TI RADCO, LLP

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LONG BEACH, CA 90805
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June 26, 2025

Mike Hamm Chief Building Code Consultant, Manufactured Building Division
North Carolina Department of Insurance
Office of State Fire Marshal
Manufactured Building Division
1202 Mail Service Center
Raleigh, NC 27699-1202

RE: APOLLO MODULAR SYSTEMS, INC – DOUGLAS, GA Via NC webaccess/
RADCO Plan No.: AMS-11778 Bus 13-8x70-NC-Combined Set

Dear Mr. Hamm:

Please find enclosed the following documents, approved by RADCO, and submitted for file:

Document:	Approval Date:	No. of Sets:
1.RADCO NC Cover Letter	06/26/2025	1
2.NC Plans Checklist		
3.NC Appendix B		
5.NC Energy Calculations		
6.NC HVAC Calculations		
7.Truss No: P2030803		
8.Plan: AMS 11778 Bus 13-8x70		
Plan No.: AMS-11778 Bus 13-8x70 -NC-Combined Set		

The "Installation Instructions" that are referenced on the list of attachments are not included with these copies of the plans. The "Installation Instructions" are included in the manufacturer's NC Modular Package which has been filed with the Department of Insurance. The repetitious attachment of the "Installation Instructions" with each and every plan set submitted to the Department would be an unnecessary volume of paperwork.

Should you need additional information, or if there are any questions, please feel free to contact James Slaght in our Tampa office at (813) 243-0370.

Sincerely,

James Slaght, MCP

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
Reviewed for Code Compliance
07/03/2025
Harnett COUNTY NORTH CAROLINA

Enclosures
(file: AMS– North Carolina Correspondence)

NORTH CAROLINA
MODULAR PLANS REVIEW CHECKLIST

		PAGE 1 of 3 revised June 2018
Manufacturer		Apollo Modular Systems
Model number/name		AMS-11778 Bus 13-8x70
3rd Party		RADCO
Review Date		6/26/2025
Reviewer		James Slaght
		Plan Sheet Page # and NOTES
x	**QC MANUAL (current and complete)**	
x	**APPENDIX B (required and attached)**	
	PLAN SHEETS	
	Each plan sheet third-party stamped with approver's name	
x	Each plan sheets is numbered and/or indexed	
x	**GENERAL (cover sheet)**	
	Code References	1, Code Summary Block
x	Statement regarding connection to public utilities	1, Plumbing notes
x	Statement regarding bathrooms if not included	N/A
x	Construction type	1, Building Data Notes
x	Occupancy classification	1, Building Data Notes
x	Fire resistance ratings (if required)	N/A
x	Floor live load	1, Structural Load Limitations Block
x	Roof live load	1, Structural Load Limitations Block
x	Design wind velocity	1, Structural Load Limitations Block
x	Seismic information (commercial projects)	1, Structural Load Limitations Block
x	Thermal zones	1, General notes
x	Notice to inspections department regarding items to be site inspected	1, Independent Block
x	**FLOOR PLANS**	
	Interior and exterior wall layouts	2, Floor Plan
x	Door and window schedule	2, Floor Plan
x	Light and Ventilation requirements	N/A
x	Attic access (size and location)	N/A
x	Non-prescriptive headers	QC Manual Pages C14.0 - C14.13
x	Safety glazing requirements	1, General Notes
x	Fire rating of Exterior walls (if applicable)	1, General Notes, Building Design Parameters
x	**EXTERIOR ELEVATIONS**	2
x	Exterior materials	3, Exterior Materials Block
	Attic ventilation requirements	
x	**PLUMBING**	
	Plan	2,Floor Plan
x	All fixtures furnished by mfg. shown on plans	2,Floor Plan, Plumbing risers
	Materials (water supply & distribution, DWV, storm drainage)	2,Floor Plan
x	Supply and waste risers, including DWV system (generic) beneath the building.	2, Plumbing risers
x	Water heater (type and capacity)	2,Floor Plan

NORTH CAROLINA
MODULAR PLANS REVIEW CHECKLIST

		PAGE 2 of 3 revised June 2018
		Electrical
		Brian Washko P-187
	MECHANICAL	**Plan Sheet Page # and NOTES**
x	Design calculations	Stapled to the Plans
x	Installed unit capacity	2, Floor plan

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x	Supply and returns (locations and sizes)	1,2 Mechanical Notes, Floor Plan
x	Duct sizes	1,2 Mechanical Notes, Floor Plan
x	Specifications (units, ducts)	1, Mechanical Notes
x	All appliances furnished by mfg. shown on plans	1,2 Mechanical Notes, Floor Plan
x	**ELECTRICAL**	
x	Plan	2, Floor plan
x	Location of all electrical boxes	2, Floor plan
x	Electrical panel location	2, Floor plan
x	Note regarding main disconnect (if applicable)	1, Electrical Note #4
x	Exterior lighting and receptacles	2, Floor plan
x	Ground level receptacles (if applicable)	N/A
x	Smoke detector location(s)	N/A
	Electrical load calculations	1, Electrical Schedule
x	Electrical panel layout (breaker and wire sizes, circuit schedule)	1, Electrical Schedule
x	Panel and service entrance sizes	1, Electrical Notes, Electrical Schedule
x	All fixtures furnished by mfg. shown on plans	2, Floor plan
	ACCESSIBILITY	
	(for other than 1 & 2 family dwellings)	
x	Entrances and means of egress	1, Accessibility notes
x	Doors, doorways, and door hardware	1, Accessibility notes
x	Stairs and handrails	1, Accessibty Notes #1
x	Toilet rooms, plumbing fixtures, grab bars, etc	1, Accessibty Notes
x	Bathrooms and shower rooms	N/A
x	Occupancy specific requirements	2, Floor Plan
x	Multi-family dwellings: Type A and B units	N/A
x	**FLOOR X-SECTION**	
x	Joists and beam sizes and spacing	4, X-Section
x	Materials species and grade	4, X-Section
x	Sheathing, decking, and concrete as applicable	4, X-Section
x	Fastening instructions	QC Manual C2.0 - C2.4
x	Insulation	4, X-Section
x	Details as required for clarification	N/A
	WALL X-SECTION	
x	Stud and column sizes and spacing	4, X-Section
x	Materials species and grade	4, X-Section
x	Sheathing and bracing	4, X-Section
x	Headers and lintels	QC Manual C14.0 - C14.13
x	Finishes	4, Inteior & Exterior, Finish Material Block
x	Fastening instructions	QC Manual C2.0 - C2.4
x	Insulation	4, X-Section
x	Details as required for clarification	N/A

NORTH CAROLINA
MODULAR PLANS REVIEW CHECKLIST

		Plan Sheet Page # and NOTES
	CEILING / ROOF X-SECTION	
x	Truss, rafter, and beam spacing	4, X-Section
x	Lumber species and grade	QC Manual Truss Section
x	Sheathing and decking	4, X-Section
x	Finishes	4, X-Section
x	Fastening instructions	4, X-Section
x	Insulation	4, X-Section
x	Details including NC sealed truss designs or manual reference	4, X-Section / QC Manual Truss Section
	FOUNDATION PLAN	
x	Footings, pier, and curtain wall locations and specifications	1 and 2 of 2, Foundation Plan

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x	X-sections with dimensions	1 and 2 of 2, Foundation Plan
x	Anchorage - sill plate to piers and curtain wall	N/A
x	Anchorage - building to sill plate	N/A
x	Anchorage - tie downs (lateral and longitudinal)	1 and 2 of 2, Foundation Plan
x	Soil bearing capacity	Foundation Note #10
x	Minimum concrete compressive strength	Foundation Note #6
x	Mortar type	Foundation Note #5
x	Ventilation requirements (with and without vapor barrier)	Elevation Notes
x	Crawl space access requirements	Elevation Notes
	ENERGY COMPLIANCE	
x	Demonstrated compliance	With Plan set
	SET-UP INSTRUCTIONS	
x	Floor and ceiling connections	4, X-Section
x	Marriage wall connections	4, X-Section
x	Roof set-up and connection	4, X-Section
x	Plumbing connections	QC Manual IM-5
x	Mechanical connections	QC Manual IM-7
x	Electrical connections	QC Manual IM-6
x	Fire stopping	1, Local inspection Dept Block
x	Air infiltration elimination	1, Local inspection Dept Block
x	Notice to inspections department attachment if set- up instructions are by attachment	
	ITEMS NOT INSPECTED IN PLANT	
x	List of items not inspected by 3rd. Party	1, Site Installed Items Block
x	Notice to inspections department	1, Site Installed Items Block

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: _____11778 Bus 13-8x70_____

Address: _____ Zip Code _____

Owner/Authorized Agent: _____ Phone # (_____) _____ - _____ E-Mail _____

Owned By: ☐ City/County ☐ Private ☐ State

Code Enforcement Jurisdiction: ☐ City_____ ☐ County_____ ☐ State

CONTACT: _____

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	_____	_____	_____	(___)_____	_____
Civil	Kenneth Earl Dunmon	__P.E._____	_017400__	(___)_____	_____
Electrical	_____	_____	_____	(___)_____	_____
Fire Alarm	_____	_____	_____	(___)_____	_____
Plumbing	_____	_____	_____	(___)_____	_____
Mechanical	_____	_____	_____	(___)_____	_____
Sprinkler-Standpipe	_____	_____	_____	(___)_____	_____
Structural	_____	_____	_____	(___)_____	_____
Retaining Walls >5' High	_____	_____	_____	(___)_____	_____
Other	_____	_____	_____	(___)_____	_____

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ☒ New Building ☐ Addition ☐ Renovation
☐ 1st Time Interior Completion
☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
☐ Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ Prescriptive ☐ Repair ☐ Chapter 14
Alteration: ☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) _____ **CURRENT OCCUPANCY(S)** (Ch. 3)**:** _____
RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3)**:** _____

RISK CATEGORY (Table 1604.5): **Current:** ☐ I ☒ II ☐ III ☐ IV
Proposed: ☐ I ☐ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ 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

Fire District: ☒ No ☐ Yes **Flood Hazard Area:** ☒ No ☐ Yes

Special Inspections Required: ☐ No ☐ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

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Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor		957 sf	
Basement			
TOTAL		957 sf	

ALLOWABLE AREA

Primary Occupancy Classification(s):

Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☒
Educational ☐
Factory ☐ 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 Condition ☐ 1 ☐ 2
☐ I-2 Condition ☐ 1 ☐ 2
☐ I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ I-4
Mercantile ☐
Residential ☐ 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 ☐

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

Special Uses (Chapter 4 – List Code Sections): _____

Special Provisions: (Chapter 5 – List Code Sections): _____

Mixed Occupancy: ☐ No ☐ Yes Separation: _____ Hr. Exception: _____

☐ Non-Separated Use (508.3) - 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 Use (508.4) - 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.

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

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} + \ldots\ldots = \quad \leq 1.00$$

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STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	Bus	957 sf	9,000 sf		

[1] Frontage area increases from Section 506.3 are computed thus:

a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)
e. Percent of frontage increase I_f = 100[F/P – 0.25] x W/30 = _____ (%)

[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2).
[4] The maximum area of open parking garages must comply with Table 406.5.4.
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE [1]
Building Height in Feet (Table 504.3) [2]	40 ft	<15 feet	
Building Height in Stories (Table 504.4) [3]	2	1	

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

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FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
		REQ'D	PROVIDED (W/_____* REDUCTION)				
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

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PERCENTAGE OF WALL OPENING CALCULATIONS

Fire Separation Distance (Feet) from Property Lines	Degree of Openings Protection (Table 705.8)	Allowable Area (%)	Actual Shown on Plans (%)

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes
Exit Signs: ☐ No ☒ Yes
Fire Alarm: ☒ No ☐ Yes
Smoke Detection Systems: ☒ No ☐ Yes ☐ Partial _____
Carbon Monoxide Detection: ☒ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☒ Assumed and real property line locations (if not on the site plan)
- ☒ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☒ Occupant loads for each area
- ☒ Exit access travel distances (1017)
- ☒ Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- ☐ Dead end lengths (1020.4)
- ☒ Clear exit widths for each exit door
- ☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☒ Actual occupant load for 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 (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (202)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

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ACCESSIBLE DWELLING UNITS
(SECTION 1107)

TOTAL UNITS	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

ACCESSIBLE PARKING
(SECTION 1106)

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

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW			1				1		1	1
	REQ'D			1				1		1	1

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

_____

_____

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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 performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ No ☒ Yes (The remainder of this section is not applicable)

Exempt Building: ☐ No ☐ Yes (Provide code or statutory reference): _____

Climate Zone: ☐ 3A ☒ 4A ☐ 5A

Method of Compliance: Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify source here)_____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: R-49
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: R-19
Openings (windows or doors with glazing)
U-Value of assembly: _____
Solar heat gain coefficient: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: R-26

Floors slab on grade

Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) 1.0
Seismic (I_E) 1.0

Live Loads: Roof 20 psf
Mezzanine _____ psf
Floor 50 psf

Ground Snow Load: 20 psf

Wind Load: Ultimate Wind Speed 120 mph (ASCE-7)
Exposure Category C

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☒ C ☐ D

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) ☐ I ☒ II ☐ III ☐ IV

Spectral Response Acceleration S_S 0.52 %g S_1 0.29 %g

Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F

Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data

Basic structural system ☒ Bearing Wall ☐ Dual w/Special Moment Frame
☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Analysis Procedure: ☒ Simplified ☐ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored? ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☒

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 2,000 psf
Pile size, type, and capacity _____

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: _____
summer dry bulb:_____

Interior design conditions

winter dry bulb: _____
summer dry bulb:_____
relative humidity: _____

Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System

Unitary
- description of unit: _____
- heating efficiency: _____
- cooling efficiency: _____
- size category of unit: _____

Boiler
- Size category. If oversized, state reason.: _____

Chiller
- Size category. If oversized, state reason.: _____

List equipment efficiencies: _____

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code ☐ Performance ☐ Prescriptive
ASHRAE 90.1 ☒ Performance ☐ Prescriptive

Lighting schedule (each fixture type)

lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)

☐ C406.2 More Efficient HVAC Equipment Performance
☐ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

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COMcheck Software Version COMcheckWeb

Envelope Compliance Certificate

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Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	11778 NC
Location:	Lillington, North Carolina
Climate Zone:	4a
Project Type:	New Construction
Vertical Glazing / Wall Area:	7%
Performance Sim. Specs:	EnergyPlus 8.1.0.009 (EPW: USA_NC_Raleigh-Durham.Intl.AP.723060_TMY3.epw)

Construction Site:

Owner/Agent:
TITAN / APOLLO MODULAR SYSTEMS
162 INDUSTRIAL DRIVE / 2162 INDUSTRIAL BLVD.
ALMA / DOUGLAS, GA 31510 /31532

Designer/Contractor:
KENNETH EARL DUNMON, P.E.
TOMMY HOOKS ROAD
AMERCUS, GA 31709

Building Area	Floor Area
1-Office : Nonresidential	957

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Attic Roof with Wood Joists, [Bldg. Use 1 - Office]	957	49.0	0.0	0.021	0.027
Floor 1: Wood-Framed, [Bldg. Use 1 - Office]	957	19.0	0.0	0.051	0.033
NORTH					
Exterior Wall 2: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	560	19.0	0.0	0.067	0.089
Window 2: Metal Frame, Perf. Specs.: Product ID CUSTOM, SHGC 0.24, VT 0.45, [Bldg. Use 1 - Office] (b)	45	---	---	0.290	0.420
Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	40	---	---	0.034	0.370
EAST					
Exterior Wall 3: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	110	19.0	0.0	0.067	0.089
Window 1: Metal Frame, Perf. Specs.: Product ID CUSTOM, SHGC 0.24, VT 0.45, [Bldg. Use 1 - Office] (b)	9	---	---	0.290	0.420
SOUTH					
Exterior Wall 4: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	560	19.0	0.0	0.067	0.089
Window 3: Metal Frame, Perf. Specs.: Product ID CUSTOM, SHGC 0.25, VT 0.45, [Bldg. Use 1 - Office] (b)	45	---	---	0.290	0.420
WEST					
Exterior Wall 5: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	110	19.0	0.0	0.067	0.089

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

Envelope PASSES: Design 5% better than code

Envelope Compliance Statement

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

Name - Title

NORTH CAROLINA SEAL 017400 ENGINEER KENNETH E. DUNMON 6-24-25

Date

Electrical
Brian Washko P-187
APPROVED RADCO APPROVED
26-Jun-25
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COMcheck Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Electrical
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Project Information

Energy Code: 90.1 (2019) Standard
Project Title: 11778 NC
Project Type: New Construction

Construction Site:

Owner/Agent:
TITAN / APOLLO MODULAR SYSTEMS
162 INDUSTRIAL DRIVE / 2162 INDUSTRIAL BLVD.
ALMA / DOUGLAS, GA 31510 /31532

Designer/Contractor:
KENNETH EARL DUNMON, P.E.
TOMMY HOOKS ROAD
AMERCUS, GA 31709

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Office	957	0.64	612
		Total Allowed Watts =	612

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Office				
LED 7: LED Linear 22W:	1	12	22	264
			Total Proposed Watts =	264

Interior Lighting PASSES: Design 57% better than code

Interior Lighting Compliance Statement

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

Name - Title _____ Signature _____ Date _____

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 017400 KENNETH E. DUNMON
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Exterior Lighting Compliance Certificate

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Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	11778 NC
Project Type:	New Construction
Exterior Lighting Zone	2 (Neighborhood business district (LZ2))

Construction Site:

Owner/Agent:
TITAN / APOLLO MODULAR SYSTEMS
162 INDUSTRIAL DRIVE / 2162 INDUSTRIAL BLVD.
ALMA / DOUGLAS, GA 31510 /31532

Designer/Contractor:
KENNETH EARL DUNMON, P.E.
TOMMY HOOKS ROAD
AMERCUS, GA 31709

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
F1 (Entry canopy)	3 ft2	0.25	Yes	1
F2 (Entry canopy)	3 ft2	0.25	Yes	1
			Total Tradable Watts (a) =	2
			Total Allowed Watts =	2
			Total Allowed Supplemental Watts (b) =	400

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

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
F1 (Entry canopy, 3 ft2): Tradable Wattage				
Incandescent 1: Incandescent 60W:	1	1	60	60
F2 (Entry canopy, 3 ft2): Tradable Wattage				
Incandescent 2: Incandescent 60W:	1	1	60	60
			Total Tradable Proposed Watts =	120

Exterior Lighting PASSES: Design 70% better than code

Exterior Lighting Compliance Statement

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

Name - Title _____ Signature _____ Date _____

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 017400 KENNETH E. DUNMON
6-24-25

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Mechanical Compliance Certificate

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Project Information

Energy Code:	90.1 (2019) Standard
Project Title:	11778 NC
Location:	Lillington, North Carolina
Climate Zone:	3a
Project Type:	New Construction

Construction Site:

Owner/Agent:
TITAN / APOLLO MODULAR SYSTEMS
162 INDUSTRIAL DRIVE / 2162 INDUSTRIAL BLVD.
ALMA / DOUGLAS, GA 31510 /31532

Designer/Contractor:
KENNETH EARL DUNMON, P.E.
TOMMY HOOKS ROAD
AMERCUS, GA 31709

Mechanical Systems List

Quantity	System Type & Description
1	HVAC System 1 (Single Zone): Heating: 1 each - Other, Electric, Capacity = 68 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Single Package DX Unit, Capacity = 36 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: Humidity Requirements Proposed Efficiency = 14.00 SEER2, Required Efficiency = 13.40 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
1	Water Heater 1: Electric Storage Water Heater, Capacity: 6 gallons w/ Heat Trace Tape Installed Proposed Efficiency: 4.80 SL, %/h (if > 12 kW), Required Efficiency: 4.80 SL, %/h (if > 12 kW)

Mechanical Compliance Statement

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

Name - Title _____ Signatu _____ Date _____

NORTH CAROLINA Professional SEAL 017400 ENGINEER KENNETH E. DUNMON
6-24-25

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Inspection Checklist

Energy Code: 90.1 (2019) Standard

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

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

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

Additional Comments/Assumptions:

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

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

Additional Comments/Assumptions:

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

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

Additional Comments/Assumptions:

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

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
7.4.4.1 [PL2][3]	Temperature controls installed on service water heating systems (<=120ºF to maximum temperature for intended use).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.4.2 [PL3][1]	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.6 [PL4][3]	Heat traps installed on non-circulating storage water tanks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1][2]	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency:_____	Efficiency:_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.4.3.4.1 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.4.5 [ME39][3]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.4.4 [ME5][3]	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.8 [ME6][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.3.2.1 [ME40][2]	DX cooling systems >= 75 kBtu/h (>= 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp >= ¼ designed to vary supply fan airflow as a function of load and comply with operational requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.4.4.1.1 [ME7][3]	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.1.2 [ME8][2]	HVAC ducts and plenums insulated per Table 6.8.2. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.1.3 [ME9][2]	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	_____ in.	_____ in.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.1.4 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.2.1 [ME10][2]	Ducts and plenums having pressure class ratings are Seal Class A construction.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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

Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.8.1-15, 6.8.1-16 [ME110][2]	Electrically operated DX-DOAS units meet requirements per Tables 6.8.1-15 or 6.8.1-16.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.4.2.2 [ME11][3]	Ductwork operating >3 in. water column requires air leakage testing.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.3 [ME19][3]	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.4.1 [ME68][3]	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.4.2 [ME69][3]	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated >= R-0.5.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.5 [ME70][3]	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.2.6 [ME106][3]	Units that provide ventilation air to multiple zones and operate in conjunction with zone heating and cooling systems are prevented from using heating or heat recovery to warm supply air above 60°F when representative building loads or outdoor air temperature indicate that most zones demand cooling.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.3.3 [ME42][3]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
6.5.4.2 [ME25][3]	HVAC pumping systems with >= 3 control values designed for variable fluid flow (see section details).			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.7.2.1 [ME32][2]	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.7.2.4 [ME49][3]	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.5.8.1 [ME34][2]	Unenclosed spaces that are heated use only radiant heat.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.9 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 15% >240 kBtu/h – 10%			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.2 [ME36][2]	Service water heating equipment meets efficiency requirements.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.9 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.5.10 [ME73][3]	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10][2]	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
8.4.3 [EL11][2]	New buildings have electrical energy use measurement devices installed. Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1 [EL1][2]	Automatic control requirements prescribed in Table 9.6.1, for the appropriate space type, are installed. Mandatory lighting controls (labeled as 'REQ') and optional choice controls (labeled as 'ADD1' and 'ADD2') are implemented.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1 [EL2][2]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.1f [EL13][1]	Daylight areas under skylights and roof monitors that have more than 150 W combined input power for general lighting are controlled by photocontrols.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.4 [EL3][2]	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.4.1.3 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
9.6.2 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
10.4.1 [EL9][2]	Electric motors meet requirements where applicable.	☐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	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [IN2][1]	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	R-____ ☐ Above deck ☐ Metal ☐ Attic	R-____ ☐ Above deck ☐ Metal ☐ Attic	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2, 5.8.1.3 [IN3][1]	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the ceiling slope is <= 3:12.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.4 [IN6][1]	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ ☐ Mass ☐ Metal ☐ Steel ☐ Wood	R-____ ☐ Mass ☐ Metal ☐ Steel ☐ Wood	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
4.2.4 [IN8][2]	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R-____ ☐ Mass ☐ Steel ☐ Wood	R-____ ☐ Mass ☐ Steel ☐ Wood	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
5.8.1.2 [IN9][2]	Floor insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.1 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate has been provided listing R-value and other relevant data.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.9 [IN18][2]	Building envelope insulation extends over the full area of the component at the proposed rated R or U value.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.4 [IN11][2]	Eaves are baffled to deflect air to above the insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.5 [IN12][2]	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
5.8.1.6 [IN13][2]	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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

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

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
5.4.3.3 [FI1][1]	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.1.2 [FI3][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.2 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.3.1 [FI21][3]	HVAC systems equipped with at least one automatic shutdown control.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.3.2 [FI22][3]	Setback controls allow automatic restart and temporary operation as required for maintenance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.4.3.6 [FI6][3]	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited. Humidity control prohibits the use of fossil fuel or electricity to produce RH > 30% in the warmest zone humidified and RH < 60% in the coldest zone dehumidified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.7.2.1 [FI7][3]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.7.2.2 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
6.7.2.3 [FI9][1]	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft2 of conditioned area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.4.3 [FI11][3]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
8.7.1 [FI16][3]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
8.7.2 [FI17][3]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
9.2.2.3 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
9.4.2 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*
9.4.4 [FI20][1]	At least 75% of all permanently installed lighting fixtures in dwelling units have >= 55 lm/W efficacy or a >= 45 lm/W total luminaire efficacy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
10.4.3 [FI24][2]	Elevators are designed with the proper lighting, ventilation power, and standby mode.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.3 [FI45][2]	First 8 ft of outlet piping in nonrecirculating storage system, or branch piping connected to recirculated, heat traced, or impredance heated piping is insulated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.3 [FI46][2]	All heat traced or externally heated piping insulated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

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Job	Truss	Truss Type	Qty	Ply	Titan Modular Systems 407
115182	P2030803	KINGPOST	1	1	

UFP Industries Inc., Grand Rapids, MI 49525, Mike Patten — 8.620 e Sep 22 2022 MiTek Industries, Inc. Mon Dec 4 07:11:33 2023

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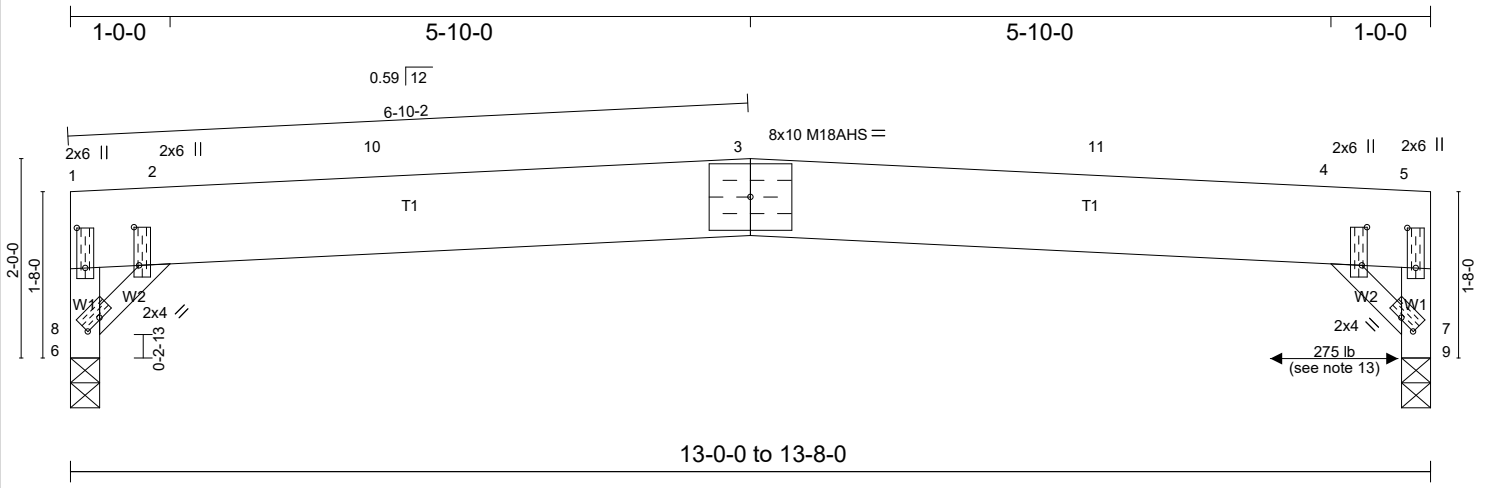

Plate Offsets (X,Y)-- [1:0-4-12,0-1-0], [2:0-4-9,0-0-10], [4:0-4-9,0-0-10], [5:0-4-12,0-1-0], [6:0-2-0,0-0-4], [7:0-2-0,0-0-4]

SPACING-: 2-0-0	**SPACING-:** 1-4-0		**CSI.**	**DEFL.** in (loc) l/defl L/d	**PLATES** **GRIP**
LOADING (psf)	**LOADING** (psf)	Plate Grip DOL 1.15	TC 0.70	Vert(LL) 0.33 3 >482 240	MT20 244/190
TCLL 20.0	TCLL 30.0	Lumber DOL 1.15	BC 0.00	Vert(CT) -0.37 3 >439 180	M18AHS 186/179
(Ground Snow=20.0)	(Ground Snow=30.0)	Rep Stress Incr YES	WB 0.15	Horz(CT) 0.26 9 n/a n/a	
TCDL 15.0	TCDL 22.5	Code IBC2021/TPI2014	Matrix-R		Weight: 59 lb
BCLL 0.0 *	BCLL 0.0 *				FT = 0%
BCDL 0.0	BCDL 0.0				

LUMBER-
TOP CHORD 2x10 SP No.2
WEBS 2x4 SP No.2 *Except*
W2: 2x3 SP No.2

BRACING- **[MCT]**
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.**[P]**
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (lb/size) 8=468/0-3-8 (min. 0-1-8), 9=468/0-3-8 (min. 0-1-8)
Max Horz 8=-49(LC 8)
Max Uplift8=-197(LC 8), 9=-197(LC 9)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-36/49, 2-3=-337/359, 3-4=-337/359, 4-5=-36/49, 6-8=-468/547, 1-6=-464/507, 7-9=-468/547, 5-7=-464/507
WEBS 2-6=-590/596, 4-7=-590/596

NOTES-
1) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph @24in o.c.; TCDL=6.0psf; BCDL=0.0psf; (Alt. 147mph @16in o.c.; TCDL=9.0psf; BCDL=0.0psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pg=20.0 psf; Ps=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10; IBC 1607.11.2 minimum roof live load applied where required.; Min. flat roof snow load governs.
3) Roof design snow load has been reduced to account for slope.
4) Unbalanced snow loads have been considered for this design.
5) The bottom chord dead load shown is sufficient only to cover the truss weight itself and does not allow for any additional load to be added to the bottom chord.
6) All plates are MT20 plates unless otherwise indicated.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 8, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 197 lb uplift at joint 8 and 197 lb uplift at joint 9.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) . The design/selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
12) When adjusting the variable span dimension, adjust the post placement dimensions proportional to the change in span.
13) This truss has been designed for a horizontal wind load as shown.
14) This design has been checked for Alpine Wave 20 gauge plates.
15) Based on P2030801 - IBC 2021, Alpine plates, 13-0-0 to 13-8-0 span

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ALABAMA LICENSED No. 23922 PROFESSIONAL ENGINEER KEVIN W. FREEMAN
12/6/2023

The professional engineering seal indicates that a licensed professional engineer has designed the truss under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

WARNING - ***Verify design parameters and READ NOTES***

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GRAND RAPIDS, MI 49525

Truss shall not be cut or modified without approval of the truss design engineer.
This component has only been designed for the loads noted on this drawing. Construction and lifting forces have not been considered. The builder is responsible for lifting methods and system design. Builder responsibilities are defined under TPI1. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult BCSI 1-06 from the Wood Truss Council of America and Truss Plate Institute Recommendation available from WTCA, 6300 Enterprise LN, Madison, WI 53719 J:\support\MitekSupp\templates\ufp.tpe

UFP INDUSTRIES

Job	Truss	MFG	Customer
115182	P2030803	407	TITAN MODULAR SYSTEMS

The professional engineering seal indicates that a licensed professional has reviewed the design under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use a design in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

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PLUMBING NOTES:

1. TOILETS SHALL BE ELONGATED WITH NONABSORBENT OPEN FRONT SEATS.
2. REST ROOM WALLS SHALL BE COVERED WITH NONABSORBENT MATERIAL TO A MINIMUM HEIGHT OF 48 INCHES A.F.F. FLOORS SHALL HAVEA SMOOTH, HARD, NONABSORBENT SURFACE THAT EXTENDS UPWARD ONTO THE WALLS AT LEAST 6 INCHES.
3. THIS UNIT MUST BE CONNECTED TO A PUBLIC WATER SUPPLY AND SEWER SYSTEM IF THESE ARE AVAILABLE.
4. ALL PLUMBING FIXTURES SHALL HAVE SEPARATE SHUTOFF VALVES.
5. WATER HEATER SHALL HAVE SAFETY PAN WITH 1 INCH DRAIN TO EXTERIOR, T & P RELIEF VALVE WITH DRAIN TO PAN WITH 2" TO 6" AIR GAP AND A SHUT OFF VALVE WITHIN 3 FEET ON A COLD WATER SUPPLY LINE.
6. DWV SYSTEM SHALL BE PVC – DWV.
7. WATER SUPPLY LINES SHALL BE PEX AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS LIMITATIONS AND INSTRUCTIONS.
8. WATER CLOSETS ARE TANK TYPE AND URINALS ARE FLUSH VALVE TYPE UNLESS OTHERWISE SPECIFIED.
9. BUILDING DRAIN AND CLEANOUTS ARE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
10. SHOWERS SHALL BE CONTROLLED BY AN APPROVED MIXING VALVE WITH A MAXIMUM WATER OUTLET TEMPERATURE OF 120°F (48.8°C).
11. THERMAL EXPANSION DEVICE, IF REQUIRED BY WATER HEATER INSTALLED, AND IF NOT SHOWN ON PLUMBING PLAN, IS DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL APPROVAL.
12. WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION.
13. WATER, SOIL AND WASTE PIPES IN UNCONDITION SPACES SHALL BE INSULATED AND PROTECTED FROM FREEZING.
14. CUSTOMER ASSUMES ALL RESPONSIBILTY FOR REQUIRED PLUMBING FACILITIES WHEN NOT SHOWN ON THE PLANS.
15. TEMPERED WATER SHALL BE SUPPLIED THROUGH A WATER TEMP LIMITING DEVICE THAT CONFORMS TO ASSE 1070 AND SHALL LIMIT THE TEMPERED WATER TO A MAX OF 110°F(43°C)
16. WHEN RESTROOM FACILITIES AND/OR PLUMBING FIXTURES REQUIRED PER CODE ARE NOT PROVIDED WITHIN THE BUILDING, A HANDICAPPED ACCESSIBLE FACILITY MUST BE PROVIDED ON SITE WITHIN THE ALLOWABLE DISTANCE PER CODE. THE REQUIRED FACILITY SHALL BE THE RESPONSIBILITY OF THE BUILDING OWNER AND IS SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL JURISDICTION HAVING AUTHORITY. THIS NOTE SHALL BE INDICATED ON THE DATA PLATE
17. THE FIRST 8 FEET OF HOT WATER PIPING FROM WATER HEATER SHALL BE INSULATED WITH 0.5 INCH OF MATERIAL HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/h x ft. x f.

MECHANICAL NOTES:

1. ALL SUPPLY AIR REGISTERS SHALL BE 24 INCHES x 24 INCHES ADJUSTABLE WITH 8 INCHES x 18 INCHES (INSIDE) OVERHEAD FIBERGLASS DUCT, UNLESS OTHERWISE SPECIFIED. DUCTS IN UNCONDITIONED SPACES SHALL HAVE R-6 MINIMUM INSULATION AND R-8 INSULATION WHERE LOCATED OUTSIDE THE BUILDING.
2. INTERIOR DOORS SHALL BE UNDERCUT 1.5 INCHES ABOVE FINISHED FLOOR FOR AIR RETURN AND/OR AS NOTED ON FLOOR PLAN (FOR UNRATED DOORS)
3. HVAC EQUIPMENT SHALL BE EQUIPPED W/OUTSIDE FRESH AIR INTAKES PROVIDING 5 CFM PER PERSON & 0.06 CFM PER S.F. BLDG. AREA PER SECTION 403.3 OF THE NCMC.
4. VENT FANS SHALL BE DUCTED TO THE EXTERIOR AND TERMINATE AT AN APPROVED VENT CAP.
5. EXHAUST FANS SHALL PROVIDE A MINIMUM OF 70 CFM FOR EACH WATER CLOSET
6. THERMOSTAT MUST BE PROGRAMMABLE

STRUCTURAL LOAD SPECIFICATIONS–ASCE 7–10

FLOOR LIVE LOAD:
A. 50 PSF
B. 2000# CONCENTRATED LOAD OVER 30 INCH X 30 INCH AREA LOCATED ANYWHERE ON FLOOR.

ROOF LIVE LOAD:
A. 20 PSF.

ROOF SNOW LOAD:

A. GROUND SNOW LOAD:	Pg	=	20	PSF
B. FLAT–ROOF SNOW LOAD:	Pf	=	20	PSF
C. SNOW EXPOSURE FACTOR:	Ce	=	1.0	
D. SNOW IMPORTANCE FACTOR:	Is	=	1.0	
E. SNOW THERMAL FACTOR:	Ct	=	1.1	
F. ROOF SLOPE FACTOR:	Cs	=	1.0	
G. SLOPED ROOF SNOW LOAD:	Ps	=	Pf x Cs	

H. DESIGN IS BASED ON FULL OR PARTIALLY EXPOSED ROOF PER ASCE 7–10.

WIND LOAD:

A. BASIC WIND SPEED (3–SEC GUST):	V = 120 MPH
B. ASD WIND SPEED (3–SEC GUST):	Vasd = 93 MPH
C. RISK CATEGORY:	II
D. WIND EXPOSURE CATEGORY:	C
E. INTERNAL PRESSURE COEFFICIENT:	GCpi = 0.18

F. COMPONENT & CLADDING BASIC DESIGN PRESSURES (ASD DESIGN PRESSURE) FOR ROOF ANGLES 0 TO 7 DEGREES:

WALL ZONE 5: P = +/– 42.0 PSF	(Pasd = +/– 25.2 PSF)	
WALL ZONE 4: P = +/– 34.0 PSF	(Pasd = +/– 20.4 PSF)	
ROOF ZONE 3: P = – 89.5 PSF	(Pasd = – 53.9 PSF)	
ROOF ZONE 2: P = – 65.8 PSF	(Pasd = – 39.5 PSF)	
ROOF ZONE 1: P = – 50.0 PSF	(Pasd = – 30.0 PSF)	
ROOF ZONE 1': P = – 28.7 PSF	(Pasd = – 17.2 PSF)	

G. THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.
H. BUILDING DESIGN IS BASED ON "ENCLOSED" CLASSIFICATION.
I. BUILDING MEAN ROOF HEIGHT SHALL NOT EXCEED 15 FEET.

SEISMIC LOAD:
A. RISK CATEGORY IS II.
B. SEISMIC IMPORTANCE FACTOR IS 1.0
C. SEISMIC SITE CLASS IS D.
D. SPECTRAL RESPONSE COEFFICIENTS:
Ss = 0.52 S1 = 0.29
Sds = 0.49 Sd1 = 0.19
E. SEISMIC DESIGN CATEGORY IS C.
F. SEISMIC FORCE RESISTING SYSTEM IS A15.
G. EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE
H. RESPONSE MODIFICATION FACTOR R = 6.5.
I. SEISMIC RESPONSE COEFFICIENT Cs = 0.08
J. DESIGN BASE SHEAR V = 2216 LBS

FLOOD LOAD:
THE MODULAR BUILDING UNITS ARE NOT DESIGNED TO BE SUBMERGED OR SUBJECT TO WAVE ACTION. IF INSTALLED IN A FLOOD PLAIN, THE MODULAR BUILDING UNITS MUST BE INSTALLED ABOVE THE MINIMUM BASE FLOOD ELEVATION DERIVED FROM APPROPRIATE FLOOD ELEVATION MAPS FOR THE BUILDING SITE OR SET ON A FOUNDATION DESIGNED FOR FLOOD LEVELS.

GENERAL NOTES:

1. ACCESS TO BUILDING FOR PERSONS IN WHEELCHAIRS IS DESIGNED BY AND FIELD BUILT BY OTHERS AND SUBJECT TO LOCAL JURISDICTION APPROVAL. THE PRIMARY ENTRANCE MUST BE ACCESSIBLE.
2. ALL DOORS SHALL BE OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OR EFFORT. MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS SHALL NOT BE USED.
3. ALL GLAZING WITHIN A 24 INCH ARC OF DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, AND ALL GLAZING IN DOORS SHALL BE SAFETY, TEMPERED OR ACRYLIC PLASTIC SHEET.
4. SEE CROSS SECTION FOR ROOF TO WALL AND WALL TO FLOOR CONNECTIONS AND TIE DOWN REQUIRMENTS
5. STRAPPING MUST BE TESTED AND/OR CERTIFIED TO VERIFY THE STRUCTURAL CAPACITY. APPROPRIATE DOCUMENTATION MUST BE ON FILE AT THE MODULAR BUILDING FACTORY.
6. WINDOWS AND DOORS MUST BE CERTIFIED FOR COMPLIANCE WITH THE WIND DESIGN PRESSURE FOR COMPONENTS AND CLADDING.
7. STRUCTURAL DETAILS NOT INCLUDED IN THIS PLAN SET ARE TO BE CONSTRUCTED ACCORDING TO THE APPROVED STRUCTIRAL MANUAL.
8. PROVISIONS FOR EXIT DISCHARGE LIGHTING ARE THE RESPONSIBILITY OF THE GENRAL CONTRACTOR AND SUBJECT TO LOCAL JURISDICTION APPROVAL WHEN NOT SHOWN ON THE FLOOR PLAN (INCLUDING EMERGENCY LIGHTING, WHEN REQUIRED).
9. PORTABLE FIRE EXTINGUISHER PER N.F.P.A. – 10 INSTALLED BY OTHERS ON SITE, AND SUBJECT TO LOCAL JURISDICTION.
10. IN WIND–BORNE DEBRIS REGIONS, EXTERIOR GLAZING SHALL BE IMPACT RESISTANT OR PROTECTED WITH AN IMPACT RESISTANT COVERING MEETING THE REQUIRMENTS OF AN APPROVED IMPACT RESISTANT STANDARD, OR ASTM E1996. WIND–BORNE DEBRIS REGIONS ARE DESIGNATED IN SECTION 1609 OF THE NCBC.
11. THIS BUILDING IS DESIGNED FOR NORTH CAROLINA CLIMATE ZONE 4a

ELECTRICAL NOTES:

1. ALL CIRCUITS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NATIONAL ELECTRICAL CODE (NEC).
2. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "CLOSET STORAGE SPACE" AS DEFINED BY NEC ARTICLE 410.2.
3. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS ONLY WHERE THE SWITCH OR CIRCUIT BREAKER IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
4. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" POSITION THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING MEANS ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
5. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE DESIGNED AND VERIFIED AS BEING IN COMPLIANCE W/ARTICLES 110.9 & 110.10 OF THE NEC BY LOCAL ELECTRICAL CONSULTANT.
6. THE MAIN ELECTRICAL PANEL AND FEEDERS ARE DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO LOCAL JURISDICTION APPROVAL.
7. ALL CIRCUITS CROSSING OVER MODULE MATING LINE(S) SHALL BE SITE CONNECTED WITH APPROVED ACCESSIBLE JUNCTION BOXES, OR CABLE CONNECTORS.
8. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPT ITSELF SHALL ALSO BE LISTED AS WEATHER RESISTANT AS PER NCEC.
9. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
10. AUTOMATIC RECEPTACLE CONTROLS IF REQUIRED SHALL BE SITE INSTALLED PER THE REQUIRMENTS OF 2021 IECC SECTION C405.11.1 SUBJECT TO THE REVIEW AND APPROVAL OF AUTHORITY HAVING JURISDICTION.

EXT. DR. SPECIFICATIONS:

1. METAL
2. SOLID STEEL
3. Uo = 0.034
4. SHGC = 0.25
5. SWINGING
6. MAX. ALLOWABLE AIR LEAKAGE RATE: 0.3 CFM (PER SQ. FT. OF DOOR AREA)

WINDOW SPECIFICATIONS:

1. VINYL, LOW–E
2. VERTICAL SLIDER
3. DOUBLE PANE TINTED GLASS
4. Uo = 0.29
5. SHGC = 0.24
6. VT = .45
7. MAX. ALLOWABLE AIR LEAKAGE RATE: 0.3 CFM (PER SQ. FT. OF WINDOW AREA)

WINDOW & DOOR SPECIFICATIONS

1. DBL. PANE WINDOWS ARE REQUIRED FOR ALL CLIMATE ZONES. SEE THE COMCHECK ENERGY CALCULATIONS FOR THE MAXIMUM ALLOWED U–FACTOR AND SHGC.
2. THE MAXIMUM ALLOWABLE AIR LEAKAGE RATE FOR WINDOWS IS 0.3 CFM PER SQUARE FEET OF WINDOW AREA.
3. THE MAXIMUM ALLOWABLE AIR LEAKAGE RATE FOR EXTERIOR DOORS IS 0.3 CFM PER SQUARE FEET OF DOOR AREA.

ACCESSIBILITY NOTES:

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN SHALL BE DISPLAYED AT ALL ACCESSIBLE RESTROOM FACILITIES AND AT ACCESSIBLE BUILDING ENTRANCES UNLESS ALL ENTRANCES ARE ACCESSIBLE. INACCESSIBLE ENTRANCES SHALL HAVE DIRECTIONAL SIGNS INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE ENTRANCE.
2. ACCESSIBLE DRINKING FOUNTAINS SHALL HAVE A SPOUT HEIGHT NO HIGHER THAN 36 INCHES ABOVE THE FLOOR AND EDGE OF BASIN NO HIGHER THAN 34 INCHES ABOVE THE FLOOR FOR INDIVIDUALS IN WHEELCHAIRS. ADDITIONALLY, DRINKING WATER PROVISIONS SHALL BE MADE FOR INDIVIDUALS WHO HAVE DIFFICULTY BENDING.
3. WHERE STORAGE FACILITIES SUCH AS CABINETS, SHELVES, CLOSETS AND DRAWERS ARE PROVIDED AT LEAST ONE TYPE PROVIDED SHALL CONTAIN STORAGE SPACE COMPLYING WITH THE FOLLOWING: DOORS ETC. TO SUCH SPACES SHALL BE ACCESSIBLE (I.E. TOUCH LATCHES, U–SHAPED PULLS); SPACES SHALL BE 15 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR FOR FORWARD REACH OR SIDE REACH; CLOTHES RODS OR COAT HOOKS SHALL BE A MAXIMUM OF 48 INCHES ABOVE THE FLOOR (46 INCHES MAXIMUM WHEN DISTANCE FROM WHEEL CHAIR TO ROD EXCEEDS 10 INCHES). SHELVES IN KITCHENS OR TOILET ROOMS SHALL BE 40 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE IN FLOOR.
4. CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE NO HIGHER THAN 48 INCHES ABOVE THE FLOOR. RECEPTACLES ON WALLS SHALL BE MOUNTED NO LESS THAN 15 INCHES ABOVE THE FLOOR. EXCEPTION; HEIGHT LIMITATIONS DO NOT APPLY WHERE THE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.
5. WHERE EMERGENCY WARNING SYSTEMS ARE PROVIED, THEY SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. THE VISUAL ALARMS SHALL BE LOCATED THROUGHOUT, INCLUDING RESTROOM, AND PLACED 80 INCHES ABOVE THE FLOOR OR 6 INCHES BELOW CEILING,WHICHEVER IS LOWER.
6. ALL DOORS SHALL BE OPENABLE BY A SINGLE EFFORT. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM. THE MAXIMUM FORCE REQUIRED FOR PUSHING OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL NOT EXCEED 5 LBS. FOR ALL SLIDING, FOLDING, AND INTERIOR HINGED DOORS.
7. FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP–RESISTANT. CHANGES IN LEVEL BETWEEN 0.25 INCH AND 0.5 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 CHANGES IN LEVEL GREATER THAN 0.5 INCH REQUIRE RAMPS. CARPET PILE THICKNESS SHALL BE 0.5 MAX. GRATINGS IN FLOOR SHALL HAVE SPACES NO GREATER THAN 0.5 INCH WIDE IN ONE DIRECTION. DOORWAY THRESHOLDS SHALL NOT EXCEED 0.5 INCH IN HEIGHT.
8. ACCESSIBLE WATER CLOSETS SHALL BE 17 INCHES TO 19 INCHES, MEASURED FROM THE FLOOR TO THE TOP OF THE SEAT. GRAB BARS SHALL BE 36 INCHES LONG MINIMUM WHEN LOCATED BEHIND WATER CLOSET AND 42 INCHES MINIMUM WHEN LOCATED ALONG SIDE OF WATER CLOSET, AND SHALL BE MOUNTED 33 INCHES TO 36 INCHES ABOVE THE FLOOR. IN ADDITION, A VERTICAL GRAB BAR 18 INCHES MINIMUM IN LENGTH SHALL BE MOUNTED ON THE SIDEWALL WITH THE BOTTOM OF THE BAR LOCATED BETWEEN 39 AND 41 INCHES ABOVE THE FLOOR, AND WITH THE CENTER LINE OF THE BAR LOCATED BETWEEN 39 INCHES AND 41 INCHES FROM THE REAR WALL.
9. ACCESSIBLE URINALS SHALL BE STALL–TYPE OR WALL HUNG WITH ELONGATED RIMS AT A MAXIMUM OF 17 INCHES ABOVE THE FLOOR.
10. ACCESSIBLE LAVATORIES AND SINKS SHALL BE MOUNTED WITH THE RIM NO HIGHER THAN 34 INCHES ABOVE THE FLOOR. KNEE CLEARANCE OF AT LEAST 27 INCHES HIGH MUST BE PROVIDED WITH A MINIMUM DEPTH OF 8 INCHES BENEATH THE FIXTURE, AND 9 INCHES HIGH MINIMUM WITH A MINIMUM DEPTH OF 11 INCHES BENEATH THE FIXTURE. THE KNEE SPACE MUST BE AT LEAST 30 INCHES WIDE.
11. HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. INSULATION OR PROTECTION MATERIALS MAY BE SITE INSTALLED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER ACCESSIBLE LAVATORIES AND SINKS.
12. ACCESSIBLE LAVATORIES AND SINKS SHALL HAVE ACCESIBLE FAUCETS (I.E. LEVER–OPERATED, PUSH TYPE, ELECTRONICALLY CONTROLLED).
13. MIRRORS LOCATED ABOVE LAVATORIES, SINKS OR COUNTERS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE A MAXIMUM OF 40 INCHES ABOVE THE FLOOR. OTHER MIRRORS IN TOILET ROOMS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES MAXIMUM ABOVE THE FLOOR.
14. GRAB BARS HAVING A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1.25 INCHES MINIMUM AND 2.0 INCHES MAXIMUM. THE SPACE BETWEEN THE GRAB BAR AND THE WALL SHALL BE 1.5 INCHES.
15. WATER CLOSET FLUSH CONTROL SHALL BE INSTALLED A MAXIMUM OF 36 INCHES ABOVE THE FLOOR AND SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.
16. DOORS TO ALL ACCESSIBLE SPACES SHALL HAVE ACCESSIBLE HARDWARE (I.E. LEVER – OPERRATED, PUSHTYPE, U–SHAPED) MOUNTED WITH OPERABLE PARTS BETWEEN 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR.
17. TOILET STALL DOORS SHALL BE THE SELF–CLOSING TYPE.
18. A TOWEL DISPENSER SHALL BE LOCATED ADJACENT TO ALL ACCESSIBLE LAVTORIES.

NORTH CAROLINA PKG. REFERENCES

N.C. INSTALLATION INSTRUCTIONS

ATTENTION LOCAL INSPECTIONS DEPARTMENT

INSTALLATION INSTRUCTIONS FOR THIS MODULAR BUILDING ARE INCLUDED BY ATTACHMENT TO THESE PLANS. ANY PLANS SET WHICH DOES NOT CONTAIN AN ATTACHMENT ENTITLED "INSTALLATION INSTRUCTIONS" IS INCOMPLETE. REFER TO THE FOLLOWING SECTIONS OF THE PLAN SET AND INSTALLATION FOR IMPORTANT INFORMATION CONCERNING THE INSTALLATION OF THE MODULAR BUILDING.

1. THE INTERCONNECTION BETWEEN BUILDING MODULES AT THE FLOOR AND ROOF SHALL BE SPECIFIED ON THE CROSS SECTION DRAWING ON THE PLAN SET.
2. BUILDING TIE DOWN AND ANCHORAGE REQUIREMENTS ARE AS INDICATED ON FOUNDATION PLAN.
3. ELECTRICAL INTERCONNECTIONS BETWEEN BUILDING MODULES SHALL BE PER PAGES E1.2, E2.0, E2.1, E2.2, E4.1 OF THE INSTALLATION INSTRUCTIONS (IF APPLICABLE).
4. MECHANICAL INTERCONNECTIONS BETWEEN BUILDING MODULES SHALL BE PER PAGES E1.0, E2.4, E2.5 OF THE INSTALLATION INSTRUCTIONS (IF APPLICABLE).
5. PLUMBING INTERCONNECTIONS BETWEEN BUILDING MODULES SHALL BE PER PAGES E1.1, E1.2, E2.3, E4.1 OF THE INSTALLATION INSTRUCTIONS (IF APPLICABLE).
6. FIRE BLOCKING SHALL BE PROVIDED PER SECTION 717.2 AND 1406.2.3 OF THE N.C. BUILDING CODE (AS APPLICABLE).
7. AIR INFILTRATION AT MODULE MATE LINES SHALL BE LIMITED BY INSTALLING SILL TAPE ALONG THE MATE LINES DURING SET UP AND/OR BY INSTALLING CONTINUOUS SHEATHING ACROSS THE MATE LINE JOINTS AFTER SET UP.

ATTENTION LOCAL INSPECTIONS DEPARTMENT

SITE INSTALLED ITEMS

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED BY THE MANUFACTURER, HAVE NOT BEEN INSPECTED BY RADCO AND ARE NOT CERTIFIED BY THE STATE MODULAR LABEL. NOTE THAT THIS LIST DOES NOT NECESSARILY LIMIT THE ITEMS OF WORK AND MATERIAL THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SITE RELATED ITEMS ARE SUBJECT TO LOCAL JURISDICTION APPROVAL. CODE COMPLIANCE MUST BE DETERMINED AT THE LOCAL LEVEL.

1. THE COMPLETE FOUNDATION SUPPORT AND TIE DOWN SYSTEM.
2. RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING.
3. PORTABLE FIRE EXTINGUISHER(S).
4. BUILDING DRAINS, CLEANOUTS, DRINKING FOUNTAIN, HOOK–UP TO PLUMBING SYSTEM.
5. ELECTRICAL SERVICE HOOK–UP (INCLUDING FEEDERS) TO THE BUILDING.
6. GLAZING OPENING PROTECTION–SEE GENERAL NOTE 10
7. GUTTER AND DOWN SPOUTS.
8. EXIT DISCHARGE LIGHTING (INCLUDING EMERGENCY)
9. CONTROLED RECEPTACLES WHEN REQUIRED

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BUILDING DESIGN PARAMETERS

1. USE/OCCUPANCY:		BUSINESS
2. CONSTRUCTION TYPE:		VB
3. SPRINKLER SYSTEM:		NO
4. BUILDING AREA:		956 S.F.
5. BUILDING HEIGHT:		≤15 FEET
6. NUMBER OF STORIES:		1
7. NUMBER OF MODULES:		1
8. OCCUPANT LOAD 10 BASED ON 100 SF/PERSON		
9. EXTERIOR WALL FIRE RATING:		NOT RATED

10. THIS BUILDING MUST BE INSTALLED WITH THE FIRE SEPARATION DISTANCES REQUIRED BY NCBC 602 AND SECTION 705.3,
11. ENGERGY CODE COMPLIANCE: SEE ATTACHED ENERGY CALCULATIONS.
12. MANUFACTURERS DATA PLATE, STATE LABELS AND RADCO LABELS ARE TO BE LOCATED ADJACENT TO ELECTRICAL PANEL.

CODE SUMMARY:

STATE	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING	ACCESSIBILTY	ENERGY CODE
N. CAROLINA	NCBC 2018 2018 NCFPC	2020 N.C. ELECT. CODE	2018 NCMC	2018 NCPC	NCBC 2018 CHPT. 11 AND ICC/ANSI A117.1–2009	2018 NC ENERGY CODE

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NORTH CAROLINA Registered Professional Engineer SEAL 017400 ENGINEER KENNETH E. DUNMON
6-24-25

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ALMA, GA 31510 (912) 632–3344
APOLLO MODULAR SYSTEMS, INC.
2162 INDUSTRIAL BLVD.
DOUGLAS, GA 31533 (912) 632–3344

DATE: 5–29–25	THIRD PARTY: RADCO 5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813–243–0370	
SCALE: NO SCALE		
CODES: SEE NOTES		
STATES: NC.	REVISIONS:	BY: K.E.D.
REFERENCE: 11778		
TMS/AMS 11778 13'–8" x 70'–0" BUSINESS		SHEET 1 OF 4
COVER SHEET	DESTINATION: BUNLEVEL	

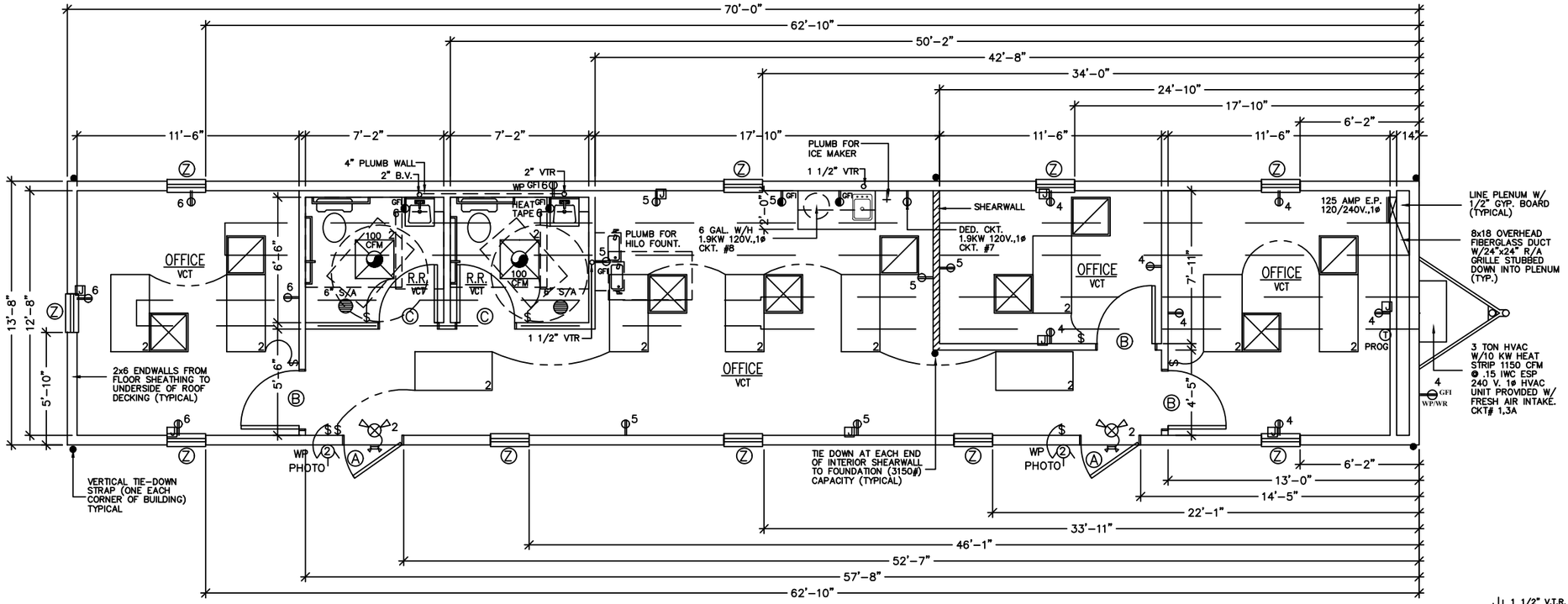
ELECTRICAL SCHEDULE

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (CU.)
1, 3	HVAC	60 A (2P) HACR	6-2 #8 GRND.
7	DED. CKT. 1.9KW 120V.,1ø	20 A(1P)	12-2 NM
8	WATER HEATER	20 A(1P)	12-2 NM
4, 5, 6	RECEPTACLES/FAN	20 A	12-2 NM
2	LIGHTING/FAN	20 A	12-2 NM

ELECTRICAL PANEL SIZING:

DESCRIPTION	KVA
GENERAL LIGHTING	
.0035 KW/SF X956 SF X 1.25=	4.2
22 RECEPTS AT 180VA/1000=	4.0
WATER HEATER 1.9 KW x 1.25=	2.4
2 FANS AT .3 KW X 1.25=	.8
HVAC	10.5
DED. CKT. 1.9KW x 1.25=	2.4

TOTAL 24.3 KW
TOTAL/240 X 1000= 103 AMPS
INSTALL 125 AMP PANEL
120/240 V 1ø



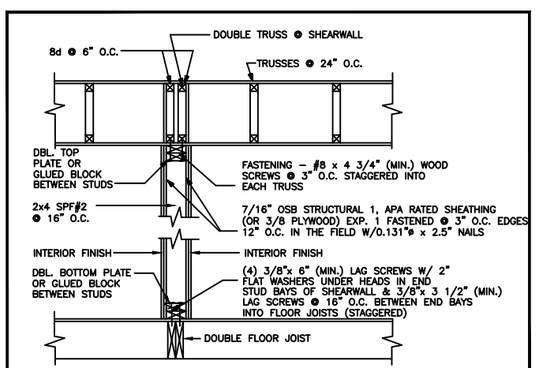
SYMBOLS

J-BOXES ONLY

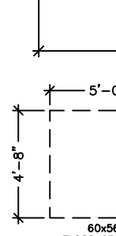
- P / H / S — FIRE ALARM PULL STATION / FIRE ALARM HORN/STROBE / FIRE ALARM STROBE LIGHT
- J — JUNCTION BOX (NON POWERED UNLESS CIRCUIT NO. IS SHOWN)
- S — SMOKE DETECTOR
- DUPLEX RECEPTACLE 120 V.
- SINGLE RECEPTACLE 240 V.
- INCANDESCENT LIGHT WITH 1- 60 W. BULB
- LED PORCH LIGHT WITH 1-11 W. BULB
- VENT FAN
- COMB. VENT FAN & LIGHT
- SUPPLY AIR REGISTER
- RETURN AIR REGISTER
- T — THERMOSTAT
- LED LIGHT FIXTURE WITH 16W PANEL
- LED LIGHT FIXTURE WITH 22W PANEL
- EXIT/EMERGENCY COMBO W/BATTERY BACKUP
- EXIT/EMERGENCY COMBO W/REMOTE HEAD W/BATTERY BACKUP
- EXIT — EXIT/EMERGENCY COMBO W/BATTERY BACKUP
- EXIT SIGN W/BATTERY BACKUP
- LED EMERGENCY LIGHT WITH BATTERY BACKUP
- TELEPHONE JACK
- $ $3 — SWITCH & 3 WAY SWITCH AUTO SHUT-OFF SEE ELECTRICAL NOTES 11
- OS $ — OCCUPANCY SENSOR SWITCH
- FIRE EXTINGUISHER

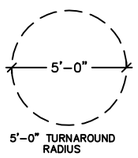
DWV RISER NOTES:

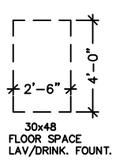
1. THE DWV RISER INDICATES ONE METHOD OF INSTALLING THE BELOW THE FLOOR PIPING. OTHER APPROVED METHODS MAY BE USED AS NEEDED TO ACCOMMODATE THE ACTUAL SITE CONDITIONS.
2. ALL BELOW FLOOR PIPING AND FITTINGS ARE TO BE SUPPLIED AND INSTALLED ON SITE BY OTHERS.
3. 1 1/2 INCH AND 2 INCH HORIZONTAL DRAIN LINES SHALL BE INSTALLED WITH A SLOPE OF 1/4 INCH PER FOOT.
4. 3 AND 4 INCH HORIZONTAL DRAIN LINES SHALL BE INSTALLED WITH A SLOPE OF 1/8 INCH PER FOOT.
5. BELOW FLOOR HORIZONTAL DRAIN LINES ARE 3 INCH MINIMUM DIAMETER UNLESS INDICATED OTHERWISE.
6. A MAXIMUM OF 3 WATER CLOSETS MAY DISCHARGE INTO A 3 INCH LINE.
7. CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS AS INDICATED IN TABLE 706.3. VERTICAL TO HORIZONTAL AND HORIZONTAL TO HORIZONTAL CHANGES OF DIRECTION ARE TO BE MADE WITH LONG SWEEP FITTINGS.

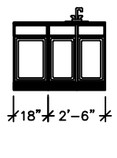


INTERIOR SHEARWALL DETAIL
-NTS-









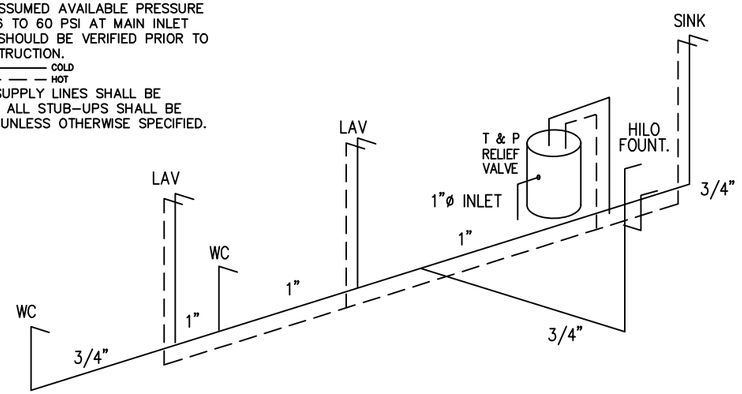
DOOR SCHEDULE

A	3680 - STEEL DOOR W/10"X10" SAFETY VISION PANEL - STEEL JAMB - CLOSER - KEYED LEVER
B	3680 - SOLID CORE - FLUSH DOOR STEEL JAMB - LEVER/PASSAGE
C	3680 - SOLID CORE - FLUSH DOOR STEEL JAMB - LEVER/PRIVACY

WINDOW SCHEDULE

Z	24W x 54H VERTICAL SLIDER DP 50 INSULATED LOW-E TINTED GLASS WHITE VINYL FRAME - VINYL MINI BLINDS

SUPPLY LINE SIZING IS BASED ON AN ASSUMED AVAILABLE PRESSURE OF 46 TO 60 PSI AT MAIN INLET AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION.
——— COLD
— — — HOT
ALL SUPPLY LINES SHALL BE 3/4", ALL STUB-UPS SHALL BE 1/2" UNLESS OTHERWISE SPECIFIED.



SUPPLY RISER -NTS-

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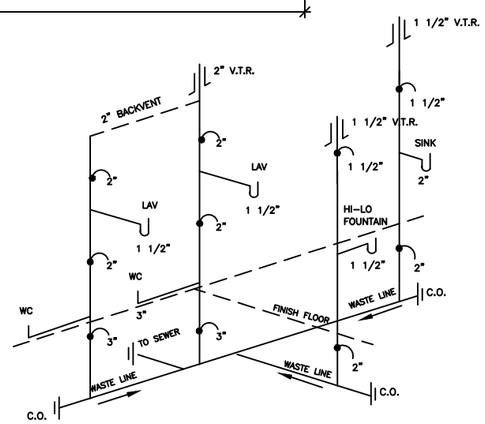

DWV RISER NTS

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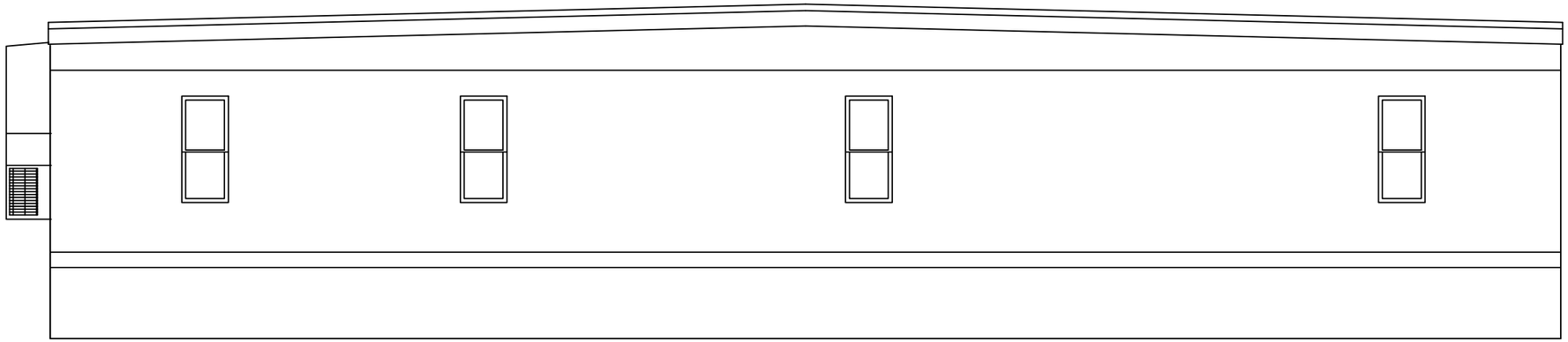
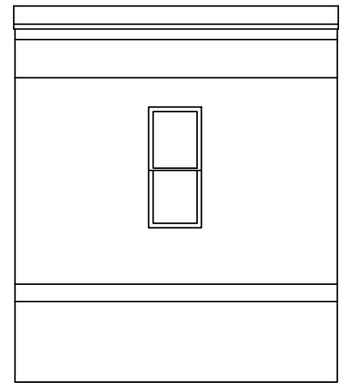
APOLLO MODULAR SYSTEMS, INC.
2162 INDUSTRIAL BLVD.
DOUGLAS, GA 31533 (912) 632-3344

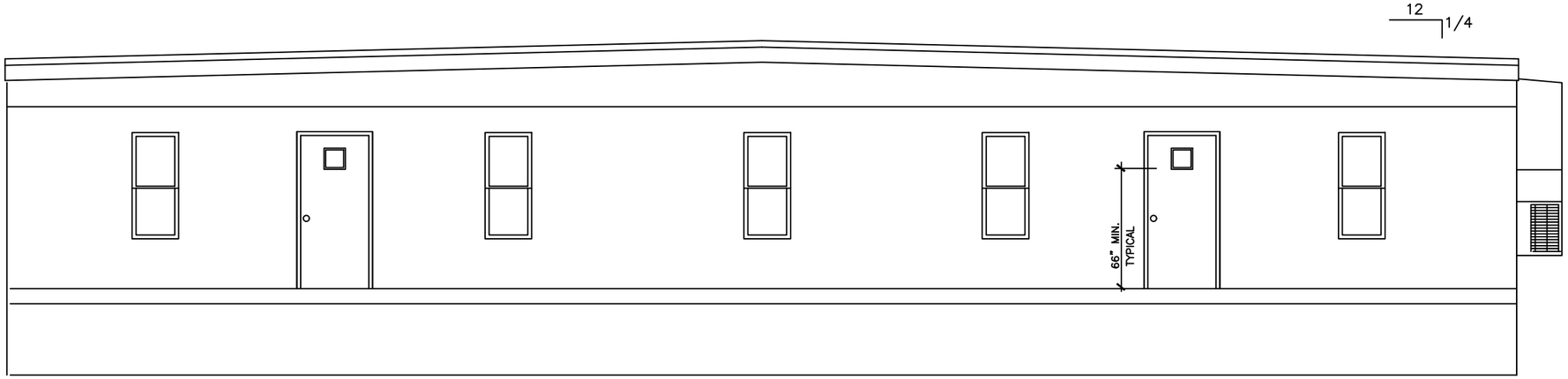
DATE: 5-29-25	THIRD PARTY: RADCO 5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813-243-0370	
SCALE: NO SCALE		
CODES: SEE NOTES		
STATES: NC.	REVISIONS:	BY: K.E.D.
REFERENCE: 11778		
TMS/AMS 11778 13'-8" x 70'-0" BUSINESS		SHEET 2 OF 4
FLOOR PLAN	DESTINATION: BUNLEVEL	



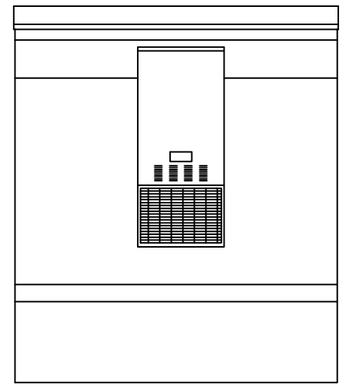
REAR ELEVATION



LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION

ELEVATION NOTES: TYPICAL

SEE–CROSS SECTION FOR METHOD OF ROOF VENTILATION

ACCESSIBLE RAMP(S), STAIR(S), AND HANDRAILS ARE SITE INSTALLED, DESIGNED BY OTHERS, AND SUBJECT TO LOCAL JURISDICTION.

FOUNDATION ENCLOSURE (WHEN PROVIDED) MUST HAVE 1 SQUARE FOOT NET VENT AREA PER 1/150TH OF THE FLOOR AREA, AND AN 18" X 24" MINIMUM CRAWL SPACE ACCESS, SITE INSTALLED BY OTHERS SUBJECT TO LOCAL JURISDICTION.

ELEVATIONS SHOWN ON THIS PAGE REPRESENT BASIC COMPONENTS & ARE NOT INTENEDED TO BE ALL INCLUSIVE NOR DO THESE ELEVATIONS DETAIL EVERY CODE REQUIRED ASPECT OF THIS BLDG.. SITE BUILT STOOPS, STEPS, DECKS, PORCHES, HANDRAILS AND/OR SIMILAR ITEMS MUST BE PROVIDED BY OTHERS ON SITE FOR COMPLIANCE WITH APPLICABLE CODES. COMPLIANCE WITH ALL APPLICABLE CODES PER LOCAL AUTHORITY HAVING JURISDICTION, WHETHER DETAILED IN THIS SET OR NOT, MUST BE MET

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TMS/AMS 11778 13'–8" x 70'–0" BUSINESS		SHEET 3 OF 4
ELEVATIONS	DESTINATION: BUNLEVEL	

INTERIOR FINISH MATERIAL:

CEILING – T–GRID CEILING INSTALLED PER MANUFACTURERS SPECIFICATIONS,

WALLS – 5/8" TYPE 'X' GYPSUM BOARD (VCG THROUGHOUT) INSTALLED PER MANUFACTURERS SPECIFICATIONS

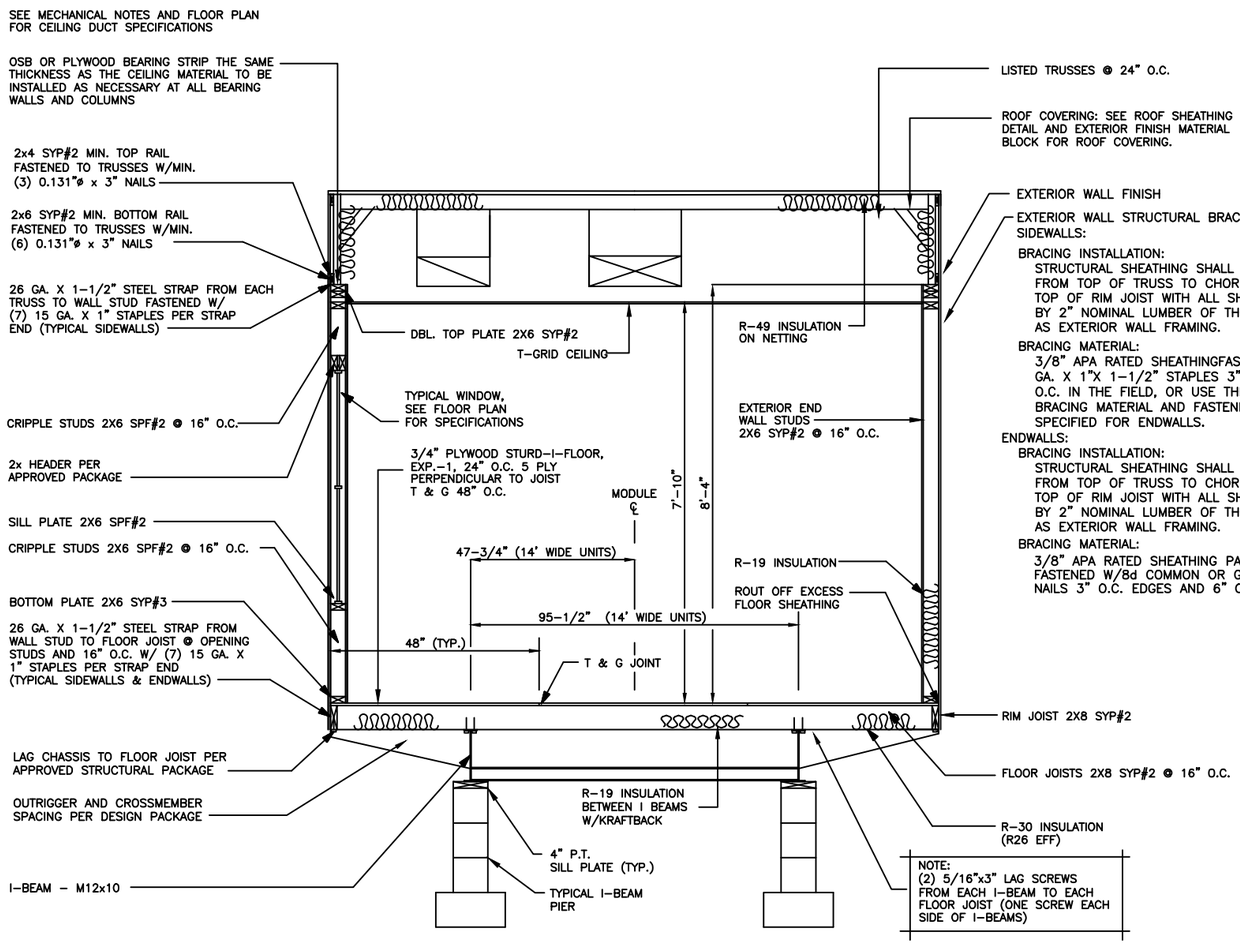
FLOOR – FLOOR FINISHES SHALL BE NO LESS THAN CLASS II LISTED PRODUCT

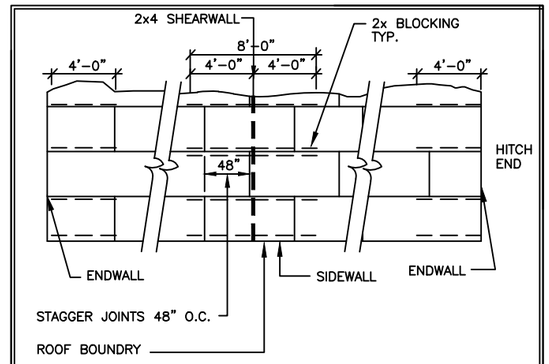
NOTE: – INTERIOR FINISHES SHALL BE CLASS 'A' FOR EXITS AND OTHER THAN EXITS SHALL BE 'A' OR 'B'

EXTERIOR FINISH MATERIAL:

ROOF – MULE–HIDE 45 MIL (BLACK) EPDM (ESR–1463) FULLY ADHERED TO 7/16" OSB OR 1/2" PLYWOOD WITH MULE–HIDE FR ADHESIVE IN ACCORDANCE WITH INTERTEK REPORT CCCR–1078 (CLASS C ROOF)

WALL – 7/16" HARDI PANEL (SIERRA) SIDING OVER APPROVED MOISTURE BARRIER INSTALLED PER MANUFACTURERS SPECIFICATIONS





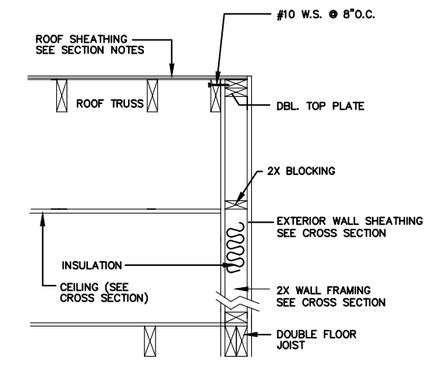
ROOF SHEATHING DETAIL

ROOF SHEATHING DIAPHRAGM SHALL BE BLOCKED WITH 2XSPF#2 NOM. LUMBER FOR A DISTANCE OF 4'–0" FROM EACH ENDWALL AND 8'–0" OVER THE INTERIOR SHEARWALL. NAIL ROOF BOUNDARIES W/0.099"øx 2" NAILS @ 4" O.C., OTHER PANEL EDGES W/0.099"øx 2" NAILS @ 6" O.C., REMAINDER OF ROOF NAIL WITH 8d NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE FIELD.

APPROVED TRUSS DESIGN:

TRUSS MANUFACTURER: UNIVERSAL

TRUSS DRAWING. # P2030803



BALLOON END WALL DETAIL

NTS

Electrical
Brian Washko P-187
APPROVED RADCO APPROVED
26-Jun-25
James Slaght, MCP
P-173, SMP 63
U02528

GENERAL CROSS–SECTION NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL STEEL MUST COMPLY W/ ASTM A36, YIELD STRENGTH = 36 KSI.
2. ALL LAG SCREWS MUST COMPLY W/ ANSI/ ASME B18.2.1 F_{YB} = 60 KSI MINIMUM.
3. SEE FOUNDATION PLAN FOR PIER AND TIE–DOWN STRAPPING LOCATIONS, ORIENTATIONS, AND SPECIFICATIONS.

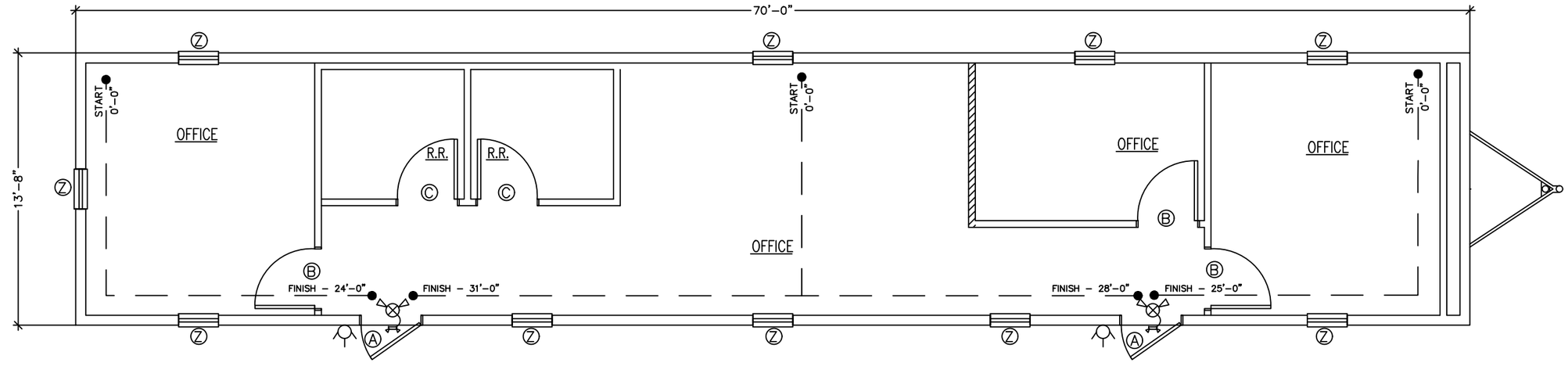
CONSULTING ENGINEER	KENNETH EARL DUNMON – 195 TOMMY HOOKS RD. – AMERICUS, GEORGIA 31709 – 229–942–2020

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 017400 KENNETH E. DUNMON
6-24-25

TITAN MODULAR SYSTEMS, INC.
162 INDUSTRIAL DRIVE
ALMA, GA 31510 (912) 632–3344

APOLLO MODULAR SYSTEMS, INC.
2162 INDUSTRIAL BLVD.
DOUGLAS, GA 31533 (912) 632–3344

DATE: 5–29–25	THIRD PARTY: RADCO 5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813–243–0370	
SCALE: NO SCALE		
CODES: SEE NOTES		
STATES: NC.	REVISIONS:	BY: K.E.D.
REFERENCE: 11778		
TMS/AMS 11778 13'–8" x 70'–0" BUSINESS		SHEET 4 OF 4
CROSS SECTION	DESTINATION: BUNLEVEL	



DOOR SCHEDULE

A	3680 – STEEL DOOR W/10"X10" SAFETY VISION PANEL – STEEL JAMB – CLOSER – KEYED LEVER
B	3680 – SOLID CORE – FLUSH DOOR STEEL JAMB – LEVER/PASSAGE
C	3680 – SOLID CORE – FLUSH DOOR STEEL JAMB – LEVER/PRIVACY

WINDOW SCHEDULE

Z	24W x 54H VERTICAL SLIDER DP 50 INSULATED LOW-E TINTED GLASS WHITE VINYL FRAME – VINYL MINI BLINDS

Electrical
Brian Washko P-187
RADCO
APPROVED APPROVED
26-Jun-25
James Slaght, MCP
P-173, SMP 63
U02528

LIFE SAFETY PARAMETERS

1. USE/OCCUPANCY: BUSINESS
2. AREA: 957 S.F.
3. OCCUPANT LOAD:
   OCCUPANT LOAD 10 BASED ON 100 SQ/FT PERSON

NOTE:
EACH EXIT DOOR IS ABLE TO ACCOMMODATE:

36x80 DOOR: 32" CLEAR WIDTH EACH DOOR
32/0.20 = 160 EACH (2) TOAL DOORS
320 PERSON TOTAL CAPACITY

MAXIMUM TRAVEL DISTANCE: 75 FT FOR SGL. EXIT BUILDING

NUMBER OF EXITS: REQUIRED: 1 PROVIDED: 2

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NORTH CAROLINA
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ENGINEER
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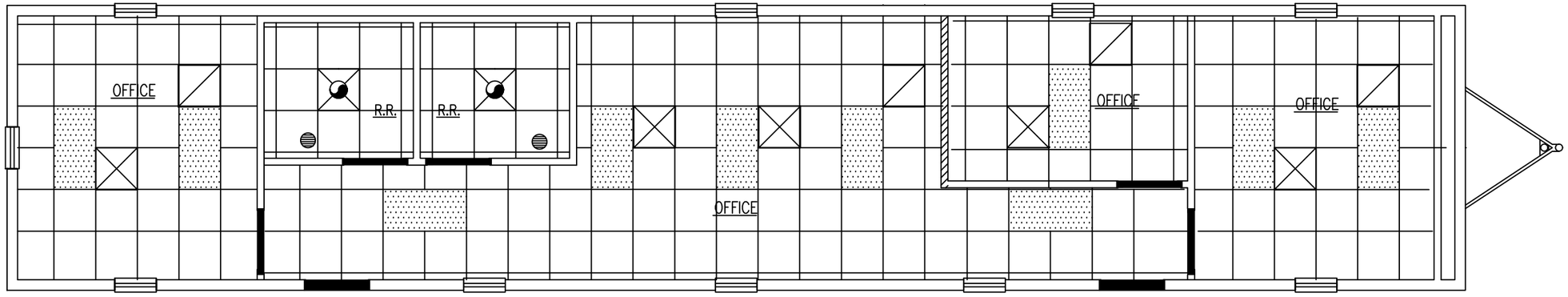
STATES: NC.	REVISIONS: / BY: K.E.D.
REFERENCE: 11778	
TMS/AMS 11778 13'-8" x 70'-0" BUSINESS	SHEET LS-1
LIFE SAFETY	DESTINATION: BUNLEVEL



LEGEND

- 24"x24" CEILING TILE
- 24"x24" RETURN AIR GRILLE
- 24"x24" SUPPLY AIR GRILLE
- T-GRID LIGHTING
- EXHAUST FAN

Electrical
Brian Washko P-187
RADCO
APPROVED
26-Jun-25
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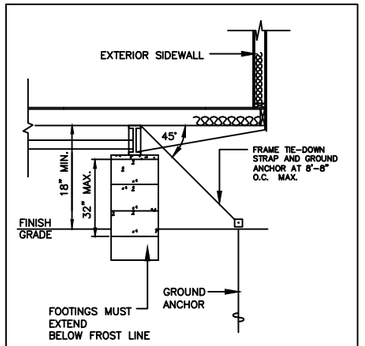
REFERENCE: 11778		
TMS/AMS 11778 13'-8" x 70'-0" BUSINESS		SHEET TG-1
TGRID PLAN	DESTINATION: BUNLEVEL	

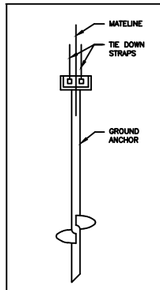


SECTION A–A

DIAGONAL FRAME TIE AND ANCHOR UNDER SIDEWALLS

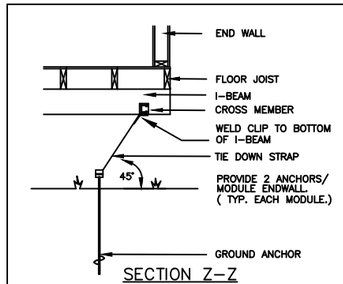
NOTES:
ALL POINTS ALONG I–BEAM SHALL BE WITHIN HALF OF THE SPECIFIED DIMENSIONS OF THE STRAP/ANCHOR LOCATIONS

THE FIRST STRAP/ANCHOR LOCATION FROM EACH END WALL SHALL NOT EXCEED HALF OF THE SPECIFIED DIMENSIONS AT END WALLS



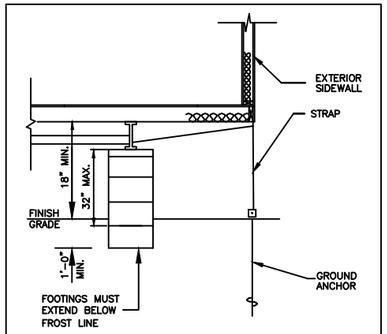
SECTION C–C

DUAL HEAD GROUND ANCHOR DETAIL



SECTION Z–Z

LONGITUDINAL TIE DOWN DETAIL AT ENDWALLS



SECTION D–D

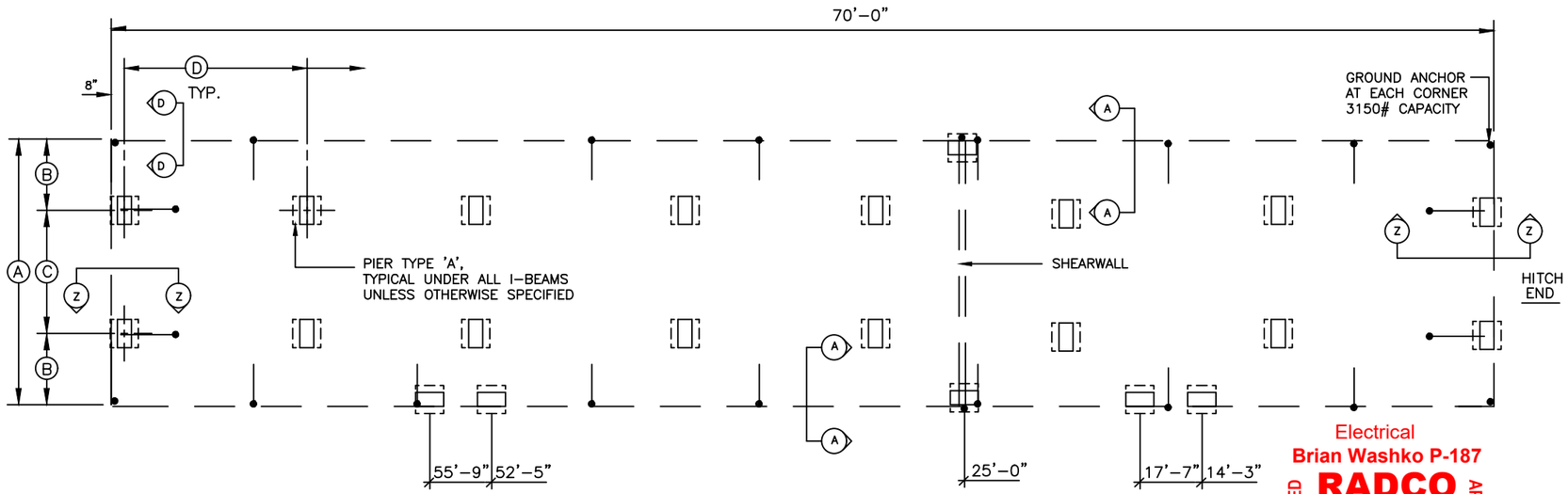
VERTICAL TIE DOWN STRAPS AT BUILDING CORNERS

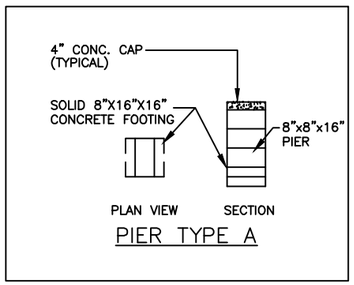
FOUNDATION NOTES:

1. ALL FOUNDATION CONSTRUCTION, MATERIALS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
2. TIE–DOWN STRAPS TO BE 1–1/4"x .035" TYPE–1, FINISH B, GRADE 1 ZINC COATED STEEL STRAPPING CERTIFIED BY A REGISTERED ENGINEER OR ARCHITECT AS CONFORMING WITH ASTM D3953–91. TIE DOWN STRAPS AND CONNECTING HARDWARE SHALL HAVE 3150# MINIMUM WORKING CAPACITY.
3. EACH GROUND ANCHOR SHALL HAVE A WORKING CAPACITY NO LESS THAN THE SUM OF THE REQUIRED WORKING CAPACITIES OF ALL TIE DOWN STRAPS CONNECTED TO THE GROUND ANCHOR, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DESIGN OF GROUND ANCHOR, INCLUDING SHAFT LENGTH, NUMBER AND DIAMETER OF HELIXES, ETC., TO BE AS SPECIFIED BY THE GROUND ANCHOR MANUFACTURER FOR THE ACTUAL SOIL TYPE ENCOUNTERED. IF THE HOLDING OR PULLOUT CAPACITIES OF GROUND ANCHORS ARE BELOW THE ASSUMED DESIGN VALUES, THE ARCHITECT/ENGINEER MUST BE CONSULTED FOR AN ALTERNATE ANCHORAGE DESIGN.
4. THE FIRST TIE–DOWN STRAP FROM ENDWALLS SHALL NOT EXCEED 12".
5. ALL PIERS SHALL BE CONSTRUCTED OF CONCRETE MASONRY UNITS CONFORMING TO ASTM C90. MASONRY UNITS SHALL BE LAID IN TYPE M OR S MORTAR OR COVERED WITH SURFACE BONDING CEMENT INSTALLED IN ACCORDANCE WITH ITS LISTING. PIER FOOTINGS SHALL BE AS DESCRIBED ABOVE.
6. MINIMUM CONCRETE FOOTING COMPRESSIVE STRENGTH 2,500 PSI AT 28 DAYS.
7. ALL REINFORCEMENT BARS SHALL COMPLY WITH ASTM A615, GRADE 60. REINFORCEMENT BARS SHALL BE EQUALLY SPACED AND PLACED WITH 3" CLEARANCE FROM BOTTOM AND SIDES OF THE FOOTING.
8. SEE SHEET 1 OF 4 FOR BUILDING DESIGN LOADS.
9. I–BEAM SUPPORT PIERS MAY BE INSTALLED LATERALLY (90° FROM THE ORIENTATION SHOWN ON THE FOUNDATION PLAN). CENTERLINE OF EACH PIER MUST BE LOCATED DIRECTLY BELOW THE I–BEAM CENTERLINE.
10. SOIL BEARING CAPACITY SHOWN ON THIS PLAN IS ASSUMED. IF THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN 2,000 PSF, THE ARCHITECT/ENGINEER MUST BE CONSULTED FOR REQUIRED ALTERNATE FOUNDATION DESIGN. FOOTINGS SHALL BE PLACED ON NON–EXPANSIVE SOILS ONLY.
11. INSTALL BLOCK PIER ON EACH SIDE OF ALL EXTERIOR DOOR OPENINGS. (MANUFACTURER'S RECOMMENDATION ONLY – OPTIONAL WHEN NOT SHOWN) SLIGHT ADJUSTMENT MAY BE REQUIRED TO INSURE OPENABILITY AFTER INSTALLATION OF BUILDING IS COMPLETE.
12. THE AREA UNDER FOOTINGS AND FOUNDATIONS SHALL HAVE ALL VEGETATION, STUMPS, ROOTS, AND FOREIGN MATERIALS REMOVED PRIOR TO THEIR CONSTRUCTION.
13. THE FOUNDATION DIMENSIONS SHOWN ARE NOMINAL. AN INCREASE IN MODULE WIDTH SHOULD BE EXPECTED DUE TO MODULE EXPANSION, SETTING TOLERANCES, ETC. THE FOUNDATION CONTRACTOR SHOULD CONSULT WITH THE MANUFACTURER OF THE MODULES PROIR TO CONSTRUCTION OF THE FOUNDATION TO DETERMINE THE AMOUNT OF INCREASED WIDTH TO BE ADDED TO THE NOMINAL DIMENSIONS SHOWN ABOVE.

NOTE:
THIS REFERENCED FOUNDATION AND ANCHORAGE PLAN IS DESIGNED FOR GRAVITY AND WIND LOADS ONLY. A SITE SPECIFIC FOUNDATION PLAN AND ANCHORAGE PLAN FOR THE SPECIFIC BUILDING SITE AND DESIGN CONDITIONS MUST BE DESIGNED BY A LICENSED ENGINEER AND SUBMITTED TO THE AUTHORITY HAVING JURISDICTION FOR APPROVAL

NOTE:
THIS FOUNDATION PLAN IS PROVIDED FOR REFERENCE AS A TYPICAL STANDARD. ACTUAL FOUNDATION CONDITIONS MUST BE EVALUATED FOR APPLICABILITY IF THIS PLAN IS TO BE USED. ALTERNATE FOUNDATION PLANS MAY BE DESIGNED BY OTHERS IN ACCORDANCE WITH THE REQUIREMENTS OF THE JURISDICTION HAVING AUTHORITY.





PIER TYPE A

FOUNDATION ENCLOSURE (WHEN PROVIDED) MUST HAVE 1 SQ. FOOT NET VENT AREA PER 1/150TH OF THE FLOOR AREA, AND AN 18" X 24" MINIMUM CRAWL SPACE ACCESS SITE INSTALLED BY OTHER, SUBJECT TO LOCAL JURISDICTION APPROVAL

FOUNDATION DIMENSIONS		
A MODULE WIDTH	B PIER TO MODULE EDGE	C STEEL BEAM SPACING
13'–8"	34 1/4"	95 1/2"
D MAXIMUM PIER SPACING	MINIMUM SOIL BEARING CAPACITY	
5'–0"	2000 PSF	
7'–8"	3000 PSF	

NOTE:
THE NUMBER OF PIERS SHOWN ON THIS FOUNDATION PLAN IS NO INDICATION OF THE AMOUNT OF PIERS REQUIRED AND NEEDED FOR THIS BUILDING. SEE MAXIMUM PIER SPACING CHARTS ABOVE FOR THE CORRECT NUMBER OF PIERS REQUIRED FOR EACH SOIL BEARING CAPACITY. ALSO THE NUMBER STRAPS (SPACING) WILL BE DETERMIND IN SECTION A–A. THE NUMBER OF ALL COMPONENTS OF THIS FOUNDATION PLAN CAN BE FOUND IN THE CHARTS AND DTAILS ABOVE.

NOTICE TO FOUNDATION CONTRACTOR:
ALL DIMENSIONS, DETAILS AND NOTES ON THIS FOUNDATION PLAN MUST BE REVIEWED AND VERIFIED BY THE FOUNDATION CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION OF THE FOUNDATION. ANY APPARENT CONFLICTS, ERRORS OR OMISSIONS MUST BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR MUST OBTAIN APPROVAL OF THE FOUNDATION PLAN FROM THE LOCAL BUILDING DEPARTMENT PRIOR TO COMMENCING CONSTRUCTION AND MUST COMPLY WITH ALL STATE AND LOCAL CODE, APPROVAL AND AND INSPECTION REQUIREMENTS. EMC IS NOT THE DESIGNER OF THE BUILDING OR THE FOUNDATION AND IS NOT RESPONSIBLE OR LIABLE FOR ANY CONFLICTS, ERRORS, OMMISSIONS OR FAILURES TO COMPLY WITH STATE OR LOCAL CODES.

- TYPICAL FOUNDATION LAYOUT SHOWN IS TO AID THE SITE ENGINEER/ARCHITECT FOR ENGINEER/ARCHITECT FOR LOCATIONS OF REQUIRED SUPPORTS. ACTUAL FOUNDATION MUST BE DESIGNED TO SITE CONDITIONS FOR ALL APPLICABLE LOADS. THIS INCLUDES BUT IS NOT LIMITED TO CONSTRUCTION OF THE FOUNDATION, SEISMIC DESIGN AND ATTACHING THE BUILDING TO THE FOUNDATION, ALONG WITH THE RESISTANCE TO LATERAL, LONGITUDINAL SHEAR, UPLIFT AND DOWNWARD FORCES IN BOTH DIRECTIONS. TYPICAL FOUNDATION IS NOT INTENDED TO BE ALL INCLUSIVE, NOR DOES THIS SET DETAIL EVERY CODE REQUIRED ASPECT OF THIS BUILDING. COMPLIANCE WITH ALL APPLICATED CODES PER LOCAL AUTHORITY HAVING JURISDICTION WHETHER DETAILED IN THIS SET OR NOT MUST BE MET.

Electrical
Brian Washko P-187
RADCO
APPROVED
26-Jun-25
APPROVED
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THIRD PARTY: RADCO
5801 BENJAMIN CENTER, SUITE 102
TAMPA, FLORIDA 33634
813–243–0370

REVISIONS:
BY: K.E.D.

TMS/AMS 11778
13'–8" x 70'–0" BUSINESS

SHEET 1 OF 1

FOUNDATION
DESTINATION: BUNLEVEL