N.T.S

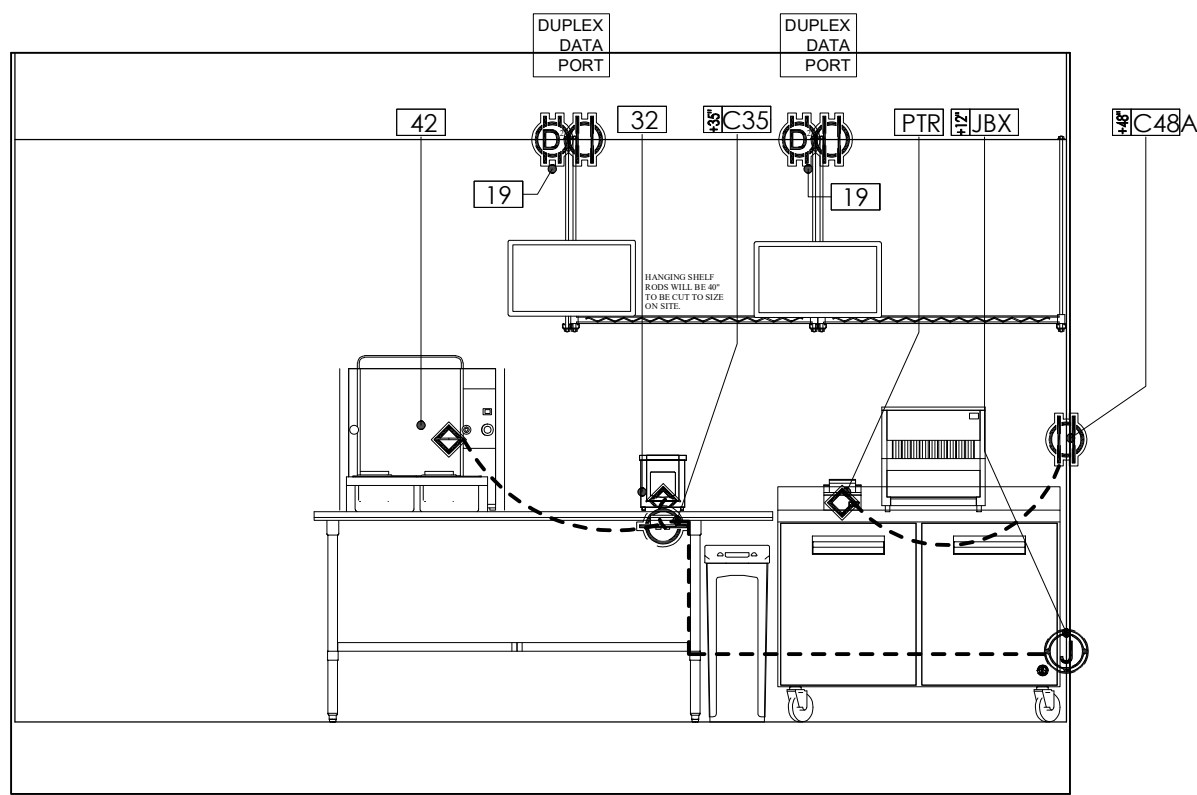




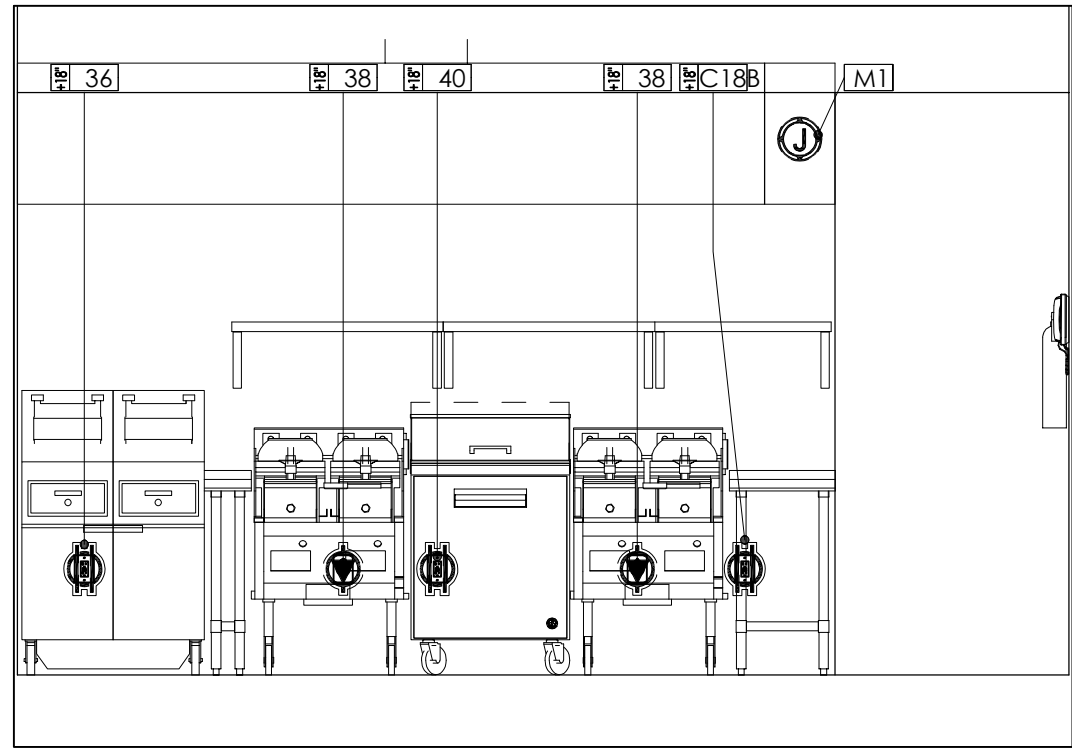
1 ELEVATION 1  
3/8" = 1'-0"



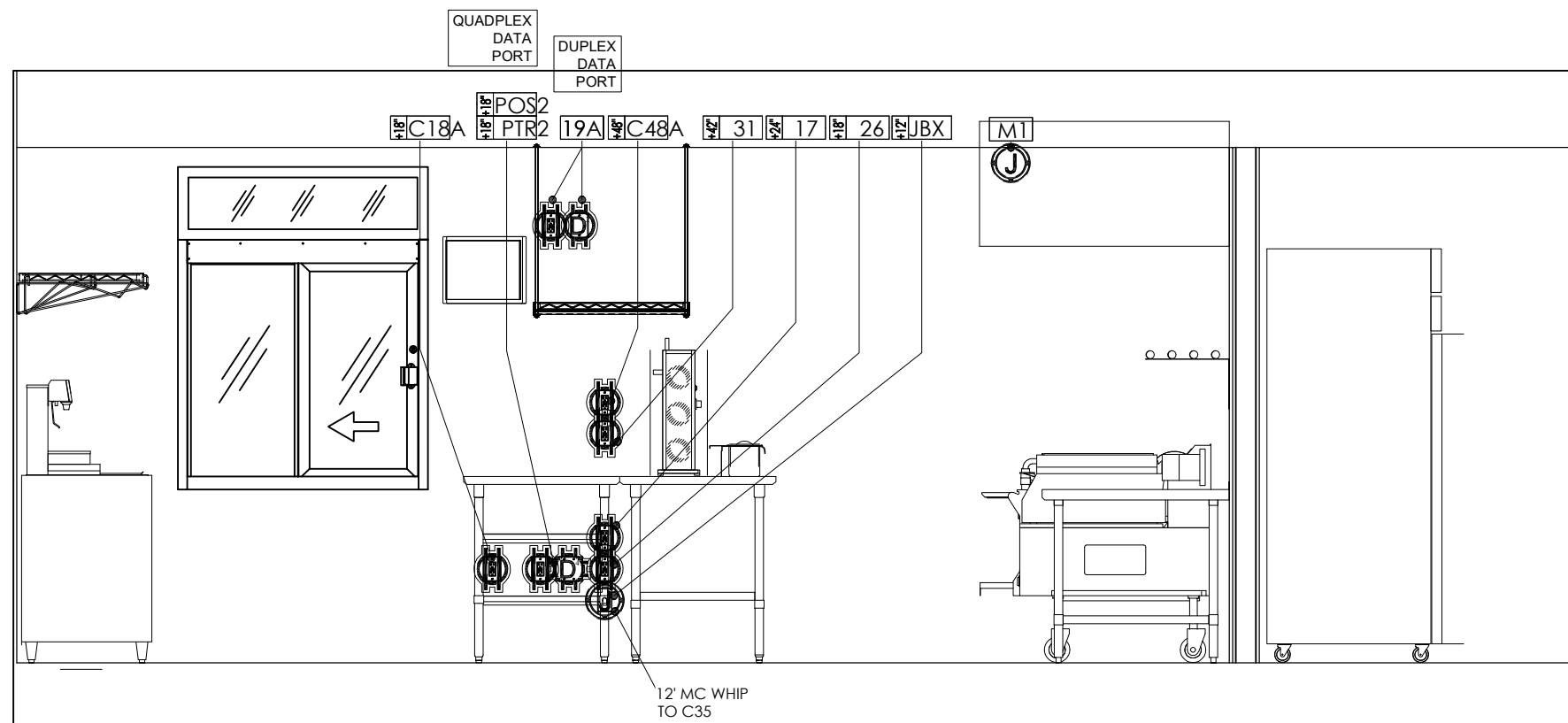
2 ELEVATION 2  
3/8" = 1'-0"



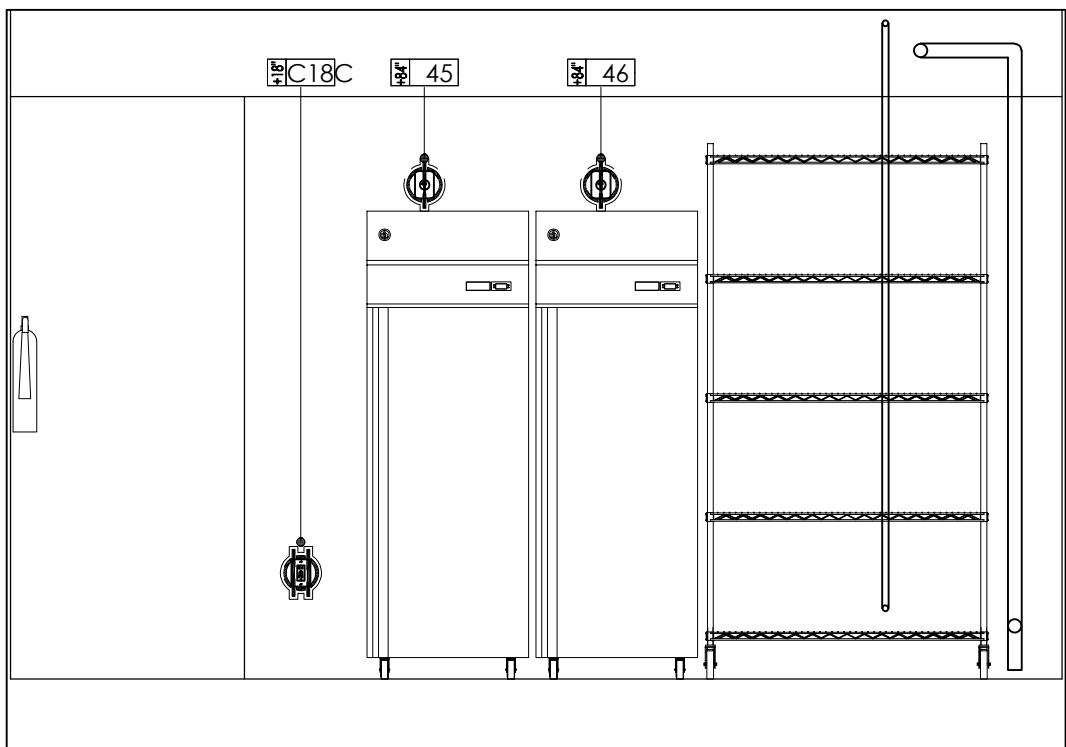
3 ELEVATION 3  
3/8" = 1'-0"



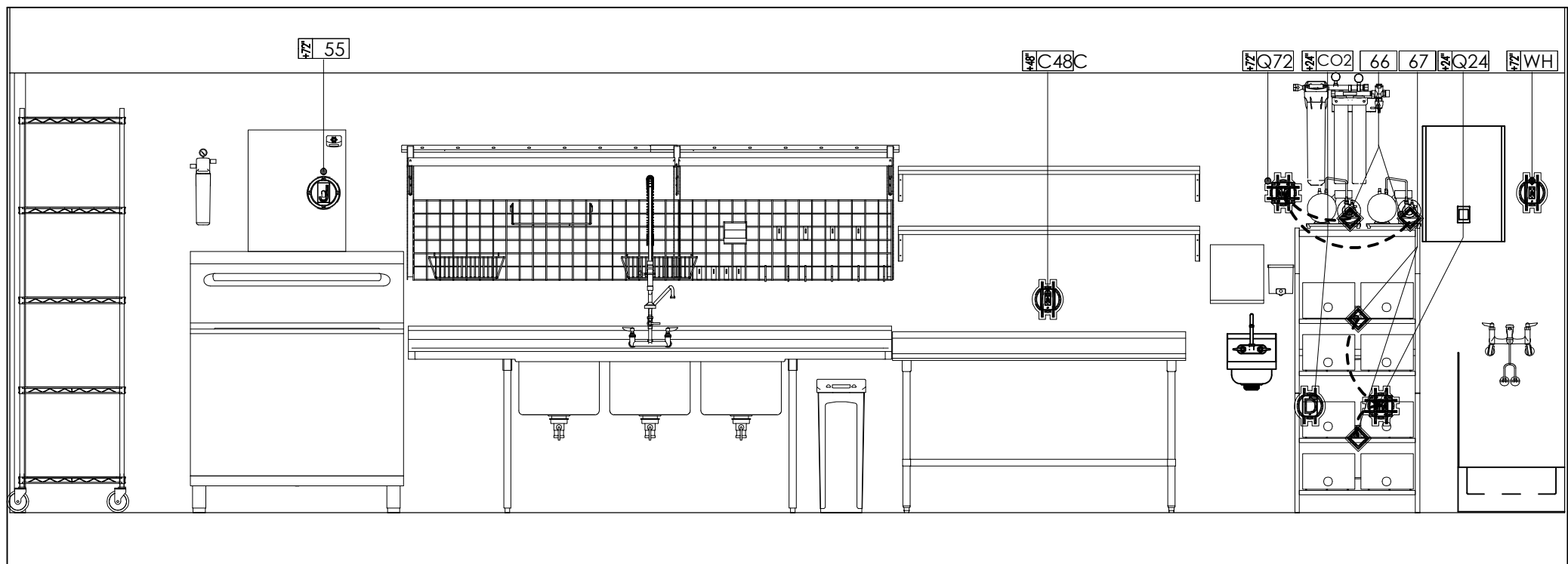
4 ELEVATION 4  
3/8" = 1'-0"



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

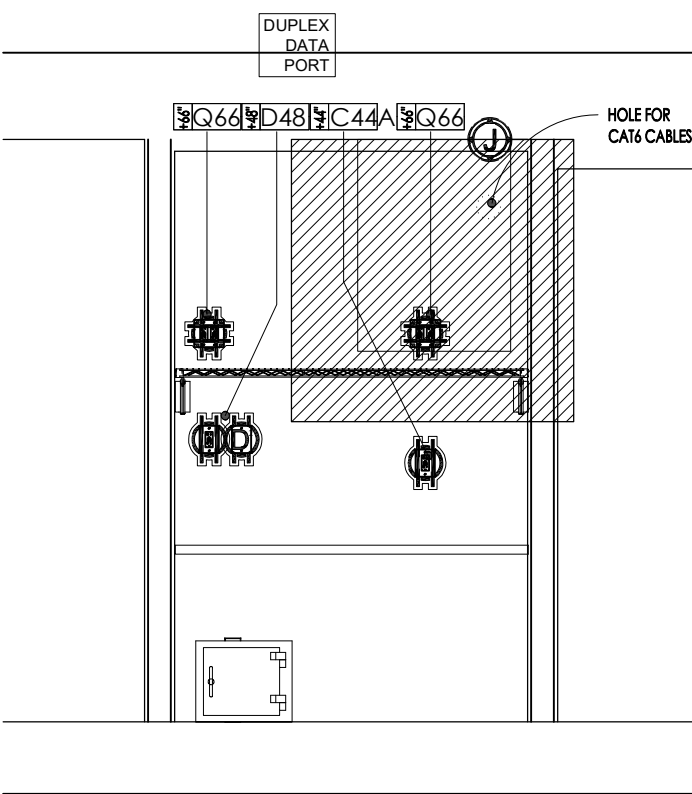


6 ELEVATION 6  
3/8" = 1'-0"

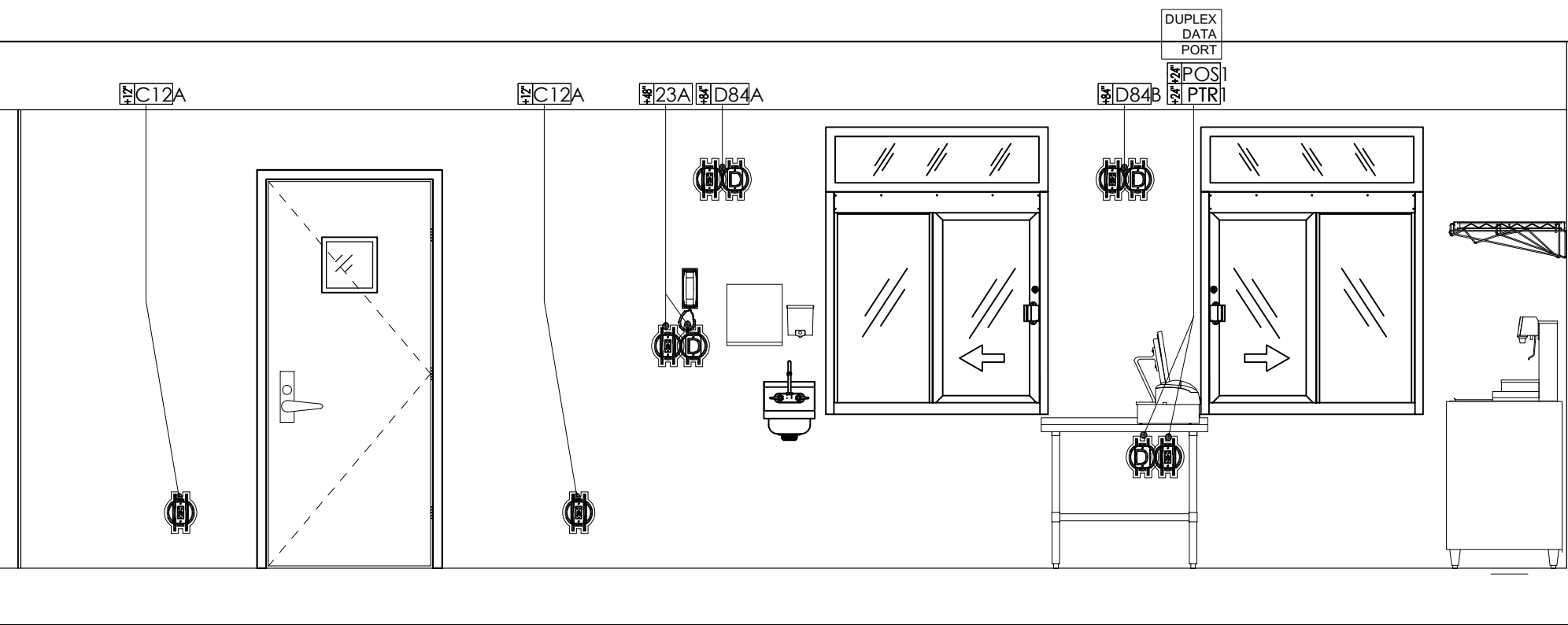


7 ELEVATION 7  
3/8" = 1'-0"

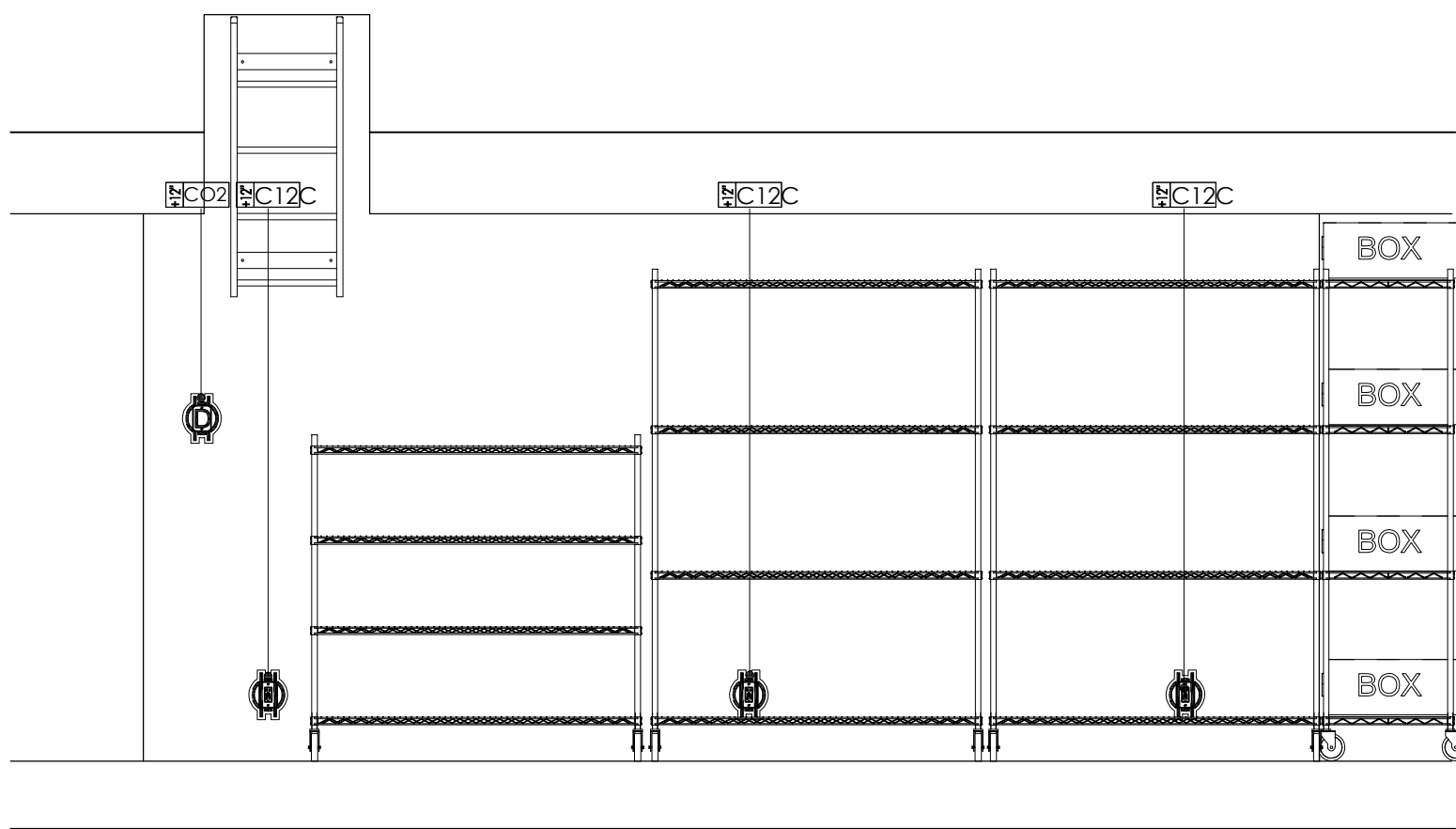
| ELECTRICAL LEGEND |           |                                                       |
|-------------------|-----------|-------------------------------------------------------|
| Plan              | Elevation | Description                                           |
|                   |           | 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<br>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"

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COMMISSION  
APPROVED  
04/05/2024  
MANUFACTURED  
HOUSING

| REVISION/ UPLOAD DATE |      |             |
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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-2017022072  
VALID  
MISSOURI PROFESSIONAL ENGINEER  
02-23-2024

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

APPROVED  
2-23-2024  
W.C. CARTER & ASSOCIATES

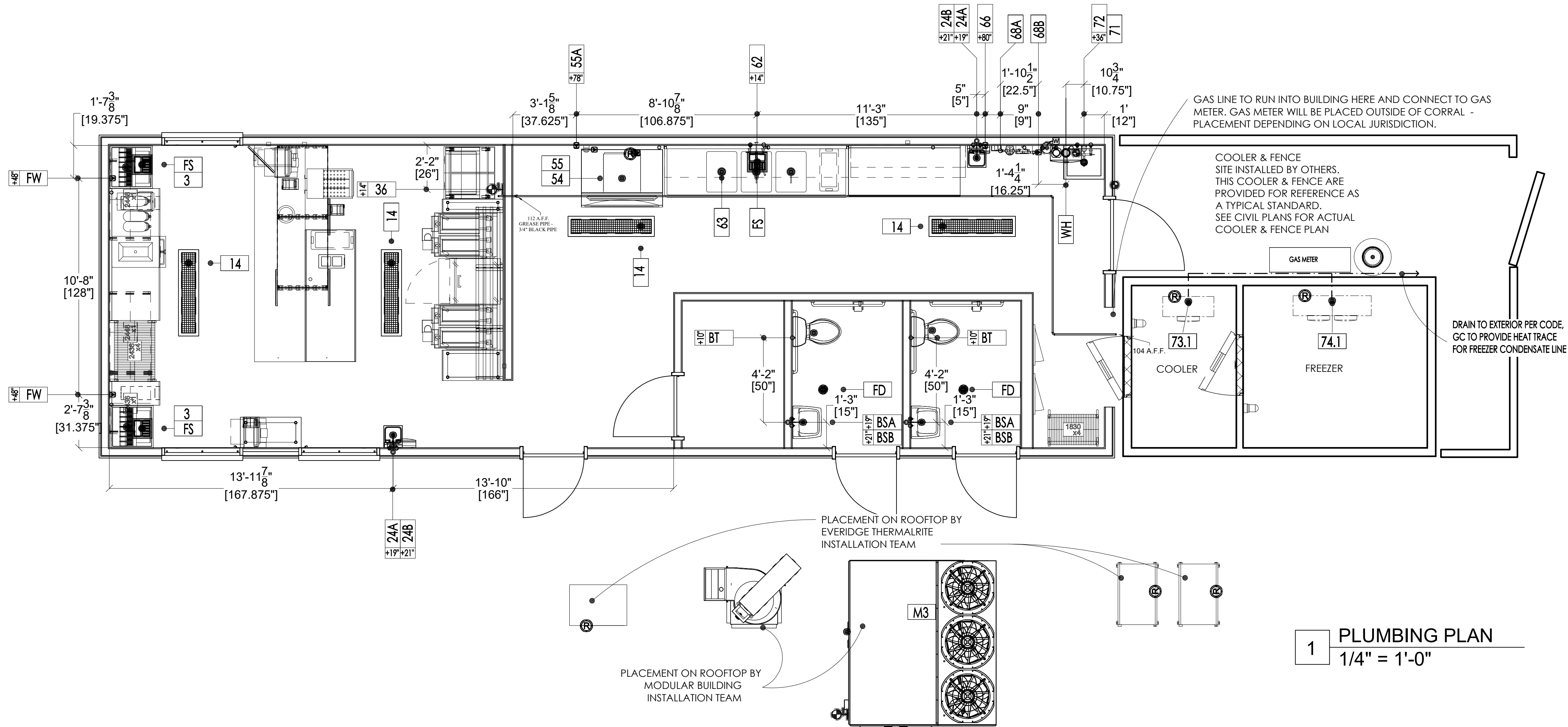
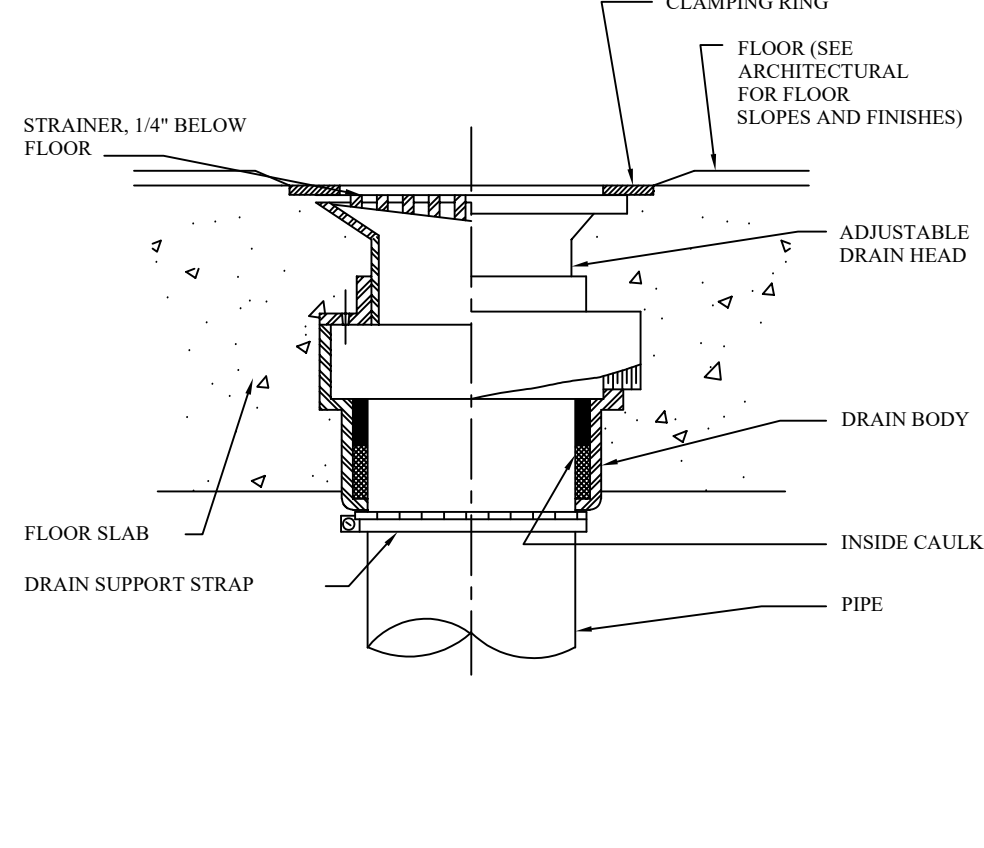
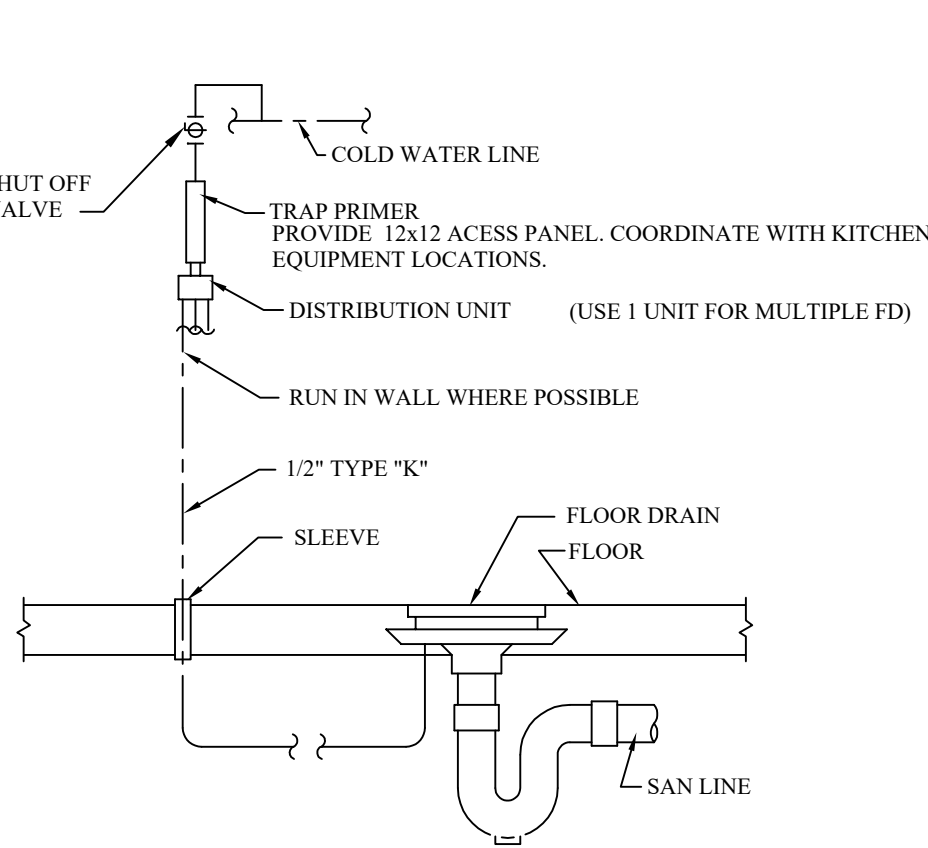
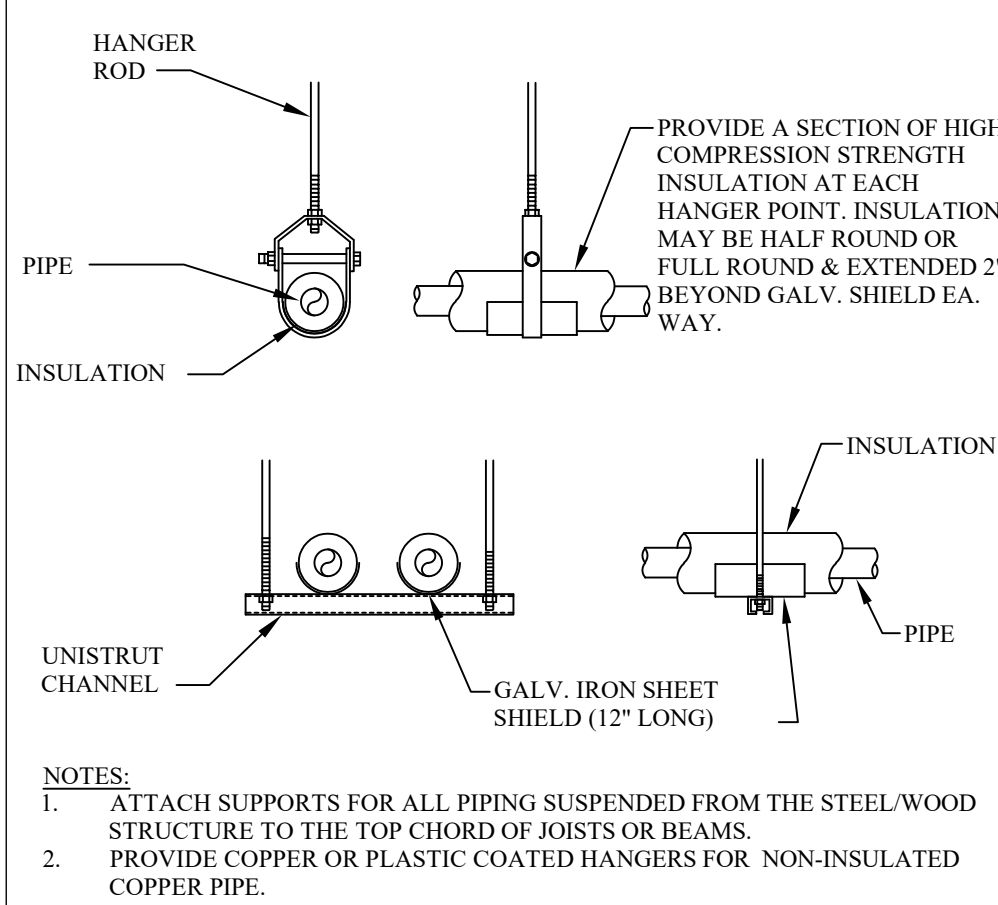
SHEET NAME  
ELECTRICAL  
ELEVATIONS

SHEET NUMBER

E4.1



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MODULAR BUILDING



## 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 WIRBOS SERIES: A55050 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 MILL WORK PRIOR TO ROUGH-IN.
21. MAKE ALL CONNECTIONS TO KITCHEN AND MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED. USE MILL HARDWOOD 30035 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                 | GPM  | GALLONS PER MINUTE  |
| AFF   | ABOVE FINISHED FLOOR  | HB   | HOSE BIBB           |
| ARCH  | ARCHITECT             | HC   | HEATING CONTRACTOR  |
| BEL   | BELOW                 | HP   | HORSEPOWER          |
| BLDG  | BUILDING              | IHW  | HOT WATER           |
| CLG   | CEILING               | IHW  | HOT WATER RETURN    |
| CO    | CLEAN OUT             | INV  | INVERT              |
| CONT  | CONTINUATION          | LAV  | LAVATORY            |
| CW    | COLD WATER            | MAX  | MAXIMUM             |
| CONTR | CONTRACTOR            | MFR  | MANUFACTURER        |
| COORD | COORDINATE            | MT   | MOUNT               |
| DISC  | DISCONNECT            | NTS  | NOT TO SCALE        |
| DN    | DOWN                  | PC   | PLUMBING CONTRACTOR |
| EA    | EACH                  | PLBG | PLUMBING            |
| EC    | ELECTRICAL CONTRACTOR | RD   | ROOF DRAIN          |
| EX    | EXISTING              | RTU  | ROOFTOP UNIT        |
| EWC   | ELECTRIC WATER COOLER | SAN  | SANITARY            |
| ECO   | EXTERIOR CLEAN OUT    | SS   | SERVICE SINK        |
| FCO   | FLOOR CLEAN OUT       | TYP  | TYPICAL             |
| FD    | FLOOR DRAIN           | TW   | TEMPERED WATER      |
| FIXT  | FIXTURE               | UR   | URINAL              |
| FLR   | FLOOR                 | V    | VENT                |
| FURN  | FURNISH               | VTR  | VENT THRU ROOF      |
| FV    | FLUSH VALVE           | WC   | WATER CLOSET        |
| G     | GAS                   | WCO  | WALL CLEAN OUT      |
| GAL   | GALLON                | WH   | WATER HEATER        |
| GC    | GENERAL CONTRACTOR    | W/   | WITH                |
| GPH   | GALLONS PER HOUR      |      |                     |

## 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 |

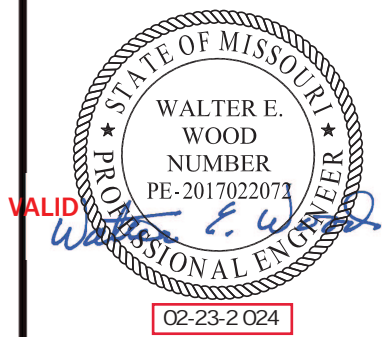
| Plumbing Schedule |       |                                               |                        |                 |               |                |              |                     |                     |                   |                 |          |                 |        | Item Number |
|-------------------|-------|-----------------------------------------------|------------------------|-----------------|---------------|----------------|--------------|---------------------|---------------------|-------------------|-----------------|----------|-----------------|--------|-------------|
| 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 |             |
| 3                 | 2     | Soda Dispenser                                | Fixture Drain Indirect |                 |               |                |              |                     | 3/4"                |                   |                 |          |                 |        | 3           |
| 14                | 4     | Floor Trough Drain                            | Penetration Drain      |                 |               |                |              |                     |                     | 3"                | 0"              |          |                 |        | 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          | 1/4"   | 36          |
| 54                | 1     | Ice Bin                                       | Fixture Drain Indirect |                 |               |                |              | 1/2"                | 3/4"                |                   |                 |          |                 |        | 54          |
| 55                | 1     | Ice Cube Machine, Remote w/ 50' Line Set      | Filtered Water         |                 |               |                |              |                     |                     |                   |                 |          |                 |        | 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"         |                     |                     |                   |                 |          |                 |        | 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 |                 |               |                |              | 1/4"                |                     |                   |                 |          |                 |        | 63          |
| 66                | 1     | Soda Carbonator                               | Filtered Water         |                 |               |                |              |                     |                     |                   |                 |          |                 |        | 66          |
| 68A               | 1     | Water Filtration System                       | Cold Water Stub        | 3/4"            |               |                |              |                     |                     |                   |                 |          |                 |        | 68A         |
| 68B               | 1     | Water Filtration System                       | Filtered Water         |                 |               |                |              | 3/4"                |                     |                   |                 |          |                 |        | 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"                |                   |                 |          |                 |        | 73.1        |
| 74.1              | 1     | Evaporator Coil (Freezer)                     | Fixture Drain Indirect |                 |               |                |              |                     | 3/4"                |                   |                 |          |                 |        | 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"              |          |                 |        | FD          |
| FS                | 3     | Floor Sink                                    | Penetration Drain      |                 |               |                |              |                     |                     | 3"                | 0"              |          |                 |        | FS          |
| FW                | 2     | Filtered Water Stub-Out                       | Filtered Water Stub    |                 |               |                |              | 1/4"                |                     |                   |                 |          |                 |        | FW          |
| M3                | 1     | Make Up Air Unit                              | Gas Connection Point   |                 |               |                |              |                     |                     |                   |                 | 3/4"     | 150000          |        | M3          |
| WH                | 1     | Water Heater                                  | Cold Water Stub        | 3/4"            |               | 3/4"           |              |                     |                     |                   |                 | 3/4"     | 200000          |        | WH          |

## REVISION/ UPLOAD DATE

| REV.                 | DATE | DESCRIPTION |
|----------------------|------|-------------|
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| LAST DESIGN BULLETIN |      |             |
| NUM.                 | DATE | DESCRIPTION |
|                      |      |             |
|                      |      |             |

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

ENGINEER  
STAMP



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



MISSOURI  
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04/05/2024  
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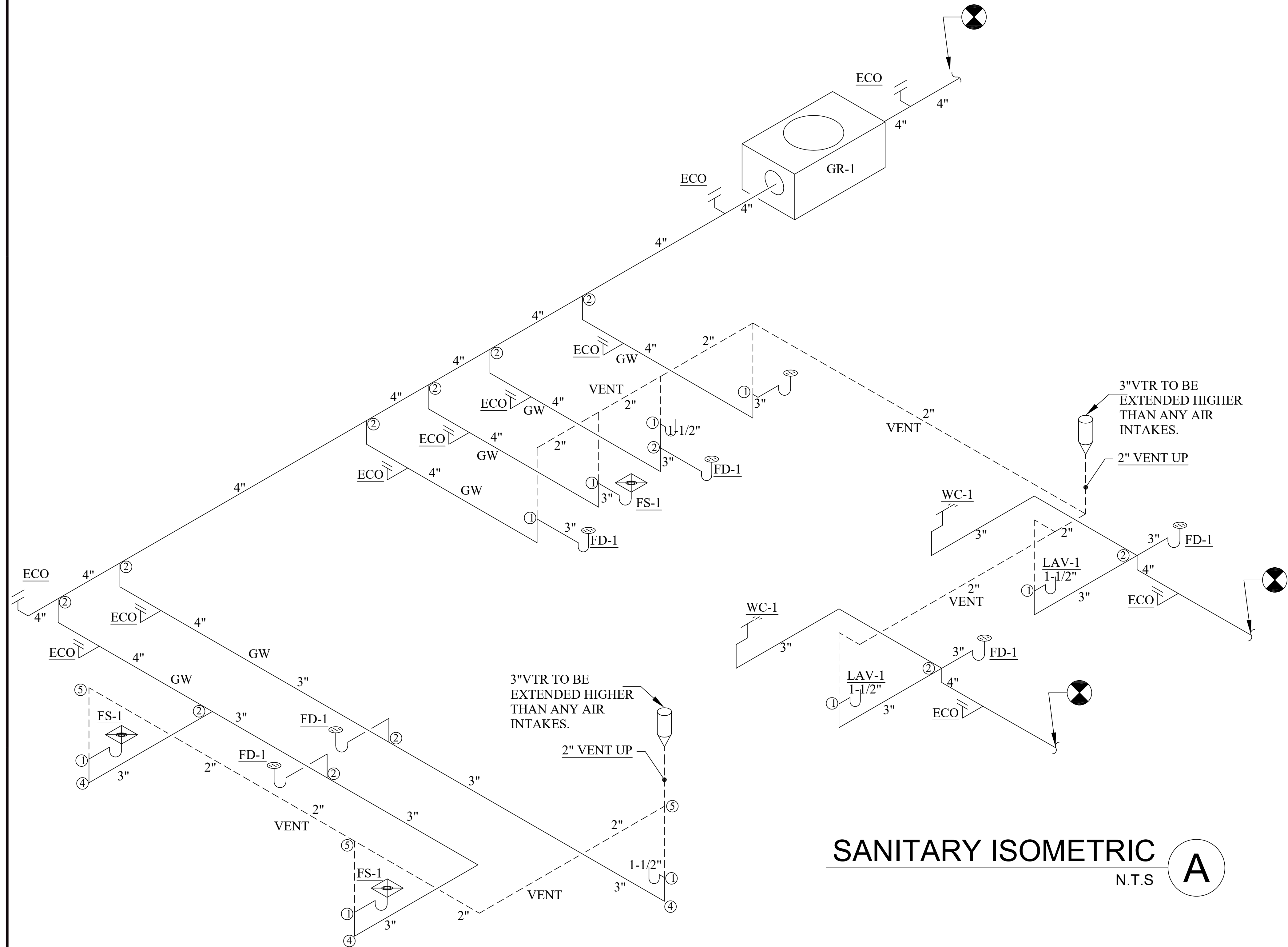
SHEET NAME

PLUMBING  
PLAN

SHEET NUMBER

P1.1





SANITARY ISOMETRIC  
N.T.S

A

- 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                                         |

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| PLUMBING FIXTURE SCHEDULE |                    |                                |                                                                                                                                              |      |      |        |        |       |
|---------------------------|--------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------|------|--------|--------|-------|
| MARK                      | DESCRIPTION        | MFG & MDL #                    |                                                                                                                                              | HW   | CW   | SAN    | VENT   | NOTES |
|                           |                    | FIXTURE OR EQUAL               | ACCESSORY                                                                                                                                    |      |      |        |        |       |
| WC-1                      | WATER CLOSET (HC)  | K-4199-0 BOWL<br>K-4468-0 TANK | VITREOUS CHINA FREE STANDING PRESSURE ASSIST,<br>ADA ELONGATED WATER CLOSET, FLANGE BOLTS, BOLT<br>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 #<br>591LF-LGHGMHDF PROVIDE WITH TRUEBRO LAV-GUARD<br>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<br>822-CF3PNR      | PVC BODY WITH SCORIATED BRONZE COVER                                                                                                         | -    | -    | 3"     | -      | 3     |
| FD-1                      | FLOOR DRAIN        | SIOUX CHIEF<br>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                     | 750 GALLON 48" X 96" GREASE INTERCEPTOR                                                                                                      |      |      |        |        |       |
| MV-1                      | MIXING VALVE       | POWERS LFMM432<br>(ASSE 1017)  | POWERS HYDROGUARD TEMPERING VALVE 3/4" IN 1" OUT                                                                                             | 1/2" | 1/2" |        |        |       |
| WF-1                      | WATER FILTER       | CUNO 260 NSF<br>CERTIFIED      | WATER FILTER MOUNTED ABOVE SINK                                                                                                              | 3/4" | 3/4" |        |        |       |
| WH-1                      | WATER HEATER       | RINNAI CXP199IN                | CONDENSING COMMERCIAL TANKLESS                                                                                                               | 3/4" | 3/4" |        |        |       |

- 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.

| REVISION/ UPLOAD DATE |      |             |
|-----------------------|------|-------------|
| REV.                  | DATE | DESCRIPTION |
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| LAST DESIGN BULLETIN  |      |             |
| NUM.                  | DATE | DESCRIPTION |
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VALANT MODULAR, LLC  
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(386) 677-9316

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

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

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2-23-2024  
HWC  
HARTLEY, CARTER & ASSOCIATES

SHEET NAME

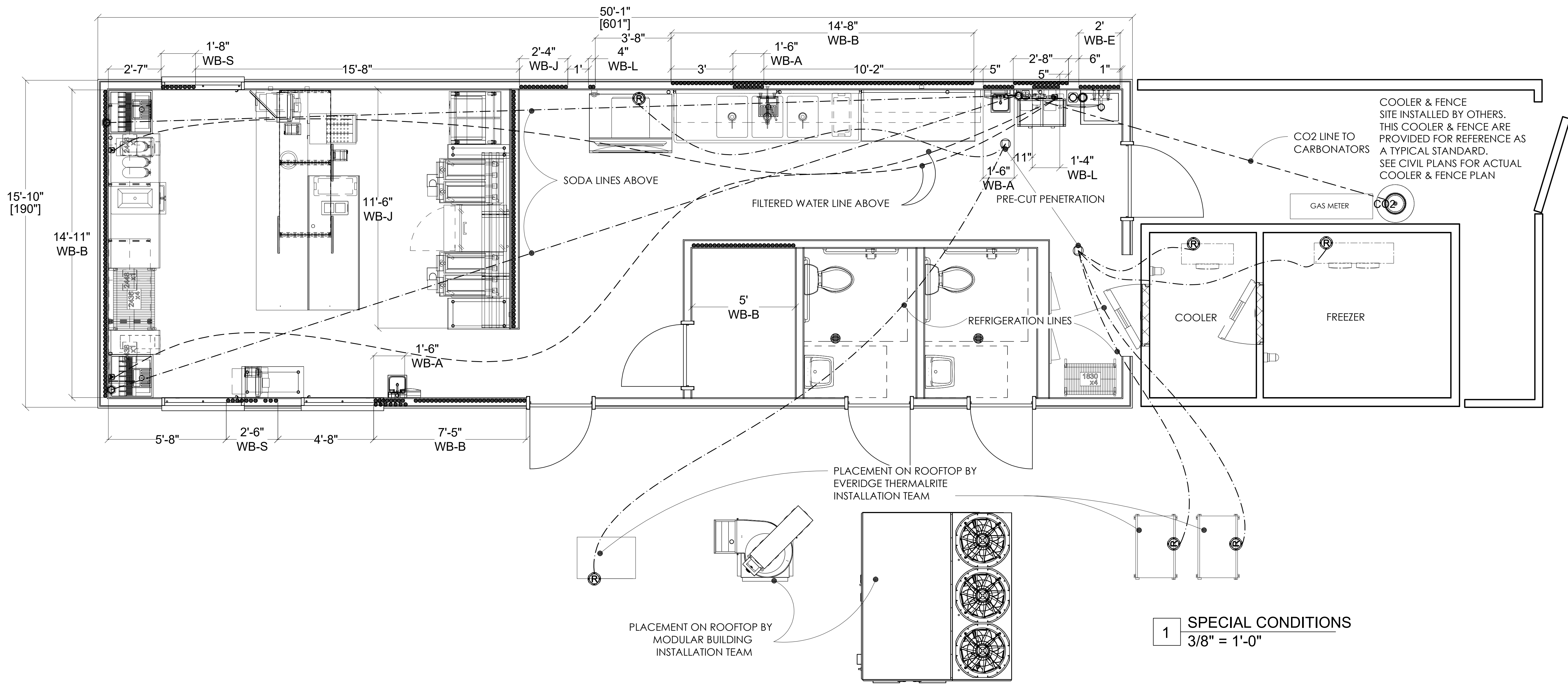
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SCHEDULE

SHEET NUMBER

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| REVISION/ UPLOAD DATE |      |             |
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| LAST DESIGN BULLETIN  |      |             |
| NUM.                  | DATE | DESCRIPTION |
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HWC  
WALTER CARTER & ASSOCIATES

(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.

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SHEET NAME

SPECIAL  
CONDITIONS

SHEET NUMBER

P2.1B

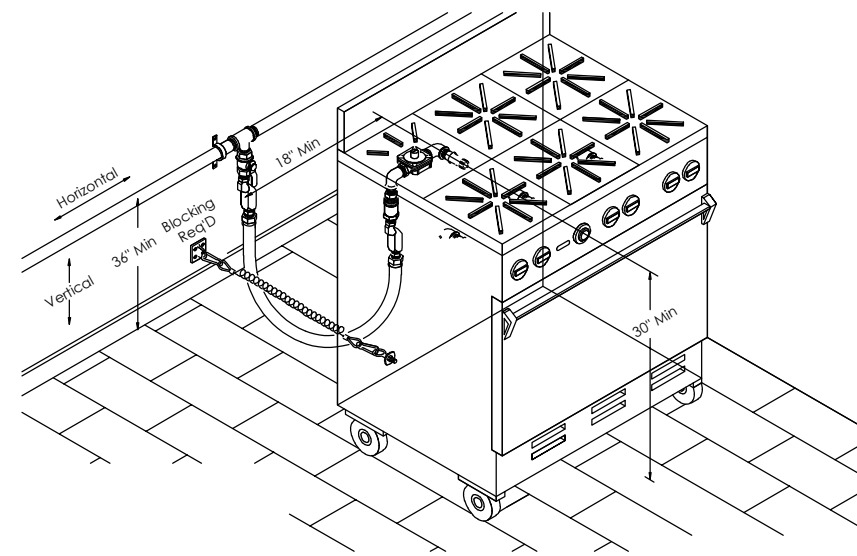


GAS CONNECTION DETAIL

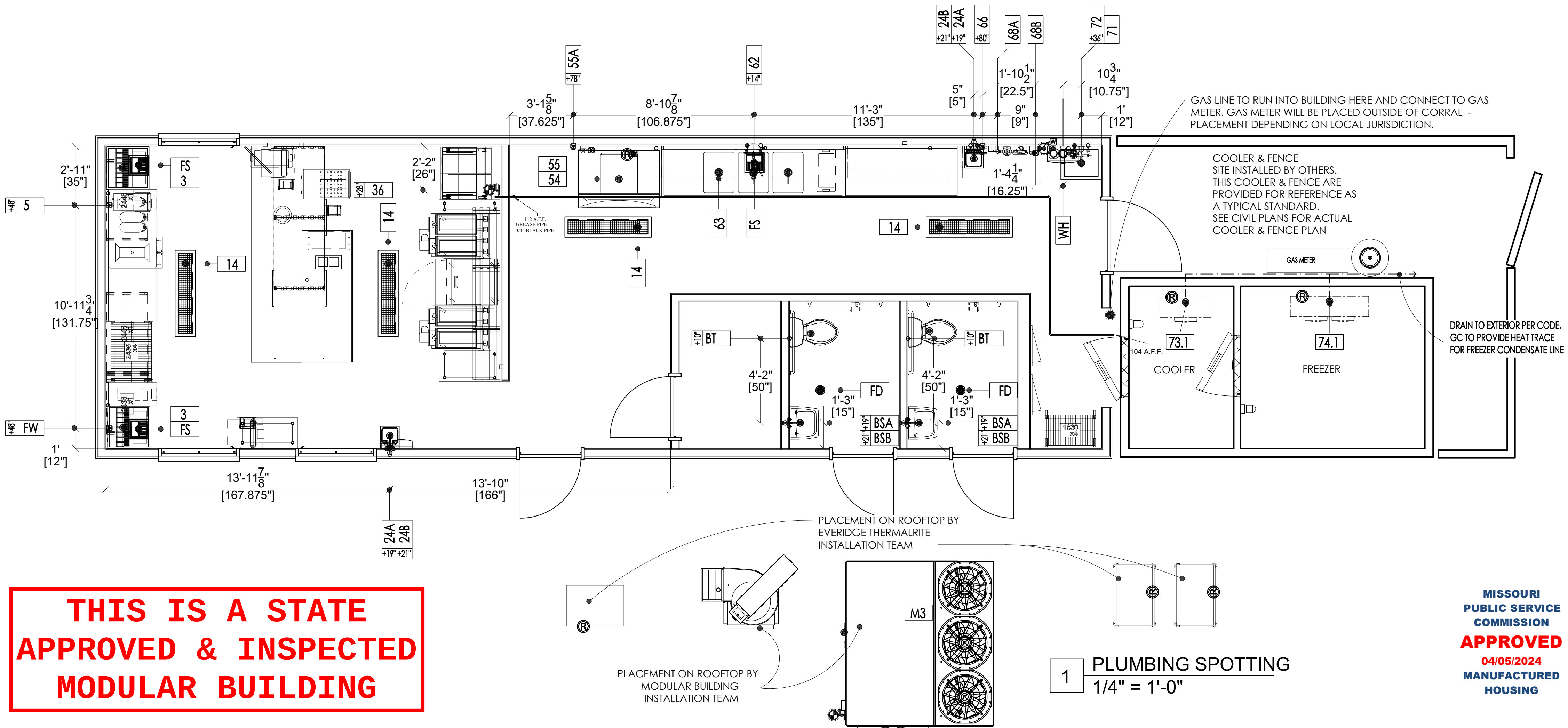
THE INSTALLATION SHOWN ON THIS DRAWING IS FOR THE EZPRESS PURPOSE OF PROVIDING INSTALLATION GUIDELINES ONLY. THE FINAL INSTALLATION APPROVAL IS THE RESPONSIBILITY OF THE SYSTEM DESIGNER/INSTALLER

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

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

ALIAINT  
MODULAR  
VALIANT MODULAR, LLC  
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(386) 677-9316

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

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

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2-23-2024  
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WALTER CARTER & ASSOCIATES

SHEET NAME

PLUMBING  
SPOTTING

SHEET NUMBER

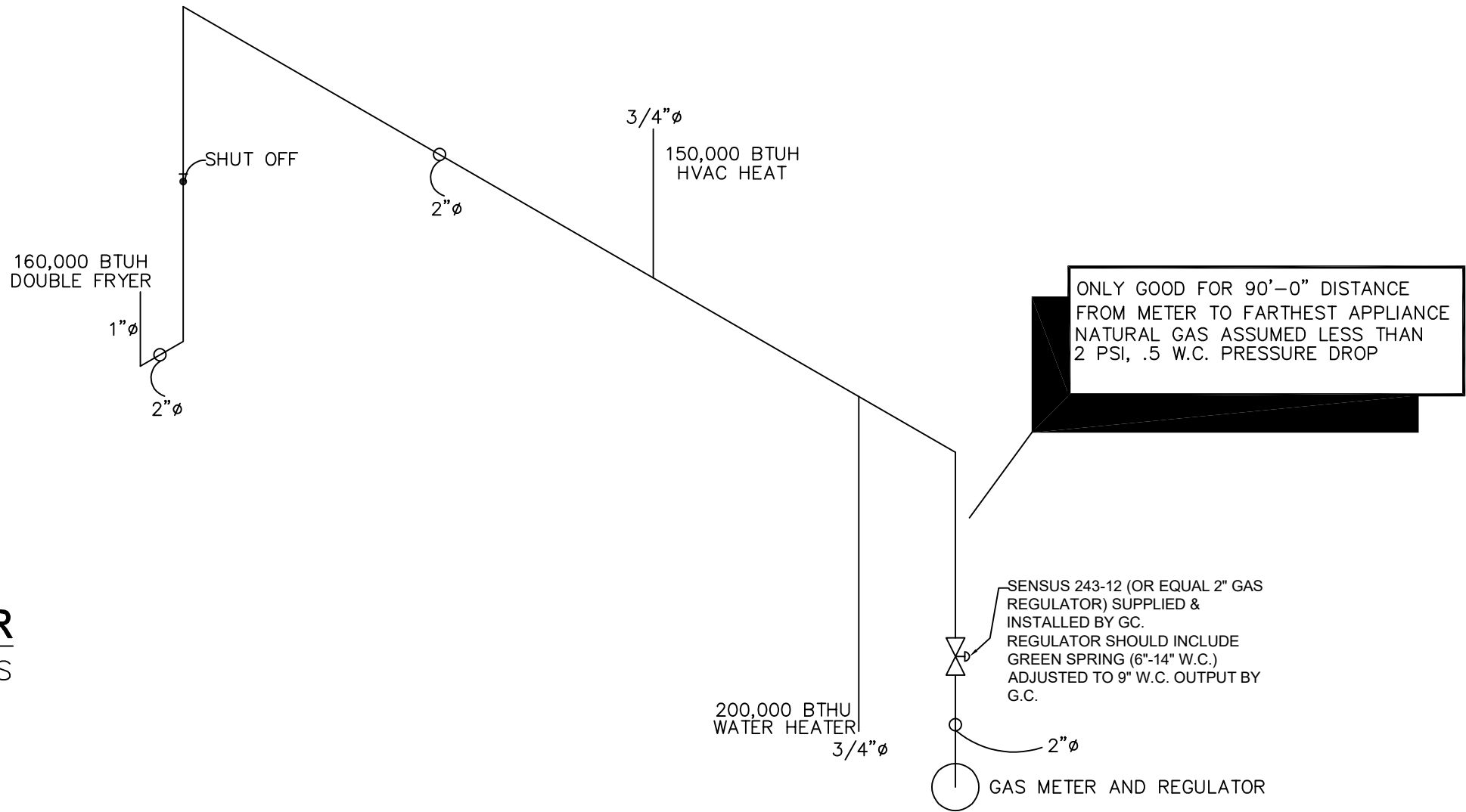
P2.1C



| Equipment       | Model #<br>(or equal) | BTU/hr Input Rating | Natural Gas<br>Pressure (W.C.) |
|-----------------|-----------------------|---------------------|--------------------------------|
| Water Heater    | CXP199IN              | 200000              | 5" - 10.5"                     |
| DOAS RTU Heater | AHRTU3-I.150-15-20T   | 150000              | 7" - 14"                       |
|                 |                       |                     | 7" - 10"                       |
| Fryer (Bank 1)  | 2VHG50F               | 80000               | (No more than 14" supply)      |
| Fryer (Bank 2)  | 2VHG50F               | 80000               | (No more than 14" supply)      |
|                 |                       |                     | 7" - 10"                       |
| Totals          |                       | 510,000 BTU/hr      | 7" - 14"                       |

| GAS LOADS |         |
|-----------|---------|
| HVAC HTR. | 150 MBH |
| WTR. HTR. | 200 MBH |
| FRYERS    | 160 MBH |
| TOTAL     | 510 MBH |

## GAS RISER NTS

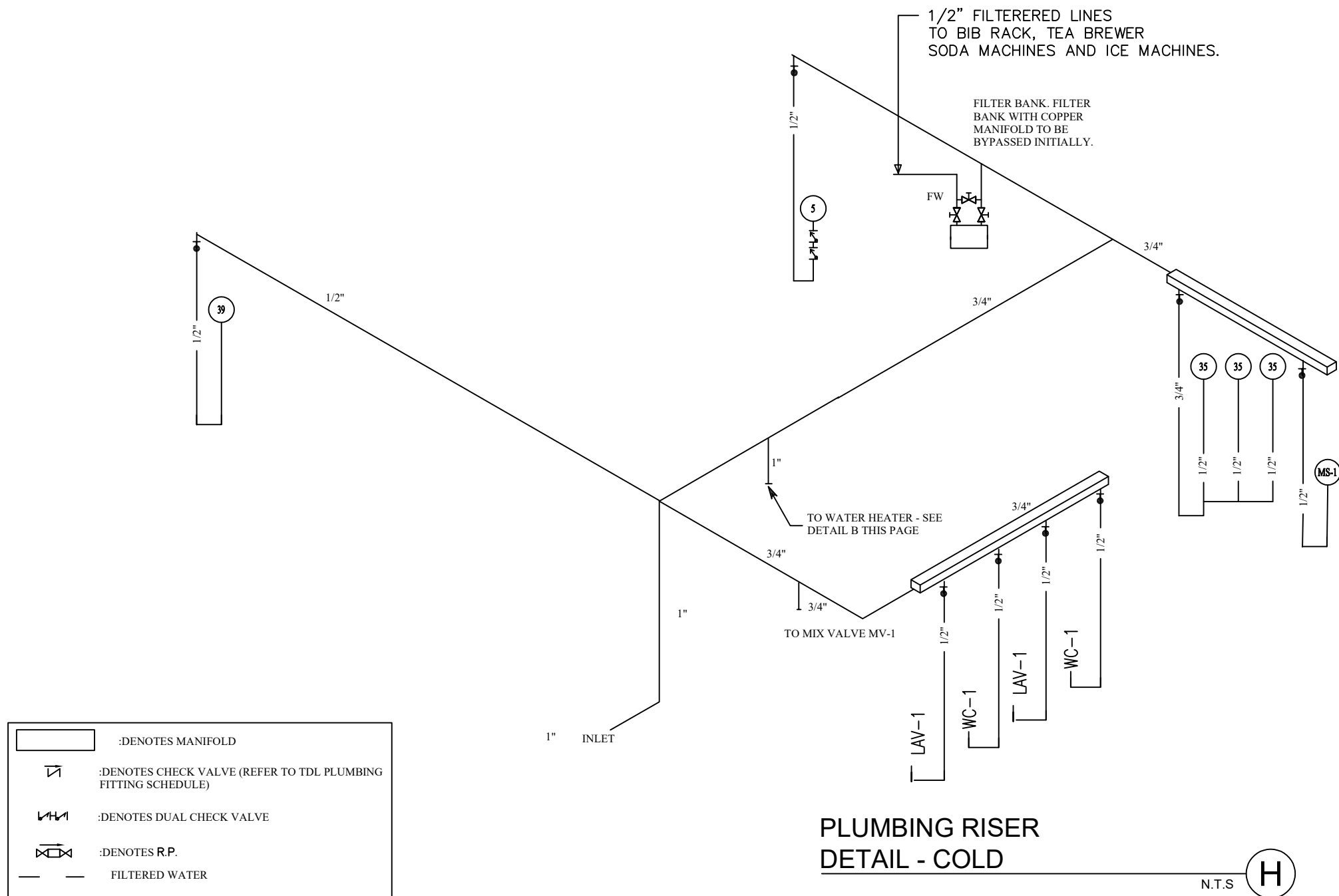


## NOTES

- 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.
- BUILDING MANUFACTURER TO FURNISH AND INSTALL A SEDIMENT TRAP AND SHUT-OFF VALVE AT EACH APPLIANCE. DRIPS SHALL BE PROVIDED WHERE CONDENSATE COULD COLLECT.
- NOT USED
- NOT USED
- SEE WATER HEATER DETAIL ON THIS SHEET FOR SIZES AND CONTINUATION OF WATER LINES.
- PROVIDE CUT TO LENGTH PEX PIPING SIZED PER EQUIPMENT CONNECTION SCHEDULE. EXTEND FILTERED COLD WATER PEX FROM MANIFOLD SHUT-OFF 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.
- NOT USED
- PROVIDE CUT TO LENGTH PEX PIPING INSIDE WALL SIZED PER EQUIPMENT CONNECTION SCHEDULE. EXTEND COLD AND 140° HOT WATER PEX FROM MANIFOLD SHUT-OFF 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.
- 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.
- SITE CONTRACTOR TO FURNISH AND INSTALL WATER METER.
- 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.
- 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.
- DROP 3/4" HOT AND COLD LINES TO WATER HEATER.
- FURNISH AND INSTALL CHECK VALVES IN THE COLD WATER SUPPLY TO PLUMBING FIXTURES. 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.
- 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.
- 2" GAS LINE TO RISE UP IN WALL TO ABOVE CEILING.
- DROP 2" GAS LINE DOWN TO WATER HEATER.
- NOT USED
- NOT USED
- GAS SUPPLY EMERGENCY SHUT-OFF VALVE BY GENERAL CONTRACTOR. VALVE TO BE INSTALLED PER LOCAL CODE REQUIREMENTS.

## GENERAL NOTES

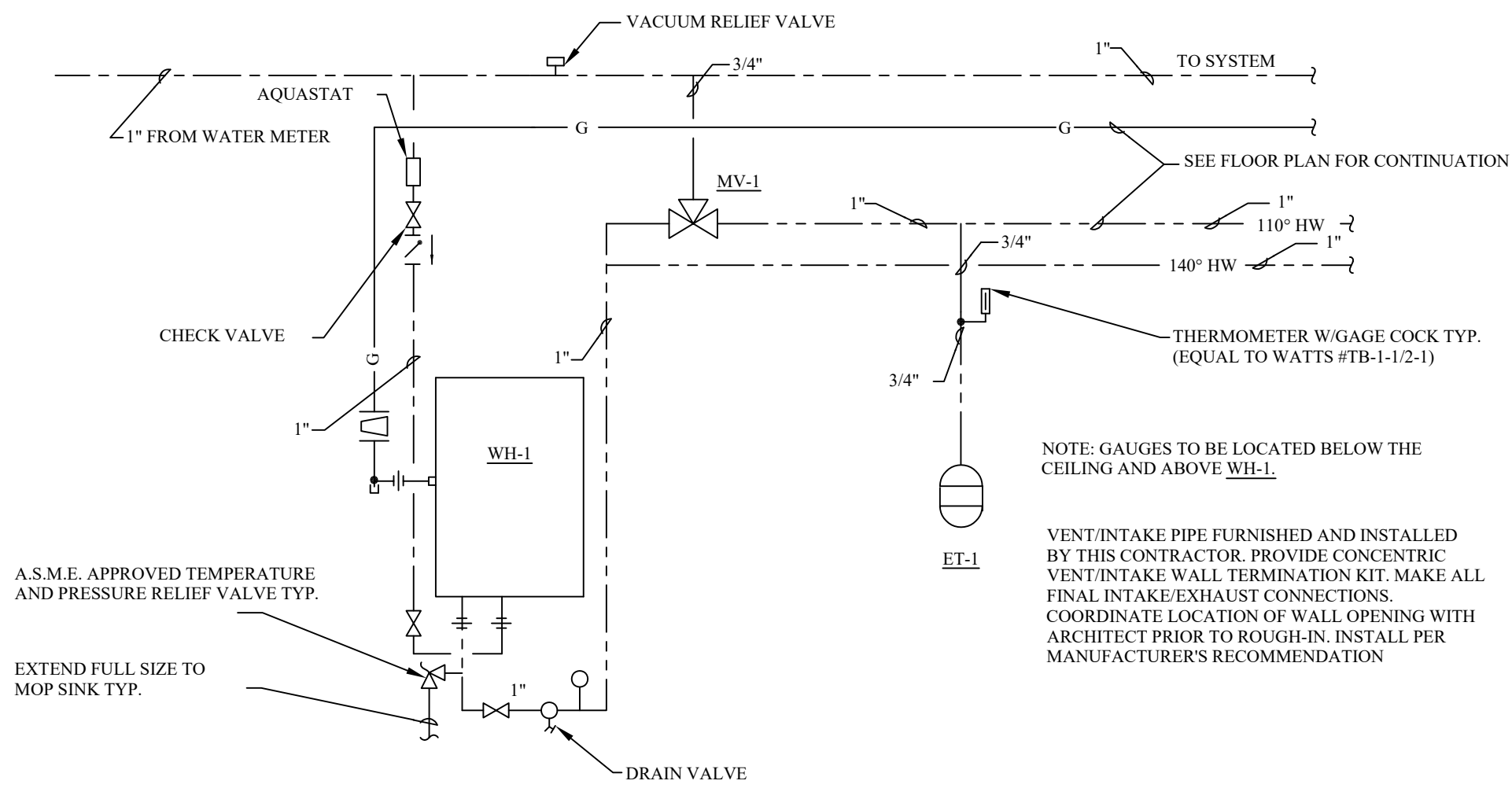
- PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO EXECUTE THE PLUMBING WORK INDICATED ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES AND ORDINANCES.
- PAY ALL FEES AND ARRANGE FOR EXECUTION OF ALL TAPS, METERS WITH REQUIRED ENCLOSURES (IF ANY), ETC. INHERENT TO THE INSTALLATION OF NEW PLUMBING SERVICE.
- 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.
- ALL ITEMS SUCH AS FITTINGS, ETC. NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED.
- 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.
- PROVIDE CLEANOUTS FOR SOIL AND WASTE LINES AS SHOWN ON DRAWINGS, AND OF TYPE APPROVED BY LOCAL CODES.
- WALL 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 UNLESS PROHIBITED BY LOCAL CODES IN WHICH CASE COPPER TUBING SHALL BE USED. (AVOID FITTINGS BELOW SLAB WHENEVER POSSIBLE). ALL WATER SUPPLY 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.
- 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.
- PROVIDE STOPS ON WATER SUPPLIES TO EACH FIXTURE & EQUIPMENT.
- 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.
- 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 FREEZING AND SMOKE DEVELOPED RATINGS REQUIRED BY LOCAL CODES.
- 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.
- WATER METER TYPE IS TO BE PROVIDED AS REQUIRED BY LOCAL UTILITY COMPANY.
- ROUGH-IN AND FINAL CONNECTIONS OF REQUIRED WASTE, VENT, AND WATER SUPPLY PIPING BY THIS CONTRACTOR. ALL SUPPLY PIPING SHALL BE VALVED.
- HOSE BIBBS SHALL BE FREEZELESS AUTOMATIC DRAINING TYPE AS MANUFACTURED BY WOODFORD.
- COORDINATE ALL WORK WITH OTHER CONTRACTORS.
- THIS 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.
- BACKFLOW PREVENTER TO BE INSTALLED WHEN REQUIRED BY LOCAL CODE.
- SEE PLUMBING SHEETS FOR KITCHEN EQUIPMENT SCHEDULE, FIXTURE SCHEDULE, DETAILS AND SANITARY ISOMETRIC.
- THE DIRECTION OF THE SANITARY MAIN AND THE LOCATION OF THE GREASE INTERCEPTOR SHALL BE COORDINATED WITH CIVIL DWGS PRIOR TO ROUGH-IN.
- PROVIDE A TRAP PRIMER ON ALL FLOOR DRAINS. LAYOUT TRAP PRIMER DISTRIBUTION TO CONNECT MULTIPLE FLOOR DRAINS TO ONE TRAP PRIMER.
- COORDINATE LOCATION AND ROUGH-IN HEIGHT OF KITCHEN EQUIPMENT WITH OWNER AND MILLWORK PRIOR TO ROUGH-IN.
- MAKE ALL CONNECTIONS TO KITCHEN AND MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED. USE MILL HARDWOOD 30B35 BRAIDED FLEXIBLE HOSES FOR ALL COUNTERTOP EQUIPMENT.
- NOT USED
- ALL PIPING (GAS AND WATER) TO BE CONCEALED IN WALL SPACE WHEN POSSIBLE.
- ALL SHUT-OFF VALVES TO BE 1/4 TURN SHUT-OFF VALVES.
- 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.
- ANY DAMAGES TO ANY EXISTING WALLS, FLOORS, FINISHES ETC. BY THIS CONTRACTOR ARE TO BE REPAIRED AT THIS CONTRACTOR'S EXPENSE.



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.

## PLUMBING RISER DETAIL - HOT WATER

## WATER HEATER PACKAGE



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

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HOUSING

| REVISION/ UPDATE DATE |         |                          |
|-----------------------|---------|--------------------------|
| REV.                  | DATE    | DESCRIPTION              |
| R2                    | 1/17/24 | WATER INLET SIZE UPDATED |
|                       |         |                          |
|                       |         |                          |
| LAST DESIGN BULLETIN  |         |                          |
| NUM.                  | DATE    | DESCRIPTION              |
|                       |         |                          |
|                       |         |                          |

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

ENGINEER  
STAMP  
WALTER E. WOOD  
NUMBER  
PE-2017022072  
02-23-2024

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

APPROVED  
2-23-2024  
WALTER CARTER & ASSOCIATES

SHEET NAME  
PLUMBING  
WATER &  
GAS

SHEET NUMBER

P3.1



| REVISION/ UPLOAD DATE |      |             |
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| REV.                  | DATE | DESCRIPTION |
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15 WEST TOWER CIRCLE, ORMOND BEACH, FL 32174

(386) 677-9316

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MISSOURI PUBLIC SERVICE COMMISSION

APPROVED

04/05/2024

MANUFACTURED HOUSING

WALTER E. WOOD

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APPROVED

02-23-2024

HWC

WALTER E. WOOD

CARTER & ASSOCIATES

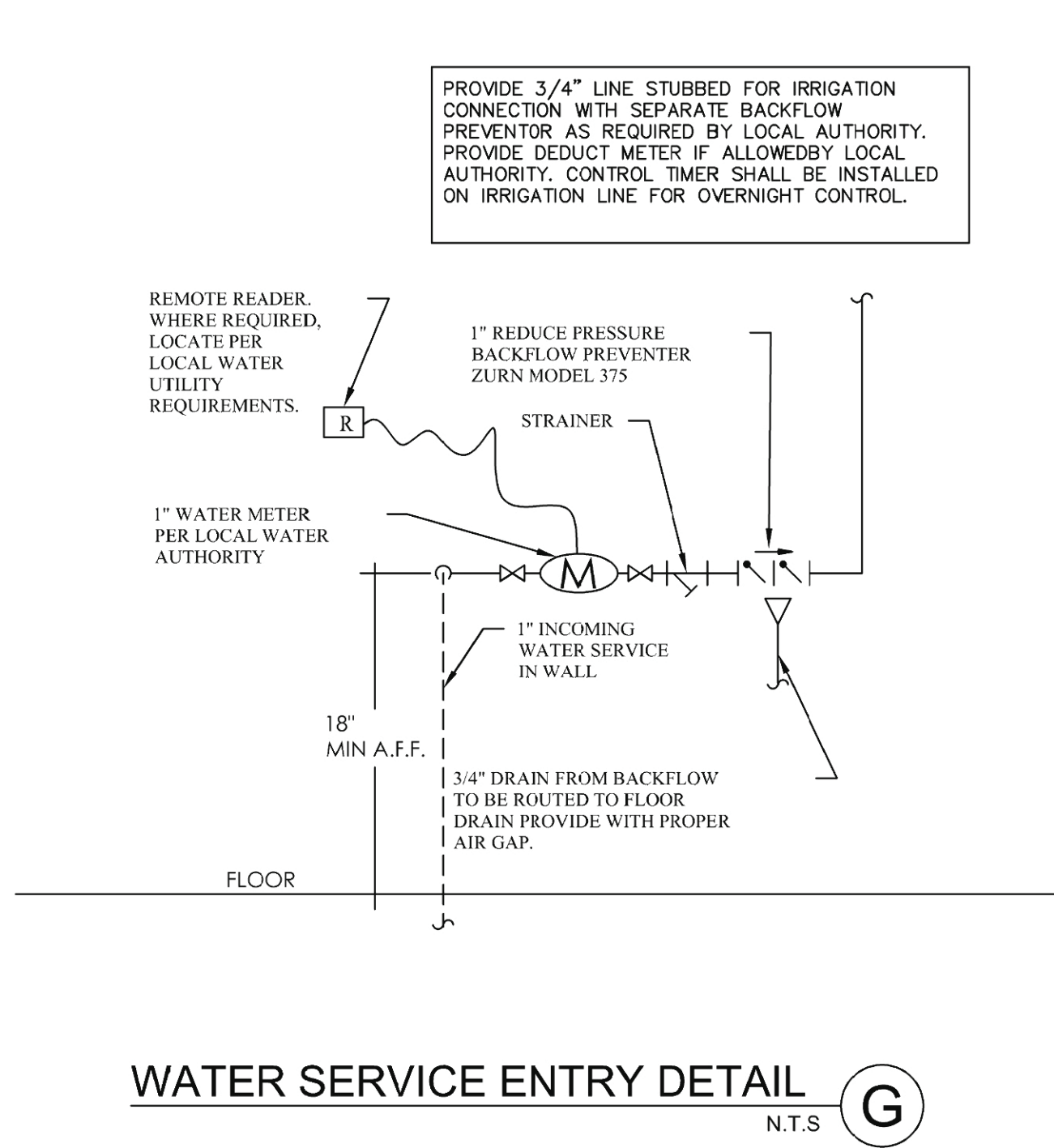
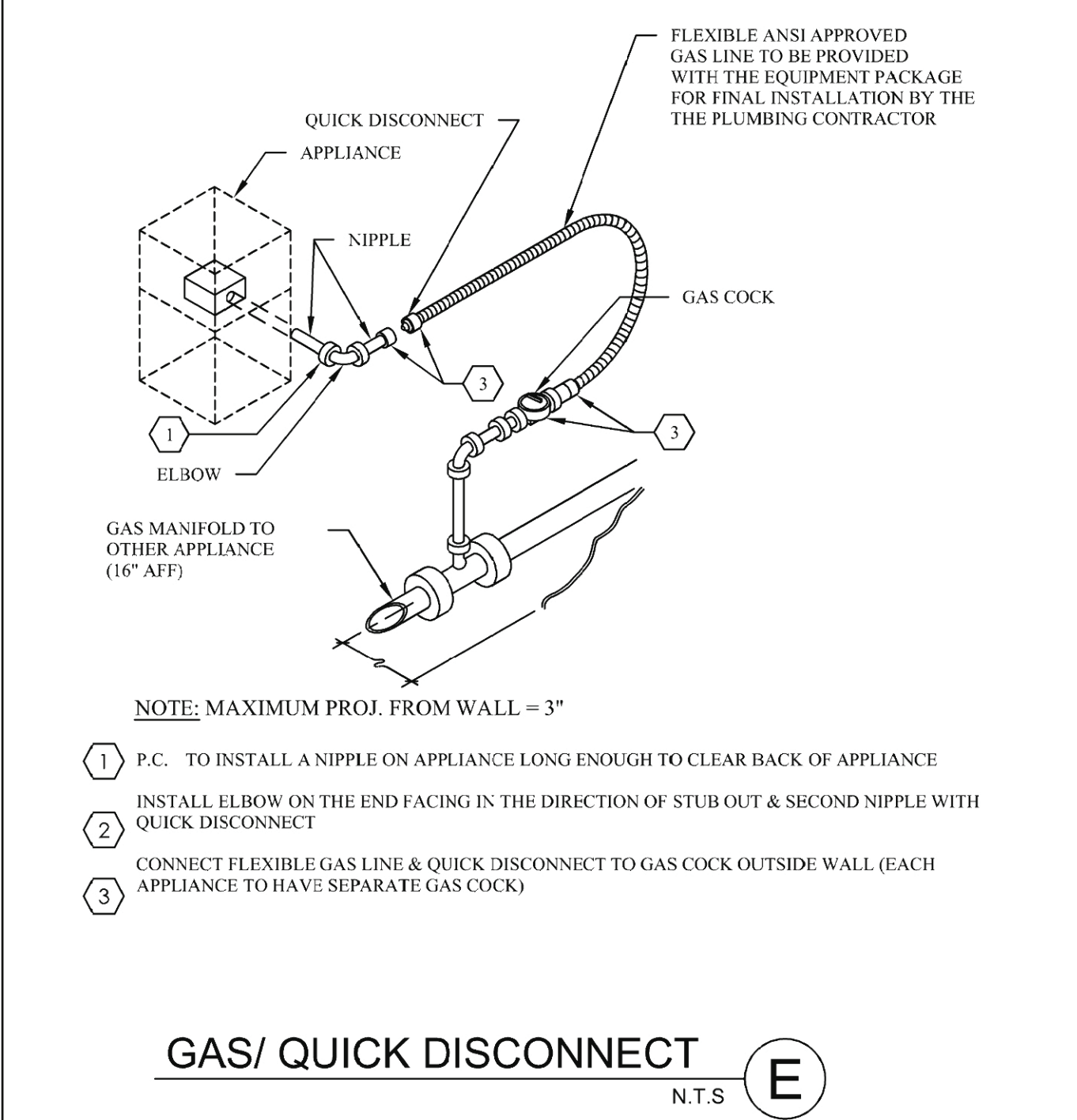
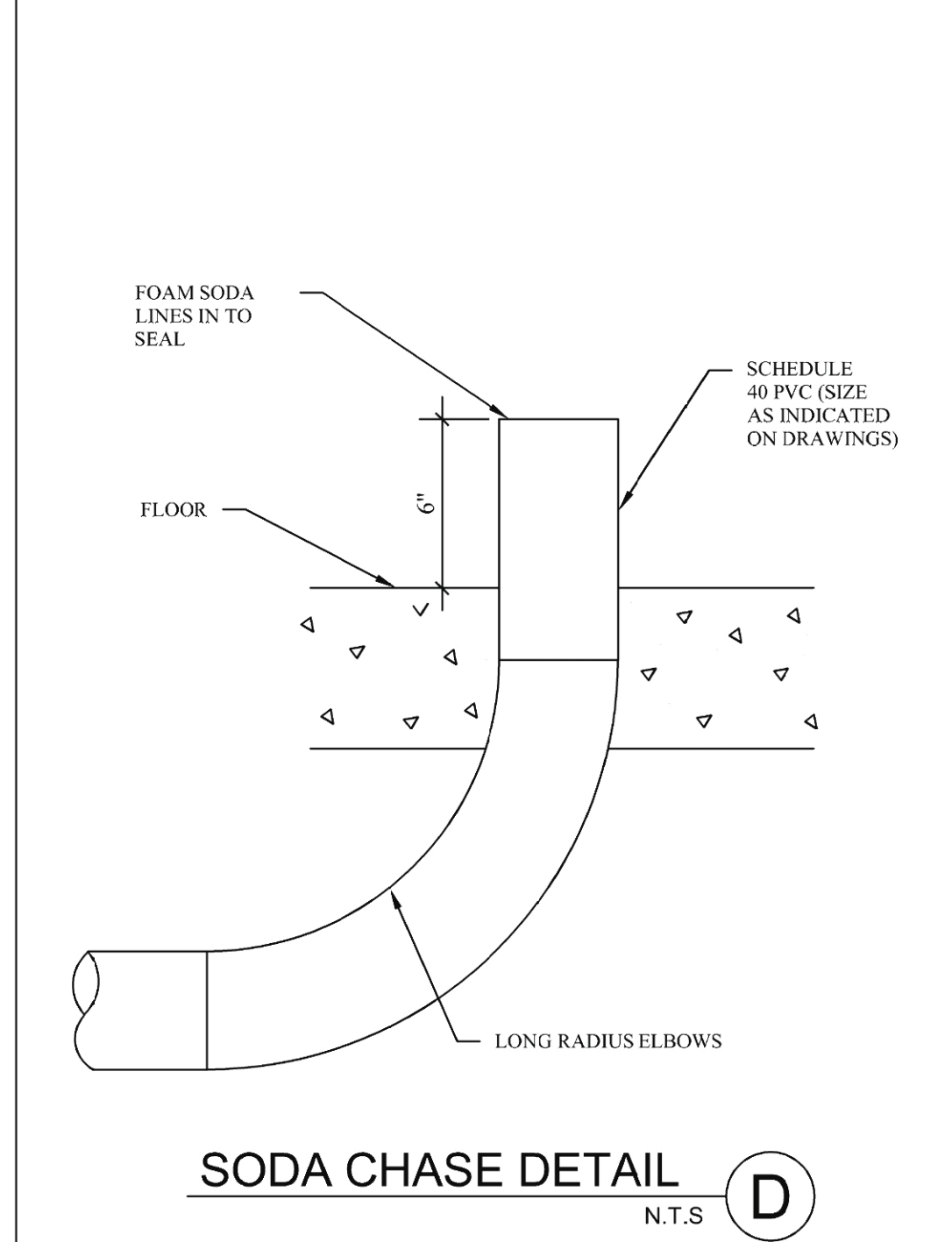
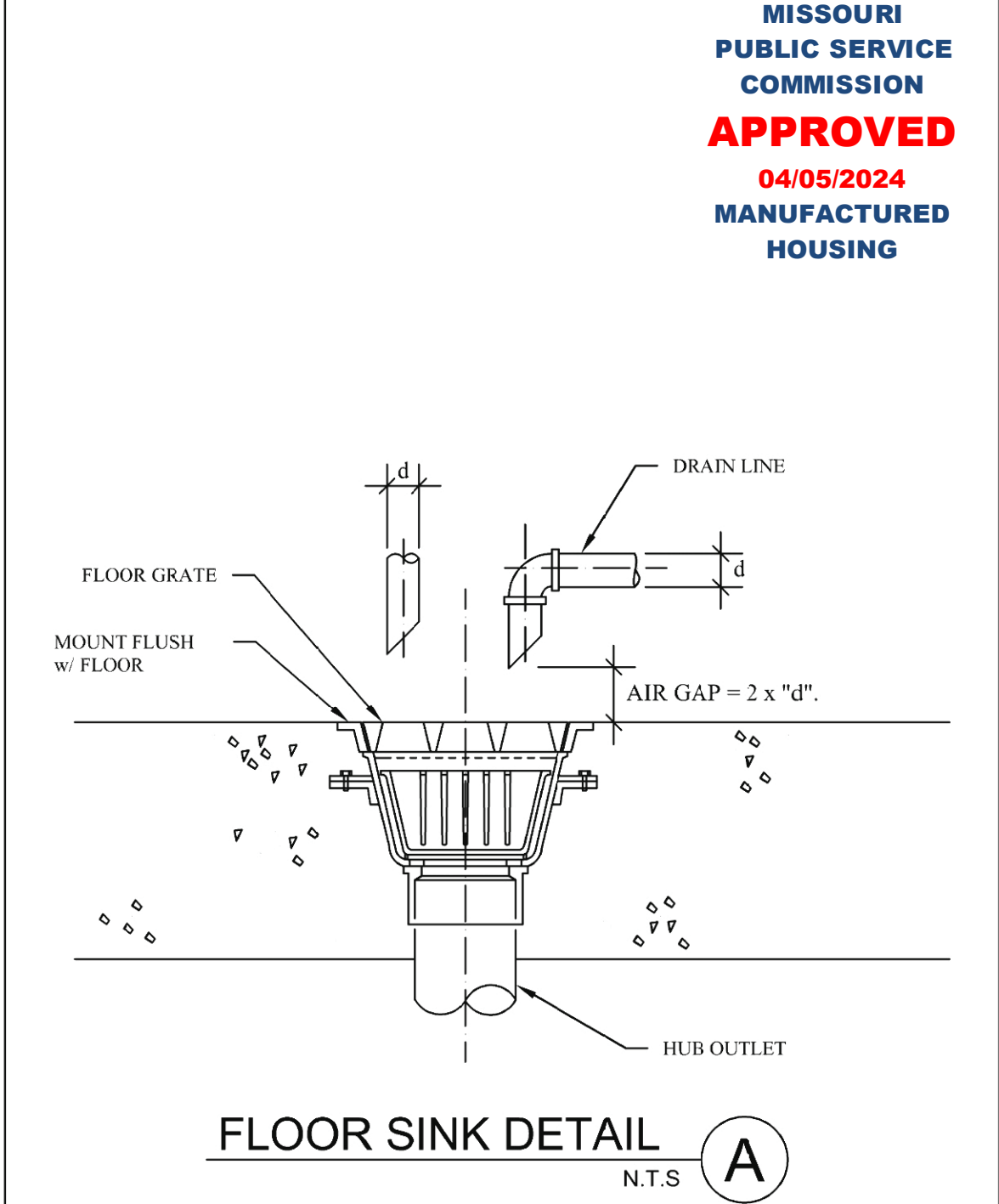
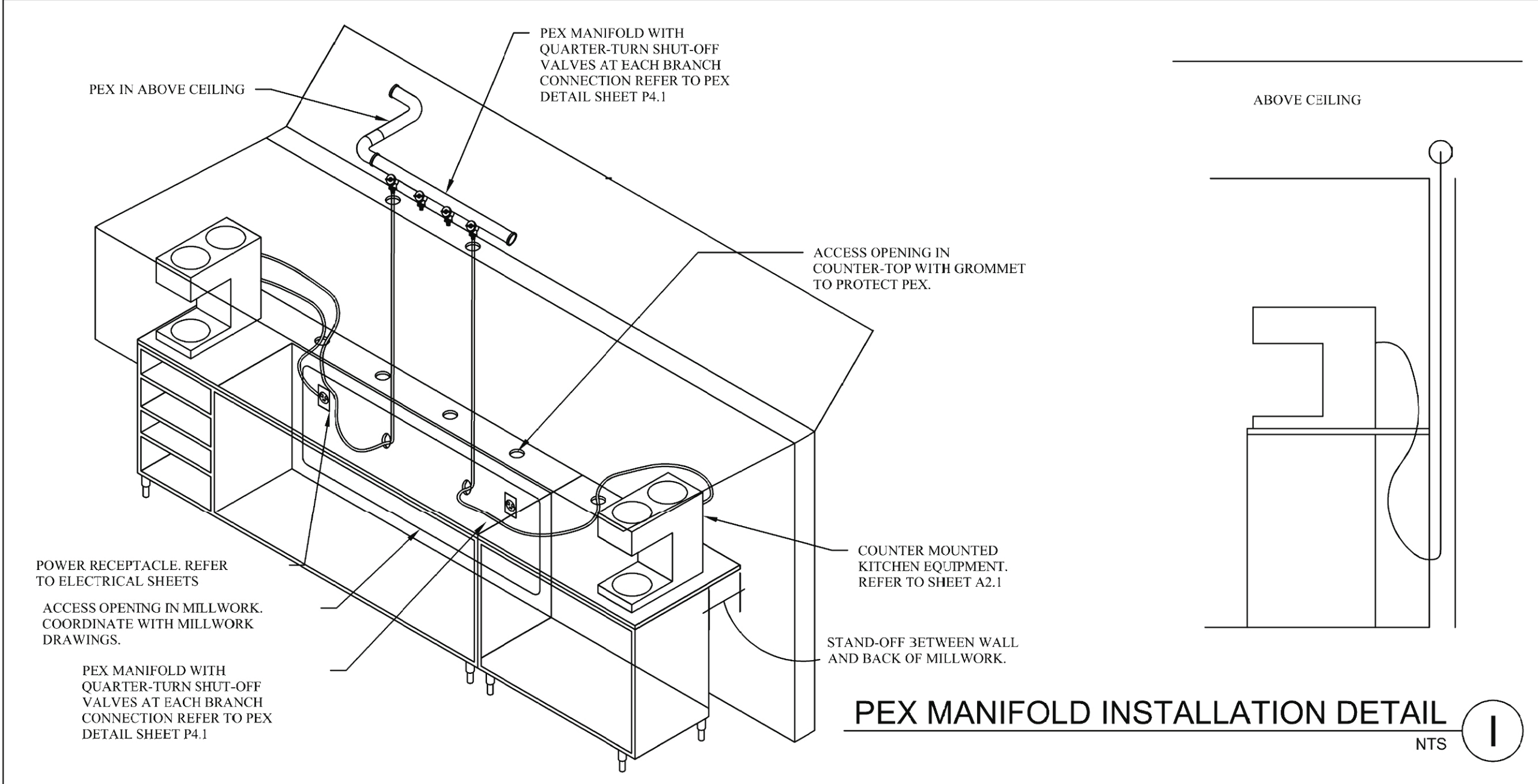
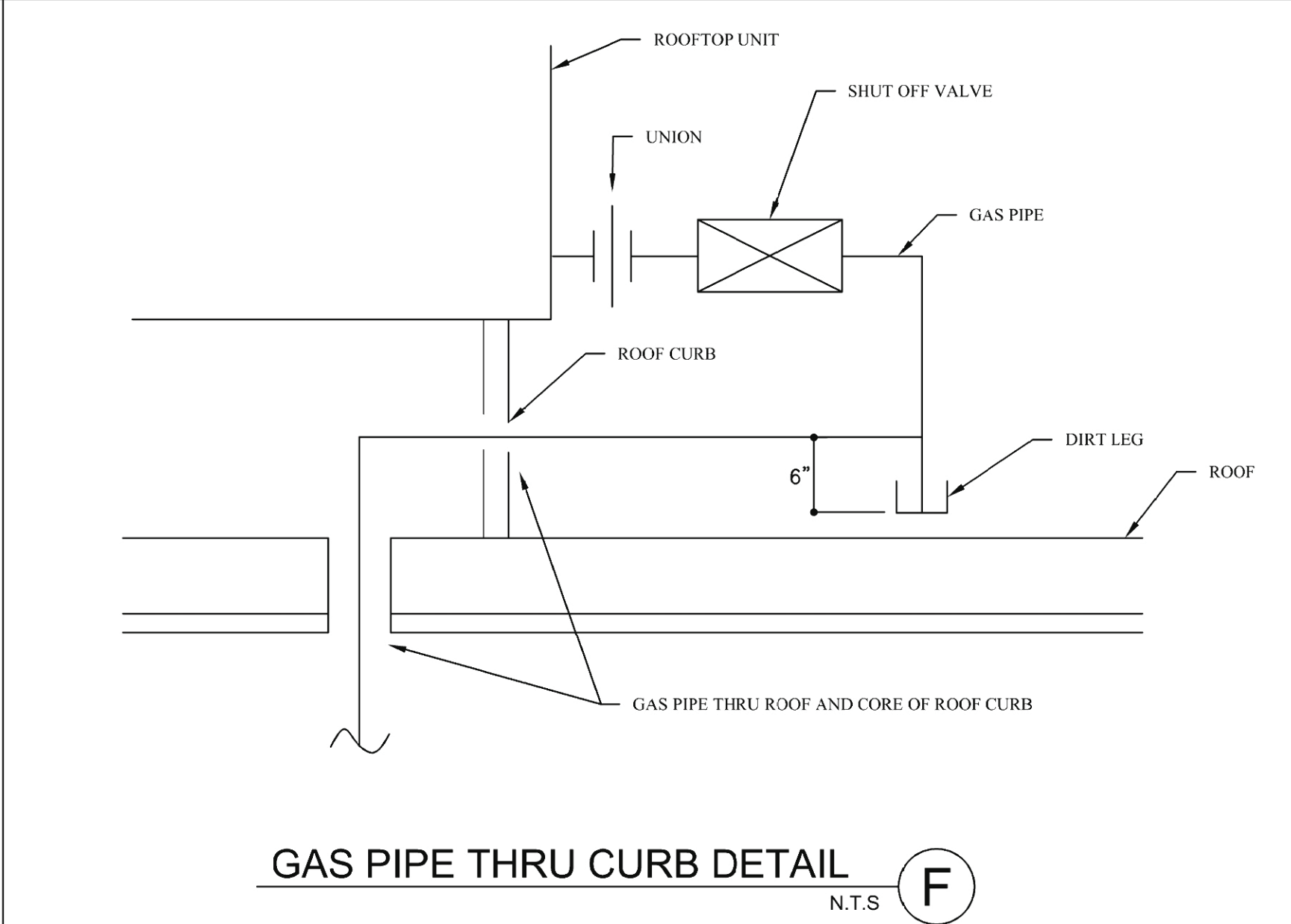
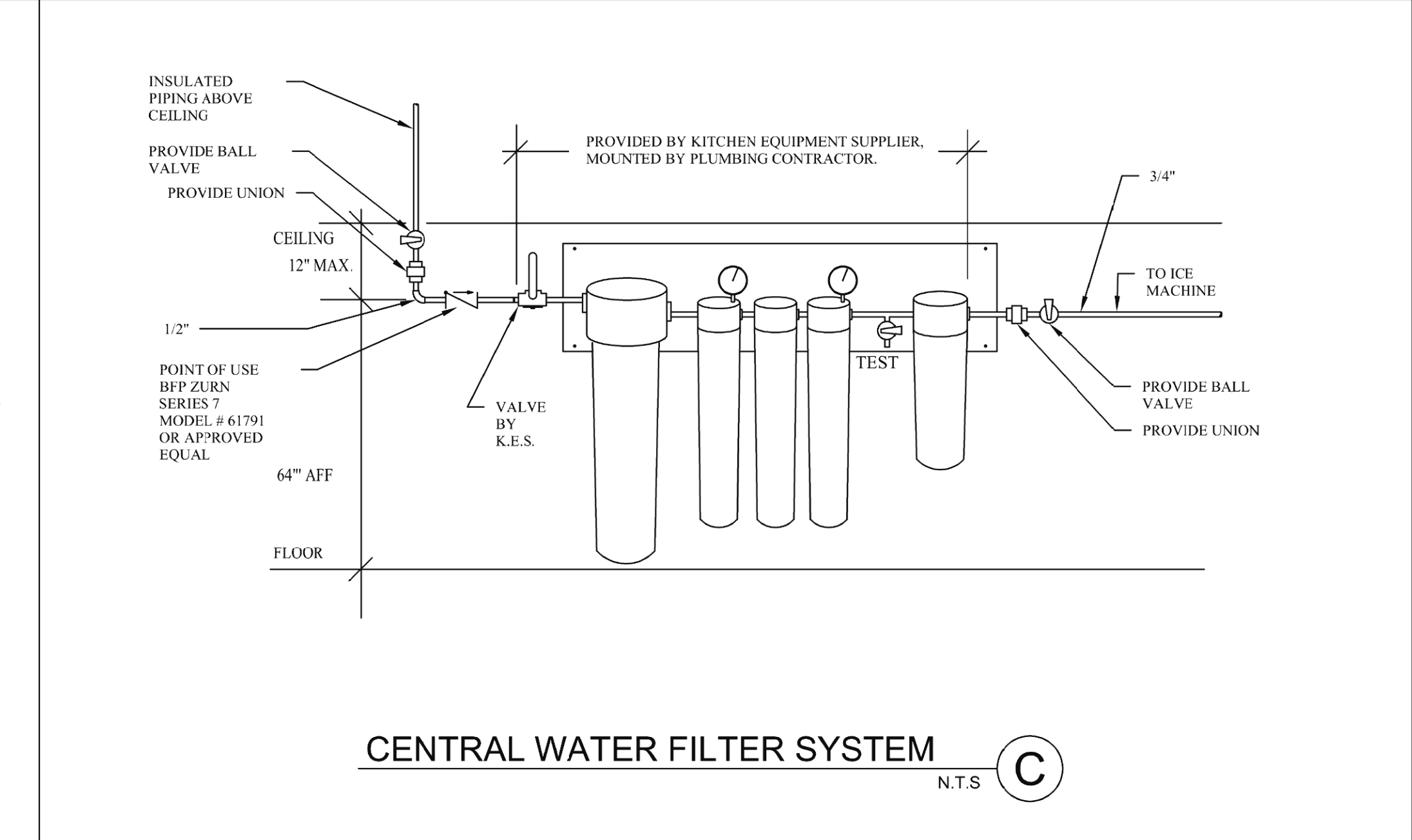
SHEET NAME

PLUMBING DETAILS

SHEET NUMBER

P4.1

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| LAST DESIGN BULLETIN  |      |             |
| NUM.                  | DATE | DESCRIPTION |
|                       |      |             |
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COOLER & FENCE  
SITE INSTALLED BY OTHERS.  
THIS COOLER & FENCE ARE  
PROVIDED FOR REFERENCE AS  
A TYPICAL STANDARD.  
SEE CIVIL PLANS FOR ACTUAL  
COOLER & FENCE PLAN

GAS METER

COOLER

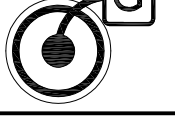
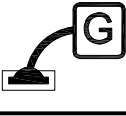
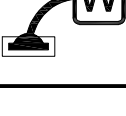
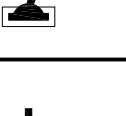
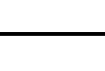
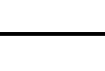
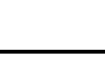
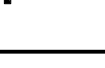
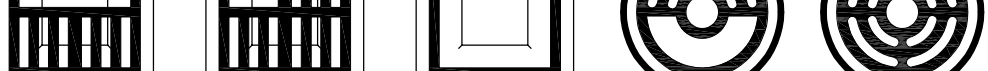
FREEZER

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

Penetration Schedule

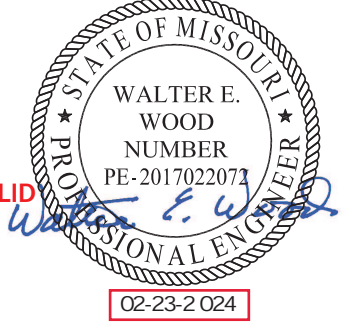
| Item Number | Count | Equipment Description          | Description           | Penetration Size | Penetration RI |
|-------------|-------|--------------------------------|-----------------------|------------------|----------------|
| 14          | 4     | Floor Trough Drain             | 47" x 8" Floor 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                                          |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------|
|  |  | Electrical Stub-Up                                   |
|  |  | Gas Line Stub-Up                                     |
|  |  | Water Stub-Up                                        |
|  |  | 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 |

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SHEET NAME

FLOOR  
PENETRATION

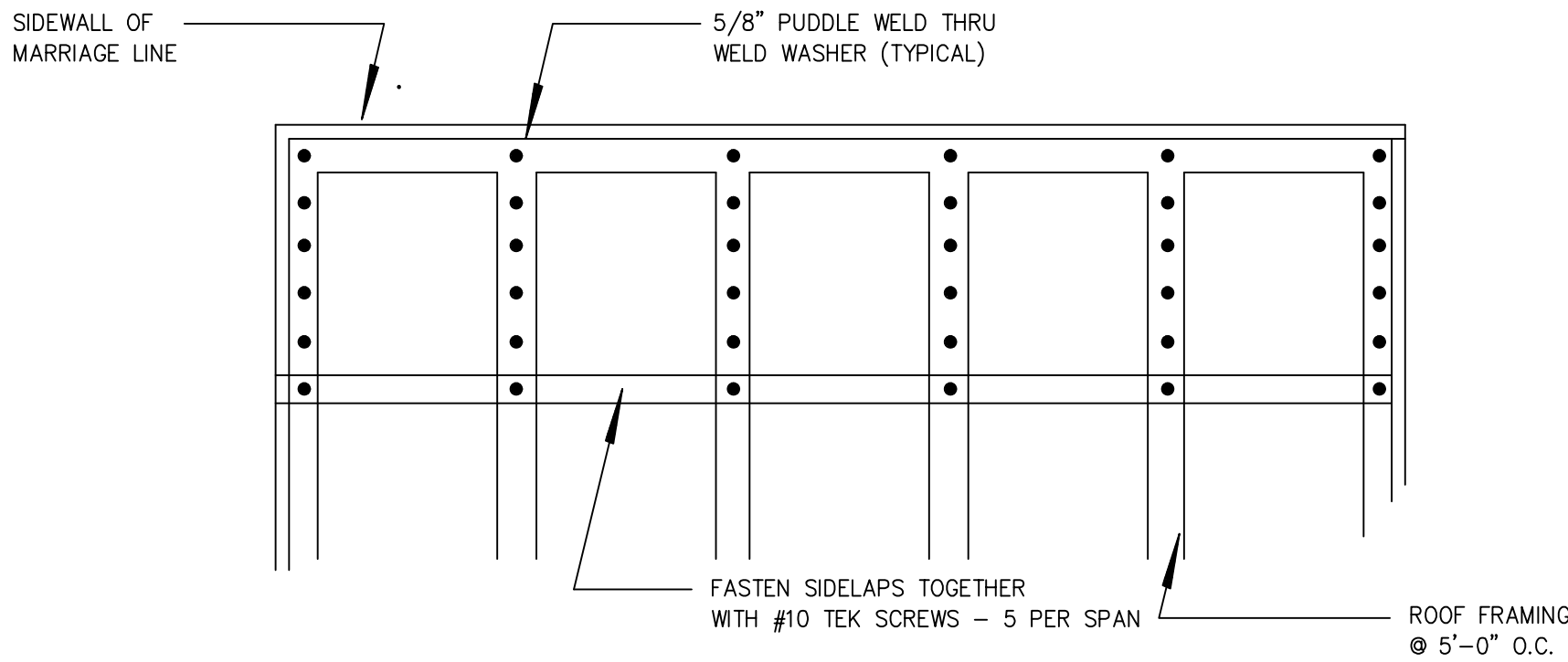
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P5.1









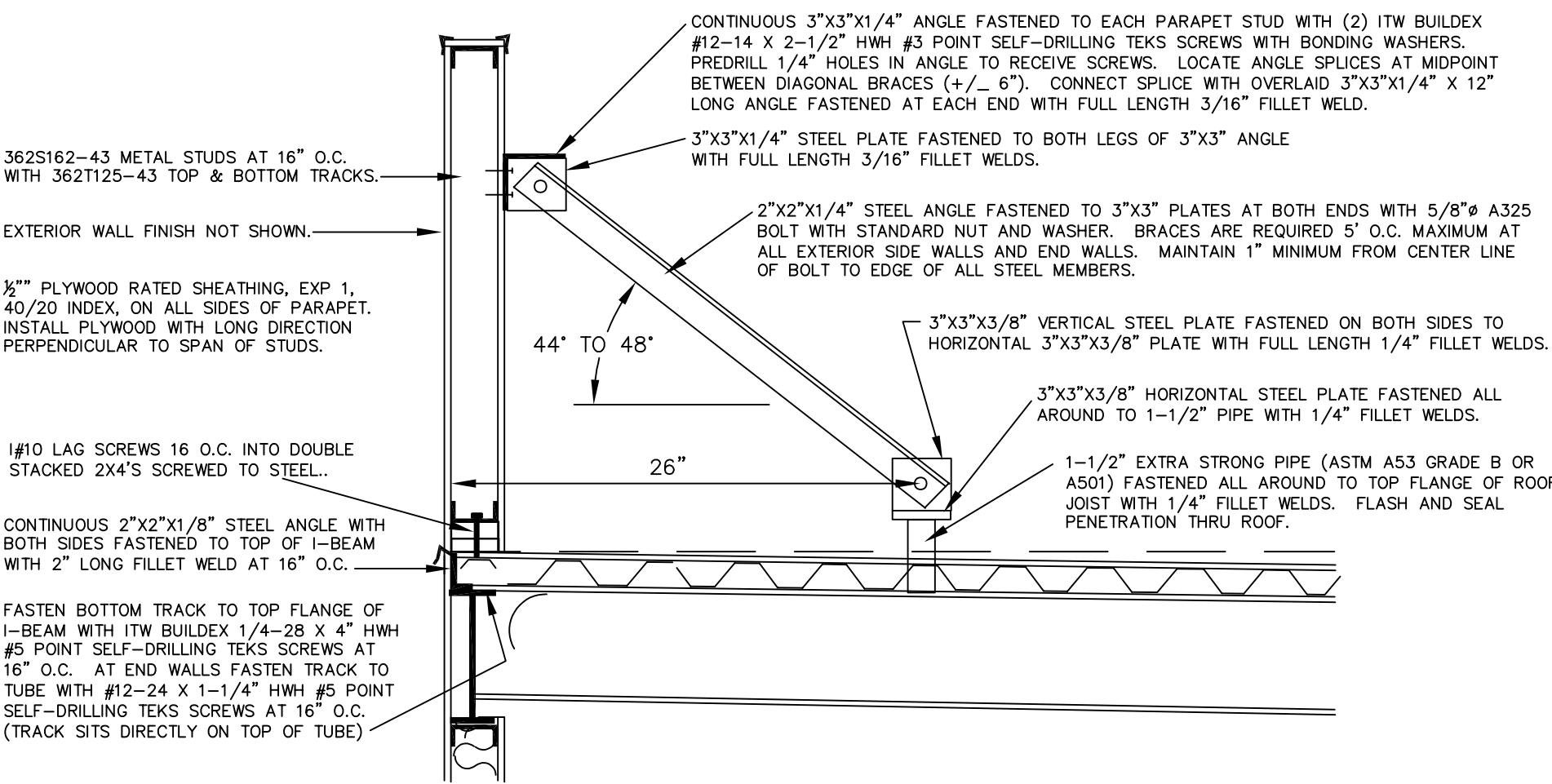
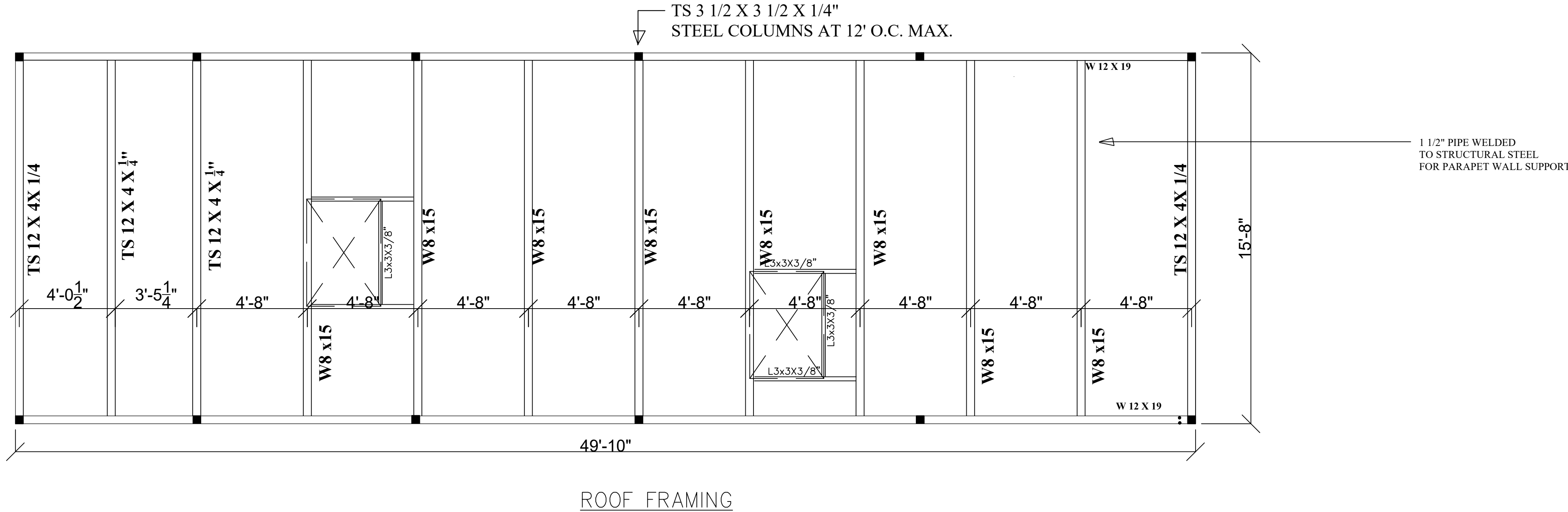
NOTE:

### Roof Deck Fastening At All Panels NTS

### STRUCTURAL NOTES:

- 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.
- 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.
- STEEL TUBES SHALL HAVE A MINIMUM YIELD STRENGTH OF 46 KSI IN ACCORDANCE WITH ASTM A500 GRADE B.
- HOT ROLLED STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI IN ACCORDANCE WITH ASTM A36.
- 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.
- 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.
- ALL BUTT WELDS SHALL BE COMPLETE PENETRATION GROOVE WELDS UNLESS OTHERWISE SPECIFIED.
- 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.
- ALL METAL DECKING SHALL BE BY VULCRAFT, OR EQUAL. METAL DECKING SHALL BE IN ACCORDANCE WITH THE "STEEL DECK INSTITUTE" STANDARDS.
- ALL BOLTS SHALL COMPLY WITH ASTM A325 UNLESS OTHERWISE SPECIFIED. 5/8" SAE GRADE 8 BOLTS ARE AN ACCEPTABLE ALTERNATIVE.

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



### ROOF PARAPET DETAIL NTS

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| REV.                  | DATE | DESCRIPTION |
|                       |      |             |
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| NUM.                  | DATE | DESCRIPTION |
|                       |      |             |

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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  
NUMBER  
PE-2017022073

VALID

EXPIRATION DATE  
02-23-2024

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

APPROVED

02-23-2024

HWC

WALTER CARTER & ASSOCIATES

**MISSOURI  
PUBLIC SERVICE  
COMMISSION**  
**APPROVED**  
04/05/2024  
**MANUFACTURED  
HOUSING**

| SHEET NAME            |
|-----------------------|
| ROOF<br>PLAN<br>STEEL |
| SHEET NUMBER          |
| S2.1                  |













## Envelope Compliance Certificate

## Project Information

Energy Code: 90.1 (2013) Standard  
Project Title: Slider Drive-Thru  
Location: Saint Louis, Missouri  
Climate Zone: 4a  
Project Type: New Construction  
Vertical Glazing /Wall Area: 2%  
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA\_MO\_StLouis-Lambert Intl.AP.724340\_TMY3.epw)

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04/05/2024  
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HOUSING

Construction Site:  
St Louis, MO

Owner/Agent

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

## Building Area

## Floor Area

1-Dining: Cafeteria/Fast Food : Nonresidential 952

## Envelope Assemblies

| Assembly                                                                                                                                              | Gross Area<br>or<br>Perimeter | Cavity<br>R-Value | Cont.<br>R-Value | Proposed<br>U-Factor | Budget U-<br>Factor <sup>(a)</sup> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|------------------|----------------------|------------------------------------|
| 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: Cool roof exempt, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]                                                 | 800                           | ---               | 23.6             | 0.041                | 0.032                              |
| <b>NORTH</b>                                                                                                                                          |                               |                   |                  |                      |                                    |
| 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                              |
| Door 101A: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food]                                                                     | 63                            | ---               | ---              | 0.500                | 0.500                              |
| <b>EAST</b>                                                                                                                                           |                               |                   |                  |                      |                                    |
| 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                              |
| Front Service Window: Metal Frame:Operable, Perf. Specs.: Product ID bb, SHGC 0.27, PF 0.40, VT 0.62, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] (b) | 19                            | ---               | ---              | 0.290                | 0.500                              |
| <b>SOUTH</b>                                                                                                                                          |                               |                   |                  |                      |                                    |
| 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                | 0.500                              |
| <b>WEST</b>                                                                                                                                           |                               |                   |                  |                      |                                    |
| 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                              |



**Assembly**

| Gross Area<br>or<br>Perimeter | Cavity<br>R-Value | Cont.<br>R-Value | Proposed<br>U-Factor | Budget U-<br>Factor <sup>(a)</sup> |
|-------------------------------|-------------------|------------------|----------------------|------------------------------------|
|-------------------------------|-------------------|------------------|----------------------|------------------------------------|

|                                                                                   |    |     |     |       |       |
|-----------------------------------------------------------------------------------|----|-----|-----|-------|-------|
| Door 101B: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Cafeteria/Fast Food] | 22 | --- | --- | 0.500 | 0.500 |
|-----------------------------------------------------------------------------------|----|-----|-----|-------|-------|

- (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.

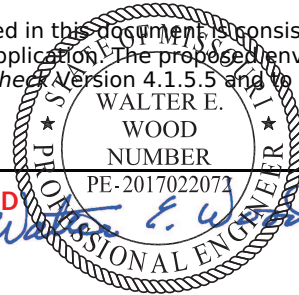
**Envelope PASSES: Design 2% better than code****Envelope Compliance Statement**

**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 (2013) Standard requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

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## Interior Lighting Compliance Certificate

## Project Information

Energy Code: 90.1 (2013) Standard  
Project Title: Slider Drive-Thru  
Project Type: New Construction

Construction Site:  
St Louis, MO

Owner/Agent

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

## Allowed Interior Lighting Power

| A<br>Area Category            | B<br>Floor Area<br>(ft <sup>2</sup> ) | C<br>Allowed<br>Watts / ft <sup>2</sup> | D<br>Allowed Watts<br>(B X C) |
|-------------------------------|---------------------------------------|-----------------------------------------|-------------------------------|
| 1-Dining: Cafeteria/Fast Food | 952                                   | 0.90                                    | 857                           |
| Total Allowed Watts =         |                                       |                                         | 857                           |

## Proposed Interior Lighting Power

| A<br>Fixture ID : Description /Lamp /Wattage Per Lamp /Ballast | B<br>Lamps/<br>Fixture | C<br># of<br>Fixtures | D<br>Fixture<br>Watt. | E<br>(C X D) |
|----------------------------------------------------------------|------------------------|-----------------------|-----------------------|--------------|
| 1-Dining: Cafeteria/Fast Food                                  |                        |                       |                       |              |
| LED 1: LED Other Fixture Unit 46W:                             | 1                      | 6                     | 45                    | 270          |
| LED 2: LED Other Fixture Unit 46W:                             | 1                      | 3                     | 39                    | 117          |
| LED 3: LED A Lamp 12W:                                         | 1                      | 3                     | 12                    | 36           |
| Total Proposed Watts =                                         |                        |                       |                       | 423          |

Interior Lighting PASSES: Design 51% better than code

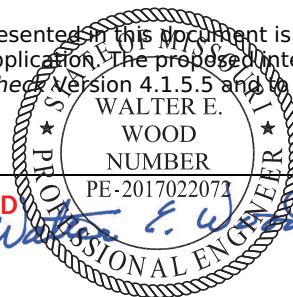
## Interior Lighting Compliance Statement

*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 (2013) Standard requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

Date



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# Exterior Lighting Compliance Certificate

## Project Information

Energy Code: 90.1 (2013) Standard  
Project Title: Slider Drive-Thru  
Project Type: New Construction  
Exterior Lighting Zone: 2 (Neighborhood business district (LZ2))

Construction Site:  
St Louis, MO

Owner/Agent

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

## Allowed Exterior Lighting Power

| A<br>Area/Surface Category             | B<br>Quantity | C<br>Allowed<br>Watts /Unit | D<br>Tradable<br>Wattage | E<br>Allowed Watts<br>(B X C) |
|----------------------------------------|---------------|-----------------------------|--------------------------|-------------------------------|
| Main entry                             | 2 ft of door  | 20                          | Yes                      | 40                            |
| Drive-up windows/doors                 | 2 windows     | 400                         | No                       | 800                           |
| Total Tradable Watts (a) =             |               |                             |                          | 40                            |
| Total Allowed Watts =                  |               |                             |                          | 840                           |
| Total Allowed Supplemental Watts (b) = |               |                             |                          | 600                           |

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

## Proposed Exterior Lighting Power

| A<br>Fixture ID : Description /Lamp /Wattage Per Lamp /Ballast           | B<br>Lamps/<br>Fixture | C<br># of<br>Fixtures | D<br>Fixture<br>Watt. | E<br>(C X D) |
|--------------------------------------------------------------------------|------------------------|-----------------------|-----------------------|--------------|
| <u>Main entry (2 ft of door width): Tradable Wattage</u>                 |                        |                       |                       |              |
| LED 1: LED Linear 22W:                                                   | 1                      | 2                     | 22                    | 44           |
| <u>Drive-up windows/doors (2 windows or doors): Non-tradable Wattage</u> |                        |                       |                       |              |
| LED 3: LED Other Fixture Unit 80W:                                       | 1                      | 2                     | 75                    | 150          |
| Total Tradable Proposed Watts =                                          |                        |                       |                       | 44           |

**Exterior Lighting PASSES: Design 93% better than code**

## Exterior Lighting Compliance Statement

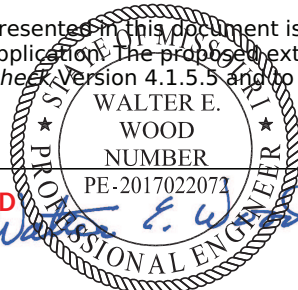
**Compliance Statement:** The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title



Signature

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# Mechanical Compliance Certificate

## Project Information

Energy Code: 90.1 (2013) Standard  
Project Title: Slider Drive-Thru  
Location: Saint Louis, Missouri  
Climate Zone: 4a  
Project Type: New Construction

Construction Site:  
St Louis, MO

Owner/Agent

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

## Mechanical Systems List

### Quantity System Type & Description

- 1 HVAC System 1 (Single Zone):  
Heating: 1 each - Central Furnace, Electric, Capacity = 52 kBtu/h  
No minimum efficiency requirement applies  
Cooling: 1 each - Single Package DX Unit, Capacity = 78 kBtu/h, Air-Cooled Condenser, Air Economizer  
Proposed Efficiency = 11.20 EER, Required Efficiency: 11.20 EER + 12.9 IEER  
Fan System: None
- 1 Water Heater 3:  
Electric Instantaneous Water Heater, Capacity: 2 gallons  
No minimum efficiency requirement applies

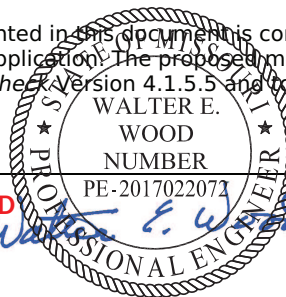
## Mechanical Compliance Statement

**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 (2013) Standard requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

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# Inspection Checklist

Energy Code: 90.1 (2013) Standard

Requirements: 100.0% were addressed directly in the COMcheck 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] <sup>1</sup>        | 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.                                                                                                                                                                                                | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                                                                                   |
| 4.2.2, 6.4.4.2.1, 6.7.2 [PR2] <sup>1</sup>      | 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.                                                                                            | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                                                                                   |
| 4.2.2, 7.7.1, 10.4.2 [PR3] <sup>1</sup>         | 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.                                                                                               | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                                                                                   |
| 4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6] <sup>2</sup> | 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%.                                                                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                                                                                   |
| 4.2.2, 9.4.3, 9.7 [PR4] <sup>1</sup>            | 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. | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.<br><br><div><b>MISSOURI<br/>PUBLIC SERVICE<br/>COMMISSION</b><br/><b>APPROVED</b><br/><b>04/05/2024</b><br/><b>MANUFACTURED<br/>HOUSING</b></div> |

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



| Section #<br>& Req.ID         | Plan Review                                                                                                                                                                                                                                                                                                                                                                     | Complies?                                                                                                                                                    | Comments/Assumptions                          |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| 9.7<br>[PR8] <sup>1</sup>     | 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. | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.7.2.4<br>[PR5] <sup>1</sup> | Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft <sup>2</sup> .                                                                                                                                                                                                                                            | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply. |

**Additional Comments/Assumptions:**

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



| Section # & Req.ID            | Footings / Foundation Inspection                                                                                                         | Plans Verified Value                                                            | Field Verified Value                                                            | Complies?                                                                                                                                                    | Comments/Assumptions                                                                               |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 4.2.4 [FO1] <sup>2</sup>      | Installed below-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. | R-_____                                                                         | R-_____                                                                         | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values.                                                      |
| 4.2.4 [FO3] <sup>2</sup>      | Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.    | R-_____<br><input type="checkbox"/> Unheated<br><input type="checkbox"/> Heated | R-_____<br><input type="checkbox"/> Unheated<br><input type="checkbox"/> Heated | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values.                                                      |
| 5.5.3.5 [FO5] <sup>2</sup>    | Slab edge insulation depth/length.                                                                                                       | _____ ft                                                                        | _____ ft                                                                        | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values.                                                      |
| 5.8.1.7 [FO6] <sup>1</sup>    | Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.                |                                                                                 |                                                                                 | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                           |
| 5.8.1.7.3 [FO7] <sup>1</sup>  | Insulation in contact with the ground has <=0.3% water absorption rate per ASTM C272.                                                    |                                                                                 |                                                                                 | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                           |
| 6.4.3.7 [FO9] <sup>3</sup>    | Freeze protection and snow/ice melting system sensors for future connection to controls.                                                 |                                                                                 |                                                                                 | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                      |
| 6.4.4.1.5 [FO11] <sup>3</sup> | Bottom surface of floor structures incorporating radiant heating insulated to >=R-3.5.                                                   | R-_____                                                                         | R-_____                                                                         | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.<br><br>See the Envelope Assemblies table for values. |

**Additional Comments/Assumptions:**

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



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

**Additional Comments/Assumptions:**

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



| 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] <sup>2</sup>     | HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.                                                                                                                                                              | Efficiency: _____    | Efficiency: _____    | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Mechanical Systems list for values.                                 |
| 6.4.3.4.1 [ME3] <sup>3</sup>            | Stair and elevator shaft vents have motorized dampers that automatically close.                                                                                                                                                                    |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                               |
| 6.4.3.4.2, 6.4.3.4.3 [ME4] <sup>3</sup> | 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.                                                                                |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                    |
| 6.4.3.4.5 [ME39] <sup>3</sup>           | Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.                                                                                                  |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                               |
| 6.4.3.4.4 [ME5] <sup>3</sup>            | Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.                                                                                                                                                               |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                    |
| 6.4.3.8 [ME6] <sup>1</sup>              | Demand control ventilation provided for spaces >500 ft <sup>2</sup> and >25 people/1000 ft <sup>2</sup> occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm. |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                    |
| 6.5.3.2.1 [ME40] <sup>2</sup>           | 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 indoor fan airflow as a function of load and comply with operational requirements.                    |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.<br><br>See the Mechanical Systems list for values. |
| 6.4.4.1.1 [ME7] <sup>3</sup>            | Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.                                                                                           |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                    |
| 6.4.4.1.2 [ME8] <sup>2</sup>            | HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.                                                                                            | R- _____             | R- _____             | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                    |
| 6.4.4.1.3 [ME9] <sup>2</sup>            | HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.                                                                                                       | _____ in.            | _____ in.            | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> 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] <sup>3</sup> | Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq$ R-3.5.                                                                  |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                           |
| 6.4.4.2.1 [ME10] <sup>2</sup> | Ducts and plenums sealed based on static pressure and location.                                                                                                |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                |
| 6.4.4.2.2 [ME11] <sup>3</sup> | Ductwork operating $>3$ in. water column requires air leakage testing.                                                                                         |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                           |
| 6.5.2.3 [ME19] <sup>3</sup>   | Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream. |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                |
| 6.5.2.4.1 [ME68] <sup>3</sup> | Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.                     |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                           |
| 6.5.2.4.2 [ME69] <sup>3</sup> | Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated $\geq$ R-0.5.                                    |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                           |
| 6.5.2.5 [ME70] <sup>3</sup>   | Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.                                           |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                |
| 6.5.3.3 [ME42] <sup>3</sup>   | Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.                                                      |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.<br><br><i>See the Mechanical Systems list for values.</i> |
| 6.5.4.2 [ME25] <sup>3</sup>   | HVAC pumping systems $>10$ hp designed for variable fluid flow.                                                                                                |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                |
| 6.5.6.1 [ME56] <sup>1</sup>   | Exhaust air energy recovery on systems meeting Tables 6.5.6.1-1, and 6.5.6.1-2.                                                                                |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                |
| 6.5.7.1.1 [ME32] <sup>2</sup> | Kitchen hoods $>5,000$ cfm have make up air $\geq 50\%$ of exhaust air volume.                                                                                 |                                                                               |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                |
| 6.5.7.1.5 [ME49] <sup>3</sup> | Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.                          | <b>MISSOURI<br/>PUBLIC SERVICE<br/>COMMISSION<br/>APPROVED<br/>04/05/2024</b> |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> 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                                                 |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 6.5.8.1 [ME34] <sup>2</sup> | Unenclosed spaces that are heated use only radiant heat.                                                                                                                                                                             |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                        |
| 6.5.9 [ME35] <sup>1</sup>   | Hot gas bypass limited to: <=240 kBtu/h - 15% >240 kBtu/h - 10%                                                                                                                                                                      |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                             |
| 7.4.2 [ME36] <sup>2</sup>   | Service water heating equipment meets efficiency requirements.                                                                                                                                                                       |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable |                                                                      |
| 6.4.3.9 [ME63] <sup>2</sup> | Heating for vestibules and air curtains include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating systems controlled by a thermostat in the vestibule with setpoint <= 60F. |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                        |
| 6.5.10 [ME73] <sup>3</sup>  | Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.                                                                                                          |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Building entrances have automatic closing devices. |

**Additional Comments/Assumptions:**

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| Section # & Req.ID           | Rough-In Electrical Inspection                                                                                                                                                                                                       | Complies?                                                                                                                                                    | Comments/Assumptions                                                                                              |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 8.4.2 [EL10] <sup>2</sup>    | At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.                                                                                                                               | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Space type is not private office, open office, or computer classroom.                           |
| 9.4.1.1 [EL1] <sup>2</sup>   | 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. | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                          |
| 9.4.1.1 [EL2] <sup>2</sup>   | Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.                                                                                             | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                          |
| 9.4.1.2 [EL11] <sup>2</sup>  | Parking garage lighting is equipped with required lighting controls and daylight transition zone lighting.                                                                                                                           | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                                     |
| 9.4.1.1f [EL13] <sup>1</sup> | Daylight areas under skylights and roof monitors that have more than 150 W combined input power for general lighting are controlled by photocontrols.                                                                                | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.                                                                     |
| 9.4.1.4 [EL3] <sup>2</sup>   | Automatic lighting controls for exterior lighting installed.                                                                                                                                                                         | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Covered vehicle entrance/exit areas requiring lighting for safety, security and eye adaptation. |
| 9.4.1.3 [EL4] <sup>1</sup>   | Separate lighting control devices for specific uses installed per approved lighting plans.                                                                                                                                           | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                          |
| 9.6.2 [EL8] <sup>1</sup>     | Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.                                                                | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                                                                                          |
| 10.4.1 [EL9] <sup>2</sup>    | Electric motors meet requirements where applicable.                                                                                                                                                                                  | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> 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] <sup>1</sup>            | 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-____<br><input type="checkbox"/> Above deck<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Attic                            | R-____<br><input type="checkbox"/> Above deck<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Attic                            | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| 5.8.1.2, 5.8.1.3 [IN3] <sup>1</sup> | Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the ceiling slope is <= 3:12.                                                           |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 4.2.4 [IN6] <sup>1</sup>            | Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.                                                                         | R-____<br><input type="checkbox"/> Mass<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Steel<br><input type="checkbox"/> Wood | R-____<br><input type="checkbox"/> Mass<br><input type="checkbox"/> Metal<br><input type="checkbox"/> Steel<br><input type="checkbox"/> Wood | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| 5.8.1.2 [IN7] <sup>1</sup>          | Above-grade wall insulation installed per manufacturer's instructions.                                                                                                                                           |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 4.2.4 [IN8] <sup>2</sup>            | Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.                                                                                    | R-____<br><input type="checkbox"/> Mass<br><input type="checkbox"/> Steel<br><input type="checkbox"/> Wood                                   | R-____<br><input type="checkbox"/> Mass<br><input type="checkbox"/> Steel<br><input type="checkbox"/> Wood                                   | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| 5.8.1.2 [IN9] <sup>2</sup>          | Floor insulation installed per manufacturer's instructions.                                                                                                                                                      |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 5.8.1.1 [IN10] <sup>2</sup>         | Building envelope insulation is labeled with R-value or insulation certificate has been provided listing R-value and other relevant data.                                                                        |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 5.8.1.9 [IN18] <sup>2</sup>         | Building envelope insulation extends over the full area of the component at the proposed rated R or U value.                                                                                                     |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 5.8.1.4 [IN11] <sup>2</sup>         | Eaves are baffled to deflect air to above the insulation.                                                                                                                                                        |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 5.8.1.5 [IN12] <sup>2</sup>         | Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.                                                                                    |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 5.8.1.6 [IN13] <sup>2</sup>         | Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.                                                                                                          |                                                                                                                                              |                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |

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| Section # & Req.ID            | Insulation Inspection                                                                                                                                                                   | Plans Verified Value | Field Verified Value | Complies?                                                                                                                                                    | Comments/Assumptions     |
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| 5.8.1.7.1 [IN15] <sup>2</sup> | Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.                                                                                      |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met. |
| 5.8.1.7.2 [IN16] <sup>2</sup> | Foundation vents do not interfere with insulation.                                                                                                                                      |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met. |
| 5.8.1.8 [IN17] <sup>3</sup>   | 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. |                      |                      | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met. |

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| Section # & Req.ID            | Final Inspection                                                                                                                                                                                                                                                          | Complies?                                                                                                                                                    | Comments/Assumptions                          |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| 5.4.3.3 [FI1] <sup>1</sup>    | Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.                                                                                                                                                                                              | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply. |
| 6.4.3.1.2 [FI3] <sup>3</sup>  | Thermostatic controls have a 5 °F deadband.                                                                                                                                                                                                                               | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.4.3.2 [FI20] <sup>3</sup>   | Temperature controls have setpoint overlap restrictions.                                                                                                                                                                                                                  | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.4.3.3.1 [FI21] <sup>3</sup> | HVAC systems equipped with at least one automatic shutdown control.                                                                                                                                                                                                       | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.4.3.3.2 [FI22] <sup>3</sup> | Setback controls allow automatic restart and temporary operation as required for maintenance.                                                                                                                                                                             | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.4.3.6 [FI6] <sup>3</sup>    | 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. | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.7.2.1 [FI7] <sup>3</sup>    | Furnished HVAC as-built drawings submitted within 90 days of system acceptance.                                                                                                                                                                                           | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.7.2.2 [FI8] <sup>3</sup>    | Furnished O&M manuals for HVAC systems within 90 days of system acceptance.                                                                                                                                                                                               | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 6.7.2.3 [FI9] <sup>1</sup>    | An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft <sup>2</sup> of conditioned area.                                                                                                                                     | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply. |
| 6.7.2.4 [FI10] <sup>1</sup>   | HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.                                                                                                                                                                 | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 7.4.4.3 [FI11] <sup>3</sup>   | Public lavatory faucet water temperature ≤110°F.                                                                                                                                                                                                                          | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |
| 8.7.1 [FI16] <sup>3</sup>     | Furnished as-built drawings for electric power systems within 30 days of system acceptance.                                                                                                                                                                               | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                      |

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| Section # & Req.ID          | Final Inspection                                                                                                                                                                          | Complies?                                                                                                                                                    | Comments/Assumptions                                   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 8.7.2 [FI17] <sup>3</sup>   | Furnished O&M instructions for systems and equipment to the building owner or designated representative.                                                                                  | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                               |
| 9.2.2.3 [FI18] <sup>1</sup> | 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. | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Interior Lighting fixture schedule for values. |
| 9.4.2 [FI19] <sup>1</sup>   | 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.                            | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | See the Exterior Lighting fixture schedule for values. |
| 10.4.3 [FI24] <sup>2</sup>  | Elevators are designed with the proper lighting, ventilation power, and standby mode.                                                                                                     | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | <b>Exception:</b> Requirement does not apply.          |
| 7.4.3 [FI45] <sup>2</sup>   | First 8 ft of outlet piping is insulated                                                                                                                                                  | <input type="checkbox"/> Complies<br><input type="checkbox"/> Does Not<br><input type="checkbox"/> Not Observable<br><input type="checkbox"/> Not Applicable | Requirement will be met.                               |

**Additional Comments/Assumptions:**

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



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