NOTES

GENERAL CONSTRUCTION NOTES:

1. All work shall be carried out according to good construction practices and shall be in compliance with the following codes:
   - Building Code / Local Codes.
   - ADA and Local By-Laws.
2. General Contractor is responsible for all life safety elements, including but not limited to exit signage, fire extinguishers and sprinkler systems neccesary to satisfy Local and State codes and regulations.
3. General Contractor is responsible for all permits and fees.
4. General Contractor shall report any discrepancies to Architect regarding either existing conditions or within the drawings. Failure to do so will relieve the architect of any responsibility regarding any consequences that arise from these discrepencies. Any changes made from the drawings or specs without permission will also relieve the architect & engineers of any responsibility for the consequences of this work.
5. General Contractor shall submit samples of any substitute product to Architect for approval.
6. General Contractor is solely responsible for the coordination of all disciplines & their potential impact upon the project. Any area damaged by their work shall be repaired to match surrounding materials and methods of construction.
7. Due to manufacturer's variations on types and sizes of equipment, casework, plumbing fixtures, etc., all dimensions referring to the space where such items are built-in shall be verified with the item supplier prior to fabrication and installation.
8. If a sprinkler system exists it will be modified to for the new tenant.
9. Install continuous treated non-combustible 2 x 6 blocking between studs for all handrails, grab bars, fixtures, brackets, accessories, monitors, cabinetry, and misc. specialties as required, unless noted otherwise.
10. Construction Drawings take precedence over Specifications. Large-scale Details take precedence over Plans & Elevations. Engineering Drawings take precedence over Graphical Representations on Architectural Drawings.
11. Contractor shall include in the work removal of all debrise and cleaning after all trades finish.
12. Contractor shall inspect existing rated walls, ceilings and other assemblies for compliance to UL listings and repair or retro fit any penetrations.
13. Contractor shall coordinate the commencement of work and storage of goods on site with the landlord.

FINISH NOTES

1. All free standing columns in a room shall receive the same finish as the room wall unless otherwise noted.

DESIGNERS:

ARCHITECT
Spencer Architect
11031 Cattail Bluff
Tega Cay, SC 29708
704-562-5605

CIVIL
–

STRUCTURAL
JVA Consulting Engineers
213 Linden Street, Suite 200
Fort Collins, CO 80524
303-565-4937

MECHANICAL
Loren Priest EE LLC
12005 Antelope Tri
Parker, CO 80138
303-748-1189

PLUMBING
Loren Priest EE LLC
12005 Antelope Tri
Parker, CO 80138
303-748-1189

ELECTRICAL
Loren Priest EE LLC
12005 Antelope Tri
Parker, CO 80138
303-748-1189

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S-101 EMBED SETTING PLAN

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M-1.0 MECHANICAL PLAN

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P-2.0 PLUMBING DETAIL

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KEY PLAN

PROJECT LOCATION

NORTH

Container Bar Unit for PARAGON STAR
Lee's Summit, MO

Project Data
International Building Code-2018 Edition

BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: Paragon Star, Lee's Summit. MO
Address: 1401 NW View High Dr., Lee's Summit, MO
Proposed Use: Bar Service & Kitchen
Owner or Authorized Agent: Constance Spencer, RA Telephone: 704-562-5605 Email: spencerlc@me.com
Owned By: ☐ City/County ■ Private ☐ State
Code Enforement Jusisdiction: ■ City Lee's Summit ☐ County ______

Building Description: One storey 40' container with steel corrugated exterior
Scope of work details: Retrofit of container to a bar building with customer order windows
Alternative Means of Compliance Request:

☐ Industrial equipment with declaration document attached
☐ RTAP (Revision to approved plan) Commercial Plan Review Services
☐ Date of Preliminary Review

LEAD DESIGN PROFESSIONAL: Constance Spencer, AIA

DESIGNER	FIRM	NAME	TELEPHONE# INCLUDE EXT.	EMAIL
Architectural	Spencer Architect LLC	Constance Spencer	(704) 562-5605	spencerlc@me.com
Civil				
Electrical	EE LLC	David W. Day	303-565-4919	loren@eeparker.com
Fire Alarm				
Plumbing	EE LLC	David W. Day	303-565-4919	loren@eeparker.com
Mechanical	EE LLC	David W. Day	303-565-4919	loren@eeparker.com
Fire Protection				
Structural	JVA Incorporated	Jason M. Jeffries	303-565-4919	jtorrents@jva.com
Retaining Walls >5' High				
Other				

2018 EDITION OF THE IBC CODE FOR: ■ New Construction ☐ Addition ☐ Upfit
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair
CONSTRUCTED: (date) ______ ORIGINAL USE(S)(Ch3): ______ PROPOSED USE(S)(Ch3): Bar
RENOVATED: (date) ______ CURRENT USE(S)(Ch3): ______
BUILDING CODE: ■ 2018 IBC ☐ 2018 Existing Building Code
NEW BUILDING: ■ New Building ☐ First time interior completion (upfit) ☐ Addition
EXISTING BUILDING: ☐ Change of use/occupancy ☐ Building/tenant space interior completion (renovation)

☐ 2009 REHAB CODE Information: Scope of Work/Work Area Must be Delineated on the plans
Check all that Apply: Repair ☐ Renovation ☐ Alteration ☐ Reconstruction ☐ Change of Use ☐ Addition ☐
☐ Last Known Legal Occupancy ______ Historic Property: Yes ☐ No ■
Original Building Construction Date: ______ Original Building Construction Date: ______
Justifications for using the REHAB code:

Reviewers Notes for Field Inspector:

BUILDING DATA
Construction Type: (Check all that apply) ☐ I-A (Parking garage) ☐ II-A ☐ III-A ☐ IV ☐ V-A ☐ I-B ☐ II-B ☐ III-B ■ V-B
Sprinklers: ■ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ■ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry (IN COOLER)
Fire District: ■ No ☐ Yes (Primary) Flood Hazard Area: ■ No ☐ Yes
Building Height: (feet) 9'-6"(Units)
Gross Building Area:

FLOOR	EXISTING (SQ.FT.)	RENOVATED (SQ.FT.)	NEW (SQ.FT.)	SUB-TOTAL
2nd Floor	–	–		
1st Floor	–	–	320SF	320SF
Basement	–	–	–	–
TOTAL	–	–	320SF	320SF

ALLOWABLE AREA:
Occupancy:
Assembly (303) ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business (304) ■ Educational(305) ☐ Factory(306) ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile(309) ☐ Residential(310) ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage Utility and Miscellaneous ☐

Incidental Uses
☐ Furnance room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops, not classified as Group H, located in occupancies other than Group F
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of mor than 50 gallons, or lithiumion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421
Special Occupancy: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8
Mixed Occupancy: ■ No ☐ Yes Separation: NA Hr. Exception: –
☐ Incidental Use Separation
☐ Non-Separated Mixed Occupancy
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Mixed Occupancy – See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$+ \frac{250}{15750} + \frac{128}{15750} = \leq 1$$

$$+ .01 + .008 = .018 \leq 1$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 506.2 AREA	(C) AREA FOR OPEN SPACE INCREASE [1]	(D) AREA FOR SPRINKLER INCREASE [2]	(E) ALLOWABLE AREA OR UNLIMITED [3]	(F) MAXIMUM BUILDING AREA [4]
1ST	BAR	320	6000	4500	–	–	10,500

1 Frontage area increases from Section 506.2 are computed thus:
   a. Perimeter which fronts a public way or open space having 20 feet minimum width =100% (F)
   b. Total Building Perimeter =96'/Unit (P)
   c. Ratio (F/P) = 1 (F/P)
   d. W = Minimum width of public way = 30' (W)
   e. Percent of frontage increase I_f = 50 [F/P – 0.25] x W/30 = 75 (%)
2 The sprinkler increase per Section 506.3 is as follows:
   a. Multi-story building I_s = 200 percent
   b. Single story building I = 300 percent
3 Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507.3): Group A motion picture (507.10); Malls (402.6) and H-2 aircraft paint hangars (507.8).
4 Maximum Building Area = total number of stories in the building X E (506.4)
5 The maximum area of parking garages must comply wtih 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V-B		Type V-B	
Building Height in Feet	Feet 40'	Feet = H + 20' = NA	9'-6"	
Building Height in Stories	Stories 2	Stories + 1 = NA	Stories: 1	

FIRE PROTECTION REQUIREMENTS:
Life Safety Plan Sheet #, if Provided: –

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ 1 HR * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses		NC					
Bearing walls		NC					
Exterior							
North	>30	NC					
East	>30	NC					
West	>30	NC					
South	>30	NC					
Interior		NC					
Nonbearing walls and partitions							
Exterior							
North	>30	NC					
East	>30	NC					
West	>30	NC					
South	>30	NC					
Interior							
Floor construction including supporting beams and joists		NC					
Roof construction including supporting beams and joists		NC					
Shafts – Exit		NA					
Shafts – Other		NA					
Corridor Separation		NA					
Occupancy Separation		NA					
Party/Fire Wall Separation		NA					
Smoke Barrier Separation		NA					
Tenant Separation		NA					
Incidental Use Separation		NA					

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS
THIS SECTION FOR ADDITIONS, NEW CONSTRUCTION AND CHANGE OF USE
Allowable openings per T705.8

WALL LEGENDS
THIS SECTION REQUIRED TO BE COMPLETED FOR ALL PROJECTS
CHECK IF THE FOLLOWING ARE PRESENT AND INDICATED BY A WALL LEGEND ON ALL PLANS
☐ Fire Partition 708 ☐ Fire Walls 705 ☐ Fire Barriers 706 ☐ Smoke Partitions 710

LIFE SAFETY SYSTEM REQUIREMENTS:
Emergency Lighting: (S1006) ☐ No ■ Yes
Exit Signs: (S1011) ☐ No ■ Yes
Fire Alarm: (S907,NFPA 72-07) ■ No ☐ Yes
Smoke Detection Systems: (S907) ■ No ☐ Yes
Panic Hardware: (S1008.1.10) ■ No ☐ Yes
Life Safety Systems Generator: (S2702.2) ■ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS
Life Safty Plan Sheet # A1.1
☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations
☐ Exterior wall opening area with respect to distance to assume property lines
☐ Existing structures within 30' of the proposed building
■ Occupancy types for each area as it relates to occupant load calcuation
■ Occupancy loads for each area
■ Exit access travel distances
☐ Common path of travel distances
☐ Dead end lengths
■ Clear exit widths for each door
■ Maximum calculated occupant load capacity each exit door can accommodate based on egress width
■ Actual Occupant load fo each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware
☐ Location of doors with delayed egress locks and the amount of delay
☐ Location of doors with electromagnetic egress locks
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows
☐ The square footage of each fire area
☐ The square footage of each smoke compartment
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

EXIT REQUIREMENTS:
NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM NUMBER OF EXITS [2] REQUIRED	SHOWN ON PLANS	TRAVEL DISTANCE ALLOWABLE TRAVEL DISTANCE	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT MEANS OF EGRESS (SECTION 1014.2) REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
1ST FLOOR-BAR	1	1	200'	30'-10"	–	–

1 Corridor dead ends.
2 Single exits for Building Single exits for Room or Space
3 Common Path of Travel.

OCCUPANT LOAD AND EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a) AREA[1] sq. ft.	(b) AREA[1] PER OCCUPANT	TOTAL	(c) EGRESS WIDTH PER OCCUPANT (1005.1) STAIR	LEVEL	EXIT WIDTH (in) [2,3,4,5,6] REQUIRED WIDTH (SECTION 1005.1) (a ÷ b) x c STAIR	LEVEL	ACTUAL WIDTH SHOWN ON PLANS STAIR	LEVEL
1ST-BAR CONTAINER	217	200SF/PERSON	1.08	0.3	0.2		5.1"		34"
1ST-KITCHEN CONTAINER	217	200SF/PERSON	1.08	0.3	0.2		5.1"		34"
TOTAL			1.08				–		34"

1 See Table 1004.1.1 to determine whether net or gross area is applicable. See definition "Area, Gross" and "Area, Net" (Section 1002)
2 Minimum stairway width (Section 1009.1); min. corridor width (Section 1018.2); min. door width (Section 1008.1)
3 Minimum width of exit passageway (Section 1023.2)
4 See Section 1004.5 for converging exits
5 The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required. (Section 1005.1)
6 Assembly occupancies (Section 1028)
7 Spaces within occupancies or use groups shall be calculated independently (Ex. Lobbies, lounges, break room, conference)

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS AREA	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL # ACCESSIBLE UNITS PROVIDED
NA							

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR W/ 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS	8' ACCESS	TOTAL # ACCESSIBLE PROVIDED
CENTER TOTAL		EXISTING	EXISTING	EXISTING	EXISTING	EXISTING

PLUMBING FIXTURE REQUIREMENTS: 784 OCCUPANTS IN COURTYARD & CONTAINERS

OCCUPANCY USE GROUP AND/OR SPACE DESIGNATION	WATERCLOSETS MALE	FEMALE	URINALS	LAVATORIES MALE	FEMALE	SHOWER	DRINKING FOUNTAINS
BAR (1 @ 40/TOILET)	.02	.02		.005	.005		WATER PROVIDED FREE
TOTAL REQUIRED	1	1		1	1	–	–
TOTAL PROVIDED ON SITE	1	1	–	1	1	–	–

EXTRA TEMPORARY RESTROOMS WILL BE BROUGHT IN FOR SPECIAL EVENTS & WILL GET SPECIAL EVENT PERMITS AS PER EMAIL FROM JIM BROWN DATED SEPT.13, 2021

SPECIAL APPROVALS
Special Approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., Describe below)

ENERGY SUMMARY
ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs. allowable annual energy cost budget.

THERMAL ENVELOPE 4A
METHOD OF COMPLIANCE: PREMANUFACTERED
PRESCRIPTIVE ■ PERFORMANCE ☐ ENERGY COST BUDGET ☐

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY
CLOSED CELL SPRAY FOAM INSULATION IN METAL CHANNELS
U-VALUE OF TOTAL ASSEMBLY U = .027
R-VALUE OF ROOF ASSEMBLY R = 38
SKYLIGHTS IN EACH ASSEMBLY NONE
U-VALUE OF SKYLIGHT NA

EXTERIOR WALLS (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY
CLOSED CELL SPRAY FOAM INSULATION IN METAL STUDS
INSUL., 1/2" GYPSUM WALL BOARD
U-VALUE OF TOTAL ASSEMBLY U = .064
R-VALUE OF INSULATION R = R13+7.5CI

OPENINGS (WINDOWS OR DOORS WITH GLAZING)
INTERNAL LOAD DENSITY ILD = NA
PROJECTION FACTOR PF = NA
SHADING COEFFICIENT SE = NA
U-VALUE OF ASSEMBLY U = .38 FIXED,.45 OPERABLE
LOW E COATING SECOND SURFACE
MAXIMUM WINDOW WALL RATIO WWR = NA

DOOR R-VALUES R = .77

WALLS ADJACENT TO UNCONDITIONED SPACE (EACH ASSEMBLY)
DOES NOT APPLY

WALLS BELOW GRADE (EACH ASSEMBLY)
DOES NOT APPLY

FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY)
FRAMING ON CONCRETE SLAB
R-VALUE OF INSULATION R = NA

FLOORS SLAB ON GRADE (EACH ASSEMBLY)
SLAB ON GRADE W/ INSUL. BETWEEN STEEL FLOOR CHANNELS
U-VALUE OF TOTAL ASSEMBLY U = NA
R-VALUE OF INSULATION R = R30
HORIZ./VERT. REQUIREMENT
SLAB HEATED? NA

SPECIAL APPROVALS
Special Approval: (Local Jurisdiction, Dept. of Insurance, SBCCI, ICC, etc. describe below)

SCHEDULE OF SPECIAL INSPECTION SERVICES
■ No special inspections required for this project ☐ Special inspections required
The following sheets comprise the required schedule of special inspections for this project. The construction divisions which may require special inspections for this project are as follows:
☐ IT-1 Verification of Soils
☐ IT-2 Excavation and Fill
☐ IT-3 Piling and Drilling Piers
☐ IT-4 Modular Retaining Walls
☐ IT-5 Reinforced Concrete
☐ IT-6 Post Tension Slab
☐ IT-7 Pre-cast Concrete Erection
☐ IT-8 Pre-stressed Concrete
☐ IT-9 Inspection of Pre-cast Fabricators
☐ IT-10 Inspection of Structural Steel Fabricators
☐ IT-11 Structural Masonry
☐ IT-12 Welding
☐ IT-13 High Strength Bolts & Steel Framing Insp.
☐ IT-14 Sprayed Fire-Resistance Materials
☐ IT-15 Exterior Insulation and Finish System
☐ IT-16 Seismic Resistance
☐ IT-17 Smoke Control
☐ IT-18 Detention Basin
☐ IT-19 Special Cases
Check the above boxes for the special inspection required for this project and list below specific special inspections required under Chapter 17

ELECTRICAL SYSTEM AND EQUIPMENT
METHOD OF COMPLIANCE: SEE ELECTRICAL DRAWINGS
PRESCRIPTIVE ☐ PERFORMANCE ☐ ENERGY COST BUDGET ☐
SEE ELECTRICAL DRAWINGS
FOR COMPLIANCE SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE: SEE MECHANICAL DRAWINGS
PRESCRIPTIVE ☐ PERFORMANCE ☐ ENERGY COST BUDGET ☐
INCLUDES MECHANICAL, PLUMBING, AND FIRE PROTECTION
SEE M,P, & FP DRAWINGS
FOR COMPLIANCE SUMMARY

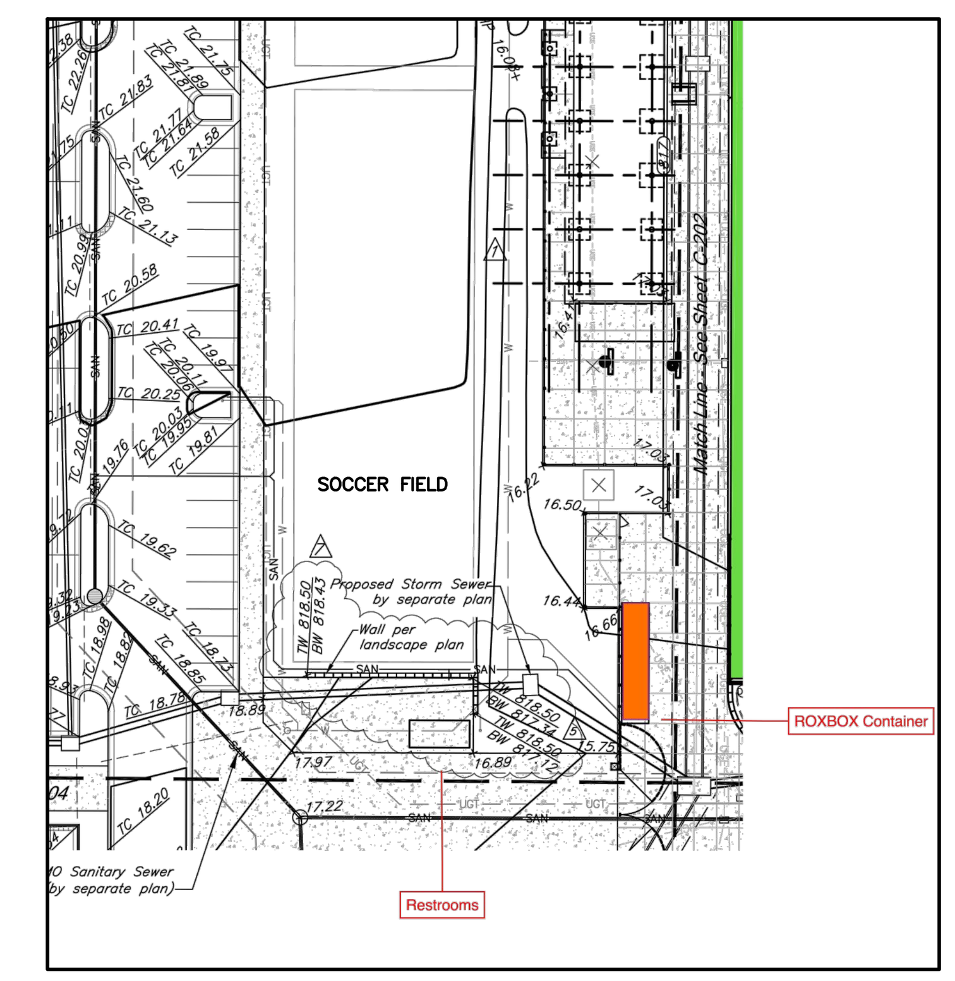
DESCRIBE HERE BELOW ANY SPECIAL APPROVAL REQUIRED BY THE DEPARTMENT OF INSURANCE OR LOCAL JURISDICTION:
NONE APPLICABLE

DESIGNER STATEMENT:
I HEREBY CERTIFY THAT THE BUILDING CODE AND ENERGY SUMMARIES COMPLETED ABOVE ARE ACCURATE FOR THE TYPE OF BUILDING AND OCCUPANCY INTENDED FOR THIS PROJECT AND THAT THESE PLANS ARE COMPLETE, COORDINATED, AND COMPLY WITH ALL APPLICABLE STATE AND LOCAL BUILDING REGULATIONS.

NAME: CONSTANCE SPENCER, AIA
TITLE: PRINCIPAL, SPENCER ARCHITECT

APPLICABLE CODES
2018 International Building Code
2018 International Fire Code
2018 International Mechanical Code
2018 International Plumbing Code
2018 International Fuel Gas Code
2018 International Energy Conservation Code
2017 National Electrical Code (NFPA 70)
2010 ADA
Local ordinances will not affect container design

ANY ACCESSIBLE MEANS, MAIN BUILDING WASHROOM REQUIREMENTS OR FIRE PROTECTION REQUIRED BY THE LOCAL BUILDING OFFICIAL SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING OWNER AND TO BE INSTALLED ON-SITE SUBJECT TO APPROVAL AND INSPECTION BY THE LOCAL AUTHORITY HAVING JURISDICTION



SITE PLAN

constance spencer, architect
11031 CATTAIL BLUFF
TEGA CAY, SC 29708
803-802-8590
spencerlc@me.com

STATE OF MISSOURI
CONSTANCE SPENCER
REGISTERED ARCHITECT
05/23/23

ROXBOX

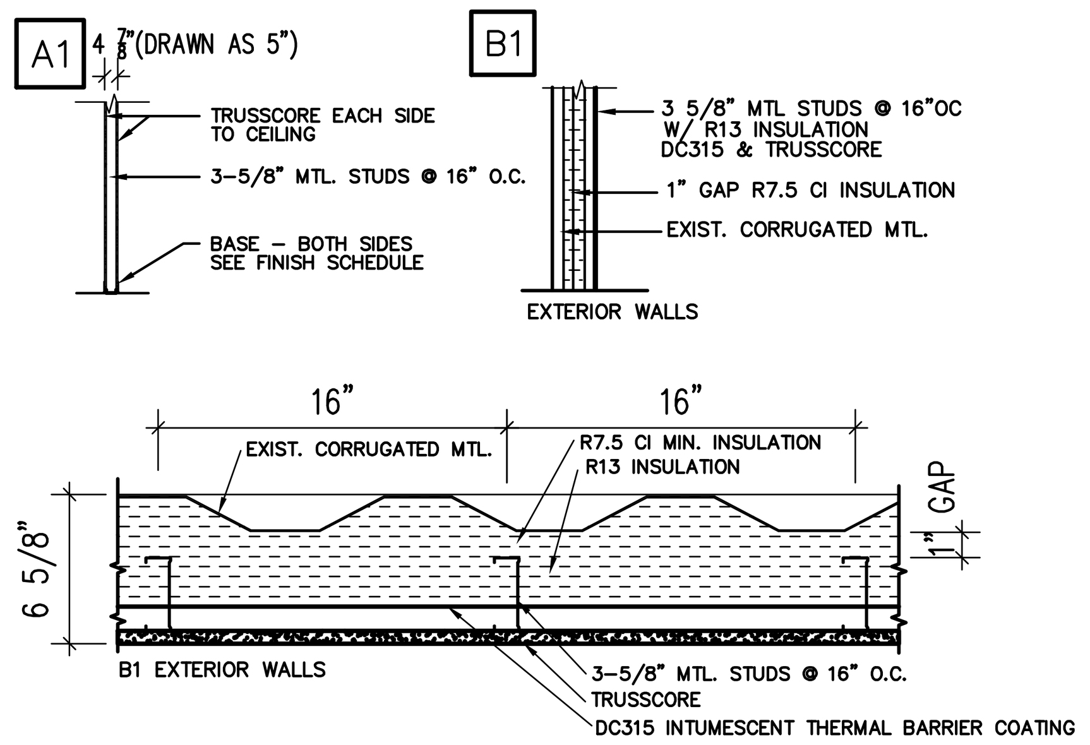
CONTAINER BAR FOR PARAGON STAR
1401 NW View High Dr., Lee's Summit, MO

COVER SHEET

PROJECT DATE: 03/02/23
PROJECT NUMBER: 23008

ISSUE DATE: 1. 03/25/23 2.
REVISED: 1. 05/23/23 2. 3. 4. 5. 6. 7.

SHEET NUMBER: ACV
CONTAINERS



5 / A2.0 TYPICAL WALL TYPES
SCALE: N.T.S.
NOTE: ANY WALL NOT MARKED WILL BE A1

KEY: WALL TYPE / WALL TYPE NOTES

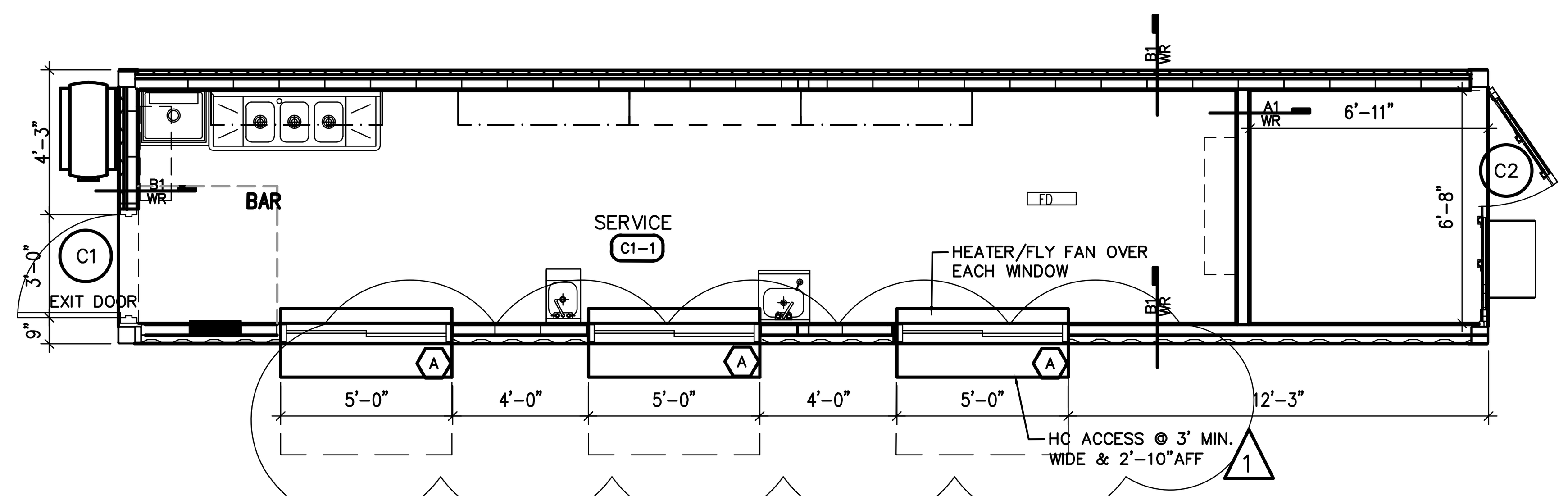
WALL TYPE NOTES:
- SP = SOUND PROTECTION TO UNDERSIDE OF DECK TYP.
- D = 1/2" OR 5/8" DENS SHEILD APPLIED UP TO 2'-0" A.F.F. (HOLD 1" OFF FLOOR) TYP. IN KITCHEN AREAS AND RESTROOMS
- FRP= FIBERGLASS REINFORCED PANELS TO CLG.
- FH = FULL HEIGHT PARTITION - SECURE TO ROOF DECK
- LW = LOW WALL - HEIGHT NOTED ON PLAN
- WR = WATER RESISTANT G.W.B. ON KITCHEN & RESTROOM SIDE(S) OF WALL
- PLY= 1/2" FR PLYWOOD FROM 4' TO 6' A.F.F. REPLACING G.W.B. AT SHELVING WHEN NOTED

***SEE ROOM FINISH SCHEDULE FOR ALL INTERIOR FINISHES

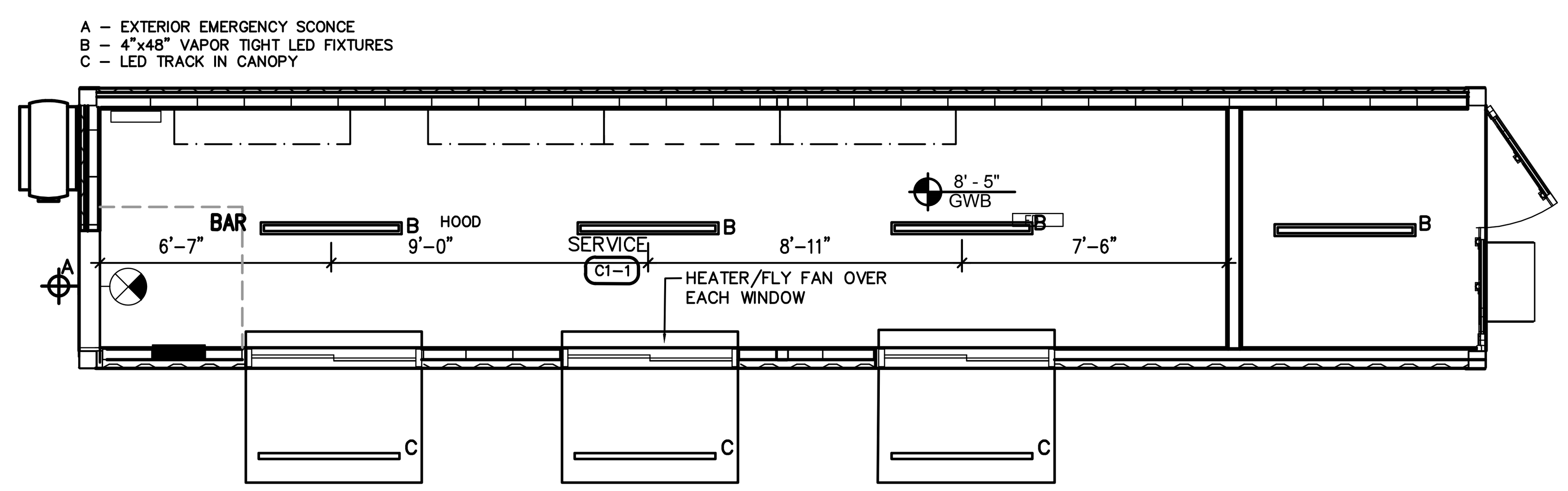
CEILING LEGEND:

Symbol	Description
○	DOWN LIGHT
	PENDANT MOUNTED FIXTURE
	WALL MOUNTED 'EXIT' SIGN
	CEILING MOUNTED EMERGENCY LIGHTING
	TRACK LIGHTING
	4'-0" SURFACE MOUNTED FLUORESCENT STRIP LIGHT FIXTURE
	SURFACE MOUNTED 1' x 4' FLUORESCENT
	RECESSED 2' x 4' FLUORESCENT
	RECESSED 2' x 2' FLUORESCENT FIXTURE
	WALL SCONCE
	WALL MOUNTED GOOSENECK

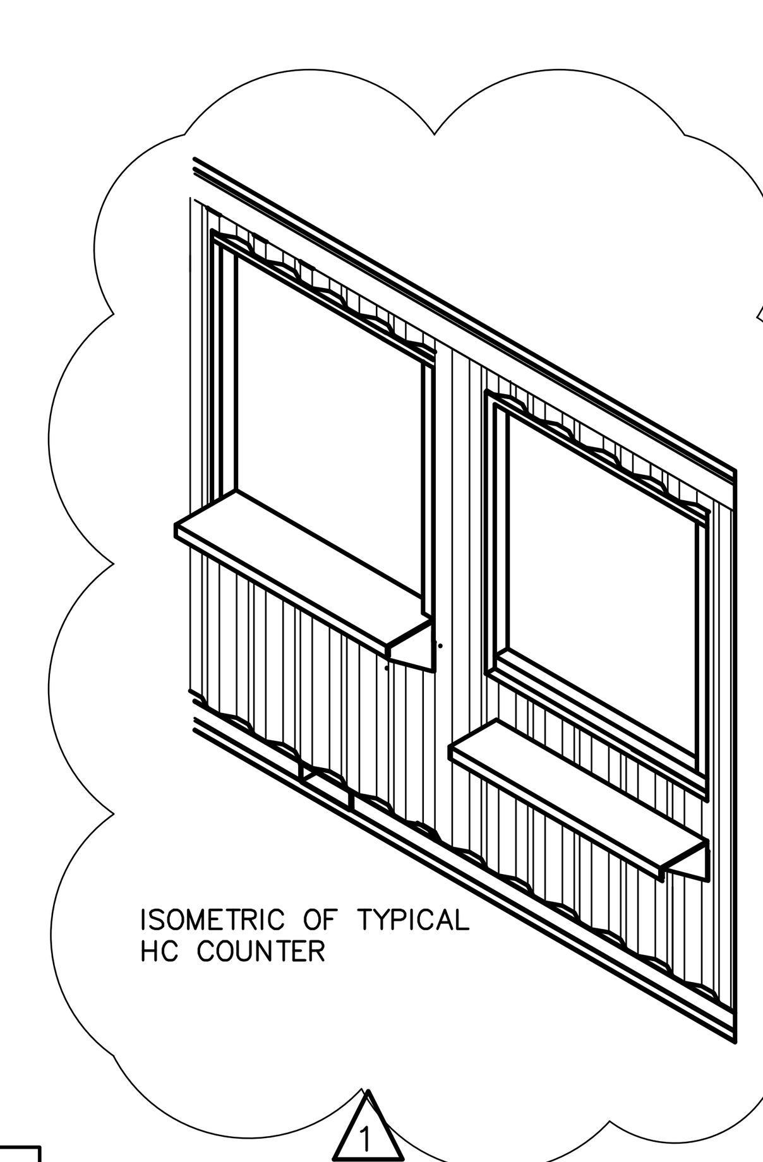
GENERAL CEILING NOTES:
1. SEE MECHANICAL DRAWINGS FOR ALL INFORMATION ON DIFFUSERS, FANS & RETURNS
2. LIGHT FIXTURES SHALL BE CENTERED IN CONTAINERS
3. VERIFY WITH ELECTRICAL DRAWINGS THE EXACT FIXTURE SPECS
4. STRUCTURAL ENGINEER TO VERIFY LOAD & LOCATION OF HVAC UNITS
5. PROVIDE GREASE GUARD AROUND ALL EXHAUST FANS OR GREASE PRODUCING ELEMENTS ON ROOF

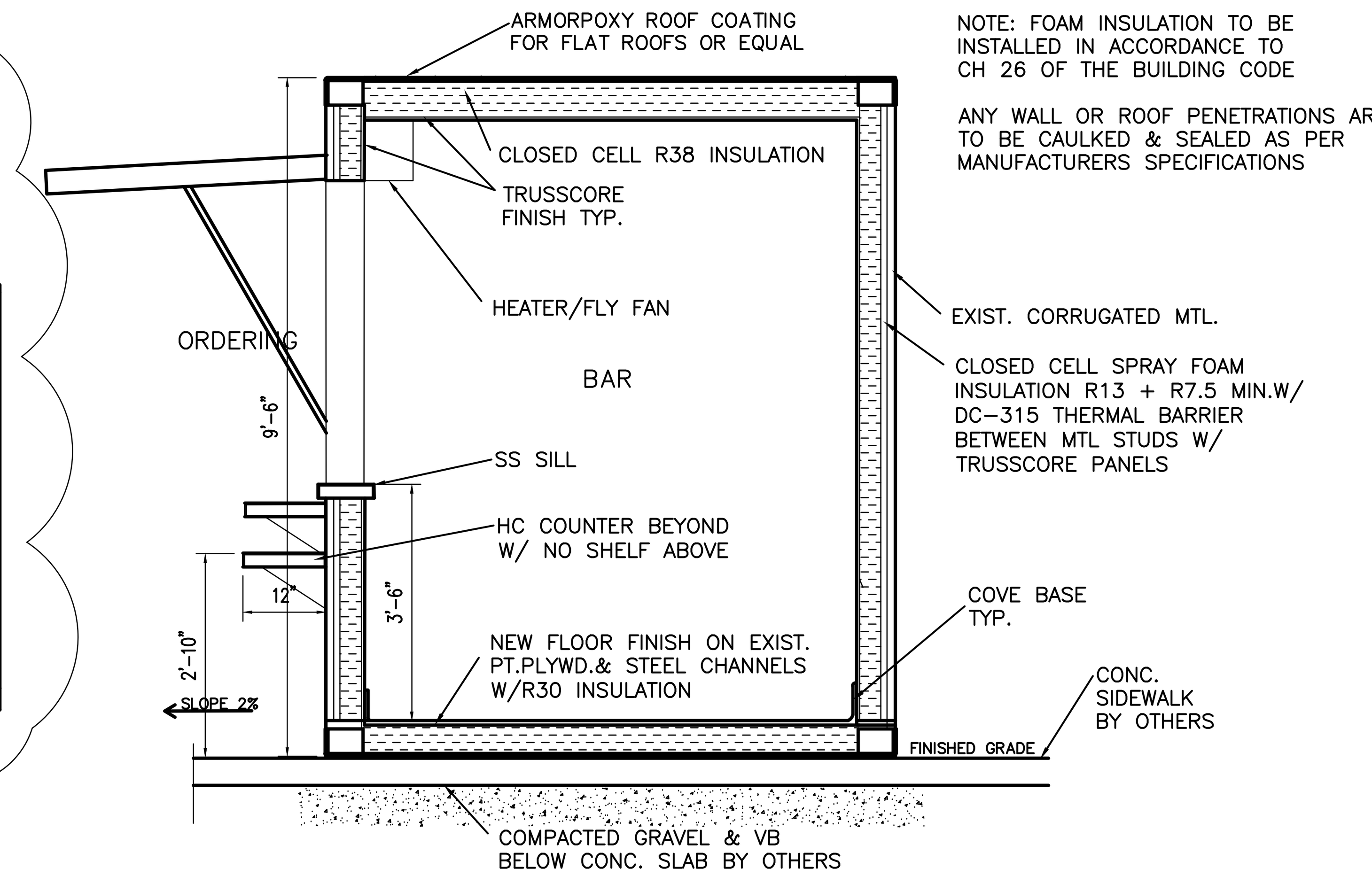


1 / A2.0 FLOOR PLAN
SCALE: 1/4"=1'-0"



2 / A2.0 REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"





8 / A2.0 WR CROSS SECTION
SCALE: 1/2"=1'-0"

CODE ANAYLSIS: EXCEPTION TO ADA COMPLIANCE & MIN. AISLE WIDTH
ALL CONTAINER UNITS ARE UNDER 50 OCCUPANTS SO ARE CONSIDERED BUSINESS USE

2010 ADA

206.2.8 Employee Work Areas.
Common use circulation paths within employee work areas shall comply with 402.
EXCEPTIONS:
1. Common use circulation paths within employee work areas that are less than 1000 square feet (93 m2) and defined by permanently installed partitions, counters, casework, or furnishings shall not be required to comply with 402.
2. Common use circulation paths located within employee work areas that are an integral component of work area equipment shall not be required to comply with 402.

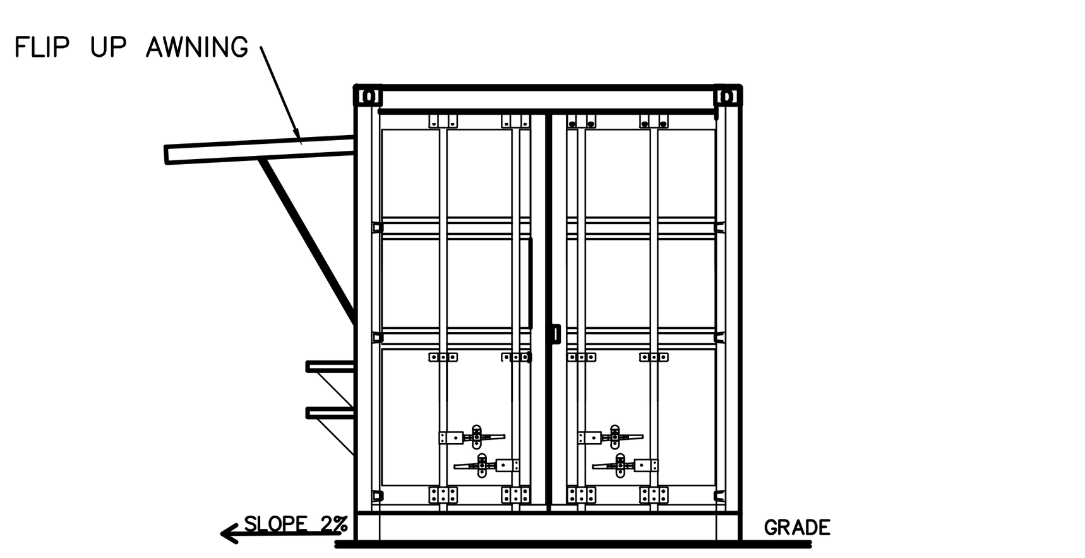
IBC 2018 – 1018.3 Aisles in Groups B and M

In Group B and M occupancies, the minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall be not less than that required for corridors by Section 1020.2.

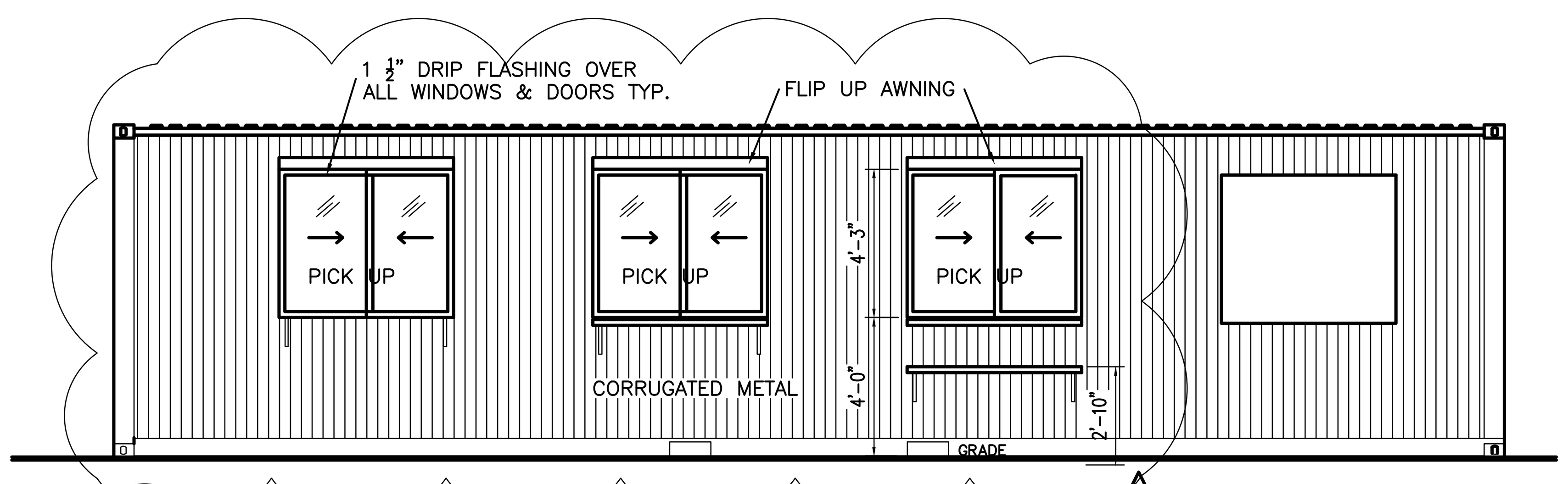
Exception: Nonpublic aisles serving less than 50 people and not required to be accessible by Chapter 11 need not exceed 28 inches (711 mm) in width.

ADA 2010
403.5 Exception Within employee work areas clearances on common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function

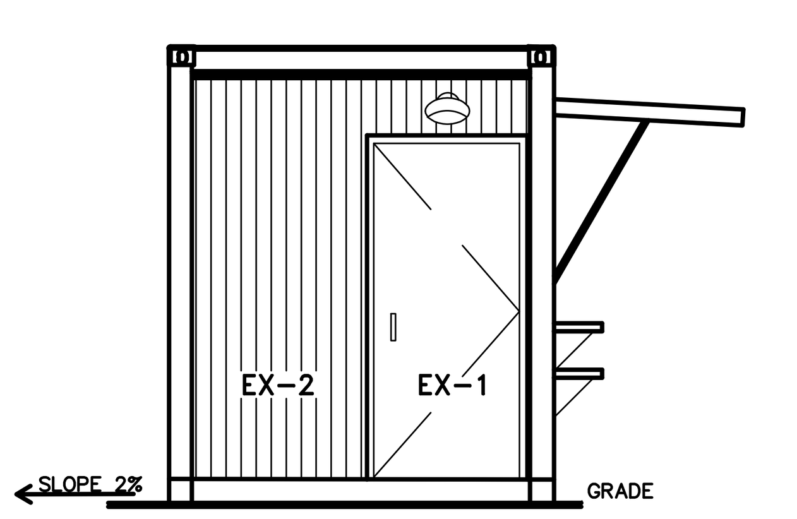
9 / A2.0 CODE ANAYLSIS
SCALE: NTS



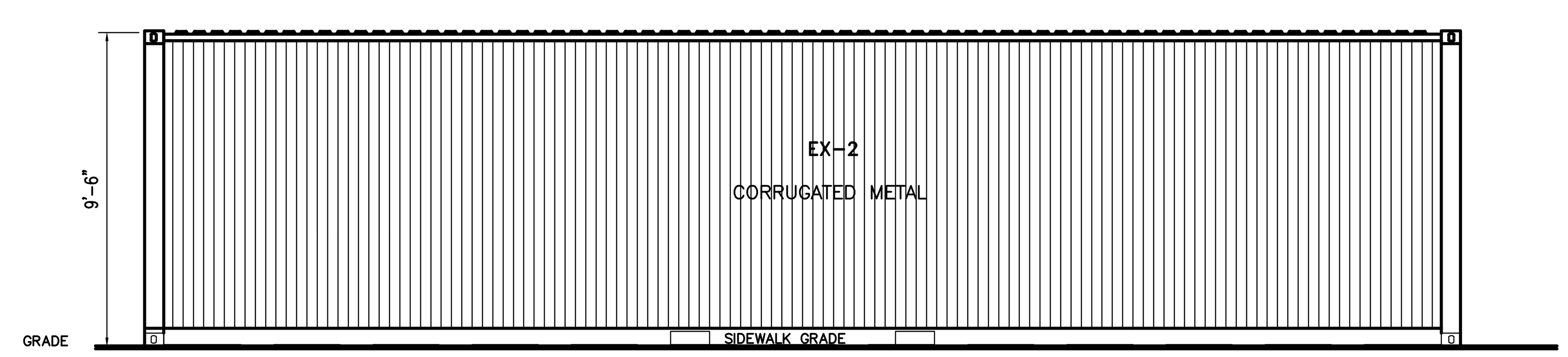
6 / A2.0 RIGHT ELEV.
SCALE: 1/4"=1'-0"



3 / A2.0 FRONT ELEVATION
SCALE: 1/4"=1'-0"
T=TEMPERED



7 / A2.0 LEFT ELEV.
SCALE: 1/4"=1'-0"



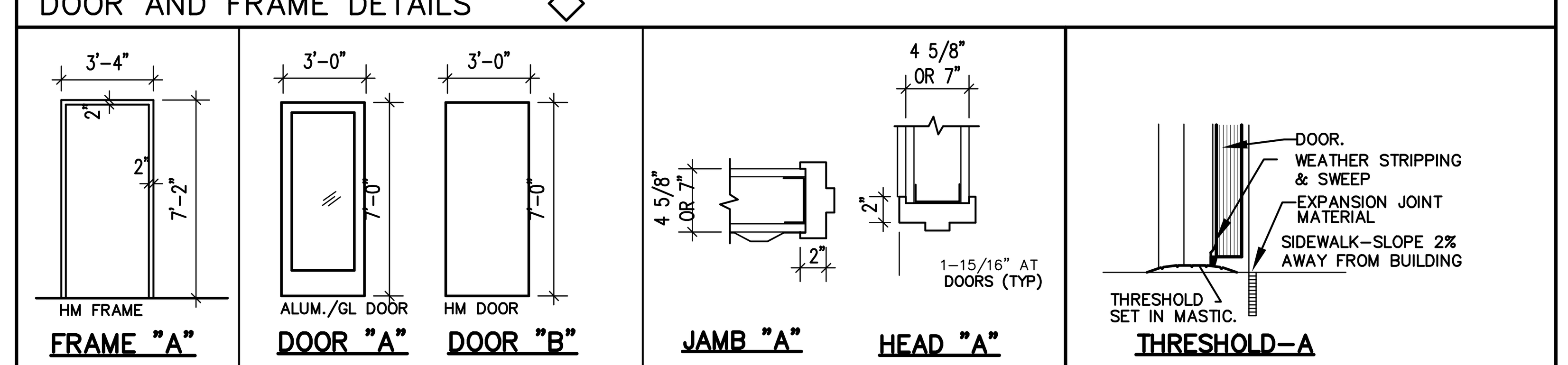
4 / A2.0 REAR ELEVATION
SCALE: 1/4"=1'-0"

GENERAL CONSTRUCTION NOTES:
1. ALL DIMENSIONS ARE FROM THE FINISH FACE OF STUD WALL TYPES AND FINISH FACE OF MASONRY WALLS. DIMENSIONS TO FIXTURES ARE TO THE CENTERLINE OF THE FIXTURE UNLESS NOTED OTHERWISE.
2. ALL SITE ELEMENTS TO BE PROVIDED BY OTHERS
3. INFORMATION ABOUT NEW BUILDING & UTILITIES PROVIDED BY OWNER, & ARCHITECT IS NOT RESPONSIBLE FOR ERRORS RESULTING FROM INCORRECT INFORMATION REGARDING DESIGN CONDITIONS.
4. FIRE EXTINQUISHERS TO BE LOCATED PER LOCAL FIRE INSPECTOR

EXTERIOR MATERIALS

EX-1	TYPE:	PAINTED HOLLOW METAL DOOR
	MFGR:	TBD
	COLOR:	TBD
EX-2	TYPE:	EXIST. CORRUGATED STEEL PANELS
	MFGR:	TBD
	COLOR:	TBD
EX-3	TYPE:	SEMI-GLOSS EPOXY TRIM PAINT
	MFGR:	TBD
	COLOR:	TBD
EX-4	TYPE:	EMERGENCY LED FIXTURE
	MFGR:	SEE ELECTRIAL
	COLOR:	TBD

DOOR AND FRAME DETAILS



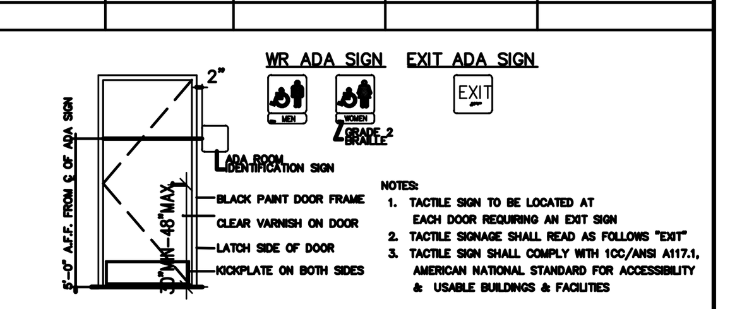
DOOR AND FRAME SCHEDULE

DOORS						FRAMES								
DOOR#	LABEL	SIZE (W X H X D)	TYPE	MATL.	FINISH	TYPE	MATL.	FINISH	HEAD DETAIL	JAMB DETAIL	THRESHOLD DETAIL	TRANSITION DETAIL	HARDWARE SETS	REFERENCE NOTES:
C1	–	3'-0" X 7'-0" X 1 3/4"	B	HM	PAINTED	A	MTL	PAINTED	A	A	–	–	1	–
C2	–	2-3'-6" X 8'-0" X 1 3/4"	EXIST.	STEEL	EXIST.	STEEL	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	–	EXIST.	–

*DENOTES EXTERIOR DOORS

GENERAL NOTES:
1. ALL DOORS TO BE KEYLESS IN THE DIRECTION OF EGRESS.
2. ALL HARDWARE TO BE ADA COMPLIANT
3. ADD PEEP HOLE TO BACK SERVICE DOORS.
4. WASHROOMS & EXITS TO HAVE BRAILLE SIGNS

REFERENCED NOTES:
1. EQUIP W/ AUTOMATIC CLOSURES.
2. EQUIP WITH PANIC HARDWARE - PUSH BARS
3. UNDER CUT DOOR 1"
4. EQUIP W/ H.C. COMPLIANT LEVER HANDLES
5. USE 1/4" TEMPERED GLASS IN DOOR
6. CHROME PUSH PAD ON INSIDE & DEAD BOLT LOCK
7. EQUIP W/ SS KICK PLATE ON BOTH SIDES OF DOOR



HARWARE SCHEDULE: ALL HARDWARE IS TO BE BRUSHED CHROME

SET #1: HARDWARE BY DOOR MANUFACTURER; LOCKSET, DEADLOCK W/ EMERGENCY RELEASES - CLOSER, CYLINDER CORE, HEAVY DUTY HINGE, PUSH BAR, DOOR PULL, THRESHOLD & WEATHERSTRIPPING

SET #2 RESTROOM: TA2714 4 1/2X4 1/21 1/2" HINGES; LOCKSET; CLOSER; DOOR HOLD OPEN; DOOR STOP; SILENCERS DOOR SHOE; HANDICAPPED SIGNAGE PER DOOR

SET #3: OFFICE: TA2714 4 1/2X4 1/2 HINGES; OFFICE LEVER LOCKSET; DOOR STOP

ROOM SCHEDULE: ALL INTERIOR FINISHES TO MEET CLASS C REQUIREMENTS

WALLS: WALLS TO BE TRUSSCORE
FLOORS: EPOXY W/ 5" MIN. COVE BASES
CEILING: TRUSSCORE

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803-802-8590
spencerlc@me.com

STATE OF MISSOURI — CONSTANCE SPENCER — REGISTERED ARCHITECT — 05/23/23

ROXBOX

CONTAINER BAR FOR
PARAGON STAR
1401 NW View High Dr., Lee's Summit, MO

FLOOR, RCP PLANS & ELEVATIONS

PROJECT DATE: 03/02/23
PROJECT NUMBER: 23008

ISSUE DATE: 1. 03/25/23
2.
3.

REVISED: 1. 05/23/23
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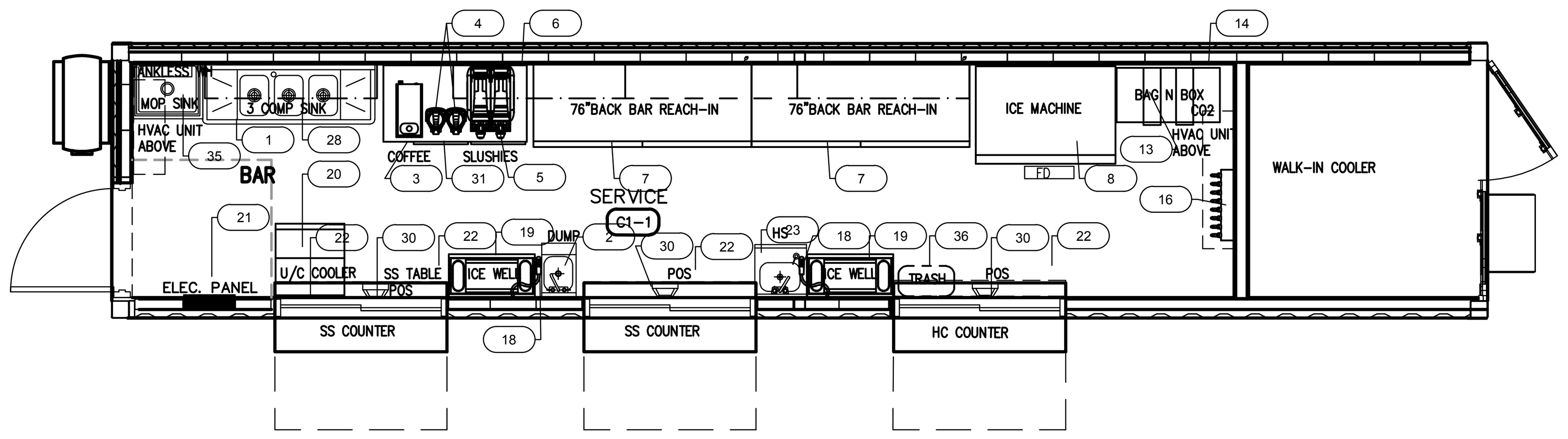
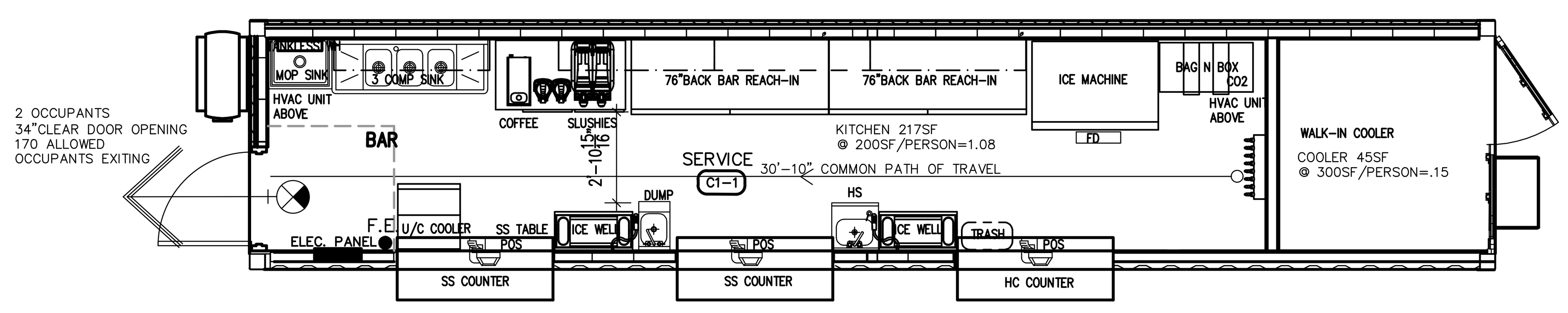
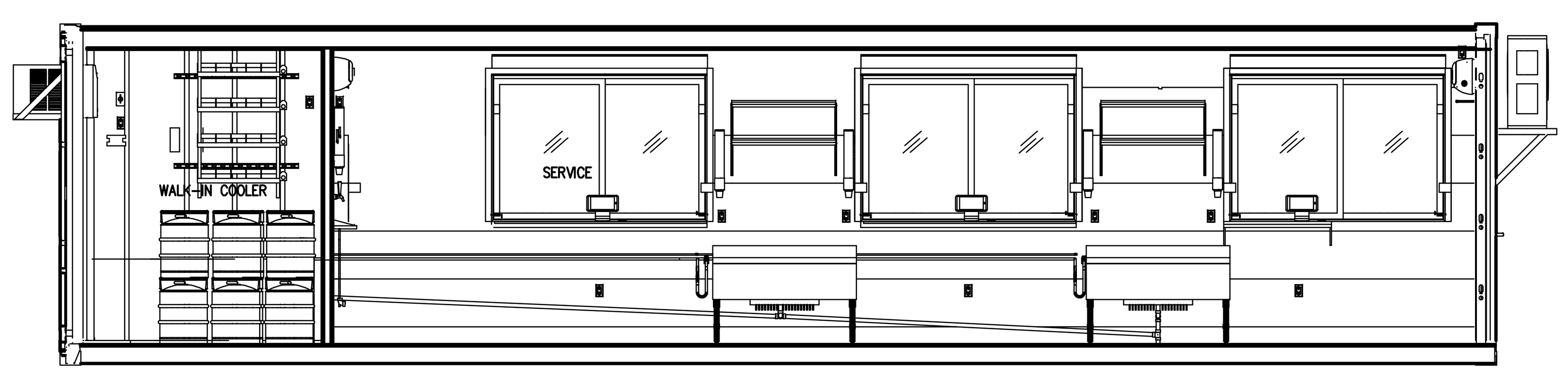
SHEET NUMBER: A2.0
CONTAINERS



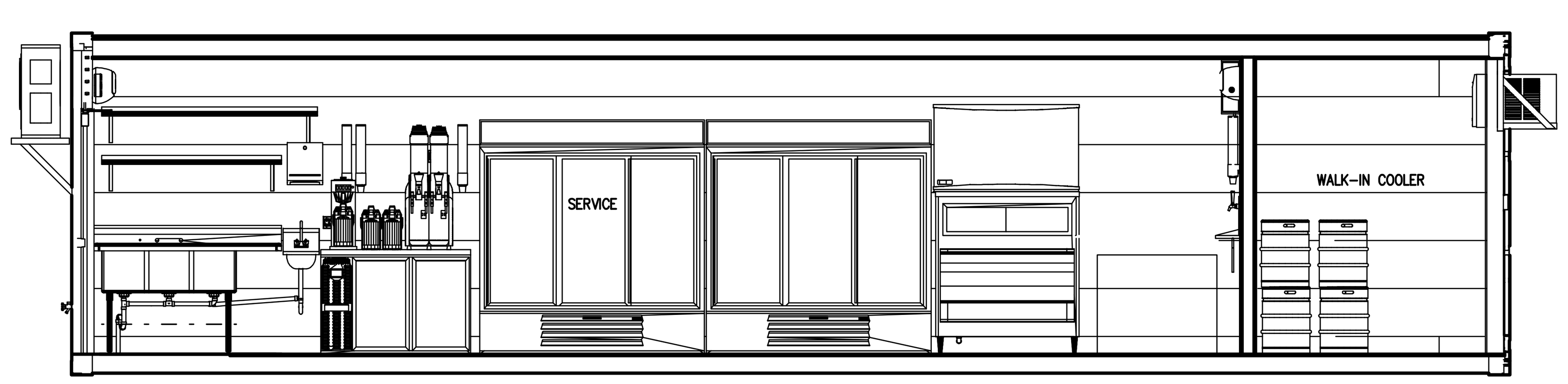
1 A2.1 EQUIPMENT PLAN
SCALE: 1/4"=1'-0"



2 A2.1 LIFE SAFETY PLAN
SCALE: 1/4"=1'-0"



3 A2.1 SOUTH INTERIOR ELEVATION
SCALE: 1/4"=1'-0"



4 A2.1 NORTH INTERIOR ELEVATION
SCALE: 1/4"=1'-0"

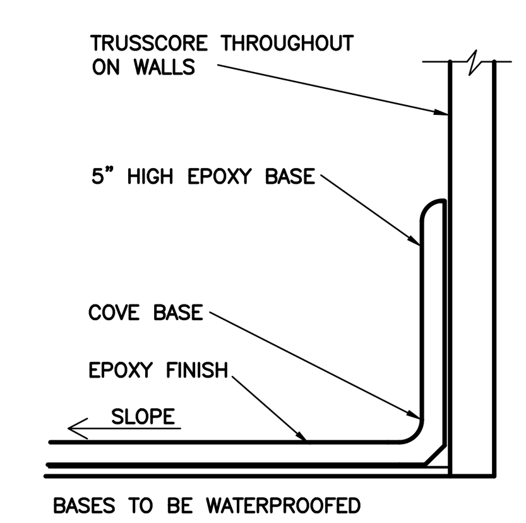
EQUIPMENT SCHEDULE C1/E1				
ItemNo	Quantity	Category	Mfr	Model
1	1	3-COMP SINK	ADVANCE TABCO	K7-CS-21
2	1	HAND SINK	ADVANCE TABCO	CR-HS-12
3	1	COFFEE MAKER	BUNN	38700.0010
4	2	AIR POTS	BUNN	32125.0000
5	1	SLUSH MACHINE	BUNN	34000.0501
6	1	STAINLESS CUP DISPENSER	SAN JAMAR	C3400P
7	1	BACK BAR COOLER	BEVERAGE-AIR	MMR66HC-1-B
8	1	ICE MACHINE	RENTAL	-
9	1	HOT WATER HEATER	RHEEM	RTEX-18
10	1	6'X12" STANLESS STEEL SHELF	ADVANCE TABCO	WS-12-60-16
11	1	AC WINDOW UNIT	LG	-
12	1	COOLBOT PRO	COOLBOT	CC-SOHV-MOUT
13	1	SODA BAG RACK	RENTAL	-
14	1	CO2 TANK	RENTAL	-
15	1	85" TV	BY TENANT	-
19	1	ICE WELL	ADVANCE TABSO	SLI-12-48-10
20	1	UNDER COUNTER COOLER	BY TENANT	-
21	1	TV MENU	BY TENANT	-
22	1	HEATED AIR CURTAIN	BERNER	CLCO8-1072E
23	1	DUMP SINK	ADVANCE TABCO	CR-HS-12
24	-	NOT USED	-	-
25	-	NOT USED	-	-
26	3	5' STAINLESS STEEL COUNTERTOP	TEXAS METAL CONNECTION	-
27	2	3'ADJUSTABLE SHELVING RACK	TBD	-
28	2	5'X1' STAINLESS STEEL SHELF	ADVANCE TABCO	-
29	1	10 FAUCET BEER TAP	FOXX EQUIPMENT	-
30	3	POS	MINT/TOAST	-
31	1	U/C REFRIGERATOR	CONTINENTAL	BB50NGD
32	2	HOSE BIBB	WOODFORD	17CP-10-MH
33	1	6'X12" SS SHELF	ADVANCE TABCO	-
34	1	PAPER TOWEL DISPENSER	LAVEX	712PTD200
35	1	MOP SINK	ADVANCE TABCO	9-OP-20-EC

5 A2.1 EQUIPMENT SCHEDULE
SCALE: 1/4"=1'-0"

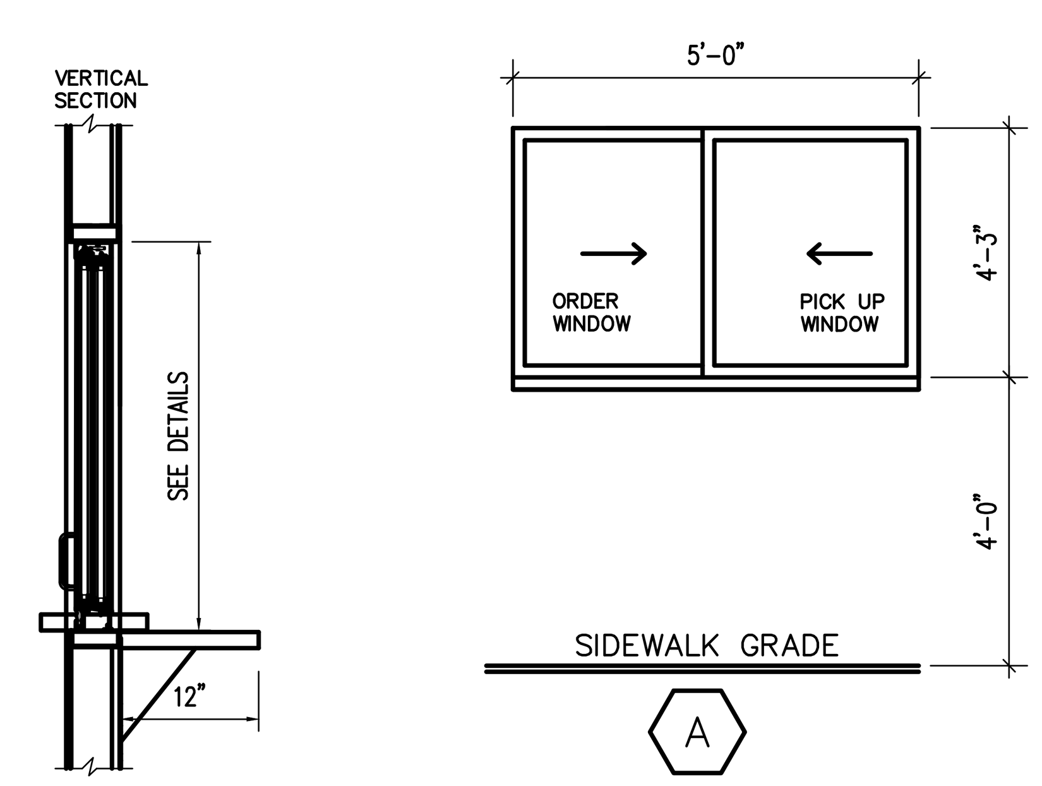
FIRE PROTECTION
A MANUAL FIRE EXTINGUISHER (ACTUATION DEVICE) SHALL BE LOCATED AT OR NEAR AN EXIT AT A HEIGHT OF 42" & A MAX. OF 48" ABOVE THE FLOOR. THE MANUAL ACTUATION SHALL REQUIRE REQUIRE A MAX. FORCE OF 40 LB. AND A MAX. MOVEMENT OF 14" TO ACTUATE THE FIRE SUPERSION SYSTEM.

LEGEND

● F.E.	INDICATES WALL MOUNTED FIRE EXTINGUISHER. SIZE & TYPE OF EXTINGUISHER AS REQ'D BY CODE.

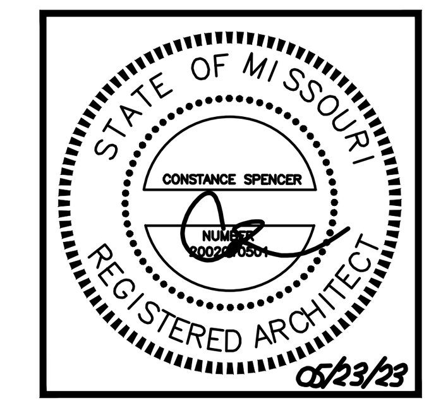


6 A2.1 TYP. BASE DETAIL
NTS



7 A2.1 OPERABLE WINDOW SECTION
SCALE: NTS

constance spencer, architect
11031 CATTAIL BLUFF
TEGA CAY, SC 29708
803-802-8590
spencerlc@me.com



ROXBOX

CONTAINER BAR FOR
PARAGON STAR
1401 NW View High Dr., Lee's Summit, MO

EQUIPMENT PLAN & LIFE SAFETY

PROJECT DATE: 03/02/23
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CONTAINERS

ARCHITECTURAL GENERAL NOTES
ALL CONSTRUCTION TO BE CARRIED OUT IN ACCORDANCE WITH LOCAL BUILDING CODE.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND ACQUISITION OF APPLICABLE PERMITS AND INSPECTIONS.
- CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL UTILITY SERVICES PRIOR TO COMMENCEMENT OF THE DEMOLITION PHASE. BEFORE STARTING DEMOLITION WORK ARRANGE FOR THE APPROPRIATE AUTHORITIES TO REMOVE ALL UTILITY SERVICES FROM THE AREA
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL LOCATE ALL WORK TO REMAIN, INCLUDING, BUT NOT LIMITED TO PLUMBING, HVAC, ELECTRICAL, STRUCTURAL, AND ARCHITECTURAL TO REMAIN, AND SHALL PROTECT SUCH WORK FROM DAMAGE DURING DEMOLITION AND NEW CONSTRUCTION. FURTHERMORE, THE CONTRACTOR SHALL AT ALL TIME CONSULT WITH THE ARCHITECT AND FOLLOW DIRECTIVES ISSUED BY THE ARCHITECT WHICH WILL INSURE THE CONTINUED SAFE FUNCTIONING OF THE OWNERS OPERATIONS. THE CONTRACTOR SHALL MINIMIZE ENCUMBRANCES TO THE OWNER'S OPERATIONS AT ALL TIMES AND SHALL NOTIFY THE ARCHITECT OF ANY WORK AFFECTING THE OPERATION OF THE OWNER AT LEAST THREE DAYS PRIOR TO PERFORMING SAID WORK.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION. DIMENSIONS AND CONDITIONS TYING INTO OR GOVERNED BY EXISTING CONSTRUCTION ARE APPROXIMATE AND ARE NOT PURPORTED TO BE CORRECT. ALL SUCH DIMENSIONS AND CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PERFORMING, PREPARING SHOP DRAWINGS, OR ORDERING MATERIALS.
- GENERAL CONTRACTOR SHALL ASK FOR DETAILS AND/OR INSTRUCTIONS WHEN UNCERTAIN HOW TO PROCEED. THE LACK OF NOT REQUESTING DETAILS DOES NOT EXCUSE SLOPPY OR IMPROPER WORK. CORRECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO COSTS TO THE OWNER.
- THE DOCUMENTS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, SUBJECT TO THE REVIEW OF THE ARCHITECT.
- GENERAL CONTRACTOR TO SEAL AND CAULK AROUND ALL PENETRATIONS, CRACKS, CREVICES AND ANY OTHER OPENINGS CAPABLE OF HARBORING INSECTS OR RODENTS.
- ALL ITEMS OF FOOD SERVICE EQUIPMENT SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH THE LATEST STANDARDS PUBLISHED BY THE NATIONAL SANITATION FOUNDATION (NSF), OR THE EQUIVALENT; AND IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE AND/OR LOCAL CODES AND STANDARDS.
- ALL EXISTING HVAC, SPRINKLERS AND OTHER SERVICES TO BE RELOCATED AS REQUIRED BY MECHANICAL AND ELECTRICAL ENGINEER TO MEET ALL STANDARDS, CODES AND BYLAWS SET FORTH BY LOCAL GOVERNING AUTHORITIES.
- MECHANICAL AND ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR ALL CONCERNS AND ARRANGEMENTS REGARDING PENETRATIONS TO THE CEILING

ERRORS AND OMISSIONS:
-CONSTRUCTION DOCUMENTS INCLUDE DRAWINGS AND WRITTEN SPECIFICATIONS, WHICH SHOULD BE REASONABLY CORRECT, HOWEVER THEIR ACCURACY IS NOT GUARANTEED. SHOULD DISCREPANCIES OCCUR THEY SHALL BE BROUGHT TO THE ATTENTION OF THE FOOD SERVICE CONSULTANT AND/OR PROJECT ARCHITECT IN ORDER FOR THE CONFLICT TO BE CLARIFIED IN AN OFFICIAL REQUEST FOR INFORMATION.
-IT SHALL BE THE RESPONSIBILITY OF THE FOOD SERVICE EQUIPMENT BIDDERS TO INFORM THE FOOD SERVICE CONSULTANT OF ANY DISCREPANCIES FOUND WITHIN THESE DOCUMENTS TO INCLUDE: WRITTEN SPECIFICATIONS, DRAWINGS OR SCHEDULES, TO ALLOW AN OPPORTUNITY FOR THE CONSULTANT TO PREPARE AN ADDENDUM TO CORRECT SUCH DISCREPANCIES. BIDDING ON A KNOWN DISCREPANCY WITH THE INTENTION OF EQUIPMENT SUBSTITUTION OR PRICE GOUGING THROUGH CHANGE ORDERS WILL NOT BE TOLERATED.
DISCLAIMER:
-THE FOOD SERVICE EQUIPMENT PLANS AND SPECIFICATIONS ARE INTENDED TO ILLUSTRATE TYPES AND ARRANGEMENTS, INCLUDING SPACE AND UTILITY REQUIREMENTS, OF EQUIPMENT REQUIRED FOR THIS PROJECT REGARDING THE DESIRED FUNCTION AND PRODUCT FLOW AND TO SERVE AS A REFERENCE ONLY TO THE LICENSED PROFESSIONAL ARCHITECT AND/OR ENGINEERS.

FOOD SERVICE GENERAL NOTES:
-ALL ITEMS OF FOOD SERVICE EQUIPMENT SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH THE LATEST STANDARDS PUBLISHED BY THE NATIONAL SANITATION FOUNDATION (NSF), OR THE EQUIVALENT; AND IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE AND/OR LOCAL CODES AND STANDARDS.
-ALL EXISTING HVAC, SPRINKLERS AND OTHER SERVICES TO BE RELOCATED AS REQUIRED BY MECHANICAL AND ELECTRICAL ENGINEER TO MEET ALL STANDARDS, CODES AND BYLAWS SET FORTH BY LOCAL GOVERNING AUTHORITIES.
-GENERAL CONTRACTOR TO SITE VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
-MECHANICAL AND ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR ALL CONCERNS AND ARRANGEMENTS REGARDING PENETRATIONS INTO THE CEILING.
-GENERAL CONTRACTOR TO SEAL AND CAULK AROUND ALL PENETRATIONS, CRACKS, CREVICES AND ANY OTHER OPENINGS CAPABLE OF HARBORING INSECTS OR RODENTS.
-GENERAL CONTRACTOR TO LIAISE WITH STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITIONS
-ENSURE THE SAFETY OF THE WORKS AND OF THE PUBLIC DURING DEMOLITION WORK BEFORE STARTING DEMOLITION WORK ARRANGE FOR THE APPROPRIATE AUTHORITIES TO REMOVE ALL SERVICES FROM THE AREA
-CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL SERVICES PRIOR TO COMMENCEMENT OF THE DEMOLITION PHASE.
-ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH LOCAL BUILDING CODE
-ALL PLUMBING, STEAM, ELECTRICAL, AND VENTILATION WORK, LABOR AND MATERIAL, REQUIRED TO CONNECT THIS EQUIPMENT IS TO BE FURNISHED BY OTHER CONTRACTORS UNLESS SPECIFICALLY CALLED FOR IN "ITEMIZED SPECIFICATIONS". THE WORK DONE BY OTHER CONTRACTORS IS TO INCLUDE ROUGHING-IN TO POINTS INDICATED ON ROUGHING-IN PLANS, FINAL CONNECTING FROM ROUGH-IN POINT TO VARIOUS PIECES OF EQUIPMENT REQUIRING SUCH CONNECTIONS, AND THE SUPPLYING OF ALL NECESSARY MATERIALS AND LABOR FOR THIS WORK EXCEPT AS HEREINAFTER NOTED.
-REFRIGERATION WORK DONE BY EQUIPMENT CONTRACTOR IS HEREINAFTER LISTED IN ITEMIZED SPECIFICATIONS, EXCEPT FOR ELECTRICAL AND PLUMBING CONNECTIONS TO COMPRESSOR, EVAPORATOR COILS, LIGHTS, CONTROLS, ETC. THIS WORK IS TO BE ACCOMPLISHED BY OTHER CONTRACTORS AND INCLUDE INTERIOR WIRING IN WALK-IN REFRIGERATED STORAGE ROOMS AND DRAIN EXTENSIONS FROM FIXTURES TO FLOOR DRAINS AND FLOOR SINKS.
-ALL TRAPS, GREASE TRAPS, TAIL PIECES, VALVES, STOPS, SHUT-OFFS, AND FITTINGS NECESSARY ARE TO BE FURNISHED AND INSTALLED UNDER MECHANICAL CONTRACT BY OTHERS, UNLESS SPECIFICALLY CALLED FOR UNDER ITEMIZED SPECIFICATIONS.
-ALL STEAM TRAPS, VALVES, SHUT-OFFS, CONDENSATE PUMPS, AND FITTINGS NECESSARY ARE TO BE FURNISHED AND INSTALLED UNDER MECHANICAL CONTRACT BY OTHERS.
-ALL LINE AND DISCONNECT SWITCHES, SAFETY CUT-OUTS, CONTROL PANELS, FUSE BOXES, OR OTHER ELECTRICAL CONTROLS, FITTINGS, AND CONNECTIONS NOT FURNISHED AS A STANDARD PART OF THE FIXTURE BY THE MANUFACTURER TO BE FURNISHED AND INSTALLED UNDER ELECTRICAL CONTRACT. STARTING SWITCHES PROVIDED BY EQUIPMENT CONTRACTOR AND FURNISHED LOOSE AS STANDARD BY FOOD SERVICE EQUIPMENT MANUFACTURERS (OTHER THAN CUSTOM FABRICATED ITEMS) IS TO BE MOUNTED AND WIRED COMPLETE UNDER ELECTRICAL CONTRACT.
SODA LINE NOTES:
-PROVIDE SIX INCH DIAMETER SCHEDULE 40 PVC WITH FITTINGS FOR TRUNK HOUSINGS WITH NINE LINES OR LESS.
-COORDINATE EXACT SIZE AND LOCATION OF FLOOR PENETRATION WITH BEVERAGE SUPPLIER.
-ALL JOINTS MUST BE SOLVENT CEMENTED IN ACCORDANCE WITH PVC MANUFACTURER'S RECOMMENDATIONS TO GUARANTEE A WATERTIGHT CHASE.
-ONLY ONE 24" OR 30" RADIUS SWEEP BEND (45 OR 90 DEGREE) MAY BE USED AT EACH END OF CHASE
-CONDUIT MUST BE CAPPED AND SEALED AT BOTH ENDS DURING CONSTRUCTION.
-INSTALLER MUST TRIM EXPOSED ENDS TO SIX INCHES ABOVE FINISHED FLOOR DURING PRODUCT LINE INSTALLATION.
-AFTER PRODUCT LINES ARE INSTALLED, OPEN ENDS OF CONDUIT MUST BE CAPPED AND SEALED

FOOD SERVICE PLUMBING/MECH NOTES:
-UTILITIES SHOWN ON THIS DRAWING ARE FOR FOOD SERVICE EQUIPMENT ONLY. SEE PLUMBING/MECHANICAL ENGINEERS'/ARCHITECTS' DRAWINGS FOR ANY ADDITIONAL INFORMATION. FINAL CONNECTIONS OF EQUIPMENT TO BUILDING'S UTILITY SYSTEMS TO BE BY APPROPRIATE MECHANICAL OR PLUMBING TRADES.
-THIS PLUMBING PLAN IS INTENDED TO SHOW ROUGH-IN LOCATIONS AND HEIGHTS, CONNECTION TYPES, POSITIONS, FIXTURE TYPES AND LOAD REQUIREMENTS. DIMENSIONS ARE FROM FINISHED FLOORS AND FINISHED WALLS TO THE CENTERLINE OF THE UTILITY. VERIFY FINISHED WALL PARTITION LOCATIONS WITH ARCHITECTURAL FLOOR PLAN.
-KITCHEN EQUIPMENT CONTRACTOR, PRIOR TO EQUIPMENT INSTALLATION, SHALL CHECK ALL UTILITY ROUGH-IN LOCATIONS, COORDINATE FIELD CONDITIONS, AND CALL TO THE ATTENTION OF THE GENERAL CONTRACTOR ANY AND ALL DISCREPANCIES BETWEEN THE FOOD SERVICE ROUGH-IN PLANS, THE EQUIPMENT SPECIFIED, AND THE ROUGH-INS AS THEY OCCUR IN THE FIELD.
-FINAL CONNECTIONS TO ALL EQUIPMENT SHALL BE BY THE PLUMBING CONTRACTOR, INCLUDING ALL REQUIRED MATERIALS SUCH AS STOPS, VALVES FILTERS, TRAPS, CHECK VALVES, PIPING, TUBING, ETC.
THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:
A. ALL WATER, WASTE, GAS, AND STEAM SERVICE TO POINT OF ROUGH-IN AS SHOWN ON PLAN. ROUGH-IN OUTLETS TO STUB 4"OUT OF WALLS AT HEIGHT INDICATED FROM FINISHED FLOOR TO CENTERLINE OF SERVICE LINE. FLOOR ROUGH-INS TO STUB UP 3" ABOVE FINISHED FLOOR OR CURBS. ALL FLOOR OPENINGS OR PENETRATIONS TO BE SEALED WATERTIGHT.
B. ALL FLOOR SINKS, COMPLETE WITH TOP GRATES (AS INDICATED) AND REMOVABLE SEDIMENT BUCKETS. ALL FIXTURES TO BE SET FLUSH WITH FINISHED FLOOR, EXCEPT AS OTHERWISE NOTED.
C. ALL WASTE LINES, DIRECT OR INDIRECT, EXCEPT AS OTHERWISE NOTED. MINIMUM DIAMETER OF LINE SHALL BE AS INDICATED ON PLAN REGARDLESS OF CONNECTION, AND SHALL BE PITCHED DOWNWARD. MAINTAIN DRAIN LINES AS HIGH AS POSSIBLE (MINIMUM 6" CLEAR ABOVE FINISHED FLOOR) ABOVE FLOOR FOR SANITATION AND CLEANING. ALL WASTE LINES SHALL HAVE ADEQUATE CLEAN-OUT PROVISIONS PER LOCAL CODES.
D. ALL REQUIRED GREASE TRAPS, OUTSIDE THE BUILDING WHERE POSSIBLE, OTHERWISE BELOW OR SET FLUSH WITH THE FINISHED FLOOR. STRICT COORDINATION WITH EQUIPMENT AND LOCAL CODES REQUIRED IF GREASE TRAP IS TO BE SET ABOVE THE FLOOR OR UNDER EQUIPMENT.
E. VACUUM BREAKERS AS REQUIRED BY LOCAL/STATE/NATIONAL CODES.
F. INSULATION ON ALL HOT WATER AND CONDENSATE RETURN LINES WITHIN THE FOOD SERVICE AREAS. ALL SUCH LINES ARE TO BE COLOR-CODED ACCORDING TO LOCAL CODES.
G. CLEAN-OUT VALVES FOR STEAM AND CONDENSATE RETURN LINES.
-PLUMBING CONTRACTOR TO INTERCONNECT DISHMACHINE WITH BOOSTER HEATER/HEAT RECLAIMER (WHEN USED) AND WATER-WASH VENTILATORS WITH CONTROL PANELS AS PER MANUFACTURER'S INSTRUCTIONS, WHEN APPLICABLE AND NOTED.
-WHERE POSSIBLE, UTILITIES SHALL BE CONCEALED WITHIN BUILDING WALLS OR COLUMN CHASES, NOT RUN ALONG WALL FACE. DO NOT STUB OUT OF FLOOR AND RUN ON THE FACE OF THE WALL.
-ANY AND ALL EXPOSED PIPING OR FITTINGS TO BE STAINLESS STEEL, CHROME PLATED OR ENCLOSED IN A CONCEALED, MOUNTED STAINLESS STEEL CHASE.
-ALL HORIZONTAL PIPING RUNS EXTENDED TO AND CONNECTED TO EQUIPMENT ITEMS SHALL BE AT THE HIGHEST PRACTICAL ELEVATION AND NOT LESS THAN 6" ABOVE FINISHED FLOOR SO AS TO PROVIDE CLEARANCE FOR CLEANING.
-ALL VENT PIPES TO BE CONCEALED IN WALLS OR COLUMN CHASES. USE LOOP VENTS FOR ISLAND FIXTURES, AS ALLOWED BY LOCAL CODES.
-ALL LINES ROUTED THROUGH EQUIPMENT SHALL NOT INTERFERE WITH THE INTENDED USE OF, OR SERVICING OF THE EQUIPMENT.
-DRINKING FOUNTAINS ARE BY MECHANICAL TRADES. VERIFY UTILITY REQUIREMENTS WITH MECHANICAL ENGINEER.
-INDOOR GREASE TRAPS ARE TO RECESSED, FLUSH WITH TOP OF FINISHED FLOOR (UNLESS SPECIFIED OTHERWISE) AND REMOVAL OF COVER SHALL NOT INTERFERE WITH THE OPERATION OF EQUIPMENT ITEMS.
-INDIRECT WASTES TO BE EXTENDED OVER BUILDING DRAINS BY PLUMBING TRADE.
-GENERAL CONTRACTOR TO PROVIDE AND INSTALL CONDUITS FOR BEVERAGE SYSTEMS. IT SHALL BE WATER TIGHT AND HAVE AN 18" MINIMUM RADIUS WITH SWEEP BENDS. ALSO, CONDUIT SLEEVES SHALL BE OF PVC, EMT OR EQUAL QUALITY GRADE, UNLESS SPECIFIED OTHERWISE. SLEEVES SHALL BE FLUSHED CLEAN AND CAPPED.
-FLOOR DRAINS, FUNNEL FLOOR DRAINS, FLOOR SINKS, ETC., LOCATED AT FOOD PREP SINKS, POT WASHING SINKS AND DISH MACHINES MUST HAVE REMOVABLE BASKETS TO CATCH FOOD PARTICLES. FLOOR TROUGH DRAINS MUST ALSO BE PROVIDED WITH REMOVABLE BASKETS. ALL DRAINS IN FOOD SERVICE AREAS TO BE RUN THROUGH GREASE TRAP UNLESS OTHERWISE APPROVED BY LOCAL CODE.
NOTES:
-ALL MOUNTING HEIGHTS TO BE VERIFIED WITH EQUIPMENT SPECIFICATIONS PRIOR TO INSTALLATION OF SERVICES.
-DIMENSIONS PROVIDED ARE TO BE USED AS A GUIDELINE ONLY. ALL DIMENSIONS TO BE SITE VERIFIED PRIOR TO INSTALLATION.
-MILLWORK CONTRACTOR TO PRE-WIRE ALL COUNTERS PRIOR TO INSTALL. FINAL CONNECTIONS TO BE MADE ON SITE BY G.C.
-ALL EXPOSED UTILITY LINES AND PIPES SHALL BE INSTALLED IN A WAY THAT DOES NOT OBSTRUCT OR PREVENT THE CLEANING OF FLOORS, WALLS AND CEILING AREA. MINIMUM 6" OFF FLOORS.
-PENETRATIONS OF ANY COUNTERTOPS, BASES, GABLES, ETC. BY DRAINS TO BE SEALED

FOOD SERVICE ELECTRICAL NOTES:
-UTILITIES SHOWN ON THIS DRAWING ARE FOR FOOD SERVICE EQUIPMENT ONLY. SEE ELECTRICAL ENGINEERS'/ARCHITECTS' DRAWINGS FOR ANY ADDITIONAL INFORMATION. FINAL CONNECTIONS OF EQUIPMENT TO BUILDING'S UTILITY SYSTEMS TO BE BY APPROPRIATE ELECTRICAL TRADES.
-THIS ELECTRICAL PLAN IS INTENDED TO SHOW ROUGH-IN LOCATIONS AND HEIGHTS, CONNECTION TYPES, POSITIONS, FIXTURE TYPES AND LOAD REQUIREMENTS. DIMENSIONS ARE FROM FINISHED FLOORS AND FINISHED WALLS TO THE CENTERLINE OF THE UTILITY. VERIFY FINISHED WALL PARTITION LOCATIONS WITH ARCHITECTURAL FLOOR PLAN.
-KITCHEN EQUIPMENT CONTRACTOR, PRIOR TO EQUIPMENT INSTALLATION, SHALL CHECK ALL UTILITY ROUGH-IN LOCATIONS, COORDINATE FIELD CONDITIONS, AND CALL TO THE ATTENTION OF THE GENERAL CONTRACTOR ANY AND ALL DISCREPANCIES BETWEEN THE FOOD SERVICE ROUGH-IN PLANS, THE EQUIPMENT SPECIFIED, AND THE ROUGH-INS AS THEY OCCUR IN THE FIELD.
-FINAL CONNECTIONS TO ALL EQUIPMENT SHALL BE BY THE ELECTRICAL CONTRACTOR, INCLUDING ALL REQUIRED MATERIALS SUCH AS DISCONNECTS, BOXES, OUTLETS (EXCEPT AS FURNISHED AS PART OF THE EQUIPMENT), RIGID CONDUIT, FLEXIBLE CONDUIT, WIRING, ETC.
THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:
A. ALL JUNCTION BOXES, ELECTRICAL OUTLETS, COVER PLATES, SWITCHES, ETC. NOT BUILT INTO FIXTURES OR EQUIPMENT. ALL OUTLETS, JUNCTION BOXES, COVER PLATES, ETC. IN FOOD SERVICE AREAS MUST BE MOISTURE PROOF.
B. ALL PLUGS AND CORDS SHALL BE N.E.M.A. RATED AND U.L. APPROVED FOR MANUFACTURED AND FABRICATE EQUIPMENT.
C. SHUNT-TRIP CIRCUIT BREAKERS OR DISCONNECTS FOR FIRE SUPPRESSION SYSTEM SHUT-OFF OR FOOD SERVICE EQUIPMENT BENEATH HOODS/VENTILATORS AS REQUIRED BY N.F.P.A.-96 AND LOCAL/STATE/NATIONAL CODES.
D. DISCONNECTS OR OTHER DEVICES AS MAY BE REQUIRED BY LOCAL/STATE/NATIONAL CODES.
WHEN APPLICABLE, THE ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT AND WIRING, INSTALL ELECTRICAL COMPONENTS (PROVIDED BY K.E.C.), AND INTERWIRE BETWEEN THE FOLLOWING:
A. REMOTE REFRIGERATION SYSTEMS TO EVAPORATOR COILS.
B. WALK-IN COOLER/FREEZER LIGHTS (RUN CONDUIT ABOVE COMPARTMENT CEILING PANELS.
C. WALK-IN COOLER/FREEZER ALARM SYSTEMS (WHEN SPECIFIED)
D. CONTROL PANELS TO WATER-WASH VENTILATORS (WHEN SPECIFIED) AND EXHAUST/SUPPLY FANS PER MANUFACTURER'S INSTRUCTIONS AND LOCAL/STATE/NATIONAL CODES.
E. CONDUIT AND WIRING BETWEEN HOODS/VENTILATORS CONTROL PANELS, REMOTE FIRE SWITCH, FIRE SUPPRESSION SYSTEM, FUEL SHUT-OFF DEVICES AND EXHAUST/SUPPLY FANS.
F. CONDUIT AND WIRING BETWEEN WALL SWITCH AND LIGHT FIXTURES INSTALLED IN VENTILATORS BY ELECTRICAL TRADE.
G. CONDUIT AND WIRING BETWEEN FLUE LINE SOLENOID SHUT-OFF VALVES, SHUNT-TRIP BREAKERS, CONTRACTORS AND FIRE SUPPRESSION SYSTEM.
-POWER TO ALL ELECTRICALLY OPERATED COOKING EQUIPMENT UNDER HOODS/VENTILATORS TO BE FROM PANEL WHERE MAIN BREAKER IS INTERWIRED WITH THE FIRE SUPPRESSION SYSTEM AND/OR FIRE TERMINAL BLOCK IN THE UTILITY DISTRIBUTION SYSTEM SO THAT THE POWER SHUT-OFF IS ACHIEVED UPON EITHER MANUAL OR AUTOMATIC OPERATION OF THE FIRE SUPPRESSION SYSTEM. ALL INTERWIRING BY ELECTRICAL CONTRACTOR.
-HOOD/VENTILATOR CONTROLS AND FIRE PROTECTION SYSTEMS EACH REQUIRE EMERGENCY (24 HOUR) SEPARATE CIRCUIT ELECTRICAL SERVICE.
-ELECTRICAL CONTRACTOR TO PROVIDE CIRCUITS ON ROOF FOR EXHAUST/SUPPLY FANS. VERIFY UTILITIES REQUIRED AND LOCATION OF UNITS.
-PROVIDE COMPUTER GRADE, CLEAN GROUND SERVICE FOR ELECTRONIC CASH REGISTERS. PROVIDE EMPTY CONDUIT BETWEEN CASH REGISTER LOCATIONS TO ALLOW UNITS TO BE TIED TOGETHER. REFER TO ARCHITECTURAL PLANS FOR CLOCKS, INTERCOM, TIME CLOCKS, POINT OF SALE (POS), CASH MACHINERY AND OTHER ITEMS LOCATED IN FOOD SERVICE AREA BUT NOT INCLUDED IN THE FOOD SERVICE EQUIPMENT CONTRACT. PRIOR TO INSTALLATION, VERIFY CASH REGISTER POWER REQUIREMENTS WITH OWNER/OPERATOR.
-ELECTRICAL COMPONENTS MUST NOT INTERFERE WITH THE OPERATION OF THE ITEMS OF FOOD SERVICE EQUIPMENT.
NOTES:
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-MILLWORK CONTRACTOR TO PRE-WIRE ALL COUNTERS PRIOR TO INSTALLATION. FINAL CONNECTIONS TO BE MADE ON SITE TO G.C.
-ALL EXPOSED UTILITY LINES AND PIPES SHALL BE INSTALLED IN A WAY THAT DOES NOT OBSTRUCT OR PREVENT THE CLEANING OF FLOORS, WALLS AND CEILING AREA. MINIMUM 6" OFF FLOORS.
-PENETRATIONS OF ANY COUNTERTOPS, BASES, GABLES, ETC. BY DRAINS TO BE SEALED WITH CAULKING.
-ELECTRICAL ENGINEER TO BE RESPONSIBLE FOR ALL CONCERNS AND ARRANGEMENTS REGARDING PENETRATIONS INTO THE FLOOR AND WALL. BUILDING OWNER TO APPROVE PRIOR TO CONSTRUCTION.
-ELECTRICAL ENGINEER TO PROVIDE G.F.I. RECEPTACLES AS REQUIRED BY THE LOCAL BUILDING CODE.
-ELECTRICAL ENGINEER TO LOCATE RECEPTACLES IN STORAGE AREAS AS REQUIRED BY LOCAL CODES

constance spencer, architect
11031 CATTAIL BLUFF
TEGA CAY, SC 29708
803-802-8590 spencerlc@me.com

STATE OF MISSOURI
CONSTANCE SPENCER
REGISTERED ARCHITECT
03/25/23

ROXBOX

CONTAINER BAR FOR
PARAGON STAR
1401 NW View High Dr., Lee's Summit, MO

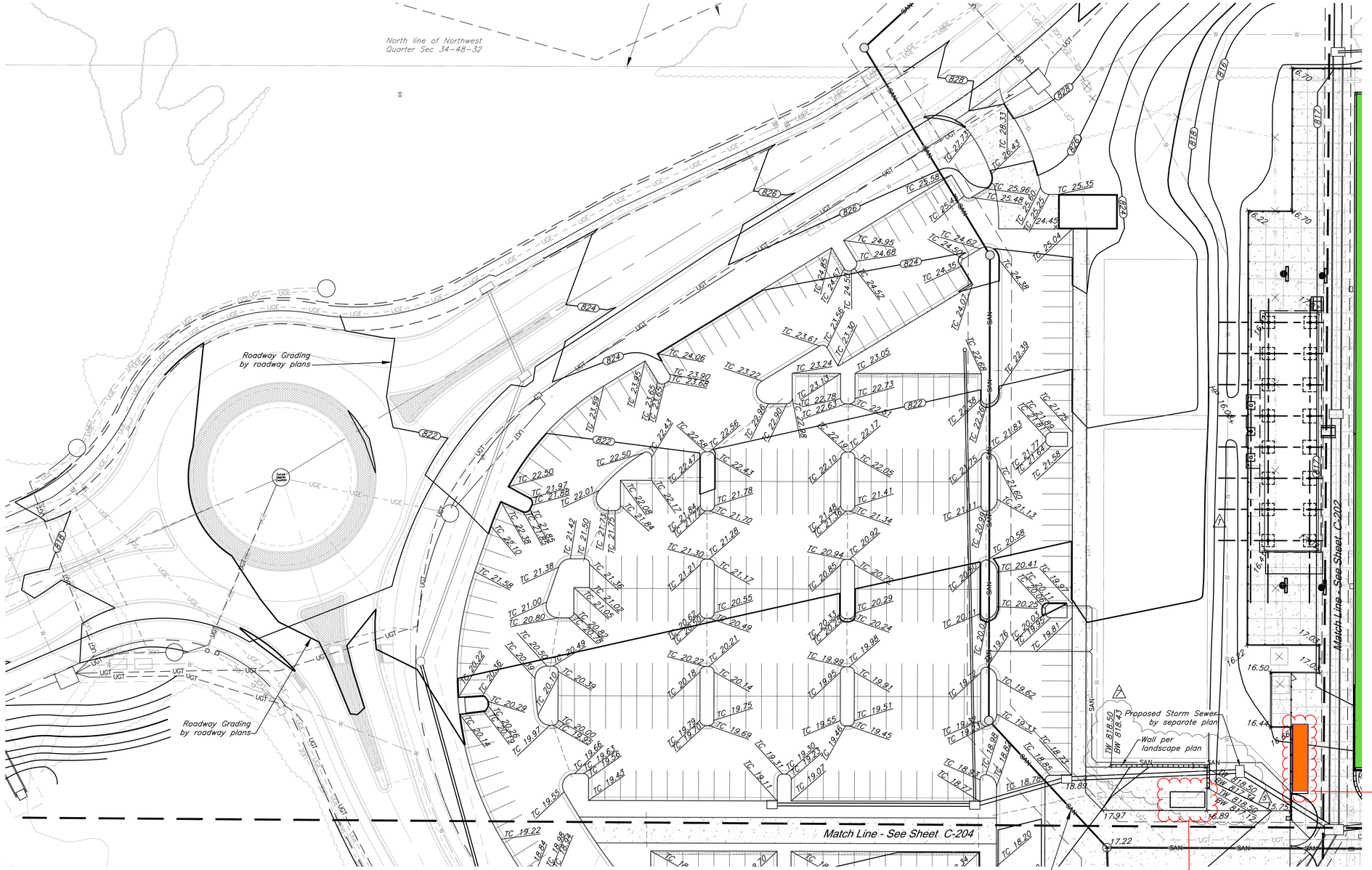
PROJECT SPECIFICATIONS

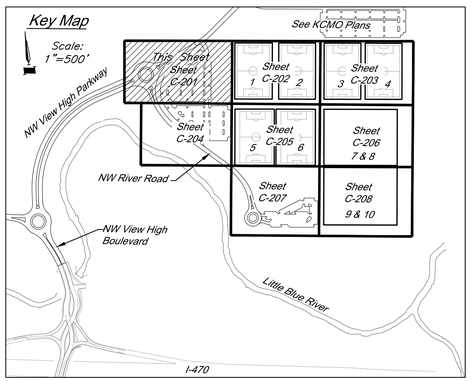
PROJECT DATE: 03/02/23
PROJECT NUMBER: 23008

ISSUE DATE:
1. 03/25/23
2.
3.

REVISED: 1.
2.
3.
4.
5.
6.
7.

SHEET NUMBER:
A9.0
CONTAINERS





Notes:

1. *TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural engineer designing the wall.*
2. *All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.*
3. *All earthwork shall adhere to the Geotechnical Report.*
4. *All walls over 30 inches in height will be provided with a railing or fence.*

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

FOR REFERENCE ONLY

GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority #2019004088

HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

FINKLE + WILLIAMS Architecture
8787 Renner Boulevard, Suite 100
Lenexa, KS 66219
913.498.1550
www.finklewilliams.com
Missouri Certificate of Authority #F00453304

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan - RESUBMITTAL

ISSUE:

- 6/13/22 Soccer Complex Revisions
- 10/21/22 Revision 4
- 3/3/23 Soccer Complex Revisions

PROFESSIONAL SEAL:

DRAWING TITLE:

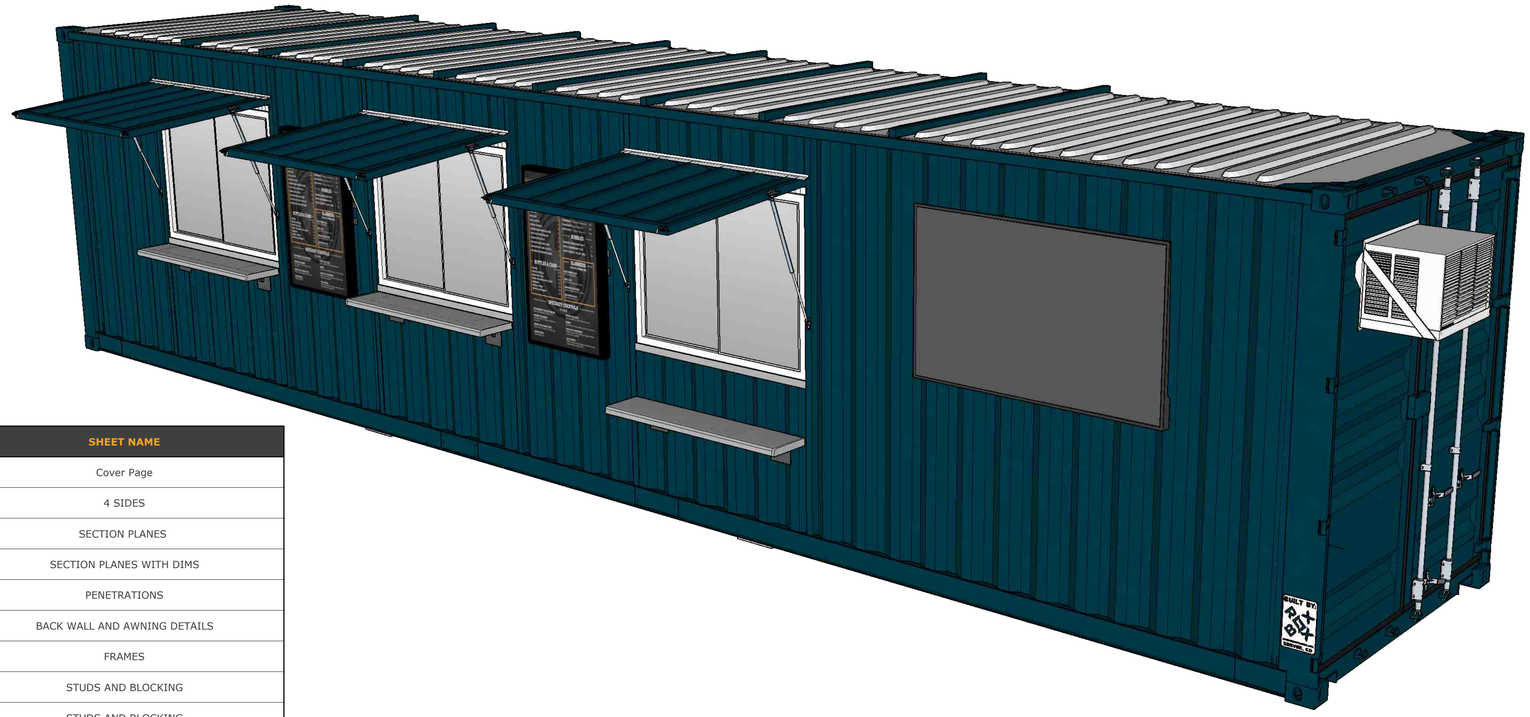
Grading Plan

JOB NO: 1197 SCALE:

DATE: 8.2.2021 DRAWN BY: JMS/KNJ

SHEET NO:

C-201



NOTES:

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1. GLOBAL WIND FORCES AND OVERTURNING CHECK.
2. LATERAL LOAD CAPACITY CHECK.
3. ROOF LOADS AND ROOF CAPACITY CHECK.
4. DOOR AND WINDOW JAMBS.
5. DOOR AND WINDOW SILLS.
6. DOOR AND WINDOW HEADERS.
7. A/C UNIT SUPPORT.

STATE OF MISSOURI
JASON M. JEFFRIES
NUMBER PE-2009019553
PROFESSIONAL ENGINEER
05.26.2023

SHOP DRAWINGS CREATED BY ROXBOX.

SHEET NUMBER	SHEET NAME
Sheet 01	Cover Page
Sheet 02	4 SIDES
Sheet 03	SECTION PLANES
Sheet 04	SECTION PLANES WITH DIMS
Sheet 05	PENETRATIONS
Sheet 06	BACK WALL AND AWNING DETAILS
Sheet 07	FRAMES
Sheet 08	STUDS AND BLOCKING
Sheet 09	STUDS AND BLOCKING
Sheet 10	MECHANICAL
Sheet 11	ELECTRICAL
Sheet 12	ELECTRICAL
Sheet 13	FRESH WATER PLAN
Sheet 14	GREY WATER PLAN
Sheet 15	PLUMBING PLAN
Sheet 16	EMBED DETAILS
Sheet 17	FOUNDATION
Sheet 18	ROOFTOP SIGN AND LED COUNTERTOPS

EXTERIOR PAINT

PANTONE
309

WEB SAFE HEX
#143A48

PHASE 2.0

ROXBOX
ROXBOX
5690 Logan St. Unit A
Denver, CO 80216
ROXBOX
12223 FM 529 Rd,
Houston, TX 77041

paragon star

COVER PAGE

DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

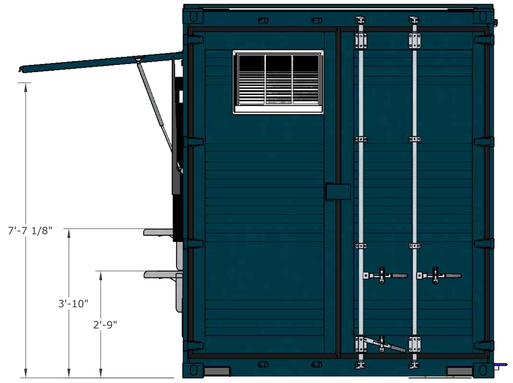
REVISIONS
JVA RED LINES INCORPORATED. SHEET 7

REV. 2.6

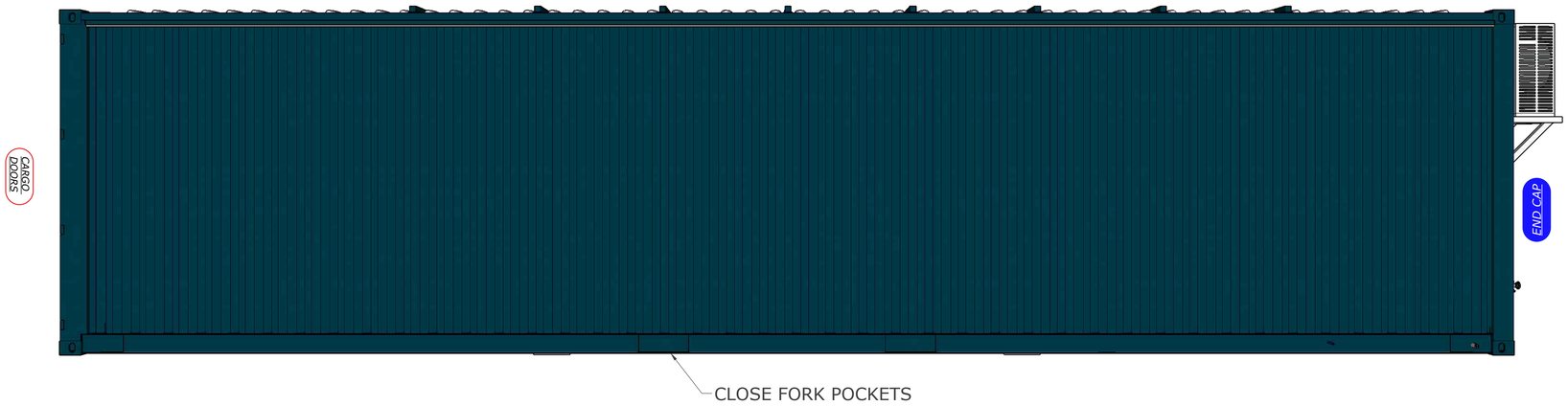
PROJECT NUMBER 2031

01

1 **FRONT**



2 **CARGO DOOR END**



3 **BACK**

4 **END CAP SIDE**

ROXBOX
12223 FM 529 Rd,
Houston, TX 77041

ROXBOX
5690 Logan St. Unit A
Denver, CO 80216

paragon star

OPEN VIEWS/ ISO VIEWS

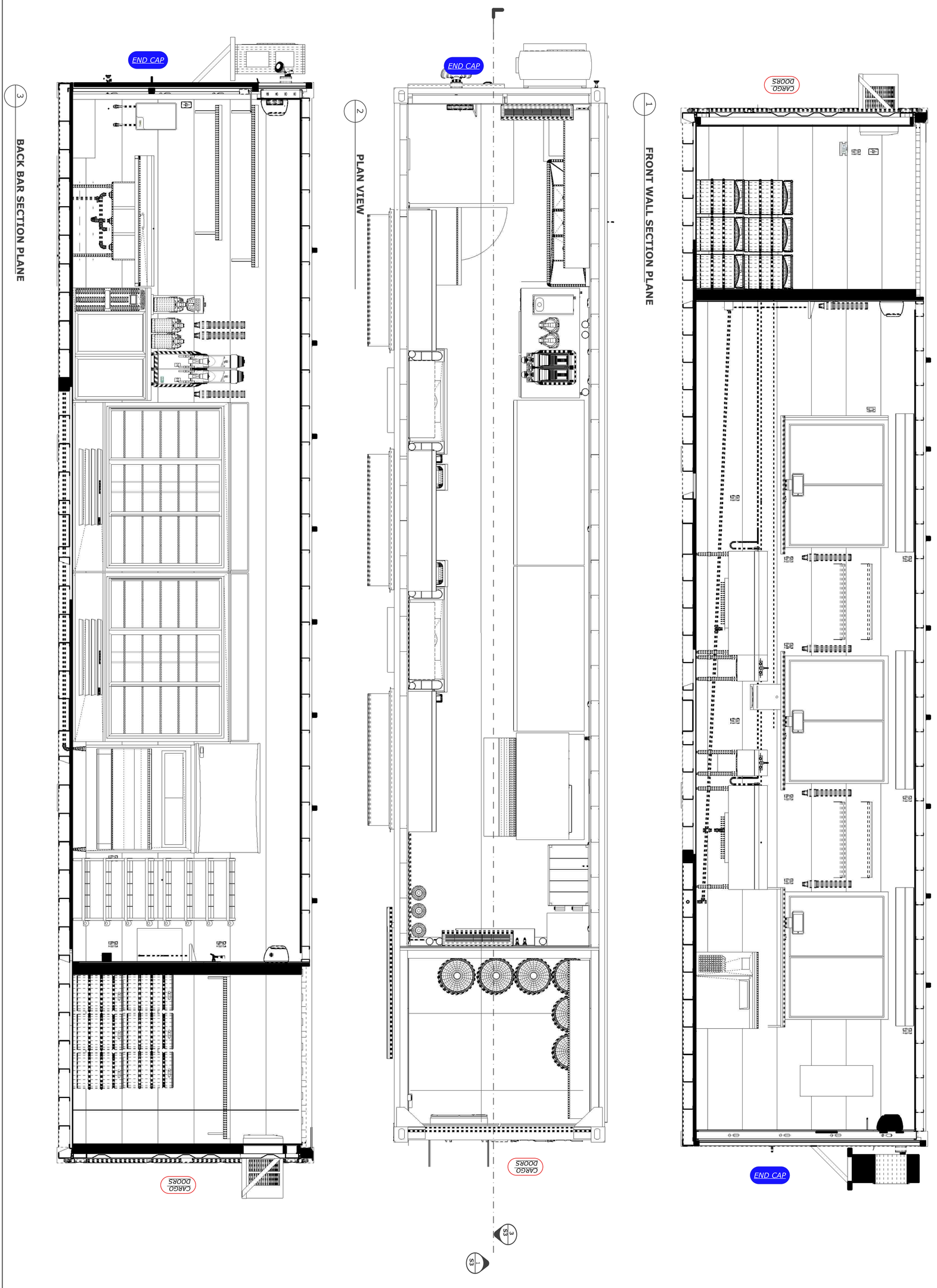
DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

REVISIONS

REV. 2.6

PROJECT NUMBER 2031

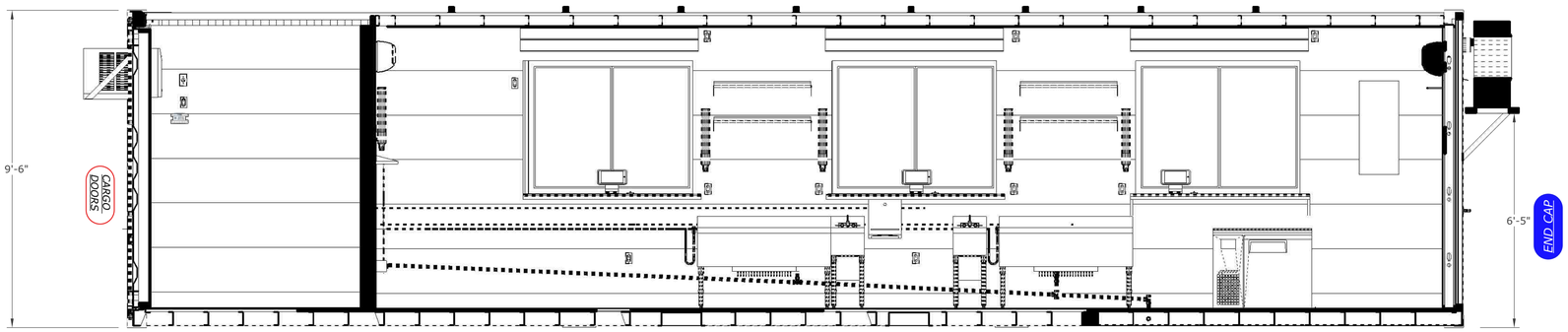
02



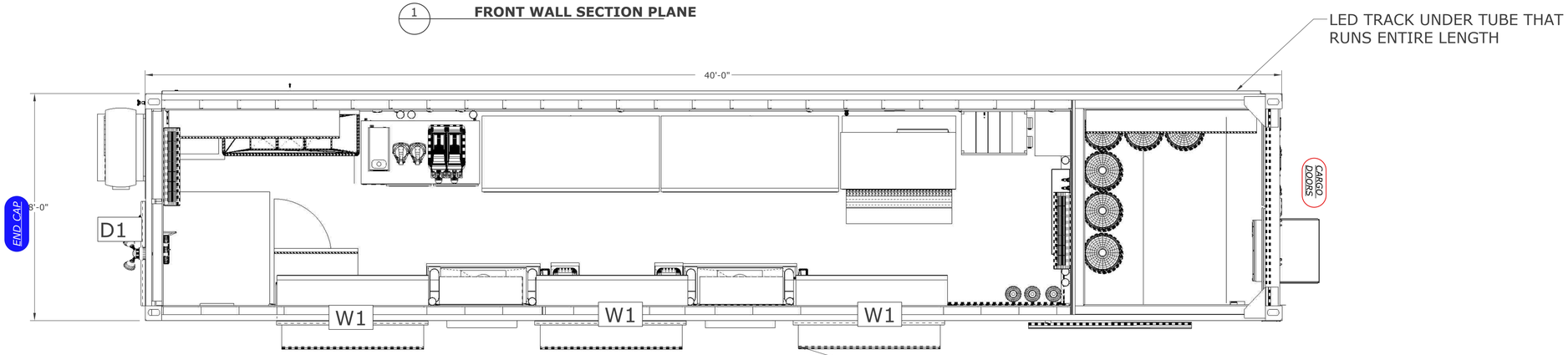
A	PROJECT NUMBER 2031	REV: 2.6	REVISIONS	DRAWN BY: SB DESIGNED BY: SB DATE: 5-22-2023	paragon star PLAN VIEW WITH CALLOUTS
03					

ROXBOX
5690 Logan St. Unit A
Denver, CO 80216

ROXBOX
12223 FM 529 Rd,
Houston, TX 77041



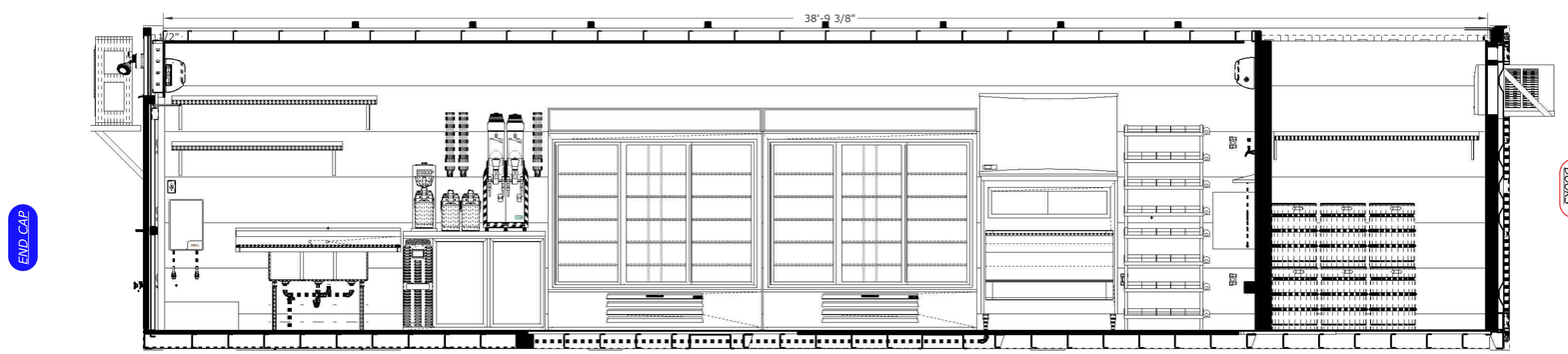
1 **FRONT WALL SECTION PLANE**



2 **PLAN VIEW**

NUMBER	QNTY	MANUFACTURER	MODEL	TYPE	SIZE	CORRU R.O.	HSS R.O.	NOTES
D1	1	TELL	TELSTAR CD	STANDARD HMD. LEFT HAND REVERSE	35-3/4" X 79-1/8"	3'-8 X 7'-0"	41-1/8" X 82-9/16	LEVERED HANDLE, DEADBOLT (KEYED ALIKE), CRASHBAR, WIND CHAIN, WEATHER STRIP KIT, THRESHOLD.

NUMBER	QNTY	MANUFACTURER	MODEL	TYPE	SIZE	CORRU R.O.	HSS R.O.	NOTES
W1	3	MI	V3000	VINYL HORIZONTAL SLIDER	60"X47.75"	64.5"X 52.25	60.5" X 48.25	NO FLANGE- REPLACEMENT WINDOW, SLIDING SCREEN-ONE SIDE



3 **BACK BAR SECTION PLANE**

FINISH MATERIALS:

FLOOR: EPOXY FLOOR WITH FLECK **COLOR TBD**
COVE BASE- 4" COVE - GREY- ENTIRE LOWER RIM
WALLS- 1/2" WHITE TRUSS CORE
CEILING: 1/2" WHITE TRUSS CORE

EXTERIOR: PAINT COLOR: PANTONE 309

PANTONE
309

WEB SAFE HEX
#143A48

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12223 FM 529 Rd,
Houston, TX 77041

ROXBOX
5690 Logan St. Unit A
Denver, CO 80216

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SECTION PLANES WITH DIMS

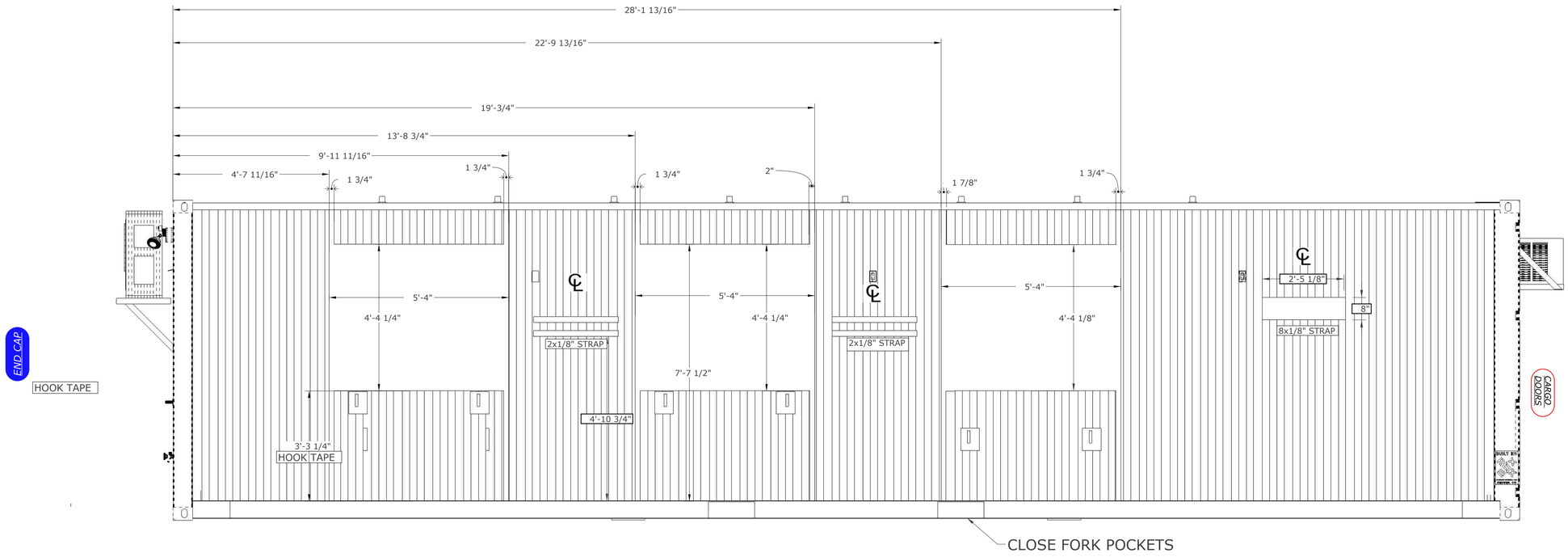
DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

REVISIONS

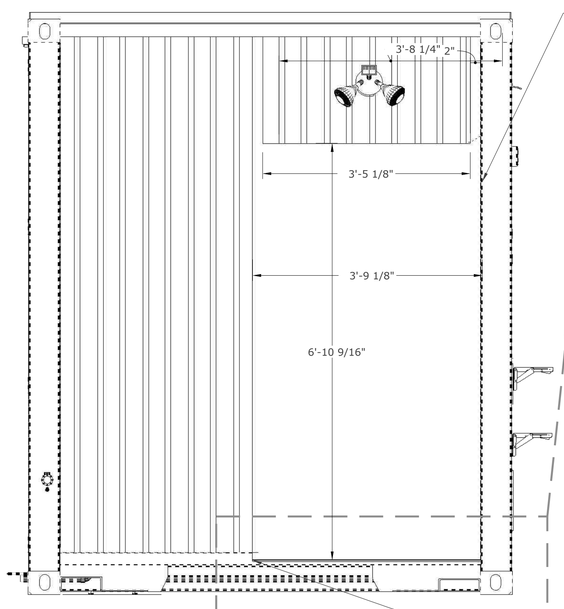
REV. 2.6

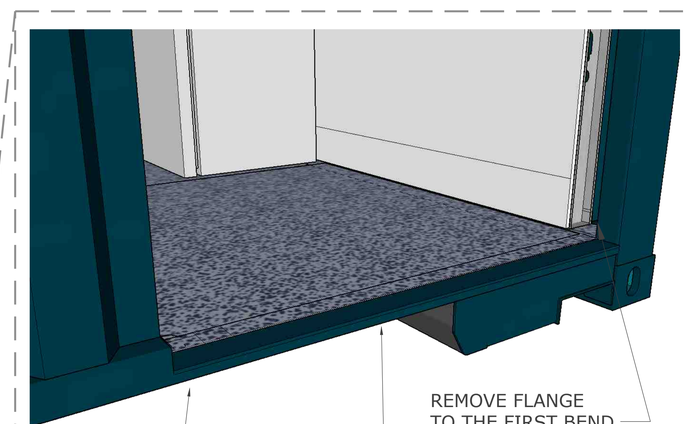
PROJECT NUMBER 2031

A | 04



1 **FRONT WALL EXTERIOR PENETRATIONS**



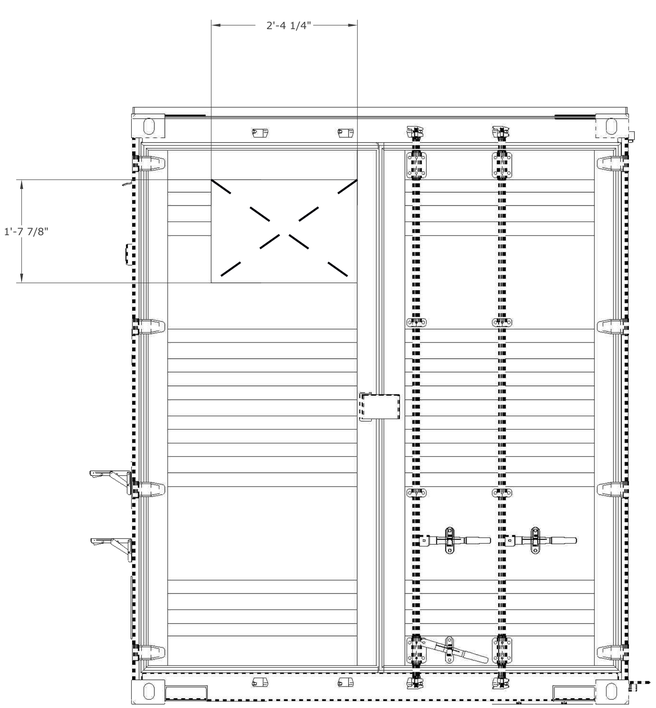


CUT FLANGE BACK FOR HSS DOOR VERTICALS

REMOVE FLANGE TO THE FIRST BEND

CUT INTO TUBE AND CAP FOR DOOR THRESHOLD. 2X1/4 FLAT AS CAP

2 **END CAP PENETRATION**



3 **CARGO DOOR PENETRATIONS**

ROXBOX
12223 FM 529 Rd,
Houston, TX 77041

ROXBOX
5690 Logan St. Unit A
Denver, CO 80216

paragon star

PENETRATIONS

DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

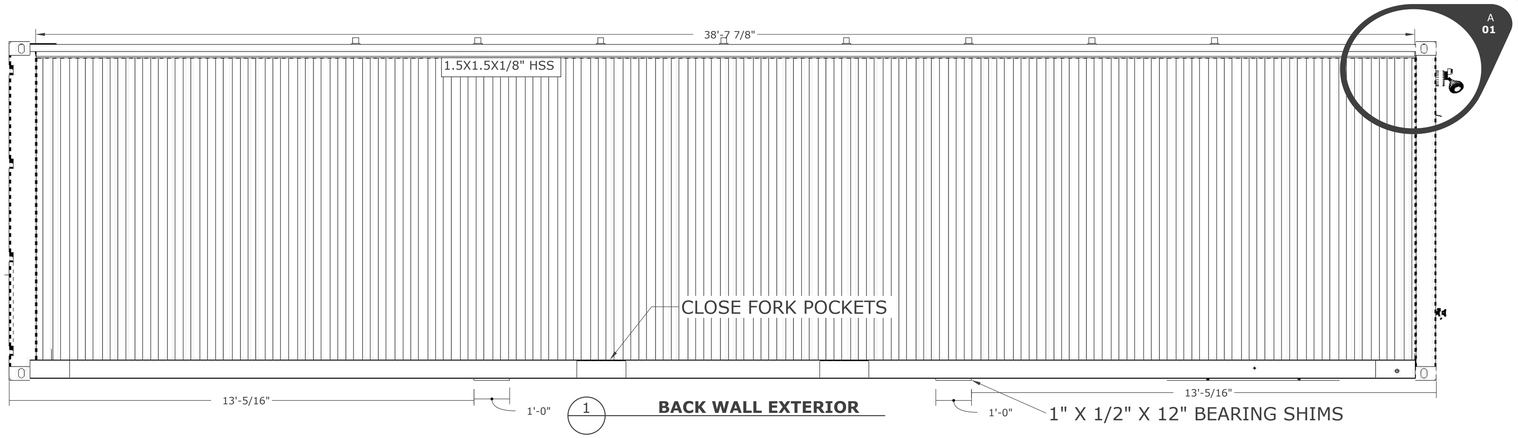
REVISIONS

REV. 2.6

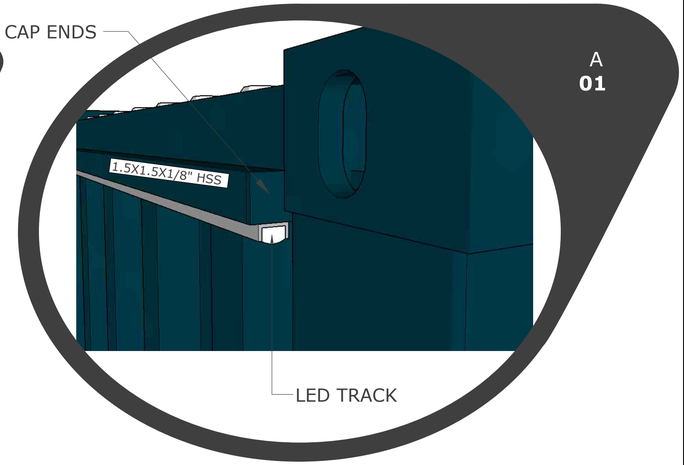
PROJECT NUMBER 2031

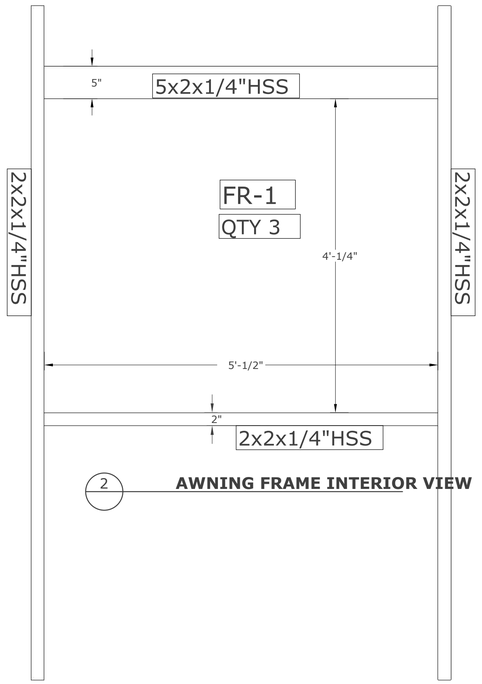
S | 05

WELD 1.5X1.5" TUBE UNDER UPPER CORD. WELD TO HIGH HATS AND UPPER CORD. CAP ENDS.

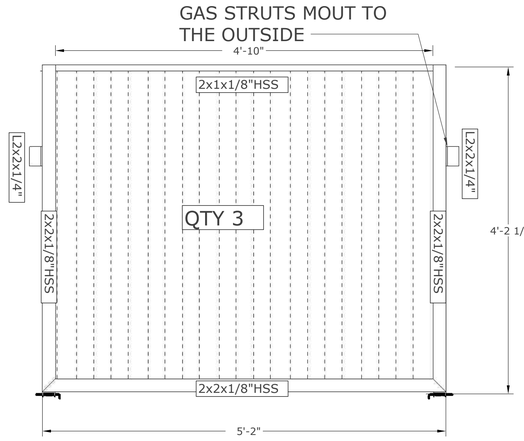


1 **BACK WALL EXTERIOR**

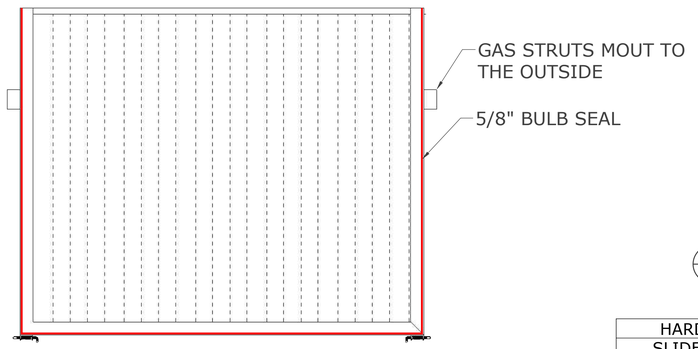




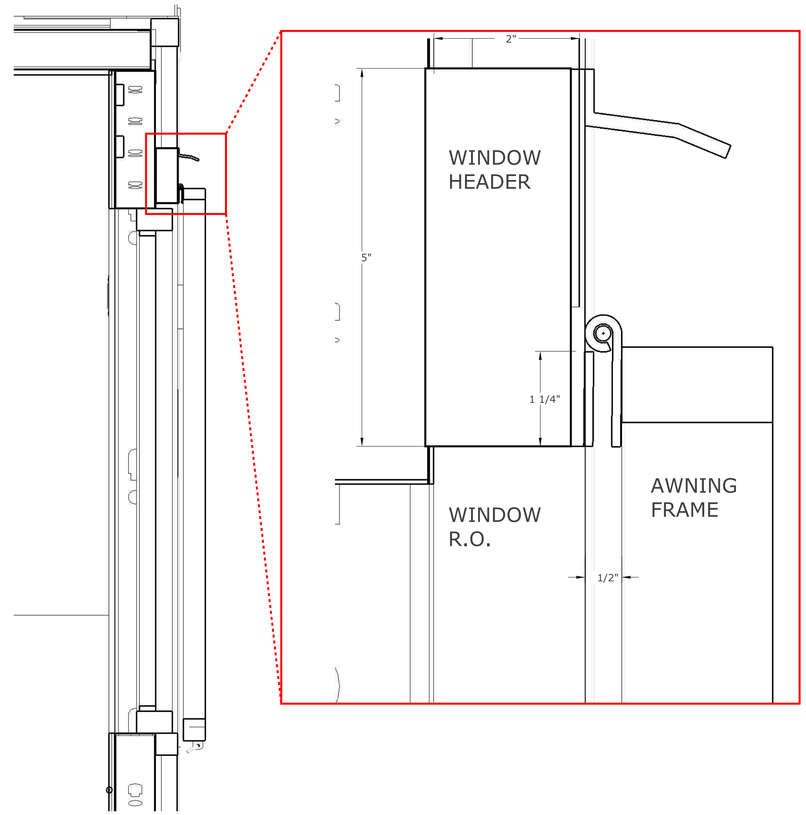
2 **AWNING FRAME INTERIOR VIEW**



3 **AWNING EXTERIOR**



4 **AWNING INTERIOR**



4 **AWNING SECTION**

HARDWARE	QNTY	LENGTH	NOTES
SLIDE LOCKS	6	STD	
STRUTS	6	STD	
STAINLESS PIANO HINGES	3	5'	
STAINLESS BREAK METAL COVERS	3	5'L . 2"SL, 6.25" LL, 2"SL	U SHAPED COVERS FOR AWNING THRESHOLD. ORDER 1" LONG AND TRIM TO SIZE

NOTES:

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4. DOOR AND WINDOW JAMBS.
5. DOOR AND WINDOW SILLS.
6. DOOR AND WINDOW HEADERS.
7. A/C UNIT SUPPORT.

STATE OF MISSOURI
JASON M. JEFFRIES
NUMBER PE-2008019553
PROFESSIONAL ENGINEER
05.26.2023

SHOP DRAWINGS CREATED BY ROXBOX.

ROXBOX
ROXBOX
12223 FM 529 Rd,
Houston, TX 77041

ROXBOX
5690 Logan St. Unit A
Denver, CO 80216

paragon star

BACK WALL AND AWNING DETAILS

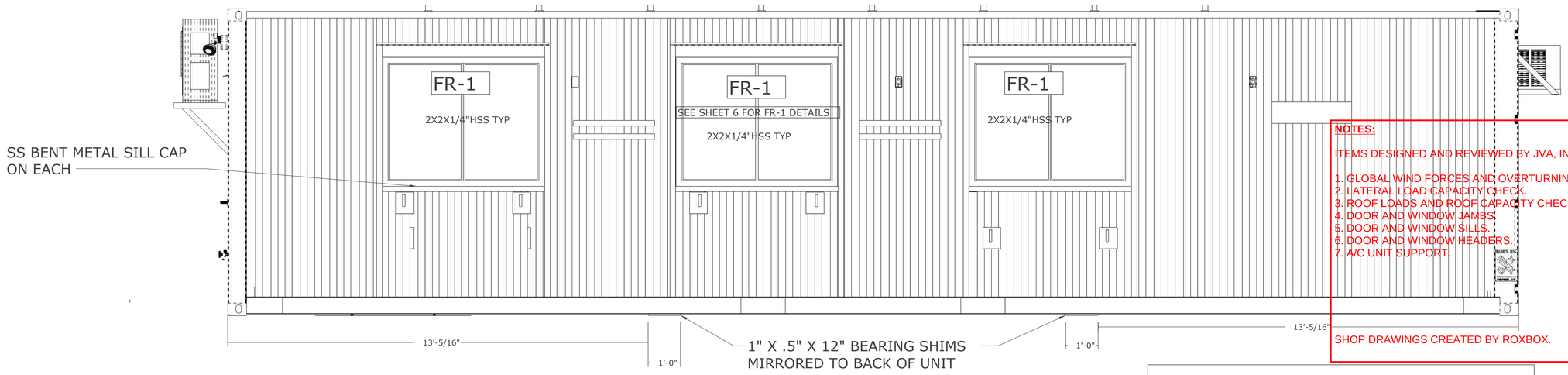
DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

REVISIONS

REV. 2.6

PROJECT NUMBER 2031

S | 06



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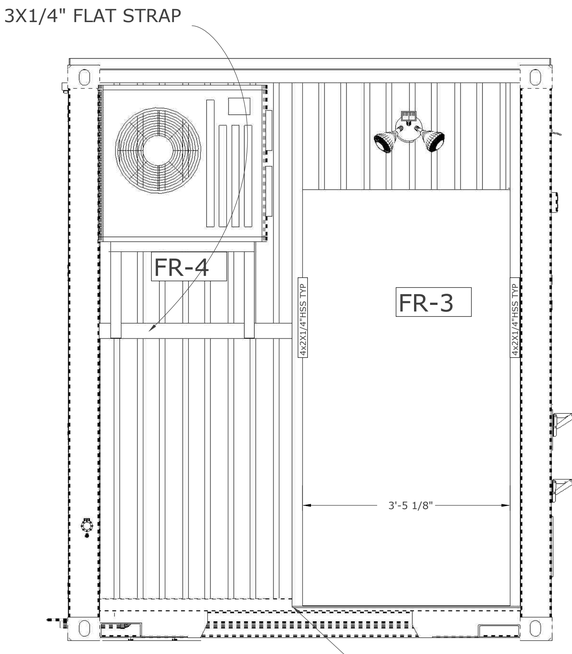
2. LATERAL LOAD CAPACITY CHECK.
3. ROOF LOADS AND ROOF CAPACITY CHECK.
4. DOOR AND WINDOW JAMBS.
5. DOOR AND WINDOW SILLS.
6. DOOR AND WINDOW HEADERS.
7. A/C UNIT SUPPORT.

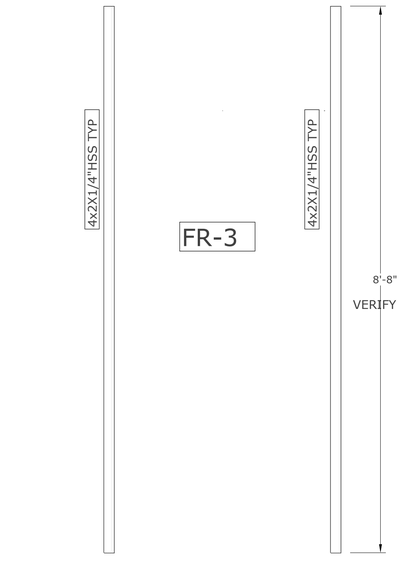
SHOP DRAWINGS CREATED BY ROXBOX.

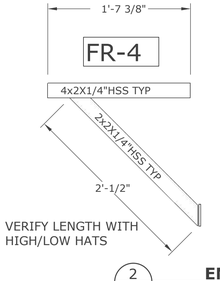
STATE OF MISSOURI
JASON M. JEFFRIES
NUMBER PE-2009019553
PROFESSIONAL ENGINEER
05.26.2023

QNTY 6 K.D. BRACKETS FOR COUNTERTOPS

1 **FRONT WALL FRAMES- EXTERIOR**







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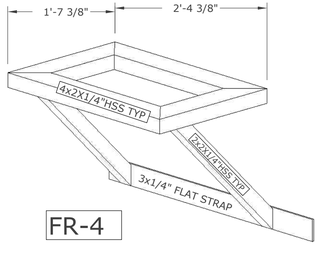
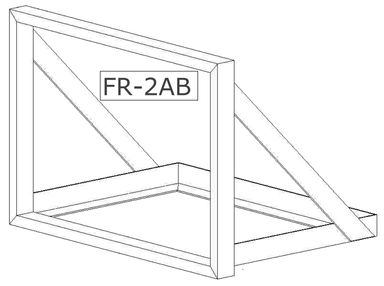
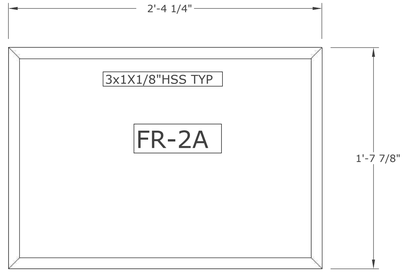
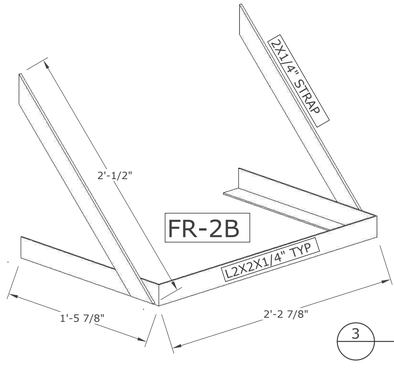
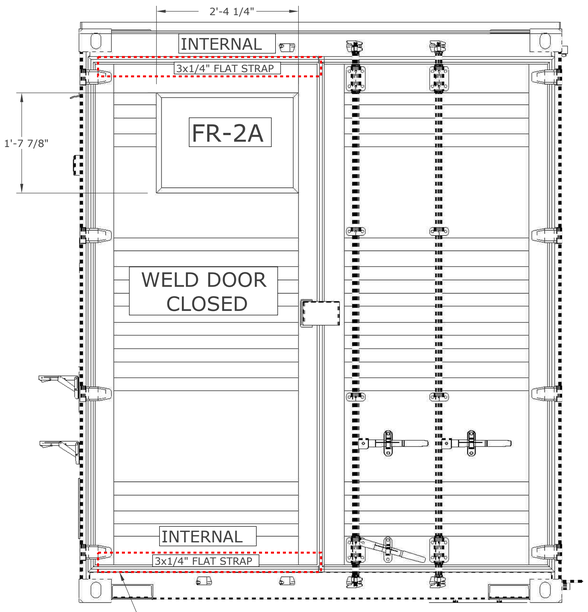








3 **CARGO END FRAMES**



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FRAMES

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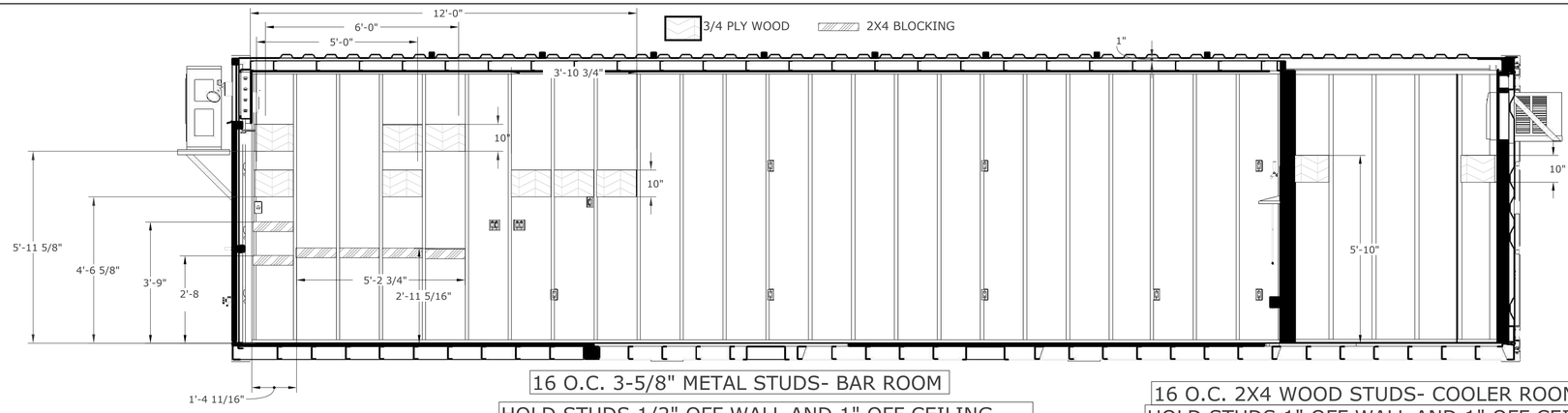
S 07



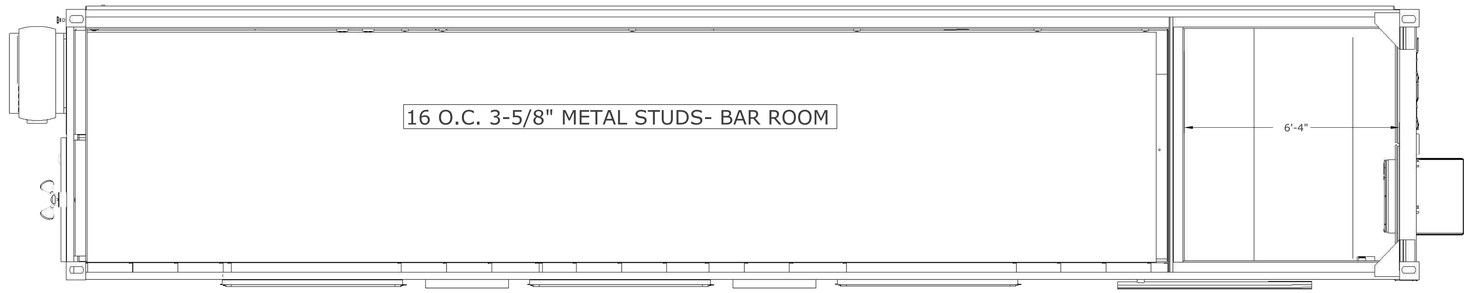
16 O.C. 3-5/8" METAL STUDS- BAR ROOM

HOLD STUDS 1/2" OFF WALL AND 1" OFF CEILING

16 O.C. 2X4 WOOD STUDS- COOLER ROOM

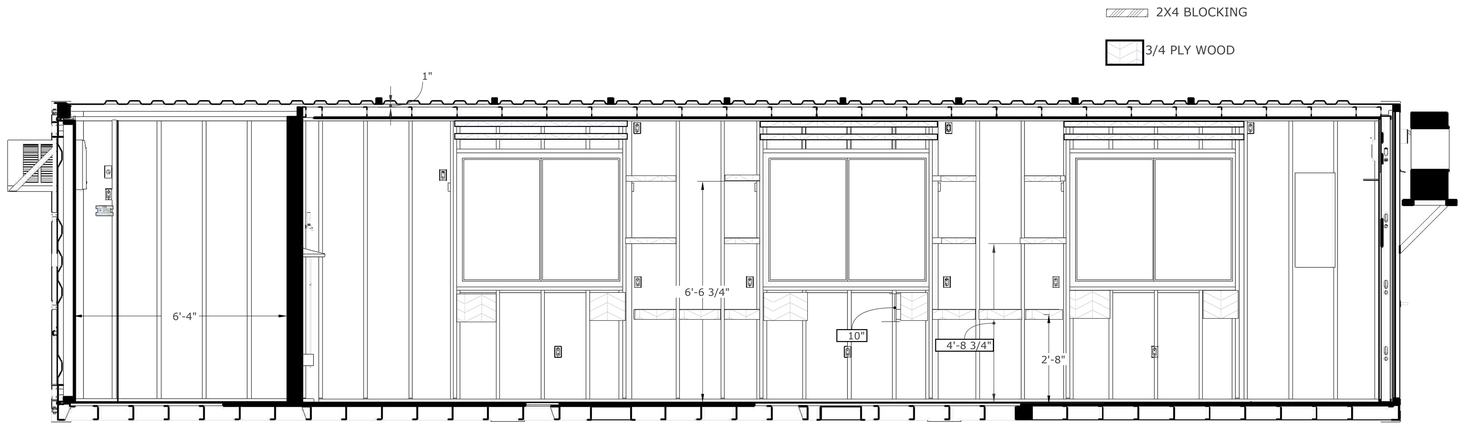
HOLD STUDS 1" OFF WALL AND 1" OFF CEILING

1 **BACK WALL STUDS AND BLOCKING**



16 O.C. 2X4 WOOD STUDS- COOLER ROOM

2 **PLAN VIEW CEILING STUDS**



16 O.C. 2X4 WOOD STUDS- COOLER ROOM

16 O.C. 3-5/8" METAL STUDS- BAR ROOM

3 **FRONT WALL STUDS AND BLOCKING**

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STUDS AND BLOCKING

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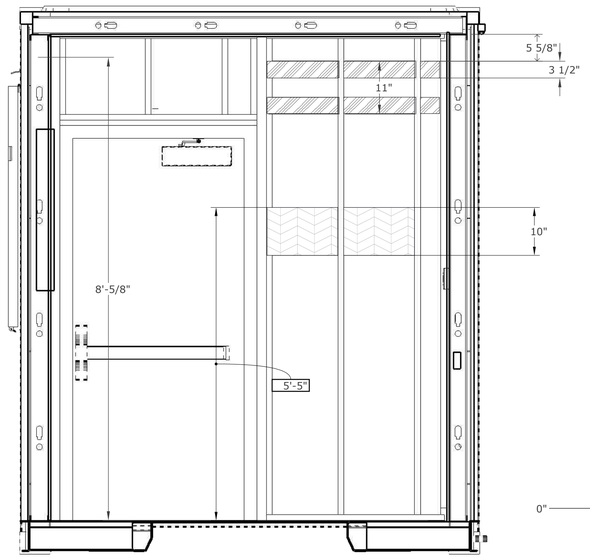
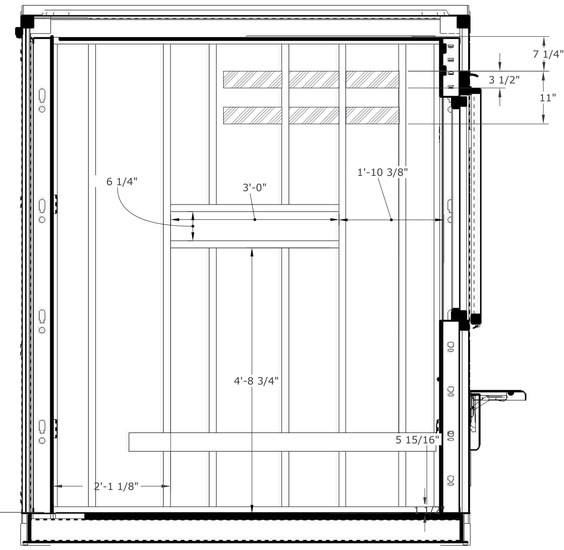


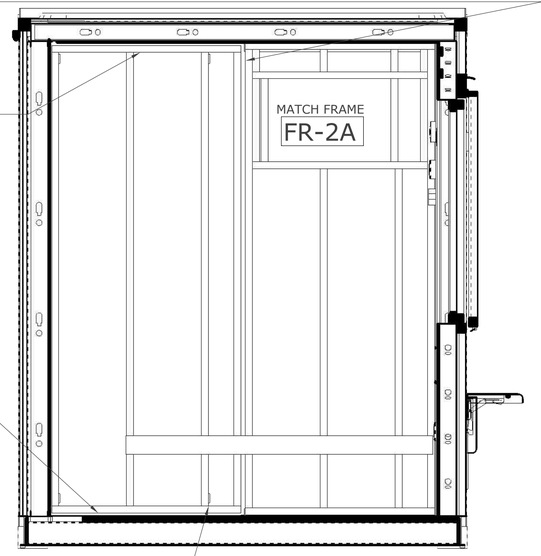
1 **END CAP WALL STUDS- INTERNAL VIEW**



2 **DEMISING WALL STUDS- INTERNAL BAR VIEW**

2" GAP BETWEEN DOORS STUD WALLS
(TRUSS CORE TAKES 1/2 OF TOLERANCE LEAVING 1" GAP)

HOLD STUDS OFF CEILING
FRAMING 1"(TRUSS CORE TAKES
1/2 OF TOLERANCE
LEAVING 1/2" GAP)



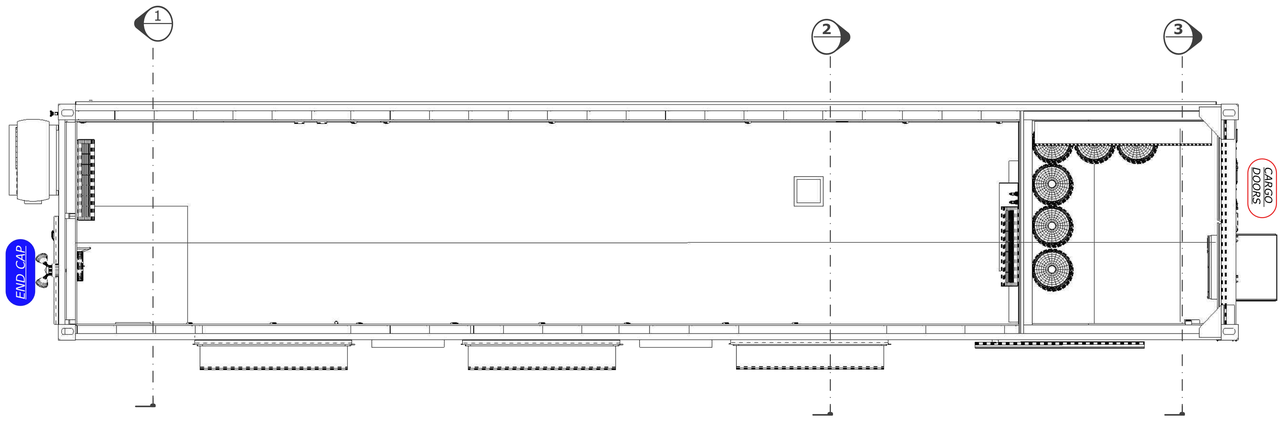
HOLD DOOR STUDS
OFF FLOOR 1"
(TRUSS CORE TAKES
1/2 OF TOLERANCE
LEAVING 1/2" GAP)

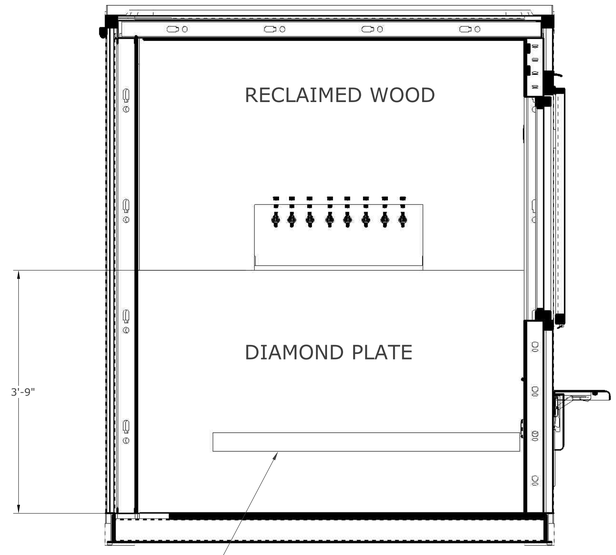
SWEEPS REQUIRED ON COOLER DOOR, 3 SIDES

3 **COOLER DOOR WALLS STUDS**

3/4 PLY WOOD

2X4 BLOCKING





DIAMOND PLATE TRUNK LINE COVER

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STUDS AND BLOCKING

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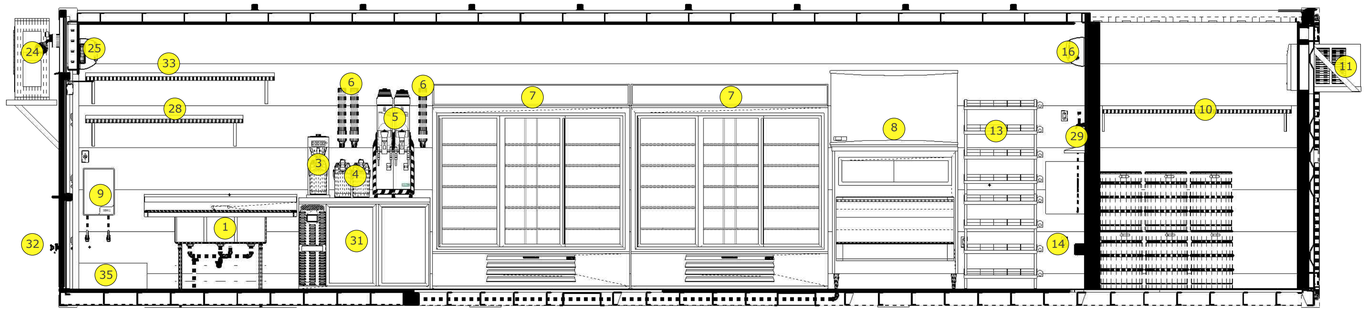
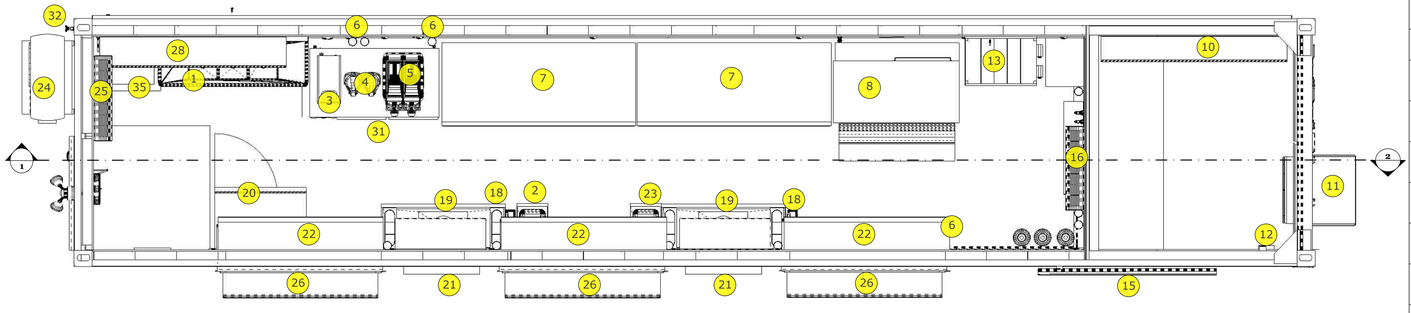
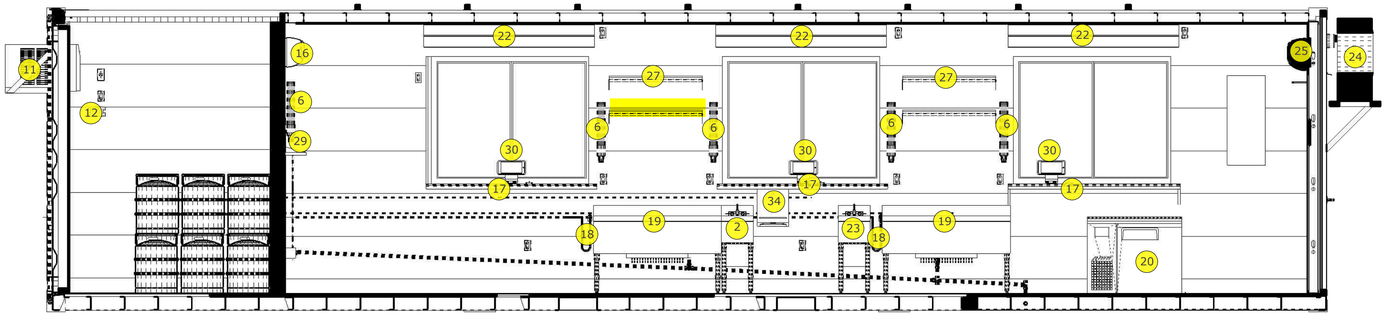


1 **BACK WALL MECHANICAL**



3 **PLAN VIEW MECHANICAL**



2 **FRONT WALL MECHANICAL**

ALL EQUIPMENT IS AS SPEC'D OR SIMILAR

NUMBER	QTY	ITEM	MANUFACTUER	MODEL #	VOLTS	WATTS	AMPS	PHASE	HERTZ	RPM/HP	PLUG	NEMA	NOTES
1	1	3 COMP SINK	ADVANCE TABCO	FC-3-1515									50L, 21W, 43H
2	1	HAND SINK	ADVANCE TABCO	CR-HS-12									12L, 16W, 12H. FAUCET INCLUDED
3	1	COFFEE MAKER	BUNN	38700.0010	120	1425	12	1	60		X	5-15P	23.6H, 9W, 18.5D
4	2	AIR POTS	BUNN	32125.0000									
5	1	SLUSH MACHINE	BUNN	34000.0501	120	1440	12	1	50/60		X	5-15P	16W, 25D, 42H. 4 GAL CAP
6	8	STAINLESS CUP DISPENSER	SAN JAMAR	C3400P									23.5L, 12-24OZ CUP
7	2	REFRIGERATED GLASS DOOR MERCHANDISER	BEVERAGE-AIR	MMR66HC-1-B	115		6.2	1	60	1/2	X	5-15P	75W, 32.12D, 78H. BLACK, SLIDING DOORS
8	1	ICE MACHINE	RENTAL										SUPPLIED BY CLIENT
9	1	HOT WATER HEATER	RHEEM	RTEX-18	240	18 KW	75						7 GAL GPM, (2) 40 AMP BREAKER.18.25H, 14.5W, 3.5D. 3/4NPT
10	1	6'X12" STAINLESS STEEL SHELF	ADVANCE TABCO	WS-12-60-16									REMOVE CENTER LEG ABOVE SERVICE WINDOW. SCREW BACKSPLASH INTO BLOCKING
11	1	AC WINDOW UNIT	LG	LW2516ER	230/208	2330/230	11.8/109	1			X		26W, 17-11/16"H, 28-1/8"D
12	1	COOLBOT PRO	COOLBOT	CC-S0HV-MOUT	120		1	1			X	5-15	6.5W, 3.5H 1.5D
13	1	SODA BAG RACK	RENTAL										SUPPLIED BY SODA VENDOR
14	1	CO2 TANK	RENTAL										SUPPLIED BY CLIENT
15	1	85" TV	SUPPLIED BY CLIENT		110						X	5-15	
16	1	MINI SPLIT HEAD 7K	LG	LMN079HVT									33W, 12H, 8.25D. POWERED FROM CONDENSER
17	2	5'X10" STAINLESS STEEL COUNTER (INTERNAL)	ADVANCE TABCO	WS-10-60									60LX12D
18	2	SODA GUN	SUPPLIED BY CLIENT										SUPPLIED BY SODA VENDOR
19	2	ICE WELL	ADVANCE TABCO	SLI-12-48									48W, 18D, 33H. 161LB CAP.
20	1	UNDER COUNTER COOLER	TURBO AIR	JUR-36S-N6	110		1.7	1	60	3/8	X	NEMA 5-15	35W, 24D, 33.75H
21	2	TV MENU BOARDS	SUPPLIED BY CLIENT		110						X	NEMA 5-15	52-58" TV
22	1	HEATED AIR CURTAIN	BERNER	CLC08-1072E	208	707@208V. 816@240V	1.7A PER CIRCUIT	1	60	1/5	X		2010 CFM. 2 CIRCUITS, 2 15A BREAKERS
23	1	DUMP SINK	ADVANCE TABCO	CR-HS-12									36W,10D
24	1	MINI SPLIT CONDENSER	LG	LMU183HV	208/230		20	1	60				18k BTU. 20A FUSE
25	1	MINI SPLIT HEAD 9K	LG	LSN090HSV5				1	60				33W, 12H, 8.25D. POWERED FROM CONDENSER
26	3	5' STAINLESS STEEL COUNTERTOPS	TEXAS METAL CONNECTION	CUSTOM									5'L, 1'D, 1.5"H.custom 16 Ga 304 Stainless #4 Brushed finish with 1 1/2" side profile, corners welded and ground smooth
27	2	3' ADJUSTABLE SHELVING RACK	TBD										
28	2	5'X 1' STAINLESS STEEL SHELF	ADVANCE TABCO	WS-12-60									
29	1	10 FAUCET BEER TAP HOUSE	FOXX EQUIPMENT	11Q09210									36L, 14H, 6.5"D. 10 FAUCET
30	3	POS	MINT/ TOAST		110						X		SUPPLIED BY CLIENT
31	1	UNDER BAR REFRIGERATOR	CONTINENTAL	BB50NGD	115		3.7	1	60	1/4 HP	X	5-15	50W, 24.5D, 34.75H. GLASS FRONT
32	1	HOSE BIB	WOODFORD	17CP-10-MH									
33	1	6' x 12" STAINLESS STEEL SHELF (ABOVE SINK)	ADVANCE TABCO	WS-12-72									72L, 12D
34	1	PAPER TOWEL DISPENSER	LAVEX	712PTD200									11W, 10H, 4D
35	1	MOP SINK	ADVANCE TABCO	9-OP-20-EC									21W, 25D, 10H
NUMBER	QTY	ITEM	MANUFACTUER	MODEL #	VOLTS	WATTS	AMPS	PHASE	HERTZ	RPM/HP	PLUG	NEMA	NOTES

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MECHANICAL

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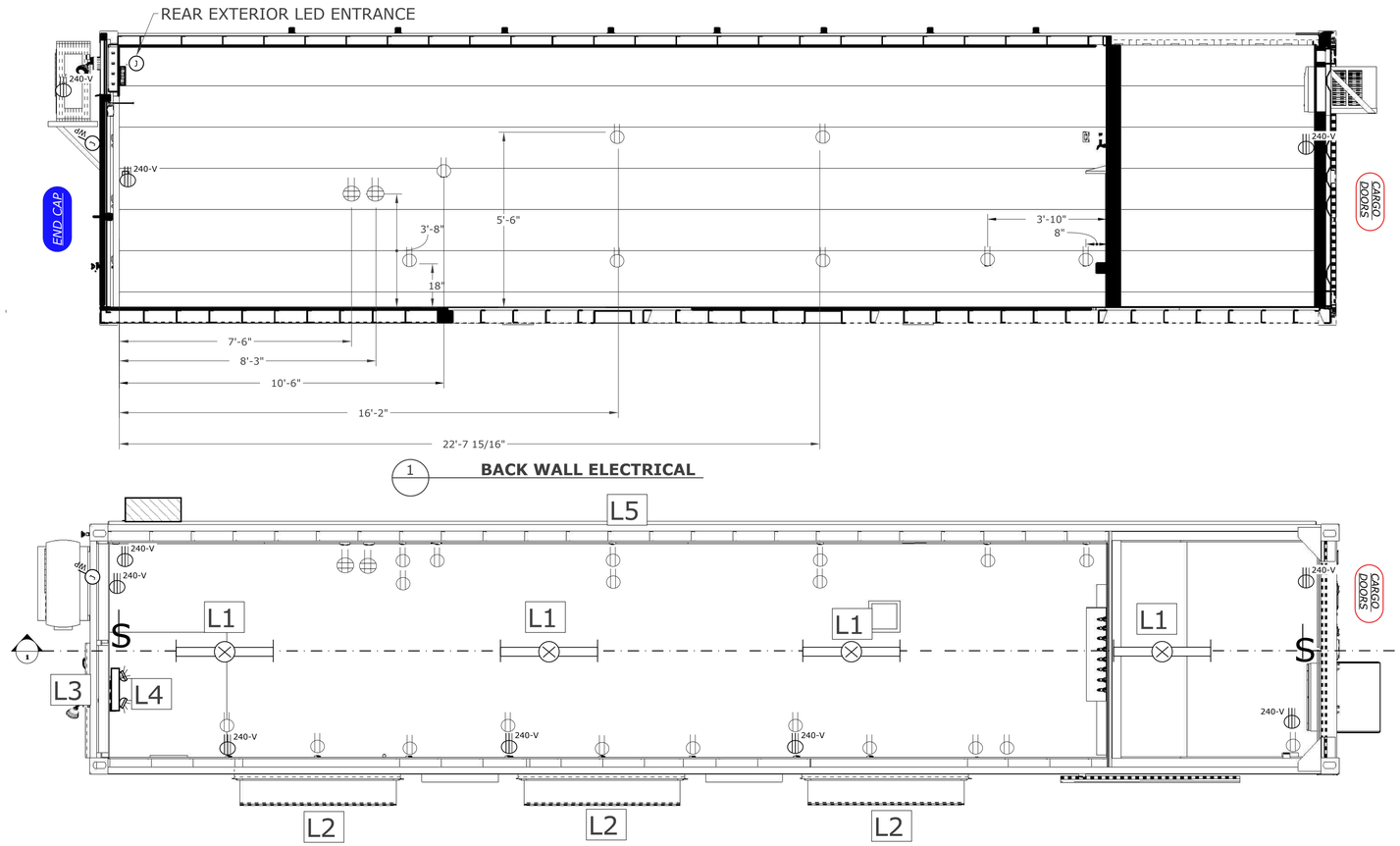
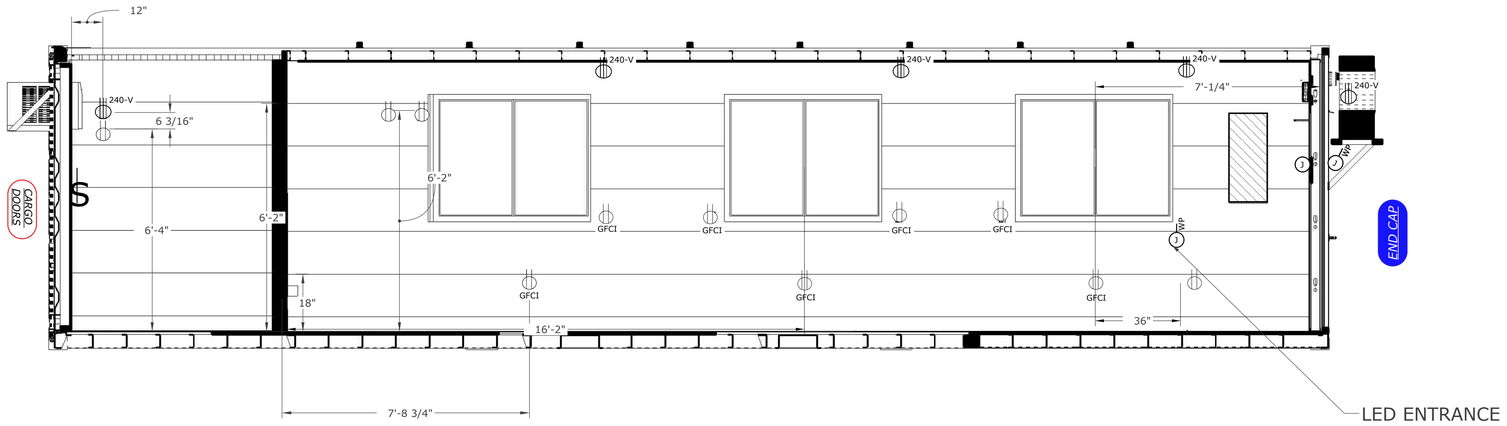
PROJECT NUMBER 2031

E | 10



1 **BACK WALL ELECTRICAL**

3 **PLAN VIEW ELECTRICAL**



2 **FRONT WALL ELECTRICAL**

ELECTRICAL PLAN

- S — LIGHT SWITCH
- CEILING MOUNTED CAGE LIGHT
- LED TUBE VAPOR LIGHT
- STANDARD 120V/ 15A ELECTRICAL RECEPTICAL
- GFCI — STANDARD 120V/ 20A GFCI RECEPTICAL
- WP — WEATHER PROOF 120v- OUTLET
- 120v- 4PLEX OUTLET
- 240V — 240-v OUTLET
- J / WP 240V — WEATHER PROOF 240v JUNCTION BOX
- DATA — CAT-5/6 DATA OUTLET
- EXIT SIGN WITH EMERGENCY LIGHTS
- 200 AMP DISTRIBUTION BOX

NUMBER	QNTY	LIGHT	SPECS	LENGTH
L1	1	VAPOR TIGHT LIGHT	120V	49.5
L2	3	UNDERCOUNTER LED	120V	6' PER
L3	1	FLOOD LIGHT	120V	
L4	1	EMERGENCY EXIT LIGHT		
L5	1	LED LIGHT STRIP		38'-6"

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3 **BACK WALL - EXTERIOR ELECTRICAL**

2 **PLAN VIEW- ROOF ELECTRICAL**

1 **FRONT WALL EXTERIOR ELECTRICAL**

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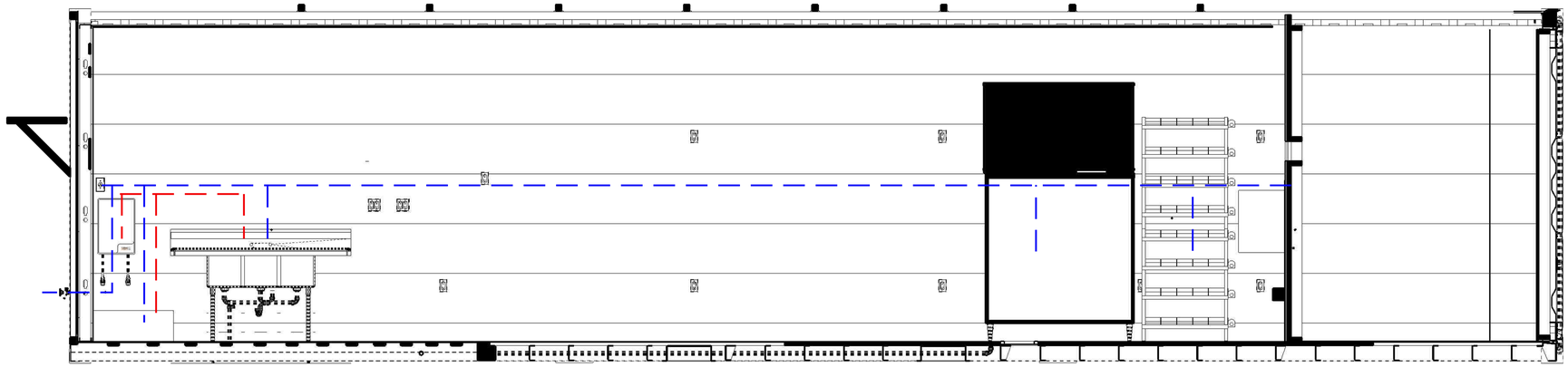
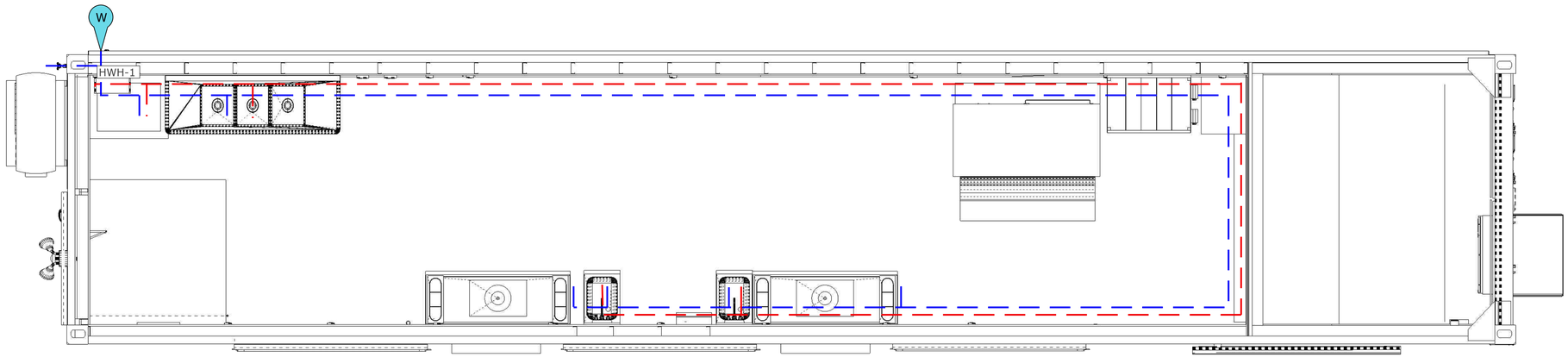
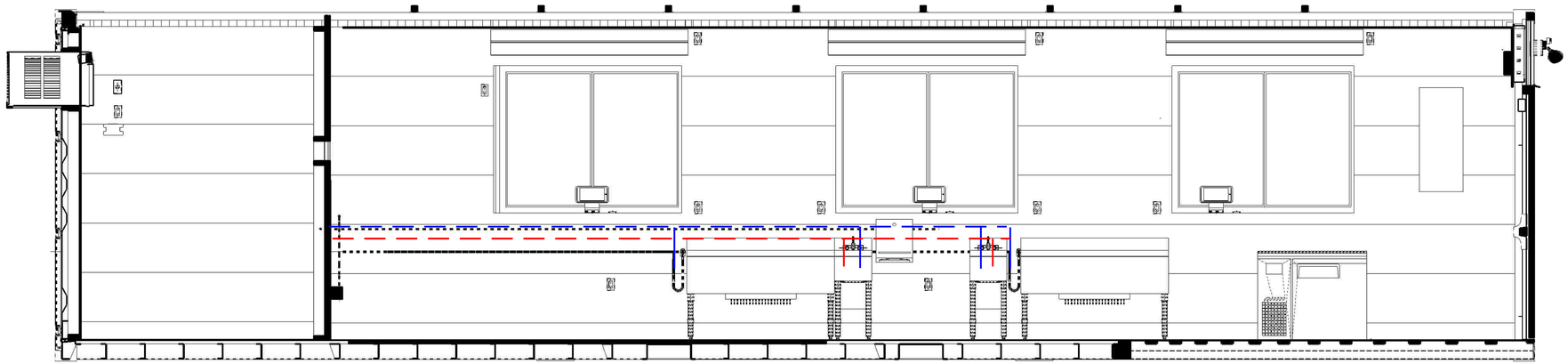


1 **PLUMBING FRESH WATER- BACK WALL**



2 **PLAN VIEW- PLUMBING FRESH WATER**



3 **PLUMBING FRESH WATER- FRONT WALL**

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PLUMBING- FRESH WATER

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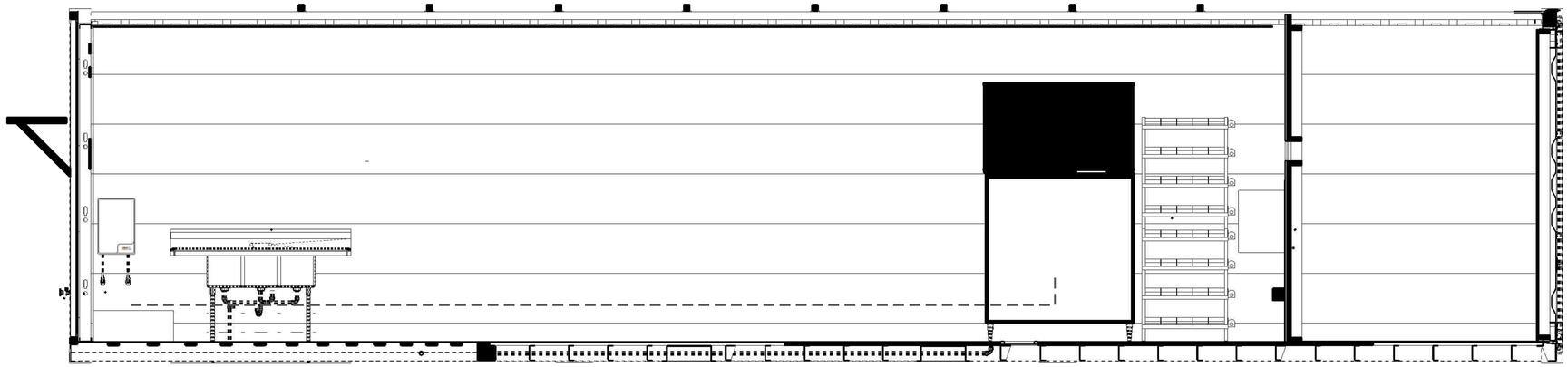
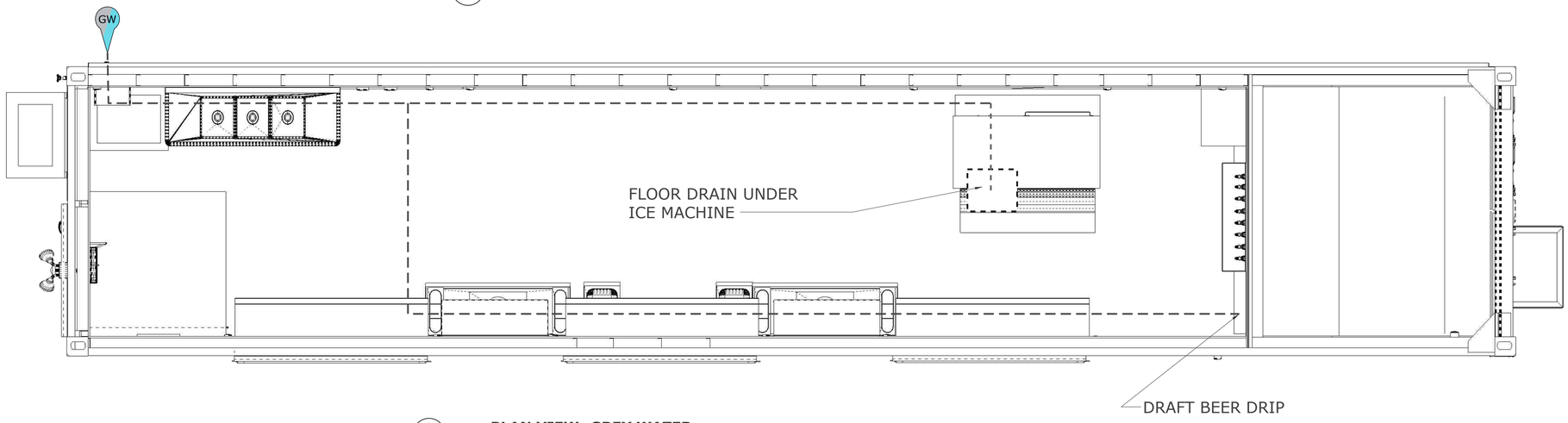
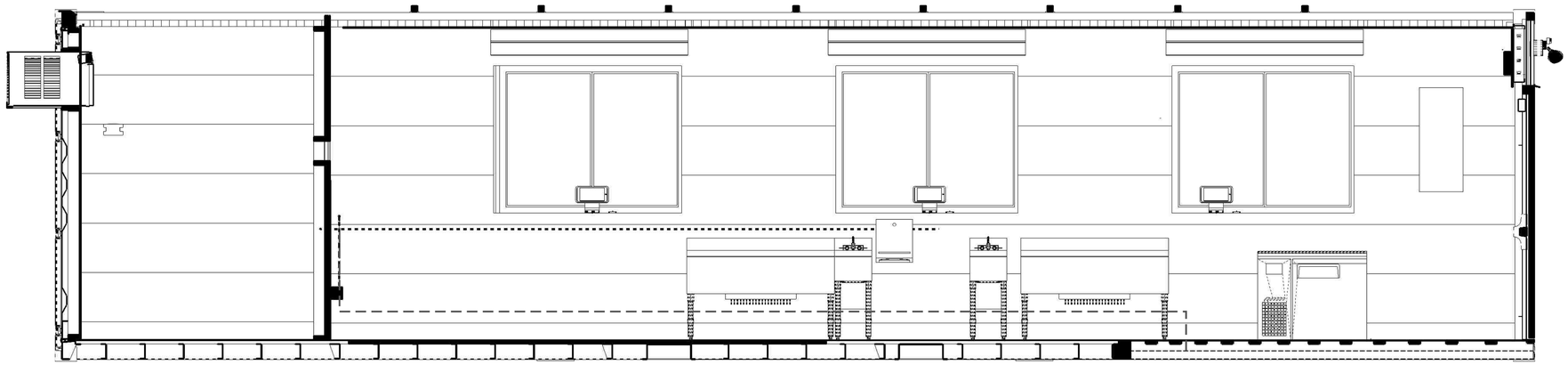


1 **BACK WALL GREY WATER**



2 **PLAN VIEW- GREY WATER**



3 **FRONT WALL - GREY WATER**

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PLUMBING- GREY WATER

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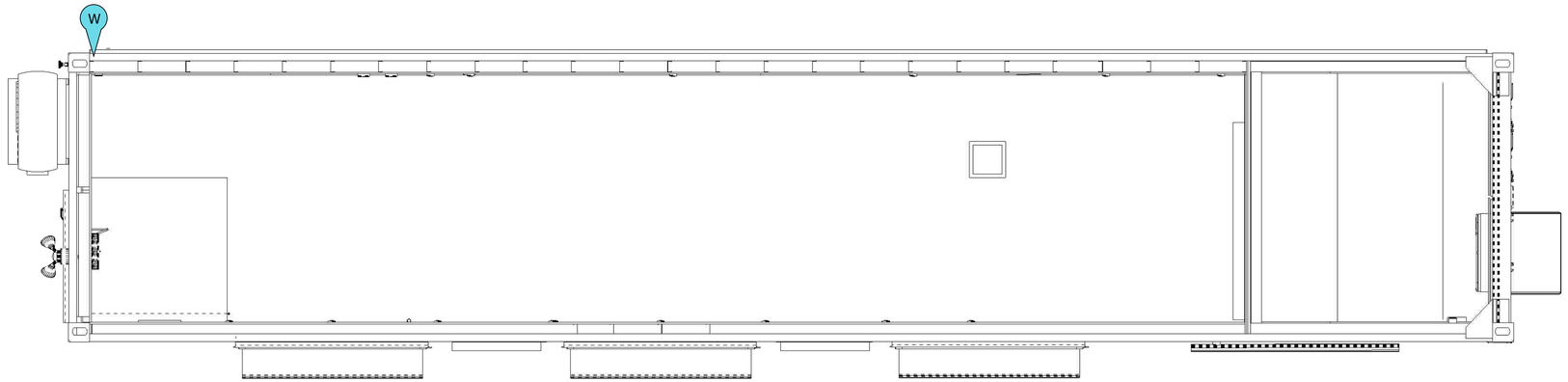
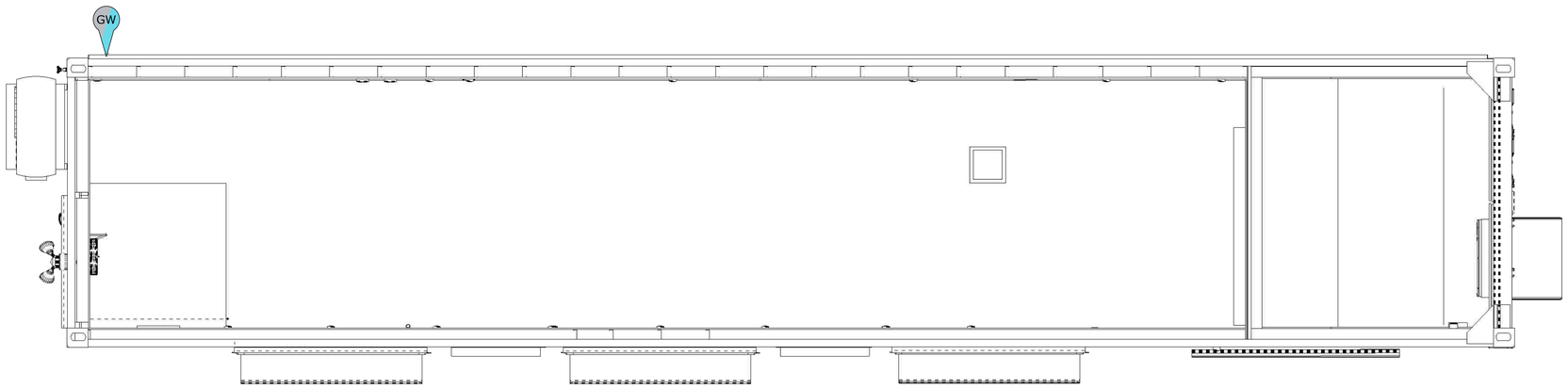


1 **PLUMBING FRESH WATER PLAN**



2 **PLUMBING WASTE PLAN**

PLUMBING NOTES

ABBREVIATION KEY	
HW	HOT WATER
CW	COLD WATER
HWH	HOT WATER HEATER
GW	GREASE WASTE
W	FRESH WATER INLET
IW	ICE WELL
MAU	MAKE-UP AIR UNIT
HS-1	HAND SINK
DS-1	DUMP SINK
3CS	3 COMP SINK
FS	FLOOR SINK
VTR	VENT TO ROOF
CM	COMMERCIAL MODULAR
DAA	DESIGN APPROVAL AGENCY (APPROVED BY THE HCD)
QAA	QUALITY ASSURANCE AGENCY (APPROVED BY THE HCD)
LEA	LOCAL ENFORCEMENT AGENCY

NOTE:
-UNIT IS **NOT** EQUIPPED WITH A WASTE HOLDING TANK. UNIT WILL BE CONNECTED TO EXISTING WASTE LINES

-UNIT IS **NOT** EQUIPPED WITH A FRESH WATER HOLDING TANK. UNIT WILL BE CONNECTED TO EXISTING FRESH WATER LINES

- HEAT PRODUCING APPLIANCES SHALL NOT BE CONVERTED FROM ONE FUEL TO ANOTHER UNLESS COVERTED IN ACCORANCE WITH THE TERMS OF ITS LISTING.

-EVERY APPLIANCE SHALL BE SECURED IN PLACE TO AVOID DISPLACEMENT AND MOVEMENT FROM VIBRATION AND ROAD SHOCK.

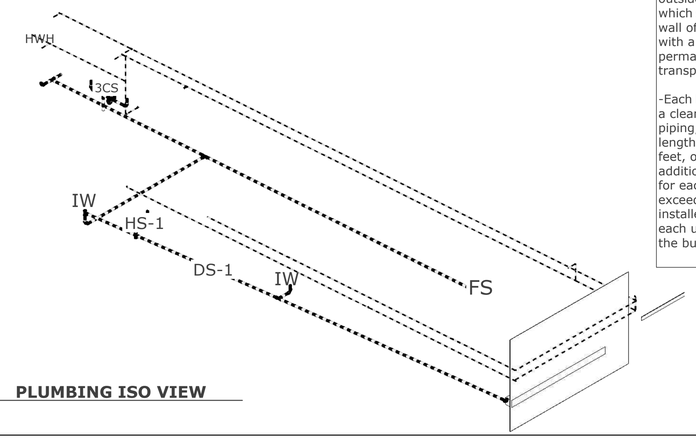
-AFTER APPLIANCES ARE CONNECTED, THE PIPING SYSTEM SALL BE PRESSURIZED TO NOT LESS THAN 10 INCHES OR MORE THAN 14 INCHES WATER COLUMN AND THE APPLIANE CONNECTIONS TESTED FOR LEAKAGE WITH SOAPY WATER OR BUBBLE SOLUTION.

-ALL EXTERIOR OPENINGS AROUND PIPING, TUBING, DUCTS, PLENUMS, CHIMNEYS AND VENTS SHALL BE SEALED TO RESIST THE ENTRANCE OF RODENTS.

-ALL ELECTRICAL EQUIPMENT INSTALLED IN COMBINATION WITH GAS EQUIPMENT SHALL BE LISTED FOR THE PURPOSE INTENDED. GAS PIPING SHALL NOT BE UNSED FOR AN ELECTRICAL GROUND.

-A commercial modular equipped with a water distribution system designed for connection to an outside source shall have a water-supply connection which shall terminate within 18 inches of the outside wall of the commercial modular and shall be equipped with a watertight cap or plug, which shall be permanently attached to the unit for use during transportation or movement.

-Each horizontal drainage pipe shall be provided with a cleanout at its upper terminal, and each run of piping, that is more than 100 feet in total developed length, shall be provided with a cleanout for each 100 feet, or fraction thereof, in length of such piping. An additional cleanout shall be provided in a drainage line for each aggregate horizontal change in direction exceeding 135 degrees (2.36 rad). A cleanout shall be installed above the fixture connection fitting, serving each urinal, regardless of the location of the urinal in the building.



3 **PLUMBING ISO VIEW**

MEP TO COMPLETE THIS PAGE

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PLUMBING- PLAN

DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

REVISIONS

REV. 2.6

PROJECT NUMBER 2031

STRUCTURAL GENERAL NOTES

DESIGN LOADS:

1. DESIGN LOADS: 2018 INTERNATIONAL BUILDING CODE WITH CITY OF LEE'S SUMMIT, MO CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA, ASCE 7-16
2. RISK CATEGORY: II
3. ROOFS:

A. ROOF DEAD LOAD	20 PSF
B. ROOF LIVE LOAD	20 PSF
C. GROUND SNOW LOAD, P_g	20 PSF
D. FLAT-ROOF SNOW LOAD, P_f	20 PSF
E. SNOW EXPOSURE FACTOR, C_e	1.0
F. SNOW IMPORTANCE FACTOR, I_s	1.0
G. THERMAL FACTOR, C_t	1.0

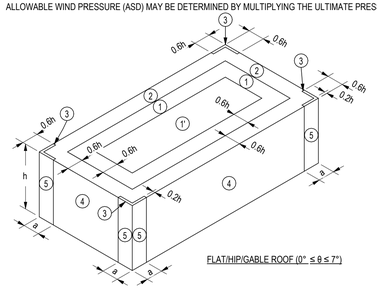
4. FLOOR LIVE LOADS:

OCCUPANCY OR USE	UNIFORMLY DISTRIBUTED (PSF)	CONCENTRATED LOAD (LBS)	LIVE LOAD REDUCTION
OFFICE	50	2,000	YES
STORAGE AREAS	125	N/A	NO
RETAIL STORES FIRST FLOOR	100	1,000	YES
MAINTENANCE ACCESS	40	300	YES

5. WIND:

A. ULTIMATE DESIGN WIND SPEED, V^{ULT}, (3-SECOND GUST)	107 MPH
B. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}, (3-SECOND GUST)	83 MPH
C. INTERNAL PRESSURE COEFFICIENT	0.18 (ENCLOSED)
D. WIND EXPOSURE	B
E. GROUND ELEVATION FACTOR	1.0

   F. COMPONENTS AND CLADDING ULTIMATE DESIGN WIND PRESSURES
      1. PRESSURES MAY BE REDUCED FOR EFFECTIVE WIND AREAS LARGER THAN 10 SQUARE FEET, BUT NOT BELOW 16 PSF.
      2. ALLOWABLE WIND PRESSURE (ASD) MAY BE DETERMINED BY MULTIPLYING THE ULTIMATE PRESSURE BY 0.6.



FLAT/HIP/GABLE ROOF (0° ≤ θ ≤ 7°)

COMPONENT AND CLADDING ULTIMATE WIND PRESSURE - FLAT ROOF		
ROOF (EFFECTIVE WIND AREA)	ROOF SURFACE PRESSURE (psf)	
	10 sf	100 sf
Negative Zone 1	-27.3	-21.3
Negative Zone 1'	-16.0	-16.0
Negative Zone 2	-36.0	-28.3
Negative Zone 3	-49.1	-33.7
Positive Zone 1 & 1'	16.0	16.0
Postive Zone 2 & 3	16.0	16.0
Overhang Zone 1 & 1'	-24.7	-23.2
Overhang Zone 2	-33.4	-23.1
Overhang Zone 3	-46.5	-28.5

WALL (EFFECTIVE WIND AREA)	WALL SURFACE PRESSURE (psf)	
	10 sf	100 sf
Negative Zone 4	-17.0	-16.0
Negative Zone 5	-20.9	-16.3
Positive Zone 4 & 5	16.0	16.0

6. SEISMIC:
   A. SPECTRAL RESPONSE ACCELERATION PARAMETERS
      1. SHORT PERIOD
         a. S_S 0.099 g
         b. S_{DS} 0.105 g
      2. ONE SECOND
         a. S_1 0.068 g
         b. S_{D1} 0.109 g
   B. SOILS SITE CLASS D
   C. SEISMIC IMPORTANCE FACTOR 1.0
   D. SEISMIC DESIGN CATEGORY B
   E. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)
      - STEEL ORDINARY CONCENTRICALLY BRACED FRAMES
   F. DESIGN BASE SHEAR(S)
      - 0.22 KIPS
   G. SEISMIC RESPONSE COEFFICIENT(S), C_S
      - 0.035
   H. RESPONSE MODIFICATION COEFFICIENT(S), R
      - 3.0
   I. ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE

FOUNDATION DESIGN:

1. REFER TO SOILS REPORT NO. 02135040 BY TERRACON CONSULTANTS, INC, DATED MAY 29, 2013.
2. GEOTECHNICAL ENGINEER SHALL VERIFY SOIL CONDITIONS AND TYPES DURING EXCAVATION AND PRIOR TO PLACEMENT OF FORMWORK OR CONCRETE.
3. MINIMUM FROST DEPTH SHALL BE 1'-0" BELOW EXTERIOR GRADE.

TURNED DOWN SLAB-ON-GRADE:

1. DESIGN OF TURNED-DOWN SLAB IS BASED ON
   A. MAXIMUM ALLOWABLE BEARING PRESSURE 2,500 PSF
2. PREPARE SUBGRADE PER GEOTECHNICAL REPORT RECOMMENDATIONS

REINFORCED CONCRETE:

1. DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
2. CONCRETE WORK SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE."
3. STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

INTENDED USE	EXPOSURE CLASS	f'c, PSI 28 DAYS	MAX W/CM RATIO	MAXIMUM AGGREGATE	SLUMP, INCHES (+/- 1")	AIR CONTENT PERCENT (+/- 1.5%)	CEMENT TYPE	ADMIXTURES / COMMENTS
TURNED-DOWN SLAB	F1-S0-W0-C1	4000	0.45	3/4" STONE	5	5%	I/II	

4. CONCRETE MIX TABLE NOTES:
   A. SLUMP VALUES INDICATED ARE SUGGESTED BASED ON USE AND TYPICAL PLACEMENT METHODS. CONTRACTOR MAY ADJUST SLUMP AS NECESSARY FOR FIELD CONDITIONS AND INSTALLATION METHOD USED PROVIDED REMAINING REQUIREMENTS ARE MET.
   B. AIR CONTENT:
      a. N/P: AIR ENTRAINING ADMIXTURES NOT PERMITTED, ENTRAPPED AIR ONLY
      b. N/A: NOT APPLICABLE, NO STRUCTURAL AIR CONTENT REQUIREMENTS
   C. GENERAL CONTRACTOR TO COORDINATE CONCRETE MOISTURE LEVEL AND ANTICIPATED MOISTURE MITIGATION PROCEDURES WITH CONCRETE SUPPLIER/MIX DESIGNER AND OTHER AFFECTED SUBCONTRACTORS (INCLUDING BUT NOT LIMITED TO FLOORING) TO ADDRESS ALL POTENTIAL SCHEDULE AND INSTALLATION CONFLICTS.
5. DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
6. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT BARS SHOWN TO BE FIELD-BENT SHALL BE ASTM A706, GRADE 60.
7. BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
8. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP BARS PER THE CONCRETE LAP SPLICE SCHEDULE.
9. AT CORNERS AND INTERSECTIONS, MAKE HORIZONTAL BARS CONTINUOUS OR PROVIDE MATCHING CORNER BARS FOR EACH LAYER OF REINFORCEMENT.
10. TRIM OPENINGS IN SLABS WITH (2) #4 FOR EACH LAYER OF REINFORCEMENT, FULLY DEVELOPED BY EXTENSION OR HOOK.
11. IN CONTINUOUS MEMBERS, SPLICE TOP BARS AT MID-SPAN AND SPLICE BOTTOM BARS OVER SUPPORTS.
12. FORM INTERMITTENT SHEAR KEYS AT ALL CONSTRUCTION JOINTS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
13. EXCEPT AS NOTED ON THE DRAWINGS, CONCRETE PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
    A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
    B. EXPOSED TO EARTH OR WEATHER:
       1. #6 THROUGH #18 BARS 2"
       2. #5 BAR, W31 OR D31 WIRE, AND SMALLER 1-1/2"
    C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
       1. SLABS: #11 BARS AND SMALLER 3/4"
14. ANCHOR BOLTS AND RODS FOR BEAM AND COLUMN-BEARING PLATES SHALL BE PLACED WITH SETTING TEMPLATES.

POST-INSTALLED ANCHORS

1. ALL CAST-IN-PLACE ANCHORS DESIGNED IN ACCORDANCE WITH ACI 318.
2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. EXISTING REINFORCING BARS SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
4. ALL ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER 'S PRINTED INSTALLATION INFORMATION (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MPII.
5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER; REGISTRATION MUST BE IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER 'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO THE ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE EOR/ SPECIAL INSPECTOR AS REQUESTED.
7. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318-11 D 9.2.2, ACI 318-14 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D 2.2, ACI 318-14 17.1.2)
9. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED IN DRY HOLES THAT HAVE BEEN DRILLED, CLEANED, AND PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER 'S PRINTED INSTALLATION INFORMATION AND THE RESPECTIVE ICC-ES EVALUATION REPORTS.
10. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC TABLE 1705.3 NOTE B).

CONCRETE POST-INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD2 (ICC ESR-2502)	KWIK BOLT TZ2 (ICC ESR-4266)	STRONG-BOLT 2 (ICC ESR-3037)
SCREW	SCREW-BOLT+ (ICC ESR-3889)	KWIK HUS-EZ (ICC ESR-3027)	TITEN HD (ICC ESR-2713)
ADHESIVE	AC200+ (ICC ESR-4027)	HIT HY-200 V3 (ICC ESR-4868)	AT-XP (UES ER-263)

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. STRUCTURAL STEEL WIDE FLANGE BEAMS AND WTS SHALL CONFORM TO ASTM A992, 50 KSI YIELD.
3. OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
4. HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 50 KSI YIELD.
5. HSS ROUND SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 46 KSI YIELD.
6. PIPE SHAPES SHALL CONFORM TO ASTM A53, GRADE B, 35 KSI YIELD.
7. EXCEPT AS NOTED, FRAMED BEAM CONNECTIONS SHALL BE BEARING-TYPE WITH 3/4" DIAMETER, SNUG TIGHT, ASTM F3125 BOLTS, DETAILED IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE "STEEL CONSTRUCTION MANUAL" BY THE AISC. INSTALL BOLTS IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
8. ALL BEAMS SHALL HAVE FULL DEPTH WEB STIFFENERS EACH SIDE OF WEBS ABOVE AND BELOW COLUMNS.
9. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE (36, 55 WITH WELDABILITY SUPPLEMENT S1, AND/OR 105) AS NOTED ON THE STRUCTURAL DRAWINGS.
10. HEADED ANCHOR STUDS (HAS) SHALL CONFORM TO ASTM A108 AND SHALL BE CONNECTED TO STRUCTURAL STEEL WITH EQUIPMENT APPROVED BY THE STUD MANUFACTURER ACCORDING TO THE STUD MANUFACTURER'S RECOMMENDATIONS.
11. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE, THE AMERICAN WELDING SOCIETY (AWS) D1.1: STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF WELD E70 ELECTRODES. WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE.
12. GROUT BENEATH COLUMN BASE AND BEAM BEARING PLATES SHALL HAVE A MINIMUM 28-DAY, COMPRESSIVE STRENGTH OF 7,500 PSI AND SHALL BE NON-SHRINK, NON-METALLIC, AND TESTED IN ACCORDANCE WITH ASTM C1107.

CORROSION CONTROL:

1. ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123.
2. FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR ASTM B695 CLASS 50 (A490 BOLTS SHALL NOT BE HOT DIPPED GALVANIZED). STAINLESS STEEL FASTENERS AND HARDWARE MAY ALSO BE USED.
3. ALL FIELD CUT OR DAMAGED SURFACES, FIELD WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS AS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPAIRED WITH (2) COATS OF A 95% ZINC RICH PAINT PER ASTM A780 (ZRC PREFERRED).

SHOP DRAWINGS:

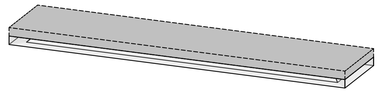
1. THE STRUCTURAL DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF JVA'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY JVA, A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF JVA'S NAME AND LOGO FROM ALL SHEETS SO USED.
2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE STRUCTURAL DRAWINGS OR PROJECT SPECIFICATIONS.
3. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED (AFTER HAVING BEEN CHECKED) BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR STRUCTURAL ENGINEER'S REVIEW; SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW.
4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR:
   A. CONCRETE MIX DESIGNS
   B. CONCRETE REINFORCING STEEL
   C. INTERMODAL SHIPPING CONTAINERS
   D. STRUCTURAL STEEL
   E. CONTROL JOINT LAYOUT
   F. EMBED PLATE LAYOUT WITH DIMENSIONS
5. SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE STRUCTURAL ENGINEER.
6. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "REQUEST FOR CHANGE IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, CHANGES MADE BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING THE CHANGE.

INTERMODAL SHIPPING CONTAINERS:

1. INTERMODAL SHIPPING CONTAINERS SHALL BEAR AN EXISTING DATA PLATE CONTAINING THE FOLLOWING INFORMATION AS REQUIRED BY ISO 6346 AND VERIFIED BY AN APPROVED AGENCY. A REPORT OF THE VERIFICATION PROCESS AND FINDINGS SHALL BE PROVIDED TO THE BUILDING OWNER.
   A. MANUFACTURER'S NAME OR IDENTIFICATION NUMBER
   B. DATE MANUFACTURED
   C. SAFETY APPROVAL NUMBER
   D. IDENTIFICATION NUMBER
   E. MAXIMUM OPERATING GROSS MASS OR WEIGHT
   F. ALLOWABLE SLACKING LOAD FOR 1.8G
   G. TRANSVERSE RACKING TEST FORCE
   H. VALID MAINTENANCE EXAMINATION DATE
2. WOOD STRUCTURAL FLOORS OF INTERMODAL SHIPPING CONTAINERS SHALL BE PROTECTED FROM DECAY AND TERMITES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF IBC SECTION 2304.12.

LETTERS OF CONSTRUCTION COMPLIANCE :

1. THE GENERAL CONTRACTOR SHALL DETERMINE FROM THE LOCAL BUILDING AUTHORITY, AT THE TIME THE BUILDING PERMIT IS OBTAINED, WHETHER ANY LETTERS OF CONSTRUCTION COMPLIANCE WILL BE REQUESTED FROM THE STRUCTURAL ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ALL SUCH REQUIREMENTS IN WRITING PRIOR TO THE START OF CONSTRUCTION.
3. THREE-DAY ADVANCE NOTICE SHALL BE GIVEN WHEN REQUESTING SITE VISITS NECESSARY AS THE BASIS FOR THE COMPLIANCE LETTER.
4. THE GENERAL CONTRACTOR SHALL PROVIDE COPIES OF ALL THIRD-PARTY TESTING AND INSPECTION REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER A MINIMUM OF ONE WEEK PRIOR TO THE DATE THAT THE COMPLIANCE LETTER IS NEEDED.



3D SCHEMATIC VIEW

SPECIAL INSPECTIONS:

1. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR, RETAINED BY THE OWNER, IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF IBC CHAPTER 17:
   A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
      1. 1704.2 SPECIAL INSPECTIONS AND TESTS
      2. 1704.3 STATEMENT OF SPECIAL INSPECTIONS
   B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
      1. 1705.1.1 SPECIAL CASES
      2. 1705.2 STEEL CONSTRUCTION
      3. 1705.3 CONCRETE CONSTRUCTION
      4. 1705.5 WOOD CONSTRUCTION
      5. 1705.6 SOILS
      6. SECTION 1705.13 SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE AND THE FOLLOWING SUB-SECTIONS:
         a. 1705.13.1 STRUCTURAL STEEL
      7. SECTION 1705.14 STRUCTURAL TESTING FOR SEISMIC RESISTANCE AND THE FOLLOWING SUB SECTIONS:
         a. 1705.14.1 STRUCTURAL STEEL
   C. SECTION 1706 DESIGN STRENGTHS OF MATERIALS
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE APPROVED INSPECTOR MUST BE INDEPENDENT FROM THE CONTRACTOR RESPONSIBLE FOR THE WORK BEING INSPECTED.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO INSPECT AND/OR TEST THE WORK OUTLINED ABOVE AND WITHIN THE STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
5. PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD.
6. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN 10 DAYS OF THE FINAL SPECIAL INSPECTION STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON A MAIN OR SEISMIC-FORCE-RESISTING SYSTEM PER SECTION 1704.4. THE STATEMENT SHALL ACKNOWLEDGE THE AWARENESS OF THE SPECIAL LISTED REQUIREMENTS OF DESIGNATED SEISMIC SYSTEM OR A OR SEISMIC-RESISTING COMPONENT IN THE STATEMENT OF SPECIAL INSPECTIONS PER SECTION 1705.
8. EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1704.6. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

CONCRETE SPECIAL INSPECTION (IBC 1705.3 & 1705.12.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
Reinforcing steel	ACI-CCI ICC-RCSI	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Cast-in bolts & embeds	ACI-CCI ICC-RCSI	Periodic	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used.
Post-installed anchors or dowels	ACI-CCI ICC-RCSI	Periodic	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. Horizontally or upwardly inclined anchors that resist sustained tension loads require continuous inspection and approved installers.
Use of required mix design	ACI-CCI ICC-RCSI	Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3, 26.4.4; and IBC 1904.1, 1904.2, 1908.2, 1908.3.
Concrete sampling for strength tests, slump, air content, and temperature	ACI-CFTT ACI-SIT	Continuous	
Concrete placement	ACI-CCI ICC-RCSI	Continuous	
Curing temperature and techniques	ACI-CCI ICC-RCSI	Periodic	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 26.4.7-26.4.9). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Strength verification	ACI-STT	Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork		Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

SOIL SPECIAL INSPECTION (IBC 1705.6)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
SHALLOW FOUNDATIONS			(IBC 1705.6)
Verify subgrade	PE/GE	Periodic	Prior to placement of concrete inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.
CONTROLLED STRUCTURAL FILL			(IBC 1705.6)
Excavations	PE/GE	Periodic	Verify excavations extend to proper depth and material prior to placement of compacted fill or concrete.
Fill materials	PE/GE	Periodic	Perform classification and testing of compacted fill materials. Check for proper classifications and gradations at each lift and not less than once for each 10,000ft² of surface area.
Placement and compaction		Continuous	Verify proper materials, densities and lift thicknesses during placement and compaction.
Subgrade preparation	PE/GE	Periodic	Verify that subgrade has been appropriately prepared prior to placing compacted fill.
Density		Continuous	Test density of each lift by nuclear methods (ASTM D2922).

SCHEDULE OF INSPECTION AND TESTING AGENCIES

SPECIAL INSPECTION AGENCIES	FIRM	ADDRESS, TELEPHONE, E-MAIL
Special Inspection Coordinator	TBD	
Inspector	TBD	
Inspector	TBD	
Testing Agency	TBD	
Testing Agency	TBD	
Continuous	TBD	
Other	TBD	

STEEL SPECIAL INSPECTION (IBC 1705.2, 1705.12.3 & 1705.13.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
FABRICATORS			(IBC 1704.2.5 & 1705.11)
In-plant Inspection	AWS/AISC-SSI ICC-SWSI		Required unless Fabricator is approved and follows procedures of 1704.2.5.1
PRIOR TO WELDING			(TABLE N5.4-1, AISC 360-16)
Verify welding procedures (WPS) and consumable certificates	AWS-CWI ASNT	Continuous	
Material identification	AWS-CWI ASNT	Periodic	Verify type and grade of material.
Welder identification	AWS-CWI ASNT	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Fit-up CJP groove welds of HSS joints without backing	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, and tacking
Access holes	AWS-CWI ASNT	Periodic	Verify configuration and finish.
Fit-up of fillet welds	AWS-CWI ASNT	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
DURING WELDING			(TABLE N5.4-2, AISC 360-16)
Use of qualified welders	AWS-CWI ASNT	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	AWS-CWI ASNT	Periodic	Verify packaging and exposure control.
Cracked tack welds	AWS-CWI ASNT	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	AWS-CWI ASNT	Periodic	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	AWS-CWI ASNT	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	AWS-CWI ASNT	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
AFTER WELDING			(TABLE N5.4-3, AISC 360-10)
Welds cleaned	AWS-CWI ASNT	Periodic	Verify that welds have been properly cleaned.
Size, length, and location of welds	AWS-CWI ASNT	Continuous	
Welds meet visual acceptance criteria	AWS-CWI ASNT	Continuous	
Arc strikes	AWS-CWI ASNT	Continuous	
k-area	AWS-CWI ASNT	Continuous	
Weld access holes in heavy shapes	AWS-CWI ASNT	Continuous	
Backing & weld tabs removed	AWS-CWI ASNT	Continuous	
Repair activities	AWS-CWI ASNT	Continuous	
Document acceptance or rejection of welded joint/member	AWS-CWI ASNT	Continuous	
AFTER BOLTING			(TABLE N5.6-3, AISC 360-16)
Document acceptance or rejection of bolted connections	AWS/AISC-SSI ICC-SWSI	Continuous	
OTHER STEEL INSPECTIONS			(SECTION N5.7, AISC 360-16; Tables J8-1 & J10-1, AISC 341-16)
Structural steel details	PE/SE	Periodic	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	ACI-CCI	Periodic	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.

STATEMENT OF SPECIAL INSPECTIONS

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines:

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

The inspectors and testing agencies shall be engaged by the Owner or the Owner 's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.
Interim Report Frequency: Within 24 hours of inspection, unless indicated otherwise.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1 & 2
ACI-STT	Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III

International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector

Quality Assurance Plans

Quality Assurance for Seismic Resistance
Seismic Design Category: B
Quality Assurance Plan Required: NO

Statement of Responsibility
Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

Prepared by: **Owner's Authorization:**

EOR NAME / Signature Date Signature Date

Building Official's Acceptance:

Signature Date

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Denver, CO 80202 303.444.1951
www.jvajva.com
Boulder • Fort Collins • Winter Park
Glenwood Springs • Denver

REVISIONS
NO. DATE DESCRIPTION

STATE OF MISSOURI
JASON M. JEFFRIES
NUMBER PE-2008019553
PROFESSIONAL ENGINEER
03.24.2023

DESIGNED BY:	SDC,ALK
DRAWN BY:	ALK
CHECKED BY:	SDC
JOB #:	21823
DATE:	03/24/2023

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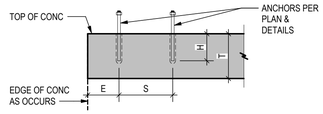
PARAGON STAR
10201 VIEW HIGH DR. LEE'S SUMMIT, MO 64081

GENERAL NOTES & SPECIAL INSPECTIONS

CONSTRUCTION SET

SHEET NO.
S-001

ADHESIVE ANCHOR IN 2500 PSI MIN & 21 DAY AGE MIN CONCRETE							
ADHESIVE TYPE	ANCHOR		PILOT HOLE	MIN EMBED UNO H	MIN EDGE DISTANCE E	MIN SPACING S	MIN CONC THICKNESS T
	THRD ROD	REBAR					
SIMPSON AT-XP (UES ER-263)	3/8"Ø	#3	1/2"Ø	3"	1 3/4"	3"	5"
	1/2"Ø	#4	5/8"Ø	4"	1 3/4"	3"	6 1/2"
	5/8"Ø	#5	3/4"Ø	5"	1 3/4"	3"	8 1/4"
	3/4"Ø	#6	7/8"Ø	6"	1 3/4"	3"	9 1/4"
	7/8"Ø	#7	1"Ø	7"	1 3/4"	3"	11 1/2"
	1"Ø	#8	1 1/8"Ø	8"	1 3/4"	3"	13"
HILTI HIT-HY 200 (ICC-ESR 3187)	3/8"Ø	#3	1/2"Ø	3"	1 3/4"	1 7/8"	4 1/4"
	1/2"Ø	#4	5/8"Ø	4"	1 3/4"	2 1/2"	5 1/4"
	5/8"Ø	#5	3/4"Ø	5"	2"	3 1/8"	6 1/4"
	3/4"Ø	#6	7/8"Ø	6"	2 1/8"	3 3/4"	7 1/2"
	7/8"Ø	#7	1"Ø	7"	2 1/4"	4 3/8"	8 3/4"
	1"Ø	#8	1 1/8"Ø	8"	2 3/4"	5"	10"



NOTES:

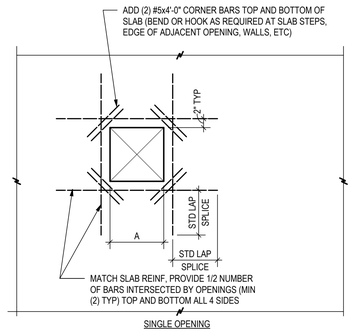
1. INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE WITH SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED WITH ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES WITH HIGH STRENGTH GROUT.
4. SPECIAL INSPECTION IS REQUIRED PER IBC SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR MUST BE ON THE JOB SITE PERIODICALLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION.

7 S-101 POST INSTALLED ANCHOR DETAIL

3/4" = 1'-0"

TYPICAL CONCRETE REINFORCING LAP & EMBEDMENT LENGTHS (UNO)							
		f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI	
BAR SIZE	TYPE	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR
#4	EMBED	29	22	25	19	22	17
	LAP	37	29	32	25	29	22
#5	EMBED	36	28	31	24	28	22
	LAP	47	36	40	31	36	28
#6	EMBED	43	33	37	29	33	26
	LAP	56	43	48	37	43	33

NOTES:
1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW BAR
2. TABULATED VALUES ARE BASED ON GRADE 60 NON-EPOXY-COATED REINFORCING BARS AND NORMAL WEIGHT CONCRETE
3. VALUES ARE IN INCHES

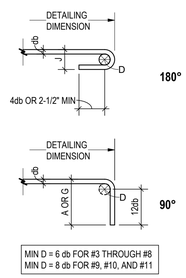


NOTES:
1. COORDINATE OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS
2. MAXIMUM DIMENSION "A" SHALL BE 1'-0", FOR "A" DIMENSION GREATER THAN 1'-0", CONTACT THE STRUCTURAL ENGINEER FOR ADDITIONAL REQUIREMENTS
3. OPENINGS 6" AND SMALLER DO NOT REQUIRE ADDITIONAL REINFORCEMENT
4. THIS DETAIL SHOWS TYPICAL CONDITIONS. VERIFY REINFORCING STEEL PLACEMENT WITH ENGINEER FOR SPECIAL CASES
5. PROVIDE REINFORCEMENT AS SHOWN FOR SQUARE, RECTANGULAR, OR ROUND OPENINGS

8 S-101 TYP CONC TRIM BARS AT SLAB OPNGS 24" OR LESS

3/4" = 1'-0"

STANDARD HOOKS

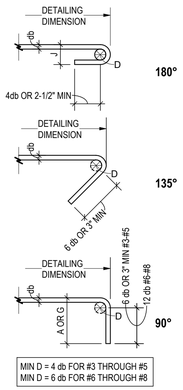


MIN D = 6 db FOR #3 THROUGH #8
MIN D = 8 db FOR #9, #10, AND #11

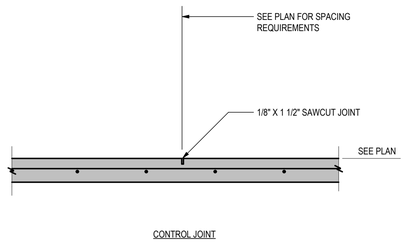
	STANDARD HOOKS		STIRRUPS & TIE HOOKS	
BAR SIZE	180° (J)	90° (A OR G)	180° (J)	90° (A OR G)
#3	3"	6"	2 1/4"	4 1/8"
#4	4"	8"	3"	4 1/2"
#5	5"	10"	3 3/4"	5 5/8"
#6	6"	1'-0	6"	1'-0

ALL GRADES OF STEEL
D = FINISHED INSIDE BEND DIAMETER
db = NOMINAL BAR DIAMETER

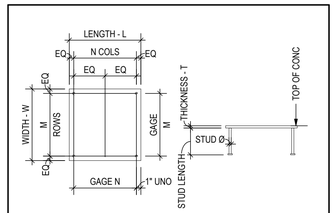
STIRRUP & TIE HOOKS



MIN D = 4 db FOR #3 THROUGH #5
MIN D = 6 db FOR #6 THROUGH #8



NOTE:
SEE SLAB ON GRADE BOX NOTE ON FOUNDATION PLAN FOR SLAB THICKNESS AND REINFORCING. REFERENCE GENERAL NOTES FOR REQUIRED CONCRETE STRENGTH



BEARING PLATE SCHEDULE					
BEARING PLATE		HEADED ANCHOR STUDS			
TYPE	T x W x L	HAS	M ROWS	N COLS	GAGE MxN
BP-1	PL1/2"x16"x1'-4"	(4)-3/4"Øx9"	2	2	12" x 12"

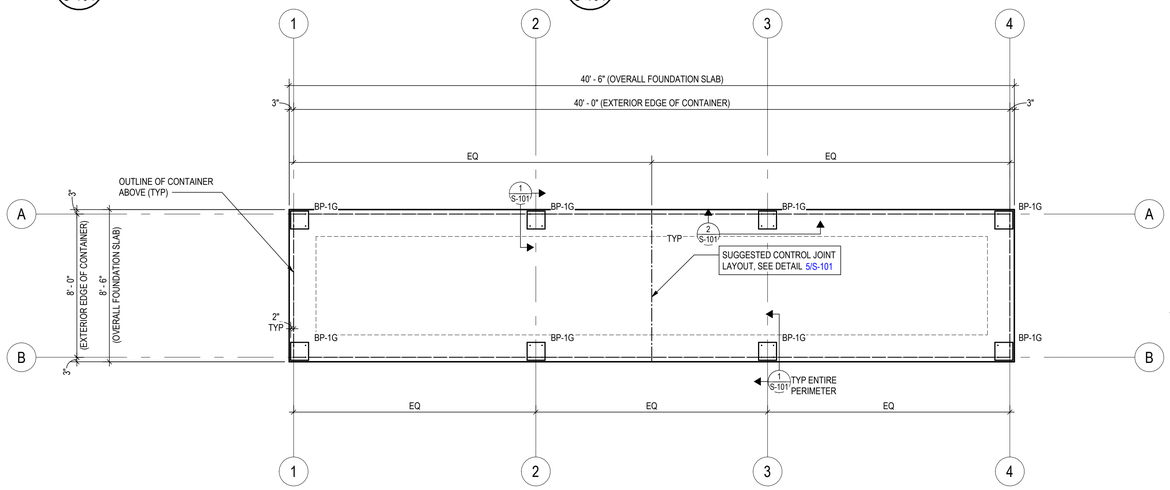
* UNLESS NOTED OTHERWISE ALL EMBEDDED PLATES SHALL BE PLACED WITH EXPOSED FACE FLUSH TO TOP OF CONCRETE.

3 S-101 TYP CONC EMBED & LAP

3/4" = 1'-0"

4 S-101 TYP CONC HOOKS & STIRRUPS

3/4" = 1'-0"



5 S-101 TYP JOINT AT SLAB ON GRADE

3/4" = 1'-0"

6 S-101 TYP EMBED PL DETAIL & SCHEDULE

3/4" = 1'-0"

EMBED SETTING PLAN

1/4" = 1'-0"

NORTH

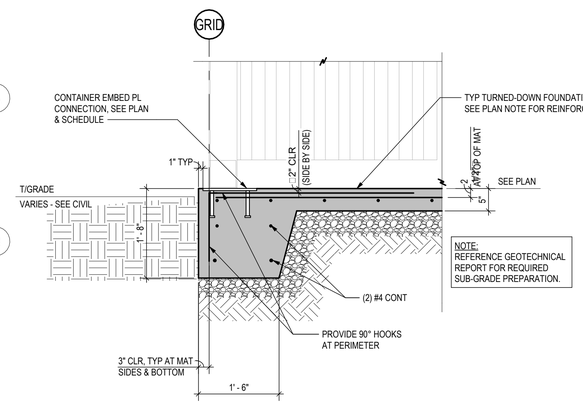
0 1' 2' 4' 8'

- USGS ELEVATION 268.25' = 100'-0", TOP OF FOUNDATION MAT SLAB

EMBED NOTES:
1. ALL EMBEDS SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
2. MAXIMUM ACCEPTABLE GLOBAL EMBED ELEVATION DEVIATION = 1/4".
3. EMBED SHOP DRAWINGS, INCLUDING PLACEMENT PLAN WITH DIMENSIONS, SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACING CONCRETE.
4. AN AS-BUILT EMBED SURVEY (PLAN DIMENSIONS AND ELEVATIONS) SHALL BE PROVIDED FOR THE CONTAINER INSTALLER'S USE.

TYPICAL FOUNDATION SLAB:
5" THICK CONCRETE ON SUBGRADE PREPARED PER GEOTECHNICAL REPORT RECOMMENDATIONS; REFERENCE ARCHITECTURAL DRAWINGS FOR VAPOR BARRIER AND INSULATION. REINFORCE SLAB W/ #4 @ 18" EACH WAY, MID-DEPTH. PROVIDE SAWCUT OR FORMED CONTROL JOINTS, PER 5/S-101. SLAB FLATNESS CRITERIA: FF = 20, FL = 15.

SLAB BLOCKOUTS:
SEE ARCHITECTURAL AND MEP DRAWINGS FOR SLAB BLOCKOUT LOCATIONS. MAXIMUM BLOCKOUT SIZE = 12"x12" (OR 12"Ø). ADJUST REINFORCING POSITION AS REQUIRED. DO NOT CUT & REMOVE REINFORCING. SEE 8/S-101

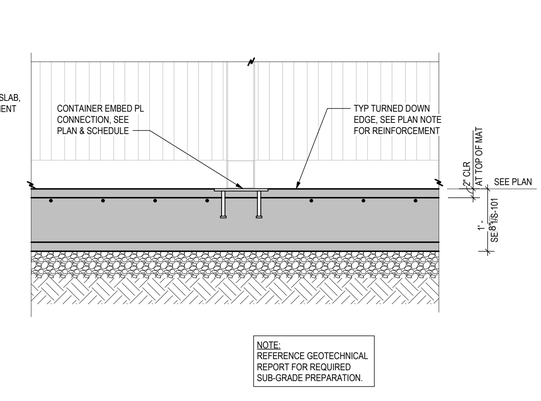


NOTE:
REFERENCE GEOTECHNICAL REPORT FOR REQUIRED SUB-GRADE PREPARATION.

1 S-101 TYPICAL TURN-DOWN AND EMBED

3/4" = 1'-0"

0 6" 1' 2' 3'



NOTE:
REFERENCE GEOTECHNICAL REPORT FOR REQUIRED SUB-GRADE PREPARATION.

2 S-101 TYPICAL INTERIOR EMBED

3/4" = 1'-0"

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REVISIONS

NO.	DATE	DESCRIPTION

STATE OF MISSOURI
JASON M. JEFFRIES
NUMBER PE-2009019553
PROFESSIONAL ENGINEER
03.24.2023

DESIGNED BY:	SDC
DRAWN BY:	ALK
CHECKED BY:	SDC
JOB #:	21823
DATE:	03/24/2023

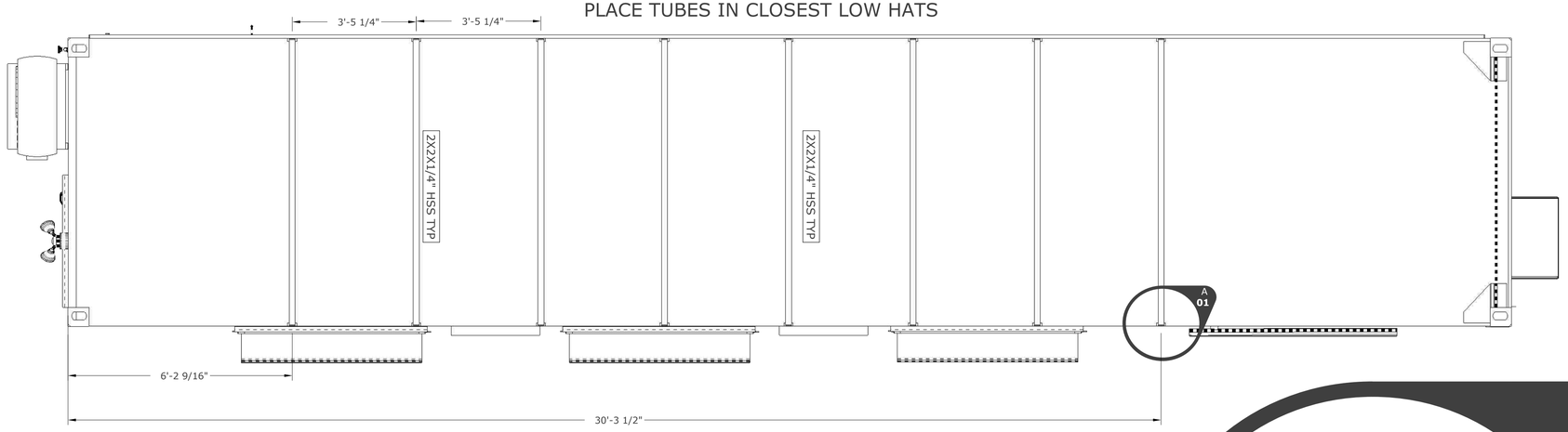
CONSTRUCTION SET

PARAGON STAR
10201 VIEW HIGH DR. LEE'S SUMMIT, MO 64081

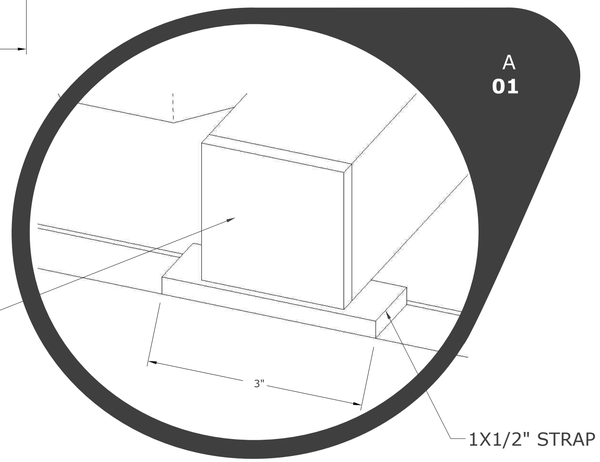
EMBED SETTING PLAN

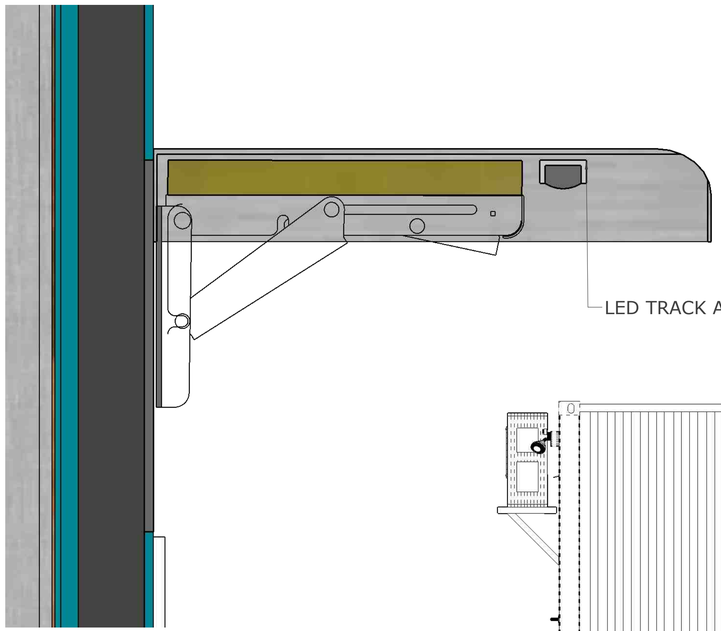
SHEET NO.
S-101

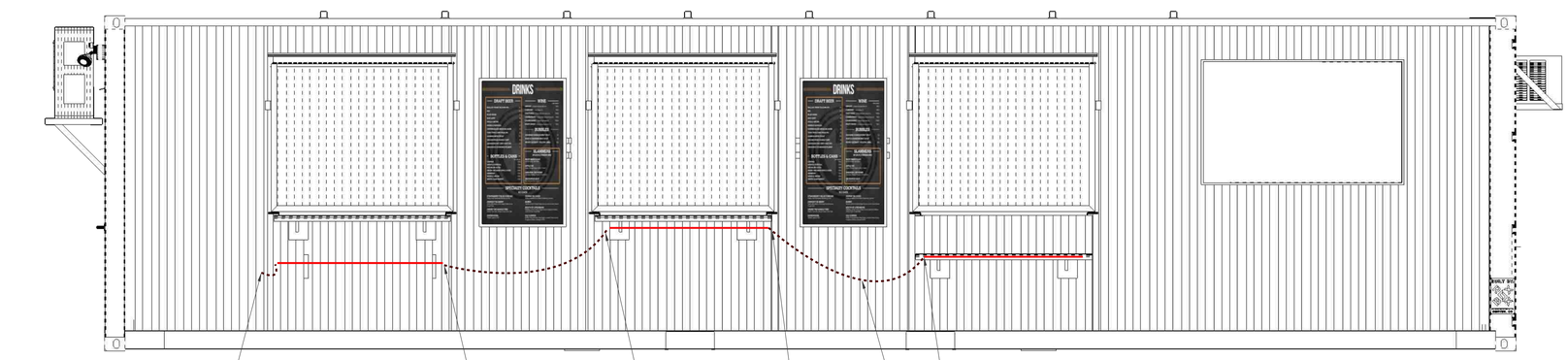
PLACE TUBES IN CLOSEST LOW HATS



1 **ROOFTOP SIGN COORDINATION**







2 **EXTERIOR LED WIRE PATH**

ROXBOX
5690 Logan St. Unit A
Denver, CO 80216

ROXBOX
12223 FM 529 Rd,
Houston, TX 77041

paragon star

ROOF TOP SIGN

DRAWN BY: SB
DESIGNED BY: SB
DATE: 5-22-2023

REVISIONS

REV. 2.6

PROJECT NUMBER 2031

S 18

STRUCTURAL GENERAL NOTES

DESIGN LOADS:

1. DESIGN LOADS: 2018 INTERNATIONAL BUILDING CODE WITH CITY OF LEE'S SUMMIT, MO CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA, ASCE 7-16
2. RISK CATEGORY: II
3. ROOFS:

A.	ROOF DEAD LOAD	20 PSF
B.	ROOF LIVE LOAD	20 PSF
C.	GROUND SNOW LOAD, P_g	20 PSF
D.	FLAT-ROOF SNOW LOAD, P_f	20 PSF
E.	SNOW EXPOSURE FACTOR, C_e	1.0
F.	SNOW IMPORTANCE FACTOR, I_s	1.0
G.	THERMAL FACTOR, C_t	1.0

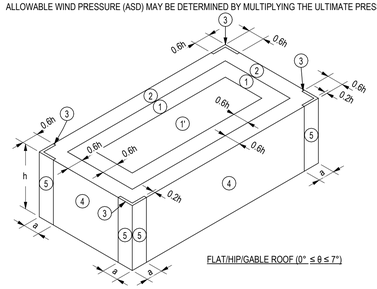
4. FLOOR LIVE LOADS:

OCCUPANCY OR USE	UNIFORMLY DISTRIBUTED (PSF)	CONCENTRATED LOAD (LBS)	LIVE LOAD REDUCTION
OFFICE	50	2,000	YES
STORAGE AREAS	125	N/A	NO
RETAIL STORES FIRST FLOOR	100	1,000	YES
MAINTENANCE ACCESS	40	300	YES

5. WIND:

A.	ULTIMATE DESIGN WIND SPEED, V^{ULT}, (3-SECOND GUST)	107 MPH
B.	ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}, (3-SECOND GUST)	83 MPH
C.	INTERNAL PRESSURE COEFFICIENT	0.18 (ENCLOSED)
D.	WIND EXPOSURE	B
E.	GROUND ELEVATION FACTOR	1.0

   F. COMPONENTS AND CLADDING ULTIMATE DESIGN WIND PRESSURES
      1. PRESSURES MAY BE REDUCED FOR EFFECTIVE WIND AREAS LARGER THAN 10 SQUARE FEET, BUT NOT BELOW 16 PSF.
      2. ALLOWABLE WIND PRESSURE (ASD) MAY BE DETERMINED BY MULTIPLYING THE ULTIMATE PRESSURE BY 0.6.



FLAT/HIP/GABLE ROOF (0° ≤ θ ≤ 7°)

COMPONENT AND CLADDING ULTIMATE WIND PRESSURE - FLAT ROOF		
ROOF (EFFECTIVE WIND AREA)	ROOF SURFACE PRESSURE (psf)	
	10 sf	100 sf
Negative Zone 1	-27.3	-21.3
Negative Zone 1'	-16.0	-16.0
Negative Zone 2	-36.0	-28.3
Negative Zone 3	-49.1	-33.7
Positive Zone 1 & 1'	16.0	16.0
Postive Zone 2 & 3	16.0	16.0
Overhang Zone 1 & 1'	-24.7	-23.2
Overhang Zone 2	-33.4	-23.1
Overhang Zone 3	-46.5	-28.5

WALL (EFFECTIVE WIND AREA)	WALL SURFACE PRESSURE (psf)	
	10 sf	100 sf
Negative Zone 4	-17.0	-16.0
Negative Zone 5	-20.9	-16.3
Positive Zone 4 & 5	16.0	16.0

6. SEISMIC:
   A. SPECTRAL RESPONSE ACCELERATION PARAMETERS
      1. SHORT PERIOD
         a. S_S 0.099 g
         b. S_{DS} 0.105 g
      2. ONE SECOND
         a. S_1 0.068 g
         b. S_{D1} 0.109 g
   B. SOILS SITE CLASS D
   C. SEISMIC IMPORTANCE FACTOR 1.0
   D. SEISMIC DESIGN CATEGORY B
   E. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)
      - STEEL ORDINARY CONCENTRICALLY BRACED FRAMES
   F. DESIGN BASE SHEAR(S)
      - 0.22 KIPS
   G. SEISMIC RESPONSE COEFFICIENT(S), C_S
      - 0.035
   H. RESPONSE MODIFICATION COEFFICIENT(S), R
      - 3.0
   I. ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE

FOUNDATION DESIGN:

1. REFER TO SOILS REPORT NO. 02135040 BY TERRACON CONSULTANTS, INC, DATED MAY 29, 2013.
2. GEOTECHNICAL ENGINEER SHALL VERIFY SOIL CONDITIONS AND TYPES DURING EXCAVATION AND PRIOR TO PLACEMENT OF FORMWORK OR CONCRETE.
3. MINIMUM FROST DEPTH SHALL BE 1'-0" BELOW EXTERIOR GRADE.

TURNED DOWN SLAB-ON-GRADE:

1. DESIGN OF TURNED-DOWN SLAB IS BASED ON
   A. MAXIMUM ALLOWABLE BEARING PRESSURE 2,500 PSF
2. PREPARE SUBGRADE PER GEOTECHNICAL REPORT RECOMMENDATIONS

REINFORCED CONCRETE:

1. DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."
2. CONCRETE WORK SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE."
3. STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

INTENDED USE	EXPOSURE CLASS	f'c, PSI 28 DAYS	MAX W/CM RATIO	MAXIMUM AGGREGATE	SLUMP, INCHES (+/- 1")	AIR CONTENT PERCENT (+/- 1.5%)	CEMENT TYPE	ADMIXTURES / COMMENTS
TURNED-DOWN SLAB	F1-S0-W0-C1	4000	0.45	3/4" STONE	5	5%	I/II	

4. CONCRETE MIX TABLE NOTES:
   A. SLUMP VALUES INDICATED ARE SUGGESTED BASED ON USE AND TYPICAL PLACEMENT METHODS. CONTRACTOR MAY ADJUST SLUMP AS NECESSARY FOR FIELD CONDITIONS AND INSTALLATION METHOD USED PROVIDED REMAINING REQUIREMENTS ARE MET.
   B. AIR CONTENT:
      a. N/P: AIR ENTRAINING ADMIXTURES NOT PERMITTED, ENTRAPPED AIR ONLY
      b. N/A: NOT APPLICABLE, NO STRUCTURAL AIR CONTENT REQUIREMENTS
   C. GENERAL CONTRACTOR TO COORDINATE CONCRETE MOISTURE LEVEL AND ANTICIPATED MOISTURE MITIGATION PROCEDURES WITH CONCRETE SUPPLIER/MIX DESIGNER AND OTHER AFFECTED SUBCONTRACTORS (INCLUDING BUT NOT LIMITED TO FLOORING) TO ADDRESS ALL POTENTIAL SCHEDULE AND INSTALLATION CONFLICTS.
5. DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
6. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT BARS SHOWN TO BE FIELD-BENT SHALL BE ASTM A706, GRADE 60.
7. BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
8. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP BARS PER THE CONCRETE LAP SPLICE SCHEDULE.
9. AT CORNERS AND INTERSECTIONS, MAKE HORIZONTAL BARS CONTINUOUS OR PROVIDE MATCHING CORNER BARS FOR EACH LAYER OF REINFORCEMENT.
10. TRIM OPENINGS IN SLABS WITH (2) #4 FOR EACH LAYER OF REINFORCEMENT, FULLY DEVELOPED BY EXTENSION OR HOOK.
11. IN CONTINUOUS MEMBERS, SPLICE TOP BARS AT MID-SPAN AND SPLICE BOTTOM BARS OVER SUPPORTS.
12. FORM INTERMITTENT SHEAR KEYS AT ALL CONSTRUCTION JOINTS AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
13. EXCEPT AS NOTED ON THE DRAWINGS, CONCRETE PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
    A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
    B. EXPOSED TO EARTH OR WEATHER:
       1. #6 THROUGH #18 BARS 2"
       2. #5 BAR, W31 OR D31 WIRE, AND SMALLER 1-1/2"
    C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
       1. SLABS: #11 BARS AND SMALLER 3/4"
14. ANCHOR BOLTS AND RODS FOR BEAM AND COLUMN-BEARING PLATES SHALL BE PLACED WITH SETTING TEMPLATES.

POST-INSTALLED ANCHORS

1. ALL CAST-IN-PLACE ANCHORS DESIGNED IN ACCORDANCE WITH ACI 318.
2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
3. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. EXISTING REINFORCING BARS SHALL NOT BE CUT UNLESS APPROVED BY THE EOR.
4. ALL ANCHORS MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER 'S PRINTED INSTALLATION INFORMATION (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING, AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MPII.
5. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER; REGISTRATION MUST BE IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER 'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO THE ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE EOR/ SPECIAL INSPECTOR AS REQUESTED.
7. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION THAT SUPPORT SUSTAINED TENSION LOADS SHALL BE DONE BY A CERTIFIED ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318-11 D 9.2.2, ACI 318-14 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE EOR FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
8. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS (ACI 318-11 D 2.2, ACI 318-14 17.1.2)
9. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED IN DRY HOLES THAT HAVE BEEN DRILLED, CLEANED, AND PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER 'S PRINTED INSTALLATION INFORMATION AND THE RESPECTIVE ICC-ES EVALUATION REPORTS.
10. PROVIDE SPECIAL INSPECTION FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE BUILDING CODE AND PER THE CURRENT ICC-ES REPORT (IBC TABLE 1705.3 NOTE B).

CONCRETE POST-INSTALLED ANCHORS			
ANCHOR TYPE	DEWALT	HILTI	SIMPSON
EXPANSION	POWER-STUD+ SD2 (ICC ESR-2502)	KWIK BOLT TZ2 (ICC ESR-4266)	STRONG-BOLT 2 (ICC ESR-3037)
SCREW	SCREW-BOLT+ (ICC ESR-3889)	KWIK HUS-EZ (ICC ESR-3027)	TITEN HD (ICC ESR-2713)
ADHESIVE	AC200+ (ICC ESR-4027)	HIT HY-200 V3 (ICC ESR-4868)	AT-XP (UES ER-263)

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC 360) AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC 303) BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
2. STRUCTURAL STEEL WIDE FLANGE BEAMS AND WTS SHALL CONFORM TO ASTM A992, 50 KSI YIELD.
3. OTHER ROLLED SHAPES, INCLUDING PLATES, CHANNELS, AND ANGLES SHALL CONFORM TO ASTM A36, 36 KSI YIELD.
4. HOLLOW STRUCTURAL SECTION (HSS) RECTANGULAR SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 50 KSI YIELD.
5. HSS ROUND SHAPES SHALL CONFORM TO ASTM A500, GRADE C, 46 KSI YIELD.
6. PIPE SHAPES SHALL CONFORM TO ASTM A53, GRADE B, 35 KSI YIELD.
7. EXCEPT AS NOTED, FRAMED BEAM CONNECTIONS SHALL BE BEARING-TYPE WITH 3/4" DIAMETER, SNUG TIGHT, ASTM F3125 BOLTS, DETAILED IN CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE "STEEL CONSTRUCTION MANUAL" BY THE AISC. INSTALL BOLTS IN ACCORDANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
8. ALL BEAMS SHALL HAVE FULL DEPTH WEB STIFFENERS EACH SIDE OF WEBS ABOVE AND BELOW COLUMNS.
9. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE (36, 55 WITH WELDABILITY SUPPLEMENT S1, AND/OR 105) AS NOTED ON THE STRUCTURAL DRAWINGS.
10. HEADED ANCHOR STUDS (HAS) SHALL CONFORM TO ASTM A108 AND SHALL BE CONNECTED TO STRUCTURAL STEEL WITH EQUIPMENT APPROVED BY THE STUD MANUFACTURER ACCORDING TO THE STUD MANUFACTURER'S RECOMMENDATIONS.
11. WELDING SHALL BE DONE BY A CERTIFIED WELDER IN ACCORDANCE WITH THE AISC DOCUMENTS LISTED ABOVE, THE AMERICAN WELDING SOCIETY (AWS) D1.1: STRUCTURAL WELDING CODE, AND THE RECOMMENDATIONS FOR USE OF WELD E70 ELECTRODES. WHERE NOT SPECIFICALLY NOTED, MINIMUM WELD SHALL BE 3/16" FILLET BY LENGTH OF CONTACT EDGE.
12. GROUT BENEATH COLUMN BASE AND BEAM BEARING PLATES SHALL HAVE A MINIMUM 28-DAY, COMPRESSIVE STRENGTH OF 7,500 PSI AND SHALL BE NON-SHRINK, NON-METALLIC, AND TESTED IN ACCORDANCE WITH ASTM C1107.

CORROSION CONTROL:

1. ALL STEEL MEMBERS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED PER ASTM A123.
2. FASTENERS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR ASTM B695 CLASS 50 (A490 BOLTS SHALL NOT BE HOT DIPPED GALVANIZED). STAINLESS STEEL FASTENERS AND HARDWARE MAY ALSO BE USED.
3. ALL FIELD CUT OR DAMAGED SURFACES, FIELD WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS AS INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPAIRED WITH (2) COATS OF A 95% ZINC RICH PAINT PER ASTM A780 (ZRC PREFERRED).

SHOP DRAWINGS:

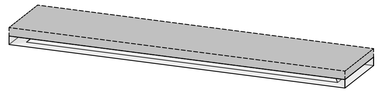
1. THE STRUCTURAL DRAWINGS ARE COPYRIGHTED AND SHALL NOT BE COPIED FOR USE AS ERECTION PLANS OR SHOP DETAILS. USE OF JVA'S ELECTRONIC FILES AS THE BASIS FOR SHOP DRAWINGS REQUIRES PRIOR APPROVAL BY JVA, A SIGNED RELEASE OF LIABILITY BY THE GENERAL CONTRACTOR AND/OR HIS SUBCONTRACTORS, AND DELETION OF JVA'S NAME AND LOGO FROM ALL SHEETS SO USED.
2. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE STRUCTURAL DRAWINGS OR PROJECT SPECIFICATIONS.
3. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED (AFTER HAVING BEEN CHECKED) BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR STRUCTURAL ENGINEER'S REVIEW; SHOP DRAWING SUBMITTALS NOT CHECKED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER WILL BE RETURNED WITHOUT REVIEW.
4. FURNISH ELECTRONIC VERSION (PDF) OF SHOP AND ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION FOR:
   A. CONCRETE MIX DESIGNS
   B. CONCRETE REINFORCING STEEL
   C. INTERMODAL SHIPPING CONTAINERS
   D. STRUCTURAL STEEL
   E. CONTROL JOINT LAYOUT
   F. EMBED PLATE LAYOUT WITH DIMENSIONS
5. SUBMIT IN A TIMELY MANNER TO PERMIT 10 WORKING DAYS FOR REVIEW BY THE STRUCTURAL ENGINEER.
6. SHOP DRAWINGS SUBMITTED FOR REVIEW DO NOT CONSTITUTE "REQUEST FOR CHANGE IN WRITING" UNLESS SPECIFIC SUGGESTED CHANGES ARE CLEARLY MARKED. IN ANY EVENT, CHANGES MADE BY MEANS OF THE SHOP DRAWING SUBMITTAL PROCESS BECOME THE RESPONSIBILITY OF THE ONE INITIATING THE CHANGE.

INTERMODAL SHIPPING CONTAINERS:

1. INTERMODAL SHIPPING CONTAINERS SHALL BEAR AN EXISTING DATA PLATE CONTAINING THE FOLLOWING INFORMATION AS REQUIRED BY ISO 6346 AND VERIFIED BY AN APPROVED AGENCY. A REPORT OF THE VERIFICATION PROCESS AND FINDINGS SHALL BE PROVIDED TO THE BUILDING OWNER.
   A. MANUFACTURER'S NAME OR IDENTIFICATION NUMBER
   B. DATE MANUFACTURED
   C. SAFETY APPROVAL NUMBER
   D. IDENTIFICATION NUMBER
   E. MAXIMUM OPERATING GROSS MASS OR WEIGHT
   F. ALLOWABLE SLACKING LOAD FOR 1.8G
   G. TRANSVERSE RACKING TEST FORCE
   H. VALID MAINTENANCE EXAMINATION DATE
2. WOOD STRUCTURAL FLOORS OF INTERMODAL SHIPPING CONTAINERS SHALL BE PROTECTED FROM DECAY AND TERMITES IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF IBC SECTION 2304.12.

LETTERS OF CONSTRUCTION COMPLIANCE :

1. THE GENERAL CONTRACTOR SHALL DETERMINE FROM THE LOCAL BUILDING AUTHORITY, AT THE TIME THE BUILDING PERMIT IS OBTAINED, WHETHER ANY LETTERS OF CONSTRUCTION COMPLIANCE WILL BE REQUESTED FROM THE STRUCTURAL ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ALL SUCH REQUIREMENTS IN WRITING PRIOR TO THE START OF CONSTRUCTION.
3. THREE-DAY ADVANCE NOTICE SHALL BE GIVEN WHEN REQUESTING SITE VISITS NECESSARY AS THE BASIS FOR THE COMPLIANCE LETTER.
4. THE GENERAL CONTRACTOR SHALL PROVIDE COPIES OF ALL THIRD-PARTY TESTING AND INSPECTION REPORTS TO THE ARCHITECT AND STRUCTURAL ENGINEER A MINIMUM OF ONE WEEK PRIOR TO THE DATE THAT THE COMPLIANCE LETTER IS NEEDED.



3D SCHEMATIC VIEW

SPECIAL INSPECTIONS:

1. THE FOLLOWING SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR, RETAINED BY THE OWNER, IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF IBC CHAPTER 17:
   A. SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY, AND STRUCTURAL OBSERVATIONS AND THE FOLLOWING SUB-SECTIONS:
      1. 1704.2 SPECIAL INSPECTIONS AND TESTS
      2. 1704.3 STATEMENT OF SPECIAL INSPECTIONS
   B. SECTION 1705 REQUIRED VERIFICATION AND INSPECTION AND THE FOLLOWING SUB-SECTIONS:
      1. 1705.1.1 SPECIAL CASES
      2. 1705.2 STEEL CONSTRUCTION
      3. 1705.3 CONCRETE CONSTRUCTION
      4. 1705.5 WOOD CONSTRUCTION
      5. 1705.6 SOILS
      6. SECTION 1705.13 SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE AND THE FOLLOWING SUB-SECTIONS:
         a. 1705.13.1 STRUCTURAL STEEL
      7. SECTION 1705.14 STRUCTURAL TESTING FOR SEISMIC RESISTANCE AND THE FOLLOWING SUB SECTIONS:
         a. 1705.14.1 STRUCTURAL STEEL
   C. SECTION 1706 DESIGN STRENGTHS OF MATERIALS
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. THE APPROVED INSPECTOR MUST BE INDEPENDENT FROM THE CONTRACTOR RESPONSIBLE FOR THE WORK BEING INSPECTED.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO INSPECT AND/OR TEST THE WORK OUTLINED ABOVE AND WITHIN THE STATEMENT OF SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
4. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
5. PER SECTION 1704.2.4 THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, CORRECTION OF PREVIOUSLY REPORTED DEFICIENCIES, AND CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE STRUCTURAL ENGINEER OF RECORD.
6. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN 10 DAYS OF THE FINAL SPECIAL INSPECTION STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
7. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON A MAIN OR SEISMIC-FORCE-RESISTING SYSTEM PER SECTION 1704.4. THE STATEMENT SHALL ACKNOWLEDGE THE AWARENESS OF THE SPECIAL LISTED REQUIREMENTS OF DESIGNATED SEISMIC SYSTEM OR A OR SEISMIC-RESISTING COMPONENT IN THE STATEMENT OF SPECIAL INSPECTIONS PER SECTION 1705.
8. EXCEPT AS NOTED, THE SPECIAL INSPECTIONS OUTLINED ABOVE ARE IN ADDITION TO, AND BEYOND THE SCOPE OF, PERIODIC STRUCTURAL OBSERVATIONS AS DEFINED IN SECTION 1704.6. STRUCTURAL OBSERVATIONS ARE INCLUDED IN THE STRUCTURAL ENGINEERING DESIGN AND CONSTRUCTION ADMINISTRATION SERVICES PROVIDED BY THE STRUCTURAL ENGINEER.

CONCRETE SPECIAL INSPECTION (IBC 1705.3 & 1705.12.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
Reinforcing steel	ACI-CCI ICC-RCSI	Periodic	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
Cast-in bolts & embeds	ACI-CCI ICC-RCSI	Periodic	Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used.
Post-installed anchors or dowels	ACI-CCI ICC-RCSI	Periodic	All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. Horizontally or upwardly inclined anchors that resist sustained tension loads require continuous inspection and approved installers.
Use of required mix design	ACI-CCI ICC-RCSI	Periodic	Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3, 26.4.4; and IBC 1904.1, 1904.2, 1908.2, 1908.3.
Concrete sampling for strength tests, slump, air content, and temperature	ACI-CFTT ACI-SIT	Continuous	
Concrete placement	ACI-CCI ICC-RCSI	Continuous	
Curing temperature and techniques	ACI-CCI ICC-RCSI	Periodic	Verify that the ambient temperature for concrete is kept at > 50°F for at least 7 days after placement. High-early-strength concrete shall be kept at > 50°F for at least 3 days. Accelerated curing methods may be used (see ACI 318: 26.4.7-26.4.9). The ambient temperature for shotcrete shall be > 40°F for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded.
Strength verification	ACI-STT	Periodic	Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons.
Formwork		Periodic	Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents.

SOIL SPECIAL INSPECTION (IBC 1705.6)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
SHALLOW FOUNDATIONS			(IBC 1705.6)
Verify subgrade	PE/GE	Periodic	Prior to placement of concrete inspect soils below footings for adequate bearing capacity and consistency with geotechnical report.
CONTROLLED STRUCTURAL FILL			(IBC 1705.6)
Excavations	PE/GE	Periodic	Verify excavations extend to proper depth and material prior to placement of compacted fill or concrete.
Fill materials	PE/GE	Periodic	Perform classification and testing of compacted fill materials. Check for proper classifications and gradations at each lift and not less than once for each 10,000ft² of surface area.
Placement and compaction		Continuous	Verify proper materials, densities and lift thicknesses during placement and compaction.
Subgrade preparation	PE/GE	Periodic	Verify that subgrade has been appropriately prepared prior to placing compacted fill.
Density		Continuous	Test density of each lift by nuclear methods (ASTM D2922).

SCHEDULE OF INSPECTION AND TESTING AGENCIES

SPECIAL INSPECTION AGENCIES	FIRM	ADDRESS, TELEPHONE, E-MAIL
Special Inspection Coordinator	TBD	
Inspector	TBD	
Inspector	TBD	
Testing Agency	TBD	
Testing Agency	TBD	
Continuous	TBD	
Other	TBD	

STEEL SPECIAL INSPECTION (IBC 1705.2, 1705.12.3 & 1705.13.1)

ITEM	REQUIRED QUALIFICATIONS	FREQUENCY	DETAILED INSTRUCTIONS
FABRICATORS			(IBC 1704.2.5 & 1705.11)
In-plant Inspection	AWS/AISC-SSI ICC-SWSI		Required unless Fabricator is approved and follows procedures of 1704.2.5.1
PRIOR TO WELDING			(TABLE N5.4-1, AISC 360-16)
Verify welding procedures (WPS) and consumable certificates	AWS-CWI ASNT	Continuous	
Material identification	AWS-CWI ASNT	Periodic	Verify type and grade of material.
Welder identification	AWS-CWI ASNT	Periodic	A system shall be maintained by which a welder who has welded a joint or member can be identified.
Fit-up groove welds	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, tacking, and backing.
Fit-up CJP groove welds of HSS joints without backing	AWS-CWI ASNT	Periodic	Verify joint preparation, dimensions, cleanliness, and tacking
Access holes	AWS-CWI ASNT	Periodic	Verify configuration and finish.
Fit-up of fillet welds	AWS-CWI ASNT	Periodic	Verify alignment, gaps at root, cleanliness of steel surfaces, and tack weld quality and location.
DURING WELDING			(TABLE N5.4-2, AISC 360-16)
Use of qualified welders	AWS-CWI ASNT	Periodic	Verify that welders are appropriately qualified.
Control and handling of welding consumables	AWS-CWI ASNT	Periodic	Verify packaging and exposure control.
Cracked tack welds	AWS-CWI ASNT	Periodic	Verify that welding does not occur over cracked tack welds.
Environmental conditions	AWS-CWI ASNT	Periodic	Verify wind speed is within limits as well as precipitation and temperature.
WPS followed	AWS-CWI ASNT	Periodic	Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position.
Welding techniques	AWS-CWI ASNT	Periodic	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
AFTER WELDING			(TABLE N5.4-3, AISC 360-10)
Welds cleaned	AWS-CWI ASNT	Periodic	Verify that welds have been properly cleaned.
Size, length, and location of welds	AWS-CWI ASNT	Continuous	
Welds meet visual acceptance criteria	AWS-CWI ASNT	Continuous	
Arc strikes	AWS-CWI ASNT	Continuous	
k-area	AWS-CWI ASNT	Continuous	
Weld access holes in heavy shapes	AWS-CWI ASNT	Continuous	
Backing & weld tabs removed	AWS-CWI ASNT	Continuous	
Repair activities	AWS-CWI ASNT	Continuous	
Document acceptance or rejection of welded joint/member	AWS-CWI ASNT	Continuous	
AFTER BOLTING			(TABLE N5.6-3, AISC 360-16)
Document acceptance or rejection of bolted connections	AWS/AISC-SSI ICC-SWSI	Continuous	
OTHER STEEL INSPECTIONS			(SECTION N5.7, AISC 360-16; Tables J8-1 & J10-1, AISC 341-16)
Structural steel details	PE/SE	Periodic	All fabricated steel or steel frames shall be inspected to verify compliance with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection.
Anchor rods and other embedments supporting structural steel	ACI-CCI	Periodic	Shall be on the premises during the placement of anchor rods and other embedments supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor rod or embedded item, and the extent or depth of embedment prior to placement of concrete.

STATEMENT OF SPECIAL INSPECTIONS

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines:

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.
Interim Report Frequency: Within 24 hours of inspection, unless indicated otherwise.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1 & 2
ACI-STT	Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III

International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector

Quality Assurance Plans

Quality Assurance for Seismic Resistance
Seismic Design Category: B
Quality Assurance Plan Required: NO

Statement of Responsibility
Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

Prepared by: **Owner's Authorization:**

EOR NAME / Signature Date Signature Date

Building Official's Acceptance:

Signature Date

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REVISIONS
NO. DATE DESCRIPTION

JASON M. JEFFRIES
NUMBER PE-2008019553
03.24.2023

DESIGNED BY:	SDC,ALK
DRAWN BY:	ALK
CHECKED BY:	SDC
JOB #:	21823
DATE:	03/24/2023

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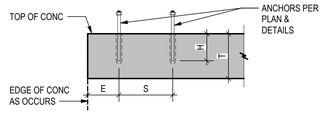
PARAGON STAR
10201 VIEW HIGH DR. LEE'S SUMMIT, MO 64081

GENERAL NOTES & SPECIAL INSPECTIONS

CONSTRUCTION SET

SHEET NO.
S-001

ADHESIVE ANCHOR IN 2500 PSI MIN & 21 DAY AGE MIN CONCRETE							
ADHESIVE TYPE	ANCHOR		PILOT HOLE	MIN EMBED UNO H	MIN EDGE DISTANCE E	MIN SPACING S	MIN CONC THICKNESS T
	THRD ROD	REBAR					
SIMPSON AT-XP (UES ER-263)	3/8"Ø	#3	1/2"Ø	3"	1 3/4"	3"	5"
	1/2"Ø	#4	5/8"Ø	4"	1 3/4"	3"	6 1/2"
	5/8"Ø	#5	3/4"Ø	5"	1 3/4"	3"	8 1/4"
	3/4"Ø	#6	7/8"Ø	6"	1 3/4"	3"	9 1/4"
	7/8"Ø	#7	1"Ø	7"	1 3/4"	3"	11 1/2"
	1"Ø	#8	1 1/8"Ø	8"	1 3/4"	3"	13"
HILTI HIT-HY 200 (ICC-ESR 3187)	3/8"Ø	#3	1/2"Ø	3"	1 3/4"	1 7/8"	4 1/4"
	1/2"Ø	#4	5/8"Ø	4"	1 3/4"	2 1/2"	5 1/4"
	5/8"Ø	#5	3/4"Ø	5"	2"	3 1/8"	6 1/4"
	3/4"Ø	#6	7/8"Ø	6"	2 1/8"	3 3/4"	7 1/2"
	7/8"Ø	#7	1"Ø	7"	2 1/4"	4 3/8"	8 3/4"
	1"Ø	#8	1 1/8"Ø	8"	2 3/4"	5"	10"



NOTES:

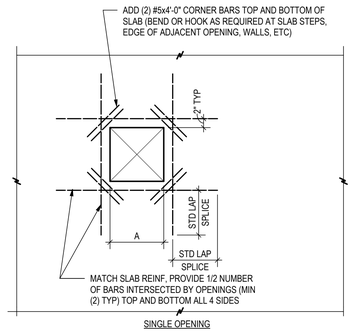
1. INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE WITH SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED WITH ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES WITH HIGH STRENGTH GROUT.
4. SPECIAL INSPECTION IS REQUIRED PER IBC SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR MUST BE ON THE JOB SITE PERIODICALLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION.

7 S-101 POST INSTALLED ANCHOR DETAIL

3/4" = 1'-0"

TYPICAL CONCRETE REINFORCING LAP & EMBEDMENT LENGTHS (UNO)							
		f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI	
BAR SIZE	TYPE	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR
#4	EMBED	29	22	25	19	22	17
	LAP	37	29	32	25	29	22
#5	EMBED	36	28	31	24	28	22
	LAP	47	36	40	31	36	28
#6	EMBED	43	33	37	29	33	26
	LAP	56	43	48	37	43	33

NOTES:
1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW BAR
2. TABULATED VALUES ARE BASED ON GRADE 60 NON-EPOXY-COATED REINFORCING BARS AND NORMAL WEIGHT CONCRETE
3. VALUES ARE IN INCHES

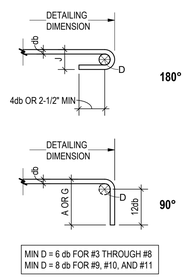


NOTES:
1. COORDINATE OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS
2. MAXIMUM DIMENSION "A" SHALL BE 1'-0", FOR "A" DIMENSION GREATER THAN 1'-0", CONTACT THE STRUCTURAL ENGINEER FOR ADDITIONAL REQUIREMENTS
3. OPENINGS 6" AND SMALLER DO NOT REQUIRE ADDITIONAL REINFORCEMENT
4. THIS DETAIL SHOWS TYPICAL CONDITIONS. VERIFY REINFORCING STEEL PLACEMENT WITH ENGINEER FOR SPECIAL CASES
5. PROVIDE REINFORCEMENT AS SHOWN FOR SQUARE, RECTANGULAR, OR ROUND OPENINGS

8 S-101 TYP CONC TRIM BARS AT SLAB OPNGS 24" OR LESS

3/4" = 1'-0"

STANDARD HOOKS

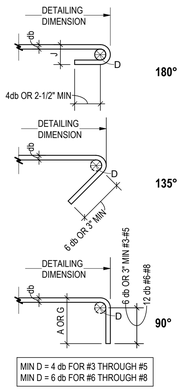


MIN D = 6 db FOR #3 THROUGH #8
MIN D = 8 db FOR #9, #10, AND #11

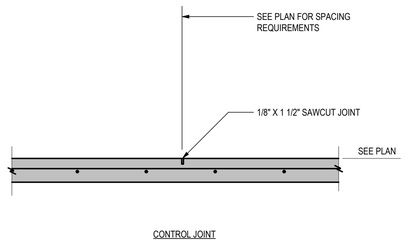
	STANDARD HOOKS		STIRRUPS & TIE HOOKS	
BAR SIZE	180° (J)	90° (A OR G)	180° (J)	90° (A OR G)
#3	3"	6"	2 1/4"	4 1/8"
#4	4"	8"	3"	4 1/2"
#5	5"	10"	3 3/4"	5 5/8"
#6	6"	1'-0	6"	1'-0

ALL GRADES OF STEEL
D = FINISHED INSIDE BEND DIAMETER
db = NOMINAL BAR DIAMETER

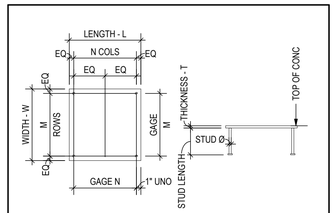
STIRRUP & TIE HOOKS



MIN D = 4 db FOR #3 THROUGH #5
MIN D = 6 db FOR #6 THROUGH #8



NOTE:
SEE SLAB ON GRADE BOX NOTE ON FOUNDATION PLAN FOR SLAB THICKNESS AND REINFORCING. REFERENCE GENERAL NOTES FOR REQUIRED CONCRETE STRENGTH



BEARING PLATE SCHEDULE					
BEARING PLATE		HEADED ANCHOR STUDS			
TYPE	T x W x L	HAS	M ROWS	N COLS	GAGE MxN
BP-1	PL1/2"x16"x1'-4"	(4)-3/4"Øx9"	2	2	12" x 12"

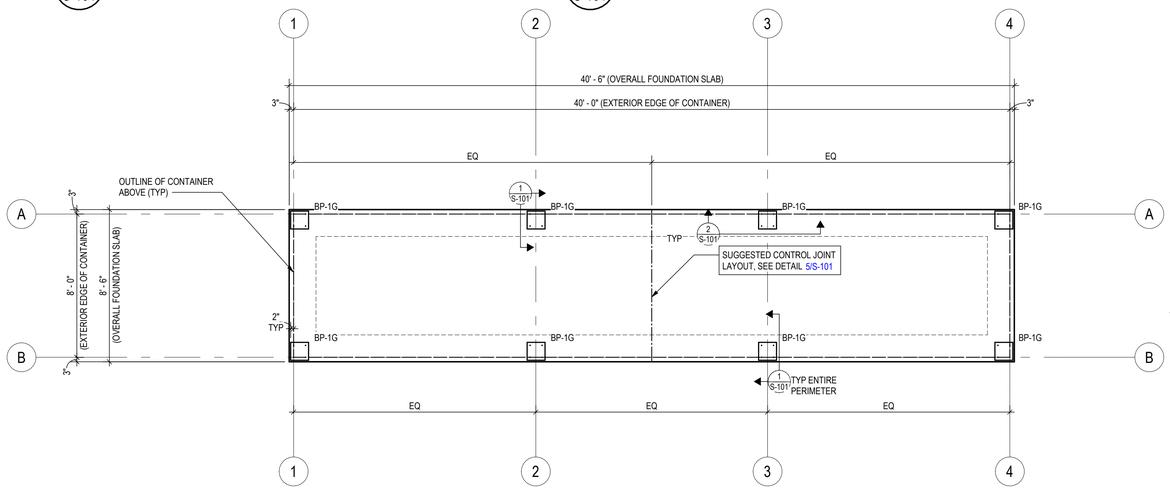
* UNLESS NOTED OTHERWISE ALL EMBEDDED PLATES SHALL BE PLACED WITH EXPOSED FACE FLUSH TO TOP OF CONCRETE.

3 S-101 TYP CONC EMBED & LAP

3/4" = 1'-0"

4 S-101 TYP CONC HOOKS & STIRRUPS

3/4" = 1'-0"



5 S-101 TYP JOINT AT SLAB ON GRADE

3/4" = 1'-0"

6 S-101 TYP EMBED PL DETAIL & SCHEDULE

3/4" = 1'-0"

EMBED SETTING PLAN

1/4" = 1'-0"

NORTH

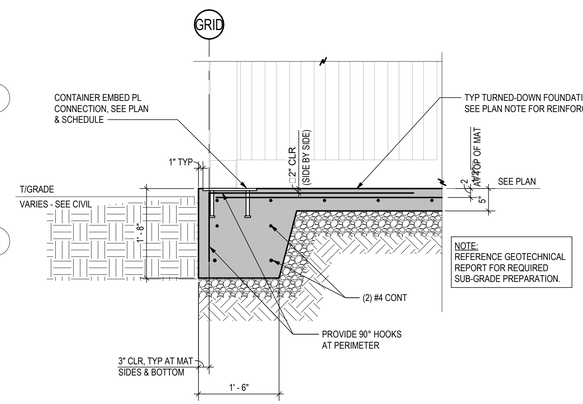
0 1' 2' 4' 8'

- USGS ELEVATION 268.25' = 100'-0", TOP OF FOUNDATION MAT SLAB

EMBED NOTES:
1. ALL EMBEDS SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
2. MAXIMUM ACCEPTABLE GLOBAL EMBED ELEVATION DEVIATION = 1/4".
3. EMBED SHOP DRAWINGS, INCLUDING PLACEMENT PLAN WITH DIMENSIONS, SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACING CONCRETE.
4. AN AS-BUILT EMBED SURVEY (PLAN DIMENSIONS AND ELEVATIONS) SHALL BE PROVIDED FOR THE CONTAINER INSTALLER'S USE.

TYPICAL FOUNDATION SLAB:
5" THICK CONCRETE ON SUBGRADE PREPARED PER GEOTECHNICAL REPORT RECOMMENDATIONS; REFERENCE ARCHITECTURAL DRAWINGS FOR VAPOR BARRIER AND INSULATION. REINFORCE SLAB W/ #4 @ 18" EACH WAY, MID-DEPTH. PROVIDE SAWCUT OR FORMED CONTROL JOINTS, PER 5/S-101. SLAB FLATNESS CRITERIA: FF = 20, FL = 15.

SLAB BLOCKOUTS:
SEE ARCHITECTURAL AND MEP DRAWINGS FOR SLAB BLOCKOUT LOCATIONS. MAXIMUM BLOCKOUT SIZE = 12"x12" (OR 12"Ø). ADJUST REINFORCING POSITION AS REQUIRED. DO NOT CUT & REMOVE REINFORCING. SEE 8/S-101

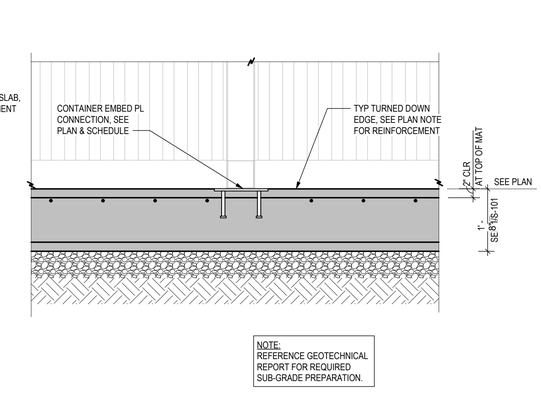


NOTE:
REFERENCE GEOTECHNICAL REPORT FOR REQUIRED SUB-GRADE PREPARATION.

1 S-101 TYPICAL TURN-DOWN AND EMBED

3/4" = 1'-0"

0 6" 1' 2' 3'



NOTE:
REFERENCE GEOTECHNICAL REPORT FOR REQUIRED SUB-GRADE PREPARATION.

2 S-101 TYPICAL INTERIOR EMBED

3/4" = 1'-0"

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Glenwood Springs • Denver

REVISIONS

NO.	DATE	DESCRIPTION

STATE OF MISSOURI
JASON M. JEFFRIES
NUMBER PE-2009019553
PROFESSIONAL ENGINEER
03.24.2023

DESIGNED BY:	SDC
DRAWN BY:	ALK
CHECKED BY:	SDC
JOB #:	21823
DATE:	03/24/2023

CONSTRUCTION SET

PARAGON STAR
10201 VIEW HIGH DR. LEE'S SUMMIT, MO 64081

EMBED SETTING PLAN

SHEET NO.
S-101

MECHANICAL GENERAL NOTES AND SPECIFICATIONS

GENERAL CONSTRUCTION NOTES:

1. DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE ON AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INFER REASONABLE INFORMATION BASED ON EXPERIENCE COMMON IN THE INDUSTRY AND TRADES, QUALITY LEVEL IS A REQUIRED STANDARD. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL CONDITIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.
2. THE ARCHITECT AND PROFESSIONAL CONSULTANTS WILL NOT HAVE CONTROL, OF AND WILL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND OR THESE CONSTRUCTION DOCUMENTS.

BASIC REQUIREMENTS:
MECHANICAL DESIGN SHALL CONFORM TO THE **2018** INTERNATIONAL MECHANICAL CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT MECHANICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.

COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION.

RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.
ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED MECHANICS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.

INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.
ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN.

THE SUB-CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIARIZED WITH ALL REQUIREMENTS OF THE CONTRACT PRIOR TO SUBMISSION OF BID. THE SUB-CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO BID OR START OF INSTALLATION.

THE SUB-CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS WHEN THEY BECOME DUE, AND SHALL NOT COVER ANY WORK UNTIL APPROVED BY THE INSPECTION AUTHORITY. ANY AND ALL FEES ASSOCIATED WITH THE MECHANICAL WORK, INCLUDING CONSTRUCTION AND INSPECTIONS SHALL BE PAID FOR BY THE SUB-CONTRACTOR IN ORDER TO DELIVER A COMPLETE AND FINISHED BUILDING, READY FOR OCCUPANCY AND 100% USAGE. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE SUB-CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE. ANY COSTS DUE TO THE LACK OF COOPERATION AMONG TRADES SHALL BE BORNE BY THE SUB-CONTRACTOR.

THE INFORMATION PRESENTED ON THESE DRAWINGS IS DIAGRAMMATIC IN NATURE. IT DOES NOT NECESSARILY REPRESENT ALL FITTINGS, HANGERS, ETC. FOR A COMPLETE WORKING SYSTEM. PROVIDE ALL MATERIALS AND LABOR FOR COMPLETELY FINISHED AND OPERATIONAL SYSTEMS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR: EXACT WALL LOCATIONS, DIMENSIONS, AND PLUMBING FIXTURE LOCATIONS AND REQUIREMENTS.

SUB-CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ALTERATIONS REQUIRED BY THE OWNER, ARCHITECT, OR FIELD CONDITIONS.

ALL EQUIPMENT SHALL BE NEW, SHALL COMPLY WITH APPLICABLE INDUSTRY STANDARDS, WITH SPECIFICATIONS ON DRAWINGS, AND ENERGY CODE COMPLIANCE CERTIFICATION AS ADOPTED BY THE STATE, AS WELL AS LOCAL JURISDICTIONAL BUILDING DEPARTMENT. SUBMIT DATA FOR APPROVAL PRIOR TO ORDERING EQUIPMENT.

SUBMITTAL SHALL INCLUDE ENERGY CODE COMPLIANCE CERTIFICATION.

SUB-CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT INCLUDING: FIXTURES SPECIFIED IN EQUIPMENT SCHEDULE ON DRAWINGS FOR REVIEW/APPROVAL (5) DAYS PRIOR TO BID. EQUIPMENT IS NOT TO BE ORDERED WITHOUT SUBMITTAL TO ARCHITECT/OWNER/ENGINEER.

ALL SPACE HEATING SUPPLY AIR DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST S.M.A.C.N.A. DUCT CONSTRUCTION STANDARDS AND BE INSULATED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL JURISDICTIONAL ENERGY CONSER- VATION STANDARDS AND THE LATEST EDITION INTERNATIONAL MECHANICAL CODE.

ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. INCREASE LISTED DUCT SIZE TO ACCOMMODATE LINER.

FLEX SHALL NOT EXCEED 8 FT. IN LENGTH AND SHALL BE TYPE "1" FACTORY DUCT. PROVIDE WITH 1 IN. EXTERNAL INSULATION IF MAIN SUPPLY DUCT IS INSULATED.

ALL SUPPLY RUN-OUTS TO HAVE MANUALLY ADJUSTABLE VOLUME DAMPERS WITH ABILITY TO LOCK IN PLACE. THIS SUB-CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE COMPLETE COST FOR THE ELECTRICAL CONTRACTOR TO INTERLOCK EXHAUST FANS AS REQUIRED BY EQUIPMENT SCHEDULE. THIS SUB-CONTRACTOR SHALL FIELD VERIFY 10 FT. MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKE AND ALL VENTS OR EXHAUST OUTLETS.

WALL THERMOSTATS FOR HEATING/COOLING UNITS TO BE AUTOMATIC CHANGEOVER TYPE AND INSTALLED 48 IN. ABOVE FINISHED FLOOR. HEATING/COOLING UNITS SHALL MAINTAIN MINIMUM OUTSIDE AIR AS SHOWN ON SCHEDULE OR SHOWN IN FRESH AIR CALCULATIONS.

ALL FURNACES OR ROOTOP UNITS SUPPLYING MORE THAN 2000 CFM OF AIR SHALL BE EQUIPPED WITH A SMOKE DETECTOR IN THE MAIN RETURN AIR DUCT WHICH WILL SHUT THE POWER OFF TO THE UNIT WHEN SMOKE IS DETECTED. THIS SMOKE DETECTOR SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE MECHANICAL CONTRACTOR. IN BUILDINGS WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED, THE SMOKE DETECTOR SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR AND SHALL BE SUPERVISED BY FIRE ALARM SYSTEM. SEE LATEST EDITION INTERNATIONAL MECHANICAL CODE FOR ADDITIONAL REQUIREMENTS. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL REMOTE TEST SWITCH AND INDICATING LIGHT AT CEILING LOCATION NEAR FURNACE/ROOFTOP LOCATION.

MECHANICAL CONTRACTOR IS RESPONSIBLE TO HAVE ROOFTOP UNIT MANUFACTURERS TECHNICIAN START ALL ROOFTOP UNITS. PROVIDE WRITTEN REPORT FROM MANUFACTURER FOR START-UP COMMISSIONING.

DUCTWORK
- A. DUCTWORK SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. **INSTALL TURNING VANES IN ALL ELBOWS.** ALL SPIN-IN FITTINGS AND RUNOUTS TO ANY REGISTERS, RETURN, OR EXHAUST TERMINAL SHALL BE PROVIDED WITH MANUAL VOLUME DAMPERS.
- B. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA STANDARDS. THE DUCT PRESSURE CLASS SHALL BE AS NOTED ON PLANS OR CORRESPONDING TO THE MAXIMUM EQUIPMENT ESP ON EACH SYSTEM. THE DUCTWORK SHALL BE SEALED TIGHT. LEAKAGE MAY NOT EXCEED 10% OF DESIGN AIRFLOW AT DESIGN PRESSURE. FOR SMOKE CONTROL SYSTEMS THE DUCT MUST BE TESTED AT 1.5 TIMES ITS DESIGN PRESSURE AND LEAKAGE MAY NOT EXCEED 5% OF DESIGN AIRFLOW.
- C. ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL DUCT. NO JOISTS OR CONNECTIONS SHALL HAVE ANY VISIBLE SEALANT FROM THE EXTERIOR SO THE DUCTWORK HAS A CLEAN AND WORKMAN LIKE APPEARANCE.
- D. DUCT SIZES GIVEN ARE NET INSIDE FREE AREA.
- E. EQUIPMENT FLEXIBLE DUCTWORK CONNECTION NOT TO EXCEED 10 INCHES IN LENGTH WITH A MAX. 25 FLAME/50 SMOKE INDEX.
- F. FLEXIBLE DUCTWORK TO AIR DEVICES SHALL HAVE A MAXIMUM STRETCHED LENGTH OF 6 FEET. SUITABLE FOR RETURN AIR PLENUM.
- G. ALL EXHAUST TERMINALS MUST BE 3'-0" AWAY FROM IN ELEVATION FROM OPERABLE PORTION OF WINDOW AND DOORS. MC TO OFFSET AS REQUIRED.
- H. ALL DIRECT VENT VENT TERMINALS MUST BE 4'-0" AWAY IN ELEVATION HORIZONTALLY OR BELOW AND ATLEAST 1'-0" ABOVE ANY OPERABLE PORTION OF A WINDOW OR DOOR. MC TO OFFSET AS REQUIRED.

INSULATION
- A. ALL INSULATING VALUES ARE TO CONFORM TO THE LATEST VERSION OF THE INTERNATIONAL ENERGY CODE.
- B. ALL ROUND CONCEALED RIGID SUPPLY DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-6.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
- C. OUTDOOR AIR INTAKE DUCTS SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-12.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
- D. WHEN LOCATED IN UNCONDITIONED SPACES ALL RECTANGULAR DUCTWORK SHALL BE LINED WITH 1" THICK 2 POUND DENSITY MINIMUM R-6.0 FIBER GLASS ACOUSTIC DUCT LINER.
- E. ALL DUCTWORK EXPOSED TO OUTDOOR AMBIENT TYPE CONDITIONS (UNCONDITIONED ATTICS, OUTSIDE AIR DUCTS, ETC) SHALL BE EXTERNALLY WRAPPED OR INTERNALLY LINED IN 2 - 2.5" NOMINAL INSULATION (MINIMUM R-12.0). ALL OUTDOOR DUCTWORK SHALL HAVE 2 - 2.5" DUCTLINER (MINIMUM R-12.0) AND THE DUCT BE SEALED WEATHERPROOF PER SMACNA GUIDELINES. RECTANGULAR DUCT WORK IN RETURN AIR PLENUM SHALL BE LINED WITH 1/2" THICK 2 POUND DENSITY (MINIMUM R2.1) MAT-LACED ACOUSTIC DUCT LINER.

ELECTRIC HEATING UNITS
- A. FURNISH AND INSTALL ELECTRIC HEATING EQUIPMENT AS SCHEDULED AND INDICATED ON THE PLANS.
- B. ELECTRIC UNIT HEATERS SHALL BE FURNISHED COMPLETE WITH ALL MOUNTING HARDWARE AND ACCESSORIES INCLUDING SPACE THERMOSTAT AND/OR SELF CONTAINED THERMOSTAT AS REQUIRED FOR OPERATION.
- C. PROVIDE WHITE COLOR FINISH UNLESS OTHERWISE INDICATED.
- D. ALL UNITS SHALL BE UL LISTED.
- E. MC SHALL REVIEW SURFACE VERSUS RECESS MOUNTING OPTIONS WITH GC PRIOR TO ORDERING EQUIPMENT. ASK FOR CLARIFICATION IF CONFLICTS ARISE DUE TO RATED WALLS, RATED CEILING, STRUCTURE, ETC.

AIR CURTAIN UNITS

Air curtains provide environmental separation at openings by reducing the infiltration of unconditioned air, fumes, dust, and humidity. At exterior openings, they can resist winds up to 8 MPH (13 KPH) and are generally mounted inside the building. During cold seasons warm air that has risen towards ceiling is recirculated; they can also be used at interior openings such as doors to coolers or clean rooms. Optimum protection is provided when units are mounted flush to the wall and as close to top of door opening as possible. To ensure peak performance keep air stream free of obstructions. Air curtains may not be fully effective where negative air pressure exists on one side of door; contact Berner for additional information.

HVAC TESTING AND BALANCING REQUIREMENTS:

THE MECHANICAL CONTRACTOR SHALL EMPLOY THE SERVICES OF AN INDEPENDENT TEST AND BALANCE CONTRACTOR TO BALANCE THE HVAC SYSTEMS IN ACCORDANCE WITH THE DRAWINGS.

HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE LATEST NEBB PROCEDURAL STANDARDS.

THE BALANCING CONTRACTOR SHALL HAVE AT LEAST (3) THREE YEARS OF EXPERIENCE IN TESTING AND BALANCING.

THE BALANCING REPORT SHALL CONTAIN ALL INFORMATION REQUIRED BY NEBB PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING. THE REPORT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE FOLLOWING: A COMPLETE LIST OF BALANCING INSTRUMENTS AND THEIR LATEST CALIBRATION DATES IS TO BE INCLUDED IN THE FINAL REPORT. BLOWER: MOTOR HP, VOLTAGE, AMPERAGE (NAMEPLATE AND ACTUAL) RPM, BELT MAKE/MODEL, SHEAVE MAKE/MODEL. UNIT: MAKE/MODEL/SERIAL NUMBER, FILTER TYPE/SIZE/QUANTITY, FINAL BALANCED DAMPER POSITIONS. AIR INLETS AND OUTLETS: DESIGN/PRELIMINARY/FINAL CFM'S (EXCLUDES RETURN GRILLES).

ALL MANUAL SINGLE BLADE DAMPERS SHALL BE SECURED IN THEIR FINAL BALANCED POSITIONS WITH A SHEET METAL SCREW THRU THE DAMPER HANDLE.

ALL COMPONENTS SHALL BE BALANCED TO WITHIN +/- 10% OF DESIGN CFM REQUIREMENTS.

ABBREVIATIONS

(D)	DEMO
(E)	EXISTING
(N)	NEW
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
B	BOILER
BB	BASEBOARD
BF	BOOSTER FAN
BFP	BACKFLOW PREVENTER
BT	BATH TUB
BV	BALL VALVE
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
CU	CONDENSING UNIT
CV	CHECK VALVE
CUH	CABINET UNIT HEATER
DCW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DHW	DOMESTIC HOT WATER
DSN	DOWN SPOUT NOZZLE
EC	ELECTRICAL CONTRACTOR
ECO	END OF LINE CLEANOUT
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FURN	FURNACE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FS	FLOOR SINK
G	GAS
GC	GENERAL CONTRACTOR
GM	GAS METER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
GW	GREASE WASTE
GWH	GAS WATER HEATER
HB	HOSE BIB
HP	HEAT PUMP
HX	HEAT EXCHANGER
IM	ICE MAKER BOX
LAV	LAVATORY
LS	LAUNDRY SINK
MAU	MAKE-UP AIR UNIT
MC	MECHANICAL CONTRACTOR
MF	MEASURE FLOW
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
ORD	OVER FLOW ROOF DRAIN
P	PUMP
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RD	ROOF DRAIN
RH	RADIANT HEATER
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SAR	SUPPLY AIR REGISTER
SF	SUPPLY FAN
SFT	SERIES FAN TERMINAL
SH	SHOWER
SK	SINK
SOI	SAND/OIL INTERCEPTOR
SS	SERVICE SINK
T&P	TEMPERATURE & PRESSURE
TD	TRENCH DRAIN
TYP	TYPICAL
UR	URINAL
VAV	VARIABLE AIR VOLUME
VVT	VARI TRAC
WB	WASHER BOX
WCO	WALL CLEANOUT
WH	WALL HYDRANT

MECHANICAL LEGEND

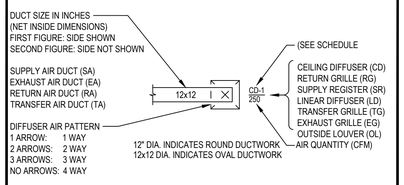
- PROVIDE TURNING VANES AT ALL CORNER BENDS IN ACCORDANCE WITH S.M.A.C.N.A. LOW VELOCITY DUCT MANUAL.
- TYPICAL DUCT TAKE-OFF WITH MANUAL VOLUME DAMPER. MARK DAMPER POSITION AFTER AIR BALANCE.
- THERMOSTAT SHALL BE MOUNTED PER OWNER'S DIRECTION. DO NOT MOUNT IN DIRECT SUNLIGHT. THERMOSTAT SHALL BE MOUNTED NEAR RETURN AIR DUCT AT 48" AFF.
- MANUAL BALANCING DAMPER - PROVIDE WHERE SHOWN, AT ALL RUN-OUTS TO AIR OUTLETS, AND AT ALL MAIN DUCT SPLITS. DAMPERS SHALL BE "YOUNG REGULATOR CO" MODEL 820 OR EQUAL.
- POINT OF CONNECTION - NEW TO EXISTING
- INDICATES UNDERCUT DOOR FOR RETURN AIR

- SUPPLY UP
- SUPPLY DOWN
- RETURN UP
- RETURN DOWN
- EXHAUST UP
- EXHAUST DN
- FLEXIBLE DUCT
- (D)XX = DEMO
- MANUAL VOLUME DAMPER
- CEILING SUPPLY DIFFUSERS SEE SCHEDULES
- CEILING RETURN AIR REGISTER SEE SCHEDULES
- SIDEWALL SUPPLY/RETURN REGISTER, SEE SCHEDULES

- FIRE DAMPER
- SMOKE DAMPER
- FIRE SMOKE DAMPER
- EQUIPMENT TAG
- (POC) POINT OF CONNECTION
- ROOFTOP UNIT
- FURNACE
- CONDENSING UNIT
- PARALLEL FAN POWERED VAV BOX
- VAV/VVT BOX

- DCW — DOMESTIC COLD WATER
- 110° — DOMESTIC HOT WATER
- CND — CONDENSATE DRAIN
- G — GAS LINE
- SS — SANITARY SEWER BELOW FLOOR (SS)
- V — SANITARY VENT
- BALL VALVE
- CLEANOUT
- FLOOR DRAIN
- FLOOR SINK
- ELBOW - TURNED DOWN
- ELBOW - TURNED UP

DIFFUSER, GRILLE, AND REGISTER NOTATION



INDOOR UNIT SCHEDULE

System Tag	Make	Model	Type	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	ROOM Cooling Design Entering Temp DB/WB (°F)	ROOM Heating Design Entering Temp DB (°F)	Estimated Cooling Coil LAT (°F)	Estimated Heating Coil LAT (°F)	Electrical Data		Notes / Options
										Voltage / Phase	MCA / MOCP	
IU-1	LG	LMN079HVT	High Wall Type	7000	8100	80.0 / 61.0	74	57	81	208/230V / 1-phase	Powered by Outdoor	1,2
IU-2	LG	LMU090 HSV5	High Wall Type	9,000.0	10,000.0	80.0 / 61.0	59	81	97.5	208/230V / 1-phase	Powered by Outdoor	1,2

Notes
PROVIDE 7-DAY , PROGRAMABLE
REFRIGERANT PIPING TO BE SIZED PER MANUFACTURER'S RECOMMNEDATIONS

OUTDOOR UNIT SCHEDULE

System Tag	Model Number	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	System Connected Capacity	Unit Weight (lbs)	Project Design Cooling Outdoor Temp DB (°F)	Project Design Heating Outdoor Temp WB	AMP	Voltage / Phase
HP-1	LG	LMU183HV	15000	17000	N/A	108	93.0	1.3	20	208/230V / 1-phase

WINDOW AIR CONDTION

System Tag	Model Number	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Unit Weight (lbs)	dBA level	AMP	Voltage / Phase
WAC-1	LG	L2W2516ER	24000	24500	151	62/69	11.8/10.9	208/230V / 1-phase 4-wire

AIR CURTAIN SCHEDULE

PLAN MARK	MFR	MODEL NO.	CFM	TEMP RISE	ELECTRICAL DATA		
					AMP	KW	V
AC-1	BERNER	CLC-08-1072E	2019	18	40.2	8	208

1 PROVIDE REMOTE TSTAT WITH SUMMER/WINTER SWITCH.

MECHANICAL SHEET LIST

SHEET #	SHEET TITLE
M0.1	MECHANICAL SPEC SCHEDULE & LEGEND
M1.0	FIRST FLOOR MECHANICAL PLAN

CODES & DESIGN CRITERIA

JURISDICTION:	LEE'S SUMMIT, MO
MECHANICAL CODE:	IMC 2021
ENERGY CODE:	IECC 2021
WINTER DESIGN DB:	1.4 F
SUMMER DESIGN TEMP DB	99.7 F
DB DESIGN FOR AIR COOLED EQUIP	110
ELEVATION:	1024 FT

EE LLC
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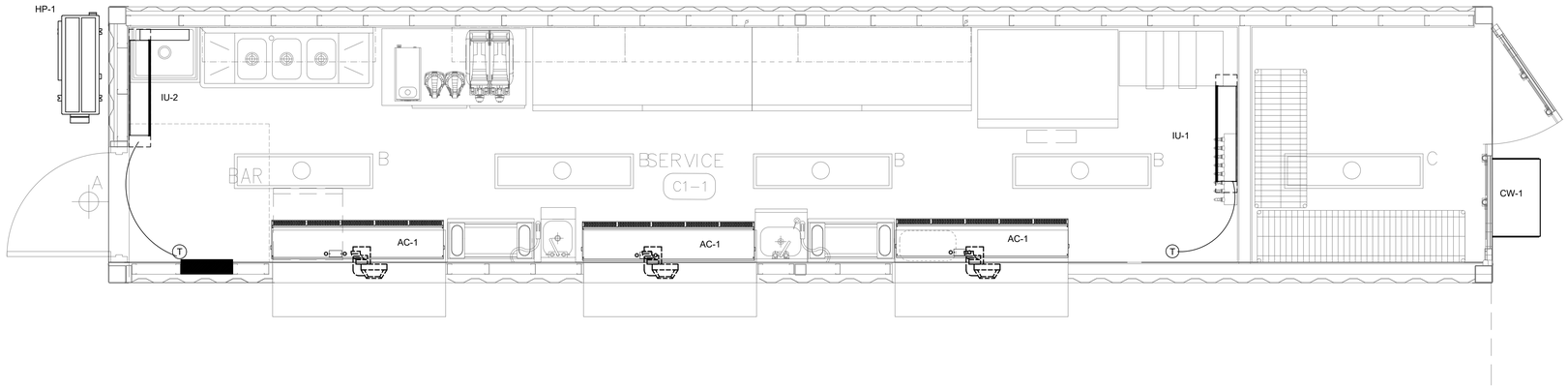
CONTAINER BAR FOR
PARAGON STAR
1401 NW VIEW HIGH DR, LEE'S SUMMIT, MO

ISSUE/REVISION

STAMP:
STATE OF MISSOURI
DAVID W. DAY
NUMBER PE-2010024
PROFESSIONAL ENGINEER
5-24-23

DATE: 7/12/22
DRAWN BY:
CHECK BY:
TITLE: SPECS SCHEDULES AND LEGEND
SHEET NO: M-01



1 MECHANICAL HVAC PLAN

M-1.0

2' 1' 0 2' 4'

1/2"=1'-0"

NORTH

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CHECK BY:

TITLE:

MECHANICAL PLAN

SHEET NO:

M-1.0

PLUMBING GENERAL NOTES AND SPECIFICATIONS

BASIC REQUIREMENTS:
PLUMBING DESIGN SHALL CONFORM TO THE 2015 INTERNATIONAL PLUMBING CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT PLUMBING SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.

DO NOT SCALE FROM THESE DRAWINGS. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS FOR DIMENSIONS AND FOR ESTIMATING DISTANCES. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS RELATING TO THE JOB WETHER OR NOT INDICATED ON THESE DRAWINGS.
ANY SCALE, DIMENSION OR QUANTITIES SHOWN ON THE DRAWINGS ARE FOR ENGINEERING CALCULATION PURPOSES ONLY. THE PLUMBING CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTIMATING AND DETERMINING ALL DISTANCES AND QUANTITIES RELATED TO THE PROJECT. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS AND VERIFY EXISTING CONDITIONS ON SITE FOR ALL ESTIMATING PURPOSES.

COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION. RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.

ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED PLUMBERS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.

INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF ANY DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.

ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN. SUBMIT MANUFACTURER'S LITERATURE (SHOP DRAWINGS) FOR MATERIALS AND EQUIPMENT. SUBMITTAL SHALL INCLUDE EQUIPMENT PERFORMANCE DATA AT ELEVATION AND/OR LOCAL CONDITIONS. EQUIPMENT CUTSHEETS OR CATALOG COPIES ARE NOT ACCEPTABLE. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES. ANY EQUIPMENT SUBSTITUTED FOR WHAT IS SCHEDULED SHALL BE EQUAL TO THAT SCHEDULED IN CONTROLS, ACCESSORIES, AND PERFORMANCE REGARDLESS OF MANUFACTURER.

FIELD LABEL ALL PLUMBING EQUIPMENT AND PIPING AS INDICATED ON THE PLANS PER PLUMBING AND LOCAL CODE REQUIREMENTS. INDICATE DIRECTION OF FLOW ON PIPING.

TAG ALL VALVES WITH CONSECUTIVE NUMBERING ON PERMANENT HARD PLASTIC OR METAL TAB AND PROVIDE SCHEDULE LISTING ITEMS, AREA SERVED, SIZE AND VALVE TYPE. SUBMIT FINAL VALVE SCHEDULE FOR REVIEW.

PROVIDE EXPANSION LOOPS, SWING JOINTS, OR MECHANICAL EXPANSION COMPENSATING DEVICES AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION OF ALL PIPING SYSTEMS. EXPANSION SYSTEM SIZING SHALL BE IN ACCORDANCE WITH MATERIALS DATA SHEETS AND MANUFACTURER RECOMMENDATIONS.

INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. IF PLAN DIFFERS FROM THESE INSTRUCTIONS THEN NOTIFY ENGINEER PRIOR TO ROUGH-IN. MANUFACTURERS INSTRUCTIONS SHALL PREVAIL. SPECIAL ATTENTION MUST BE PAID TO GAS FIRED EQUIPMENT FLUE/CA LENGTHS, SIZES, AND MATERIAL.

BASIC MATERIALS
PLUMBING CONTRACTOR TO PROVIDE PLUMBING SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMER, DISCONNECTS, STARTERS, CONTROL WIRING, ASSOCIATED CONTROL POWER WIRING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL PLUMBING SYSTEM. ALL ELECTRICAL ITEMS SHALL BE COORDINATED WITH ELECTRICAL DRAWINGS AND ELECTRICAL SUB-CONTRACTOR FOR INSTALLATION.

PROVIDE SUPPLEMENTAL STEEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF PLUMBING MATERIALS, EQUIPMENT, AND APPARATUS.

ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL. APPROVAL OF LOCATION AND EXTENT.

PROVIDE PRESSURE REDUCING VALVE ASSEMBLY AT BUILDING WATER SERVICE ENTRY WHERE PRESSURE EXCEEDS 65 PSI. PRESSURE REDUCING VALVE TO BE SET TO 65 PSI.

PROVIDE SANITARY SEWER SYSTEM CLEANOUTS AS REQUIRED BY LOCAL CODES. PROVIDE BRANCH SHUT-OFF VALVES ON ALL WATER LINES EXTENDING FROM MAINS. THE CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY OTHERS, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, MOTORS, ETC. AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THIS CONTRACT.

PIPING
1. SANITARY, VENT, AND STORM PIPING ABOVE AND BELOW GRADE SHALL BE SOLID CORE PVC SCHEDULE 40 OR 80 PIPE AND SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. INJECTION MOLDED PVC DWV FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED PVC DWV FITTINGS SHALL CONFORM TO ASTM F 1866. PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM AND BE THE PRODUCT OF ONE MANUFACTURER. ALL PIPE AND FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES. ALL SYSTEMS SHALL UTILIZE A SEPARATE WASTE AND VENT SYSTEM. PIPE AND FITTINGS SHALL CONFORM TO NSF INTERNATIONAL STANDARD 14. INSTALLATION SHALL COMPLY WITH THE LATEST INSTALLATION INSTRUCTIONS PUBLISHED BY MANUFACTURER AND SHALL CONFORM TO ALL APPLICABLE PLUMBING, BUILDING, AND FIRE CODE REQUIREMENTS. BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321 AND ASTM F 1668. SOLVENT CEMENT JOINTS SHALL BE MADE IN A TWO STEP PROCESS WITH PRIMER CONFORMING TO ASTM F 656 AND SOLVENT CEMENT CONFORMING TO ASTM D 2564. THE SYSTEM SHALL BE PROTECTED FROM CHEMICAL AGENTS, FIRE STOPPING MATERIALS, THREAD SEALANT, PLASTICIZED VINYL PRODUCTS, OR OTHER AGGRESSIVE CHEMICAL AGENTS NOT COMPATIBLE WITH PVC COMPOUNDS. SYSTEMS SHALL BE HYDROSTATICALLY TESTED AFTER INSTALLATION.
2. DOMESTIC WATER PIPING ABOVE GRADE: SOCKET WELDED CPVC TUBE AND FITTINGS PER ASTM D 2846.
3. DOMESTIC WATER PIPING ABOVE GRADE: UPONOR AQUAPEX PIPING WITH PROPEX FITTINGS FOR ALL BRANCH CONNECTIONS AND TERMINATIONS (OR REHAU EQUIVALENT). DCW TO BE BLUE PIPE, DHW TO BE RED PIPE, AND DHWR TO BE CLEAR PIPE.
4. DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K COPPER WITH SILVER SOLDERED JOINTS.
5. CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH SOLDERED JOINTS, OR CPVC IF ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.
6. GAS PIPING 3 INCHES AND LARGER SHALL BE SCHEDULE 40 STEEL WITH WELDED JOINTS. GAS PIPING 2-1/2 INCHES AND SMALLER SHALL BE SCHEDULE 40 STEEL. MALLEABLE THREADED FITTINGS OR MECHANICALLY CRIMPED JOINTS (PRO PRESS) MEETING ASTM A53.
7. GAS PIPING BELOW GRADE SHALL BE WRAPPED WITH PROTECTIVE PIPE COVERING AND VENTED IN ACCORDANCE WITH LOCAL JURISDICTIONS HAVING AUTHORITY.
8. ANY PIPING SYSTEM LOCATED IN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NO MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
9. FIRE STOP ALL PIPING MATERIALS PASSING THROUGH FIRE RATED STRUCTURES OR FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. USE CURRENTLY LISTED U.L. CLASSIFIED PRODUCTS, TESTED BY ASTM E814. USE FOR ALL APPLICABLE PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, OR FLOOR CEILING ASSEMBLIES IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

INSULATION
1. WATER PIPING IN UNCONDITIONED SPACE AND EXTERIOR WALLS SHALL BE 2" FIBERGLASS INSULATION.
2. HOT WATER PIPING 2" OR LESS SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING GREATER THAN 2-INCHES SHALL BE 1 1/2" FIBERGLASS INSULATION. RUNOUTS, NOT EXCEEDING 12 FEET, UP TO 2-INCHES SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.
3. STORM DRAIN PIPING ABOVE GRADE SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.
4. COLD OR HOT WATER PIPING IN A WALL, CEILING, OR FLOOR THAT IS ADJACENT TO AN UNCONDITIONED SPACE SHALL HAVE 1-INCH THICK INSULATION. THE PIPING SHALL ALSO BE INSTALLED TO THE WARM SIDE OF THE BUILDING INSULATION.
5. RECIRULATING HOT WATER SYSTEM MAINS SHALL BE 1" THICK FIBER GLASS INSULATION WITH AN ALL SERVICE JACKET.
6. HOT WATER PIPING LESS THAN 1-1/2" SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING 1-1/2 TO 4" SHALL BE 1 1/2" FIBERGLASS INSULATION.

PLUMBING EQUIPMENT/FIXTURES
- FURNISH AND INSTALL PLUMBING FIXTURES AS SCHEDULED ON THE PLANS.
- PROVIDE CHROME PLATED ANGLE STOPS AND ESCUTCHEON PLATES ON ALL EXPOSED FIXTURE RUNOUTS
- PROVIDE INSULATION AND ROUGH IN AS REQUIRED FOR COMPLIANCE WITH ADA REQUIREMENTS.
- PROVIDE ALL ACCESSORIES AND SPECIALTY ITEMS AS REQUIRED FOR A COMPLETE FIXTURE INSTALLATION.

ABBREVIATIONS

(D)	DEMO
(E)	EXISTING
(N)	NEW
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
B	BOILER
BB	BASEBOARD
BF	BOOSTER FAN
BFP	BACKFLOW PREVENTER
BT	BATH TUB
BV	BALL VALVE
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
CU	CONDENSING UNIT
CV	CHECK VALVE
CUH	CABINET UNIT HEATER
DCW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DHW	DOMESTIC HOT WATER
DSN	DOWN SPOUT NOZZLE
EC	ELECTRICAL CONTRACTOR
ECO	END OF LINE CLEANOUT
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FURN	FURNACE
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FS	FLOOR SINK
G	GAS
GC	GENERAL CONTRACTOR
GM	GAS METER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GUH	GAS UNIT HEATER
GW	GREASE WASTE
GWH	GAS WATER HEATER
HB	HOSE BIB
HP	HEAT PUMP
HX	HEAT EXCHANGER
IM	ICE MAKER BOX
LAV	LAVATORY
LS	LAUNDRY SINK
MAU	MAKE-UP AIR UNIT
MC	MECHANICAL CONTRACTOR
MF	MEASURE FLOW
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
ORD	OVER FLOW ROOF DRAIN
P	PUMP
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RD	ROOF DRAIN
RH	RADIANT HEATER
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SAR	SUPPLY AIR REGISTER
SF	SUPPLY FAN
SFT	SERIES FAN TERMINAL
SH	SHOWER
SK	SINK
SOI	SAND/OIL INTERCEPTOR
SS	SERVICE SINK
T&P	TEMPERATURE & PRESSURE
TD	TRENCH DRAIN
TYP	TYPICAL
UR	URINAL
VAV	VARIABLE AIR VOLUME
VVT	VARI TRAC
WB	WASHER BOX
WCO	WALL CLEANOUT
WH	WALL HYDRANT

PLUMBING LEGEND

CND	CONDENSATE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
GW	GREASE WASTE
G	GAS
RD	ROOF DRAIN
ORD	OVERFLOW ROOF DRAIN
SOI	SAND OIL
SS	SANITARY SEWER
V	VENT
(A)XX	TYPICAL PIPE ABOVE/ON ROOF
(B)XX	TYPICAL PIPE BELOW/UNDERGROUND
(E)XX	TYPICAL PIPE EXISTING

VALVES

- BALL VALVE
- GATE VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE (PRV)
- MEASURE FLOW
- TEE UP
- TEE DOWN
- ELBOW UP
- ELBOW DOWN

MISC.

- POINT OF CONNECTION (POC)
- DEMO

FIXTURES

- WALL CLEAN OUT
- FLOOR CLEANOUT
- AREA DRAIN
- FLOOR DRAIN
- FLOOR SINK FULL COVER
- GAS METER
- HOSE BIB
- BATH TUB/MOP SINK
- SINK
- 2-COMPARTMENT SINK
- DRINKING FOUNTAIN/URINAL
- WASHER BOX
- ICE BOX
- WATER CLOSET STACK
- WATER CLOSET

GENERAL NOTES

1. ALL ITEMS CONNECTING TO POTABLE WATER SHALL MEET THE LEAD FREE STANDARD OF .25% OR LESS LEAD.
2. PLUMBING PLANS REFERENCE FINISHED FLOOR TO FINISHED FLOOR ABOVE, SANITARY SHOWN IS FOR FIXTURES ABOVE UNLESS NOTED OTHERWISE.
3. FIELD VERIFY ALL ROUTING OF PLUMBING LINES WITH OTHER TRADES. FIELD ADJUST ROUTING ACCORDINGLY TO MAKE SYSTEM WORK WITH OTHER TRADES.
4. PROVIDE WATTS MMV ASSE1070 MIXING VALVE AT ALL PUBLIC FIXTURES AS REQUIRED PER LOCAL CODE.
5. PC TO PROVIDE VACUUM BREAKERS AT LOCATIONS WHERE HOSES AND NOZZLES ARE USE, I.E. JANITOR SINKS, BEAUTY SINKS, KITCHEN SPRAYERS, DISHWASHERS, AND BATHS.
6. ALL DRAINAGE LINES 2-1/2" AND UNDER TO BE SLOPED AT MINIMUM 1/4" PER FOOT, AND 3" AND OVER TO BE SLOPED AT MINIMUM 1/8" PER FOOT UNLESS NOTED OTHERWISE.
7. START TRENCHING FOR NEW SANITARY LINE AT FURTHEST FIXTURE (HIGHEST POINT IN SYSTEM) FROM CIVIL CONNECTION POINT TO BUILDING.
8. FIELD ROUTE ALL CONDENSATE LINES, T&P VALVES, AND DRAIN VALVES FROM MECHANICAL AND PLUMBING EQUIPMENT TO SANITARY SEWER RECEPTOR OR STORM/GRADE PER LOCAL CODE AND JURISDICTION.

WATER HEATER CALCULATIONS

FIXTURE NAME	NUMBER OF FIXTURES	FAUCET FLOW GPM	TOTAL GAL/MIN FOR FIXTURES
HAND SINKS	2	0.5	1.0
3-COMP SINK	1	1.5	1.5
SERVICE SINK	1	1.0	1.0
		TOTAL GALLONS/MIN	3.5

USE REHEEM MODEL RTEX-18

PLUMBING FIXTURE SCHEDULE

TAG	ADA	DESCRIPTION	CONNECTIONS DCW	DHW	WASTE	VENT	FIXTURE MANUFACTURER	MODEL NAME	MODEL #	FLOW RATE	DIMENSIONS	MOUNTING	RIM HEIGHT	FINISH	MISC.	REMARKS
FS-1		FLOOR SINK			4"	2"-3"	SIOUX CHEF	SQUARE MAX	861	-	14-3/8"x14-3/8"	FLOOR	1-1/2"	PVC , NICKEL BRONZE, STAINLESS OR DUCTILE IRON		
FD-1		FLOOR DRAIN			2-4"		ZURN	-	FD2211	-	5-5/16" FACE	FLOOR	0	NICKEL BRONZE HEAD, PVC OR ABS BODY	HEEL PROOF	TP

ELECTRIC WATER HEATER SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NO.	ELECTRICAL VOLT	PH	AMP	KW	GPM RISE	RISE (F)	REMARKS
EWH-1	RAHEEM	RTEX-18	240	1	75	18	3	41	1

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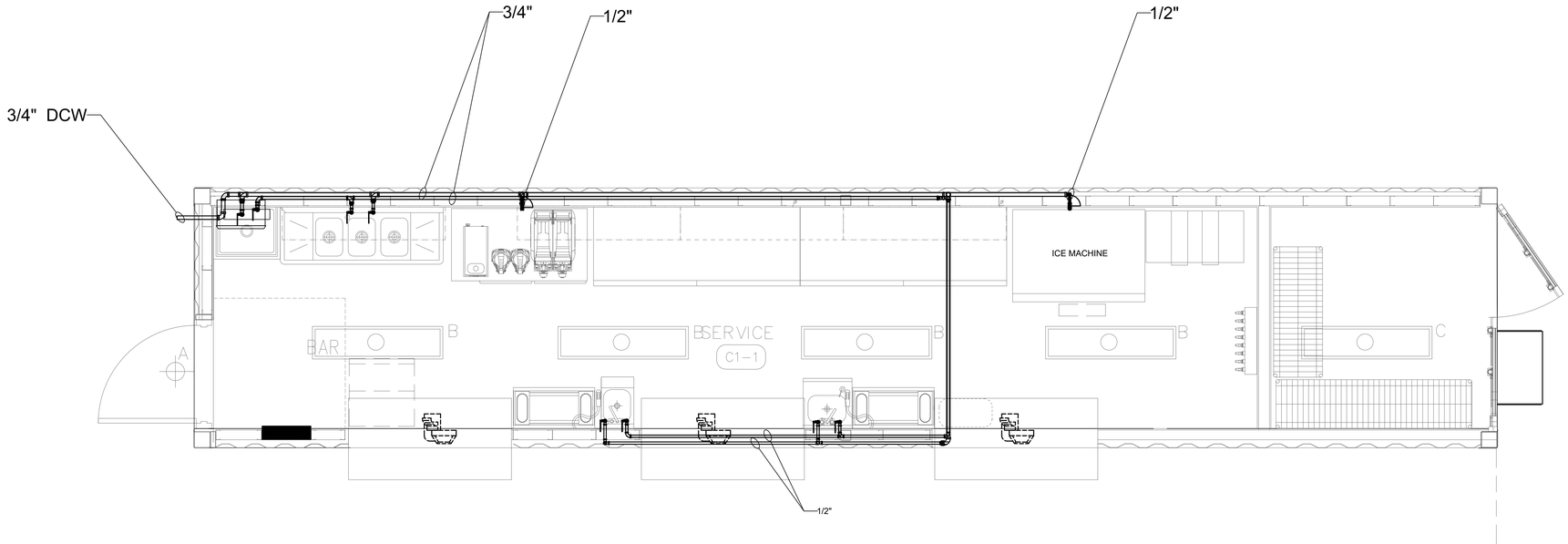
DATE: 7/12/22

DRAWN BY:

CHECK BY:

TITLE:
PLUMBING SPECS
SCHEDULES LEGEND

SHEET NO:
P-0.1



1 PLUMBING PLAN

P-1.0

2' 1' 0 2' 4'

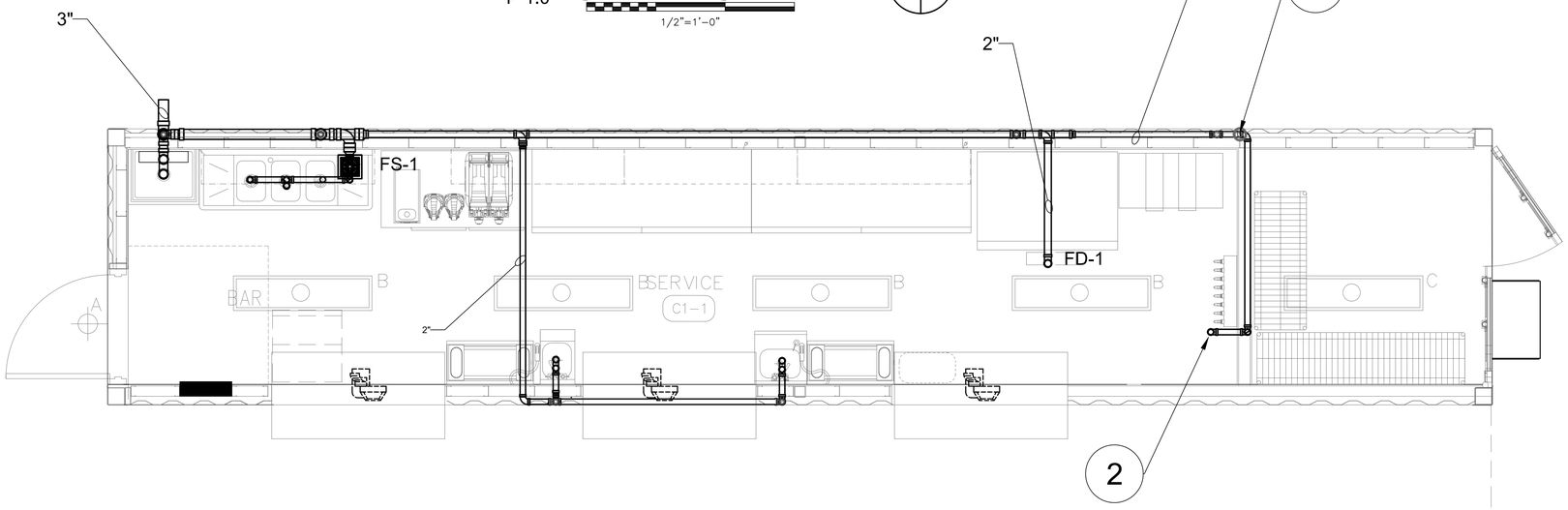
1/2"=1'-0"

NORTH

DRAWING NOTES:

1- AIR ADMITTANCE VALVE BASE DESIGN STUDOR MINI VENT

2- DRAFT BEER DRIP



2 PLUMBING UNDERGROUND PLAN

P-1.0

2' 1' 0 2' 4'

1/2"=1'-0"

NORTH

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ARCHITECT/OWNER:

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CONTAINER BAR FOR

PARAGON STAR

1401 NW VIEW HIGH DR, LEE'S SUMMIT, MO

ISSUE/REVISION

STAMP:

STATE OF MISSOURI
DAVID W. DAY
NUMBER PE-2009
PROFESSIONAL ENGINEER
5-24-23

DATE: 7/12/22

DRAWN BY:

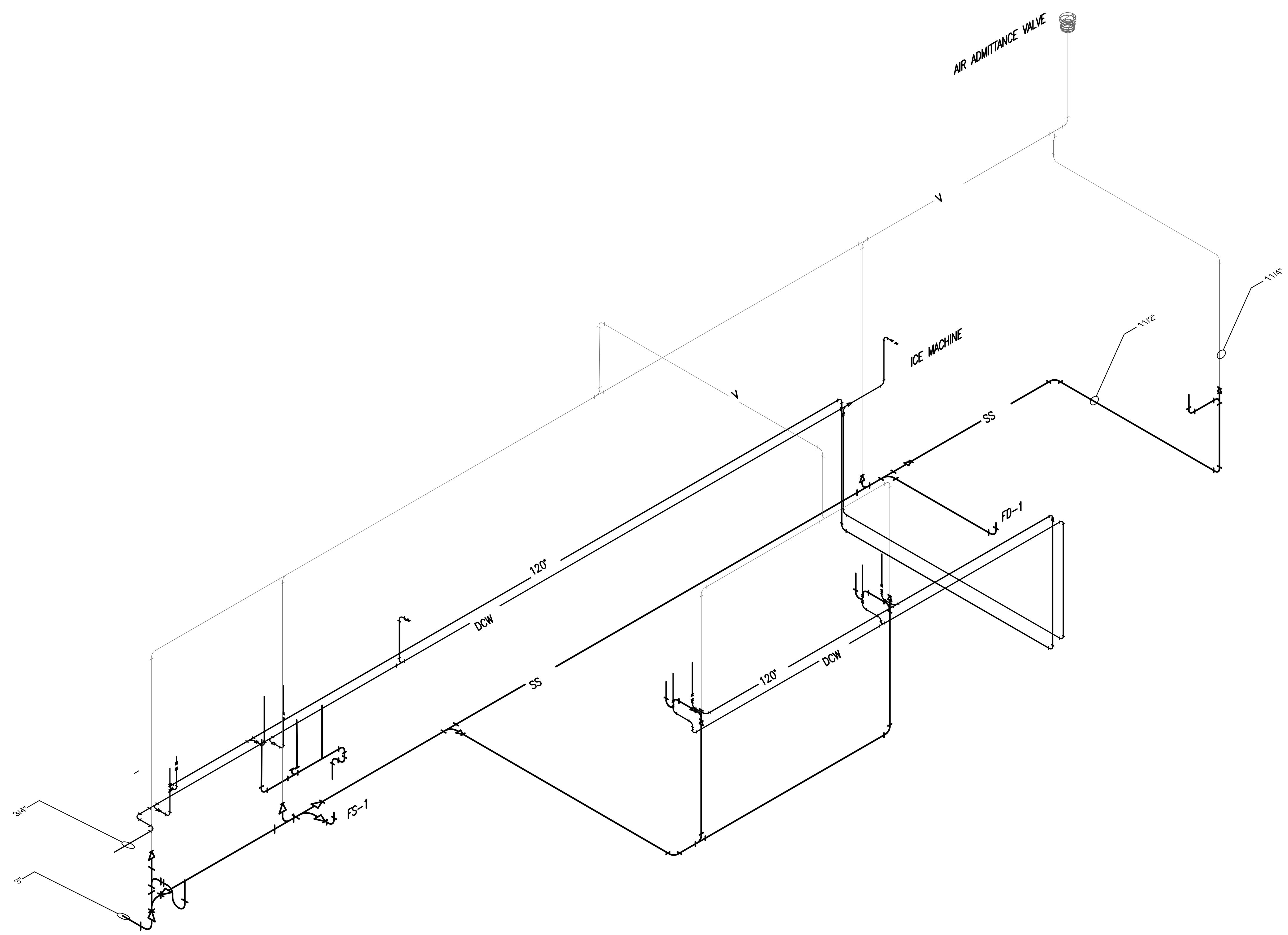
CHECK BY:

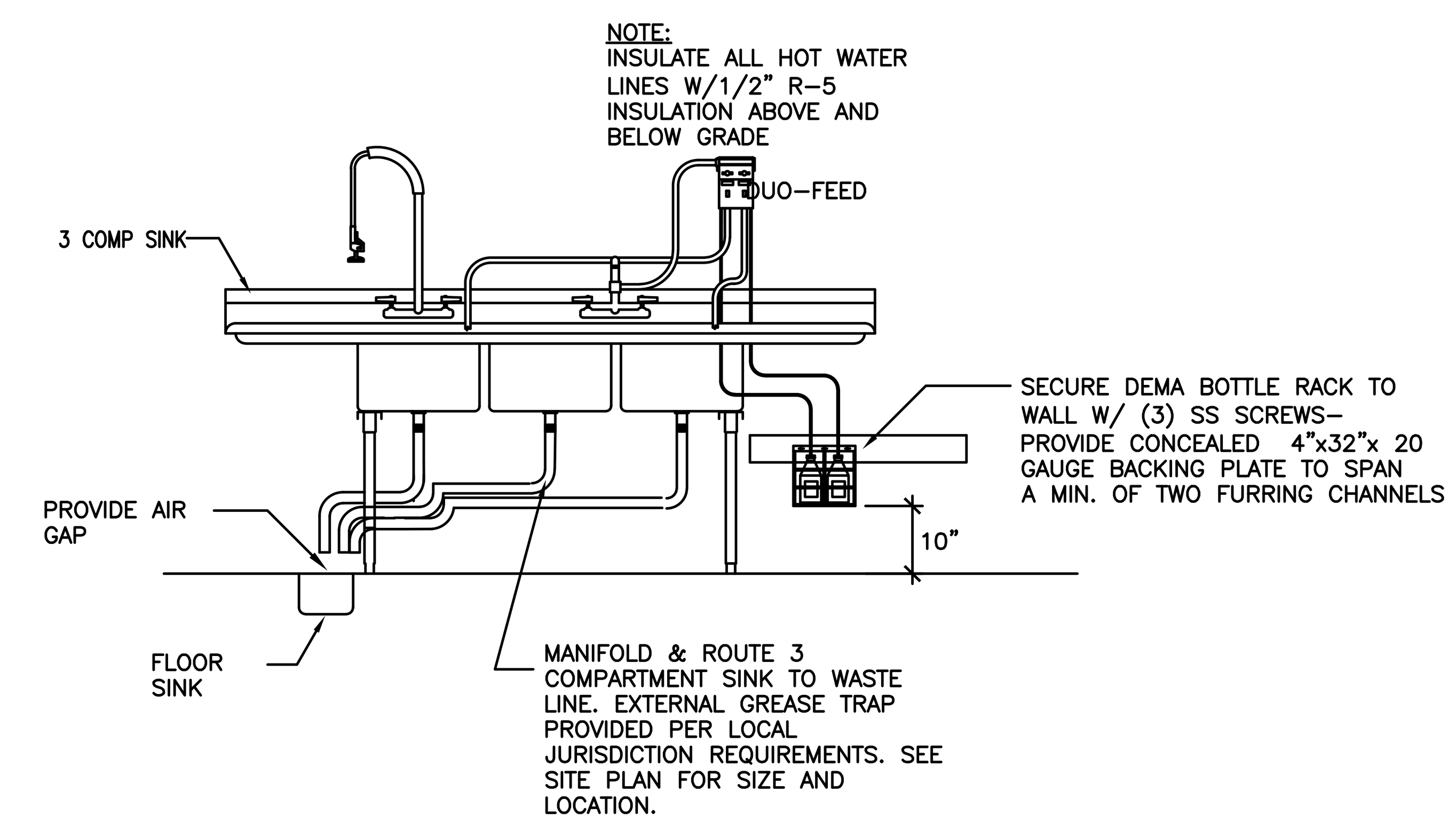
TITLE:

PLUMBING PLAN

SHEET NO:

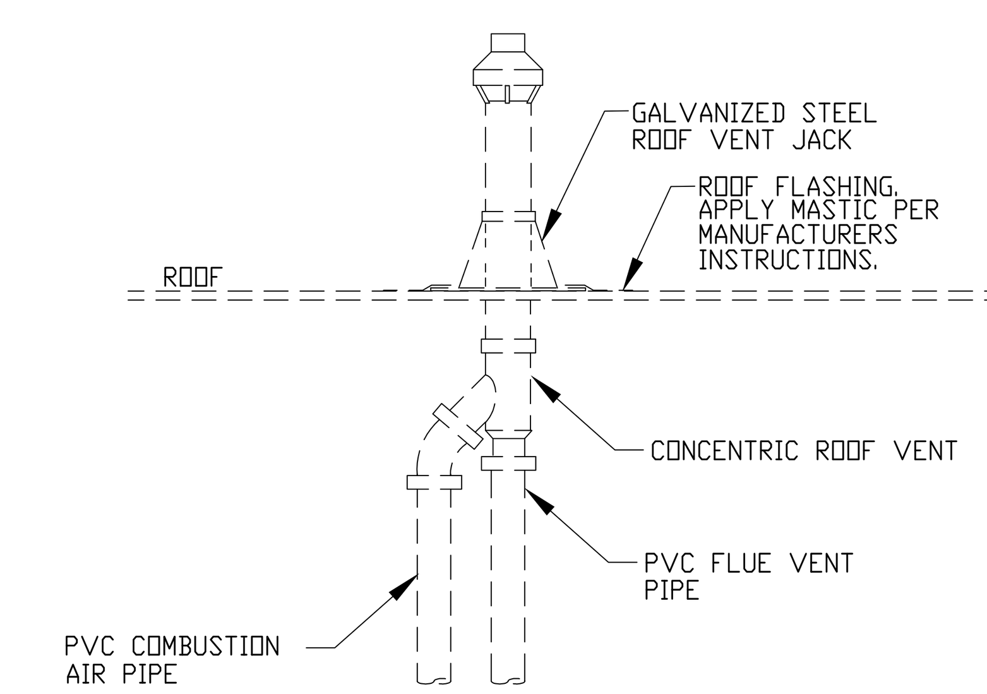
P-1.0





3 COMPARTMENT SINK DETAIL

NO SCALE



WATER HEATER CONCENTRIC ROOF VENT

NO SCALE

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CHECK BY:

TITLE:

SHEET NO:

P-2.0

ELECTRICAL GENERAL NOTES

ALL WORK SHALL COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE (N.E.C.), IECC, AND ALL LOCAL AND STATE BUILDING CODES AND ADOPTED ORDINANCES, AND REQUIREMENTS OF THE UTILITY COMPANY .

THE SUB-CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIARIZED WITH ALL REQUIREMENTS OF THE CONTRACT PRIOR TO SUBMISSION OF BID. THE SUB-CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO BID OR START OF INSTALLATION.

ELECTRICAL CONTRACTOR SHALL CONTACT UTILITY COMPANY FOR METERING REQUIREMENTS AND SHALL INCLUDE ALL WORK IN BID.

CONTRACTOR SHALL MAKE SUBMISSION TO LOCAL UTILITY COMPANY AND BUILDING DEPARTMENT. ELECTRICAL ENGINEER WILL NOT SUBMIT APPLICATION TO UTILITY COMPANY OR BUILDING DEPARTMENT.

THE SUB-CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS WHEN THEY BECOME DUE, AND SHALL NOT COVER ANY WORK UNTIL APPROVED BY THE INSPECTION AUTHORITY.

ANY AND ALL FEES ASSOCIATED WITH THE ELECTRICAL WORK, INCLUDING CONSTRUCTION AND INSPECTIONS SHALL BE PAID FOR BY THE SUB-CONTRACTOR IN ORDER TO DELIVER A COMPLETE AND FINISHED BUILDING, READY FOR OCCUPANCY AND 100% USAGE.

THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE SUB-CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE.

THE INFORMATION PRESENTED ON THESE DRAWINGS IS DIAGRAMMATIC IN NATURE. IT DOES INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF CIRCUITS, OUTLETS, EQUIPMENT, SYSTEMS, ETC. PROVIDE ALL MATERIALS AND LABOR FOR COMPLETELY FINISHED AND OPERA-TIONAL SYSTEMS. EXACT ROUTING MAY VARY AND MAY REQUIRE ADDITIONAL J-BOXES/PULL-BOXES AND/OR SPECIAL FITTINGS.

REFER TO LATEST ARCHITECTURAL DRAWINGS FOR: EXACT WALL LOCATIONS, DIMENSIONS, AND CONFIGURATIONS, DOOR SWINGS FOR SWITCH LOCATION VERIFICATION, REFLECTED CEILING PLANS FOR VERIFICATION OF LIGHT FIXTURE LOCATIONS.

ALL EQUIPMENT SHALL BE NEW AND SHALL HAVE APPROPRIATE UNDERWRITERS LABORATORIES, INC. (U.L.) LABEL AND SHALL CONFORM TO LATEST INDUSTRY STANDARDS.

ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT INCLUDING: LIGHT FIXTURES, ELECTRICAL APPARATUS, WIRING DEVICES, ETC. FOR REVIEW/APPROVAL (5) DAYS PRIOR TO BID. EQUIPMENT IS NOT TO BE ORDERED WITHOUT SUBMITTAL TO ARCHITECT/OWNER/ENGINEER.

ELECTRICAL CONTRACTOR SHALL MAINTAIN ALL WORKING CLEARANCES FOR ALL ELECTRICAL EQUIPMENT PER N.E.C. REQUIREMENTS.

ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY WITH DUAL ELEMENT TIME DELAY FUSES AS NOTED ON THE ONE LINE DIAGRAM. ENCLOSURE AND FUSE SIZE AS SHOWN OR AS REQUIRED TO MATCH INSTALLATION LOCATION AND LOAD CONDITIONS.

AT THE COMPLETION OF THE WORK, THE ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE, ACCURATE, TYPED PANEL DIRECTORIES.

REFER TO MECHANICAL DRAWINGS FOR LOCATION OF THERMOSTAT(S), EXHAUST FAN(S), AND OTHER SPECIAL EQUIPMENT OR CONTROLS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ALL CONDUIT, JUNCTION BOXES, WIRING, AND DISCONNECT SWITCHES AND THERMOSTAT JUNCTION BOXES.

ALL WIRING SHALL BE INSTALLED IN APPROVED RACEWAY SYSTEM IN ACCORDANCE WITH N.E.C. AND LOCAL ORDINANCES. THE USE OF TYPE MC CABLE SHALL BE INSTALLED IN ACCORDANCE WITH N.E.C. ARTICLE 330. IF ALLOWED, TYPE NM CABLE SHALL BE INSTALLED IN ACCORDANCE WITH N.E.C. ARTICLE 334.

BRANCH CIRCUIT WIRING SHALL BE #12 COPPER FOR 20 AMPERE CIRCUITS, #14 COPPER IS ACCEPTABLE FOR 15 AMPERE CIRCUITS. 20 AMPERE CIRCUITS, ARE REQUIRED IN ACCORDANCE WITH N.E.C. PARAGRAPH 210.11(C).

GROUNDING: SYSTEM GROUND SHALL BE IN ACCORDANCE WITH N.E.C. AND TABLE 250.122. THE SYSTEM SHALL BE FURNISHED WITH A CONTINUOUS GROUND FOR RECEPTACLES, LIGHTS, AND EQUIPMENT IN ACCORDANCE WITH N.E.C. TABLE 250.122.

ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE PHASE, 15 AND 20 AMPERE RECEPTACLE OUTLETS AND LIGHTING, INSTALLED IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS, INCLUDING SMOKE DETECTOR 120V POWER, SHALL BE PROTECTED BY AN ARC-FAULT INTERRUPTER(S) IN ACCORDANCE WITH N.E.C. PARAGRAPH 210.12 AND SHALL BE TAMPER RESISTANT IN ACCORDANCE WITH N.E.C. 210.52 AND N.E.C. 406.11.

NOTES: KITCHEN HOOD SYSTEM

NORMAL OPERATION:
THE GREASE HOOD FAN SHALL BE INTERLOCKED TO OPERATE WHEN-EVER ANY GAS-FIRED APPLIANCE IS ON. THE MUA UNIT SHALL OPERATE WHENEVER THE GREASE HOOD OR DISHWASHER HOOD IS OPERATING. START-STOP SWITCHING FOR THE HOOD SYSTEM(S) SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR, PROPERLY LABELED.

ALL ELECTRICAL POWER CONNECTIONS AND RECEPTACLES LOCATED UNDER THE GREASE HOOD SHALL BE CONNECTED TO THE PANELBOARD(S) WITH SHUNT-TRIP BREAKER(S). BREAKERS CONNECTED TO FIRE PROTECTION SYSTEM FOR SHUT-DOWN IF FIRE DETECTORS ARE ACTIVATED.

EMERGENCY FIRE MODE:
ALL EXHAUST FANS SHALL BE LEFT ON, THE MAKE-UP AIR UNIT SHALL BE AUTOMATICALLY TURNED OFF, THE KITCHEN GAS LINE SOLENOID VALVE SHALL BE AUTOMATICALLY TURNED OFF, ELECTRICAL POWER CONNECTIONS UNDER THE HOOD SHALL AUTOMATICALLY TURNED OFF.

COORDINATE THE ABOVE SEQUENCE WITH THE KITCHEN HOOD FIRE PROTECTION CONTRACTOR. INSTALLATION SHALL COMPLY WITH N.F.P.A. CHAPTER 96.

NOTES: KITCHEN EQUIPMENT

THE SUB-CONTRACTOR SHALL COORDINATE WITH AND CONFORM TO: APPROVED ELECTRICAL KITCHEN EQUIPMENT SHOP DRAWINGS, WITH THE EQUIPMENT SUPPLIER, EQUIPMENT INSTALLER, AND THE WIRING DIAGRAMS, DETAILS, ETC., PRIOR TO ANY ROUGH-INS. THIS SHALL INCLUDE THE FOLLOWING BUT IS NOT NECESSARILY LIMITED TO:

PROVIDE ALL POWER CIRCUITS, WIRING, CONDUIT, OUTLETS, DISCONNECT SWITCHES, ETC., AND PROVIDE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT. ALL EQUIPMENT SHALL HAVE APPROVED DISCONNECTING MEANS IN ACCORDANCE WITH N.E.C. ARTICLE 422.

PROVIDE ALL POWER CIRCUITS, WIRING, CONDUIT, OUTLETS, DISCONNECT SWITCHES, ETC., FOR ALL REFRIGERATION EQUIPMENT EXCLUDING COMPRESSORS, SOLENOIDS, ETC. WHICH ARE FURNISHED BY REFRIGERATION CONTRACTOR. MAGNETIC CONTACTORS, TIME CLOCKS, ETC. ARE FURNISHED AND INSTALLED BY THE ELECTRICAL SUB-CONTRACTOR.

PROVIDE MATCHING RECEPTACLES AND CONNECTORS IF CORD IS SUPPLIED WITH EQUIPMENT. SPLICE CONNECTORS TO CORD IF NECESSARY.

MAKE ALL FINAL HARD WIRED CONNECTIONS TO EQUIPMENT AFTER EQUIPMENT IS INSTALLED.

VERIFY ALL ELECTRICAL CHARACTERISTICS WITH THE KITCHEN EQUIPMENT SUPPLIER, RECOMMENDATIONS, AND CONTROL WIRING DIAGRAMS, EQUIPMENT CONNECTIONS, MOUNTING HEIGHTS, LOCATIONS ETC.

PROVIDE MATCHING RECEPTACLES AND CONNECTORS IF CORD IS SUPPLIED WITH EQUIPMENT. PROVIDE CORD CAP IF NOT PROVIDED WITH EQUIPMENT.

FOR ADDITIONAL INFORMATION, REFER TO FOOD SERVICE EQUIP-MENT DRAWINGS.

NOTES: MISCELLANEOUS EQUIPMENT

WHERE OUTLETS ARE INDICATED FOR MISCELLANEOUS EQUIPMENT REQUIRING ELECTRIC POWER OR CONTROL, PROVIDE WIRE, CONDUIT, ETC., AND MAKE ALL CONNECTIONS TO SAME, UNLESS OTHERWISE INDICATED.

PROVIDE ALL POWER CIRCUITS, WIRING, CONDUIT, OUTLETS, DISCONNECT SWITCHES, ETC., AND PROVIDE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT.

PROVIDE GROUNDING FOR ALL EQUIPMENT IN ACCORDANCE WITH N.E.C.

VERIFY EXACT CONNECTIONS REQUIRED FOR ALL EQUIPMENT.

FIRE ALARM SYSTEM

CONTRACTOR SHALL SUBMIT FIRE ALARM SHOP DRAWINGS FOR APPROVAL TO LOCAL AUTHORITIES. SYSTEM SHALL INCLUDE THE FOLLOWING FOR A COMPLETE INSTALLED SYSTEM.

SMOKE DETECTORS SHALL BE LOCATED AS REQUIRED BY I.R.C. SECTION R313, IBC F907.2.8, F907.2.9 AND F907.2.10, SMOKE DETECTORS TO BE POWERED BY NORMAL BUILDING POWER AND STANDBY BATTERY IN ACCORDANCE WITH I.B.C. SECTION 907.

CARBON MONOXIDE DETECTORS SHALL BE LOCATED BY N.F.P.A. 720. DETECTORS POWERED BY NORMAL BUILDING POWER AND STANDBY BATTERY.

INTERCONNECT ALARM RELAY IN ALL SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS TO ACTIVATE ALARM IN ALL DETECTORS WITHIN EACH UNIT.

APPROVED AUDIBLE AND VISUAL ALARM INDICATING DEVICES SHALL BE PROVIDED THROUGHOUT THE FACILITY AS REQUIRED BY THE AUTHORITY HAVE JURISDICTION.

SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AND ORDINANCES.

COMPLETE SYSTEM SHALL BE U.L. LABELED AND LISTED.

VOLTAGE DROP

FEEDER SIZE REQUIRED FOR MAXIMUM 3% VOLTAGE DROP

DISTANCE	WIRE SIZE REQUIRED	VOLTAGE	AMPERES	BRANCH BREAKER	VD
0-64	#12 CU	120	16	20	3.6 (3%)
65-107	#10 CU	120	16	20	3.6 (3%)
108-162	#8 CU	120	16	20	3.6 (3%)
163-254	#6 CU	120	16	20	3.6 (3%)
255-391	#4 CU	120	16	20	3.6 (3%)

NOTE: CALCULATIONS ARE IN ACCORDANCE WITH N.E.C. HANDBOOK 210.19.A.1 EXCEPTION NO2: FPN NO. 4

WHERE VD = $\frac{2 \times L \times R \times I}{1000}$ (VOLTAGE DROP BASED ON CONDUCTOR TEMPERATURE OF 75 DEG. F.)

L = ONE-WAY LENGTH OF CIRCUIT (FT.)
R = CONDUCTOR RESISTANCE (OHMS PER 1000 FT)
I = LOAD CURRENT (AMPERES)

ABBREVIATIONS

(D)	DEMO
(N)	NEW
(E)	EXISTING
UNSW	UNSWITCHED
NL	NIGHTLIGHT
AFF	ABOVE FINISHED FLOOR
WP	WATERPROOF
GFI	GROUND FAULT INTERRUPTER

ELECTRICAL LEGEND

- 48" GFI — DUPLEX RECEPTACLE MOUNT @ 18" [450mm] A.F.F. UNLESS OTHERWISE NOTED
  48" - MOUNT AT 48" [1219mm] A.F.F. IG - ISOLATED GROUND
  +6" - MOUNT AT 6" [152mm] ABOVE CONTERTOP
  GFI - GROUND FAULT INTERRUPTER
- 4-PLEX RECEPTACLE MOUNT @ 18" [450mm] A.F.F. UNLESS OTHERWISE NOTED
- OR — 208V. RECEPTACLE
- J — NOTE: MARK ALL J BOXES WITH BRANCH JUNCTION BOX CIRCUIT PANEL DESIGNATION & CIRCUIT NUMBER(S)
- J — WALL MOUNTED JUNCTION BOX
- TELEPHONE/DATA OUTLET MOUNT @ 18"A.F.F. [450mm] UNLESS OTHERWISE NOTED - STUB 3/4"C. [21mm] INTO ACCESSIBLE LOCATION ABOVE CEILING. PROVIDE BLANK COVER PLATE.
- 2D — TELEPHONE OUTLET MOUNT @ 18"A.F.F. [450mm] UNLESS OTHERWISE NOTED - STUB 3/4"C. [21mm] INTO ACCESSIBLE LOCATION ABOVE CEILING. PROVIDE BLANK COVER PLATE.
  2D-DOUBLE
- FLUSH FLOOR MOUNTED TELEPHONE OUTLET - USE BRASS COVERPLATES - STUB 3/4"C. [21mm] INTO ACCESSIBLE LOCATION ABOVE CEILING
- 2D — DATA TERMINAL OUTLET MOUNT @ 18"A.F.F. [450mm] UNLESS OTHER- WISE NOTED - STUB 3/4"C. [21mm] INTO ACCESSIBLE LOCATION ABOVE CEILING. PROVIDE BLANK COVER PLATE.
  2D-DOUBLE
- FLUSH FLOOR MOUNTED DATA TERMINAL - USE BRASS COVERPLATES - STUB 3/4"C. [21mm] INTO ACCESSIBLE LOCATION ABOVE CEILING
- TV — CATV OUTLET
- FUSIBLE DISCONNECT — NON-FUSIBLE DISCONNECT
- PANELBOARD -NOTE: PROVIDE TYPEWRITTEN DIRECTORIES AT COMPLETION OF WORK
- D — SWITCH MOUNT @ 48" A.F.F. [1219mm] UNLESS OTHERWISE NOTED
  D - DIMMER SWITCH T - TIMER L - LIMIT
  3 - THREE-WAY SWITCHING K - KEYED M - MANUAL STARTER
  OS - OCCUPANCY SENSOR
- OS — CEILING MOUNTED OCCUPANCY SENSOR
- a — RECESS MOUNTED FIXTURE
  A - FIXTURE TYPE
  a - SWITCHING DESIGNATION
- OR — RECESSED DOWNLIGHT
- SURFACE / CHAIN MOUNTED FIXTURE
- AA — WALL / POLE MOUNTED FIXTURE
  AA - FIXTURE TYPE
- WALL MOUNTED EXIT SIGN
  ARROW INDICATED
- CEILING MOUNTED EXIT SIGN
- A-1,3,5 (#10) — CIRCUIT HOME-RUN (ARROWS INDICATE NUMBER OF CIRCUITS)
  A-1,3,5 - PANEL A, CIRCUITS 1, 3, & 5
  (#10) - USE 10 GAUGE COPPER WIRE (6mm²)

NOTE: - NOT ALL SYMBOLS MAY APPLY TO ALL SHEETS
- ALL WIRE SHALL BE COPPER (MIN. #12 AWG) (4mm²) UNLESS OTHERWISE NOTED.
- FEEDERS SHALL CONFORM TO N.E.C. 215.2. BRANCH CIRCUIT WIRING AND VOLTAGE DROP REQUIREMENTS SHALL CONFORM TO N.E.C. 210.19(A).
- ALL SUPPORTS FOR EQUIPMENT AND DEVICES SHALL CONFORM SEISMIC ZONE REQUIREMENTS AND LOCAL AUTHORITY HAVING JURISDICTION. LIGHT FIXTURES SHALL BE SUPPORTED IN ACCORDANCE WITH N.E.C. ARTICLE 300 SPECIFICALLY PARAGRAPH 300.11(A)

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PROFESSIONAL ENGINEER
5-15-23

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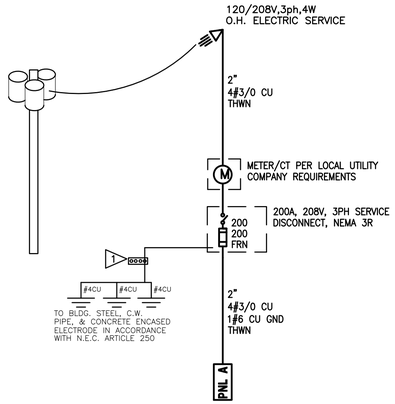
ELECTRICAL NOTES & LEGEND

SHEET NO:
E1.0



SHEET NOTES:

1. PROVIDE AN INTERSYSTEM BONDING TERMINATION (IBT) AS REQUIRED BY N.E.C. ARTICLE 250.94.

ONE LINE DIAGRAM

SCALE: NONE

SHORT CIRCUIT CALCULATIONS

POINT TO POINT METHOD FOR SHORT CIRCUIT CALCULATIONS ILLUSTRATED IN BUSSMAN MANUFACTURING PUBLICATION FORM SPD90.

SERVICE: 120/208 V., 3-PHASE, 4W

$$I\ f.l. = \frac{75 \times 1000}{1.73 \times 208} = 208.333$$

$$MULTIPLIER = \frac{100}{1.6} = 62.5$$

AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY = 13,021 A.

$$FIND\ FACTOR\ f = \frac{1.73 \times (\text{length in feet}) \times (\text{short circuit current})}{(\text{constant from Table C}) \times (\text{line-to-line voltage})}$$

$$f = \frac{1.73 \times 40 \times 13{,}021}{4{,}811 \times 208} = 0.9$$

$$FIND\ FACTOR\ M = \frac{1}{1 + f} \qquad M = 0.526$$

SHORT CIRCUIT CURRENT AT UTILITY METER = M x AVAILABLE S.C. CURRENT

I = 6,849 A.

SCHEDULE – PANEL **A**

MFG. AS APPROVED
TYPE PANELBOARD
LUG LOC. TOP
AMPS. 200A. MLO
VOLTAGE 120/208V. 3ph. 4W
MOUNTING SURFACE
BRACING 10,000 A.I.C.

NOTE: ALL BREAKERS 20A. UNLESS NOTED OTHERWISE.

LIGHT	0.1	KVA @ 125% =	0.2	KVA	
RECEPT.	11.5	KVA @ 100% =	11.5	KVA	
MECH.	5.5	KVA @ 100% =	5.5	KVA	
25% LARGEST MOTOR			0.8	KVA	
SPECIAL	38.4	KVA @ 100% =	38.4	KVA	
SPARE				KVA	
TOTAL			(157A) 56.4	KVA	

RECEPT – #3 COFFEE MAKER	1425	1		2	1500	HP–1
RECEPT	360	3	20	4	1500	---
RECEPT – #31 UNDER BAR REFRIG	445	5		6	3325	#9 HOT WATER HEATER
RECEPT – #5 SLUSH MACH.	1440	7	60	8	3325	---
RECEPT – #7 REF DOOR MERCH.	745	9		10	3325	#9 HOT WATER HEATER
RECEPT – #7 REF DOOR MERCH.	745	11	20	12	3325	---
RECEPT – #8 ICE MACHINE	1035	13		14	1200	RECEPT
RECEPT	180	15	20	16	1200	---
RECEPT	360	17		18	1230	WAC–1
RECEPT – #30 POS	360	19	20	20	1230	---
RECEPT – #30 POS	360	21		22		SPACE
RECEPT – #30 POS	540	23		24		SPACE
RECEPT – #20 U.C. COOLER	205	25		26	120	LIGHTING
RECEPT – EXT.	540	27		28		SPARE
RECEPT – EXT.	360	29		30		SPARE
#22 HEATED AIR CURTAIN	4180	31	60	32		SPARE
---	4180	33		34		SPARE
#22 HEATED AIR CURTAIN	4180	35	60	36		SPARE
---	4180	37		38		SPARE
#22 HEATED AIR CURTAIN	4180	39	60	40		SPARE
---	4180	41		42		SPARE

A phase =	20,200 VA	B phase =	16,570 VA	C phase =	18,690 VA	Total =	55,460 VA

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DRAWN BY: SB

CHECK BY: LRP

TITLE:
ONE LINE DIAGRAM & SCHEDULES

SHEET NO:

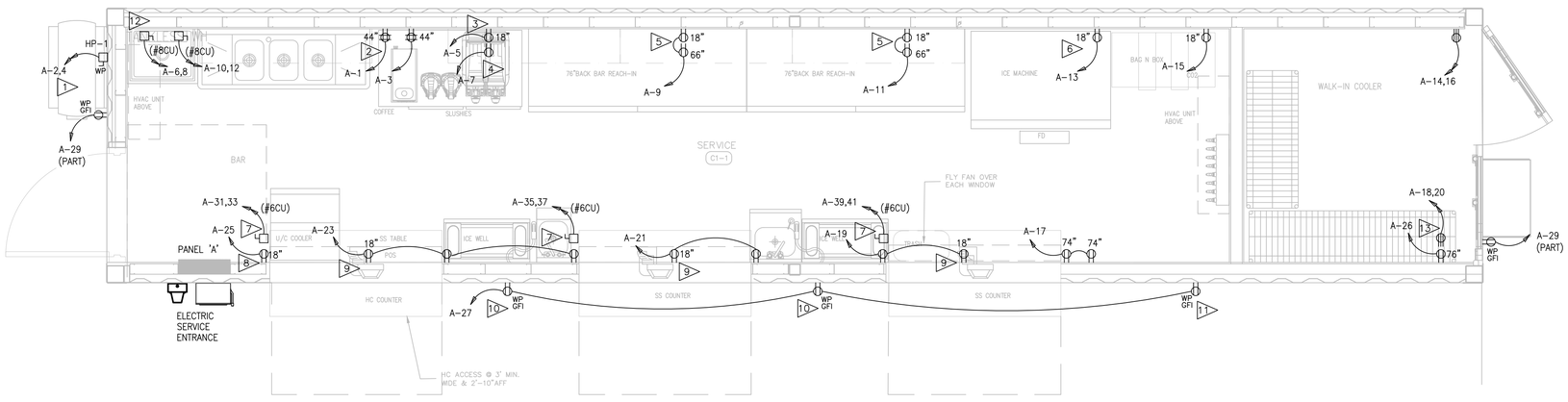
E1.1

NOTES:

1. VERIFY ELECTRICAL REQUIREMENTS, CONNECTION TYPE, AND LOCATION/MOUNTING HEIGHT OF ALL EQUIPMENT/DEVICES BEFORE INSTALLATION.
2. ALL 120V, SINGLE PHASE, 15 AND 20 AMPERE RECEPTACLES INSTALLED IN THE KITCHEN SHALL BE GFCI. VERIFY MOUNTING HEIGHT FOR ALL RECEPTACLES.

SHEET NOTES:

1. PROVIDE CORRECT WORKING SPACE FOR ALL A/C DISCONNECTS. N.E.C. 110.26(A). FUSE PER MANUFACTURER'S REQUIREMENTS. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS.
2. ITEM #3 COFFEE MAKER, 120V, 12A 1425W, NEMA 5-15P
3. ITEM #31 UNDER BAR REFRIGERATOR, 120V, 3.7A, NEMA 5-15P
4. ITEM #5 SLUSH MACHINE, 120, 12A, 1440W, NEMA 5-15P
5. ITEM #7 REFRIGERATED GLASS DOOR MERCHANDISER, 120V 6.2A, NEMA 5-15P
6. ITEM #8 ICE MACHINE, VERIFY ELECTRICAL REQUIREMENTS
7. ITEM #22 HEATED AIR CURTAIN, 208V, 40.2A, 60A BREAKER
8. ITEM #20 UNDER COUNTER COOLER, 120V, 1.7A, NEMA 5-15P
9. ITEM #30 POS, 120V
10. ITEM #21 TV MENU BOARD, 120V, NEMA 5-15P, WP
11. ITEM #21 85" TV, 120V, NEMA 5-15P, WP
12. ITEM #9 HOT WATER HEATER, 208V, 64A, (2) 40A BREAKERS
13. WINDOW AIR CONDITIONER (WAC-1), 208V, 11.8A



POWER PLAN

SCALE: 1/2" = 1'-0"

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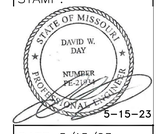


DATE: 5/15/23

DRAWN BY: SB

CHECK BY: LRP

TITLE:
POWER PLAN

SHEET NO:
E2.1

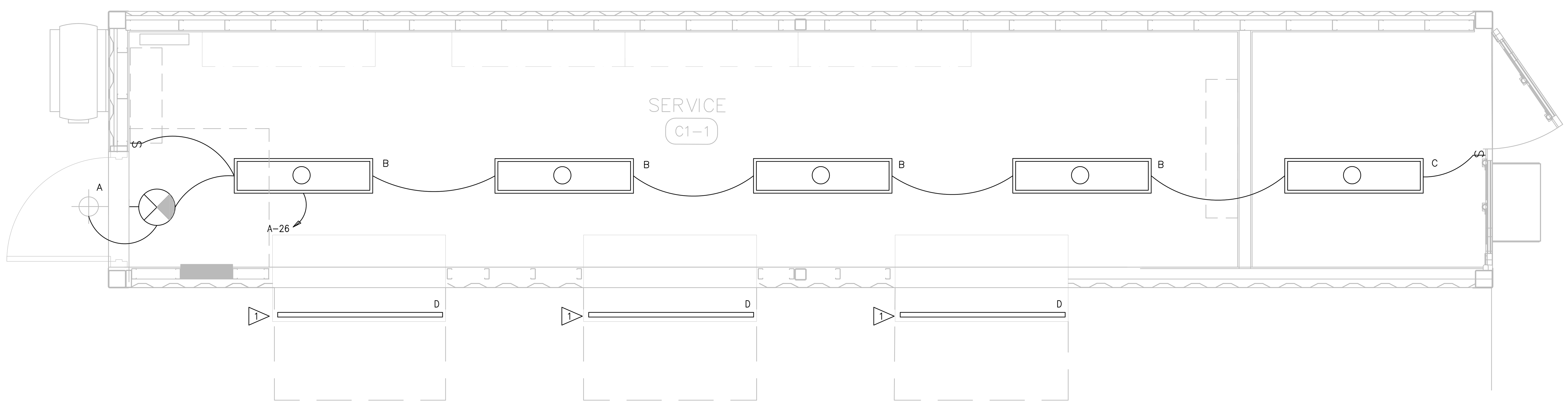
NOTES:

1. CONTRACTOR TO VERIFY THAT ALL EXIT AND EMERGENCY LIGHTING IS ON 90 MINUTE MINIMUM BATTERY BACKUP, AND AHEAD OF SWITCHING ON LIGHTING BRANCH CIRCUITS.
2. VERIFY THAT EXISTING EMERGENCY LIGHTING PROVIDES A MINIMUM OF 1.0 FTC AT FLOOR. ADD ADDITIONAL EMERGENCY LIGHTING AS NECESSARY.
3. VERIFY LOCATION OF ALL LIGHT SWITCHES

SHEET NOTES:

1 UNDERCOUNTER LED FIXTURE TYPE "D" WILL HAVE ELECTRICAL CORD, PLUGGED INTO INTERIOR RECEPTACLE, CONTROLLED BY REMOTE.

A – EXTERIOR EMERGENCY SCONCE
B – 2'X4' LED SHATTERPROOF CEILING MOUNTED FIXTURE
C – COOLER LED LIGHT
D – UNDERCOUNTER LED



LIGHTING PLAN

SCALE: 1/2" = 1'-0"

EE PROJ # 23-1002
ee LLC
EXCELLENCE IN ENGINEERING
12005 Antelope Trail
Parker, Colorado 80138
303-748-1189
info@eeparker.com

ARCHITECT/OWNER:

ROXBOX
5690 Logan St., Unit A
Denver, CO 80216

CONTAINER BAR FOR
PARAGON STAR
10201 VIEW HIGH DR, LEE'S SUMMIT, MO

ISSUE/REVISION

STAMP:

STATE OF MISSOURI
DAVID W. DAY
NUMBER
PROFESSIONAL ENGINEER
5-15-23

DATE: 5/15/23

DRAWN BY: SB

CHECK BY: LRP

TITLE:

LIGHTING PLAN

SHEET NO:

E3.1

COMcheck Software Version 4.1.5.5

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Paragon Star
Project Type: New Construction

Construction Site:
1401 NW View High Dr.
Lee's Summit, MO

Owner/Agent:

Designer/Contractor:
Loren Priest
EE, LLC
12005 Antelope Trail
Parker, CO 80138
303.748.1189
loren@eeparker.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Kitchen / Bar (Dining: Cafeteria/Fast Food)	266	0.71	189
		Total Allowed Watts =	189

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Kitchen / Bar (Dining: Cafeteria/Fast Food)				
LED 1: B: 4' LED: LED Linear 20W:	1	4	21	84
LED 1 copy 1: C: 4' LED: LED Linear 20W:	1	1	21	21
			Total Proposed Watts =	105

Interior Lighting PASSES: Design 44% 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 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley – Electrical Designer — Stan Bentley — 5-15-23
Name - Title — Signature — Date

COMcheck Software Version 4.1.5.5

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Paragon Star
Project Type: New Construction
Exterior Lighting Zone: 4 (High activity metropolitan commercial district (LZ4))

Construction Site:
1401 NW View High Dr.
Lee's Summit, MO

Owner/Agent:

Designer/Contractor:
Loren Priest
EE, LLC
12005 Antelope Trail
Parker, CO 80138
303.748.1189
loren@eeparker.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Sales Counters (Free standing/attached sales canopy)	49 ft2	0.7	Yes	34
			Total Tracable Watts (a) =	34
			Total Allowed Watts =	34
			Total Allowed Supplemental Watts (b) =	900

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 900 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Sales Counters (Free standing/attached sales canopy 49 ft2): Tracable Wattage				
LED 1: D: Linear UC LED: LED Linear 8W:	1	3	20	60
			Total Tradable Proposed Watts =	60

Exterior Lighting PASSES: Design 94% 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 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley – Electrical Designer — Stan Bentley — 5-15-23
Name - Title — Signature — Date

COMcheck Software Version 4.1.5.5

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% 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
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C103.2 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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

Section # & Req.ID	Rough-in Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.4 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.5 [EL28][1][a]	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.2.6 [EL30][1][a]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.6 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.7 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8.2, C405.8.2.1 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.4.1 [FI18][3]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
C405.5.1 [FI19][3]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
C408.1.1 [FI57][3]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5.1 [FI16][3]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.3 [FI33][3]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

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CONTAINER BAR FOR
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ISSUE/REVISION

STAMP:
STATE OF MISSOURI
DAVID W. DAY
NUMBER PE-2010036
PROFESSIONAL ENGINEER
5-15-23

DATE: 5/15/23
DRAWN BY: SB
CHECK BY: LRP

TITLE:
LIGHTING
COMCHECK

SHEET NO:
E4.0