



TI RADCO, LLP

June-24-2021

DLLR in Baltimore, MD
Norman C. Wang, RA, & Mr. Jun Zhao
Director, Building Codes Administration
Mr. Jun Zhao PE, Program Manager
Director, Building Codes Administration

Submitted-E-mail

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Division of Labor and Industry

Maryland Department of Labor, Licensing and Regulation

[1100 North Eutaw Street, Room 606](#)

[Baltimore, Maryland 21201](#)

RE: SPECIALIZED STRUCTURES, INC.- DOUGLAS, GA

Dear Norman C. Wang, R.A, Mr. Jun Zhao PE, Program Manager

Please find enclosed for your files the following documents, approved by RADCO under the Maryland Industrialized Buildings Program, and submitted.

RADCO Approval Letter
Plan Number: **SSI-6005-21 -23'-4"x34'-0-MD-Plans-Business (MD-SET)**
Energy Calculations
Truss: **F0350652_signed**
No Plan Review Record Form (7 Module) Required
Site Plan (7 Module)- Not Required
No Site plan (Initial installation- Not MD, if this building is to be installed in
The future in the state of MD, a site plan shall be provided and attached to the
Permit application for the building

STATE OF MARYLAND PACKAGE REFERENCES:
FRAME I-BEAM DESIGN - C10.1
FLOOR SYSTEM DESIGN - C5.2
MATELINE COLUMNS - C27.7
MATELINE PLYWOOD BEAMS - C29.1 & C29.3
OVERTURNING AND SLIDING - D24.0
LONGITUDINAL TIE DOWN - D25.0

RADCO's review confirmed that the design complies with the following codes:

COMMERCIAL CODES:

ASCE	7-16
Building	2018-International Building Code w/ MD Amendments 2018-NFPA 101 with MD Amendments
Life Safety	2018-NFPA 101 Life Safety Code w/ MD Amendments
Plumbing	2018-IPC with MD Amendments
Mechanical	2018-International Mechanical Code (IMC)
Electrical	2017-National Electrical Code (NEC) with MD Amendments
Energy	2018-International Energy Conservation Code IECC with MD Amendments 2013-ASHRAE-90.1
Accessibility	2012 Maryland Accessibility Code. (2012 M.A.C) Per MD 2010 ADA CHAPTER 02 MD Accessibility Code, 2012-ADAAG- 2012 M.A.C

Please feel free to contact me in our Tampa office at (813) 243-0370 if additional information is needed.

Sincerely,

James Slaght

James Slaght, MCP
Plan Review Manager-Eastern Region RADCO, A Twining Company
enclosures
cc: [Ms. cheyenne@specializedstructures.com](mailto:Ms.cheyenne@specializedstructures.com) Specialized Structures, Inc.
(file: SSI - Maryland Correspondence)



Name - Title

Signature

VALID

Water

06-24-2021

Date

APPROVED
RADCO
24-Jun-21
APPROVED
James Slaght, MCP



Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: SSI 6005-21 23-4X34 EDUCATION-STOCK
 Project Type: New Construction

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 24-Jun-21
 James Slaght, MCP

APPROVED

Construction Site: Owner/Agent: Designer/Contractor:
 SPECIALIZED STRUCTURES, INC WALTER E. WOOD P.E.
 2400 SPRINGHEAD CHURCH ROAD 168 W. LONGLEAF DRIVE
 WILLACHOOCHEE, GA 31650 SYLVESTER, GA 31791

Additional Efficiency Package(s)

On-site Renewable Energy

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-School/University	794	0.81	643
Total Allowed Watts =			643

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-School/University LED 1: LED Linear 33W:	2	9	66	594
Total Proposed Watts =				594

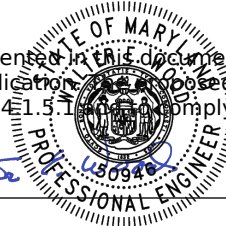
Interior Lighting PASSES: Design 8% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and shall comply with any applicable mandatory requirements listed in the Inspection Checklist.

VALID

Walter E. Wood



Name - Title

Signature

Date

06-24-2021



Mechanical Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: SSI 6005-21 23-4X34 EDUCATION-STOCK
 Location: Baltimore, Maryland
 Climate Zone: 4a
 Project Type: New Construction

RADCO
 24-Jun-21
 James Slaght, MCP

APPROVED

Construction Site: Owner/Agent: Designer/Contractor:
 SPECIALIZED STRUCTURES, INC WALTER E. WOOD P.E.
 2400 SPRINGHEAD CHURCH ROAD 168 W. LONGLEAF DRIVE
 WILLACHOOCHEE, GA 31650 SYLVESTER, GA 31791

Additional Efficiency Package(s)

On-site Renewable Energy

Mechanical Systems List

Quantity System Type & Description

- 1 HVAC System 1 (Single Zone):
 - Heating: 1 each - Other, Electric, Capacity = 34120 kBtu/h
 No minimum efficiency requirement applies
 - Cooling: 1 each - Single Package Vertical AC Unit, Capacity = 42000 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 9.00 EER, Required Efficiency: 8.60 EER
 - Fan System: None

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 2018 IECC requirements in COMcheck Version 4.1.5.1 and comply with any applicable mandatory requirements listed in the Inspection Checklist.

VALID

Water



06-24-2021

Name - Title

Signature

Date



Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

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

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR8] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.1 [PR10] ¹	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.1 [PR11] ¹	The skylight area <= 3 percent of the gross roof area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> 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
C402.4.2 [PR14] ¹	In enclosed spaces > 2,500 ft ² directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is \geq half the floor area; (b) the skylight area to daylight zone is \geq 3 percent with a skylight VT \geq 0.40; or a minimum skylight effective aperture \geq 1 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2.1 [FO6] ¹	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.12.2 , C403.12.3 [FO9] ³	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12] ²	Fenestration products rated in accordance with NFRC.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.1.3 [FR13] ¹	Fenestration products are certified as to performance labels or certificates provided.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.3 [FR10] ¹	Vertical fenestration SHGC value.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.4.3, C402.4.3.4 [FR8] ¹	Vertical fenestration U-Factor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.4.4 [FR14] ²	U-factor of opaque doors associated with the building thermal envelope meets requirements.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.5.1.2.1 [FR19] ¹	The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability ≤ 0.004 dfm/ft ² . Air barrier penetrations are sealed in an approved manner.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.2, C402.5.4 [FR18] ³	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.7 [FR17] ³	Vestibules are installed on all building entrances. Doors have self-closing devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7] ³	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8] ³	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation \geq R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.5, C403.2.4.3 [ME3] ³	Stair and elevator shaft vents have motorized dampers that automatically close. Refernece section C403.7.7 for operational details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.1 [ME65] ³	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.8.3 [ME117] ²	Fans have efficiency grade (FEG) \geq 67. The total efficiency of the fan at the design point of operation \leq 15% of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.12.1 [ME71] ²	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME55] ²	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.2.2 [ME59] ¹	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.1 [ME59] ¹	Demand control ventilation provided for spaces >500 ft ² and >25 people/1000 ft ² occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow $>3,000$ cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.2 [ME115] ³	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.6 [ME141] ³	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.4 [ME57] ¹	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.5 [ME116] ³	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.1, C403.11.2 [ME60] ²	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.4 [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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2.1 [ME53] ³	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5, C403.5.1, C403.5.2 [ME123] ³	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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

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

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23] ²	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL26] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL27] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.5 [EL28] ^{null}	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.3 [EL6] ¹	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3] ¹	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is ≤3 in 12.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.2.1 [IN20] ¹	Insulation installed on a suspended ceiling having ceiling tiles is not being specified for roof/ceiling assemblies. Continuous insulation board installed in 2 or more layers with edge joints offset between layers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.1 [IN10] ²	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.2 [IN7] ¹	Above-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.2, C402.2.4 [IN9] ²	Floor insulation installed per manufacturer's instructions. Cavity or structural slab insulation installed in permanent contact with underside of decking or structural slabs.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.2.1 [IN14] ²	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C105 [IN6] ¹	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Envelope Assemblies table for values.</i>
C402.2.3 [IN8] ²	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Envelope Assemblies table for values.</i>
C402.2.6 [IN18] ³	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C105 [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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Envelope Assemblies table for values.</i>
C402.5.1.1 [IN1] ¹	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17] ³	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.3, C408.2.5.3 [FI8] ³	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.6 [FI37] ¹	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.6 [FI37] ¹	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.6 [FI37] ¹	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.6 [FI37] ¹	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.8 [FI26] ³	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.2 [FI27] ³	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1 [FI47] ³	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.2 [FI38] ³	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.3 [FI20] ³	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2 [FI39] ³	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.2.1, C403.2.4.2.2 [FI40] ³	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.4.1 [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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Interior Lighting fixture schedule for values.</i>
C405.5.1 [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.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Exterior Lighting fixture schedule for values.</i>
C408.2.1 [FI28] ¹	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.1 [FI31] ¹	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.2 [FI10] ¹	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [FI29] ¹	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [FI7] ³	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [FI16] ³	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.3 [FI43] ¹	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.4 [FI30] ¹	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [FI33] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Job 95430	Truss F0350652	Truss Type FLAT	Qty 1	Ply 1	Specialized Structures 316 GA Ref. #10002617
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Universal Forest Products Inc., Grand Rapids, MI 49525, Weston Gorbey 8.220 e Aug 13 2018 MiTek Industries, Inc. Fri Mar 22 11:11:03 2019 Page 1 of 1
Copyright © 2019 Universal Forest Products, Inc. All Rights Reserved - This replaces the drawing issued on 3/21/2019 -
- Wind loading changes -

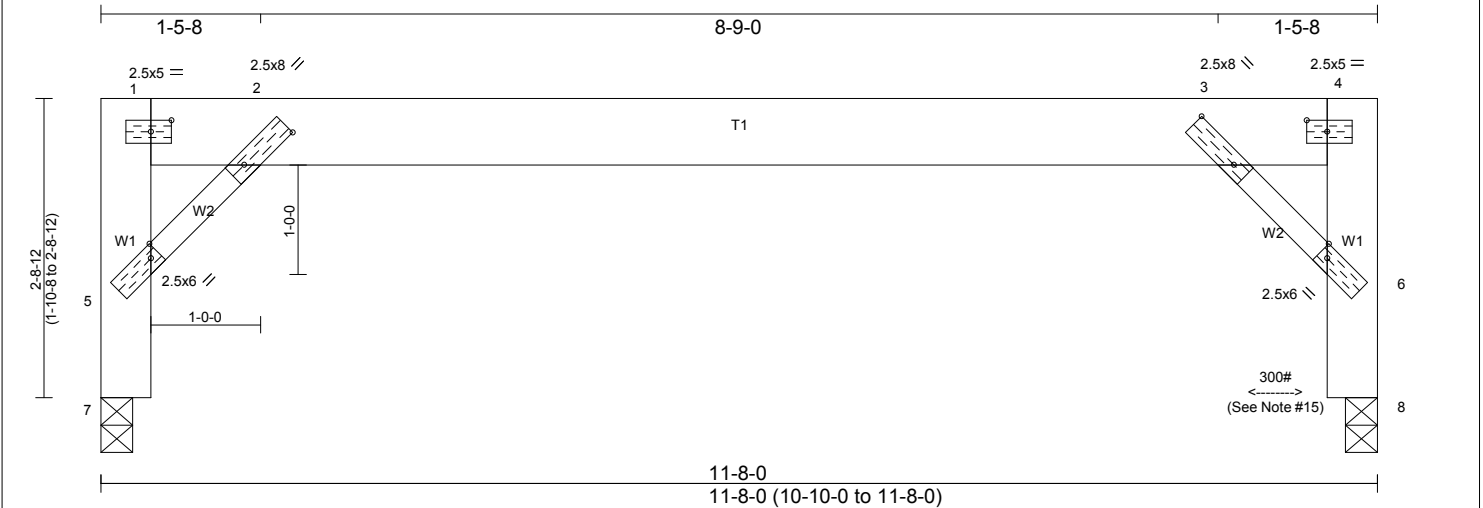


Plate Offsets (X,Y)-- [1:0-2-4,0-1-4], [2:0-6-4,0-1-4], [3:0-6-4,0-1-4], [4:0-2-4,0-1-4], [5:0-1-0,0-1-4], [6:0-1-0,0-1-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 46.2 (Ground Snow=60.0)	1-4-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IBC2018/TPI2014 IBC2015/TPI2014 IBC2012/TPI2007	TC 0.49 BC 0.00 WB 0.24 Matrix-R	in (loc) l/defl L/d Vert(LL) 0.48 2-3 >282 240 Vert(CT) 0.45 2-3 >302 180 Horz(CT) -0.74 8 n/a n/a	MT20	244/190
TCDL 15.0				Weight: 49 lb	FT = 0%
BCLL 0.0 *					
BCDL 0.0					

LUMBER-	BRACING-	
TOP CHORD 2x8 SP DSS	TOP CHORD Structural wood sheathing directly applied or 5-1-15 oc purlins, except end verticals.	
WEBS 2x6 SP No.2 *Except* W2: 2x3 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS. (lb/size) 7=457/0-3-8 (min. 0-1-8), 8=457/0-3-8 (min. 0-1-8) Max Horz 7=-101(LC 7) Max Uplift 7=-215(LC 7), 8=-215(LC 8)		
FORCES. (lb) - Maximum Compression/Maximum Tension		
TOP CHORD 5-7=-457/438, 1-5=-489/1180, 1-2=-274/328, 2-9=-400/400, 9-10=-400/400, 10-11=-400/400, 3-11=-400/400, 3-4=-270/331, 6-8=-457/463, 4-6=-489/1238		
WEBS 2-5=-1061/982, 3-6=-1066/977		

- NOTES-**
- 1) Wind: ASCE 7-16; Vult=155mph (3-second gust) Vasd=123mph; TCDL=6.0psf; BCDL=0.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and, Exterior(2) 2-2-12 to 5-8-0, Corner(3) 5-8-0 to 11-5-4 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=60.0 psf; Ps=46.2 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, Lu=50-0-0
 - 3) Roof design snow load has been reduced to account for slope.
 - 4) Provide adequate drainage to prevent water ponding.
 - 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) * 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.
 - 7) Bearing at joint(s) 7, 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 215 lb uplift at joint 7 and 215 lb uplift at joint 8.
 - 9) This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
 - 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) This truss is designed in accordance with the 2012 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
 - 13) This truss is designed in accordance with the 2015 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
 - 14) When adjusting the variable span dimension, adjust the post placement dimensions proportional to the change in span.
 - 15) This design has been checked for a horizontal wind load as shown.
 - 16) Based on: F0350651
 - 17) Revision: Increased wind speed

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RADCO
18-Jun-21
James Slight, MCP
APPROVED



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 Universal Forest Products, Inc. 2801 EAST BELTLINE RD, NE
PHONE (616)-364-6161 FAX (616)-365-0060 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\lufp.tpe



UFP INDUSTRIES

Job	Truss	MFG	Customer
95430	F0350652	316	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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 18-Jun-21
 James Slaght, MCP
 APPROVED

KENNETH A. GODFREY, P.E.
CONSULTING ENGINEER
490 RUSTIC BARN TRAIL
MORGANTON, GA 30560

CONSTRUCTION DETAILS INDEX
FOR 2018 IBC

SPECIALIZED STRUCTURES, INC.
2400 SPRINGHEAD CHURCH RD.
WILLACOOCHEE, GA 31650

DESCRIPTION	PAGE(S)	LAST REVISION DATE
DESIGN CRITERIA NOTES & DETAILS	C1.0–C1.3	
FASTENING SCHEDULE	C2.0–C2.6	
FOOTNOTES TO ON–FRAME FLOOR SYSTEM SUMMARIES	C3.0	
OUTRIGGERS & CROSS MEMBERS	C4.0	
ON–FRAME FLOOR SYSTEM SUMMARIES	C5.0–C5.5	
ON–FRAME CHASSIS FRAMING DETAILS	C6.0–C6.4	
WOOD FLOOR FRAMING DETAILS	C7.0–C7.1	
PERIMETER FRAME WOOD/STEEL FLOOR SYSTEM SUMMARIES	C8.0–C8.2	
PERIMETER FRAME LIGHT GAGE STEEL FLOOR SYSTEMS	C9.0	
CHASSIS OR PERIMETER I–BEAM SPAN SUMMARIES	C10.0–C10.2	
TYPICAL EXTERIOR WALL OPENING FRAMING DETAIL	C11.0	
EXTERIOR WALL STUD SPACING	C12.0–C12.2	
EXTERIOR WALL OPENING STUDS	C13.0–C13.6	
EXTERIOR WALL HEADERS	C14.0–C14.4	
EXTERIOR WALL HEADER STRAPPING	C15.0	
EXTERIOR WALL SILLS	C16.0–C16.1	
BOTTOM PLATE TO FLOOR CONNECTION	C17.0	
WALL INTERSECTION DETAIL	C18.0	
NON–LOADBEARING WALL DETAILS	C19.0–C19.1	

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Jan 06, 2020
RESOURCES, APPLICATIONS, DESIGN & CONTROLS, INC.
EASTERN NATIONAL REGION
5801 BENJAMIN CENTER DRIVE, SUITE 102
TAMPA, FL 33634
(813) 243-0370 - O | (813) 243-1314 - F
www.radcoinc.com



THIRD PARTY DESIGN APPROVAL & INSPECTION AGENCY



12-11-2019

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19336, EXPIRATION DATE: 08–18–21."

DATE: 05–28–19

PAGE: C0.0

KENNETH A. GODFREY, P.E.
CONSULTING ENGINEER
490 RUSTIC BARN TRAIL
MORGANTON, GA 30560

CONSTRUCTION DETAILS INDEX
FOR 2018 IBC

SPECIALIZED STRUCTURES, INC.
2400 SPRINGHEAD CHURCH RD.
WILLACOOCHEE, GA 31650

DESCRIPTION	PAGE(S)	LAST REVISION DATE
TYPICAL WALL SHEATHING INSTALLATION DETAILS	C20.0–C20.1	
ROOF NET UPLIFT WIND LOADS	C21.0–C21.4	
TIE DOWN CONNECTOR TABLE	C22.0	
ROOF EDGE RAIL FASTENING	C23.0–C23.2	
ROOF/CEILING TO WALL CONNECTION REQUIREMENTS	C24.0–C24.6	
ROOF FRAMING DETAILS	C25.0–C25.3	
END WALL OVERHANG DETAILS	C26.0	
COLUMN SUMMARY CHARTS	C27.0–C27.16	
COLUMN TIE DOWN STRAPPING	C28.0	
PLYWOOD MATE LINE BEAMS	C29.0–C29.9	
MICROLLAM LVL MATE LINE BEAMS	C30.0–C30.11	
RESERVED FOR FUTURE USE	C31.0	
MATE LINE BEAM TO TRUSS OR JOIST FASTENING	C32.0–C32.1	
ROOF SHEATHING FASTENING TO RESIST UPLIFT WIND LOAD	C33.0–C33.7	
DUCT PROTECTION AT WALL HUNG HVAC UNIT	C34.0	
TYPICAL STORAGE TANK WATER HEATER DETAIL	C35.0	



Kenneth A. Godfrey



12-11-2019

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DATE: 05-28-19

PAGE: C0.1

KENNETH A. GODFREY, P.E. CONSULTING ENGINEER 490 RUSTIC BARN TRAIL MORGANTON, GA 30560	11'-8" WIDE FLOOR SYSTEMS SUMMARY	SPECIALIZED STRUCTURES, INC. 2400 SPRINGHEAD CHURCH RD. WILLACOOCHEE, GA 31650
---	-----------------------------------	--

OCCU-PANCY USE GROUPS	FLOOR SYSTEM	MAX. FLOOR LOADS (PSF)	MAX. ROOF LOADS (PSF)	MAX. WALL HEIGHT	MAX. ROOF OVER-HANG	I-BEAM SIZE (MIN.) & SPACING	SPACING (C-C)		O.R. ITEM NO.	C.M. ITEM NO.
							O.R.	C.M.		
A,B E	2x6 SYP#2 16" O.C. (1)(2)	100 LL 2000# 10 DL	20 LL 30 SL 12 DL	9'-0"	0'-10"	10" & 95.5"C-C	96"	48"	5	2
A,B E	2x6 SYP#2 16" O.C. (1)(2)	100 LL 2000# 10 DL	20 LL 55 SL 12 DL	9'-0"	1'-6"	10" & 95.5"C-C	48"	48"	5	2
A,B E,S	2x8 SYP#2 16" O.C. (1)(2)	125 LL(10) 2000# 10 DL	20 LL 55 SL 12 DL	9'-0"	1'-6"	10" & 95.5"C-C	N.R.	48"	N.R.	2

11'-9" WIDE FLOOR SYSTEMS SUMMARY										
-----------------------------------	--	--	--	--	--	--	--	--	--	--

OCCU-PANCY USE GROUPS	FLOOR SYSTEM	MAX. FLOOR LOADS (PSF)	MAX. ROOF LOADS (PSF)	MAX. WALL HEIGHT	MAX. ROOF OVER-HANG	I-BEAM SIZE (MIN.) & SPACING	SPACING (C-C)		O.R. ITEM NO.	C.M. ITEM NO.
							O.R.	C.M.		
A,B E	2x6 SYP#2 16" O.C. (1)(2)	100 LL 2000# 10 DL	20 LL 30 SL 12 DL	9'-0"	0'-6"	10" & 95.5"C-C	96"	48"	7	2
A,B E	2x6 SYP#2 16" O.C. (1)(2)	100 LL 2000# 10 DL	20 LL 55 SL 12 DL	9'-0"	1'-6"	10" & 95.5"C-C	48"	48"	7	2
A,B E,S	2x8 SYP#2 16" O.C. (1)(2)	125 LL(10) 2000# 10 DL	20 LL 55 SL 12 DL	9'-0"	1'-6"	10" & 95.5"C-C	N.R.	48"	N.R.	2
A,B E,S	2x8 SYP#2 16" O.C. (1)(2)	125 LL 2000# 10 DL	20 LL 55 SL 12 DL	9'-0"	1'-6"	10" & 99.5"C-C	N.R.	48"	N.R.	3

SEE "FOOTNOTES TO FLOOR SYSTEMS SUMMARY CHARTS" FOR ADDITIONAL INFORMATION.

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Jan 06, 2020

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PAGE: C5.2

KENNETH A. GODFREY, P.E.
CONSULTING ENGINEER
490 RUSTIC BARN TRAIL
MORGANTON, GA 30560

CHASSIS OR PERIMETER I-BEAM
SPAN SUMMARIES

SPECIALIZED STRUCTURES, INC.
2400 SPRINGHEAD CHURCH RD.
WILLACOOOCHEE, GA 31650

MAXIMUM CENTER-TO-CENTER I-BEAM SPAN FOR M12X10.8 OR M12X11.8 OR PACO 12.25X9.91:

MAXIMUM MODULE WIDTH:	GROUND SNOW LOAD: <u>25 PSF</u>			
	FLOOR LIVE LOAD:			
	<u>50 PSF</u>	<u>100 PSF</u>	<u>125 PSF</u>	<u>250 PSF</u>
<u>12'-0"</u>	13'-3"	11'-9"	11'-0"	8'-6"
<u>14'-0"</u>	12'-6"	11'-0"	10'-3"	8'-0"
<u>16'-0"</u>	11'-9"	10'-6"	9'-9"	7'-6"

MAXIMUM MODULE WIDTH:	GROUND SNOW LOAD: <u>35 PSF</u>			
	FLOOR LIVE LOAD:			
	<u>50 PSF</u>	<u>100 PSF</u>	<u>125 PSF</u>	<u>250 PSF</u>
<u>12'-0"</u>	13'-0"	11'-6"	10'-9"	8'-6"
<u>14'-0"</u>	12'-0"	10'-9"	10'-0"	8'-0"
<u>16'-0"</u>	11'-6"	10'-3"	9'-6"	7'-6"

MAXIMUM MODULE WIDTH:	GROUND SNOW LOAD: <u>45 PSF</u>			
	FLOOR LIVE LOAD:			
	<u>50 PSF</u>	<u>100 PSF</u>	<u>125 PSF</u>	<u>250 PSF</u>
<u>12'-0"</u>	12'-6"	11'-3"	10'-6"	8'-6"
<u>14'-0"</u>	11'-9"	10'-6"	10'-0"	7'-9"
<u>16'-0"</u>	11'-0"	10'-0"	9'-3"	7'-3"

MAXIMUM MODULE WIDTH:	GROUND SNOW LOAD: <u>55 PSF</u>			
	FLOOR LIVE LOAD:			
	<u>50 PSF</u>	<u>100 PSF</u>	<u>125 PSF</u>	<u>250 PSF</u>
<u>12'-0"</u>	12'-3"	11'-0"	10'-6"	8'-3"
<u>14'-0"</u>	11'-6"	10'-3"	9'-9"	7'-9"
<u>16'-0"</u>	10'-9"	9'-9"	9'-0"	7'-3"

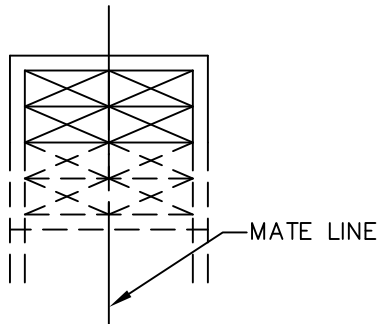
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PAGE: C10.1

FREE STANDING COLUMNS AND COLUMNS IN WALLS PARALLEL TO MATE LINE.					MAXIMUM TRIBUTARY SPAN FROM MATE LINE BEAM IN FEET					
NO. OF STUDS PER HALF (2X4 SYP #2, 9' MAX. HEIGHT)	MINIMUM MATE LINE BEAM THICKNESS (INCHES)	MODULE WIDTH			11'-8"	13'-8"	15'-8"	11'-8"	13'-8"	15'-8"
		ROOF LIVE LOAD (PSF)	ATTIC LIVE LOAD (PSF)	GRND. SNOW LOAD (PSF)	WITHOUT MATE LINE BEAM BEARING STIFFENER			WITH MATE LINE BEAM BEARING STIFFENER (2X4 SYP #3 GLUE/NAILED)		
2	1.44	20	0	20	9.2	7.8	6.8	12.3	10.5	9.1
		20	0	35	6.8	5.8	5.0	9.0	7.6	6.7
		20	0	45	5.6	4.7	4.1	7.5	6.4	5.5
2	2.15	20	0	20	10.3	8.7	7.6	16.0	13.6	11.9
		20	0	35	7.6	6.5	5.6	11.8	10.0	8.7
		20	0	45	6.3	5.3	4.7	9.8	8.3	7.3
2	2.88	20	0	20	12.1	10.3	9.0	16.0	13.6	11.9
		20	0	35	8.9	7.6	6.6	11.8	10.0	8.7
		20	0	45	7.4	6.3	5.5	9.8	8.3	7.3
3	1.44	20	0	20	18.2	15.5	13.5	27.9	23.8	20.7
		20	0	35	13.4	11.4	10.0	20.4	17.4	15.1
		20	0	45	11.2	9.5	8.3	17.0	14.5	12.6
3	2.15	20	0	20	24.1	20.5	17.9	31.9	27.2	23.7
		20	0	35	17.7	15.1	13.1	23.4	20.0	17.4
		20	0	45	14.7	12.5	10.9	19.5	16.6	14.5
3	2.88	20	0	20	27.5	23.4	20.4	31.9	27.2	23.7
		20	0	35	20.2	17.2	15.0	23.4	20.0	17.4
		20	0	45	16.8	14.3	12.5	19.5	16.6	14.5
4	1.44	20	0	20	24.4	20.8	18.1	39.0	33.2	29.0
		20	0	35	17.9	15.2	13.3	28.8	24.5	21.4
		20	0	45	14.9	12.7	11.1	24.0	20.4	17.8
4	2.15	20	0	20	36.2	30.9	26.9	42.0	35.8	31.2
		20	0	35	26.5	22.6	19.7	31.2	26.6	23.2
		20	0	45	22.0	18.7	16.3	26.0	22.2	19.3
4	2.88	20	0	20	39.4	33.6	29.3	42.0	35.8	31.2
		20	0	35	28.9	24.6	21.5	31.2	26.6	23.2
		20	0	45	24.0	20.5	17.8	26.0	22.2	19.3

NOTE: ALLOWABLE TRIBUTARY SPANS SHOWN IN CHART SHALL BE REDUCED 25% FOR INTERMEDIATE COLUMNS SUPPORTING MATE LINE BEAMS THAT ARE CONTINUOUS OVER THE COLUMN (I.E. COLUMN SUPPORTS MATE LINE BEAM SPANS ON BOTH SIDES OF COLUMN). SEE "NOTES TO COLUMN CHARTS" PAGE FOR ADDITIONAL INFORMATION.



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 Jan 06, 2020

DATE: 05-28-19
 PAGE: C27.7

**2 layers 3/4" Plywood Rated Sheathing, Exposure 1, Structural I, 5 ply/5 layer, 48/24
 index (each side of mate line)**

Beam Height

Basic wind speed in mph

(BH_k) in	$(w120_k)$ ft	$(w130_k)$ ft	$(w140_k)$ ft	$(w150_k)$ ft	$(w160_k)$ ft	$(w170_k)$ ft	$(w180_k)$ ft	$(w190_k)$ ft	$(w200_k)$ ft
12.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
16.0	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
18.0	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
20.0	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
24.0	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8
28.0	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3
30.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
32.0	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8
36.0	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2

Beam Height

Ground snow load in psf

(BH_k) in	$(s16_k)$ ft	$(s20_k)$ ft	$(s25_k)$ ft	$(s30_k)$ ft	$(s35_k)$ ft	$(s40_k)$ ft	$(s45_k)$ ft	$(s55_k)$ ft
12.0	11.0	10.6	10.6	10.1	9.6	9.2	8.8	8.0
16.0	14.6	14.0	14.0	13.4	12.8	12.2	11.7	10.6
18.0	16.4	15.7	15.7	15.1	14.3	13.7	13.1	12.0
20.0	18.2	17.5	17.5	16.7	15.9	15.2	14.6	13.3
24.0	21.8	20.9	20.9	20.0	19.0	18.2	17.4	15.9
28.0	25.3	24.2	24.2	23.2	22.1	21.1	20.3	18.5
30.0	27.0	25.9	25.9	24.8	23.6	22.6	21.7	19.8
32.0	28.8	27.6	27.6	26.4	25.2	24.1	23.1	21.1
36.0	32.2	30.9	30.9	29.6	28.2	27.0	25.9	23.7

Notes:

1. Maximum span is the lessor of the maximum span from the wind speed chart and from the snow load chart for the specific beam height and applicable design loads. All spans in wind speed chart are capable of supporting a 20 psf roof live load or 16 psf ground snow load. All spans in snow load chart are capable of resisting a 115 mph wind load.
2. These charts are not valid for buildings with a least horizontal dimension greater than 150 feet.
3. Snow loads are based on risk category I or II buildings. For risk category III or IV buildings see page C1.3.
4. All beams must have full height lateral bracing at all support locations and at 24" o.c. or closer.
5. Beam spans are based on 12 psf dead load for snow loads of 45 psf or less, and 14 psf for snow loads greater than 45 psf. These dead load do not include the beam weight. These dead loads have been reduced by 2 psf for wind design.
6. Duration factor is 1.25 for live load and 1.15 for snow load.
7. Beams spans are based on 0 psf of attic live load.
8. Beams are designed to comply with code required deflection limits, however the building designer must specify adequate roof slope and camber to prevent roof ponding and other undesirable effects from deflection.
9. Required beam bearing length is designed by others.

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Jan 06, 2020
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**3 layers 3/4" Plywood Rated Sheathing, Exposure 1, Structural I, 5 ply/5 layer, 48/24
 index (each side of mate line)**

Beam Height

Basic wind speed in mph

(BH_k) in	$(w120_k)$ ft	$(w130_k)$ ft	$(w140_k)$ ft	$(w150_k)$ ft	$(w160_k)$ ft	$(w170_k)$ ft	$(w180_k)$ ft	$(w190_k)$ ft	$(w200_k)$ ft
12.0	15.5	15.5	15.5	15.5	15.5	15.5	14.9	14.3	13.7
16.0	20.5	20.5	20.5	20.5	20.5	20.5	19.9	19.1	18.3
18.0	23.0	23.0	23.0	23.0	23.0	23.0	22.5	21.5	20.7
20.0	25.5	25.5	25.5	25.5	25.5	25.5	25.0	23.9	23.0
24.0	30.4	30.4	30.4	30.4	30.4	30.4	30.1	28.8	27.6
28.0	35.3	35.3	35.3	35.3	35.3	35.3	35.2	33.7	32.3
30.0	37.7	37.7	37.7	37.7	37.7	37.7	37.7	36.1	34.6
32.0	40.1	40.1	40.1	40.1	40.1	40.1	40.1	38.6	37.0
36.0	44.8	44.8	44.8	44.8	44.8	44.8	44.8	43.5	41.7

Beam Height

Ground snow load in psf

(BH_k) in	$(s16_k)$ ft	$(s20_k)$ ft	$(s25_k)$ ft	$(s30_k)$ ft	$(s35_k)$ ft	$(s40_k)$ ft	$(s45_k)$ ft	$(s55_k)$ ft
12.0	15.5	14.8	14.8	14.2	13.5	12.9	12.4	11.3
16.0	20.5	19.7	19.7	18.8	17.9	17.1	16.4	15.0
18.0	23.0	22.1	22.1	21.1	20.1	19.2	18.4	16.8
20.0	25.5	24.4	24.4	23.4	22.3	21.3	20.4	18.7
24.0	30.4	29.2	29.2	27.9	26.6	25.4	24.4	22.3
28.0	35.3	33.8	33.8	32.4	30.9	29.5	28.4	26.0
30.0	37.7	36.1	36.1	34.6	33.0	31.6	30.3	27.8
32.0	40.1	38.4	38.4	36.8	35.1	33.6	32.3	29.6
36.0	44.8	43.0	43.0	41.2	39.3	37.7	36.2	33.1

Notes:

1. Maximum span is the lessor of the maximum span from the wind speed chart and from the snow load chart for the specific beam height and applicable design loads. All spans in wind speed chart are capable of supporting a 20 psf roof live load or 16 psf ground snow load. All spans in snow load chart are capable of resisting a 115 mph wind load.
2. These charts are not valid for buildings with a least horizontal dimension greater than 150 feet.
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5. Beam spans are based on 12 psf dead load for snow loads of 45 psf or less, and 14 psf for snow loads greater than 45 psf. These dead load do not include the beam weight. These dead loads have been reduced by 2 psf for wind design.
6. Duration factor is 1.25 for live load and 1.15 for snow load.
7. Beams spans are based on 0 psf of attic live load.
8. Beams are designed to comply with code required deflection limits, however the building designer must specify adequate roof slope and camber to prevent roof ponding and other undesirable effects from deflection.
9. Required beam bearing length is designed by others.

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4 layers 3/4" Plywood Rated Sheathing, Exposure 1, Structural I, 5 ply/5 layer, 48/24
index (each side of mate line)

Beam Height

Basic wind speed in mph

(BH_k) in	$(w120_k)$ ft	$(w130_k)$ ft	$(w140_k)$ ft	$(w150_k)$ ft	$(w160_k)$ ft	$(w170_k)$ ft	$(w180_k)$ ft	$(w190_k)$ ft	$(w200_k)$ ft
12.0	17.8	17.8	17.8	17.8	17.8	17.3	16.5	15.8	15.1
16.0	23.7	23.7	23.7	23.7	23.7	23.1	22.0	21.1	20.2
18.0	26.6	26.6	26.6	26.6	26.6	26.1	24.8	23.8	22.8
20.0	29.5	29.5	29.5	29.5	29.5	29.0	27.6	26.4	25.4
24.0	35.3	35.3	35.3	35.3	35.3	35.0	33.3	31.8	30.5
28.0	41.1	41.1	41.1	41.1	41.1	41.0	39.0	37.2	35.7
30.0	44.0	44.0	44.0	44.0	44.0	44.0	41.8	40.0	38.3
32.0	46.8	46.8	46.8	46.8	46.8	46.8	44.7	42.7	40.9
36.0	52.6	52.6	52.6	52.6	52.6	52.6	50.5	48.2	46.2

Beam Height

Ground snow load in psf

(BH_k) in	$(s16_k)$ ft	$(s20_k)$ ft	$(s25_k)$ ft	$(s30_k)$ ft	$(s35_k)$ ft	$(s40_k)$ ft	$(s45_k)$ ft	$(s55_k)$ ft
12.0	17.8	17.8	17.8	17.3	16.5	15.7	15.1	13.8
16.0	23.7	23.7	23.7	22.9	21.8	20.8	20.0	18.3
18.0	26.6	26.6	26.6	25.7	24.4	23.4	22.4	20.5
20.0	29.5	29.5	29.5	28.4	27.1	25.9	24.9	22.7
24.0	35.3	35.3	35.3	33.8	32.3	30.9	29.7	27.1
28.0	41.1	40.9	40.9	39.2	37.4	35.8	34.4	31.5
30.0	44.0	43.6	43.6	41.9	39.9	38.3	36.8	33.7
32.0	46.8	46.3	46.3	44.5	42.5	40.7	39.1	35.9
36.0	52.6	51.7	51.7	49.7	47.5	45.5	43.8	40.2

Notes:

1. Maximum span is the lessor of the maximum span from the wind speed chart and from the snow load chart for the specific beam height and applicable design loads. All spans in wind speed chart are capable of supporting a 20 psf roof live load or 16 psf ground snow load. All spans in snow load chart are capable of resisting a 115 mph wind load.
2. These charts are not valid for buildings with a least horizontal dimension greater than 150 feet.
3. Snow loads are based on risk category I or II buildings. For risk category III or IV buildings see page C1.3.
4. All beams must have full height lateral bracing at all support locations and at 24" o.c. or closer.
5. Beam spans are based on 12 psf dead load for snow loads of 45 psf or less, and 14 psf for snow loads greater than 45 psf. These dead load do not include the beam weight. These dead loads have been reduced by 2 psf for wind design.
6. Duration factor is 1.25 for live load and 1.15 for snow load.
7. Beams spans are based on 0 psf of attic live load.
8. Beams are designed to comply with code required deflection limits, however the building designer must specify adequate roof slope and camber to prevent roof ponding and other undesirable effects from deflection.
9. Required beam bearing length is designed by others.

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2018 IBC Calculation Index

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On-frame floor systems - wood joists	
Composite floor analysis	D2.0
Floor joists	D3.0 - D3.9
Outriggers	D4.0 - D4.1
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Perimeter frame floor systems - wood joists over steel joists	
Wood floor joist	D6.0 - D6.1
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Uplift on roof sheathing fasteners	D23.0 - D23.3
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Wind speed comparison (Exp. C vs. B & D)	D26.0 - D26.1

Note: These calculations do not include all aspects of the building's structural system and they must be reviewed and verified for applicability by the building designer prior to construction. Designer of these calculations is not the "Designer or Record" for any specific project. See certified model plans for "Designer of Record" information.



12-11-2019



D24.8-D24.9 revised 12-11-19

D25.0-D25.1 revised 12-11-19

Note: All wind design calculations assume a ground elevation factor of $K_e = 1$.

"Professional certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, license no. 19336; expiration date: 08-18-21."

RADCO APPROVED
 Jan 06, 2020
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THIRD PARTY DESIGN APPROVAL & INSPECTION AGENCY

Overturing and Sliding Analysis

Reference: 2018 IBC &
 ASCE 7-16 Chp. 27.

$$plf := \frac{lb}{ft} \quad \psi := \frac{lb}{in^2} \quad \psi_f := \frac{lb}{ft^2} \quad k := 1..10$$

This analysis is applicable to the tie down of the exterior side wall I-beams of outrigger frame single wide buildings with module widths of 8'-0" to 13'-8" wide. This analysis is only applicable to buildings within the variables specified below. The building designer must verify that the floor system is adequately attached to the steel frame so as to transfer all horizontal and vertical wind loads for this analysis to be valid.

Variables:

Exposure Category: C
 Zone: All zones
 Mean Roof Height: 15 ft max.
 Coefficients*:
 Internal: GCpi := 0.18
 Windward Wall: WWCp := 0.8-0.85
 Windward Roof: WRCp := -1.3-0.85
 Leeward Roof: LRCp := -0.7-0.85
 Leeward Wall: LWCp := -0.5-0.85
 Overhang: OCp := 0.8-0.85
 Wind Direction Factor: Kd := 0.85
 Velocity Pressure Exp.: Kz := 0.85
 Topographic Factor:** Kzt := 1.0

Exterior Module Width: BW := 13.67 ft
 Overhang Length (max.): OL := 2 in
 Roof Dead Load (min.): RD := 8 psf
 Floor Dead Load (min.): FD := 8 psf
 Wall Dead Load (min.): WD := 6 psf
 Wall Height (max.): WH := 9 ft
 Truss Heel Height (max.): TH := 20 in
 Floor height (max.): FH := 8 in
 I-beam height (max.): IH := 12 in

Basic Wind Speed
 in mph:

$$V_k :=$$

200
190
180
170
160
150
140
130
120
115

Maximum Roof Pitch Angle at Exterior Sidewall (Deg): RA := 20
 Module Centerline to Overturing Point: A := 4 ft
 Turning Point to Tie Down Strapping: B := 8 ft
 Tie Down Strapping Working Capacity: FTD := 3150 lb
 Angle Between Tie Down Strap & Ground (Deg.): TA := 45

* Positive indicates towards surface
 Negative indicates away from surface
 **Building shall not be located on the upper half of a hill or escarpment exceeding 15 ft. in height.

Overturing:

Wind Pressure: Conversion to ASD: $V_{asd} := V \cdot \sqrt{0.6}$ $q_k := 0.00256 \cdot K_d \cdot K_z \cdot K_{zt} \cdot \left[(V_{asd}_k)^2 \right] \cdot \text{psf}$

Windward Wall: WW := WWCp
 Leeward Wall: LW := LWCp
 Windward Roof: WR := WRCp - GCpi
 Leeward Roof: LR := LRCp - GCpi
 Windward Overhang: WOH := WRCp - OCp
 Leeward Overhang: LOH := LRCp - OCp

$$H := WH + TH + FH + IH \quad H = 12.33 \text{ ft}$$

$$RH := 0.5 \cdot BW \cdot \tan(RA \cdot \text{deg}) \quad HLW_k := (WW - LW) \cdot q_k \cdot H \quad HLR_k := (WR - LR) \cdot q_k \cdot RH$$

$$HLr1_k := \text{if} \left[\left(HLR_k < 0 \cdot plf \right), 0 \cdot plf, HLR_k \right]$$

$$OTh_k := HLW_k \cdot (H \cdot 0.5) + HLr1_k \cdot (H + RH \cdot 0.5)$$

$$OTV_k := -WR \cdot q_k \cdot (BW \cdot 0.5) \cdot [A + (BW \cdot 0.25)] + -LR \cdot q_k \cdot (BW \cdot 0.5) \cdot [A - (BW \cdot 0.25)]$$

Longitudinal Tie Down Analysis for Roof Slopes of 1.05:12 or Less

This analysis will determine the quantity of longitudinal tie down anchors required for an individual on-frame module supported on two rows of I-Beam piers with the parameters as specified below.

Reference: 2018 IBC &
 ASCE 7-16 Chp. 27.

$$plf := \frac{lb}{ft} \quad psi := \frac{lb}{in^2} \quad psf := \frac{lb}{ft^2} \quad k := 1..10$$

Variables:

Exposure category:	C	Maximum module width:	MW := 188·in
Mean roof height:	15 ft max.	Maximum sidewall overhang:	SH := 2·in
Coefficients*:		Maximum wall height:	WH := 108·in
Wall end zone:	GCpe := 0.61 – (–0.43)	Maximum floor height:	FH := 8·in
Wall interior zone:	GCpi := 0.40 – (–0.29)	Roof height at low end:	HH := 20·in
Bldg. least horz. dim.:	30 ft max.	Roof height at high end:	RH := 24·in
End zone length:	a := 3·ft	Anchor/strap working capacity:	AC := 3150·lb
Wind direction factor:	Kd := 0.85	Angle from ground to tie down strap (must be > 25 deg.):	AG := 45·deg
Velocity pressure exp.:	Kz := 0.85	Angle from steel beam length axis to tie down strap projected on to a horizontal plane:	AB := 10·deg
Topographic factor**:	Kzt := 1.0		

* Positive indicates towards surface
 Negative indicates away from surface
 **Building shall not be located on the upper half of a hill or escarpment exceeding 15 ft. in height.

Note: The ground anchor angle of installation from vertical shall be 20 deg. with bottom of anchor positioned in the windward direction.

Basic Wind speed in mph: $V_k :=$

200
190
180
170
160
150
140
130
120
115

Analysis:

Conversion to ASD: $V_{asd} := V \cdot \sqrt{0.6}$

Wind pressure: $q_k := 0.00256 \cdot K_d \cdot K_z \cdot K_{zt} \cdot \left[(V_{asd_k})^2 \right] \cdot psf$

End zone length: $EZ := \text{if} \left[(2 \cdot a < MW), 2 \cdot a, MW \right]$

Interior zone length: $Iz := \text{if} \left[(EZ < MW), MW - EZ, 0 \cdot ft \right]$

PLUMBING NOTES:

- WHEN RESTROOM FACILITIES AND/OR PLUMBING FIXTURES REQUIRED PER IPC SECTION 403 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.

MECHANICAL NOTES:

- ALL SUPPLY AIR REGISTERS SHALL BE 14 INCHES X 14 INCHES ADJUSTABLE WITH 6 INCHES X 18 INCHES (INSIDE) OVERHEAD FIBERGLASS DUCT, UNLESS OTHERWISE SPECIFIED. DUCTS SHALL BE INSULATED PER THE REQUIREMENTS OF THE APPLICABLE ENERGY CODES.
- INTERIOR DOORS SHALL BE UNDERCUT 1.5 INCHES ABOVE FINISHED FLOOR FOR AIR RETURN AND/OR AS NOTED ON FLOOR PLAN (FOR UNRATED DOORS).
- HVAC EQUIPMENT SHALL BE EQUIPPED W/OUTSIDE FRESH AIR INTAKES PROVIDING 10 CFM PER PERSON & 0.12 CFM PER S.F. BLDG. AREA PER SECTION 403.3 OF THE IMC.
- VENT FANS SHALL BE DUCTED TO THE EXTERIOR AND TERMINATE AT AN APPROVED VENT CAP.
- EXHAUST FANS SHALL PROVIDE A MINIMUM OF 70 CFM FOR EACH WATER CLOSET AND URINAL.
- THERMOSTATS MUST BE PROGRAMMABLE.

GENERAL NOTES:

- 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.
- 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.
- 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.
- SEE CROSS SECTION FOR ROOF TO WALL AND WALL TO FLOOR CONNECTION REQUIREMENTS.
- PORTABLE FIRE EXTINGUISHER PER N.F.P.A. - 10 INSTALLED BY OTHERS ON SITE, AND SUBJECT TO LOCAL JURISDICTION.
- PROVISIONS FOR EXIT DISCHARGE LIGHTING ARE THE RESPONSIBILITY OF THE BUILDING OWNER AND SUBJECT TO LOCAL JURISDICTION APPROVAL WHEN NOT SHOWN ON THE FLOOR PLAN (INCLUDING EMERGENCY LIGHTING, WHEN REQUIRED).
- WHEN LOW SIDES OF ROOF PROVIDE LESS THAN 6" OF OVERHANG, CUTTERS AND DOWN SPOUTS SHALL BE SITE INSTALLED, DESIGNED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
- IN WIND-BORNE DEBRIS REGIONS, EXTERIOR GLAZING SHALL BE IMPACT RESISTANT OR PROTECTED WITH AN IMPACT RESISTANT COVERING MEETING THE REQUIREMENTS OF AN APPROVED IMPACT RESISTANT STANDARD, OR ASTM E1996. WIND-BORNE DEBRIS REGIONS ARE DESIGNATED IN SECTION 1609 OF THE IBC AND NBCS.
- WINDOWS AND DOORS MUST BE CERTIFIED FOR COMPLIANCE WITH THE WIND DESIGN PRESSURE FOR COMPONENTS AND GLAZING.
- STRUCTURAL DETAILS NOT INCLUDED IN THIS PLAN SET ARE TO BE CONSTRUCTED ACCORDING TO THE MANUFACTURERS STATE APPROVED BUILDING SYSTEM MANUAL.
- A FIRE ALARM MUST BE SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL APPROVAL BY THE AUTHORITY HAVING JURISDICTION.
- THIS BUILDING IS DESIGNED FOR NORTH CAROLINA CLIMATE ZONE 4c.

ELECTRICAL NOTES:

- ALL CIRCUITS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NATIONAL ELECTRICAL CODE (NEC).
- 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 6 INCHES FROM "STORAGE AREA" AS DEFINED BY NEC 410-8(c).
- 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.
- 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.
- PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE DESIGNED AND VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110-9 OF THE NEC BY LOCAL ELECTRICAL CONSULTANT.
- THE MAIN ELECTRICAL PANEL AND FEEDERS ARE DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO LOCAL JURISDICTION APPROVAL.
- ALL CIRCUITS CROSSING OVER MODULE MATING LINE(S) SHALL BE SITE CONNECTED WITH APPROVED ACCESSIBLE JUNCTION BOXES, OR CABLE CONNECTORS.
- 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 IS INSERTED OR REMOVED. THE RECEPT ITSELF SHALL ALSO BE LISTED FOR DAMP AND WET LOCATIONS AS PER NEC AND NCEC.
- EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
- THE BUILDINGS FIRE ALARM SYSTEM (PROTECTIVE, SIGNALING SYSTEMS, FIRE DETECTION SYSTEMS, ETC.) SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 101 AND NFPA 72 AND SITE INSTALLED BY OTHERS SUBJECT TO LOCAL BUILDING OFFICIAL REVIEW AND APPROVAL. THE FIRE ALARM CONTROL PANEL MUST BE INSTALLED IN A HIGHLY VISIBLE LOCATION ACCEPTABLE TO THE LOCAL AUTHORITY HAVING JURISDICTION. (THE FAC. CANNOT BE INSTALLED IN A CLOSET OR BATHROOM).
- ALL 15 AND 20 AMPERE, 125 AND 250 VOLT NONLOCKING-TYPE RECEPTACLES SHALL BE LISTED TAMPER RESISTANT RECEPTACLES.

ACCESSIBILITY NOTES:

- 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.
- 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.
- 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 (48 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.
- 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.
- WHERE EMERGENCY WARNING SYSTEMS ARE PROVIDED, 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, WHICH EVER IS LOWER.
- 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.
- 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.
- DOORS TO ALL ACCESSIBLE SPACES SHALL HAVE ACCESSIBLE HARDWARE (I.E. LEVER - OPERATED, PUSH TYPE, U-SHAPED) MOUNTED WITH OPERABLE PARTS BETWEEN 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR.

MARYLAND, N.J. STRUCTURAL LOAD LIMITATIONS:

FLOOR LIVE LOAD:
A. DEAD LOAD = 12 PSF (AVERAGE).
B. UNIFORM LIVE LOAD = 40 PSF.
C. CONCENTRATED LIVE LOAD = 1000 LB. OVER 30 INCH X 30 INCH AREA LOCATED ANYWHERE ON FLOOR. NOTE: UNIFORM AND CONCENTRATED LIVE LOADS ARE NOT SIMULTANEOUSLY APPLIED.

ROOF DEAD AND LIVE LOAD:
A. DEAD LOAD = 13 PSF (AVERAGE).
B. LIVE LOAD = 20 PSF.

ROOF SNOW LOAD:
A. GROUND SNOW LOAD: Pg = 50 PSF
B. FLAT-ROOF SNOW LOAD: Ps = 40.8 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 = Pt X Ce
H. DESIGN IS BASED ON FULL OR PARTIALLY EXPOSED ROOF PER ASCE 7-16.

WIND LOAD:
A. BASIC WIND SPEED (3-SEC GUST): V = 130 MPH
B. ASD WIND SPEED (3-SEC GUST): Vasd = 101 MPH
C. RISK CATEGORY: II
D. WIND EXPOSURE CATEGORY: B
E. INTERNAL PRESSURE COEFFICIENT: GCp1 = 0.18
F. COMPONENT & CLADDING BASIC DESIGN PRESSURES (ASD DESIGN PRESSURE) FOR ROOF ANGLES 0 TO 7 DEGREES:
WALL ZONE 5: P = 4/-49.2 PSF (Wind = +/-29.5 PSF)
WALL ZONE 4: P = 4/-39.9 PSF (Wind = +/-24.0 PSF)
ROOF ZONE 3: P = -105.4 PSF (Wind = -63.2 PSF)
ROOF ZONE 2: P = -77.3 PSF (Wind = -48.4 PSF)
ROOF ZONE 1: P = -56.6 PSF (Wind = -35.1 PSF)
ROOF ZONE 1: P = -33.6 PSF (Wind = -20.2 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 = 0.537 S1 = 0.285
Sd1 = 0.48 Sd2 = 0.19
E. SEISMIC DESIGN CATEGORY IS C.
F. SEISMIC FORCE RESISTING SYSTEM IS A13.
G. SIMPLIFIED SEISMIC ANALYSIS PROCEDURE HAS BEEN USED.
H. RESPONSE MODIFICATION FACTOR R = 6.5.
I. SEISMIC RESPONSE COEFFICIENT Ca = 0.08.
J. DESIGN BASE SHEAR V = 1612#

FLOOD LOAD:
THIS BUILDING IS NOT DESIGNED TO BE LOCATED IN A FLOOD HAZARD AREA.

ROOF RAIN LOAD:
A. RAIN INTENSITY: I = 4.0 INCHES/HOUR

**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.

- THE COMPLETE FOUNDATION SUPPORT AND THE DOWN SYSTEM.
- RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING.
- PORTABLE FIRE EXTINGUISHER(S).
- BUILDING DRAINS, CLEANOUTS, AND HOOK-UP TO PLUMBING SYSTEM.
- ELECTRICAL SERVICE HOOK-UP (INCLUDING FEEDERS) TO THE BUILDING.
- THE MAIN ELECTRICAL PANEL AND SUB-FEEDERS.
- CONNECTION OF ELECTRICAL CIRCUITS CROSSING OVER MODULE MATELINE(S) - (MULTI-UNITS ONLY).
- STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES (MULTI-UNITS ONLY).
- FIRE INSPECTION.

WINDOW & DOOR SPECIFICATIONS

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

APPROVED
RADCO
APPROVED
18-Jun-21
James Slaght, MCP

BUILDING DESIGN PARAMETERS

1. USE/OCCUPANCY:	EDUCATION ELEMENTARY
2. CONSTRUCTION TYPE:	V6
3. SPRINKLER SYSTEM:	NO
4. BUILDING AREA:	794 S.F.
5. BUILDING HEIGHT:	≤ 15 FEET
6. NUMBER OF STORIES:	1
7. NUMBER OF MODULES:	2
8. OCCUPANT LOAD:	38 BASED ON 20 NET SF/PERSON
9. EXTERIOR WALL FIRE RATING:	NOT RATED
10. THIS BUILDING MUST BE INSTALLED WITH THE FIRE SEPARATION DISTANCES REQUIRED BY IBC & NBC TABLE 602 AND SECTION 705.3	
11. ENERGY 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	ACCESSIBILITY	ENERGY CODE
NEW JERSEY	2018 IBC W/ N.J. AMENDS	2017 NEC W/N.J. AMENDS	2018 IMC N.J. AMENDS	2018 NATL STD PC (NSPC) W/ N.J. AMENDS	ANSI A117.1-2009 CHPT. 11 OF 2018 IBC & NJAC 5:23-7	2018 ASHRAE 90.1 W/N.J. AMENDS 2018 IECC
N. CAROLINA	NCBC 2018 2018 NCFE	2017 N.C. ELECT. CODE	2018 NCMC	2018 NCPC	NCBC 2018 CHPT. 11 AND ICC/ANSI A117.1-2009	2015 NC ENERGY CODE 2015 IECC
MARYLAND	2018 IBC W/ MD. AMENDMENTS FIRE CODE 2018 NFPA 1 AND NFPA 101 WITH MD. AMENDMENTS	2017 NEC W/MD. AMEND.	2018 IMC W/ MD. AMEND.	2018 IPC W/ MD. AMEND.	2010 ADA 2012 MARYLAND ACCESS. CODE	2018 IECC W/MD. AMEND.
VIRGINIA	2015 VA. UNIFORM STATEWIDE BLDG. CD. 2015 IBC 2015 VA. STATEWIDE FIRE PREVENTION CODE 2015 IFC W/VA. AMENDS	2014 NEC	2015 IMC.	2015 IPC	ICC/ANSI A117.1-2009	2015 IECC

MARYLAND NOTES:

- REFER TO STATE PACKAGE PAGE NO. C34.0 FOR REQUIRED DUCT PROTECTION AT CONNECTION TO HVAC UNIT.
- THE FOLLOWING NOTE SHALL BE ON THE BLDG. DATA PLATE: THIS BUILDING HAS NOT BEEN DESIGNED FOR AND IS NOT APPROVED FOR INSTALLATION IN THE FOLLOWING MARYLAND COUNTIES: ALLEGANY
- HVAC SYSTEM SHALL COMPLY WITH NFPA 90B WHEN BUILDING VOLUME DOES NOT EXCEED 25,000 CUBIC FEET, OTHERWISE HVAC SYSTEM SHALL COMPLY WITH NFPA 90A.
- THESE PLANS ARE PREPARED TO FACILITATE CONSTRUCTION OF THE PRE-ENGINEERED FACTORY BUILT MODULAR BUILDING, AND THEY INCLUDE MINIMUM ON-SITE SUPPORT AND THE DOWN REQUIREMENTS FOR THE MODULAR BUILDING. THE PROJECT ARCHITECT OF RECORD IS RESPONSIBLE FOR INCORPORATION AND COORDINATION OF THESE PLANS INTO THE OVERALL PROJECT DESIGN.
- TO LOCAL BUILDER AND/OR SITE DEVELOPER: ALL SITE WORK INCLUDING THE LOCATION OF THE BUILDING, IS REQUIRED TO BE REVIEWED AND APPROVED BY A MD. REG. ARCH. OR ENG. TO VERIFY CODE COMPLIANCE INCLUDING BUT NOT LIMITED TO FIRE RESISTANCE RATINGS FOR EXTERIOR PROTECTION, MEANS OF EGRESS, HEIGHT AND AREA LIMITATIONS, OTHER PERTINENT SITE RELATED MATTERS, DOCUMENTS RELATED TO SITE WORK, INCLUDING SITE AND DEVELOPMENT DRAWINGS, SHALL BE SUBMITTED TO THE LOCAL GOVERNMENT AGENCY FOR REVIEW AND APPROVAL.
- INSTALL STATE INSIGNIA AND BUILDING DATA PLATE IN THE VICINITY OF ELECTRICAL DISTRIBUTION PANEL OR OTHER LOCATION THAT IS READILY ACCESSIBLE FOR INSPECTION, BUT NOT ON ANY READILY REMOVABLE FEATURE.
- WHEN THE 2018 IECC IS THE APPLICABLE ENERGY CODE, SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND WHERE LOCATED OUTSIDE THE BUILDING WITH A MINIMUM OF R-8 INSULATION IN CLIMATE ZONES 1 THRU 4 AND A MINIMUM OF R-12 INSUL IN CLIMATE ZONE 5. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-8 INSULATION IN CLIMATE ZONES 1 THRU 4 AND A MINIMUM OF R-12 INSULATION IN CLIMATE ZONE 5.

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.

- THE INTERCONNECTION BETWEEN BUILDING MODULES AT THE FLOOR AND ROOF SHALL BE SPECIFIED ON THE CROSS SECTION DRAWING ON THE PLAN SET.
- BUILDING THE DOWN AND ANCHORAGE REQUIREMENTS ARE AS INDICATED ON FOUNDATION PLAN.
- 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).
- MECHANICAL INTERCONNECTIONS BETWEEN BUILDING MODULES SHALL BE PER PAGES E1.0, E2.4, E2.5 OF THE INSTALLATION INSTRUCTIONS (IF APPLICABLE).
- PLUMBING INTERCONNECTIONS BETWEEN BUILDING MODULES SHALL BE PER PAGES E1.1, E1.2, E2.3, E4.1 OF THE INSTALLATION INSTRUCTIONS (IF APPLICABLE).
- FIRE BLOCKING SHALL BE PROVIDED PER SECTION 717.2 AND 1406.2.3 OF THE N.C. BUILDING CODE (AS APPLICABLE).
- 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.

MARYLAND SERIAL NO.: STOCK

CONSULTING ARCHITECT
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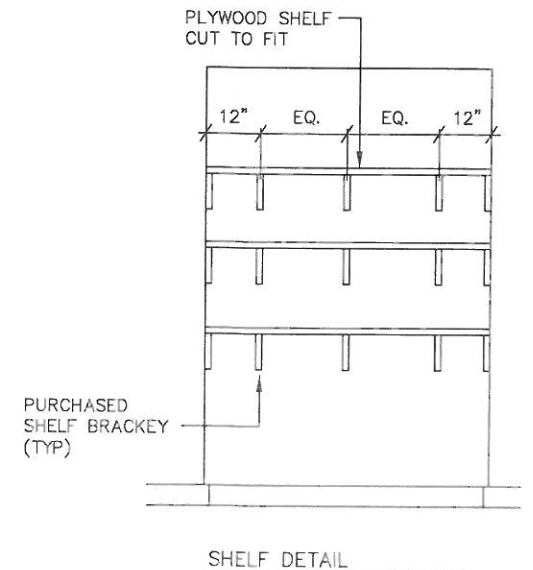
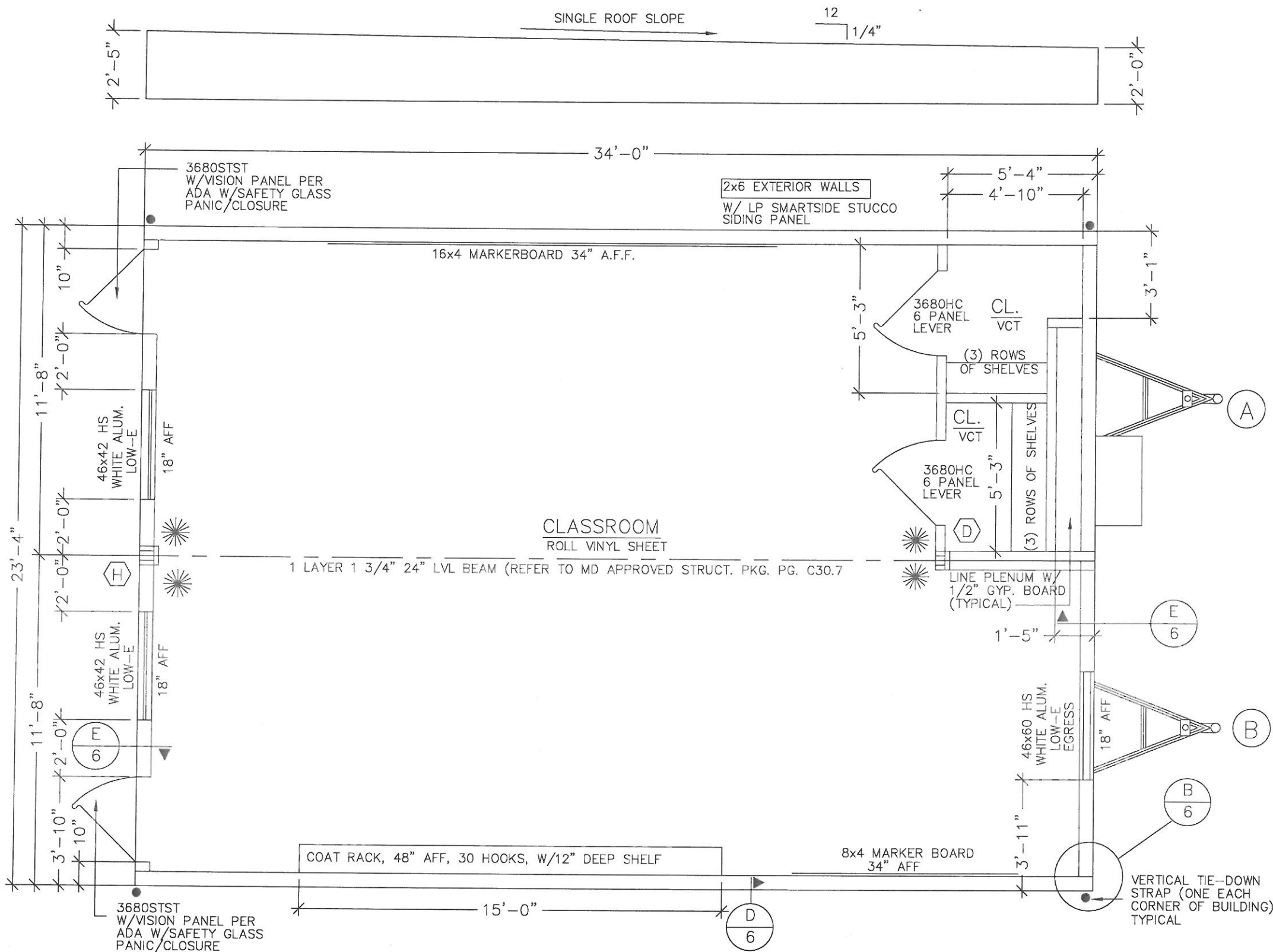
CONSULTING ENGINEER
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CONSULTING ENGINEER
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SPECIALIZED STRUCTURES INC.

2400 SPRINGHEAD CHURCH ROAD WILLACOOCHEE, GA 31650
1-912-384-7565 FAX: 1-912-384-4943

DATE: 5-25-21	THIRD PARTY: RADCO	BY: W.E.W.
SCALE: NO SCALE	5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813-243-0370	SHEET 1 OF 7
CODES: SEE NOTES	REVISIONS:	
STATES: MD, VA, NJ, NC.	REFERENCE: 5637	
SSI6005-21 A/B 23'-4" x 34'-0" ED.-STOCK		
COVER SHEET	MD. PLAN NO: SSI-6005 MD	



APPROVED **RADCO** APPROVED
18-Jun-21
James Slaght, MCP

CONSULTING ENGINEER: WALTER E. WOOD, P.E. - 168 W. LONGLEAF DR. - SYLVESTER, GA. 31791

COLUMN STRAPPING SCHEDULE:

(A) (2) 2x4 SPF #2 THIS HALF.	(B) (2) 2x4 SPF #2 EACH HALF
(C) (3) 2x4 SPF #2 THIS HALF.	(D) (3) 2x4 SPF #2 EACH HALF.
(E) (4) 2x4 SPF #2 THIS HALF.	(F) (4) 2x4 SPF #2 EACH HALF.
(G) (3) 2x6 SPF #2 THIS HALF.	(H) (3) 2x6 SPF #2 EACH HALF.

☼ WITH RIDGE BEAM BEARING STIFFENER

NOTES:
1. ALL COLUMN STUDS SHALL BE GLUE/NAILED TOGETHER. PVA GLUE WITH 100% COVERAGE SHALL BE USED.
2. INSTALL TWO STEEL STRAPS AT EACH STUD OF EACH COLUMN.
3. COLUMN STUDS SHALL NOT BE NOTCHED OR BORED.

CONSULTING ARCHITECT
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STATE OF NEW JERSEY
ROBERT E. GREGG
REGISTERED ARCHITECT
15414

STATE OF MARYLAND
WALTER E. WOOD
PROFESSIONAL ENGINEER
06-18-2021

NORTH CAROLINA
WALTER E. WOOD
PROFESSIONAL ENGINEER
SEAL 044853
06-18-2021

COMMONWEALTH OF VIRGINIA
WALTER E. WOOD
Lic. No. 57881
06-18-2021

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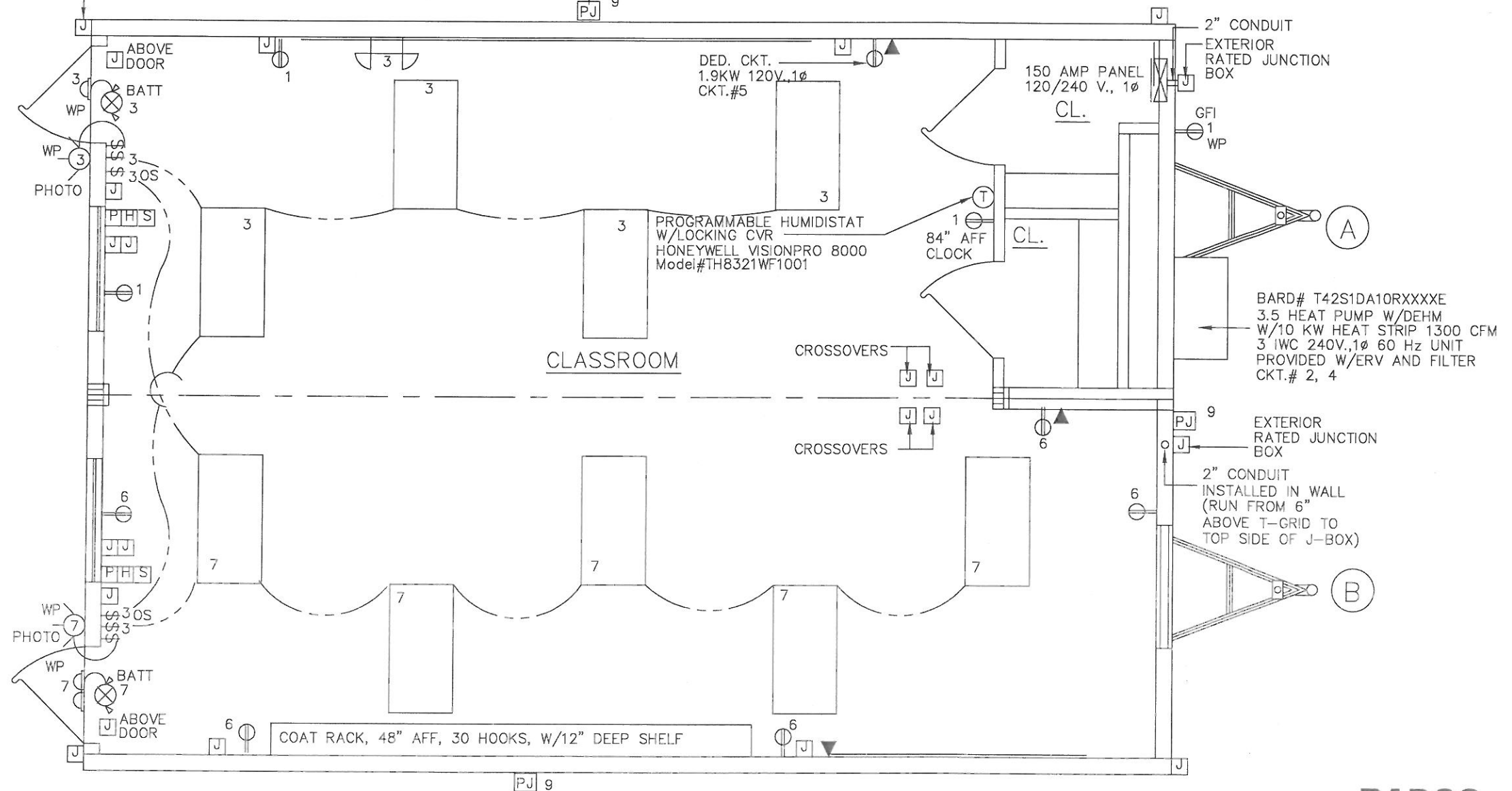
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CODES: SEE NOTES	TAMPA, FLORIDA 33634	
STATES: MD, VA, NJ, NC.	813-243-0370	
REFERENCE: 5637	REVISIONS:	
SSI6005-21 A/B		
23'-4" x 34'-0" ED.-STOCK		
FLOOR PLAN	MD. PLAN NO: SSI-6005 MD	2 OF 7

SYMBOLS
J-BOXES ONLY

P	FIRE ALARM PULL STATION
H	FIRE ALARM HORN/STROBE
S	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.
⊕	BLACK LED PORCH LIGHT WITH 1-11 W. BULB
⊕	COMPACT FLOURESCENT LIGHT 1-60 W. BULB
⊕	HIGH PRESSURE SODIUM LIGHT
⊕	METAL HALIDE WALL PACK
⊕	VENT FAN
⊕	COMB. VENT FAN & LIGHT
⊕	SUPPLY AIR REGISTER
⊕	RETURN AIR REGISTER
⊕	FLOOD LIGHT 2-150W BULBS
⊕	THERMOSTAT
⊕	LED LIGHT FIXTURE WITH 30W. PANEL
⊕	EXT./EMERGENCY COMBO W/BATTERY BACKUP
⊕	EXT./EMERGENCY COMBO W/REMOTE HEAD W/BATTERY BACKUP
⊕	EXT./EMERGENCY COMBO W/DBL. REMOTE HEAD W/BATTERY BACKUP
⊕	EXT./EMERGENCY COMBO W/BATTERY BACKUP
⊕	EXT. SIGN W/BATTERY BACKUP
⊕	EMERGENCY LIGHT WITH BATTERY BACKUP
⊕	TELEPHONE
⊕	SWITCH & 3 WAY SWITCH
⊕	OCCUPANCY SENSOR WITH 3-WAY SWITCH COOPER CONTROLS MODEL NO. VAC-DT-1000-R
⊕	FIRE EXTINGUISHER

J-BOX AT ALL 4 CORNERS ABOVE CEILING, ON EXTERIOR FOR ADDITIONAL LIGHTING OR CAMERA HOOK-UP

POWERED J-BOW (NO SWITCH) MOUNTED AT 102" A.F.F. (TYPICAL OF 3)



NOTE:
NM CABLE SHALL NOT BE USED WHERE INTERIOR FINISH HAS LESS THAN A 15 MIN. FIRE RATING TYPE AC OR OTHER APPROVED WIRING METHODS SHALL BE USED WHEN USING LESS THAN 1/2\"/>

ELECTRICAL SCHEDULE

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (CU.)
2, 4	HVAC	90 A (2P) HACR	4-2 #8 GRND.
5	DED. CKT. 1.9KW 120V., 1ϕ	20A(1P)	12-2 MC
9	POWERED J-BOX	20 A	12-2 MC
1, 6	RECEPTACLES	20 A	12-2 MC
3, 7	LIGHTING	20 A	12-2 MC

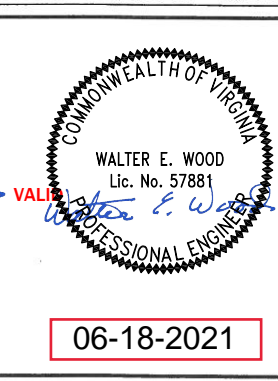
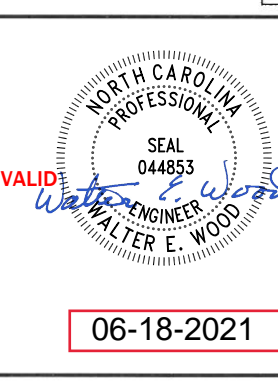
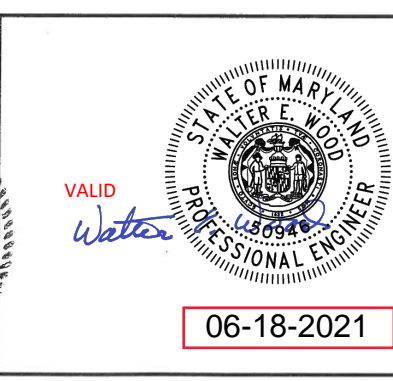
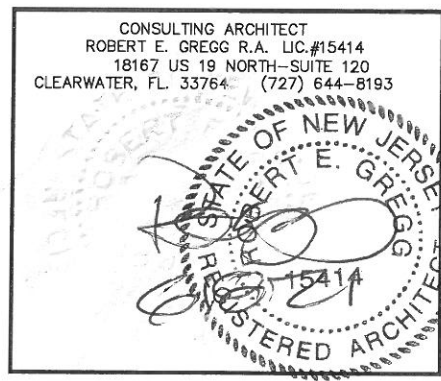
ELECTRICAL PANEL SIZING:

DESCRIPTION	KVA
GENERAL LIGHTING	
.0030 KW/SF X 79.3 SF X 1.25=	3.0
9 RECEPTS AT 180VA/1000=	1.6
DED. CKT. 1.9KW X 1.25=	2.4
3 PWD J-B .5 KW X 1.25=	1.9
HVAC	21.6
TOTAL	30.5 KW
TOTAL/240 X 1000=	128 AMPS
INSTALL 150 AMP PANEL	
120/240 V 1ϕ	

USE QUICK CONNECTS FOR CROSSOVERS

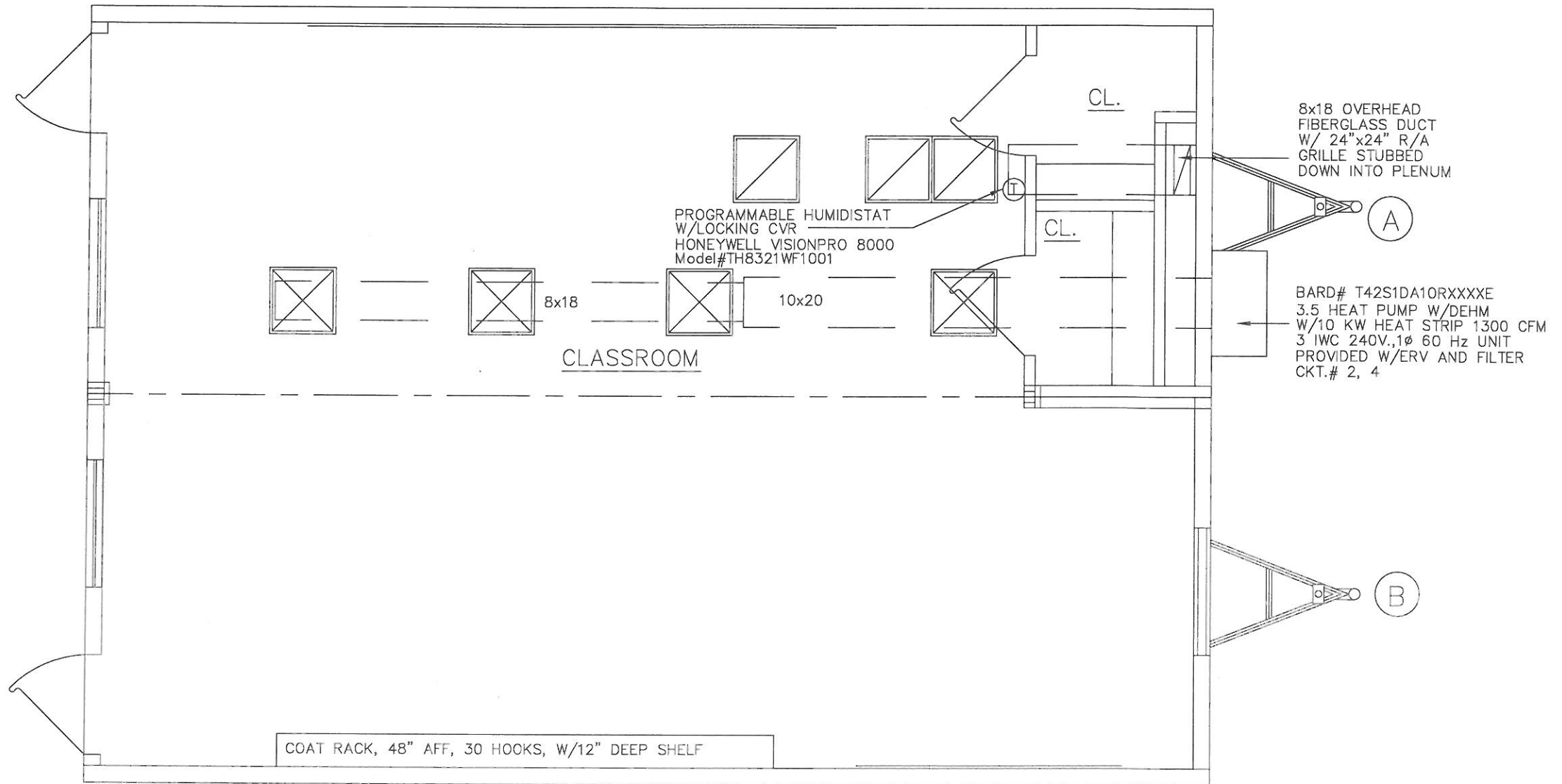
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SSI6005-21 A/B 23'-4" x 34'-0" ED.-STOCK		
ELECTRICAL PLAN		MD. PLAN NO: SSI-6005 MD



APPROVED **RADCO** APPROVED
 18-Jun-21
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LEGEND

24"x24" RETURN AIR GRILLE WITH

24"x24" SUPPLY AIR GRILLE WITH (4-WAY THROW)

T THERMOSTAT W/ LOCKING COVER

NOTES:
 ACOUSTICAL CEILING TILE:
 DONN X DX TILES BY ARMSTRONG 2910
 (INSTALLED PER MANUFACTURES SPEC'S)

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 CLEARWATER, FL. 33764-7214
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STATE OF NEW JERSEY
 ROBERT E. GREGG
 REGISTERED ARCHITECT
 15414

STATE OF MARYLAND
 WALTER E. WOOD
 PROFESSIONAL ENGINEER
 150940

VALID
Walter E. Wood

06-24-2021

NORTH CAROLINA
 PROFESSIONAL
 SEAL
 044853
 WALTER E. WOOD
 ENGINEER

VALID
Walter E. Wood

06-24-2021

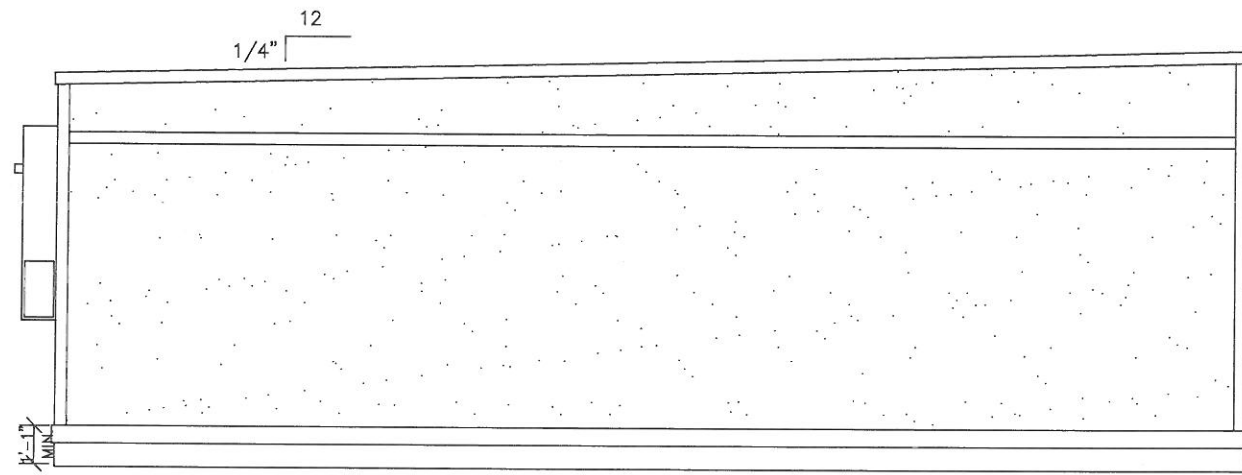
COMMONWEALTH OF VIRGINIA
 WALTER E. WOOD
 Lic. No. 57881
 PROFESSIONAL ENGINEER

VALID
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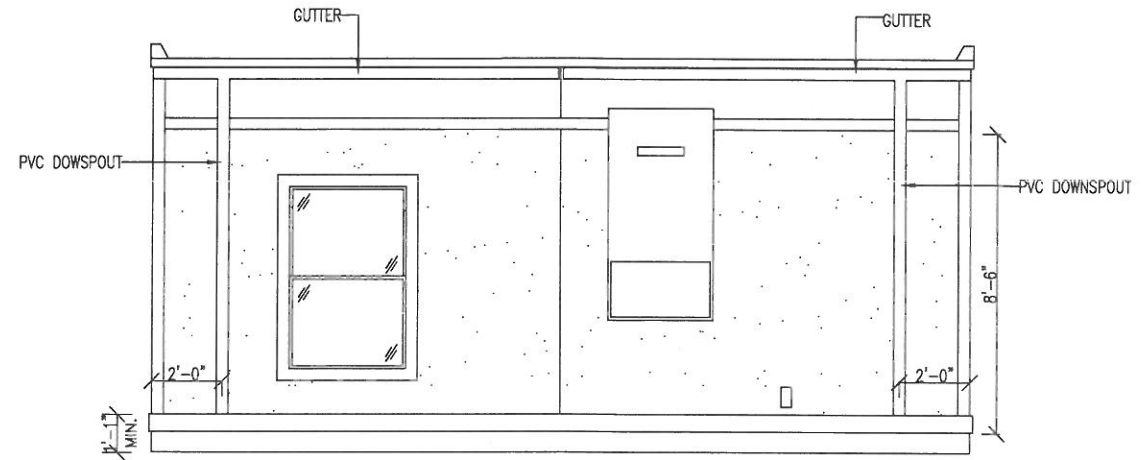
06-24-2021

SPECIALIZED STRUCTURES INC.
 2400 SPRINGHEAD CHURCH ROAD WILLACOCOCHEE, GA 31650
 1-912-384-7565 FAX: 1-912-384-4943

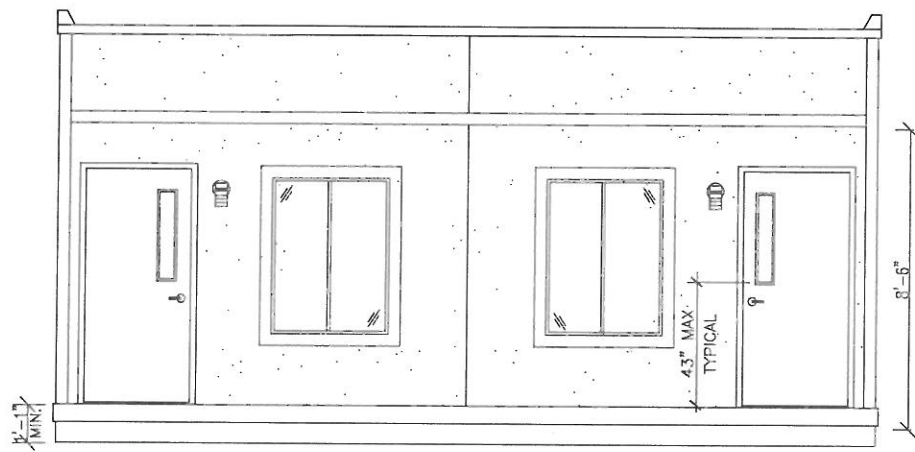
DATE: 5-25-21	THIRD PARTY: RADCO	BY: W.E.W.
SCALE: 1/4"=1'-0"	5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813-243-0370	SHEET
CODES: SEE NOTES	REVISIONS:	4 OF 7
STATES: MD, VA, NJ, NC.	REFERENCE: 5637	MD. PLAN NO: SSI-6005 MD
SS16005-21 A/B 23'-4" x 34'-0" ED.-STOCK		
MECH PLAN		



LEFT

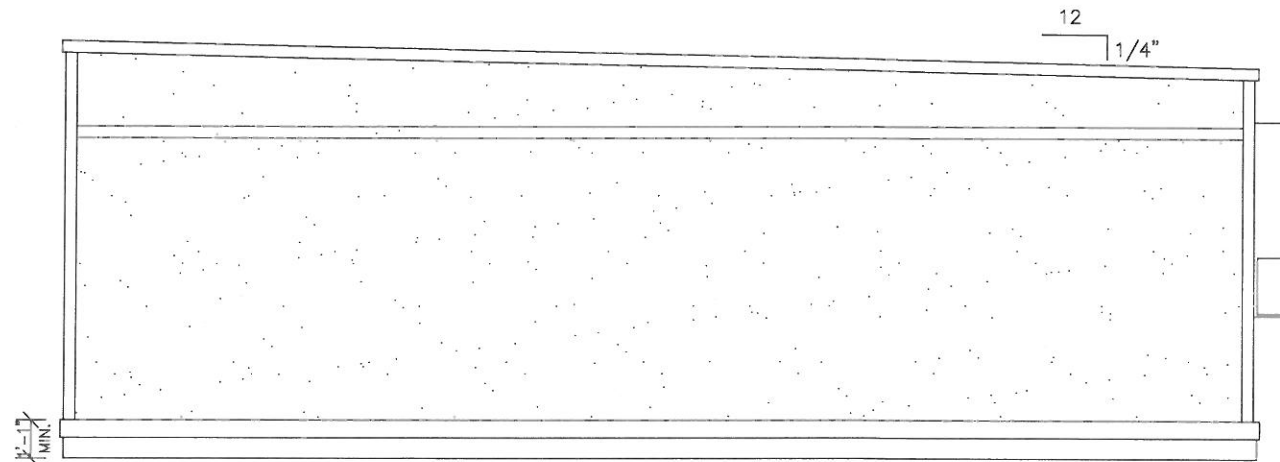


REAR



FRONT

ELEVATIONS 1/4"=1'-0"



RIGHT

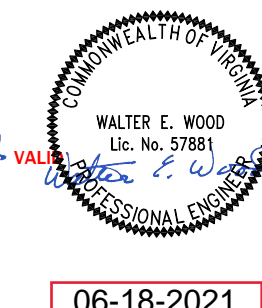
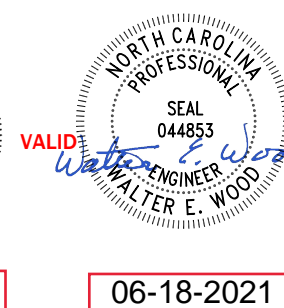
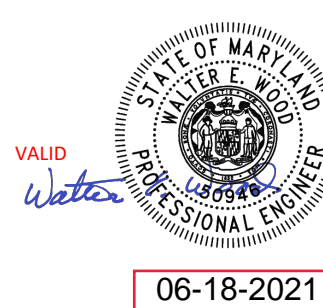
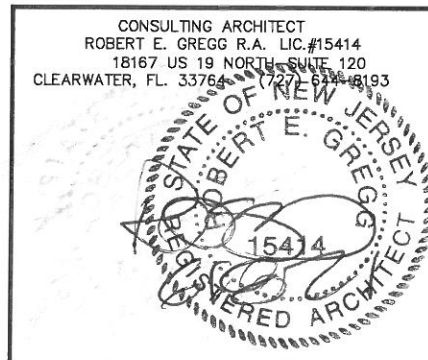
APPROVED **RADCO** APPROVED
 18-Jun-21
 James Slaght, MCP

CONSULTING ENGINEER: WALTER E. WOOD, P.E. - 168 W. LONGLEAF DR. - SYLVESTER, GA. 31791

ELEVATION NOTES (TYP.)

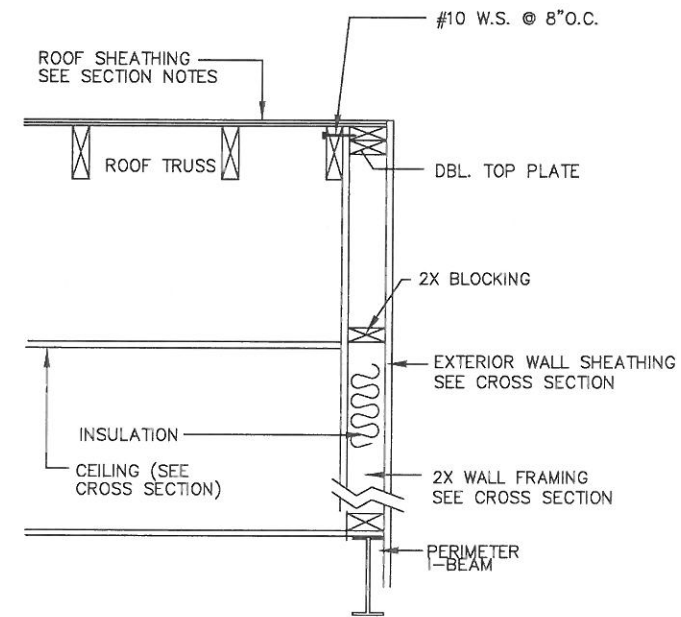
SEE CROSS SECTION FOR METHOD OF ROOF VENTILATION

- HANDICAP RAMP(S), STAIR(S), AND HANDRAILS ARE TO BE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION AND APPROVAL.
- 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 AND APPROVAL

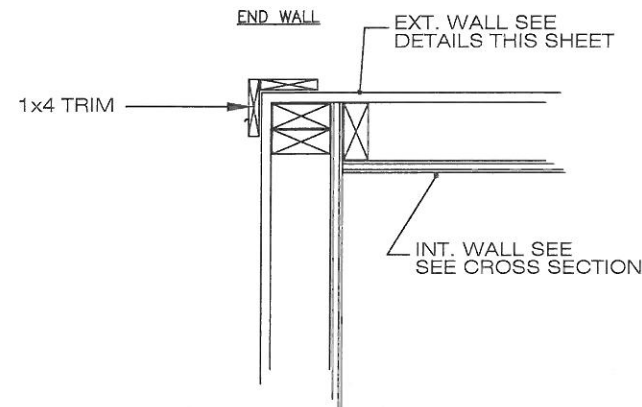


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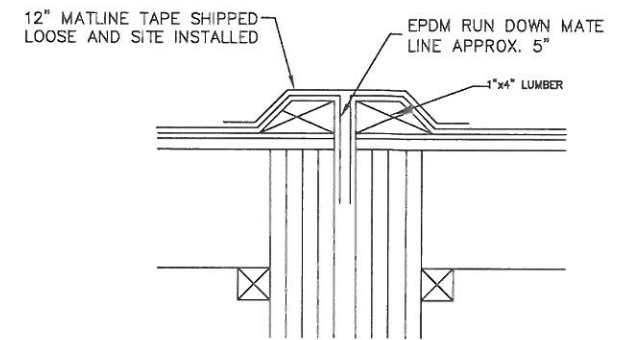
DATE: 5-25-21	THIRD PARTY: RADCO	BY: W.E.W.
SCALE: 1/4"=1'-0"	5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813-243-0370	SHEET
CODES: SEE NOTES	REVISIONS:	5 OF 7
STATES: MD, VA, NJ, NC.	REFERENCE: 5637	
SSI6005-21 A/B		
23'-4" x 34'-0" ED.-STOCK		
ELEVATIONS	MD. PLAN NO: SSI-6005 MD	



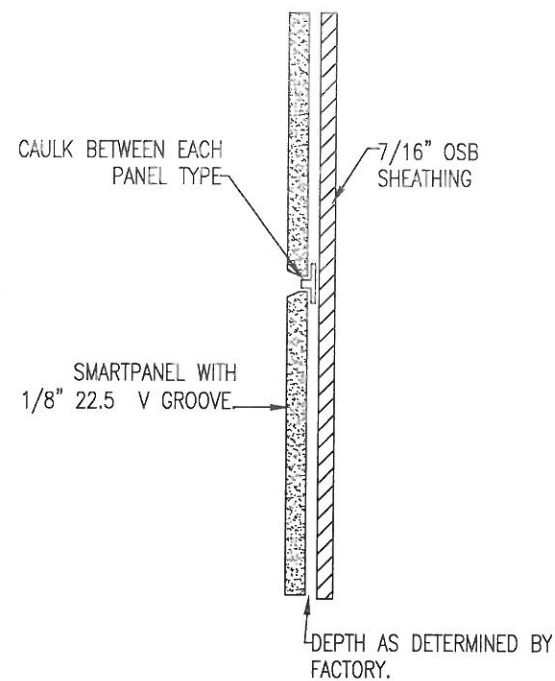
A SECTION EXTERIOR WALL (PERIMETER)
N.T.S.



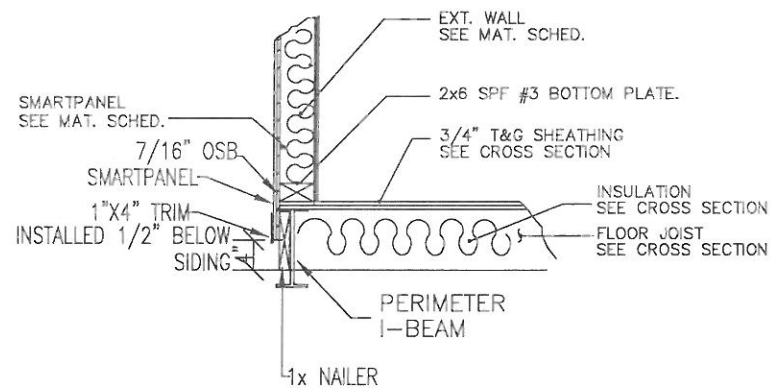
B SECTION CORNER ROOF
N.T.S.



C SECTION ROOF MATELINE
N.T.S.



D WALL FINISH SECTION
EXTERIOR WALL
N.T.S.



E SECTION CORNER FLOOR
N.T.S.

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RADCO
APPROVED
18-Jun-21
James Slaght, MCP

CONSULTING ENGINEER: WALTER E. WOOD, P.E. — 168 W. LONGLEAF DR. — SYLVESTER, GA. 31791

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WALTER E. WOOD
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VALID
Walter E. Wood
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DATE: 5-25-21	THIRD PARTY: RADCO	5801 BENJAMIN CENTER, SUITE 102 TAMPA, FLORIDA 33634 813-243-0370	
SCALE: NO SCALE	CODES: SEE NOTES	STATES: MD, VA, NJ, NC.	REVISIONS:
REFERENCE: 5637	BY: W.E.W.	SS16005-21 A/B 23'-4" x 34'-0" ED.-STOCK	
DETAILS	MD. PLAN NO: SSI-6005 MD	SHEET 6 OF 7	

EXTERIOR FINISH MATERIAL:

ROOF - MULE-HIDE 60 MIL (WHITE) EPDM (ESR-1463) FULLY ADHERED TO 1/2" PLYWOOD WITH MULE-HIDE FR ADHESIVE IN ACCORDANCE WITH INTERTEK REPORT CCR-1078 (CLASS C ROOF)

WALL - 7/16" SMART PANEL OVER APPROVED MOISTURE BARRIER INSTALLED PER MANUFACTURERS SPECIFICATIONS.

INTERIOR FINISH MATERIAL:

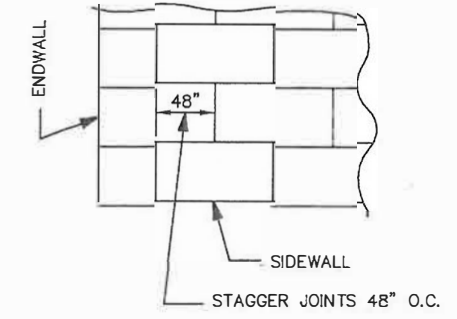
CEILING - T-GRID CEILING INSTALLED PER MANUFACTURER'S SPECIFICATIONS

WALL - 5/8" TYPE 'X' GYP. 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'

APPROVED
RADCO
18-Jun-21
James Slaght, MCP
APPROVED



1/2" PLYWOOD SHTG. TO BE FASTENED TO RAFTERS PER APPROVED STRUCTURAL PACKAGE

ROOF SHEATHING DETAIL

APPROVED TRUSS DESIGN:

TRUSS MANUFACTURER: UNIVERSAL
TRUSS DRAWING. # F0350652

SEE MECHANICAL NOTES AND FLOOR PLAN FOR CEILING DUCT SPECIFICATIONS

26 GA. X 1-1/2" STEEL STRAP FROM TRUSS TO WALL STUD FASTENED W/ (8) 15 GA. X 1" PENETRATION STAPLES PER STRAP END (TYPICAL SIDEWALLS)
NOTE: TRUSSES WHICH DO NOT FALL DIRECTLY OVER WALL STUDS SHALL BE STRAPPED TO TOP PLATE AND TOP PLATE SHALL BE STRAPPED TO NEAREST ADJACENT STUD W/ EQUIVALENT FASTENING

INSTALL 2x3 SPF#3 MIN. RAIL, W/ PLYWOOD FILLERS IF NEEDED, EACH SIDE, AT ROOF PEAK FASTENED TO EACH TRUSS W/(2) 16d NAILS WITH 2" MINIMUM PENETRATION INTO TRUSS, OR EQUAL, WHERE ROOF RIDGE BEAM DOES NOT EXTEND TO TOP OF ROOF. TAPER RAIL WHEN SPACE IS LESS THAN 2 1/2" ABOVE BEAM. ALSO INSTALL RAIL AT BOTTOM OF TRUSSES OVER MARRIAGE WALL WHERE RIDGE BEAM IS NOT REQUIRED. (TYP.)

FASTEN RIDGE BEAM TO TRUSS PER APPROVED STRUCTURAL PACKAGE

1"x4" LUMBER, SEE SEE DETAIL C/6 FOR INFO

SEE INSTALL 3/8" LAG SCREWS STAGGERED FROM SIDE TO SIDE AT 16" O.C. MAXIMUM. LAG SCREWS MUST PENETRATE 1.75" MINIMUM INTO ADJACENT MODULE RIDGE BEAM OR RAIL (TYPICAL AT ALL MARRIAGE LINES)

TRUSS AT 16" O.C.

ROOF COVERING OVER: MULE-HIDE FR DECK PANEL G (SEE EXTERIOR FINISH AND ROOF SHEATHING DETAIL)

R-49 INSULATION UNFACED ON NETTING

1"x3" LUMBER, SEE SEE SHEET 6 OF 7 FOR INFO

EXTERIOR WALL STRUCTURAL BRACING SIDEWALLS:

BRACING INSTALLATION: STRUCTURAL SHEATHING SHALL CONSIST OF A 4 FOOT MINIMUM WIDTH SHEET EXTENDING CONTINUOUSLY FROM FROM TRUSS TOP CHORD TO FLOOR RIM MEMBER EXTENDING 3/4" MINIMUM OVER 2" NOMINAL LUMBER OF THE SAME SIZE AND GRADE AS EXTERIOR WALL FRAMING. BRACING SHALL BE LOCATED CONTINUOUS ALONG SIDE OF BUILDING

BRACING MATERIAL: 7/16" SMART PANEL SHEATHING FASTENED W/ 16 GA. X 1" X 1-1/2" STAPLES 3" O.C. ON EDGES AND 6" O.C. IN THE FIELD, OR USE THE SAME STRUCTURAL BRACING MATERIAL AND FASTENING METHOD AS SPECIFIED FOR ENDWALLS.

ENDWALLS: BRACING INSTALLATION: STRUCTURAL SHEATHING SHALL EXTEND CONTINUOUS FROM TOP OF TRUSS TOP CHORD TO 3/4" MINIMUM BELOW TOP OF RIM MEMBER W/ ALL SHEATHING EDGES SUPPORTED BY 2" NOMINAL LUMBER OF THE SAME SIZE AND GRADE AS EXTERIOR WALL FRAMING.

BRACING MATERIAL: 7/16" SMART PANEL SHEATHING, EXP.-1, EXP.-2, FASTENED W/ 8d COMMON OR GALV. BOX NAILS 3" O.C. EDGES AND 6" O.C. IN THE FIELD.

26 GA. X 1-1/2" STEEL STRAP FROM WALL STUD TO 1x NAILER AT OPENING STUDS AND 16" O.C. WITH 8-15 GA. STAPLES W/FULL PENETRATION PER STRAP END. (TYPICAL SIDEWALLS & ENDWALLS)

RIM MEMBER 2x4 SPF #2 MIN. (TOP AND BOTTOM)

CRIPPLE STUDS 2x6 SYP#2 AT 16" O.C.

2x HEADER PER APPROVED STRUCTURAL PACKAGE

SILL PLATE 2x6 SYP#2

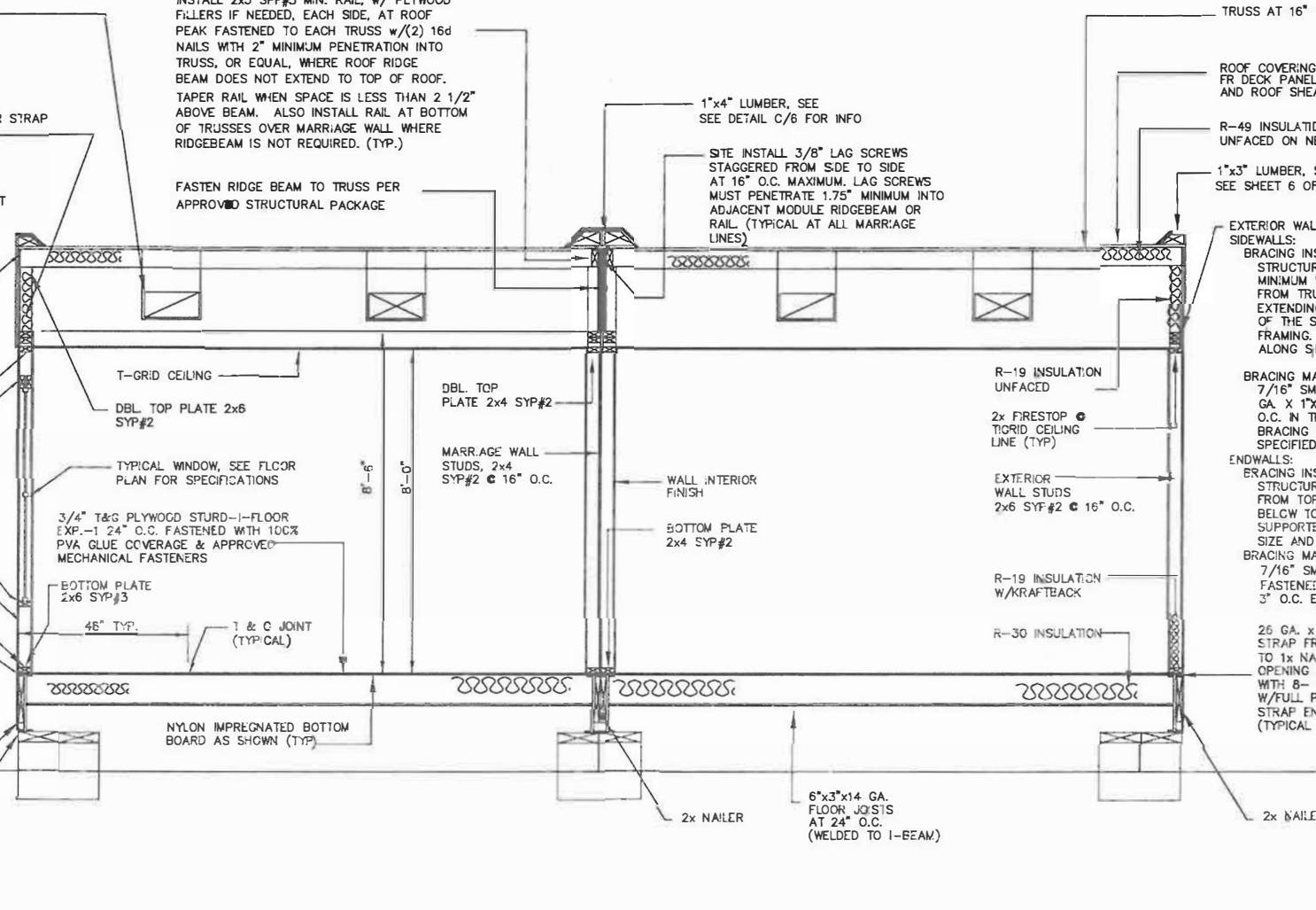
CRIPPLE STUDS 2x6 SYP#2 AT 16" O.C.

2x6 SPF#3 BOTTOM PLATE ATTACHED TO I-BEAM W/ 3" HILT SILL PLATE FASTENERS (X-DNI-72-PE) @ 16" O.C.

26 GA. X 1-1/2" STEEL STRAP FROM WALL STUD TO 2x NAILER AT OPENING STUDS AND 16" O.C. WITH 8-15 GA. STAPLES W/FULL PENETRATION PER STRAP END. (TYPICAL SIDEWALLS & ENDWALLS)

2x NAILER ATTACHED TO I-BEAM W/ 3" HILT SILL PLATE FASTENERS (X-DNI-72-PB) @ 16" O.C.

M12x11.8 PERIMETER I-BEAM



T-GRID CEILING

DBL. TOP PLATE 2x6 SYP#2

TYPICAL WINDOW, SEE FLOOR PLAN FOR SPECIFICATIONS

3/4" T&G PLYWOOD STURD-I-FLOOR EXP.-1 24" O.C. FASTENED WITH 100% PVA GLUE COVERAGE & APPROVED MECHANICAL FASTENERS

BOTTOM PLATE 2x6 SYP#3

48" TYP.

1" & C JOINT (TYPICAL)

NYLON IMPREGNATED BOTTOM BOARD AS SHOWN (TYP)

2x NAILER

6"x3"x14 GA. FLOOR JOISTS AT 24" O.C. (WELDED TO I-BEAM)

2x NAILER

2x NAILER

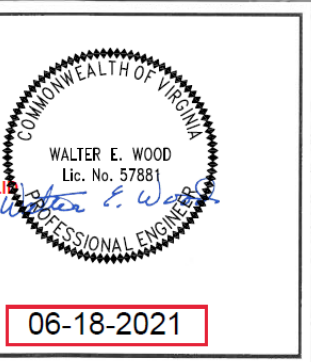
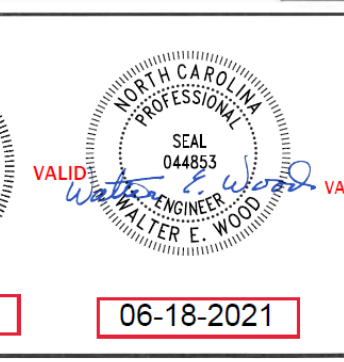
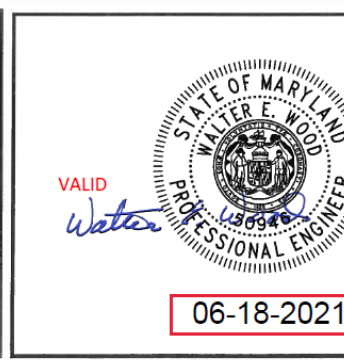
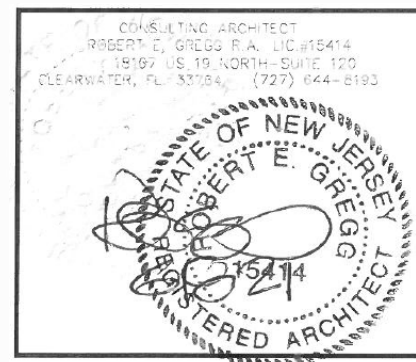
GENERAL CROSS-SECTION NOTES:

- UNLESS OTHERWISE SPECIFIED, ALL STEEL MUST COMPLY W/ ASTM A36, YIELD STRENGTH = 36 KSI.
- ALL LAG SCREWS MUST COMPLY W/ ANSI/ ASME B18.2.1 F_y = 60 KSI MINIMUM.
- SEE FOUNDATION PLAN FOR PIER AND TIE-DOWN STRAPPING LOCATIONS, ORIENTATIONS, AND SPECIFICATIONS.

MICROLAM BEAM CONSTRUCTION

1 LAYER(S) 1 3/4" x 24" MICROLAM, EACH MODULE.

- NOTES:
- MICROLAM F = 2750 PSI
 - MICROLAM MUST BE CONTINUOUS OVER CLEARSPAN(S).
 - BEAMS SUPPORTED BY ENDWALL COLUMNS MUST EXTEND CONTINUOUS OVER COLUMNS TO EXTERIOR FACE OF ENDWALL.
 - FASTEN ROOF SHEATHING INTO TOP EDGE OF MICROLAM TO PROVIDE CONTINUOUS LATERAL SUPPORT OF BEAM.
 - INSTALL (2 X 4) X 20" SPF# 3 RIDGE BEAM BEARING STIFFENER OVER SUPPORT COLUMNS WHEN SPECIFIED ON FLOOR PLAN; FASTEN THE FACE OF THE STIFFENER TO THE RIDGE BEAM WITH 100% GLUE COVERAGE AND 6-16 GA. STAPLES WITH 3/4" MINIMUM PENETRATION INTO MICROLAM BEAM.
 - WHEN MORE THAN ONE LAYER OF MICROLAM IS INSTALLED ON EITHER SIDE OF THE MATING LINE, LAYERS ON THAT SIDE OF THE MATING LINE MUST BE FASTENED TOGETHER WITH 16 GA. STAPLES X 7/16" MINIMUM CROWN INSTALLED PARALLEL TO BEAM SPAN) X 3/4" MINIMUM PENETRATION INTO CONNECTING LAYER STAPLES SHALL BE PLACED AT 6" O.C. MAXIMUM VERTICALLY AND HORIZONTALLY WITH FIRST AND LAST ROW OF STAPLES LOCATED 1" FROM TOP AND BOTTOM EDGE OF BEAM RESPECTIVELY.



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	SSI MD