October 10, 2019

Mr. Mike Hamm, P.E.
Chief Building Code Consultant
North Carolina Department of Insurance - OSFM
325 North Salisbury Street
Raleigh, NC 27603

RE: Champion Home Builders #23
Lillington, NC
Model: 23-3264-01 130

Dear Mr. Hamm:

Enclosed is one set of PFS accepted documents for the above referenced manufacturer. PFS has reviewed these documents and to the best of our knowledge have found them to conform to the North Carolina codes:

2018 NC Residential Code w/Amendments (includes plumbing, mechanical, & energy codes – Chapter 11)
2017 NC Electrical Code w/Amendments

If you have any questions, please contact us.

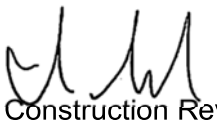
Sincerely,

Ian Lehrer, P.E.
Agency Engineer

Enclosure: As Stated

cc: Jon Tyndall
File

PFS Corporation has reviewed and approved the above referenced material and to the best of our knowledge these documents conform to the referenced codes.



Construction Review
Ian Lehrer, P.E.

Structural Review
Ian Lehrer, P.E.

Plumbing Review
Ian Lehrer, P.E.

Mechanical Review
Ian Lehrer, P.E.

Electrical Review
Ian Lehrer, P.E.

N//A

Quality Control Review
Ian Lehrer, P.E.

Date Received at PFS: 09-25-19
IBC Transmittal No. (by PFS):
Project No. (by PFS): 4329

# ADDITIONAL OR MODIFIED ACCEPTANCE (MODULARS/PANELIZED)

This form is to be used only when the manufacturer is seeking acceptance of an additional model, modified model or model name change which uses a previously accepted building system.

Current PFS Building System Acceptance #:
Model Name/ No. 23-3264-01 130
Manufacturer's Name: CHAMPION HOME BUILDERS
Plant(s) at which model will be produced PLANT #23 LILLINGTON, NC

Check One: Y NEW MODEL ____ Revised Model*

## TECHNICAL DATA

PFS APPROVED
Sharron Barry
DATE 10/10/19
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Cottage Grove, WI

| Floor Plan Showing: | Conforms Yes | No | N/A |
|---|---|---|---|
| Braced Wall Method or Shearwalls | Y | | |
| Building Size (LxW Dimensions) | Y | | |
| Room Sizes, Light & Ventilation Schedule | Y | | |
| Exit Requirements | Y | | |
| Electrical Outlet Spacing & Smoke Detector | Y | | |
| Location of Labels & Data Plates | Y | | |
| Use Group, Type Const., Total Sq.Ft. Area | Y | | |
| Plumbing System Design or Reference No. (PROVIDED ON PP-101) | Y | | |
| Heat Loss Calculations or Reference No. (PROVIDED ON RS-101) | Y | | |
| HVAC/Furnace Size/Model No. (BY OTHERS) | Y | | |
| Thermal Performance Calculations or Reference No. (PROVIDED ON RS-101) | Y | | |
| Electrical Load Calculations or Reference No. (PROVIDED ON EP-101) | Y | | |
| Service Size and Location (200A/UTILITY) | Y | | |
| Applicable Building Codes SEE GE-101 | Y | | |

Submit model to the followingstates: NC

*Description of Modification:

Requested by: JON TYNDALL Date: 9-24-19
(designer)

For PFS Use

Staff Plan Reviewer Sharron Barry IBC Certification #: Date: 10-03-19

Structural Calculation(s) Reviewed By: P.E. #: Date:

Remarks:

**(1) copy sent to IBC within 15 days of approval.*

VERBAL APPROVAL GIVEN ☐ By Whom: To Whom Date:

MODEL WAS DEVIATED ☐ Revision Number:

THIS FORM SHALL BE FILLED OUT COMPLETELY WITH EACH MODEL ACCEPTANCE OR MODIFICATION PRIOR TO SUBMITTAL TO PFS.

cc:

# NORTH CAROLINA
## MODULAR PLANS REVIEW CHECKLIST

 revised May 2011

| | | |
|---|---|---|
| **Manufacturer** | | Champion Home Builders, Inc. |
| **Model number/name** | | 23-3264-01 |
| **3rd Party** | | PFS Corporation |
| **Review Date** | | |
| **Reviewer** | | |
| | | **Plan Sheet Page # and NOTES** |
| | **QC MANUAL** (current and complete) | 8-15-19 |
| | | |
| | **APPENDIX B** (required and attached) | N/A |
| | | |
| | **PLAN SHEETS** | |
| | Each plan sheet third-party stamped with approver's name | |
| | Each plan sheet is numbered and/or indexed | |
| | | |
| | **GENERAL (cover sheet)** | |
| | Code References | GE-101 |
| | Statement regarding connection to public utilities | GE-101 |
| | Statement regarding bathrooms if not included | N/A |
| | Construction type | GE-101 |
| | Occupancy classification | GE-101 |
| | Fire resistance ratings (if required) | GE-101 |
| | Floor live load | GE-101 |
| | Roof live load | GE-101 |
| | Design wind velocity | GE-101 |
| | Seismic information (commercial projects) | GE-101 |
| | Thermal zones | RS-101/GE-101 UNDER GENERAL NOTES |
| | Notice to inspections department regarding items to be site installed | GE-101 |
| | | |
| | **FLOOR PLANS** | |
| | Interior and exterior wall layouts | AP-101 |
| | Door and window schedule | AP-101 |
| | Light and Ventilation requirements | AP-101 |
| | Attic access (size and locaiton) | AP-101 |
| | Non-prescriptive headers | AP-101/Page 23-25 in Calculations |
| | Safety glazing requirements | ap-101 |
| | Fire rating of Exterior walls (if applicable) | N/A |
| | | |
| | **EXTERIOR ELEVATIONS** | |
| | Exterior materials | EV-101-EV-104/SE-101 |
| | Attic ventilation requirements | SE-101/AP-101/WORKSHEET 1 |
| | | |
| | **PLUMBING** | |
| | Plan | PP-101/WP-101 |
| | All fixtures furnished by mfg. shown on plans | PP-101/WP-101/GE-101 |
| | Materials (water supply & distribution, DWV, storm drainage) | PP-101/WP-101 |
| | Supply and waste risers, including DWV system (generic) beneath the building | PP-101/WP-101 |
| | Water heater (type and capacity) | WP-101 |
| | | |
| | | |

10/3/2019
Sharron Barry
QA MANUAL
Current and complete
PLAN SHEETS
3rd Party stamped
Numbered and/or indexed

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# NORTH CAROLINA
## MODULAR PLANS REVIEW CHECKLIST

 revised May 2011

| | | Plan Sheet Page # and NOTES |
|---|---|---|
| | **MECHANICAL** | |
| | Design calculations | BY OTHERS |
| | Installed unit capacity | BY OTHERS |
| | Supply and returns (locations and sizes) | AP-101 |
| | Duct sizes | BY OTHERS |
| | Specifications (units, ducts) | BY OTHERS |
| | All appliances furnished by mfg. shown on plans | AP-101/EP-101 |
| | | |
| | **ELECTRICAL** | |
| | Plan | EP-101 |
| | Location of all electrical boxes | EP-101 |
| | Electrical panel location | EP-101 |
| | Note regarding main disconnect (if applicable) | GE-101 |
| | Exterior lighting and receptacles | EP-101 |
| | Ground level receptacles (if applicable) | BY OTHERS |
| | Smoke detector location(s) | EP-101 |
| | Electrical load calculations | EP-101 |
| | Electrical panel layout (breaker and wire sizes, circuit schedule) | EP-101 |
| | Panel and service entrance sizes | GE-101/EP-101 |
| | All fixtures furnished by mfg. shown on plans | EP-101 |
| | | |
| | **ACCESSIBILITY** | |
| | **(for other than 1 & 2 family dwellings)** | |
| | Entrances and means of egress | N/A |
| | Doors, doorways, and door hardware | N/A |
| | Stairs and handrails | N/A |
| | Toilet rooms, plumbing fixtures, grab bars, etc | N/A |
| | Bathrooms and shower rooms | N/A |
| | Occupancy specific requirements | N/A |
| | Multi-family dwellings: Type A and B units | N/A |
| | | |
| | **FLOOR X-SECTION** | |
| | Joist and beam sizes and spacing | SE-101/Calculation Page 31 |
| | Materials species and grade | SE-101/Calculation Page 31 |
| | Sheathing, decking, and concrete as applicable | SE-101 |
| | Fastening instructions | SE-101 |
| | Insulation | SE-101 |
| | Details as required for clarification | SE-101 |
| | | |
| | **WALL X-SECTION** | |
| | Stud and column sizes and spacing | SE-101 |
| | Materials species and grade | SE-101/Calculation Page 28-29 |
| | Sheathing and bracing | AP-101/SE-101 |
| | Headers and lintels | AP-101/SE-101 |
| | Finishes | AP-101 |
| | Fastening instructions | AP-101 |
| | Insulation | AP-101 |
| | Details as required for clarificaiton | AP-101 |
| | | |

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# NORTH CAROLINA
# MODULAR PLANS REVIEW CHECKLIST

| | | PAGE 3 of 3 | revised May 2011 |
|---|---|---|---|
| | | | |
| | | **Plan Sheet Page # and NOTES** | |
| | **CEILING/ROOF X-SECTION** | | |
| | Truss, rafter, and beam spacing | AP-101/TR-101 | |
| | Lumber species and grade | SE-101/TR-101 | |
| | Sheathing and decking | SE-101/TR-101 | |
| | Finishes | SE-101 | |
| | Fastening instructions | SE-101 | |
| | Insulation | SE-101 | |
| | Details including NC sealed truss designs or manual reference | TR-101 | |
| | | | |
| | **FOUNDATION PLAN** | | |
| | Footings, pier, and curtain wall locations and specifications | F-101 | |
| | X-sections with dimensions | F-101 | |
| | Anchorage - sill plate to piers and curtain wall | F-102-103 | |
| | Anchorage - building to sill plate | F-102-103 | |
| | Anchorage - tie downs (lateral and longitudinal) | N/A | |
| | Soil bearing capacity | F-103 | |
| | Minimum concrete compressive strength | F-103 | |
| | Motar type | F-103 | |
| | Ventilation requirements (with and without vapor barrier) | F-101 | |
| | Crawl space access requirements | F-101 | |
| | | | |
| | **ENERGY COMPLIANCE** | | |
| | Demonstrate compliance | RS-101 | |
| | | | |
| | **SET-UP INSTRUCTIONS** | | |
| | Floor and ceiling connections | GE-101/SE-101 | |
| | Marriage wall connections | N/A | |
| | Roof set-up connections | GE-101/SE-101/SET UP MANUAL | |
| | Plumbing connections | GE-101/SE-101SET UP MANUAL | |
| | Mechanical connections | GE-101/SE-101/SET UPMANUAL | |
| | Electrical connections | GE-101/SE-101/SET UP MANUAL | |
| | Fire stopping | GE-101/SE-101/SET UP MANUAL | |
| | Air infiltration elimination | GE-101/SE-101/SET UP MANUAL | |
| | Notice to inspections department attachment if set-up instructions are by attachment | GE-101/SE-101 | |
| | | | |
| | | | |
| | **ITEMS NOT INSPECTED IN PLANT** | | |
| | List of items not inspected by 3rd. Party | GE-101 | |
| | Notice to inspections department | GE-101 | |
| | | | |
| | | | |
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# RES*check* Software Version 4.6.5

# Inspection Checklist

Energy Code: 2015 IECC

Text in the "Comments/Assumptions" column is provided by the user in the REScheck 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 | Pre-Inspection/Plan Review | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 103.1, 103.2 [PR1][1] | Construction drawings and documentation demonstrate energy code compliance for the building envelope. Thermal envelope represented on construction documents. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |
| 103.1, 103.2, 403.7 [PR3][1] | Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the IECC Commercial Provisions. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |
| 302.1, 403.7 [PR2][2] | Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official. | Heating: Btu/hr____<br>Cooling: Btu/hr____ | Heating: Btu/hr____<br>Cooling: Btu/hr____ | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |

**Additional Comments/Assumptions:**

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

| Section # & Req.ID | Foundation Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| 303.2.1 [FO11][2] | A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade. | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.9 [FO12][2] | Snow- and ice-melting system controls installed. | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |

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

| Section # & Req.ID | Framing / Rough-In Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 402.1.1, 402.3.4 [FR1][1] | Door U-factor. | U-____ | U-____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* FACTORY |
| 402.1.1, 402.3.1, 402.3.3, 402.5 [FR2][1] | Glazing U-factor (area-weighted average). | U-____ | U-____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* FACTORY |
| 303.1.3 [FR4][1] | U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | FACTORY |
| 402.4.1.1 [FR23][1] | Air barrier and thermal barrier installed per manufacturer's instructions. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | FACTORY |
| 402.4.3 [FR20][1] | Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 402.4.5 [FR16][2] | IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | FACTORY |
| 405.2 [FR25][1] | All ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6. | R-____ | R-____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.3.5 [FR15][3] | Building cavities are not used as ducts or plenums. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.4 [FR17][2] | HVAC piping conveying fluids above 105 ºF or chilled fluids below 55 ºF are insulated to ≥R-3. | R-____ | R-____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.4.1 [FR24][1] | Protection of insulation on HVAC piping. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.6 [FR19][2] | Automatic or gravity dampers are installed on all outdoor air intakes and exhausts. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |

**Additional Comments/Assumptions:**

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

| Section # & Req.ID | Insulation Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 303.1 [IN13][2] | All installed insulation is labeled or the installed R-values provided. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |
| 402.1.1, 402.2.6 [IN1][1] | Floor insulation R-value. | R-____<br>☐ Wood<br>☐ Steel | R-____<br>☐ Wood<br>☐ Steel | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | *See the Envelope Assemblies table for values.*<br>FACTORY |
| 303.2, 402.2.7 [IN2][1] | Floor insulation installed per manufacturer's instructions and in substantial contact with the underside of the subfloor, or floor framing cavity insulation is in contact with the top side of sheathing, or continuous insulation is installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |
| 402.1.1, 402.2.5, 402.2.6 [IN3][1] | Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies (FR10). | R-____<br>☐ Wood<br>☐ Mass<br>☐ Steel | R-____<br>☐ Wood<br>☐ Mass<br>☐ Steel | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | *See the Envelope Assemblies table for values.*<br>FACTORY |
| 303.2 [IN4][1] | Wall insulation is installed per manufacturer's instructions. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |

**Additional Comments/Assumptions:**

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

| Section # & Req.ID | Final Inspection Provisions | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1][1] | Ceiling insulation R-value. | R-____<br>☐ Wood<br>☐ Steel | R-____<br>☐ Wood<br>☐ Steel | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | *See the Envelope Assemblies table for values.*<br>FACTORY |
| 303.1.1.1, 303.2 [FI2][1] | Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft². | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |
| 402.2.3 [FI22][2] | Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 402.4.1.2 [FI17][1] | Blower door test @ 50 Pa. <=5 ach in Climate Zones 1-2, and <=3 ach in Climate Zones 3-8. | ACH 50 =_____ | ACH 50 =_____ | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.3.4 [FI4][1] | Duct tightness test result of <=4 cfm/100 ft2 across the system or <=3 cfm/100 ft2 without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection. | _____ cfm/100 ft² | _____ cfm/100 ft² | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.3.3 [FI27][1] | Ducts are pressure tested to determine air leakage with either: Rough-in test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the system including the manufacturer's air handler enclosure if installed at time of test. Postconstruction test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the entire system including the manufacturer's air handler enclosure. | _____ cfm/100 ft² | _____ cfm/100 ft² | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.3.2.1 [FI24][1] | Air handler leakage designated by manufacturer at <=2% of design air flow. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.1.1 [FI9][2] | Programmable thermostats installed for control of primary heating and cooling systems and initially set by manufacturer to code specifications. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |
| 403.1.2 [FI10][2] | Heat pump thermostat installed on heat pumps. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.5.1 [FI11][2] | Circulating service hot water systems have automatic or accessible manual controls. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |
| 403.6.1 [FI25][2] | All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | |

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

| Section # & Req.ID | Final Inspection Provisions | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 403.2 [FI26][2] | Hot water boilers supplying heat through one- or two-pipe heating systems have outdoor setback control to lower boiler water temperature based on outdoor temperature. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.5.1.1 [FI28][2] | Heated water circulation systems have a circulation pump. The system return pipe is a dedicated return pipe or a cold water supply pipe. Gravity and thermos-syphon circulation systems are not present. Controls for circulating hot water system pumps start the pump with signal for hot water demand within the occupancy. Controls automatically turn off the pump when water is in circulation loop is at set-point temperature and no demand for hot water exists. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.5.1.2 [FI29][2] | Electric heat trace systems comply with IEEE 515.1 or UL 515. Controls automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.5.2 [FI30][2] | Water distribution systems that have recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe have a demand recirculation water system. Pumps have controls that manage operation of the pump and limit the temperature of the water entering the cold water piping to 104ºF. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 403.5.4 [FI31][2] | Drain water heat recovery units tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units < 3 psi for individual units connected to one or two showers. Potable water-side pressure loss of drain water heat recovery units < 2 psi for individual units connected to three or more showers. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 404.1 [FI6][1] | 75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 404.1.1 [FI23][3] | Fuel gas lighting systems have no continuous pilot light. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| 401.3 [FI7][2] | Compliance certificate posted. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | FACTORY |

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|---|---|---|---|---|---|

| Section # & Req.ID | Final Inspection Provisions | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| 303.3 [FI18][3] | Manufacturer manuals for mechanical and water heating systems have been provided. | | | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | FACTORY |

**Additional Comments/Assumptions:**

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

CHAMPION

4055 HIGHWAY 401 SOUTH
LILLINGTON, NC 27546

# "23-3264-01"
3 BEDROOM 2 BATH
1941 SQ. FT.

## A HOME DESIGNED FOR:

*ANY COUNTY THAT MEETS REQUIREMENTS OF GE-101.

*SEE GE-101 FOR MAXIMUM WIND SPEED

## 130 Vult MAX

SHEET INDEX



SHEET INDEX-CONT.



PFS CORPORATION
Approval Limited to Factory Built Portion Only

State: North Carolina
Signature: Sharron Barry
Title: Staff Plan Reviewer
Date: 10/10/19

**THIS MODEL NOT DESIGNED FOR OCEAN HIGH HAZARD AREAS OR SPECIAL MOUNTAIN REGIONS OR FLOOD ZONES OR SPECIAL WIND REGIONS.**

CP- 1 Revised or Added page per PFS review of 10-03-19

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

TITLE: COVER SHEET
MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH
DATE: 11-09-2012
SCALE:
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: CP-101
PAGE:

| STATE | GENERAL: | ELECTRICAL: | PLUMBING: | MECHANICAL: | ENERGY: |
|---|---|---|---|---|---|
| NC CODES | 2018 NC RESIDENTIAL CODE WITH CURRENT NC AMENDMENTS | 2017 NC ELECTRICAL CODE WITH CURRENT NC AMENDMENTS | 2018 NC PLUMBING CODE FROM 2012 NC RESIDENTIAL CODE | 2018 NC MECHANICAL CODE FROM 2012 NC RESIDENTIAL CODE | 2018 NORTH CAROLINA ENERGY CONSERVATION CODE WITH CURRENT NC AMENDMENTS<br>✱ 2015 IECC for REScheck used for code compliance (with attic decking)<br>N1102.1.2 and Appendex E used for code compliance (without attic decking) |

## GENERAL NOTES

- ALL GLAZING WITHIN 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.
- OCCUPANT LOAD IS BASED ON 1 PERSON PER 200 SQUARE FEET OF FLOOR AREA.
- ALL STEEL STRAPS REFERENCED ON FLOOR PLAN SHALL BE 1.5 INCH x 26 GA. MIN.
- CEILING FANS SHALL BE 80 INCHES MIN. FROM BOTTOM OF BLADES TO FINISH FLOOR.
- MINIMUM CORRIDOR WIDTH IS 36 INCHES
- ALL WINDOWS SHALL BE DOUBLE GLAZED.
- EXTERIOR DOORS SHALL HAVE AN INSULATION VALUE OF R-1.66 MINIMUM.
- FIRE STOPPING AND AIR INFILTRATION BARRIER BETWEEN UNITS SHALL BE PROVIDED BY DRAFTSTOP BRAND NONCOMBUSTIBLE FILLER COMPOUND OR EQUAL MEETING ASTM-E136, R602.8
- HOMES GOING INTO RADON AREAS WILL HAVE A 3" VTR AND SWITCH LEG TO SWITCH LABELED "RADON" ON TRIM PLATE. LOCATION MAY VARY PER MODEL
- ✱ THIS HOME DESIGNED FOR ,UP TO, CLIMATE ZONE 4 FOR NC & SC AND CLIMATE ZONE 4A FOR VA THE MANUFACTURER MUST BE INFORMED IF HOME IS TO BE LOCATED IN HIGHER CLIMATE ZONE.
- THE MANUFACTURER MUST BE INFORMED IF THE HOME IS TO BE LOCATED IN THE CITY OF CHARLESTON, S.C.
- THE MANUFACTURER MUST BE INFORMED IF THE HOME IS TO BE LOCATED IN ANY SPECIAL MOUNTIAN REGION.
- THIS PLAN MAY BE FLIPPED END TO END AND/OR MIRRORED

## PLUMBING NOTES

- THIS UNIT MUST BE CONNECTED TO PUBLIC WATER SUPPLY AND SEWAGE SYSETM IF THESE SERVICES ARE AVAILABLE
- ALL PLUMBING FIXTURES SHALL HAVE SEPERATE SHUT-OFF VALVES.
- WATER HEATER SHALL HAVE A SAFETY PAN WITH 1 INCH DRAIN TO EXTERIOR.
- WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED ATTIC SHALL BE INSULATED WITH AN INSULATION OF R-6,5 MINIMUM.
- DWV SYSTEM SHALL EITHER ABS or PVC -DWV
- WATER SUPPLY LINES SHALL BE POLYETHYLENE (PEX), CPVC, OR COPPER, WHEN POLYETHYLENE (PEX), SUPPLY LINES ARE INSTALLED THE MAXIMUM WATER HEATER SETTING IS 180 deg F. THE POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES LIMITATIONS AND INSTRUCTIONS.
- BUILDING DRAIN AND CLEANOUTS ARE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
- TUB ACCESS PROVIDED UNDER HOME UNLESS OTHERWISE NOTED.
- SHOWER STALLS SHALL BE COVERED w/ NON-ABSORBANT MATERIAL TO A HEIGHT OF 72 INCHES ABOVE FINISH FLOOR.
- T&P RELIEF VALVE w/DRAIN TO EXTERIOR AND SHUT-OFF WITH-IN 3' of WATER SUPPLY AT WATER HEATER
- WATER HAMMER ARRESTERS SHALL BE INSTALLED AT EACH QUICK CLOSING VALVE le, ICE MAKERS, DISH WASHERS, AND CLOTHES WASHERS (WHEN REQUIRED).
- WATER HEATERS LIST ON Q.C. 04.01.01
- ALL PLUMBING FIXTURES/PIPING SHALL COMPLY WITH SECTIONS: P2608, P2701 & TABLES P2701.1, P2904.4.1 & P2904.6 OF INTERNATIONAL RESIDENTIAL CODE OR SECTIONS 303, 402 & TABLES 605.3, 605,4, 605,5 OF NORTH CAROLINA PLUMBING.
- ALL TUBS AND SHOWER SHALL HAVE TEMPERATURE LIMITING VALVES PER IRC AND NC PLUMBING.

## ELECTRICAL NOTES

- ALL CIRCUITS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NATIONAL ELECTRIC 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 INCANDESENT FIXTURES SHALL HAVE A MINIMUM OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A CLEARANCE OF 6 INCHES FROM "STORAGE" AREA AS DEFINED BY NEC 410-16(C)
- WHEN WATER HEATERS, DISH WASHERS, AND WALL OVENS ARE INSTALLED, THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS. 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 APPLIANCE OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
- HVAC EQUIPMENT SHALL BE PROVIDED w/ READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" POSITION THAT IS PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITED 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(DISCONNECT) AND FEEDERS ARE DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO LOCAL JURISDICTION APPROVAL.
- SMOKE DETECTORS SHALL BE WIRED SO THAT THE OPERATION OF ANY ONE SMOKE DETECTOR WILL CAUSE SIMULTANEOUS ACTIVATION OF ALL OTHERS.
- ALL CIRCUITS CROSSING OVER MODULE MATING LINE(S) SHALL BE SITE CONNECTED IN APPROVED ACCESSIBLE JUNCTION BOXES OR WITH APPROVED CABLE CONNECTIONS.
- ALL WIRING SHALL BE NMC
- ANY STRIP RECEPT MOUNTED BENEATH A COUNTER SHALL BE WITHIN 6" OF THE EDGE
- ALL BRANCH CIRCUITS SUPPLYING 15 & 20 AMPRE OUTLETS IN LIVING AREAS ARE PROTECTED BY AN ARC-FAULT CIRCUIT INTERUPTER IN ACCORDANCE WITH SECTION 210.12, NEC
- ALL ELECTRICAL FIXTURES/WIRING SHALL COMPLY WITH SECTION E3303.3 (SC & VA)
- IT IS THE BUILDERS RESPONSIBILITY TO PROVIDE ELECTRICAL PROVISIONS FOR ANY "MOBILE" WORKSTATION IF IT IS PERMANENTLY MOUNTED.
- FACTORY INSTALLED SUB PANEL BOX SHALL HAVE 2" MIN. CONDUIT FOR WIRE FEEDERS

## MECHANICAL NOTES

- ALL AIR SUPPLY REGISTERS ARE ADJUSTABLE EXCEPT WHERE OTHERWISE SPECIFIED
- INTERIOR DOORS SHALL BE UNDERCUT 1" MIN ABOVE FINISHED FLOOR FOR AIR RETURN
- BATHROOMS SHALL BE PROVIDED WITH A WINDOW OR A MIN. 50 CFM VENT FAN. VA. REQUIRES A MINIMUM OF .35 AIR CHANGE EVERY HOUR.
- BATH VENT FANS SHALL BE DUCTED TO THE EXTERIOR AND TERMINATE AT AN APPROVED VENT CAP
- HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKES BY OTHERS.
- HVAC SUPPLY DUCTS AND CALCULATIONS DESIGNED AND INSTALLED BY OTHERS
- ALL DUCTS SHALL HAVE A MIN. OF R-8 INSULATION
- ALL REGISTER BOOTS SHALL BE TAPED OR SEALED OTHERWISE.
- ALL RETURN GRILLS BY FACTORY UNLESS SPECIFIED
- ✱ OPTIONAL FURNACE TO BE FACTORY INSTALLED. OPTIONAL FURNACE KW SIZING TO BE VERIFIED BY OTHERS WITH SITE PROVIDED MANUAL D & J.
- ✱ OPTIONAL FURNACE USED FOR SUPPLEMENTAL HEATING ONLY. FOR OPTIMAL EFFICIENCY, A HEAT PUMP SHOULD BE INSTALLED.

## ON-SITE CONNECTIONS

- ON-SITE STRUCTURAL CONNECTIONS: FOR SITE CONNECTIONS REFER TO SECTION DRAWINGS, FOUNDATION PLANS, AND TIE DOWN PLAN (ON-FRAME)
- ON-SITE ELECTRICAL CONNECTIONS: MULTI-SECTION UNITS WILL HAVE THE ELECTRICAL CROSSOVERS LOCATED EITHER IN THE FLOOR NEAR THE MARRIAGE LINE OR IN THE ENDWALLS NEAR THE CENTER OF THE UNIT. LOCATE THE JUNCTION BOXES AND CONNECT THE CONDUCTORS TOGETHER. THE CONDUCTORS SHOULD BE COLOR CODED OR MARKED FOR EASY IDENTIFICATION. DO NOT INTERCONNECT CIRCUITS OR CROSS CONDUCTORS.
- ON-SITE PLUMBING CONNECTIONS:

WATER LINES:

- LOCATE AND CONNECT WATER LINE CROSS-OVERS LOCATED UNDER THE FLOOR AT THE MARRIAGE LINE. TURN THE WATER ON AND CHECK FOR LEAKS.

DRAIN LINES:

- CONNECT DRAIN DROP-OUTS TO THE MAIN DRAIN. BE SURE ALL CONNECTIONS ARE MADE TO COMPLY WITH LOCAL PLUMBING CODES.

TWO STORY DESIGNS:

- SOME 2 STORY MODELS WILL REQUIRE ADDITIONAL VERTICAL CONNECTIONS SEE PLAN SHEETS FOR LOCATIONS AND ACCESS POINTS

- INTEGRITY OF MARRIAGE LINE RIDGE BEAM SHALL NOT BE COMPROMISED UNLESS SPECIFICALLY DESIGNED FOR AND SHOWN ON APPROVED PLANS.

ON-SITE GAS CONNECTIONS (IF APPLICABLE):

- LOCATE "QUICK DISCONNECT" AND CONNECT. THE "QUICK DISCONNECT" IS LOCATED UNDER THE FLOOR AT THE MARRIAGE LINE. VERIFY THAT ALL CONNECTIONS ARE TIGHT AND HAVE BEEN CHECKED FOR LEAKS.

# ATTENTION LOCAL INSPECTIONS DEPARTMENT

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED
BY CHAMPION HOMES, HAVE NOT BEEN INSPECTED
BY P.F.S., AND ARE NOT CERTIFIED BY THE
STATE MODULAR CERTIFICATION LABEL. CODE COMPLIANCE
MUST BE DETERMINED AT THE LOCAL LEVEL.

SITE CONNECTION OF ROOFS,FLOORS,WALLS(setup manual pages 11-13, pages AP-101, SE-101-102, CALCULATION SHEETS in plan set)
FOUNDATIONS, PORCHES, DECKS, EXTERIOR STAIRS
ELECTRICAL CONNECTIONS ON SITE(pages 26-28 setup manual), PLUMBING CONNECTIONS ON SITE(pages 23-25 setup manual),
4X10 REGISTERS/BOOTS PROVIDED IN TYPICAL LOCATIONS (SEE AP-101)
TRUNKLINE ,MANUAL D & J BY OTHERS ON SITE. DRYER VENTING BY OTHERS (page 20 setup manual).
✱ BLOWER DOOR TEST TO BE COMPLETED BY OTHERS ON SITE.
**ON BASEMENT ENTRY HOMES, FLOOR INSULATION IS NOT PROVIDED BY FACTORY.
ALL BASEMENT WORK, INCLUDING FOUNDATION DESIGN, STAIRS, HVAC AND
CONNECTION OF SMOKE DETECTOR AND REQUIRED OUTLETS, DONE BY OTHERS.
PROVISIONS FOR EGRESS FROM BASEMENT MUST BE PROVIDED ON SITE BY OTHERS.
ALL ENERGY COMPLIANCE FOR BASEMENTS MUST BE DONE ON SITE BY OTHERS
✱ RODENT PROOFING TO BE COMPLETED ON-SITE BY OTHERS PER RP-101 (IN HOME OWNERS PACKET)
IN WINDBORNE DEBRIS AREAS, WINDOW/DOOR PROTECTION PROVIDED BY OTHERS PER LOCAL CODE
ANY SITE INSTALLED ATTIC ACCESS SHOWN ON AP-101
NO SPRINKLER SYSTEMS REQUIRED FOR UNIT. A FIRE EXTIGUISHER TO BE PROVIDED ON SITE BY OTHERS
**SEE ENERGY CODE INSPECTION CHECKLIST FOR FACTORY COMPLETED ITEMS AND SITE COMPLETED ITEMS**
**ALL FALL PROTECTION DEVICES REQUIRED PER R612.2, MUST BE INSTALLED ON SITE BY OTHERS**

# ATTENTION LOCAL INSPECTIONS DEPARTMENT

SET-UP INSTRUCTIONS ARE INCLUDED ON THE PLAN SHEETS & IN SET-UP MANUAL INCLUDED IN HOMES.
SEE NOTES, CROSS SECTION AND FOUNDATION PAGES ( ITEMS NOT COMPLETE AT FACTORY MARKED WITH ✱ ON CROSS SECTION )
IF CHAMPION HOMES INSTALLATION MANUAL IS NOT INCLUDED THESE PLANS ARE INCOMPLETE.

# ATTENTION LOCAL INSPECTIONS DEPARTMENT

**IF THIS STRUCTURE IS IN A THERMAL ZONE MORE STRINGENT THAT THAT LISTED ON THESE PLANS,IS SET ON PILINGS, OR IS INSTALLED AT A MOUNTAIN REGION OR COASTAL HGH HAZARD SITE SUCH THAT WIND OR OTHER DESIGN PARAMETERS ARE INCREASED, THE DESIGN MUST BE DETERMINED TO BE ADEQUATE FOR ACTUAL SITE CONDITIONS. ALTERATIONS MAY BE REQUIRED TO BRING THE HOME INTO COMPLIANCE WITH THE MORE STRINGENT CONDITIONS.**

ANY MODEL DESIGNED FOR 150 MPH Vult MAY BE LOCATED IN AREAS OF 4500 FT OR ABOVE

ALL OPERABLE WINDOWS TO INCLUDE INSECT SCREENS.
ALL PATIO AND ATRIUM DOORS TO INCLUDE INSECT SCREENS.

IF HOME IS EQUIPPED WITH WOOD BURNING FIREPLACE, SEE PAGE 22 OF SET UP MANUAL AND MANUFACTURE'S INSTALLATION MANUAL FOR REQUIRED SITE INSTALLATION.

VIRGINIA MODS TO HAVE ICE DAM PROTECTION AS REQUIRED BY STATE/LOCAL CODES.

APPROVAL STAMP

PFS CORPORATION
Approval Limited to Factory Built Portion Only

State: North Carolina
Signature: Sharron Barry
Title: Staff Plan Reviewer
Date: 10/10/19

## DESIGN INFORMATION

| | |
|---|---|
| OCCUPANCY | SINGLE FAMILY ✓ |
| CONSTRUCTION TYPE | VB UNP |
| MAXIMUM WIND SPEED | 130 MPH Vult ✓ |
| WIND EXPOSURE | C |
| SEISMIC CATEGORY | C ✓ |
| FLOOR LIVE LOAD | 40 PSF |
| 2ND FLOOR LIVE LOAD (for homes with fixed walkup staircases) | 30 PSF |
| FLOOR DEAD LOAD | 10 PSF |
| ROOF LIVE LOAD | 20 PSF STANDARD<br>30 PSF OPTIONAL |
| ROOF DEAD LOAD | 10 PSF |
| GROUND SNOW LOAD | 30 PSF |
| FIRE RATING EXT WALL | 0 Hrs. |
| TENANT SEPARATION | 0 Hrs. |
| MAX MEAN ROOF HT. | 20.00' ✓ |

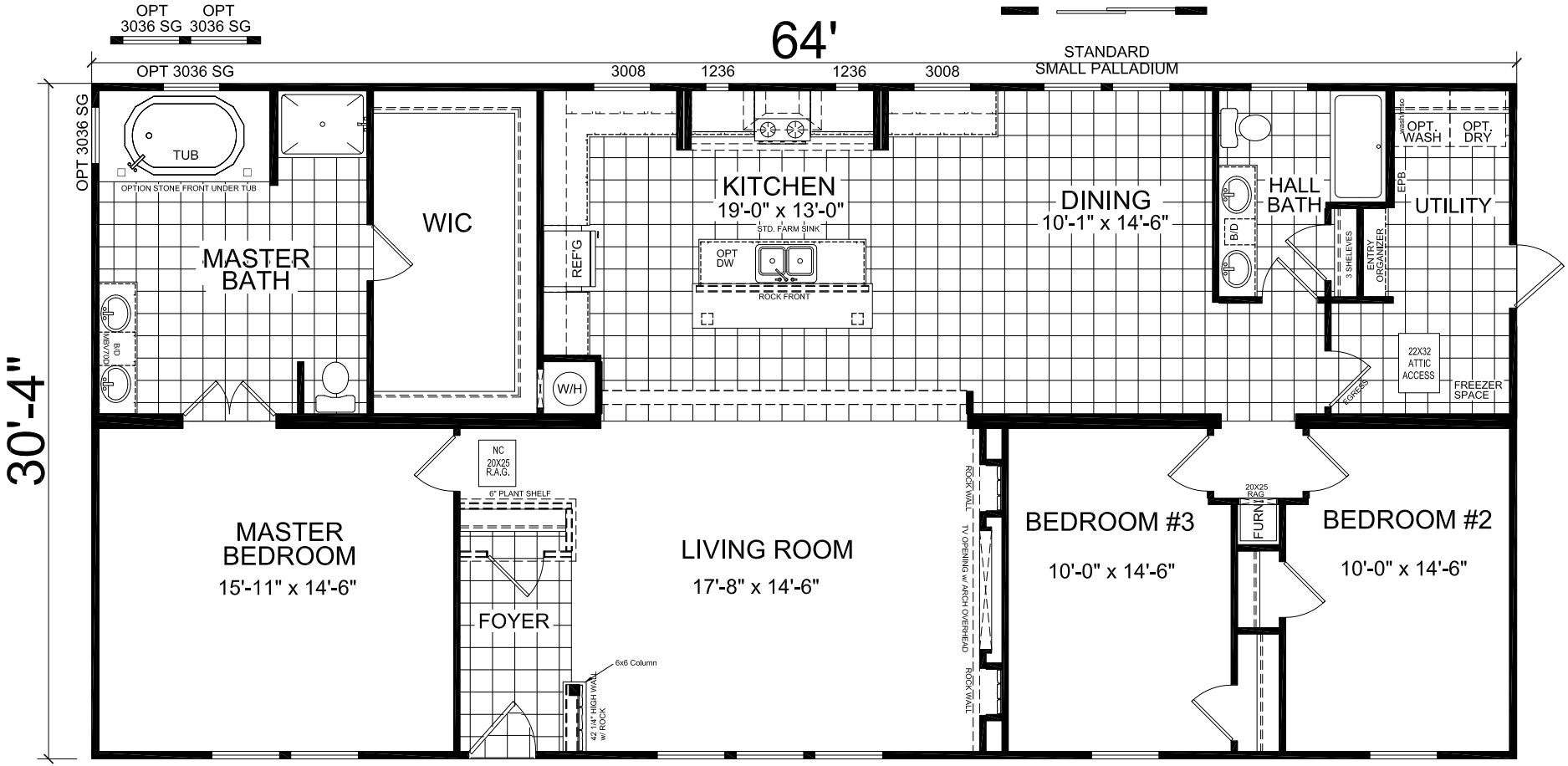
NOTE: ALL HIGH WIND DESIGNS, CONSTRUCTION, FASTENING, ETC, BUILT PER CALCULATION MANUAL OR SPECIFIC ENGINEERING (MEETING OR EXCEEDING CHAPTER 45- NC)

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

TITLE: NOTES
MODEL: ANY MODEL
DATE: 04-15-03
SCALE: NOT TO SCALE
DRAWN BY: CDB
REVISED:
REVISIONS
SHEET NO: GE-101
PAGE:

# MODEL 23-3264-01
# BELLE VUE
## CHATEAU SERIES

3 BDRM, 2 BATH
ACTUAL SIZE: 64'-0"X 30'-4"
TOTAL AREA: 1941 SQ.FT.



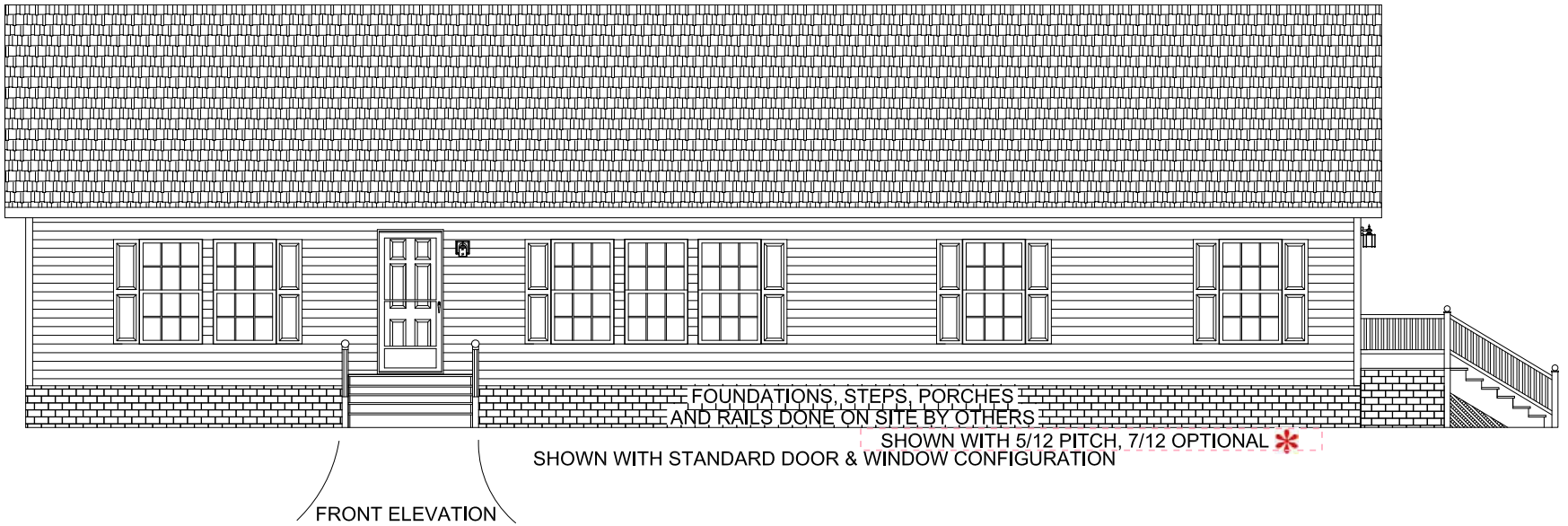

MATERIALS AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE FOR PRODUCTION AND CODE PURPOSES. ALL DIMENSIONS ARE NOMINAL AND APPROXIMATE. SQUARE FOOTAGE IS MEASURED FROM EXTERIOR WALL TO EXTERIOR WALL AND IS A APPROXIMATE FIGURE. THIS DRAWING IS A RENDERING AND IS MEANT FOR SALE PURPOSES ONLY.

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE: LITERATURE PLAN
MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH
DATE: 11-09-2012
SCALE:
DRAWN BY: STAFF
REVISED:
REVISIONS
SHEET NO: L-101
PAGE:




FRONT ELEVATION

CP- 1 Revised or Added page per PFS review of 10-03-19

CHAMPION

4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Shannon Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE:
ELEVATIONS

MODEL:
023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO:
EV-101

PAGE:

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Shawnee Corp.
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE: ELEVATIONS

MODEL: 023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-30-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: EV-102
PAGE:




REAR ELEVATION

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Shawn Berry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE: ELEVATIONS

MODEL: 023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-30-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: EV-103
PAGE:




RIGHT ELEVATION

FOUNDATIONS, STEPS, PORCHES
AND RAILS DONE ON SITE BY OTHERS

LEFT ELEVATION

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Shawnbury
PFS CORPORATION
Approval Limited to Factory Built Portion Only
DATE 10/10/19
Cottage Grove, WI

TITLE: ELEVATIONS

MODEL: 023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-30-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: EV-104
PAGE:

| DESCRIPTION | GLAZING SQ. FT. | VENTING SQ. FT. | DESIGN PRESSURE | MANUFACTURER |
|---|---|---|---|---|
| WINDOWS | | | | |
| 36" X 61" EGRESS opt. SAFETY GLAZED | 12.2 | 6.14 | DP 50/DP 66 | KINRO |
| 30" X 36" | 5.55 | 2.76 | DP 66 | KINRO |
| 30" X 40" opt. SAFETY GLAZED | 6.28 | 3.14 | DP 66 | KINRO |
| 30" X 8" TRANSOM | 1.3 | 0 | DP 66 | KINRO |
| 36" X 12" TRANSOM | 1.7 | 0 | DP 66 | KINRO |
| 24" X 48" opt. SAFETY GLAZED | 4.85 | 2.44 | DP 66 | KINRO |
| 30" X 72" palladium | 5.55 | 2.76 | DP 66 | KINRO |
| 62" X 40" DBL END SLIDER | 14.35 | 6.11 | DP 50 | KINRO |
| DOORS | | | | |
| 74" X 80" ATRIUM DOOR | 24.96 | 19.45 | DP 50 | ELIXER |
| 72" X 76" SLIDING GLASS | 34.37 | 19.45 | DP 50 | KINRO |
| 36" X 80" EXTERIOR DOOR with 9 LITE WINDOW | 4.4 | 19.45 | DP 50 | ELIXER |
| 36" X 80" EXTERIOR DOOR with 15 LITE WINDOW | 14.88 | 19.45 | DP 50 | ELIXER |

| | DOOR SCHEDULE | WINDOW SCHEDULE |
|---|---|---|
| 1 | 36" x 80" EXTERIOR | 36" x 61" EGRESS |
| 2 | 34" x 76" EXTERIOR | 31 3/4" X 26" = 5.7 SQ FT 2 STEP EGRESS |
| 3 | 30" x 80" INTERIOR | 36" x 12" TRANSOM |
| 4 | 24" x 80" INTERIOR | 30" x 36" |
| 5 | 72" x 80" SG GLASS DOOR | 30" x 8" TRANSOM |
| 6 | 48" x 80" BIFOLD | 12" x 36" TRANSOM |
| 7 | 60" x 80" BIFOLD | 24" x 48" SAFETY GLAZED |
| 8 | 74" x 80" ATRIUM DOOR | 30" x 72" paladium |
| 9 | 36" x 80" INTERIOR | 46" x 38" SAFETY GLAZED |

COLUMN SUPPORT

(A) 1-2x4's
(B) 2-2x4's
(C) 3-2x4's

ALL COLUMN STUDS SHALL BE GLUED TOGETHER WITH 100% PVA GLUE COVERAGE

EACH COLUMN STUDS SHALL BE NAILED TO ADJACENT COLUMN STUD WITH .131 x 2½" NAILS SPACED 4" O.C. STAGGERED OR APPROVED ALTERNATE FASTENING.

RIDGE BEAMS TO CONTINUOUS PAST COLUMN STUDS

STUDS SHALL BE MINIMUM SPF#2

| AREA | |
|---|---|
| 1st FLOOR | 1941 SQ. FT |
| 2nd FLOOR | N/A |
| GLAZING | 158.0 SQFT |

15KW Nordyne E6 Furnace with 53,000 Btuh provided by Champion Homes. The builder to provided HVAC layout and Manual D and J to be approved and inspected by local jurisdiction.
Furnace may be omitted and return air(s) installed instead.

SEE ATTACHED WORKSHEET 2 FOR SHEARWALL PAGE NUMBER REFERENCES

TRUSSES LOCATED IN ATTACHED CALCULATIONS, SECTION 6 PAGES 1 FOR 5/12
TRUSSES LOCATED IN ATTACHED CALCULATIONS, SECTION 8 PAGES 1 FOR 7/12

* 4X10 REGISTER
TYPICAL REGISTER(S) INSTALLED IN EACH ROOM IF ADDITIONAL REQUIRED, BY OTHERS ON SITE.

ALL BEAMS REFERENCED TO ATTACHED CALCULATION SHEETS SECTION 6 PAGE 15
* FOR 5:12 ROOF
AS PREPARED BY BARLOW ENGINEERING
MATEWALL
LIVE LOAD ( L/240) = 198 PLF TOTAL LOAD (L/180) = 367 PLF
* 5/12 used for worst case

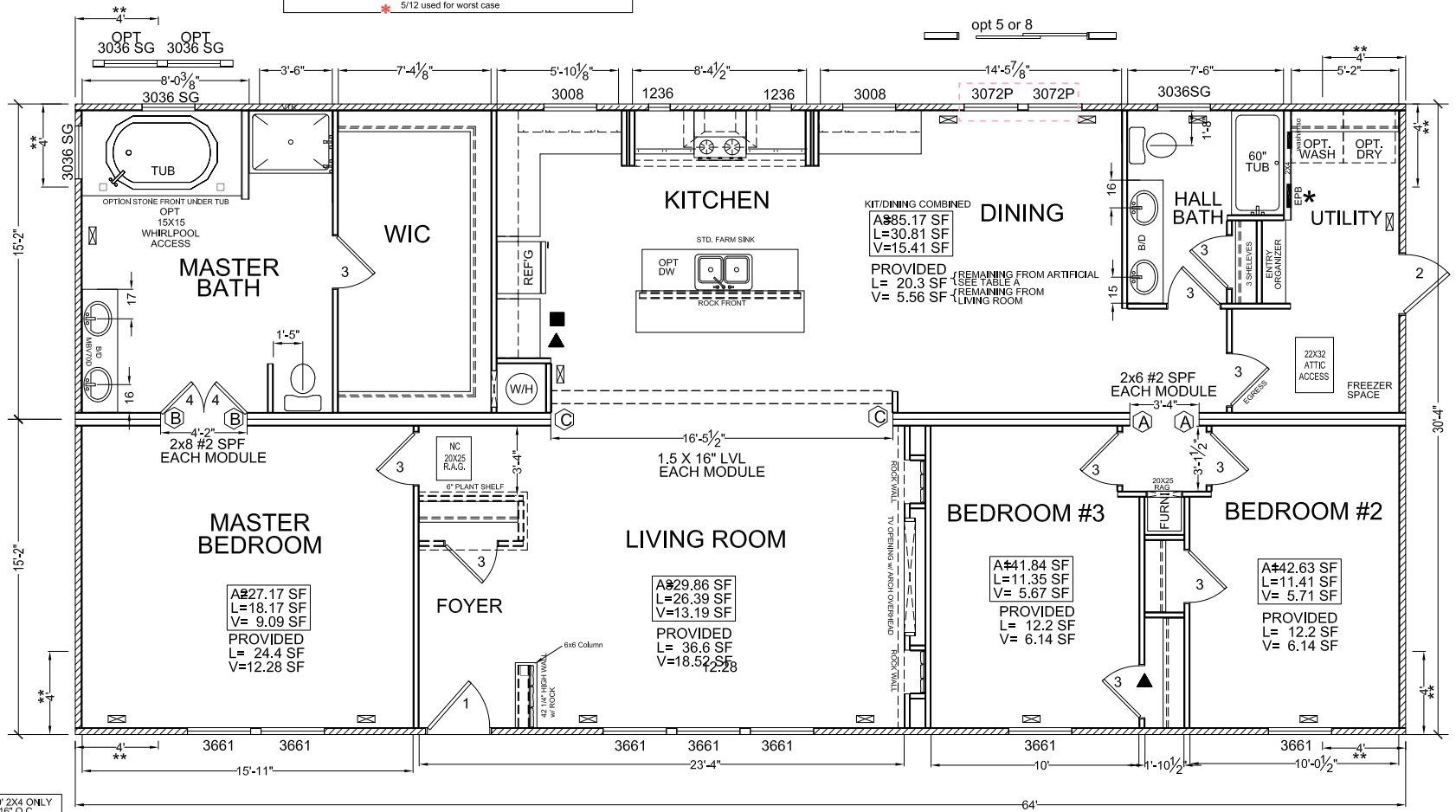
TABLE A

PROVIDED NATURAL
20.3/.08=253.7
385.17-253.7=131.47 SQ FT NEED ARTIFICIAL
131.47 X 6=788.8 LUMENS 3840 - 788.8 = 3051.2
131.47 X 20=2629.4 LUMENS 3840 - 2629.4 = 1210.6
640 LUMENS, 60 WATT
640 X 6 = 3,840 LUMENS

ATTIC VENTALATION:
SEE WORKSHEET #1 CALCULATIONS

DRYER VENT TO BE INSTALLED ONSITE

■ DATA PLATE
* ENERGY CERTIFICATION LABEL
▲ LABEL LOCATIONS (STATE & PFS)




** 12" O.C. STUDS W/ 9' 2X4 ONLY ALL OTHER, 16" O.C.

CP-2 Revised or Added page per PFS review of 08-02-19

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharon Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE: FLOOR PLAN

MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: 3/16" = 1'-0"
DRAWN BY: STAFF
REVISED:
REVISIONS

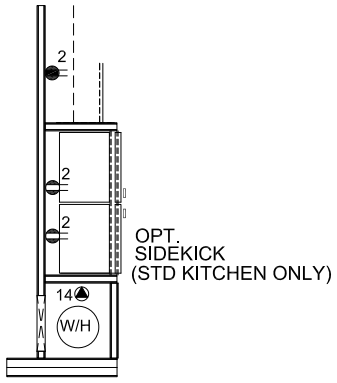
SHEET NO: AP-101

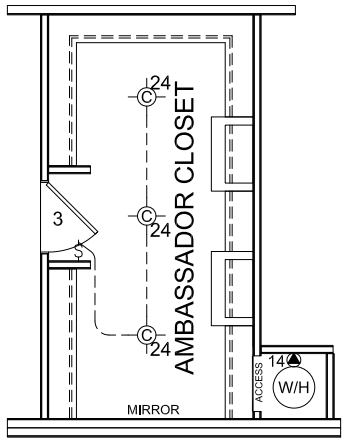
PAGE:

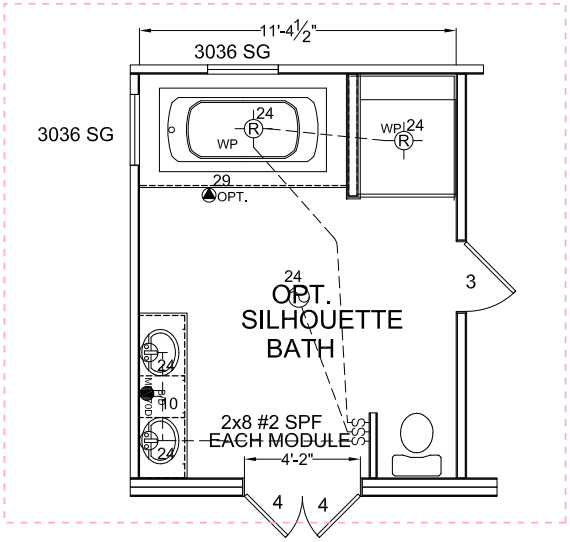
| DESCRIPTION | GLAZING SQ. FT. | VENTING SQ. FT. | DESIGN PRESSURE | MANUFACTURER |
|---|---|---|---|---|
| WINDOWS | | | | |
| 36" X 61" EGRESS opt. SAFETY GLAZED | 12.2 | 6.14 | DP 50/DP 66 | KINRO |
| 30" X 36" | 5.55 | 2.76 | DP 66 | KINRO |
| 30" X 40" opt. SAFETY GLAZED | 6.28 | 3.14 | DP 66 | KINRO |
| 42" X 34" BLOCK GLASS | 6.28 | 0 | DP 50 | HY-LITE |
| 36" X 12" TRANSOM | 1.7 | 0 | DP 66 | KINRO |
| 24" X 48" opt. SAFETY GLAZED | 4.85 | 2.44 | DP 66 | KINRO |
| 14" X 40" opt. SAFETY GLAZED | 2.48 | 1.29 | DP 66 | KINRO |
| 62" X 40" DBL END SLIDER | 14.35 | 6.11 | DP 50 | KINRO |
| DOORS | | | | |
| 74" X 80" ATRIUM DOOR | 24.96 | 19.45 | DP 50 | ELIXER |
| 72" X 76" SLIDING GLASS | 34.37 | 19.45 | DP 50 | KINRO |
| 36" X 80" EXTERIOR DOOR with 9 LITE WINDOW | 4.4 | 19.45 | DP 50 | ELIXER |
| 36" X 80" EXTERIOR DOOR with 15 LITE WINDOW | 14.88 | 19.45 | DP 50 | ELIXER |

| | DOOR SCHEDULE | WINDOW SCHEDULE |
|---|---|---|
| 1 | 36" x 80" EXTERIOR | 36" x 61" EGRESS |
| 2 | 34" x 76" EXTERIOR | 31 3/4" X 26" = 5.7 SQ FT 2 STEP EGRESS |
| 3 | 30" x 80" INTERIOR | 36" x 12" TRANSOM |
| 4 | 24" x 80" INTERIOR | 30" x 36" |
| 5 | 72" x 80" SG GLASS DOOR | 30" x 8" TRANSOM |
| 6 | 48" x 80" BIFOLD | 12" x 36" TRANSOM |
| 7 | 60" x 80" BIFOLD | 24" x 48" SAFETY GLAZED |
| 8 | 74" x 80" ATRIUM DOOR | 30" x 72" paladium |
| 9 | 36" x 80" INTERIOR | 46" x 38" SAFETY GLAZED |

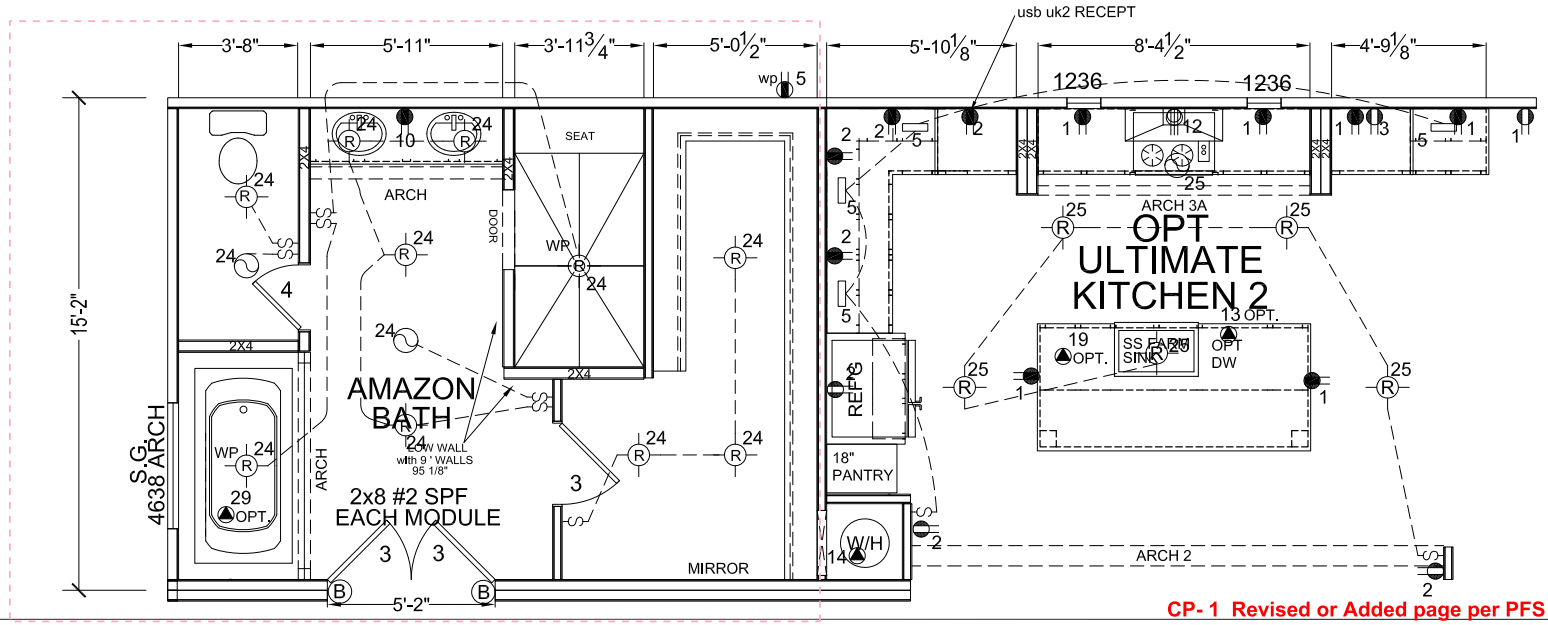
| COLUMN SUPPORT | AREA |
|---|---|
| (A) 1-2x4's<br>(B) 2-2x4's<br>(C) 3-2x4's | 1st FLOOR<br>1941 SQ. FT |
| ALL COLUMN STUDS SHALL BE GLUED TOGETHER WITH 100% PVA GLUE COVERAGE<br>EACH COLUMN STUDS SHALL BE NAILED TO ADJACENT COLUMN STUD WITH .131 x 2½" NAILS SPACED 4" O.C. STAGGERED OR APPROVED ALTERNATE FASTENING.<br>RIDGE BEAMS TO CONTINUOUS PAST COLUMN STUDS<br>STUDS SHALL BE MINIMUM SPF#2 | 2nd FLOOR<br>N/A |
| | GLAZING<br>158.0 SQFT |




# OPTIONS MAY BE USED SEPERATELY




CP- 1 Revised or Added page per PFS review of 10-03-19

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharon Barry
DATE 10/10/19
Approval Limited to Portion Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE: OPTIONS

MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: 1/8" = 1'-0"
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: AP-102

PAGE:

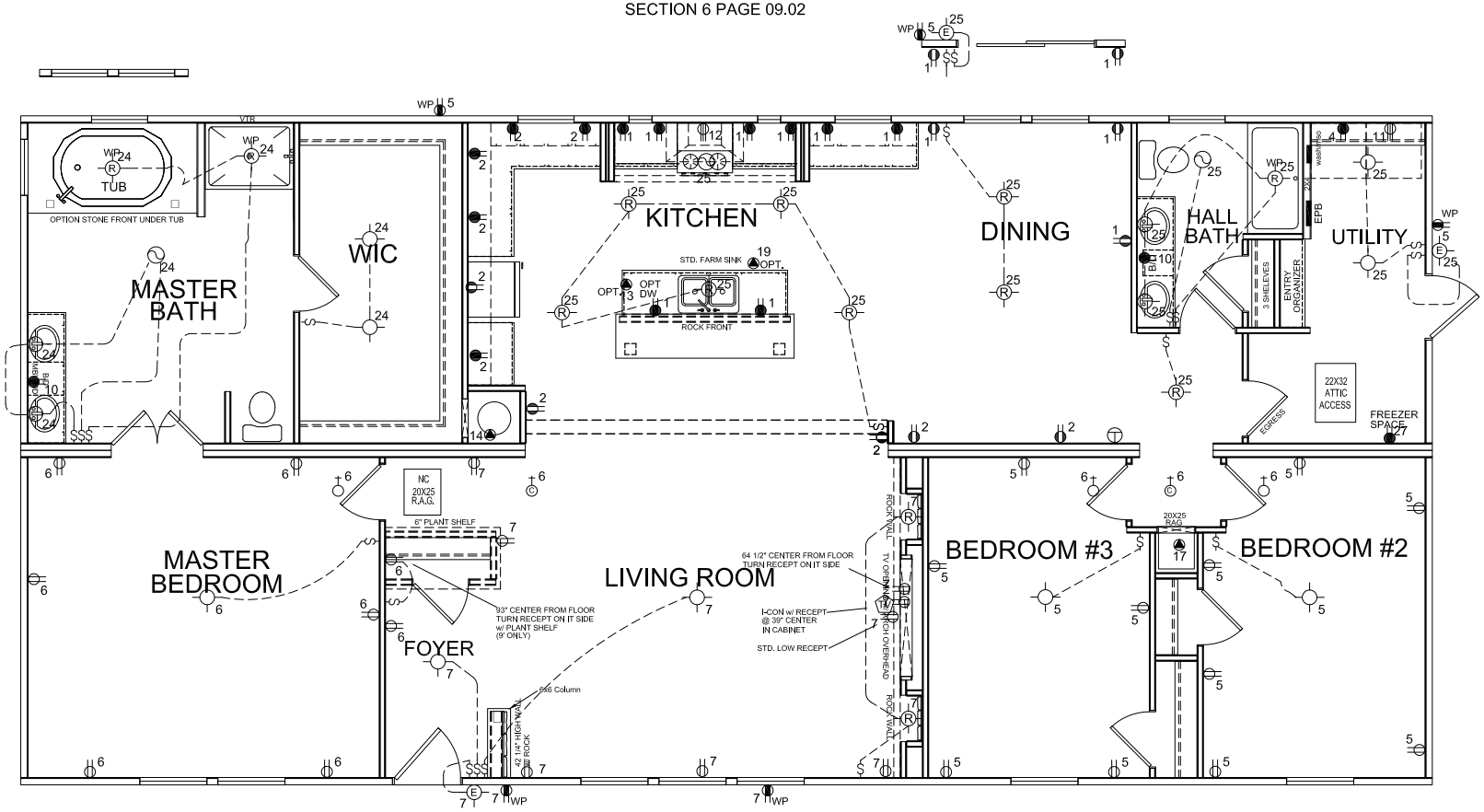
NC NOTE:

PER NC ECC 404.1, A MINIMUM OF 75% OF LAMPS INSTALLED IN PERMANENTLY INSTALLED FIXTURES MUST BE HIGH-EFFICIENT LAMPS (EXAMPLE. CFL'S)

ALL BULBS TO BE PROVIDED ON SITE BY OTHERS.

SEE Q/A MANUAL FOR APPROVED ELECTRICAL FIXTURES SECTION 6 PAGE 09.02

- RECEPT TO BE INSTALLED FOR WHIRLPOOL TUB WITHIN 12" OF ACCESS IN DIRECT VIEW FOR DISCONNECT OF APPLIANCE.
- BREAKER LOCKOUT TO BE INSTALLED FOR DISHWASHER, WATER HEATER
- RANGE HOOD EXHAUST FAN IS A NON VENTED RECIRCULATION TYPE (CHARCOAL)
- CO/SMOKE DETECTOR COMPLIES WITH UL 217 AND UL 2034 FIRST ALERT MODEL #SC9120B (NC,SC)




| ELECTRICAL LEGEND | | | |
|---|---|---|---|
| GENERAL RECEPTACLE 120 VOLT - 15 AMP | INCANDESCENT CEILING LIGHT | FLUORESCENT LIGHT | PHONE JACK |
| G.F.I. PROTECTED RECEP. 120 VOLT-15 AMP | WALL LIGHT | DIRECTLY WIRED CONNECTION | TV/CABLE JACK |
| 120 VOLT - 20 AMP | CEILING VENT FAN W/LIGHT (2 SWITCHES) | THERMOSTAT | HEAT TAPE RECEPT 120 VOLT-15 AMP |
| 120 VOLT - 20 AMP G.F.I. PROTECTED | EXHAUST FAN | SMOKE DETECTOR | JUNCTION BOX |
| 220 VOLT RECEPT. | SINGLE POLE SWITCH | MAIN PANEL | RECESSED LIGHT |
| WATERPROOF EXTERIOR LIGHT | FLOOD LIGHT | TRACK LIGHTING | SMOKE DETECTOR/ CO COMBINATION |

NOTE:

1. CIRCUIT NUMBERS MAY VARY AND NOT ALL CIRCUITS ARE IN USE
2. ARC-FAULT CIRCUIT INTERRUPTERS SHALL BE IN ACCORDANCE WITH SECTION 210.12 (A) OF THE CURRENT NEC.
3. OPTIONAL 220 VOLT RECEPTACLE PROVIDED FOR RANGE AND DRYER.
4. POWER RANGE HOOD STANDARD.
5. ALL CLOSET LIGHTS TO BE A MIN. 12" OFF OF SHELF.
6. DWELLING UNIT RECEPTACLE MUST BE RATED AS TAMPER RESISTANT ACCORDANCE WITH SECTION 406.12, NEC
7. WATER PROOF COVERS REQUIRED FOR OUTDOOR SWITCHES AND RECEPTACLE ACCORDANCE WILL SECTION 404.4 AND 404.9, NEC
8. OUTLET, DEVICE, PULL, AND JUNCTION ARE IN ACCORDANCE TO ARTICLE 314
9. ATTIC LIGHT TO BE INSTALLED, IF ATTIC TO BE USED FOR STORAGE, ON SITE

ELECTRICAL SCHEDULE

| BRKR | CIR # | | NOMENCLATURE | VOLTS | WIRE |
|---|---|---|---|---|---|
| 20 | AF | 1 | GFI PORTABLE APPLIANCE | 120 | 12/2 |
| 20 | AF | 2 | GFI PORTABLE APPLIANCE | 120 | 12/2 |
| 20 | 3 | OPT | PORTABLE APPLIANCE | 120 | 12/2 |
| 20 | 4 | GFI | WASHER | 120 | 12/2 |
| 15 | 5 | AF | BEDROOM#2/#3 | 120 | 14/2 |
| 15 | SD 6 | AF | MASTER BEDROOM | 120 | 14/2 |
| 15 | 7 | AF | LIVING ROOM | 120 | 14/2 |
| 15 | 8 | OPT | GEN LIGHTING | 120 | 14/2 |
| 20 | 9 | OPT | PORTABLE APPLIANCE | 120 | 12/2 |
| 20 | 10 | GFI | BATH GFI's | 120 | 12/2 |
| 30 | 11 | | DRYER | 240 | 10/3 |
| 40 | 12 | | RANGE | 240 | 8/3 |
| 15 | 13 | OPT | DISH WASHER | 120 | 14/2 |
| 20/20 | 14 | | WATER HEATER | 240 | 12/2 |
| 30 | 15 | OPT | COUNTER TOP RANGE | PER MANF | |
| 15 | 16 | OPT | FURNACE (GAS) | 120 | 14/2 |
| 20/20 | 17 | | FURNACE (ELECTRIC) | 240 | 6/6/8 |
| 20 | 18 | OPT | TRASH COMPACTOR | 120 | 12/2 |
| 15 | 19 | OPT | DISPOSAL | 120 | 14/2 |

ELECTRICAL SCHEDULE – CONT –

| BRKR | CIR # | NOMENCLATURE | VOLTS | WIRE |
|---|---|---|---|---|
| 15 | 24 AF | MASTER BATH | 120 | 14/2 |
| 15 | 25 AF | UTIL/KIT | 120 | 14/2 |
| OPT | 26 GFI | OUTDOOR HYDRO MASSAGE SPA | PER MANF | |
| 20 | 27 GFI | FREEZER | 120 | 12/2 |
| 15 | 28 OPT | GEN LIGHTING | 120 | 14/2 |

WIRE SIZING MAY INCREASE DUE TO DISTANCE FROM PANEL BOX

| | |
|---|---|
| *GFI | GROUND FAULT PROTECTED |
| *AF | ARC FAULT PROTECTED |
| *SD | SMOKE DETECTOR |
| *OPT | OPTIONAL |

ARC FAULT FOR VA BEDROOMS ONLY

PANEL SIZING

| DESCRIPTION | KVA | |
|---|---|---|
| MAX. FLOOR AREA 2305 X 3VA. / 1000 | | 6.9 KVA |
| 2 SMALL APPLIANCES @ 1500VA. / 1000 | | 3 KVA |
| RANGE @ 12.0 KW. | | 12 KVA |
| WATER HEATER @ 4.5 KW. | | 4.5 KVA |
| DISH WASHER @ 1.4 KW. | | 1.4 KVA |
| WASHER @ 1500VA. / 1000 | | 1.5 KVA |
| DRYER @ 5.0 KW. | | 5.0 KVA |
| DISPOSAL @ 1.4 KW. | | 1.4 KVA |
| W/P TUB @ 1500VA. / 1000 | | 1.5 KVA |
| W/P TUB @ 1500VA. / 1000 | | 1.5 KVA |
| 2 SMALL APPLIANCES @ 1500VA. / 1000 FOR MAX LOAD USED FOR CALCULATION PURPOSES | | 3 KVA |
| – | | KVA |
| – | | |
| TOTAL LOAD | | 41.7 KVA |
| 1st 10 KVA @ 100% | | 10 KVA |
| REMAINDER @ 40% | | 12.68 KVA |
| HVAC @ 100% | | 10.5 KVA |
| | TOTAL | 33.18 |

33.18 X 1000 /240 = 138.3
INSTALLED 200 AMP PANEL

CP-2 Revised or Added page per PFS review of 08-02-19

CHAMPION
4065 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharon Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

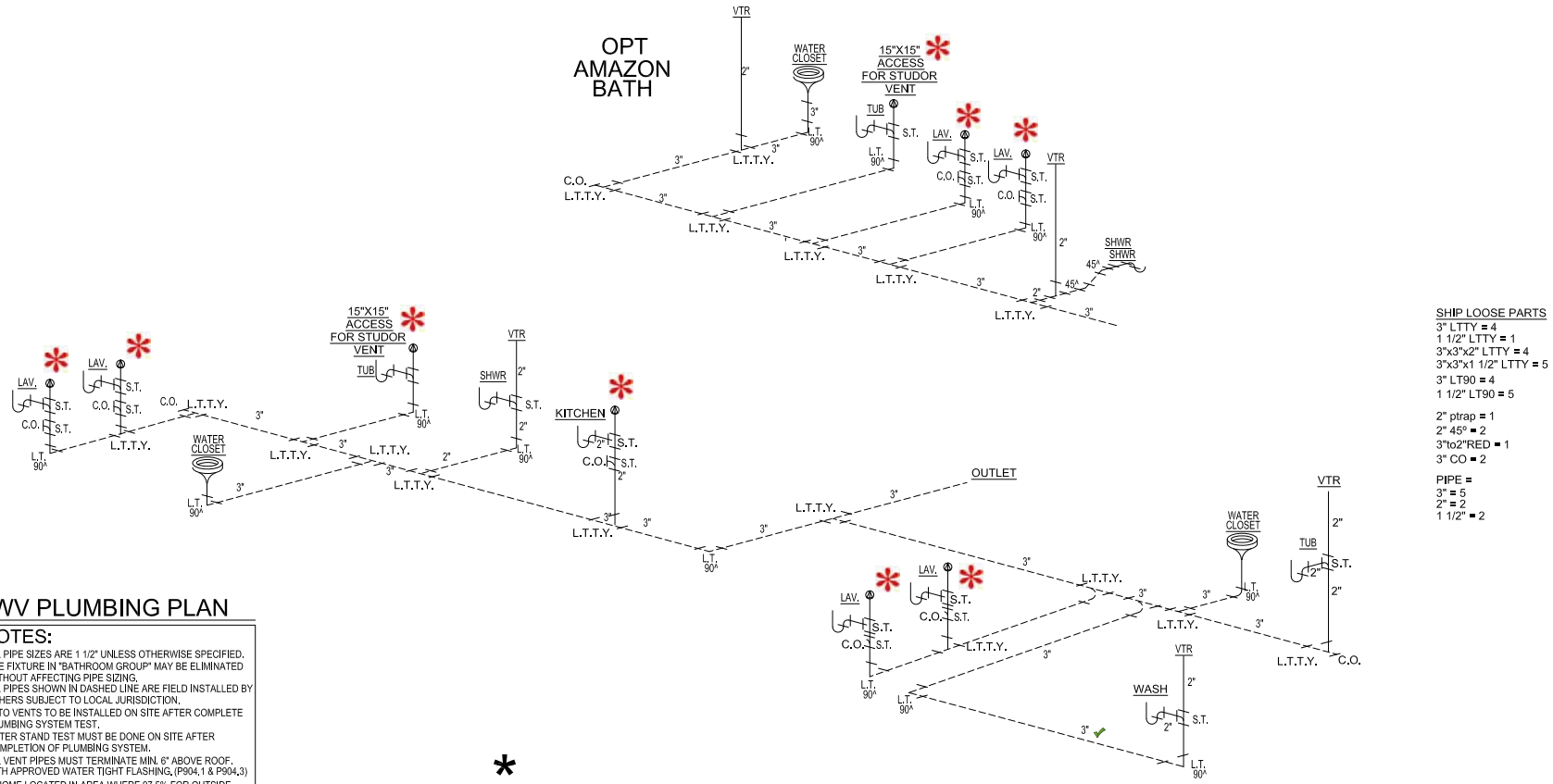
TITLE: ELECTRICAL PLAN

MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: 3/16" = 1'-0"
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: EP-101

PAGE:




## DWV PLUMBING PLAN

### NOTES:

1-ALL PIPE SIZES ARE 1 1/2" UNLESS OTHERWISE SPECIFIED.
2-ONE FIXTURE IN "BATHROOM GROUP" MAY BE ELIMINATED WITHOUT AFFECTING PIPE SIZING.
3-ALL PIPES SHOWN IN DASHED LINE ARE FIELD INSTALLED BY OTHERS SUBJECT TO LOCAL JURISDICTION.
4-AUTO VENTS TO BE INSTALLED ON SITE AFTER COMPLETE PLUMBING SYSTEM TEST.
5-WATER STAND TEST MUST BE DONE ON SITE AFTER COMPLETION OF PLUMBING SYSTEM.
6-ALL VENT PIPES MUST TERMINATE MIN. 6" ABOVE ROOF. WITH APPROVED WATER TIGHT FLASHING.(P904.1 & P904.3)
7-IF HOME LOCATED IN AREA WHERE 97.5% FOR OUTSIDE DESIGN TEMPERATURE IS 0° OR LESS, EVERY VENT EXTENSION SHALL BE MIN. 3". THIS TO BE DONE ON SITE BY OTHERS. (P904.2)
8-RODENT PROOFING AT ALL SHOWERS, TUBS, TUB/SHOWER TO BE COMPLETED ON SITE BY OTHERS AFTER PLUMBING TEST COMPLETED.

SEE Q/A MANUAL FOR APPROVED PLUMBING FIXTURES SECTION 4 PAGE 5

SHIP LOOSE PARTS
3" LTTY = 4
1 1/2" LTTY = 1
3"x3"x2" LTTY = 4
3"x3"x1 1/2" LTTY = 5
3" LT90 = 4
1 1/2" LT90 = 5

2" ptrap = 1
2" 45° = 2
3"to2"RED = 1
3" CO = 2

PIPE =
3" = 5
2" = 2
1 1/2" = 2

*

**ATTN. LOCAL BUILDING OFFICAL**

ALL P-TRAPS AT TUBS, SHOWERS & TUB/SHOWERS MUST BE RODENT PROOFED AND FINAL DRAFT STOPPING COMPLETED ON SITE BY OTHERS AFTER COMPLETION OF ALL PLUMBING TESTS. ALL OTHER RODENT PROOFING AND DRAFT STOPPING AT FLOOR LEVEL DONE AT FACTORY.

SEE PAGE AE-101 IN SETUP MANUAL IN HOME FOR DETAILS (SECTION 5, PG 36 QA MANUAL).

| PIPE SUPPORT TO BE AS FOLLOWS: |
|---|
| MAX HORIZONTAL SPACING = 4' |
| MAX VERTICAL SPACING = 10' |

REFERENCE TABLE 308.5

| | |
|---|---|
| (1) | 1 1/2" PVC OR ABS |
| (2) | 2" PVC OR ABS |
| (3) | 3" PVC OR ABS |
| △ | APPROVED AUTOVENT |
| S/O | STUB OUT |
| VTR | VENT THROUGH ROOF |
| ------- | INSTALLED ON SITE |

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

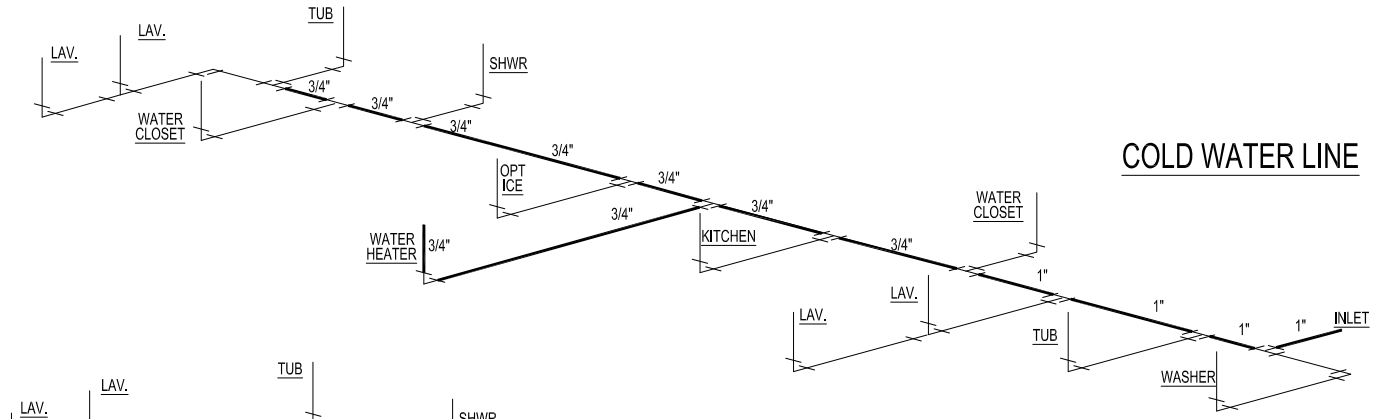
TITLE:
DWV PLAN
OFF-FRAME

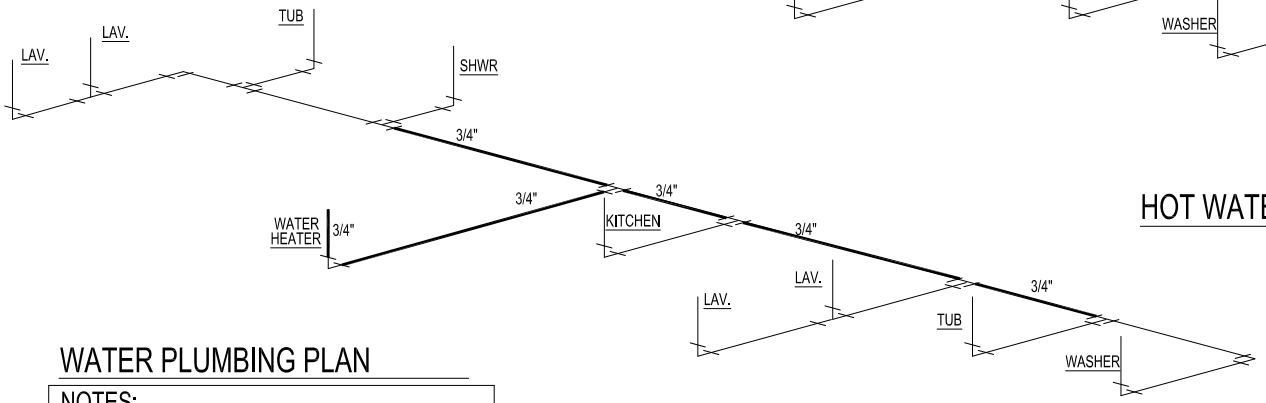
MODEL:
023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO:
PP-101

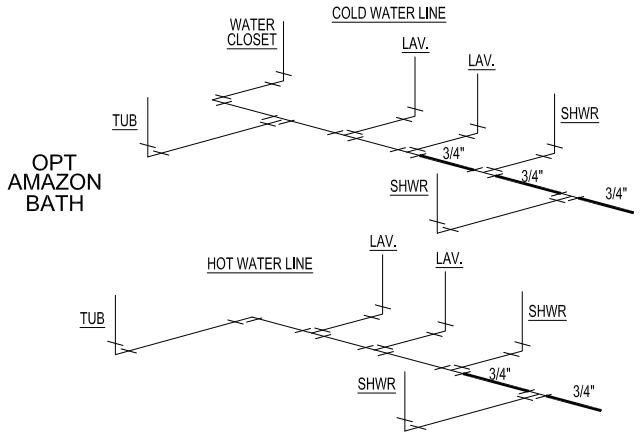
PAGE:



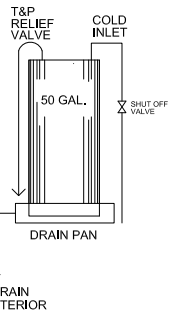

# WATER PLUMBING PLAN

NOTES:
-ALL PIPE SIZES ARE 1/2" UNLESS OTHERWISE SPECIFIED.




WATER HEATER SECURED IN PLACE FOR TRANSIT WITH METAL SHIPPING STRAPS FROM WALL TO WALL

STATE WATER HEATER
MODEL # SC 152 DORTE 3 (ELECTRIC)
CO1094 IM 50 NHDST 2 (GAS)
MANF. INFORMATION LOCATED IN Q.A. MANUAL, SECTION 4, PAGE 04.01.01




SUPPLY AT WATER HEATER

1. ALL PLUMBING FIXTURES HAVE SEPARATE SHUTOFF VALVES.
2. WATER HEATER SHALL HAVE A SAFETY PAN WITH 1 INCH DRAIN TO EXTERIOR.
3. WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED ATTIC SHALL BE INSULATED WITH AN INSULATION OF R-6.5 MINIMUM.
4. DWV SYSTEM SHALL BITHER ABS or PVC -DWV
5. WATER SUPPLY LINES SHALL BE POLY-ETHYLENE (PEX), CPVC, OR COPPER. WHEN POLYETHYLENE SUPPLY LINES ARE INSTALLED THE MAXIMUM WATER HEATER SETTING IS 180 deg F. THE POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES LIMITATIONS AND INSTRUCTIONS.
6. BUILDING DRAIN AND CLEANOUTS ARE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
7. TUB ACCESS PROVIDED UNDER HOME UNLESS OTHERWISE NOTED.
8. SHOWER STALLS SHALL BE COVERED w/ NON-ABSORANT MATERIAL TO A HEIGHT OF 72 INCHES ABOVE FINISH FLOOR.
9. T&P RELIEF VALVE w/DRAIN TO EXTERIOR OR PAN and SHUT-OFF WITHIN 3' of WATER SUPPLY AT WATER HEATER
10. THIS UNIT MUST BE CONNECTED TO PUBLIC WATER SUPPLY AND SEWAGE SYSTEM IF THESE ARE AVAILABLE
11. WATER PIPE DESIGNED FOR MAXIMUM INLET PRESSURE OF 80 PSI. SEE SETUP MANUAL SECTION 6.1

SEE Q/A MANUAL FOR APPROVED PLUMBING FIXTURES SECTION 4 PAGE 5

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE: WATER LINE PLAN

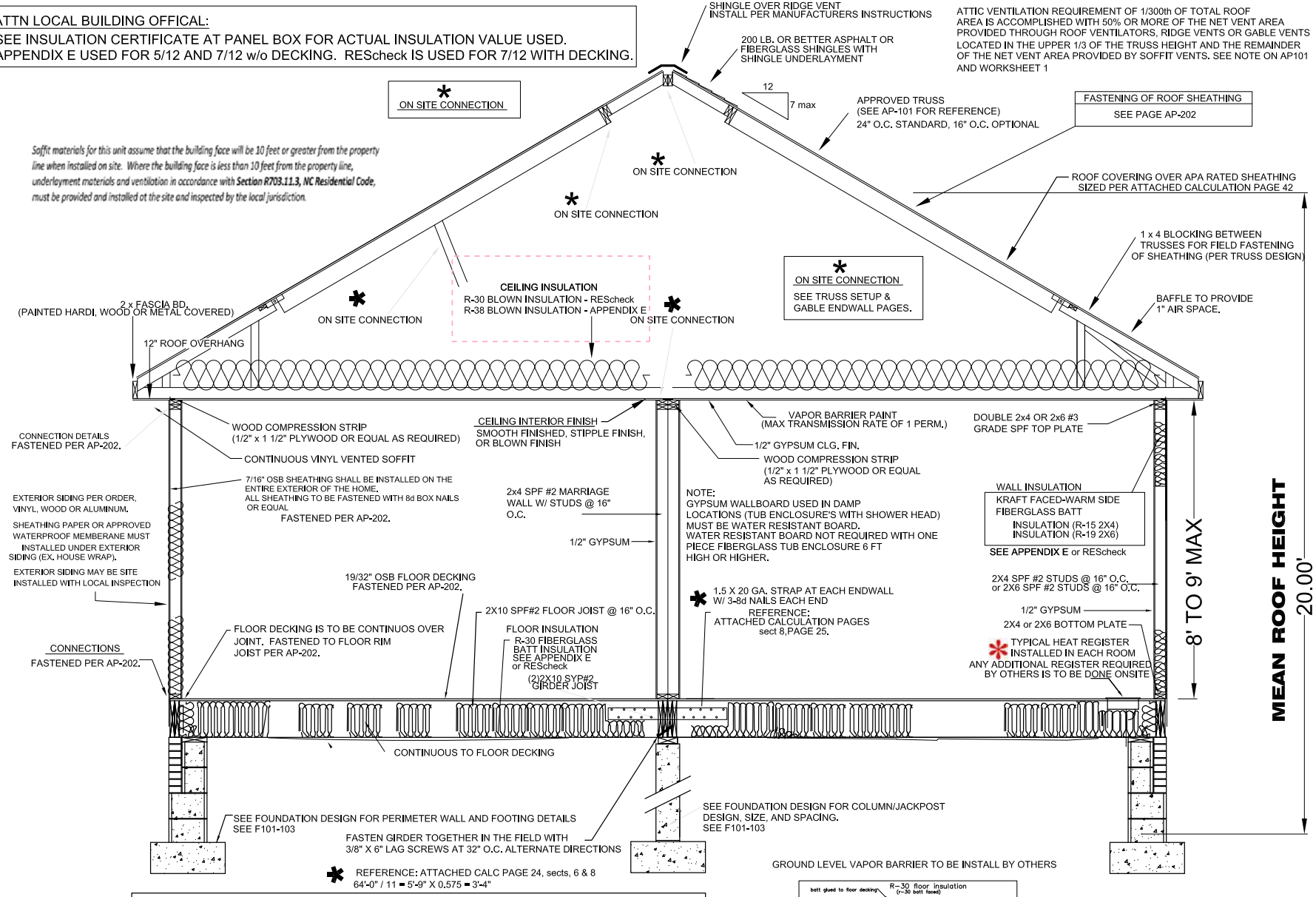
MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: WP-101

PAGE:

ATTN LOCAL BUILDING OFFICAL:
SEE INSULATION CERTIFICATE AT PANEL BOX FOR ACTUAL INSULATION VALUE USED.
APPENDIX E USED FOR 5/12 AND 7/12 w/o DECKING. REScheck IS USED FOR 7/12 WITH DECKING.




NOTES:
1. ALL FINISH MATERIAL TO HAVE CLASS "C" FIRE RATING.
2. ALL PENETRATIONS THROUGH FLOOR OR CEILING FIRE STOPPED
3. SEE FOUNDATION PLAN FOR SUPPORT AND TIE DOWN REQUIREMENTS.

CP- 1 Revised or Added page per PFS review of 10-03-19

CHAMPION
4085 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Sharon Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE:
OFF FRAME CROSS SECTION
MODEL 023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

| | |
|---|---|
| DATE: | 10/7/03 |
| SCALE: | 1/8" = 1'-0" |
| DRAWN BY: | JPT |
| REVISED: | 04-13-04 |

REVISIONS

| | |
|---|---|
| CDB | ADDED DORMER INFORMATION |
| SFA | ADDED P-TRAP RODENT PROOF |
| | |
| | |

SHEET NO:
SE-101
PAGE:

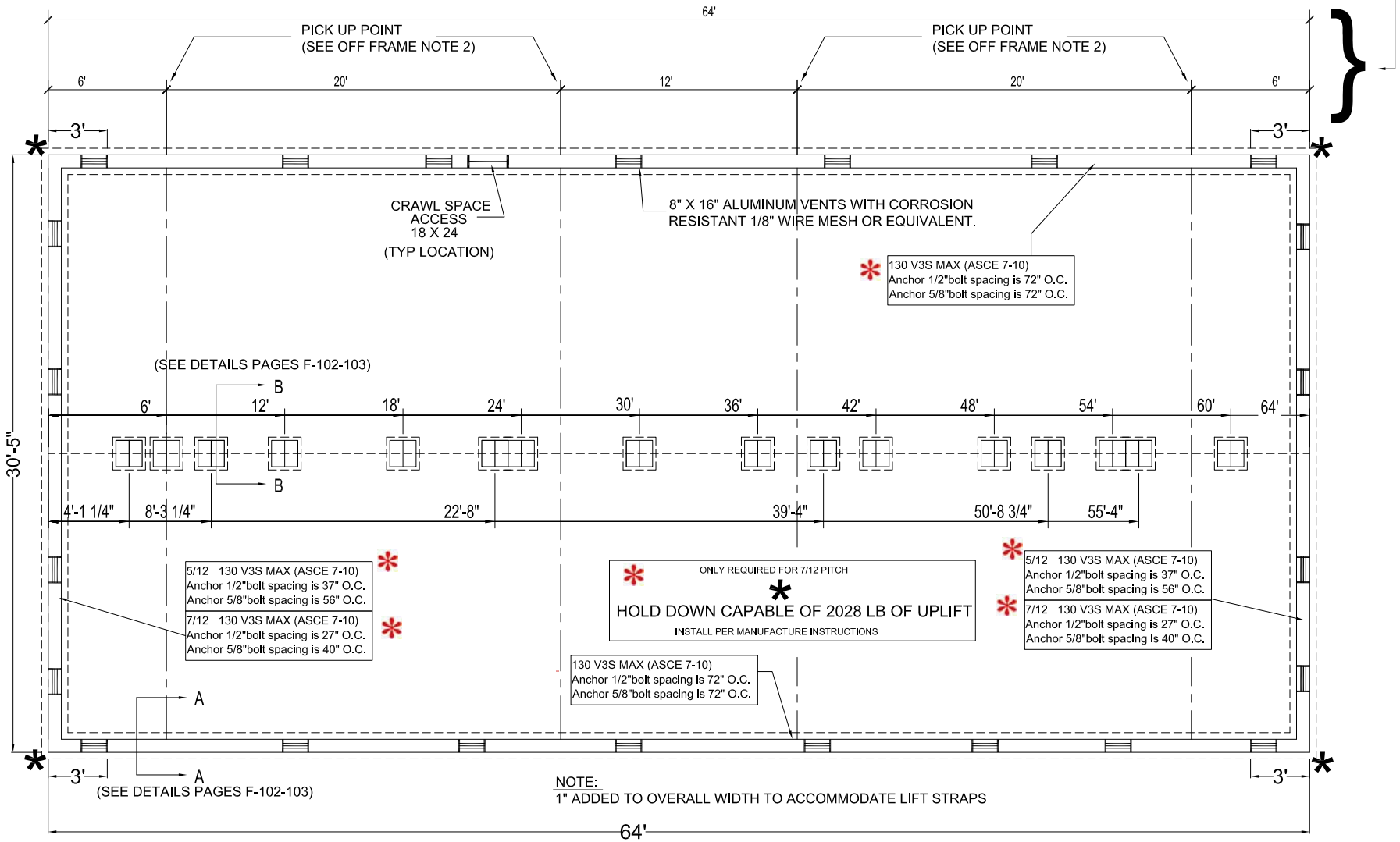
FOUNDATION VENT TO PROVIDE 1sf OF VENT PER EACH 150sf OF CRAWL SPACE AREA

1941 SF / 150 SF = 12.9

8"x16" (TYP) VENT= APPROX .5 SF
12.9 / .5 = APPROX. 25.8 VENTS

NOTES:
1. SPLICES IN MATE LINE GIRDERS MUST FALL ON A SUPPORT PIER.
2. PIERS OR POSTS TO BE SPACED PER CHART AND LOCATED UNDER OPENING COLUMN SUPPORTS WHEN OPENING WIDTH IS 4' OR GREATER.
3. FOR SEISMIC DESIGN CATEGORY D0, D1 & D2 FOUNDATION DESIGNED BY OTHERS

OFF FRAME LIFTING NOTES:
1. IF LIFTING POINTS ARE MORE THAN 32' FEET APART (TYPICAL OF UNIT LENGTHS GREATER THAN 64'), A THIRD AND FOURTH LIFTING POINT IS REQUIRED. THIRD AND FOURTH LIFTING POINT IS TO BE BETWEEN OUTER LIFTING POINTS AND MEET THE REQUIREMENTS OF NOTE 2.
2. PICK UP POINT MUST NOT BE LOCATED UNDER A WALL OPENING. IF AN OPENING CANNOT BE AVOIDED, A TEMPORARY WALL MUST BE INSTALLED.




NOTE:
1" ADDED TO OVERALL WIDTH TO ACCOMMODATE LIFT STRAPS

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

APPROVED
Shannon Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

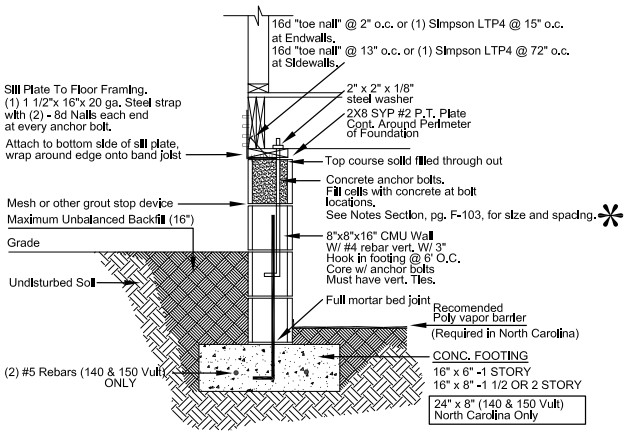
TITLE:
PERIMETER FOUNDATION PLAN

MODEL:
023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO:
F-101

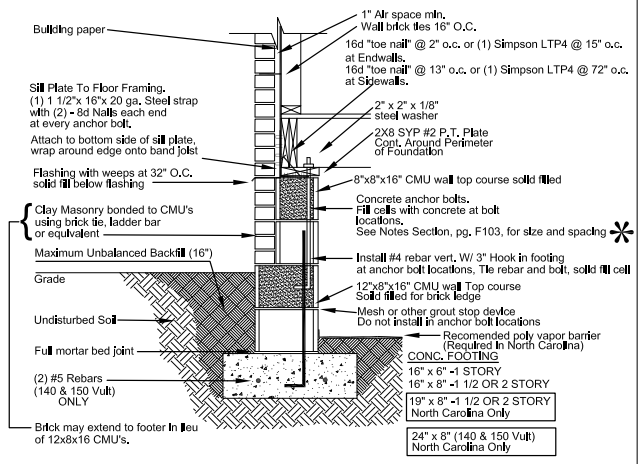
PAGE:




● If nail spacing is 2" or less, plates are recommended, since plate splitting may occur.

# SECTION A-A

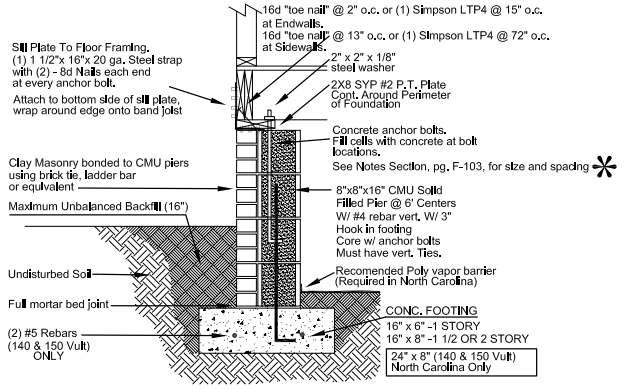
## BLOCK WALL




● If nail spacing is 2" or less, plates are recommended, since plate splitting may occur.

# SECTION A-A

## BRICK VENEER WALL

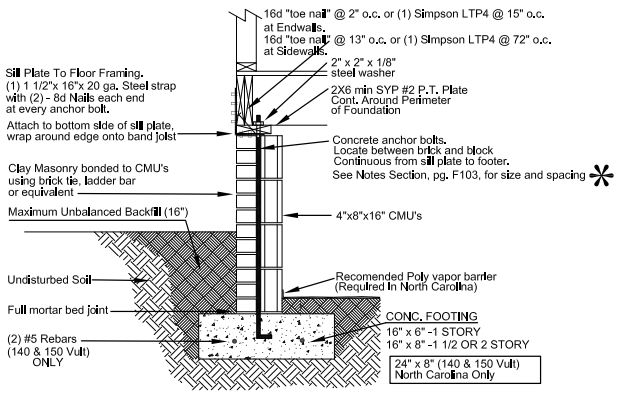



MAX 48" HEIGHT

● If nail spacing is 2" or less, plates are recommended, since plate splitting may occur.

# SECTION A-A

## PIER & CURTAIN WALL




● If nail spacing is 2" or less, plates are recommended, since plate splitting may occur.

# SECTION A-A

## CONTINUOUS 8" MASONRY WALL

CHAMPION

4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

PFS APPROVED
Sharon Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

TITLE:
PERIMETER FOUNDATION DETAILS

MODEL:
023-3264-01
BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO:
F-102

PAGE:

REFERENCE STRUCT. MANUAL SECTION 20

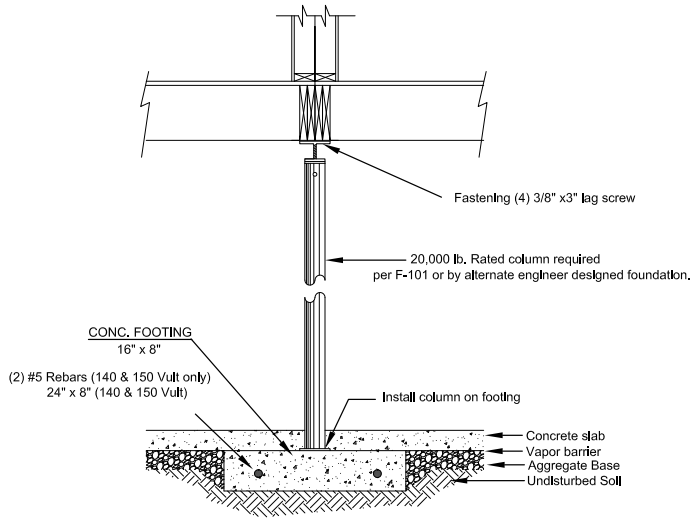
# TYPICAL FOUNDATION NOTES :

- Foundation and its structural elements shall be capable of accommodating all superimposed live, dead, and other loads in accordance with applicable codes and all lateral loads in accordance with accepted design practices.
- Lots shall be provided with adequate drainage and shall be graded so as to drain surface water away from foundation walls - by lot owner.
- Materials shall conform to applicable standards and codes.
- Concrete subject to weathering shall have a minimum compressive strength and air content in accordance with code - 2500 psi concrete minimum.
- All exterior walls, bearing walls, columns, and piers shall be supported on continuous solid concrete footings which shall be of sufficient design to support safely the loads imposed as determined from the character of the soil, and shall in all cases, extend below the frost line. Top surface shall be level and bottom not exceeding 1 in 40 slope. Footings shall be not less than shown on drawings for 2000 psf soil.
- Foundation walls shall be constructed in accordance with the code and not less than as shown on the Drawings.
- Foundations shall extend not less than 12 inches below the finished natural grade or engineered fill and in no case less than the frost line depth. Footings on soil with a lower allowable soil pressure shall be designed in accordance with accepted engineering practice. However, where there is evidence that the groundwater table can rise to within 6 inches of the finished grade at the building perimeter or where there is evidence that the surface water does not readily drain from the building site, the building official may require that the grade in the under-floor space be as high as the outside finished grade, unless an approved drainage system is provided. Termite shields and/or protection shall be provided as per code. Local and state requirements for footings may exceed that shown on drawings. If there are any questions, contact your local building inspections department.
- Crawl space ventilation and access space shall be by openings in the foundation walls {cross-ventilation as required by code and/or as follows}. Provide 1 sq. Ft. of ventilation area for each 150 sq. Ft. of crawl space floor area. Use 8"x16" foundation vents with corrosion resistant wire mesh (1/8" mesh) or equal.
- Mortar shall be type "m" or "s".
- Minimum soil bearing capacity shall be 2000 psf.
- Anchorbolt length to be: masonry wall-20",
- Poured concrete footing w/two #5 rebar (120 & 130 only) continuous w'a minimun 25" lap. Place bars 3" from bottom.
- This foundation plan is provided for reference as a typical. Actual foundation conditions must be evaluted for applicability if this plan is to be used. Alternate foundation plans may be designed by others in accordance with the requirements of the jurisdiction having authority.

* Vertical wall reinforcement or continuous anchorage is as follows:

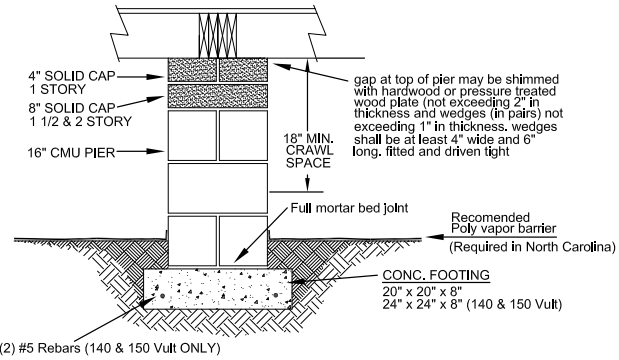
- Sidewall anchor bolt spacing see F-101
- Endwall anchor bolt spacing see F-101

There shall be a minimum of (2) bolts per sill plate section, with one bolt located not more than 12" from each end of the plate section.




## SECTION B-B

BASEMENT WALL




## SECTION B-B

PIER & CURTAIN WALL, BLOCK WALL & BRICK VENEER WALL
(where required on module mate lines)

CHAMPION
4055 HWY. 401 SOUTH LILLINGTON, NC 27546

PROJECT

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TITLE: PERIMETER FOUNDATION DETAILS

MODEL: 023-3264-01 BELLE VUE
30'-4" x 64'-0" 3 BEDROOM 2 BATH

DATE: 11-09-2012
SCALE: NTS
DRAWN BY: STAFF
REVISED:
REVISIONS

SHEET NO: F-103

PAGE:

# REScheck Software Version 4.6.5

# Compliance Certificate

Project 23-3264-01

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Energy Code: **2015 IECC**
Location: **Hendersonville, North Carolina**
Construction Type: **Single-family**
Project Type: **New Construction**
Orientation: **Unspecified**
Conditioned Floor Area: **1,941 ft2**
Glazing Area **12%**
Climate Zone: **4 (4203 HDD)**
Permit Date:
Permit Number:

Construction Site: Owner/Agent: Designer/Contractor:

**Compliance: Passes using UA trade-off**

Compliance: **1.3% Better Than Code** Maximum UA: **306** Your UA: **302** Maximum SHGC: **0.40** Your SHGC: **0.28**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

## Envelope Assemblies

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | U-Factor | UA |
|---|---|---|---|---|---|
| Ceiling 1: Flat Ceiling or Scissor Truss | 1,941 | 30.0 | 0.0 | 0.035 | 68 |
| Front sidewall: Wood Frame, 16" o.c.<br>Orientation: Unspecified | 512 | 15.0 | 0.0 | 0.077 | 28 |
| 3661: Vinyl Frame:Double Pane with Low-E<br>SHGC: 0.28<br>Orientation: Unspecified | 105 | | | 0.350 | 37 |
| Door 1: Solid<br>Orientation: Unspecified | 40 | | | 0.140 | 6 |
| Rear sidewall: Wood Frame, 16" o.c.<br>Orientation: Unspecified | 512 | 15.0 | 0.0 | 0.077 | 35 |
| 3036: Vinyl/Fiberglass Frame:Double Pane with Low-E<br>SHGC: 0.28<br>Orientation: Unspecified | 15 | | | 0.350 | 5 |
| transoms: Vinyl/Fiberglass Frame:Double Pane with Low-E<br>SHGC: 0.28<br>Orientation: Unspecified | 6 | | | 0.350 | 2 |
| Patio: Glass<br>SHGC: 0.28<br>Orientation: Unspecified | 40 | | | 0.330 | 13 |
| Right endwall: Wood Frame, 16" o.c.<br>Orientation: Unspecified | 242 | 15.0 | 0.0 | 0.077 | 16 |
| Door 3: Solid<br>Orientation: Unspecified | 40 | | | 0.140 | 6 |
| Left endwall: Wood Frame, 16" o.c.<br>Orientation: Unspecified | 242 | 15.0 | 0.0 | 0.077 | 18 |

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | U-Factor | UA |
|---|---|---|---|---|---|
| Window 4: Vinyl/Fiberglass Frame:Double Pane with Low-E<br>SHGC: 0.28<br>Orientation: Unspecified | 12 | | | 0.350 | 4 |
| Floor 1: All-Wood Joist/Truss:Over Unconditioned Space | 1,941 | 30.0 ✔ | 0.0 | 0.033 | 64 |

*Compliance Statement:* The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in RES*check* Version 4.6.5 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

| Name - Title | Signature | Date |
|---|---|---|
| | Jon Tyndall | 9-24-19 |

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# 2015 IECC Energy Efficiency Certificate

| Insulation Rating | R-Value |
|---|---|
| Above-Grade Wall | 15.00 |
| Below-Grade Wall | 0.00 |
| Floor | 30.00 |
| Ceiling / Roof | 30.00 |
| Ductwork (unconditioned spaces): | _____ |

| Glass & Door Rating | U-Factor | SHGC |
|---|---|---|
| Window | 0.35 | 0.28 |
| Door | 0.14 | 0.28 |

| Heating & Cooling Equipment | Efficiency |
|---|---|
| Heating System:_____ | _____ |
| Cooling System:_____ | _____ |
| Water Heater:_____ | _____ |

**Name:** Jon Tyndall **Date:** 9-24-19

**Comments**

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BUILDER MUST FINISH APPENDIX, FACTORY DONE MARKED IN RED

# APPENDIX E

# (E-1 THROUGH E-4)
# RESIDENTIAL REQUIREMENTS FOR ENERGY CONSERVATION

This appendix is a North Carolina addition and not part of the 2015 *International Residential Code*.
There will be no underlined text.

(The provisions contained in this appendix are adopted as part of this code.)

**APPENDIX E-1** Energy Efficiency Certificate (Section N1101.14)

**ENERGY EFFICIENCY CERTIFICATE (N1101.14)**

| | |
|---|---|
| Builder, Permit Holder or Registered Design Professional<br>Print Name:<br>Signature: | |
| Property Address: | |
| Date: | |
| **Insulation Rating – List the value covering largest area to all that apply** | ***R*-Value** |
| Ceiling/roof: | R- 38 |
| Wall: | R- 15 min |
| Floor: | R- 30 |
| Closed crawl space wall: | R- |
| Closed crawl space floor: | R- |
| Slab: | R- |
| Basement wall: | R- |
| **Fenestration:** | |
| *U*-Factor | 0.34 |
| Solar Heat Gain Coefficient (SHGC) | 0.28 |
| **Building Air Leakage** | |
| ❑ Visually inspected according to N1102.4.2.1 OR | |
| ❑ Building air leakage test results (Sec. N1102.4.2.2)<br>ACH50 [Target: 5.0] or<br>CFM50/SFSA [Target: 0.30] | |
| Name of Tester/Company:<br>Date: Phone: | |
| **Ducts:** | |
| Insulation | R- 8 flex only by factory |
| Total duct leakage test result (Sect. N1103.3.3)<br>Circle one:<br>Total duct leakage test<br>(CFM25 Total/100SF) [Target: 5] or<br>Duct leakage to the outside test<br>(CFM25 Total/100SF) [Target: 4] | |
| Name of Tester or Company:<br>Date: Phone: | |
| **Certificate to be displayed permanently** | |

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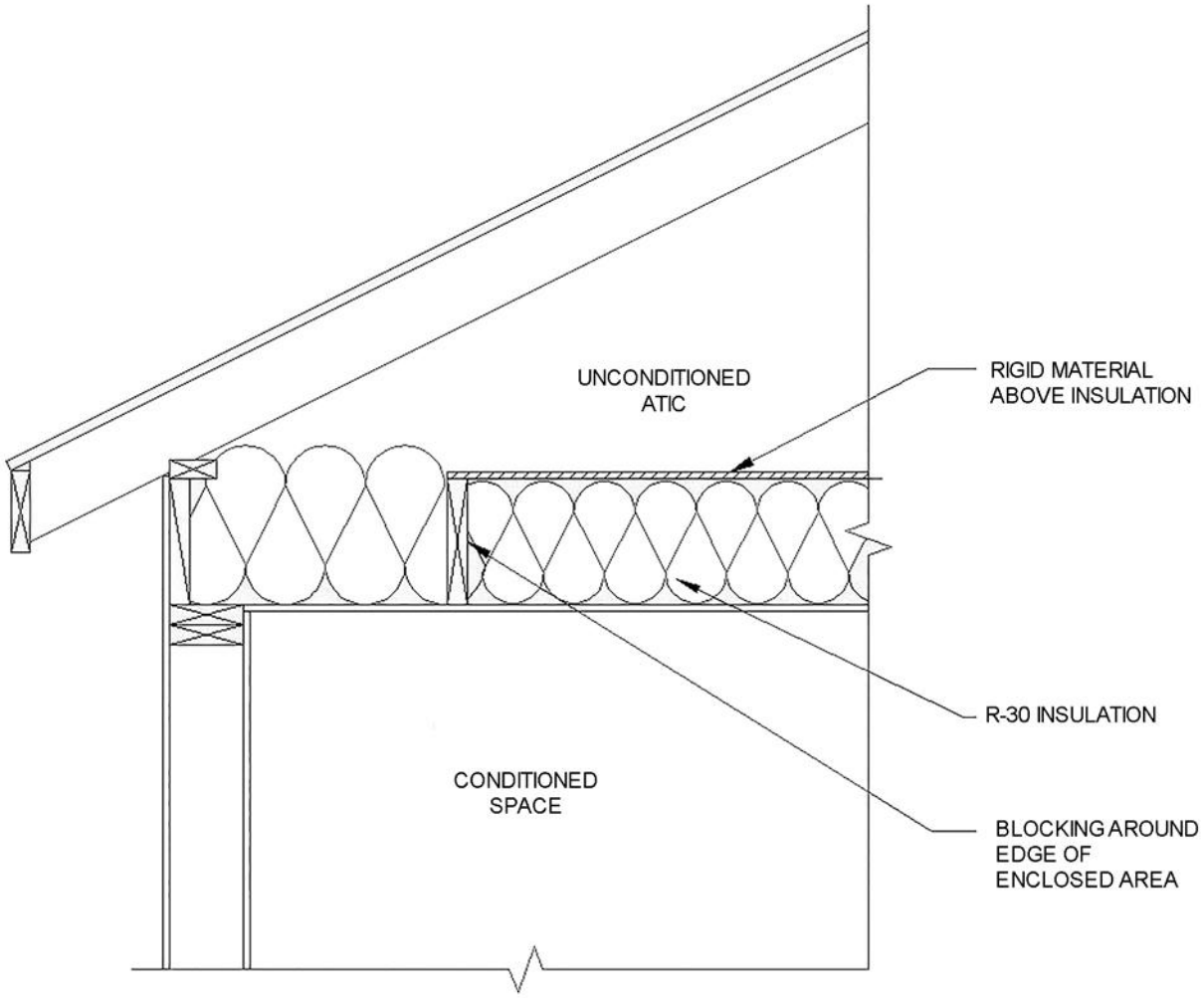
# APPENDIX E-2
# INSULATION AND AIR SEALING DETAILS

## APPENDIX E-2.1

**N1102.2.1 Ceilings with attic spaces:** Exception for fully enclosed attic floor systems




SECTION VIEW OF CEILING WITH ATTIC SPACE

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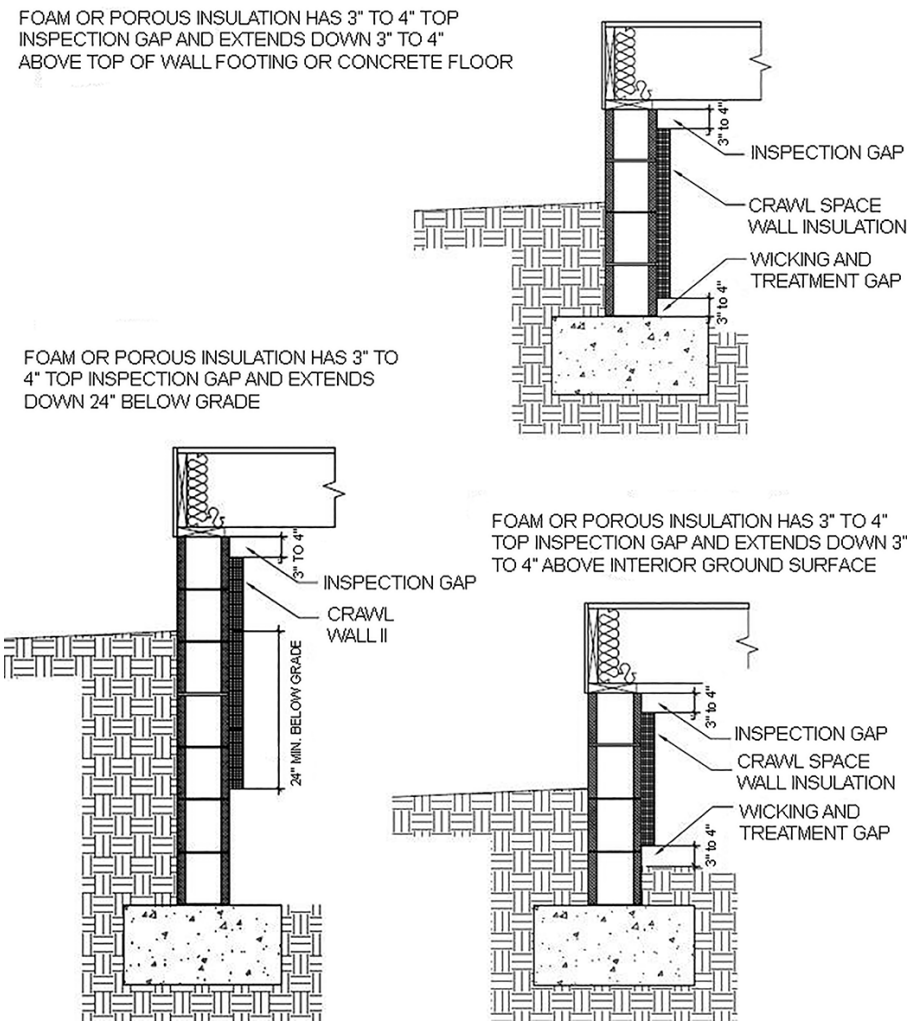
## APPENDIX E-2.2

**N1102.2.11 Closed crawl space walls.** Insulation illustrations

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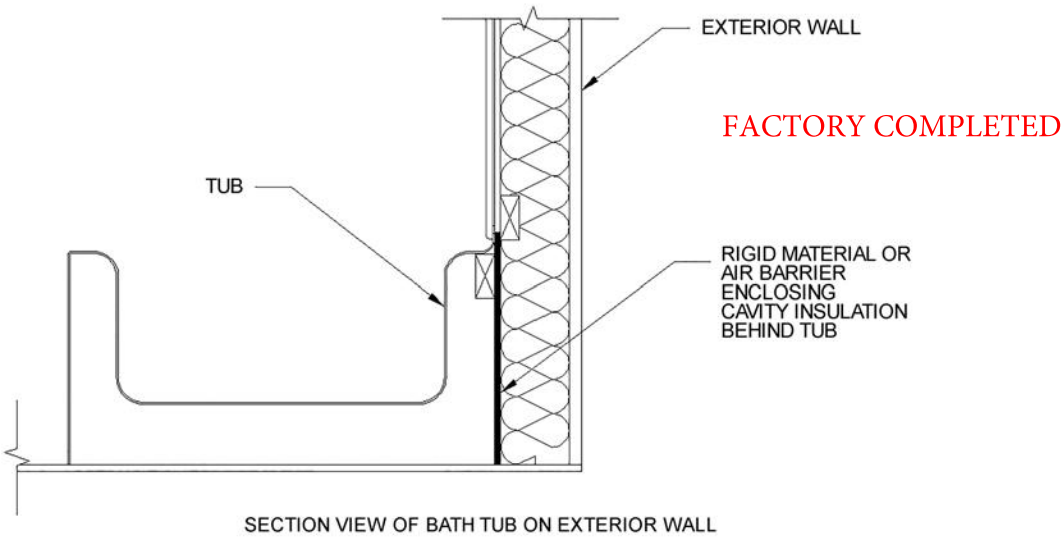
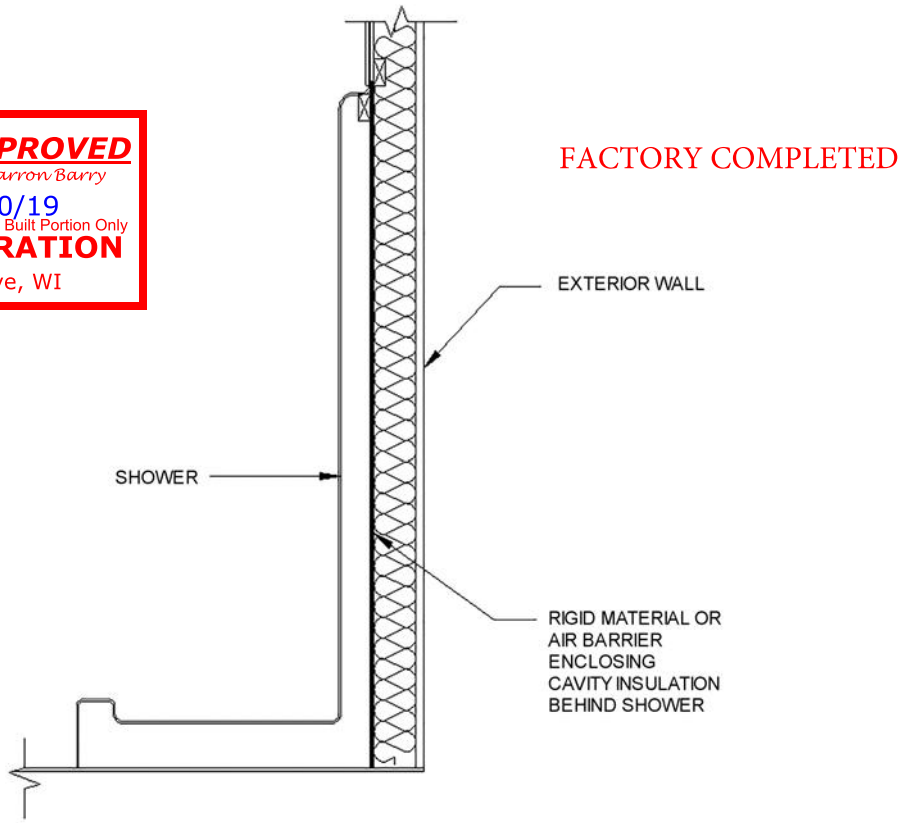
## APPENDIX E-2.3

**N1102.2.14 Framed cavity walls.** Insulation enclosure—1. Tubs




SECTION VIEW OF BATH TUB ON EXTERIOR WALL

**N1102.2.14 Framed cavity walls.** Insulation enclosure—2. Showers


SECTION VIEW OF SHOWER ON EXTERIOR WALL



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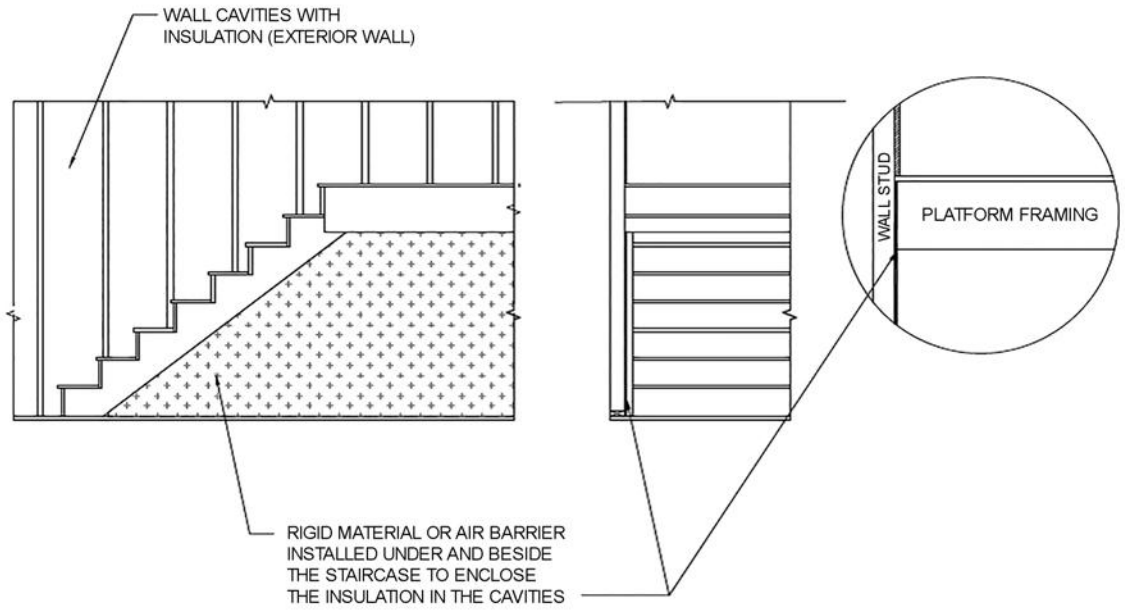
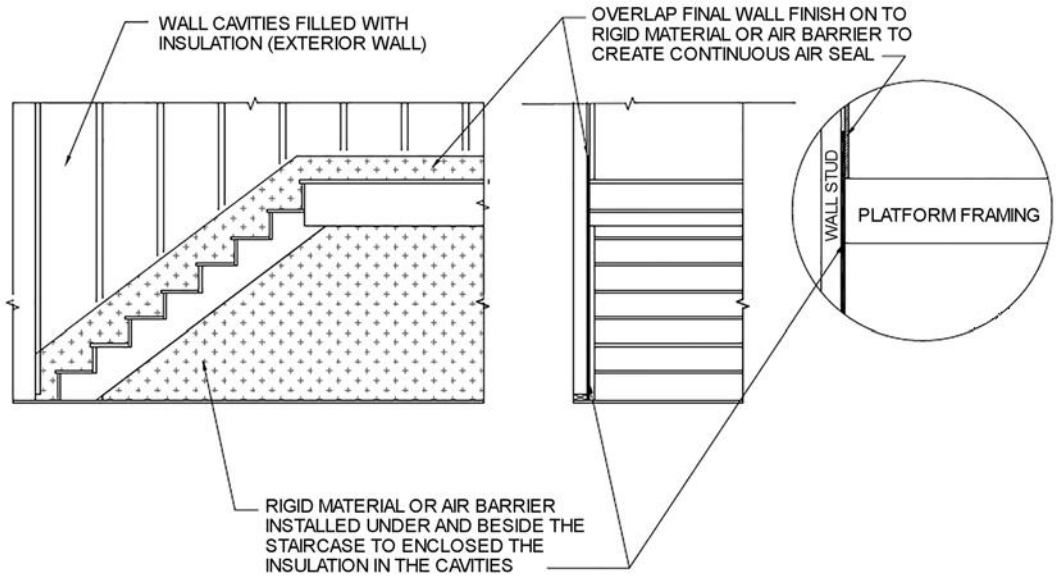
**N1102.2.14 Framed cavity walls.** Insulation enclosure—3. Stairs

FACTORY COMPLETED, IF APPLICABLE




SECTION VIEW OF INTERIOR STAIRCASE ON EXTERIOR WALL (OPTION 1)

**N1102.2.14 Framed cavity walls.** Insulation enclosure—3. Stairs




SECTION VIEW OF INTERIOR STAIRCASE ON EXTERIOR WALL (OPTION 2)

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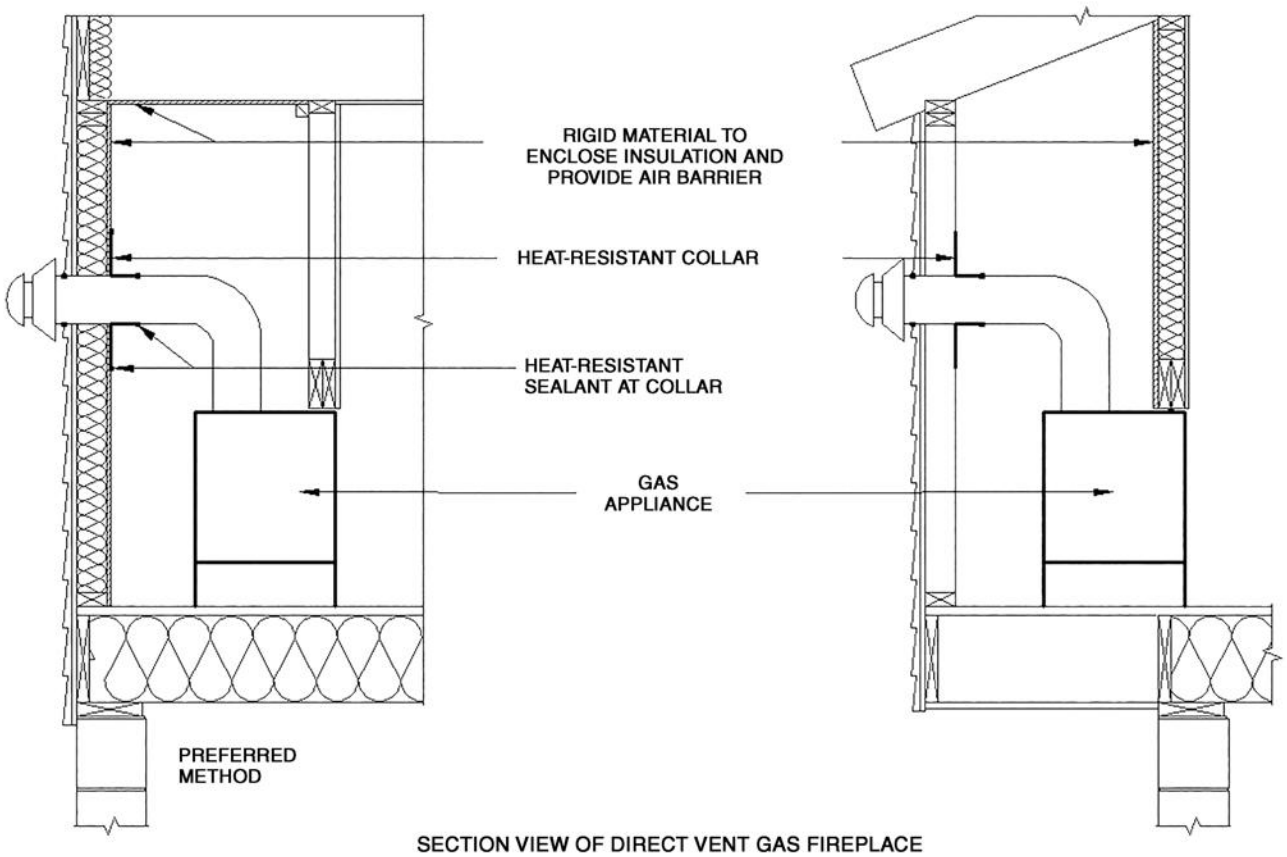
**N1102.2.14 Framed cavity wall.** Insulation enclosure—4. Direct vent gas fireplace

N/A BY FACTORY




SECTION VIEW OF DIRECT VENT GAS FIREPLACE

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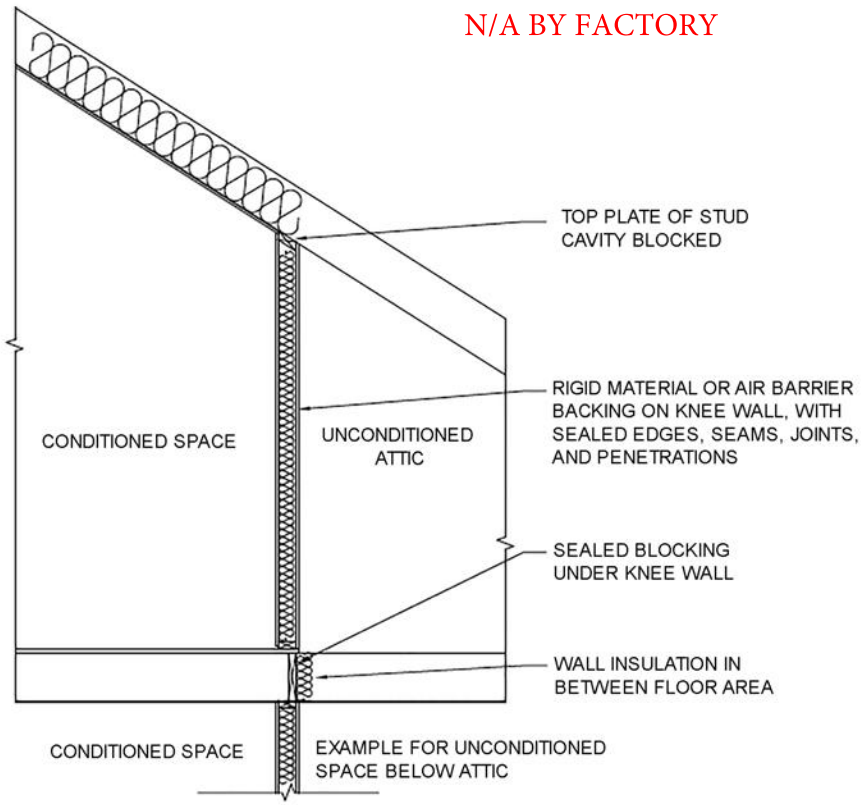
**N1102.2.15 Framed cavity walls.** Insulation enclosure—5. Walls that adjoin attic spaces

N/A BY FACTORY




SECTION VIEW OF WALL ADJOINING ATTIC SPACE WITH STICK FRAMED ROOF

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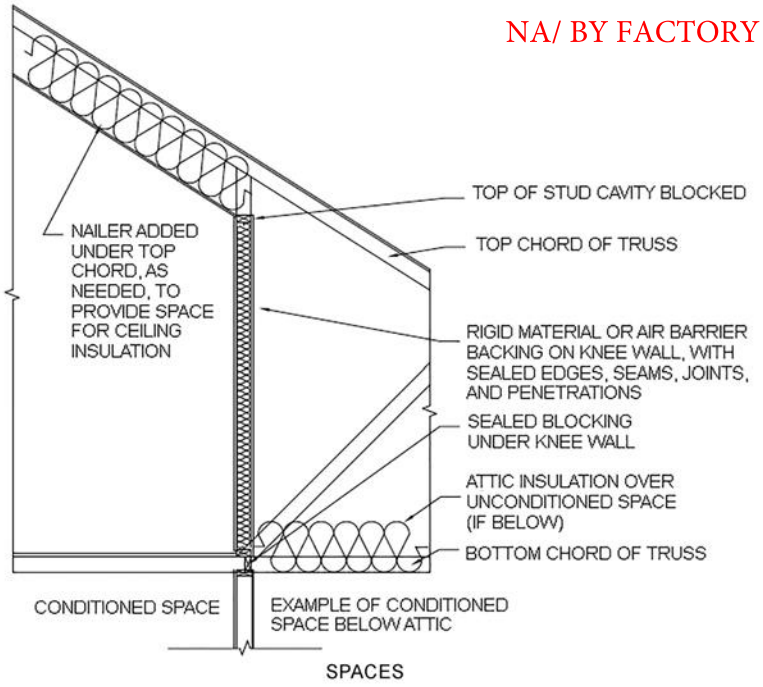
**N1102.2.15 Framed cavity walls.** Insulation enclosure—5. Walls that adjoin attic spaces

NA/ BY FACTORY

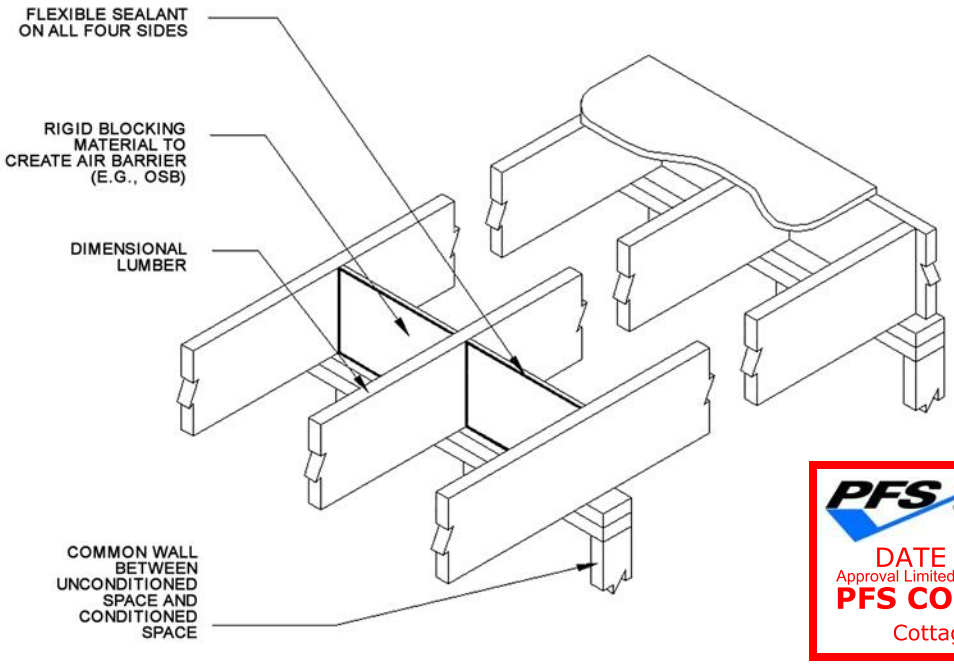



SECTION VIEW OF WALL ADJOINING ATTIC SPACE WITH TRUSS ROOF

## APPENDIX E-2.4

**N1102.4.1 Building thermal envelope.**—1. Block and seal floor/ceiling systems

N/A BY FACTORY

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ISOMETRIC VIEW OF DIMENSIONAL LUMBER FLOOR/CEILING SYSTEM ABOVE COMMON WALL BETWEEN UNCONDITIONED AND CONDITIONED SPACE



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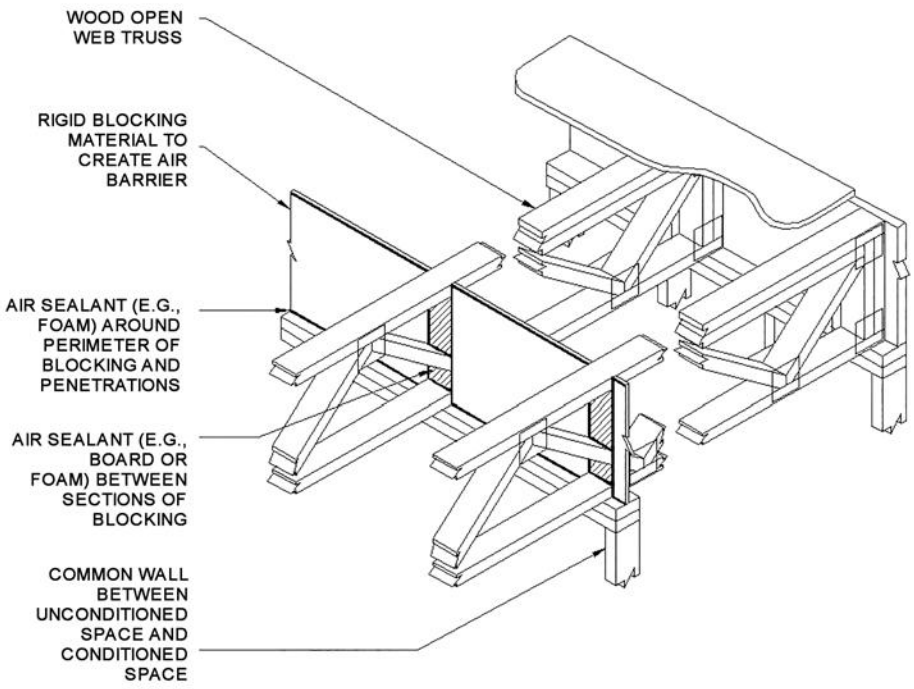
**N1102.4.1 Building thermal envelope.**—1. Block and seal floor/ceiling systems

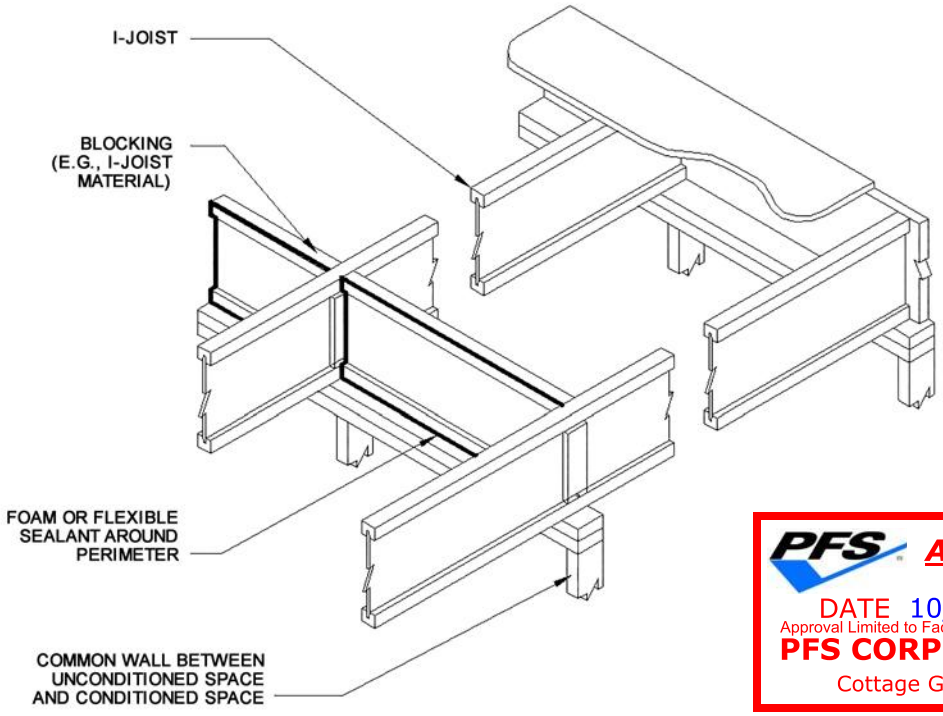
N/A BY FACTORY




ISOMETRIC VIEW OF WOOD TRUSS FLOOR/CEILING SYSTEM ABOVE COMMON WALL BETWEEN UNCONDITIONED AND CONDITIONED SPACE

**N1102.4.1 Building thermal envelope.** —1. Block and seal floor/ceiling systems

N/A BY FACTORY

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ISOMETRIC VIEW OF I-JOIST FLOOR/CEILING SYSTEM ABOVE COMMON WALL BETWEEN UNCONDITIONED AND CONDITIONED SPACE



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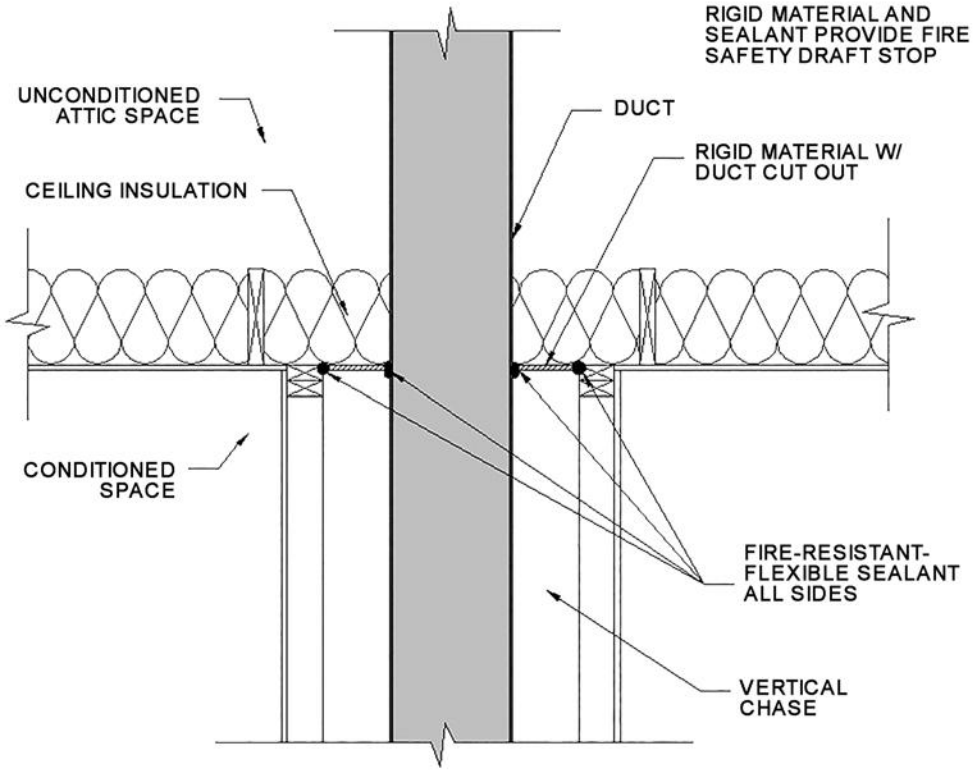
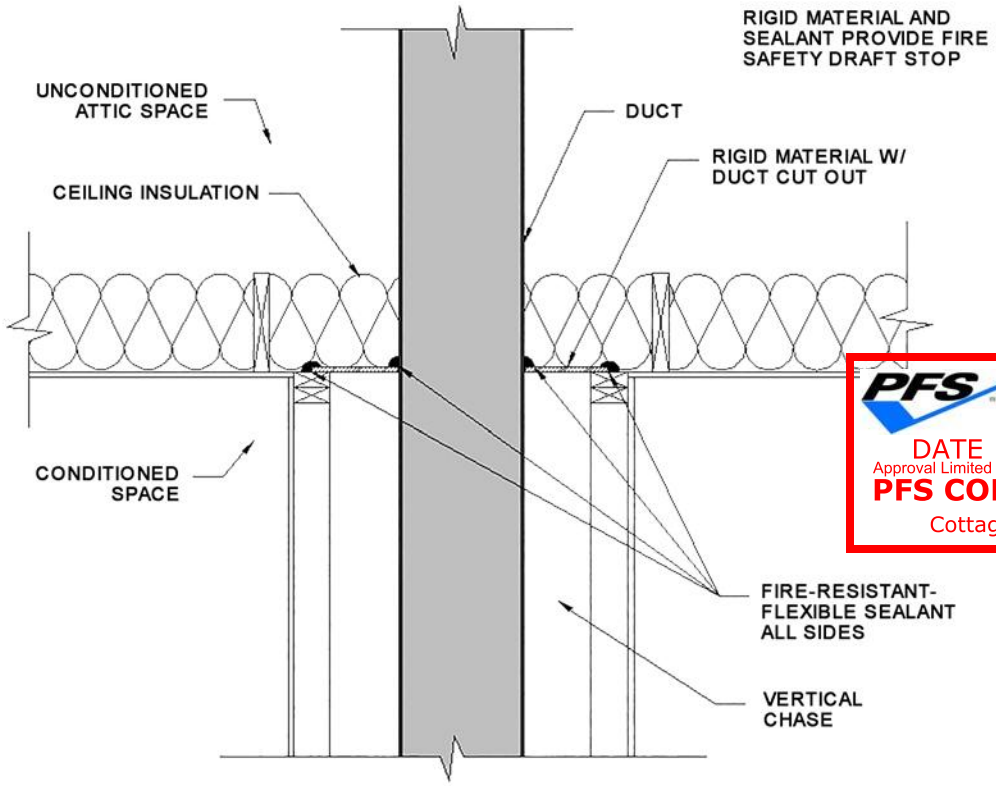
**N1102.4.1 Building thermal envelope**—2. Cap and seal shafts and chases BY OTHERS IF APPLICABLE




SECTION VIEWS OF DUCT PENETRATING INTO ATTIC

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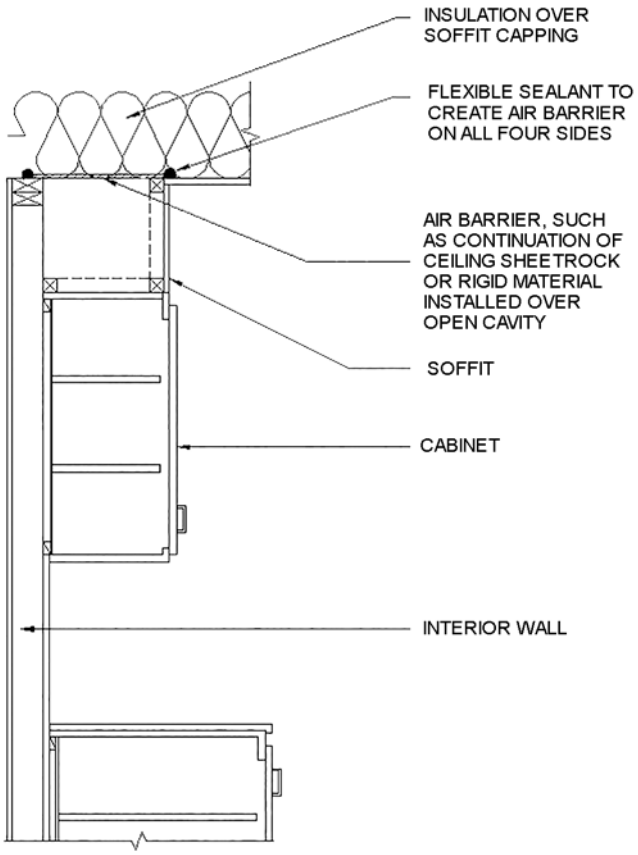
**N1102.4.1 Building thermal envelope.** —3. Cap and seal soffit or dropped ceiling N/A




SECTION VIEW OF SOFFIT OVER CABINET

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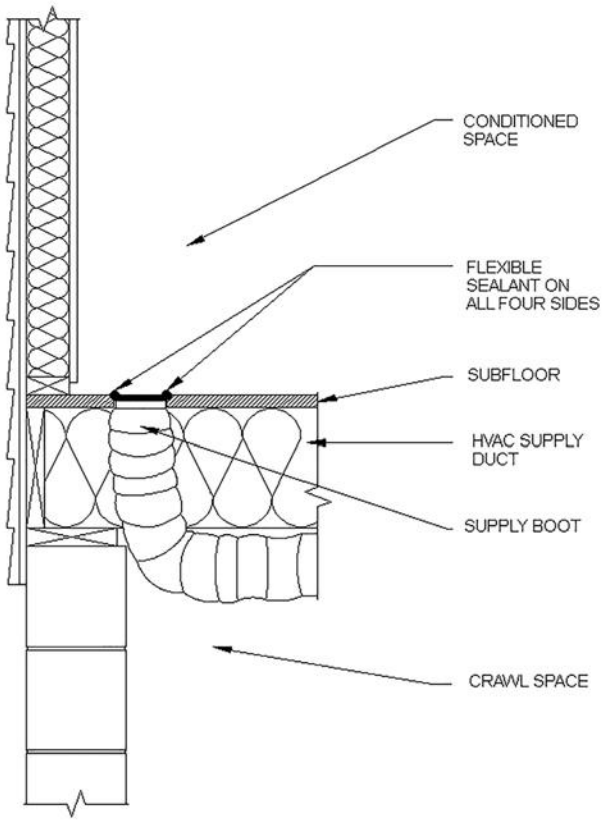
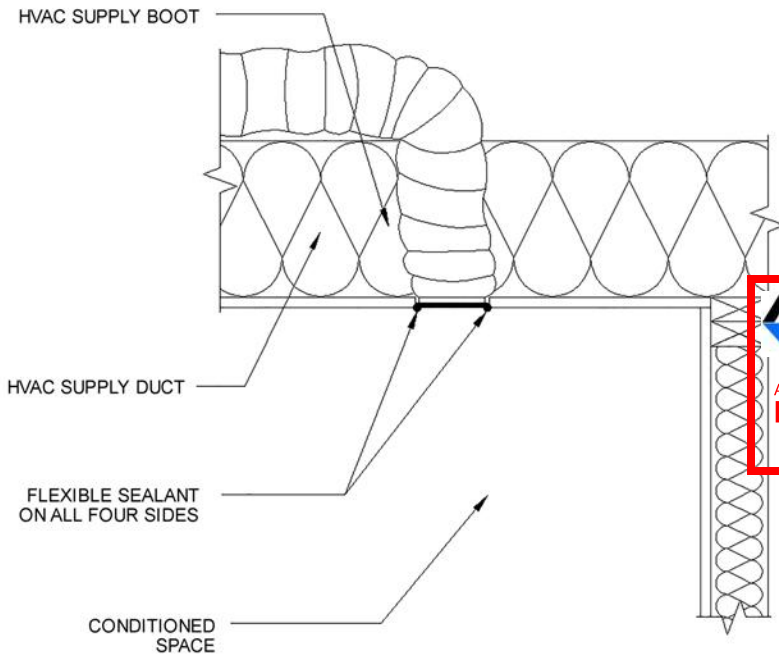
**N1102.4.1 Building thermal envelope.**—4. Seal HVAC boot penetration—floor FACTORY COMPLETED




SECTION VIEW OF FLOOR HVAC BOOT PENETRATION

**N1102.4.1 Building thermal envelope.**—4. Seal HVAC boot penetration—ceiling

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Cottage Grove, WI

SECTION VIEW OF CEILING HVAC BOOT PENETRATION



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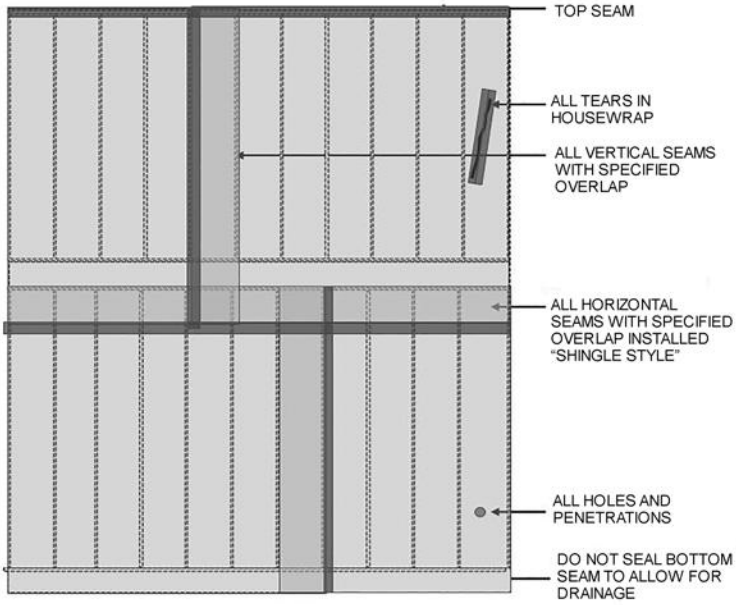
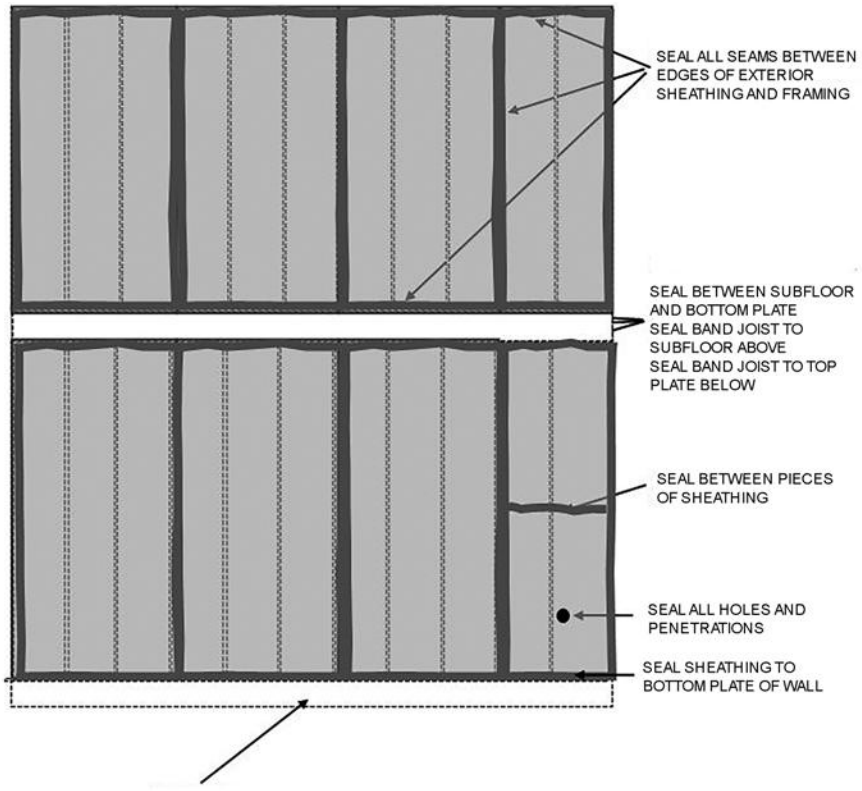
MUST BE INSPECTED ON SITE BY OTHERS FOR TEARS

**N1102.4.1 Building thermal envelope.**—5. Sealed exterior air barrier with housewrap

Follow manufacturer's instructions for sealing air barrier-rated housewrap, including choice of materials, to provide an exterior air barrier at the following locations:




**N1102.4.1 Building thermal envelope.**—5. Sealed exterior air barrier with sheathing




1) IF FIRST FLOOR IS SLAB-ON-GRADE, INSTALL SEAL SEALER UNDER BOTTOM PLATE OF EXTERIOR WALL.
2) IF FIRST FLOOR IS OVER UNCONDITIONED CRAWL SPACE OR BASEMENT, INSTALL SEAL SEALER UNDER BOTTOM PLATE AND SEAL SUBFLOOR TO BAND JOIST.
3) IF FIRST FLOOR IS OVER CONDITIONED BASEMENT OR CLOSED CRAWL SPACE WITH CRAWL SPACE WALL INSULATION BELOW, SEAL BETWEEN SUBFLOOR AND BOTTOM PLATE, SEAL BAND JOIST TO SUBFLOOR ABOVE, AND SEAL BAND JOIST TO TOP PLATE BELOW.

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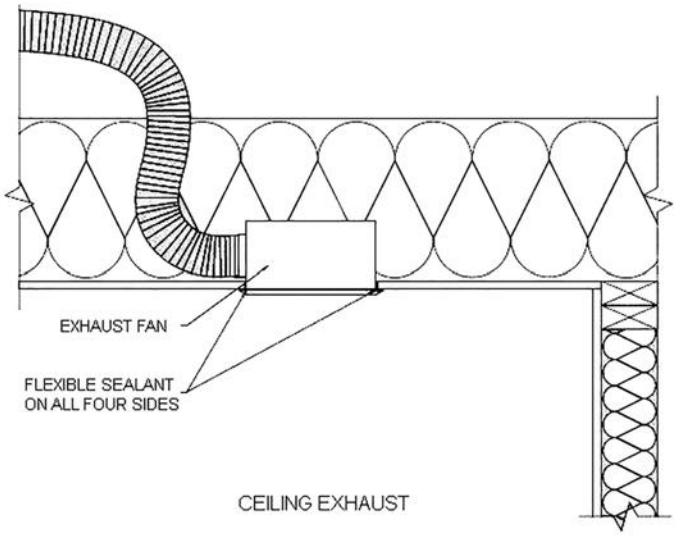
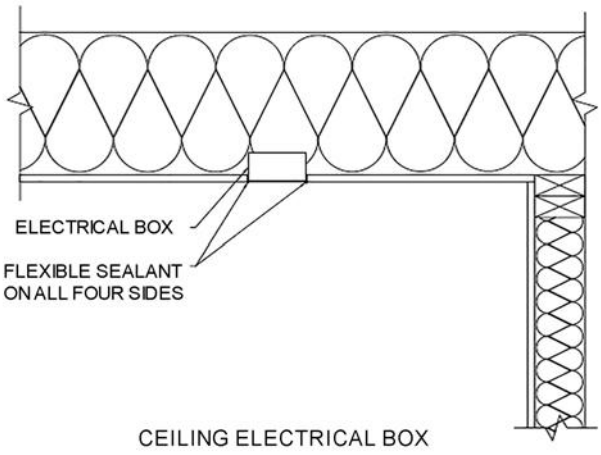
**N1102.4.2.1 Visual inspection option.** —Table N1102.4.2 Seal ceiling mechanical box penetrations

FACTORY COMPLETED




**N1102.4.2.1 Visual inspection option.** — Table N1102.4.2 Seal ceiling electrical box penetrations FACTORY COMPLETED

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# APPENDIX E-3:
# SAMPLE WORKSHEETS FOR RESIDENTIAL AIR AND DUCT LEAKAGE TESTING

## APPENDIX E-3A
## AIR SEALING: VISUAL INSPECTION OPTION (Section N1102.4.2.1)

### SAMPLE WORKSHEET

**N1102.4.2 Air sealing.** Building envelope air tightness shall be demonstrated by Section N1102.4.2.1 or N1102.4.2.2.

**N1102.4.2.1 Visual inspection option.** Building envelope tightness shall be considered acceptable when items providing insulation enclosure in Section N1102.2.14 and enclosure and air sealing in Section N1102.2.15 and air sealing in Section N1102.4.1 are addressed and when the items listed in Table N1102.4.2, applicable to the method of construction, are certified by the builder, permit holder or *registered design professional* via the certificate in Appendix E-1.

**TABLE N1102.4.2**
**AIR BARRIER INSPECTION**

| COMPONENT | CRITERIA |
|---|---|
| factory done<br>Ceiling/attic | Sealants or gaskets provide a continuous air barrier system joining the top plate of framed walls with either the ceiling drywall or the top edge of wall drywall to prevent air leakage. Top plate penetrations are sealed.<br>For ceiling finishes that are not air barrier systems such as tongue-and-groove planks, air barrier systems (for example, taped house wrap), shall be used above the finish.<br>**Note:** It is acceptable that sealants or gaskets applied as part of the application of the drywall will not be observable by the code official. |
| Walls | Sill plate is gasketed or sealed to subfloor or slab. factory done |
| Windows and doors | Space between window and exterior door jambs and framing is sealed. factory done |
| Floors (including above-garage and cantilevered floors) | Air barrier system is installed at any exposed edge of insulation. factory done |
| Penetrations | Utility penetrations through the building thermal envelope, including those for plumbing, electrical wiring, ductwork, security and fire alarm wiring, and control wiring, shall be sealed. factory done |
| Garage separation | Air sealing is provided between the garage and conditioned spaces. An air barrier system shall be installed between the ceiling system above the garage and the ceiling system of interior spaces. |
| Ceiling penetrations | Ceiling electrical box penetrations and ceiling mechanical box penetrations shall be caulked, gasketed, or sealed at the penetration of the ceiling finish. See Appendix E-2.4. factory done<br>**Exception:** Ceiling electrical boxes and ceiling mechanical boxes not penetrating the building thermal envelope |
| Recessed lighting | Recessed light fixtures are air tight, IC rated, and sealed to drywall. factory done<br>**Exception:** Fixtures in conditioned space. |

**Attic Access insulated and weatherstripped per N1102.2.2.4**

**Property Address:**

_____

**N1102.4.2.1 Visual Inspection Option.** The inspection information including tester name, date, and contact shall be included on the certificate described in Section N1101.14.

_____ _____

Signature Date

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## APPENDIX E-3B
## Air sealing: Testing option (Section N1102.4.2.2)

### Sample Worksheet

**N1102.4.2 Air sealing.** Building envelope air tightness shall be demonstrated by Section N1102.4.2.1 or N1102.4.2.2:

**N1102.4.2.2 Testing option.** Building envelope tightness shall be considered acceptable when items providing insulation enclosure in Section N1102.2.14 and enclosure and air sealing in Section N1102.2.15 and air sealing in Section N1102.4.1 are addressed and when tested air leakage is less than or equal to one of the two following performance measurements:

1. 0.30 CFM50/Square Foot of Surface Area (SFSA) or
2. Five (5) air changes per hour (ACH50)

When tested with a blower door fan assembly, at a pressure of 33.5 psf (50 Pa). A single point depressurization, not temperature corrected, test is sufficient to comply with this provision, provided that the blower door fan assembly has been certified by the manufacturer to be capable of conducting tests in accordance with ASTM E779—03. Testing shall occur after rough in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation and combustion appliances. Testing shall be reported by the permit holder, a North Carolina licensed general contractor, a North Carolina licensed HVAC contractor, a North Carolina licensed Home Inspector, a *registered design professional*, a certified *BPI Envelope Professional* or a certified *HERS rater*.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed;
2. Dampers shall be closed, but not sealed, including exhaust, backdraft, and flue dampers;
3. Interior doors shall be open;
4. Exterior openings for continuous ventilation systems, air intake ducted to the return side of the conditioning system, and energy or heat recovery ventilators shall be closed and sealed;
5. Heating and cooling system(s) shall be turned off; and
6. Supply and return registers shall not be sealed.

The air leakage information, including building air leakage result, tester name, date, and contact information, shall be included on the certificate described in Section N1101.14.

**For Test Criteria 1** in this section, the report shall be produced in the following manner: Perform the blower door test and record the *CFM50* _____. Calculate the total square feet of surface area for the building thermal envelope, all floors, ceilings, and walls (this includes windows and doors) and record the area_____. Divide *CFM50* by the total square feet and record the result below. If the result is less than or equal to **[0.30 CFM50/SFSA]** the envelope tightness is acceptable; or

**For Test Criteria 2**, the report shall be produced in the following manner: Perform a blower door test and record the *CFM50* _____. Multiply the *CFM50* by 60 minutes to create CFHour50 and record _____. Then calculate the total conditioned volume of the home and record_____. Divide the CFH50 by the total volume and record the result below. If the result is less than or equal to **[5 ACH50]** the envelope tightness is acceptable.

Property Address: _____

Fan attachment location _____ Company Name _____

Contact Information: _____

_____

Signature of Tester _____ Date _____

Permit Holder, NC Licensed General Contractor, NC Licensed HVAC Contractor,
NC Licensed Home Inspector, *Registered Design Professional*,
Certified *BPI Envelope Professional*, or Certified *HERS Rater*
**(circle one)**.




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## APPENDIX E-3C
## Duct sealing. Duct air leakage test (Section N1103.2.2 & Section N1103.3.3)

### Sample Worksheet

**N1103.3.2 Sealing (Mandatory Requirements).** Ducts, air handlers, filter boxes, and building cavities used as ducts shall be sealed. Joints and seams shall comply with either the *International Mechanical Code* or *International Residential Code*, as applicable.

**N1103.3.3 Duct leakage (Prescriptive) and duct testing (Mandatory).** Duct testing and duct leakage shall be verified by compliance with either Section N1103.3.3.1 or N1103.3.3.2. Duct testing shall be verified using one of the two following methods:

**N1103.3.3.1 Total duct leakage.** Total duct leakage shall be less than or equal to 5 CFM (12 L/min) per 100 $ft^2$ (9.29 $m^2$) of conditioned floor area served by that system when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure.

During testing:

1. Block, if present, ventilation air duct(s) connected to the conditioning system.
2. The duct air leakage testing equipment shall be attached to the largest return in the system or to the air handler.
3. The filter shall be removed and the air handler power shall be turned off.
4. Supply boots or registers and return boxes or grilles shall be taped, plugged, or otherwise sealed air tight.
5. The hose for measuring the 25 Pascals of pressure differential shall be inserted into the boot of the supply that is nominally closest to the air handler.
6. Specific instructions from the duct testing equipment manufacturer shall be followed to reach duct test pressure and measure duct air leakage.

**N1103.3.3.2 Duct leakage to the outside.** Conduct the test using fan pressurization of distribution system and building at a fixed reference pressure for combined supply and return leaks. Duct leakage to the outside shall be less than or equal to 4 CFM (12 L/min) per 100 $ft^2$ (9.29 $m^2$) of conditioned floor area served by that system when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, relative to the outside, including the manufacturer's air handler enclosure.

During testing:

1. Block, if present, the ventilation air duct(s) connected to the conditioning system.
2. The duct air leakage testing equipment shall be attached to the largest return in the system or to the air handler.
3. The filter shall be removed and the air handler power shall be turned off.
4. Supply boots or registers and return boxes or grilles shall be taped, plugged, or otherwise sealed air tight or as tight as possible.
5. The hose for measuring the 25 Pascals of pressure differential shall be inserted into the boot of the supply that is nominally closest to the air handler.
6. Open all interconnecting doors in the building, close dampers for fireplaces and other operable dampers.
7. Set up an envelope air moving/flow-regulating/flow measurement assembly, such as a blower door, following the manufacturer's prescribed procedure.
8. Specific instructions from the duct testing equipment manufacturer shall be followed to reach duct test pressure and measure duct air leakage used in combination with a blower door. Typical steps are as follows:
    a. Depressurize the ductwork system to 25 Pa using the measurement hose in Step 5 above.
    b. Depressurize the house to 25 Pa using an envelope air moving/flow-regulating/flow measurement assembly, such as a blower door.
    c. Correct the duct pressure to measure 0 Pa of pressure differential between the house and the ductwork system.
    d. Read the CFM of duct leakage using the procedures for the specific equipment being used. (Note that most automatically calculating pressure gauges cannot compute the CFM25 automatically with a duct-to-house difference in pressure of 0 Pa, so the gauge setting should be set to read CFM instead of CFM25).

Testing shall be performed and reported by the permit holder, a North Carolina licensed general contractor, a North Carolina licensed HVAC contractor, a North Carolina licensed Home Inspector, a registered design professional, a certified BPI Envelope Professional or a certified HERS rater. A single point depressurization, not temperature corrected, test is sufficient to comply with this provision, provided that the duct testing fan assembly(s) has been certified by the manufacturer to be capable of conducting tests in accordance with ASTM E1554-07.

The duct leakage information, including duct leakage test selected and result, tester name, date, and contact information, shall be included on the certificate described in Section N1101.14.

For the Test Criteria, the report shall be produced in the following manner: perform the HVAC system air leakage test and record the CFM25. Calculate the total square feet of Conditioned Floor Area (CFA) served by that system. Multiply CFM25 by 100, divide the result by the CFA and

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record the result. If the result is less than or equal to 5 CFM25/100SF for the "Total duct leakage test" or less than or equal to 4 CFM25/100SF for the "Duct leakage to the outside" test, then the HVAC system air tightness is acceptable.

**Complete one duct leakage report for each HVAC system serving the home:**

Property Address: _____

Test Performed: Total duct leakage or Duct leakage to the outside (circle one)

HVAC System Number: _____ Describe area of home served: _____

CFM25 Total _____. Conditioned Floor Area (CFA) served by system: _____ s.f.

CFM25 × 100 divided by CFA = ____ CFM25/100SF (e.g. 100 CFM25 × 100/2,000 CFA = 5 CFM25/100SF)

Fan attachment location _____

Company Name _____

Contact Information: _____

_____

_____ _____

Signature of Tester Date

Permit Holder, NC Licensed General Contractor, NC Licensed HVAC Contractor,
NC Licensed Home Inspector, *Registered Design Professional*,
Certified *BPI Envelope Professional,* or Certified *HERS Rater*
**(circle one)**

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# E-4D:

# SAMPLE WORKSHEETS FOR RESIDENTIAL AIR AND DUCT LEAKAGE TESTING

## E-4D.1
## AIR SEALING: TESTING
## (Section N1102.4.2.2)
## Sample Worksheet for Alternative Residential Energy Code for Higher Efficiency

**Air sealing.** Building envelope air tightness shall be demonstrated by Section N1102.4.2.2:

### Air sealing: Testing option (Section N1102.4.2.2) Sample Worksheet for Alternative Residential Energy Code for Higher Efficiency

**N1102.4.2.2 Testing.** Building envelope tightness shall be considered acceptable when items providing insulation enclosure in Section N1102.2.14 and enclosure air sealing in Section N1102.2.15 and air sealing in Section N1102.4.1 are addressed and when tested air leakage is less than or equal to one of the two following performance measurements:

1. 0.24 CFM50 (6.8 L/min)/square foot of surface area (SFSA) or
2. Four (4) air changes per hour (ACH50)

When tested with a blower door fan assembly, at a pressure of 0.2 inches water gauge (50 Pa), a single point depressurization, not temperature corrected, test is sufficient to comply with this provision, provided that the blower door fan assembly has been certified by the manufacturer to be capable of conducting tests in accordance with ASTM E779—03. Testing shall occur after rough in and after installation of penetrations of the building envelope, including penetrations for utilities, plumbing, electrical, ventilation and combustion appliances. Testing shall be reported by the permit holder, a North Carolina licensed general contractor, a North Carolina licensed HVAC contractor, a North Carolina licensed Home Inspector, a r*egistered design professional*, a certified *BPI Envelope Professional* or a certified *HERS rater*.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed;
2. Dampers shall be closed, but not sealed, including exhaust, backdraft, and flue dampers;
3. Interior doors shall be open;
4. Exterior openings for continuous ventilation systems, air intake ducted to the return side of the conditioning system, and energy or heat recovery ventilators shall be closed and sealed;
5. Heating and cooling system(s) shall be turned off; and
6. Supply and return registers shall not be sealed.

The air leakage information, including building air leakage result, tester name, date, and contact information, shall be included on the certificate described in Section N1101.14.

F**or Test Criteria 1** in this section, the report shall be produced in the following manner: Perform the blower door test and record the *CFM50*_____. Calculate the total square feet of surface area for the building thermal envelope, all floors, ceilings, and walls (this includes windows and doors) and record the area_____. Divide *CFM50* by the total square feet and record the result below. If the result is less than or equal to **[0.24 CFM50/SFSA]** the envelope tightness is acceptable; or

**For Test Criteria 2**, the report shall be produced in the following manner: Perform a blower door test and record the *CFM50* = _____. Multiply the *CFM50* by 60 minutes to create CF/Hour50 and record = _____. Then calculate the total conditioned volume of the home and record = _____cubic feet. Divide the CF/Hour50 by the total volume and record the result = _____ ACH50. If the result is less than or equal to **[4 ACH50]** the envelope tightness is acceptable.

Property Address: _____

Fan attachment location _____ Company Name _____

Contact Information: _____

_____

_____ _____

Signature of Tester Date

Permit Holder, NC Licensed General Contractor, NC Licensed HVAC Contractor,
NC Licensed Home Inspector, *Registered Design Professional*,
Certified *BPI Envelope Professional*, or Certified *HERS Rater*
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## E-4D.2
## DUCT SEALING. Duct air leakage test (Section N1103.3.3) Sample Worksheet for Alternative Residential Energy Code for Higher Efficiency

**N1103.3.3 Duct leakage (Prescriptive) and duct testing (Mandatory).** Duct testing and duct leakage shall be verified by compliance with either Section N1103.3.3.1 or N1103.3.3.2. Duct testing shall be performed and reported by the permit holder, a NC licensed general contractor, a NC licensed HVAC contractor, a NC licensed Home Inspector, a *registered design professional*, a certified *BPI Envelope Professional* or a certified *HERS rater*. A single point depressurization, not temperature corrected, test is sufficient to comply with this provision, provided that the duct testing fan assembly(s) has been certified by the manufacturer to be capable of conducting tests in accordance with ASTM E1554—07.

The duct leakage information, including duct leakage test selected and result, tester name, date, and contact information, shall be included on the certificate described in Section N1101.3.

For the Test Criteria, the report shall be produced in the following manner: perform the HVAC system air leakage test and record the CFM25. Calculate the total square feet of Conditioned Floor Area (CFA) served by that system. Multiply CFM25 by 100, divide the result by the CFA and record the result. If the result is less than or equal to 4 CFM25/100SF for the "Total duct leakage test or less than or equal to 3 CFM25/100SF for the Duct leakage to the outside" test, then the HVAC system air tightness is acceptable.

**Exceptions to testing requirements:**

1. Duct systems or portions thereof inside the building thermal envelope shall not be required to be leak tested.
2. Installation of a partial system as part of replacement, renovation or addition does not require a duct leakage test.

**1103.3.3.1 Total duct leakage.** Total duct leakage less than or equal to 4 CFM (113 L/min) per 100 $ft^2$ (9.29 $m^2$) of conditioned floor area served by that system when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. During testing:

1. Block, if present, ventilation air duct(s) connected to the conditioning system.
2. The duct air leakage testing equipment shall be attached to the largest return in the system or to the air handler.
3. The filter shall be removed and the air handler power shall be turned off.
4. Supply boots or registers and return boxes or grilles shall be taped, plugged, or otherwise sealed air tight.
5. The hose for measuring the 25 Pascals of pressure differential shall be inserted into the boot of the supply that is nominally closest to the air handler.
6. Specific instructions from the duct testing equipment manufacturer shall be followed to reach duct test pressure and measure duct air leakage.

**1103.3.3.2 Duct leakage to the outside.** Conduct the test using fan pressurization of distribution system and building at a fixed reference pressure for combined supply and return leak. Duct leakage to the outside shall be less than or equal to 3 CFM (85 L/min) per 100 $ft^2$ (9.29 $m^2$) of conditioned floor area served by that system when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, relative to the outside, including the manufacturer's air handler enclosure.

During testing:

1. Block, if present, the ventilation air duct(s) connected to the conditioning system.
2. The duct air leakage testing equipment shall be attached to the largest return in the system or to the air handler.
3. The filter shall be removed and the air handler power shall be turned off.
4. Supply boots or registers and return boxes or grilles shall be taped, plugged, or otherwise sealed air tight or as tight as possible.
5. The hose for measuring the 25 Pascals of pressure differential shall be inserted into the boot of the supply that is nominally closest to the air handler.
6. Open all interconnecting doors in the building, close dampers for fireplaces and other operable dampers.
7. Set up an envelope air moving/flow-regulating/flow measurement assembly, such as a blower door, following the manufacturer's prescribed procedure.
8. Specific instructions from the duct testing equipment manufacturer shall be followed to reach duct test pressure and measure duct air leakage used in combination with a blower door. Typical steps are as follows:
    a. Depressurize the ductwork system to 25 Pa using the measurement hose in Step 5 above.
    b. Depressurize the house to 25 Pa using an envelope air moving/flow-regulating/flow measurement assembly, such as a blower door.
    c. Correct the duct pressure to measure 0 Pa of pressure differential between the house and the ductwork system.
    d. Read the CFM of duct leakage using the procedures for the specific equipment being used. (Note that most automatically calculating pressure gauges cannot compute the CFM25 automatically with a duct-to-house difference in pressure of 0 Pa, so the gauge setting should be set to read CFM instead of CFM25).

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**Complete one duct leakage report for each HVAC system serving the home:**

Property Address: _____

HVAC System Number: _____ Describe area of home served: _____

CFM25 Total _____. Conditioned Floor Area (CFA) served by system: _____ s.f.

CFM25 × 100 divided by CFA = _____ CFM25/100 SF

(e.g. 50 CFM25 × 100/ 2,000 CFA = 2.5 CFM25/100SF)

Fan attachment location _____

Company Name _____

Contact Information: _____

_____

_____ _____

Signature of Tester Date

Permit Holder, NC Licensed General Contractor, NC Licensed HVAC Contractor,
NC Licensed Home Inspector, *Registered Design Professional*,
Certified *BPI Envelope Professional*, or Certified *HERS Rater*
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# Required Ventilation

Model Number: 23-3264-01

Floor Length: 64 ft.

Floor Type
- ○ 28 Wide
- ◉ 32 Wide
- ○ Triple Wide
- ○ T-Ranch
- ☐ Check if pod

**Manufactor Specifications**
*Ridge Vent:* **18 sq. in. per lf.**
*Soffit Vent:* **5.89 sq. in. per lf.**

## House Required Ventilation

| | | |
|---|---|---|
| Required Ventilation for House: | 931.84 | sq. in. |
| Inches Required for Soffit Ventilation: | 465.92 | sq. in. |
| Inches Required for Ridge Ventilation: | 465.92 | sq. in. |
| Number of Ridge Vents Required: | 6.471111 | pc. |
| | **25.88444** | **lf. of Ridge Vent** |

## Ventilatioin in House

| | | | |
|---|---|---|---|
| Soffit Ventilation in house: | 736 | sq. in. | |
| Ridge Ventilatiion in house: | 504 | sq. in. | **54.09% through Ridge Vent** |
| Number of Ridge Vents in house: | 7 | pc. | |
| | **28** | **lf. of Ridge Vent** | |

*Code can be found at R806.2 in the NC Residential and the IRC*

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**Champion Homes Engineered Shear Wall Calculations**
23-3264-01

| | | |
|---|---|---|
| a) House Mean Roof Height | 20' | Max. Mean Roof Height = 33'-0" |
| b) Number of Stories | 1 | Max. Number of Stories = 3 |
| c) House Length | 64 | Max. Length = 80'-0" |
| d) House Width | 30.3 | Min. Width = Mean Roof Hei 20' |
| e) House Aspect Ratio = L / W | 2.112211 | Min. Ratio = 1:4 |
| f) House Vertical Offset | | |
| g) Floor Diaphragm Aspect Ratio = L /W | 2.112211 | |
| h) House Floor Diaphram Opening Width | 0 | Max. = 12'-0" |
| House Floor Diaphram Opening Length | 0 | Max. = 12'-0" |
| I) Max. Shearwall Plan Offset | 0 | (If wall offset is more than 4'-0", count as 2 different shear walls) |
| j) Min. Shearwall Segment = h/3.5 | 2.571429 | |
| k) Wall Height | 9 | Max. Wall Height = 10' |
| l) Roof Diaphram Aspect Ratio = L / W | 2.112211 | Max. Ratio = 4:1 |
| m) Roof Slope | 7/12 | Min. 0/12<br>Max. 12/12 |

✔ House meets all applicability limits.
(Calculation sheet referenced to structural package)
USE 26.417 FOR 28 WIDES
USE 32.083 FOR 32 WIDES

| | | |
|---|---|---|
| Front Sidewall USE PG. 55 | 60 | % of Sheathing |
| Rear Sidewall USE PG. 55 | 72 | % of Sheathing |
| Right Endwall USE PG 48 | 90 | % of Sheathing |
| Left Endwall USE PG 48 | 92 | % of Sheathing |

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## ***SECTION 6***

TRUSS HM773855



JAMES BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW

07/22/19

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER

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| Job | Truss | Truss Type | Qty | Ply | Champion Homes 315 NC |
|---|---|---|---|---|---|
| 89373 | HM773855 | HINGE MONO | 1 | 1 | Ref. #3157316 |

Universal Forest Products Inc., Grand Rapids, MI 49525, Weston Gorby 8.030 e Apr 8 2017 MiTek Industries, Inc. Fri Sep 22 13:38:30 2017 Page 1 of 2

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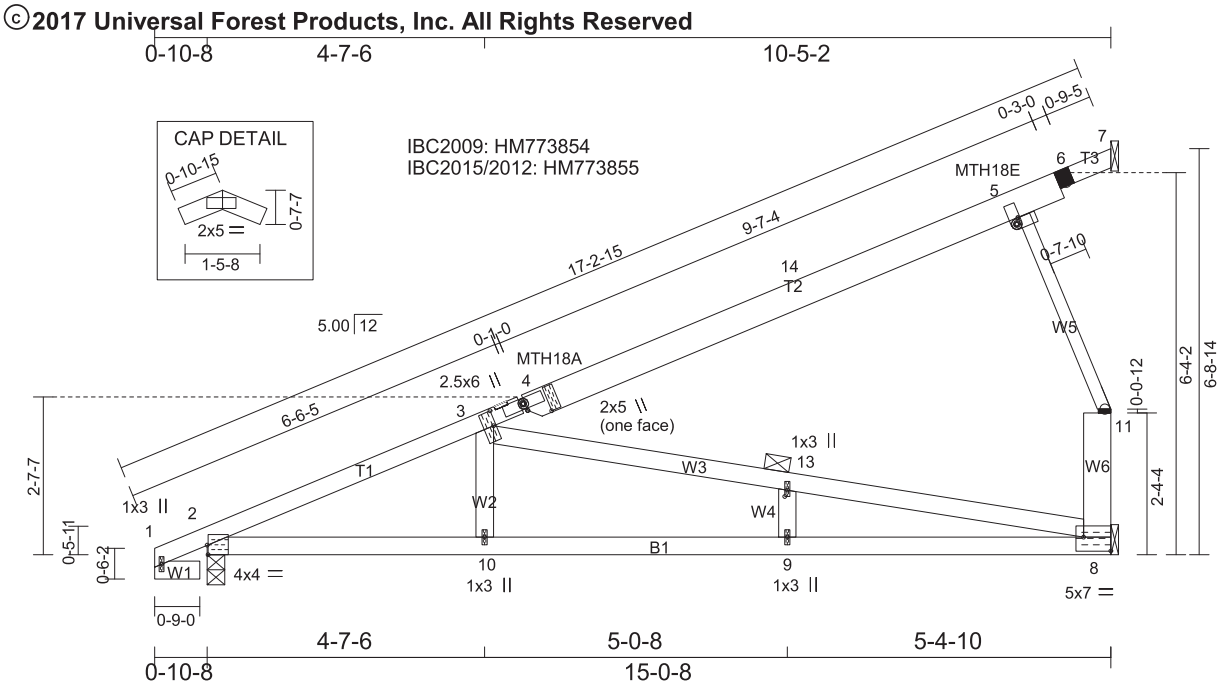


Plate Offsets (X,Y)-- [2:0-0-3,Edge], [3:0-3-0,0-0-8], [4:0-0-5,0-1-9], [4:0-1-15,0-4-6], [5:0-0-11,0-1-2], [8:Edge,0-2-12], [13:0-1-4,0-0-8]

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPACING-:** 2-0-0 | | **SPACING-:** 1-4-0 | | **SPACING-** | 2-0-0 | **CSI.** | | **DEFL.** | in | (loc) | l/defl | L/d | **PLATES** | **GRIP** |
| **LOADING** (psf) | | **LOADING** (psf) | | Plate Grip DOL | 1.15 | TC | 0.90 | Vert(LL) | -0.22 | 8-9 | >808 | 240 | MT20 | 197/144 |
| TCLL | 23.1 | TCLL | 34.7 | Lumber DOL | 1.15 | BC | 0.85 | Vert(CT) | -0.40 | 8-9 | >442 | 180 | MT18HS | 197/144 |
| (Ground Snow=30.0) | | (Ground Snow=45.0) | | Rep Stress Incr | YES | WB | 0.67 | Horz(CT) | 0.02 | 8 | n/a | n/a | | |
| TCDL | 10.0 | TCDL | 15.0 | Code | IBC2015/TPI2014 | Matrix-R | | | | | | | Weight: 83 lb | |
| BCLL | 0.0 | BCLL | 0.0 | | IBC2012/TPI2007 | | | | | | | | FT = 0% | |
| BCDL | 10.0 | BCDL | 15.0 | | | | | | | | | | | |

**LUMBER-**
TOP CHORD 2x4 SP No.1 *Except*
T2: 2x6 SP No.1 or 2x6 SPF No.2, T3: 2x4 SPF No.2
BOT CHORD 2x4 SP No.1
WEBS 2x4 SP No.2 *Except*
W3: 2x4 SP No.2 or 2x4 SPF No.2
W6: 2x6 SP No.1 or 2x6 SPF No.2, W5: 2x3 SPF Stud
W1: 2x4 SPF Stud

**BRACING-**
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 5-2-10 oc bracing.
JOINTS 1 Brace at Jt(s): 11, 13

**REACTIONS.** (lb/size) 2=721/0-3-8 (min. 0-1-8), 8=622/Mechanical, 7=-0/Mechanical
Max Horz 2=419(LC 9), 7=-62(LC 14)
Max Uplift 2=-392(LC 9), 8=-497(LC 9)
Max Grav 2=752(LC 14), 8=733(LC 14)

**FORCES.** (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/21, 2-15=-1319/623, 3-15=-1219/625, 3-16=-326/0, 16-17=-322/0, 4-17=-318/0, 4-14=-338/22, 5-14=-225/32, 5-6=-111/49, 6-7=-70/57, 8-11=-404/414
BOT CHORD 2-10=-960/1108, 9-10=-960/1108, 8-9=-960/1108
WEBS 3-10=0/330, 3-13=-973/825, 8-13=-975/815, 5-11=-433/443, 9-13=0/76

**REQUIRED FIELD JOINT CONNECTIONS** - Maximum Compression (lb)/ Tension (lb)/ Shear (lb)/ Moment (lb-in)
6=86/55/38/0, 11=433/443/157/0

**NOTES-**
1) Dado: 0-2-10 length x 0-0-12 deep dado, 0-2-4 to right edge from joint 4 on the top face.
2) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph @24in o.c.; TCDL=4.0psf; BCDL=4.0psf; (Alt. 180mph @16in o.c.; TCDL=6.0psf; BCDL=6.0psf); h=30ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60


2/22/2019

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 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***
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 ... e proper erection of the truss. Builder is responsible for lifting methods and system design. Builder responsibilities are defined under TPI1. This ... / 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\u...tpe

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PHONE (616)-364-6161 FAX (616)-365-0060 GRAND RAPIDS, MI 49525

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3) TCLL: ASCE 7-10; Pg=30.0 psf (ground snow); Ps=23.1 psf (roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
4) Roof design snow load has been reduced to account for slope.
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 19.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
7) All plates are MT20 plates unless otherwise indicated.
8) See HINGE PLATE DETAILS for plate placement.
9) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
10) All additional member connections shall be provided by others for forces as indicated.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 392 lb uplift at joint 2 and 497 lb uplift at joint 8.
13) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
14) This truss is designed in accordance with the 2012 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
15) Take precaution to keep the chords in plane, any bending or twisting of the hinge plate must be repaired before the building is put into service.
16) The field-installed members are an integral part of the truss design. Retain a design professional to specify final field connections and temporary supports. All field-installed members must be properly fastened prior to applying any loading to the truss. This design anticipates the final set position.
17) Based on: HM773854
18) Revision: IBC2015/2012 Version

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# Universal Forest Products

| Job | Truss | MFG | Customer |
|---|---|---|---|
| 89373 | HM773855 | 315 | CHAMPION HOMES |

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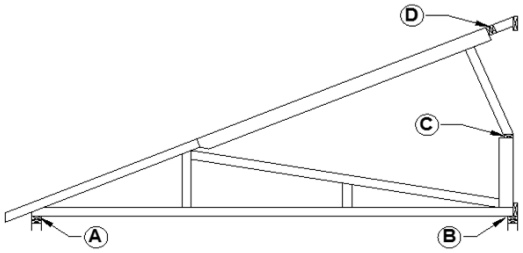
## TRUSS CONNECTIONS

TRUSS NUMBER : **HM773855**
PROJECT NUMBER : **190127**
TRUSS PITCH : **5/12**
TRUSS SPAN : **15'-2"**
UNIT WIDTH : **30'-4"**




**UPLIFT CONNECTIONS (MWFRS LOADS):**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **150 / 119 mph** | | | | | | | | | |
| **CONDITION "A" - EXTERIOR WALL:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H8 TWIST STRAP |
| 392 | WIND | 1.6 | OK | 3 | 4 | OK | 2 | 4 | OK |
| | ALTERNATE: | (5) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (3) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | | |
| | ALTERNATE: | (1) SIMPSON SDWC15600 SCREW | | | | | | | |
| | ALTERNATE: | (2) #10 x 5" WOOD SCREW WITH MINIMUM 2 in PENETRATION | | | | | | | |
| **CONDITION "B" - MATING WALL (PER SIDE):** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs / PER SIDE) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON CS20 STRAP |
| 497 | WIND | 1.6 | NO GOOD | N/A | N/A | OK | 2 | 5 | OK |
| | ALTERNATE: | (6) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (4) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | | |
| **130 / 101 mph (ADJUSTED)** | | | | | | | | | |
| **CONDITION "A" - EXTERIOR WALL:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H3 TWIST STRAP |
| 294 | WIND | 1.6 | OK | 2 | 3 | OK | 2 | 3 | OK |
| | ALTERNATE: | (4) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (3) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | | |
| | ALTERNATE: | (1) SIMPSON SDWC15600 SCREW | | | | | | | |
| | ALTERNATE: | (2) #10 x 5" WOOD SCREW WITH MINIMUM 2 in PENETRATION | | | | | | | |
| **CONDITION "B" - MATING WALL (PER SIDE):** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs / PER SIDE) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H8 TWIST STRAP |
| 373 | WIND | 1.6 | OK | 3 | 4 | OK | 2 | 4 | OK |
| | ALTERNATE: | (5) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (3) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | | |
| **115 / 90 mph (ADJUSTED)** | | | | | | | | | |
| **CONDITION "A" - EXTERIOR WALL:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H3 TWIST STRAP |
| 231 | WIND | 1.6 | OK | 2 | 3 | OK | 2 | 3 | OK |
| | ALTERNATE: | (3) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (2) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | | |
| | ALTERNATE: | (1) SIMPSON SDWC15600 SCREW | | | | | | | |
| | ALTERNATE: | (2) #10 x 5" WOOD SCREW WITH MINIMUM 2 in PENETRATION | | | | | | | |
| **CONDITION "B" - MATING WALL (PER SIDE):** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs / PER SIDE) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H3 TWIST STRAP |
| 292 | WIND | 1.6 | OK | 2 | 3 | OK | 2 | 3 | OK |
| | ALTERNATE: | (4) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (3) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | | |

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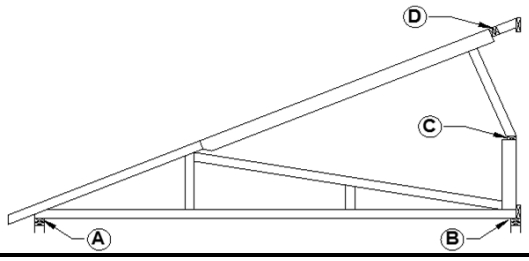
## TRUSS CONNECTIONS

TRUSS NUMBER : **HM773855**
PROJECT NUMBER : **190127**
TRUSS PITCH : **5/12**
TRUSS SPAN : **15'-2"**
UNIT WIDTH : **30'-4"**




| MAXIMUM OF DL + LL + 30 psf GSL & 150 / 119 mph WIND | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CONDITION "C" - KNEEWALL TO WEB MEMBER:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END |
| TENSION (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON CS20 STRAP | 10 d NAILS |
| 443 | SNOW | 1.15 | OK | 4 | 5 | OK | 2 | 5 | OK | 5 |
| SHEAR (lbs) | CASE | CD | | | | | | | | |
| 157 | SNOW | 1.15 | USE (3) 8 d NAILS TOENAILED KNEEWALL TO PLATE AND WEB MEMBER TO PLATE | | | | | | | |
| **CONDITION "D" - TOP CHORD FLIP:** | | | | | | | | | | |
| TENSION (lbs) | CASE | CD | | | | | | | | |
| 55 | SNOW | 1.15 | USE (2) 6 d NAILS THROUGH SHEATHING EACH SIDE | | | | | | | |
| | | | ALTERNATE: USE (2) 16 ga STAPLE THROUGH SHEATHING EACH SIDE | | | | | | | |
| SHEAR (lbs) | CASE | CD | | | | | | | | |
| 38 | SNOW | 1.15 | USE (2) 16 d NAILS TOENAILED EACH END PLUS USE 10 d NAILS AT 24 in O.C. THROUGH PLATES | | | | | | | |

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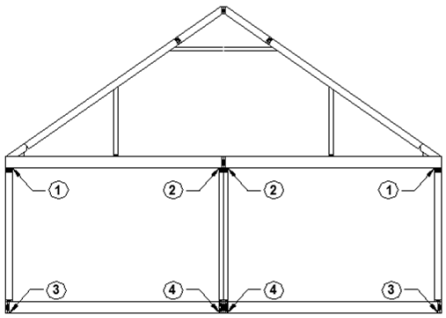
## COMPONENT LOAD SUMMARY

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EXTERIOR WALL DEAD LOAD = | 12 | psf | x | 10 | ft | = | 120 plf |
| MATING WALL DEAD LOAD = | 8 | psf | x | 10 | ft | = | 80 plf |
| FLOOR DEAD LOAD = | 10 | psf | x | 15.16 | ft / 2 = | | 75.8 plf |
| FLOOR LIVE LOAD = | 40 | psf | x | 15.16 | ft / 2 = | | 303.2 plf |
| CEILING DEAD LOAD = | 5 | psf | x | 15.16 | ft / 2 = | | 37.9 plf |

| | |
|---|---|
| LOCATION 1 = | EXT. WALL HEADER & EXT. WALL STUD |
| LOCATION 2 = | M. WALL HEADER & M. WALL STUD |
| LOCATION 3 = | PERIMETER BAND |
| LOCATION 4 = | CENTER GIRDER |
| LOCATIONS 3 & 4 MAY BE USED TO GENERATE FOUNDATION LOADS | |

* CROSS SECTION IS FOR REFERENCE ONLY
AND MAY NOT REFLECT ACTUAL TRUSS




TRUSS HM773855, 5/12 PITCH, 15'-2" WIDTH

**COMPONENT LOADS (lbs/ft)**

30 psf GROUND SNOW (MATING WALL LOADS ARE PER SIDE OF LINE)

| LOCATION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| DEAD LOAD | 175 | 171 | 371 | 327 |
| LIVE LOAD | 201 | 196 | 505 | 500 |
| TOTAL LOAD | 376 | 367 | 876 | 827 |

C & C UPLIFT

| LOCATION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| UPLIFT (0.6) DEAD LOAD | 105 | 103 | 223 | 196 |
| 150 / 119 mph UPLIFT | 196 | 249 | - | -53 |
| 130 / 101 mph UPLIFT | 147 | 187 | - | - |
| 115 / 90 mph UPLIFT | 116 | 146 | - | - |

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**101/130 mph WIND, 5/12 PITCH, FIELD PRESSURE (27.47 psf)**

| HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 ft | 2 x 4 SPF STUD GRADE | 12 | 755 | 0.227 | 9 ft | 2 x 4 SPF STUD GRADE | 12 | 295 | 0.372 | 10 ft | 2 x 4 SPF STUD GRADE | 12 | **NG** | - |
| | | 16 | 295 | 0.303 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | 295 | 0.364 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SPF #2 | 12 | 1565 | 0.195 | | 2 x 4 SPF #2 | 12 | 1035 | 0.319 | | 2 x 4 SPF #2 | 12 | 660 | 0.495 |
| | | 16 | 1265 | 0.26 | | | 16 | 740 | 0.426 | | | 16 | **NG** | - |
| | | 19.2 | 1035 | 0.312 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | 685 | 0.39 | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SYP #2 | 12 | 1395 | 0.195 | | 2 x 4 SYP #2 | 12 | 865 | 0.319 | | 2 x 4 SYP #2 | 12 | 490 | 0.495 |
| | | 16 | 1045 | 0.26 | | | 16 | 510 | 0.426 | | | 16 | **NG** | - |
| | | 19.2 | 765 | 0.312 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | 320 | 0.39 | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 6 SPF STUD GRADE | 12 | 4790 | 0.059 | | 2 x 6 SPF STUD GRADE | 12 | 3605 | 0.096 | | 2 x 6 SPF STUD GRADE | 12 | 2610 | 0.149 |
| | | 16 | 4180 | 0.078 | | | 16 | 2940 | 0.128 | | | 16 | 1915 | 0.198 |
| | | 19.2 | 3705 | 0.094 | | | 19.2 | 2420 | 0.154 | | | 19.2 | 1340 | 0.238 |
| | | 24 | 2995 | 0.117 | | | 24 | 1605 | 0.192 | | | 24 | 375 | 0.298 |
| | 2 x 6 SPF #2 | 12 | 7380 | 0.05 | | 2 x 6 SPF #2 | 12 | 5625 | 0.082 | | 2 x 6 SPF #2 | 12 | 4275 | 0.128 |
| | | 16 | 6810 | 0.067 | | | 16 | 5055 | 0.11 | | | 16 | 3720 | 0.17 |
| | | 19.2 | 6380 | 0.08 | | | 19.2 | 4625 | 0.132 | | | 19.2 | 3300 | 0.204 |
| | | 24 | 5770 | 0.1 | | | 24 | 4010 | 0.164 | | | 24 | 2685 | 0.255 |
| | 2 x 6 SYP #2 | 12 | 7285 | 0.05 | | 2 x 6 SYP #2 | 12 | 5450 | 0.082 | | 2 x 6 SYP #2 | 12 | 4075 | 0.128 |
| | | 16 | 6635 | 0.067 | | | 16 | 4815 | 0.11 | | | 16 | 3455 | 0.17 |
| | | 19.2 | 6150 | 0.08 | | | 19.2 | 4330 | 0.132 | | | 19.2 | 2980 | 0.204 |
| | | 24 | 5455 | 0.1 | | | 24 | 3635 | 0.164 | | | 24 | 2275 | 0.255 |

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PFS CORPORATION
Cottage Grove, WI

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS
EVEN IF RATIO MEETS CODE REQUIREMENTS

**101/130 mph WIND, 5/12 PITCH, EDGE PRESSURE (33.35 psf)**

| HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 ft | 2 x 4 SPF STUD GRADE | 12 | 470 | 0.276 | 9 ft | 2 x 4 SPF STUD GRADE | 12 | **NG** | - | 10 ft | 2 x 4 SPF STUD GRADE | 12 | **NG** | - |
| | | 16 | 295 | 0.368 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | **NG** | - | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SPF #2 | 12 | 1370 | 0.237 | | 2 x 4 SPF #2 | 12 | 845 | 0.387 | | 2 x 4 SPF #2 | 12 | **NG** | - |
| | | 16 | 1020 | 0.316 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | 735 | 0.379 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SYP #2 | 12 | 1170 | 0.237 | | 2 x 4 SYP #2 | 12 | 640 | 0.387 | | 2 x 4 SYP #2 | 12 | **NG** | - |
| | | 16 | 745 | 0.316 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | 385 | 0.379 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 6 SPF STUD GRADE | 12 | 4395 | 0.071 | | 2 x 6 SPF STUD GRADE | 12 | 3175 | 0.116 | | 2 x 6 SPF STUD GRADE | 12 | 2160 | 0.181 |
| | | 16 | 3670 | 0.095 | | | 16 | 2380 | 0.155 | | | 16 | 1300 | 0.241 |
| | | 19.2 | 3095 | 0.114 | | | 19.2 | 1725 | 0.186 | | | 19.2 | 530 | 0.289 |
| | | 24 | 2205 | 0.142 | | | 24 | 625 | 0.233 | | | 24 | 295 | 0.361 |
| | 2 x 6 SPF #2 | 12 | 7005 | 0.061 | | 2 x 6 SPF #2 | 12 | 5250 | 0.1 | | 2 x 6 SPF #2 | 12 | 3915 | 0.155 |
| | | 16 | 6350 | 0.081 | | | 16 | 4595 | 0.133 | | | 16 | 3265 | 0.206 |
| | | 19.2 | 5855 | 0.098 | | | 19.2 | 4095 | 0.16 | | | 19.2 | 2770 | 0.248 |
| | | 24 | 5140 | 0.122 | | | 24 | 3370 | 0.2 | | | 24 | 2025 | 0.31 |
| | 2 x 6 SYP #2 | 12 | 6860 | 0.061 | | 2 x 6 SYP #2 | 12 | 5035 | 0.1 | | 2 x 6 SYP #2 | 12 | 3670 | 0.155 |
| | | 16 | 6115 | 0.081 | | | 16 | 4300 | 0.133 | | | 16 | 2945 | 0.206 |
| | | 19.2 | 5555 | 0.098 | | | 19.2 | 3735 | 0.16 | | | 19.2 | 2375 | 0.248 |
| | | 24 | 4740 | 0.122 | | | 24 | 2900 | 0.2 | | | 24 | 1505 | 0.31 |

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EVEN IF RATIO MEETS CODE REQUIREMENTS

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Cottage Grove, WI

CHAMPION HOMES of NC

**EXTERIOR WALL HEADER - 1 STORY (LOCATION 1)**
**TRUSS HM773855**
**5/12 PITCH, 30.33 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

2x3 FOR (1) MEMBER HEADERS
2x4 FOR (2) MEMBER HEADERS
2x6 FOR (3) MEMBER HEADERS

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | MIN. NUMBER OF JACKSTUDS REQ'D EACH END SPF #2 | SYP #2 | SPF STUD | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 x 4 SPF #2 | 1 | 201 | 378 | 2 ' - 10" | Lb | 0.075 | 1 | 1 | 1 | 196 | 280 |
| 2 x 6 SPF #2 | 1 | 201 | 378 | 4 ' - 2" | Lb | 0.088 | 2 | 2 | 2 | 196 | 409 |
| 2 x 8 SPF #2 | 1 | 201 | 378 | 5 ' - 3" | Lb | 0.1 | 2 | 2 | 2 | 196 | 518 |
| 2 x 10 SPF #2 | 1 | 201 | 378 | 6 ' - 5" | Lb | 0.107 | 2 | 2 | 2 | 196 | 633 |
| 2 x 12 SPF #2 | 1 | 201 | 378 | 7 ' - 5" | Lb | 0.108 | 2 | 2 | 2 | 196 | 734 |
| 2 x 4 SYP #2 | 1 | 201 | 378 | 2 ' - 7" | Lb | 0.053 | 1 | 1 | 1 | 196 | 256 |
| 2 x 6 SYP #2 | 1 | 201 | 378 | 3 ' - 10" | Lb | 0.068 | 2 | 2 | 2 | 196 | 383 |
| 2 x 8 SYP #2 | 1 | 201 | 378 | 4 ' - 11" | Lb | 0.078 | 2 | 2 | 2 | 196 | 487 |
| 2 x 10 SYP #2 | 1 | 201 | 378 | 5 ' - 10" | Lb | 0.074 | 2 | 2 | 2 | 196 | 577 |
| 2 x 12 SYP #2 | 1 | 201 | 378 | 7 ' - 1" | Lb | 0.09 | 2 | 2 | 2 | 196 | 702 |
| 1.5 x 3.5 LVL | 1 | 201 | 378 | 4 ' - 0" | Lb | 0.206 | 2 | 2 | 2 | 196 | 393 |
| 1.5 x 5.5 LVL | 1 | 201 | 378 | 6 ' - 2" | Lb | 0.304 | 2 | 2 | 2 | 196 | 609 |
| 1.5 x 7.25 LVL | 1 | 201 | 378 | 8 ' - 1" | Lb | 0.387 | 2 | 2 | 2 | 196 | 795 |
| 1.5 x 9.25 LVL | 1 | 201 | 378 | 10 ' - 3" | Lb | 0.479 | 2 | 2 | 3 | 196 | 1007 |
| 1.5 x 11.25 LVL | 1 | 201 | 378 | 12 ' - 4" | Lb | 0.568 | 3 | 3 | 3 | 196 | 1217 |
| 1.5 x 12 LVL | 1 | 201 | 378 | 13 ' - 2" | Lb | 0.6 | 3 | 3 | 3 | 196 | 1295 |
| 1.5 x 14 LVL | 1 | 201 | 378 | 15 ' - 4" | Lb | 0.687 | 3 | 3 | 3 | 196 | 1503 |
| 1.5 x 16 LVL | 1 | 201 | 378 | 17 ' - 5" | Lb | 0.771 | 3 | 3 | 3 | 196 | 1711 |
| 1.5 x 18 LVL | 1 | 201 | 378 | 19 ' - 6" | Lb | 0.854 | 3 | 3 | 3 | 196 | 1917 |
| 1.5 x 20 LVL | 1 | 201 | 378 | 21 ' - 7" | Lb | 0.936 | 3 | 3 | 3 | 196 | 2123 |
| 1.5 x 22 LVL | 1 | 201 | 378 | 23 ' - 9" | Lb | 1.017 | 3 | 3 | 3 | 196 | 2328 |
| 1.5 x 24 LVL | 1 | 201 | 378 | 25 ' - 10" | Lb | 1.097 | 3 | 3 | 3 | 196 | 2532 |
| 2 x 4 SPF #2 | 2 | 201 | 378 | 4 ' - 0" | Lb | 0.151 | 1 | 1 | 1 | 196 | 396 |
| 2 x 6 SPF #2 | 2 | 201 | 378 | 5 ' - 10" | Lb | 0.177 | 1 | 1 | 1 | 196 | 578 |
| 2 x 8 SPF #2 | 2 | 201 | 378 | 7 ' - 5" | Lb | 0.2 | 1 | 1 | 1 | 196 | 733 |
| 2 x 10 SPF #2 | 2 | 201 | 378 | 9 ' - 1" | Lb | 0.214 | 1 | 1 | 2 | 196 | 896 |
| 2 x 12 SPF #2 | 2 | 201 | 378 | 10 ' - 7" | Lb | 0.215 | 2 | 2 | 2 | 196 | 1039 |
| 2 x 4 SYP #2 | 2 | 201 | 378 | 3 ' - 8" | Lb | 0.106 | 1 | 1 | 1 | 196 | 362 |
| 2 x 6 SYP #2 | 2 | 201 | 378 | 5 ' - 6" | Lb | 0.136 | 1 | 1 | 1 | 196 | 542 |
| 2 x 8 SYP #2 | 2 | 201 | 378 | 7 ' - 0" | Lb | 0.155 | 1 | 1 | 1 | 196 | 688 |
| 2 x 10 SYP #2 | 2 | 201 | 378 | 8 ' - 3" | Lb | 0.148 | 1 | 1 | 1 | 196 | 817 |
| 2 x 12 SYP #2 | 2 | 201 | 378 | 10 ' - 1" | Lb | 0.18 | 2 | 2 | 2 | 196 | 993 |
| 1.5 x 3.5 LVL | 2 | 201 | 378 | 5 ' - 8" | Lb | 0.411 | 1 | 1 | 1 | 196 | 556 |
| 1.5 x 5.5 LVL | 2 | 201 | 378 | 8 ' - 9" | Lb | 0.609 | 1 | 1 | 2 | 196 | 861 |
| 1.5 x 7.25 LVL | 2 | 201 | 378 | 11 ' - 5" | Lb | 0.775 | 2 | 2 | 2 | 196 | 1125 |
| 1.5 x 9.25 LVL | 2 | 201 | 378 | 14 ' - 6" | Lb | 0.957 | 2 | 2 | 2 | 196 | 1424 |
| 1.5 x 11.25 LVL | 2 | 201 | 378 | 17 ' - 6" | Lb | 1.135 | 2 | 2 | 3 | 196 | 1721 |
| 1.5 x 12 LVL | 2 | 201 | 378 | 18 ' - 8" | Lb | 1.2 | 2 | 2 | 3 | 196 | 1831 |
| 1.5 x 14 LVL | 2 | 201 | 378 | 21 ' - 8" | Lb | 1.373 | 3 | 3 | 3 | 196 | 2126 |
| 1.5 x 16 LVL | 2 | 201 | 378 | 24 ' - 8" | Lb | 1.542 | 3 | 3 | 3 | 196 | 2419 |
| 1.5 x 18 LVL | 2 | 201 | 378 | 27 ' - 7" | Lb | 1.708 | 3 | 3 | 3 | 196 | 2711 |
| 1.5 x 20 LVL | 2 | 201 | 378 | 30 ' - 7" | Lb | 1.872 | 3 | 3 | 3 | 196 | 3002 |
| 1.5 x 22 LVL | 2 | 201 | 378 | 33 ' - 7" | Lb | 2.034 | 3 | 3 | 3 | 196 | 3292 |
| 1.5 x 24 LVL | 2 | 201 | 378 | 36 ' - 6" | Lb | 2.194 | 3 | 3 | 3 | 196 | 3581 |
| 2 x 4 SPF #2 | 3 | 201 | 378 | 4 ' - 11" | Lb | 0.226 | 1 | 1 | 1 | 196 | 485 |
| 2 x 6 SPF #2 | 3 | 201 | 378 | 7 ' - 2" | Lb | 0.265 | 1 | 1 | 1 | 196 | 708 |
| 2 x 8 SPF #2 | 3 | 201 | 378 | 9 ' - 1" | Lb | 0.3 | 1 | 1 | 1 | 196 | 898 |
| 2 x 10 SPF #2 | 3 | 201 | 378 | 11 ' - 2" | Lb | 0.321 | 1 | 1 | 1 | 196 | 1097 |
| 2 x 12 SPF #2 | 3 | 201 | 378 | 12 ' - 11" | Lb | 0.323 | 1 | 1 | 1 | 196 | 1272 |
| 2 x 4 SYP #2 | 3 | 201 | 378 | 4 ' - 6" | Lb | 0.159 | 1 | 1 | 1 | 196 | 444 |
| 2 x 6 SYP #2 | 3 | 201 | 378 | 6 ' - 9" | Lb | 0.205 | 1 | 1 | 1 | 196 | 664 |
| 2 x 8 SYP #2 | 3 | 201 | 378 | 8 ' - 7" | Lb | 0.233 | 1 | 1 | 1 | 196 | 843 |
| 2 x 10 SYP #2 | 3 | 201 | 378 | 10 ' - 2" | Lb | 0.222 | 1 | 1 | 1 | 196 | 1000 |
| 2 x 12 SYP #2 | 3 | 201 | 378 | 12 ' - 4" | Lb | 0.27 | 1 | 1 | 1 | 196 | 1216 |
| 1.5 x 3.5 LVL | 3 | 201 | 378 | 6 ' - 11" | Lb | 0.617 | 1 | 1 | 1 | 196 | 681 |
| 1.5 x 5.5 LVL | 3 | 201 | 378 | 10 ' - 9" | Lb | 0.913 | 1 | 1 | 1 | 196 | 1054 |
| 1.5 x 7.25 LVL | 3 | 201 | 378 | 14 ' - 0" | Lb | 1.162 | 1 | 1 | 1 | 196 | 1378 |
| 1.5 x 9.25 LVL | 3 | 201 | 378 | 17 ' - 9" | Lb | 1.436 | 1 | 1 | 1 | 196 | 1744 |
| 1.5 x 11.25 LVL | 3 | 201 | 378 | 21 ' - 6" | Lb | 1.703 | 1 | 1 | 1 | 196 | 2107 |
| 1.5 x 12 LVL | 3 | 201 | 378 | 22 ' - 10" | Lb | 1.801 | 1 | 1 | 1 | 196 | 2243 |
| 1.5 x 14 LVL | 3 | 201 | 378 | 26 ' - 6" | Lb | 2.06 | 1 | 1 | 2 | 196 | 2604 |
| 1.5 x 16 LVL | 3 | 201 | 378 | 30 ' - 2" | Lb | 2.313 | 1 | 1 | 2 | 196 | 2963 |
| 1.5 x 18 LVL | 3 | 201 | 378 | 33 ' - 10" | Lb | 2.561 | 2 | 1 | 2 | 196 | 3320 |
| 1.5 x 20 LVL | 3 | 201 | 378 | 37 ' - 6" | Lb | 2.808 | 2 | 2 | 2 | 196 | 3677 |
| 1.5 x 22 LVL | 3 | 201 | 378 | 41 ' - 1" | Lb | 3.052 | 2 | 2 | 2 | 196 | 4032 |
| 1.5 x 24 LVL | 3 | 201 | 378 | 44 ' - 9" | Lb | 3.291 | 2 | 2 | 2 | 196 | 4386 |

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DATE 10/10/19
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Cottage Grove, WI



**ALL WINDS, ALL PITCHES, LATERAL PRESSURE (5 psf)**

| HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 ft | 2 x 3 SPF STUD GRADE | 12 | 610 | 0.114 | 9 ft | 2 x 3 SPF STUD GRADE | 12 | 435 | 0.186 | 10 ft | 2 x 3 SPF STUD GRADE | 12 | 310 | 0.288 |
| | | 16 | 540 | 0.151 | | | 16 | 370 | 0.248 | | | 16 | 295 | 0.385 |
| | | 19.2 | 490 | 0.182 | | | 19.2 | 320 | 0.298 | | | 19.2 | 295 | 0.461 |
| | | 24 | 420 | 0.227 | | | 24 | 295 | 0.372 | | | 24 | **NG** | - |
| | 2 x 3 SPF #2 | 12 | 830 | 0.097 | | 2 x 3 SPF #2 | 12 | 615 | 0.159 | | 2 x 3 SPF #2 | 12 | 465 | 0.247 |
| | | 16 | 775 | 0.13 | | | 16 | 565 | 0.213 | | | 16 | 415 | 0.33 |
| | | 19.2 | 735 | 0.156 | | | 19.2 | 525 | 0.255 | | | 19.2 | 385 | 0.395 |
| | | 24 | 680 | 0.195 | | | 24 | 475 | 0.319 | | | 24 | 335 | 0.494 |
| | 2 x 3 SYP #2 | 12 | 800 | 0.097 | | 2 x 3 SYP #2 | 12 | 585 | 0.159 | | 2 x 3 SYP #2 | 12 | 435 | 0.247 |
| | | 16 | 740 | 0.13 | | | 16 | 530 | 0.213 | | | 16 | 385 | 0.33 |
| | | 19.2 | 695 | 0.156 | | | 19.2 | 485 | 0.255 | | | 19.2 | 345 | 0.395 |
| | | 24 | 630 | 0.195 | | | 24 | 430 | 0.319 | | | 24 | 295 | 0.494 |
| | 2 x 4 SPF STUD GRADE | 12 | 1920 | 0.041 | | 2 x 4 SPF STUD GRADE | 12 | 1450 | 0.068 | | 2 x 4 SPF STUD GRADE | 12 | 1110 | 0.105 |
| | | 16 | 1810 | 0.055 | | | 16 | 1345 | 0.09 | | | 16 | 1010 | 0.14 |
| | | 19.2 | 1725 | 0.066 | | | 19.2 | 1265 | 0.108 | | | 19.2 | 940 | 0.168 |
| | | 24 | 1605 | 0.083 | | | 24 | 1155 | 0.136 | | | 24 | 830 | 0.21 |
| | 2 x 4 SPF #2 | 12 | 2495 | 0.035 | | 2 x 4 SPF #2 | 12 | 1905 | 0.058 | | 2 x 4 SPF #2 | 12 | 1485 | 0.09 |
| | | 16 | 2400 | 0.047 | | | 16 | 1815 | 0.077 | | | 16 | 1400 | 0.12 |
| | | 19.2 | 2330 | 0.057 | | | 19.2 | 1750 | 0.093 | | | 19.2 | 1340 | 0.144 |
| | | 24 | 2230 | 0.071 | | | 24 | 1660 | 0.116 | | | 24 | 1255 | 0.18 |
| | 2 x 4 SYP #2 | 12 | 2450 | 0.035 | | 2 x 4 SYP #2 | 12 | 1855 | 0.058 | | 2 x 4 SYP #2 | 12 | 1440 | 0.09 |
| | | 16 | 2340 | 0.047 | | | 16 | 1755 | 0.077 | | | 16 | 1345 | 0.12 |
| | | 19.2 | 2260 | 0.057 | | | 19.2 | 1685 | 0.093 | | | 19.2 | 1280 | 0.144 |
| | | 24 | 2150 | 0.071 | | | 24 | 1585 | 0.116 | | | 24 | 1185 | 0.18 |
| | 2 x 6 SPF STUD GRADE | 12 | 6495 | 0.011 | | 2 x 6 SPF STUD GRADE | 12 | 5520 | 0.017 | | 2 x 6 SPF STUD GRADE | 12 | 4600 | 0.027 |
| | | 16 | 6345 | 0.014 | | | 16 | 5340 | 0.023 | | | 16 | 4405 | 0.036 |
| | | 19.2 | 6230 | 0.017 | | | 19.2 | 5205 | 0.028 | | | 19.2 | 4260 | 0.043 |
| | | 24 | 6065 | 0.021 | | | 24 | 5010 | 0.035 | | | 24 | 4060 | 0.054 |
| | 2 x 6 SPF #2 | 12 | 9150 | 0.009 | | 2 x 6 SPF #2 | 12 | 7445 | 0.015 | | 2 x 6 SPF #2 | 12 | 6055 | 0.023 |
| | | 16 | 8980 | 0.012 | | | 16 | 7260 | 0.02 | | | 16 | 5870 | 0.031 |
| | | 19.2 | 8855 | 0.015 | | | 19.2 | 7125 | 0.024 | | | 19.2 | 5735 | 0.037 |
| | | 24 | 8670 | 0.018 | | | 24 | 6935 | 0.03 | | | 24 | 5545 | 0.046 |
| | 2 x 6 SYP #2 | 12 | 9325 | 0.009 | | 2 x 6 SYP #2 | 12 | 7490 | 0.015 | | 2 x 6 SYP #2 | 12 | 6040 | 0.023 |
| | | 16 | 9125 | 0.012 | | | 16 | 7280 | 0.02 | | | 16 | 5835 | 0.031 |
| | | 19.2 | 8970 | 0.015 | | | 19.2 | 7125 | 0.024 | | | 19.2 | 5685 | 0.037 |
| | | 24 | 8760 | 0.018 | | | 24 | 6910 | 0.03 | | | 24 | 5480 | 0.046 |

***** LOADS AND QUANTITIES ARE PER SIDE OF MATING WALL**



THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS
EVEN IF RATIO MEETS CODE REQUIREMENTS
190284

BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

PFS APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

CHAMPION HOMES of NC

**MATING WALL HEADER - 1 STORY (LOCATION 2)**
**TRUSS HM778355**
**5/12 PITCH, 30.33 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

2x3 FOR (1) MEMBER HEADERS
2x4 FOR (2) MEMBER HEADERS
2x6 FOR (3) MEMBER HEADERS

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | MIN. NUMBER OF JACKSTUDS REQ'D EACH END | | | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | SPF #2 | SYP #2 | SPF STUD | | |
| 2 x 4 SPF #2 | 1 | 198 | 367 | 2 ' - 10" | Lb | 0.078 | 1 | 1 | 1 | 249 | 361 |
| 2 x 6 SPF #2 | 1 | 198 | 367 | 4 ' - 2" | Lb | 0.091 | 2 | 2 | 2 | 249 | 527 |
| 2 x 8 SPF #2 | 1 | 198 | 367 | 5 ' - 4" | Lb | 0.103 | 2 | 2 | 2 | 249 | 668 |
| 2 x 10 SPF #2 | 1 | 198 | 367 | 6 ' - 6" | Lb | 0.11 | 2 | 2 | 2 | 249 | 816 |
| 2 x 12 SPF #2 | 1 | 198 | 367 | 7 ' - 7" | Lb | 0.111 | 2 | 2 | 2 | 249 | 947 |
| 2 x 4 SYP #2 | 1 | 198 | 367 | 2 ' - 7" | Lb | 0.055 | 1 | 1 | 1 | 249 | 330 |
| 2 x 6 SYP #2 | 1 | 198 | 367 | 3 ' - 11" | Lb | 0.07 | 2 | 2 | 2 | 249 | 494 |
| 2 x 8 SYP #2 | 1 | 198 | 367 | 5 ' - 0" | Lb | 0.08 | 2 | 2 | 2 | 249 | 627 |
| 2 x 10 SYP #2 | 1 | 198 | 367 | 5 ' - 11" | Lb | 0.076 | 2 | 2 | 2 | 249 | 744 |
| 2 x 12 SYP #2 | 1 | 198 | 367 | 7 ' - 3" | Lb | 0.093 | 2 | 2 | 2 | 249 | 905 |
| 1.5 x 3.5 LVL | 1 | 198 | 367 | 4 ' - 0" | Lb | 0.212 | 2 | 2 | 2 | 249 | 507 |
| 1.5 x 5.5 LVL | 1 | 198 | 367 | 6 ' - 3" | Lb | 0.314 | 2 | 2 | 2 | 249 | 785 |
| 1.5 x 7.25 LVL | 1 | 198 | 367 | 8 ' - 2" | Lb | 0.399 | 2 | 2 | 2 | 249 | 1025 |
| 1.5 x 9.25 LVL | 1 | 198 | 367 | 10 ' - 5" | Lb | 0.493 | 2 | 2 | 3 | 249 | 1298 |
| 1.5 x 11.25 LVL | 1 | 198 | 367 | 12 ' - 7" | Lb | 0.585 | 3 | 3 | 3 | 249 | 1569 |
| 1.5 x 12 LVL | 1 | 198 | 367 | 13 ' - 4" | Lb | 0.618 | 3 | 3 | 3 | 249 | 1670 |
| 1.5 x 14 LVL | 1 | 198 | 367 | 15 ' - 6" | Lb | 0.707 | 3 | 3 | 3 | 249 | 1938 |
| 1.5 x 16 LVL | 1 | 198 | 367 | 17 ' - 8" | Lb | 0.794 | 3 | 3 | 3 | 249 | 2205 |
| 1.5 x 18 LVL | 1 | 198 | 367 | 19 ' - 10" | Lb | 0.879 | 3 | 3 | 3 | 249 | 2471 |
| 1.5 x 20 LVL | 1 | 198 | 367 | 21 ' - 11" | Lb | 0.964 | 3 | 3 | 3 | 249 | 2737 |
| 1.5 x 22 LVL | 1 | 198 | 367 | 24 ' - 1" | Lb | 1.048 | 3 | 3 | 3 | 249 | 3001 |
| 1.5 x 24 LVL | 1 | 198 | 367 | 26 ' - 2" | Lb | 1.13 | 3 | 3 | 3 | 249 | 3265 |
| 2 x 4 SPF #2 | 2 | 198 | 367 | 4 ' - 1" | Lb | 0.155 | 1 | 1 | 1 | 249 | 510 |
| 2 x 6 SPF #2 | 2 | 198 | 367 | 5 ' - 11" | Lb | 0.182 | 1 | 1 | 1 | 249 | 745 |
| 2 x 8 SPF #2 | 2 | 198 | 367 | 7 ' - 7" | Lb | 0.206 | 1 | 1 | 1 | 249 | 945 |
| 2 x 10 SPF #2 | 2 | 198 | 367 | 9 ' - 3" | Lb | 0.221 | 1 | 1 | 2 | 249 | 1155 |
| 2 x 12 SPF #2 | 2 | 198 | 367 | 10 ' - 9" | Lb | 0.222 | 2 | 2 | 2 | 249 | 1339 |
| 2 x 4 SYP #2 | 2 | 198 | 367 | 3 ' - 9" | Lb | 0.109 | 1 | 1 | 1 | 249 | 467 |
| 2 x 6 SYP #2 | 2 | 198 | 367 | 5 ' - 7" | Lb | 0.141 | 1 | 1 | 1 | 249 | 699 |
| 2 x 8 SYP #2 | 2 | 198 | 367 | 7 ' - 1" | Lb | 0.16 | 1 | 1 | 1 | 249 | 887 |
| 2 x 10 SYP #2 | 2 | 198 | 367 | 8 ' - 5" | Lb | 0.152 | 1 | 1 | 1 | 249 | 1053 |
| 2 x 12 SYP #2 | 2 | 198 | 367 | 10 ' - 3" | Lb | 0.185 | 1 | 1 | 2 | 249 | 1280 |
| 1.5 x 3.5 LVL | 2 | 198 | 367 | 5 ' - 9" | Lb | 0.423 | 1 | 1 | 1 | 249 | 717 |
| 1.5 x 5.5 LVL | 2 | 198 | 367 | 8 ' - 10" | Lb | 0.627 | 1 | 1 | 2 | 249 | 1110 |
| 1.5 x 7.25 LVL | 2 | 198 | 367 | 11 ' - 7" | Lb | 0.798 | 2 | 2 | 2 | 249 | 1450 |
| 1.5 x 9.25 LVL | 2 | 198 | 367 | 14 ' - 8" | Lb | 0.986 | 2 | 2 | 2 | 249 | 1836 |
| 1.5 x 11.25 LVL | 2 | 198 | 367 | 17 ' - 9" | Lb | 1.169 | 2 | 2 | 3 | 249 | 2218 |
| 1.5 x 12 LVL | 2 | 198 | 367 | 18 ' - 11" | Lb | 1.236 | 2 | 2 | 3 | 249 | 2361 |
| 1.5 x 14 LVL | 2 | 198 | 367 | 22 ' - 0" | Lb | 1.414 | 3 | 3 | 3 | 249 | 2741 |
| 1.5 x 16 LVL | 2 | 198 | 367 | 25 ' - 0" | Lb | 1.588 | 3 | 3 | 3 | 249 | 3119 |
| 1.5 x 18 LVL | 2 | 198 | 367 | 28 ' - 0" | Lb | 1.759 | 3 | 3 | 3 | 249 | 3495 |
| 1.5 x 20 LVL | 2 | 198 | 367 | 31 ' - 1" | Lb | 1.928 | 3 | 3 | 3 | 249 | 3870 |
| 1.5 x 22 LVL | 2 | 198 | 367 | 34 ' - 1" | Lb | 2.095 | 3 | 3 | 3 | 249 | 4245 |
| 1.5 x 24 LVL | 2 | 198 | 367 | 37 ' - 1" | Lb | 2.26 | 3 | 3 | 3 | 249 | 4617 |
| 2 x 4 SPF #2 | 3 | 198 | 367 | 5 ' - 0" | Lb | 0.233 | 1 | 1 | 1 | 249 | 625 |
| 2 x 6 SPF #2 | 3 | 198 | 367 | 7 ' - 3" | Lb | 0.273 | 1 | 1 | 1 | 249 | 913 |
| 2 x 8 SPF #2 | 3 | 198 | 367 | 9 ' - 3" | Lb | 0.309 | 1 | 1 | 1 | 249 | 1158 |
| 2 x 10 SPF #2 | 3 | 198 | 367 | 11 ' - 4" | Lb | 0.331 | 1 | 1 | 1 | 249 | 1414 |
| 2 x 12 SPF #2 | 3 | 198 | 367 | 13 ' - 2" | Lb | 0.333 | 1 | 1 | 1 | 249 | 1640 |
| 2 x 4 SYP #2 | 3 | 198 | 367 | 4 ' - 7" | Lb | 0.164 | 1 | 1 | 1 | 249 | 572 |
| 2 x 6 SYP #2 | 3 | 198 | 367 | 6 ' - 10" | Lb | 0.211 | 1 | 1 | 1 | 249 | 856 |
| 2 x 8 SYP #2 | 3 | 198 | 367 | 8 ' - 8" | Lb | 0.24 | 1 | 1 | 1 | 249 | 1087 |
| 2 x 10 SYP #2 | 3 | 198 | 367 | 10 ' - 4" | Lb | 0.229 | 1 | 1 | 1 | 249 | 1289 |
| 2 x 12 SYP #2 | 3 | 198 | 367 | 12 ' - 7" | Lb | 0.278 | 1 | 1 | 1 | 249 | 1568 |
| 1.5 x 3.5 LVL | 3 | 198 | 367 | 7 ' - 0" | Lb | 0.635 | 1 | 1 | 1 | 249 | 878 |
| 1.5 x 5.5 LVL | 3 | 198 | 367 | 10 ' - 11" | Lb | 0.941 | 1 | 1 | 1 | 249 | 1359 |
| 1.5 x 7.25 LVL | 3 | 198 | 367 | 14 ' - 3" | Lb | 1.197 | 1 | 1 | 1 | 249 | 1776 |
| 1.5 x 9.25 LVL | 3 | 198 | 367 | 18 ' - 0" | Lb | 1.479 | 1 | 1 | 1 | 249 | 2248 |
| 1.5 x 11.25 LVL | 3 | 198 | 367 | 21 ' - 9" | Lb | 1.754 | 1 | 1 | 1 | 249 | 2717 |
| 1.5 x 12 LVL | 3 | 198 | 367 | 23 ' - 2" | Lb | 1.855 | 1 | 1 | 1 | 249 | 2892 |
| 1.5 x 14 LVL | 3 | 198 | 367 | 26 ' - 11" | Lb | 2.121 | 1 | 1 | 2 | 249 | 3357 |
| 1.5 x 16 LVL | 3 | 198 | 367 | 30 ' - 8" | Lb | 2.382 | 1 | 1 | 2 | 249 | 3820 |
| 1.5 x 18 LVL | 3 | 198 | 367 | 34 ' - 4" | Lb | 2.638 | 1 | 1 | 2 | 249 | 4281 |
| 1.5 x 20 LVL | 3 | 198 | 367 | 38 ' - 0" | Lb | 2.892 | 2 | 2 | 2 | 249 | 4740 |
| 1.5 x 22 LVL | 3 | 198 | 367 | 41 ' - 9" | Lb | 3.143 | 2 | 2 | 2 | 249 | 5198 |
| 1.5 x 24 LVL | 3 | 198 | 367 | 45 ' - 5" | Lb | 3.39 | 2 | 2 | 2 | 249 | 5655 |

***** LOADS AND QUANTITIES ARE PER SIDE OF MATING LINE**

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS EVEN IF RATIO MEETS CODE REQUIREMENTS



BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

PFS APPROVED
Sharron Barry
DATE 10/10/19
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PFS CORPORATION
Cottage Grove, WI



**PERIMETER BAND - 1 STORY (LOCATION 3)**
**TRUSS HM773855**
**5/12 PITCH, 30.33 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|
| 2 x 8 SPF #2 | 1 | 505 | 878 | 3 ' - 5" | Lb | 0.043 | 0 | 0 |
| 2 x 10 SPF #2 | 1 | 505 | 878 | 4 ' - 2" | Lb | 0.046 | 0 | 0 |
| 2 x 12 SPF #2 | 1 | 505 | 878 | 4 ' - 11" | Lb | 0.046 | 0 | 0 |
| 2 x 8 SYP #2 | 1 | 505 | 878 | 3 ' - 3" | Lb | 0.033 | 0 | 0 |
| 2 x 10 SYP #2 | 1 | 505 | 878 | 3 ' - 10" | Lb | 0.032 | 0 | 0 |
| 2 x 12 SYP #2 | 1 | 505 | 878 | 4 ' - 8" | Lb | 0.039 | 0 | 0 |
| 1.5 x 7.25 LVL | 1 | 505 | 878 | 5 ' - 3" | Lb | 0.167 | 0 | 0 |
| 1.5 x 9.25 LVL | 1 | 505 | 878 | 6 ' - 8" | Lb | 0.206 | 0 | 0 |
| 1.5 x 11.25 LVL | 1 | 505 | 878 | 8 ' - 1" | Lb | 0.244 | 0 | 0 |
| 2 x 8 SPF #2 | 2 | 505 | 878 | 4 ' - 10" | Lb | 0.086 | 0 | 0 |
| 2 x 10 SPF #2 | 2 | 505 | 878 | 5 ' - 11" | Lb | 0.092 | 0 | 0 |
| 2 x 12 SPF #2 | 2 | 505 | 878 | 6 ' - 11" | Lb | 0.093 | 0 | 0 |
| 2 x 8 SYP #2 | 2 | 505 | 878 | 4 ' - 7" | Lb | 0.067 | 0 | 0 |
| 2 x 10 SYP #2 | 2 | 505 | 878 | 5 ' - 5" | Lb | 0.064 | 0 | 0 |
| 2 x 12 SYP #2 | 2 | 505 | 878 | 6 ' - 7" | Lb | 0.077 | 0 | 0 |
| 1.5 x 7.25 LVL | 2 | 505 | 878 | 7 ' - 6" | Lb | 0.333 | 0 | 0 |
| 1.5 x 9.25 LVL | 2 | 505 | 878 | 9 ' - 6" | Lb | 0.412 | 0 | 0 |
| 1.5 x 11.25 LVL | 2 | 505 | 878 | 11 ' - 6" | Lb | 0.489 | 0 | 0 |
| 2 x 8 SPF #2 | 3 | 505 | 878 | 6 ' - 0" | Lb | 0.129 | 0 | 0 |
| 2 x 10 SPF #2 | 3 | 505 | 878 | 7 ' - 4" | Lb | 0.138 | 0 | 0 |
| 2 x 12 SPF #2 | 3 | 505 | 878 | 8 ' - 6" | Lb | 0.139 | 0 | 0 |
| 2 x 8 SYP #2 | 3 | 505 | 878 | 5 ' - 7" | Lb | 0.1 | 0 | 0 |
| 2 x 10 SYP #2 | 3 | 505 | 878 | 6 ' - 8" | Lb | 0.096 | 0 | 0 |
| 2 x 12 SYP #2 | 3 | 505 | 878 | 8 ' - 1" | Lb | 0.116 | 0 | 0 |
| 1.5 x 7.25 LVL | 3 | 505 | 878 | 9 ' - 2" | Lb | 0.5 | 0 | 0 |
| 1.5 x 9.25 LVL | 3 | 505 | 878 | 11 ' - 8" | Lb | 0.618 | 0 | 0 |
| 1.5 x 11.25 LVL | 3 | 505 | 878 | 14 ' - 1" | Lb | 0.733 | 0 | 0 |

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**FLOOR JOIST (10 psf DEAD LOAD / 40 psf LIVE LOAD)**
**ALL LEVELS**

| MEMBER | QTY | SPACING (in O.C.) | TOTAL LOAD (plf) | LIVE LOAD (plf) | MAX. SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) |
|---|---|---|---|---|---|---|---|
| 2 x 8 SPF #2 | 1 | 12 | 50 | 40 | 13 ' - 6 " | Ld LL - l/360 | 0.563 |
| 2 x 10 SPF #2 | 1 | 12 | 50 | 40 | 17 ' - 2 " | Ld LL - l/360 | 0.719 |
| 2 x 12 SPF #2 | 1 | 12 | 50 | 40 | 20 ' - 7 " | Lb | 0.814 |
| 2 x 8 SYP #2 | 1 | 12 | 50 | 40 | 13 ' - 6 " | Ld LL - l/360 | 0.563 |
| 2 x 10 SYP #2 | 1 | 12 | 50 | 40 | 16 ' - 2 " | Lb | 0.559 |
| 2 x 12 SYP #2 | 1 | 12 | 50 | 40 | 19 ' - 8 " | Lb | 0.68 |
| 2 x 8 SPF #2 | 1 | 16 | 66.67 | 53.33 | 12 ' - 3 " | Ld LL - l/360 | 0.512 |
| 2 x 10 SPF #2 | 1 | 16 | 66.67 | 53.33 | 15 ' - 4 " | Lb | 0.607 |
| 2 x 12 SPF #2 | 1 | 16 | 66.67 | 53.33 | 17 ' - 10 " | Lb | 0.61 |
| 2 x 8 SYP #2 | 1 | 16 | 66.67 | 53.33 | 11 ' - 9 " | Lb | 0.44 |
| 2 x 10 SYP #2 | 1 | 16 | 66.67 | 53.33 | 14 ' - 0 " | Lb | 0.419 |
| 2 x 12 SYP #2 | 1 | 16 | 66.67 | 53.33 | 17 ' - 0 " | Lb | 0.51 |
| 2 x 8 SPF #2 | 1 | 19.2 | 80 | 64 | 11 ' - 5 " | Lb | 0.472 |
| 2 x 10 SPF #2 | 1 | 19.2 | 80 | 64 | 14 ' - 0 " | Lb | 0.506 |
| 2 x 12 SPF #2 | 1 | 19.2 | 80 | 64 | 16 ' - 3 " | Lb | 0.509 |
| 2 x 8 SYP #2 | 1 | 19.2 | 80 | 64 | 10 ' - 9 " | Lb | 0.366 |
| 2 x 10 SYP #2 | 1 | 19.2 | 80 | 64 | 12 ' - 9 " | Lb | 0.35 |
| 2 x 12 SYP #2 | 1 | 19.2 | 80 | 64 | 15 ' - 6 " | Lb | 0.425 |
| 2 x 8 SPF #2 | 1 | 24 | 100 | 80 | 10 ' - 3 " | Lb | 0.378 |
| 2 x 10 SPF #2 | 1 | 24 | 100 | 80 | 12 ' - 6 " | Lb | 0.405 |
| 2 x 12 SPF #2 | 1 | 24 | 100 | 80 | 14 ' - 6 " | Lb | 0.407 |
| 2 x 8 SYP #2 | 1 | 24 | 100 | 80 | 9 ' - 7 " | Lb | 0.293 |
| 2 x 10 SYP #2 | 1 | 24 | 100 | 80 | 11 ' - 5 " | Lb | 0.28 |
| 2 x 12 SYP #2 | 1 | 24 | 100 | 80 | 13 ' - 11 " | Lb | 0.34 |

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Cottage Grove, WI



**CENTER GIRDER - 1 STORY (LOCATION 4)**
**TRUSS HM778355**
**5/12 PITCH, 30.33 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|
| 2 x 8 SPF #2 | 1 | 500 | 827 | 3 ' - 6" | Lb | 0.046 | 53 | 95 |
| 2 x 10 SPF #2 | 1 | 500 | 827 | 4 ' - 4" | Lb | 0.049 | 53 | 116 |
| 2 x 12 SPF #2 | 1 | 500 | 827 | 5 ' - 0" | Lb | 0.049 | 53 | 134 |
| 2 x 8 SYP #2 | 1 | 500 | 827 | 3 ' - 4" | Lb | 0.035 | 53 | 89 |
| 2 x 10 SYP #2 | 1 | 500 | 827 | 3 ' - 11" | Lb | 0.034 | 53 | 106 |
| 2 x 12 SYP #2 | 1 | 500 | 827 | 4 ' - 10" | Lb | 0.041 | 53 | 128 |
| 1.5 x 7.25 LVL | 1 | 500 | 827 | 5 ' - 5" | Lb | 0.177 | 53 | 145 |
| 1.5 x 9.25 LVL | 1 | 500 | 827 | 6 ' - 11" | Lb | 0.219 | 53 | 184 |
| 1.5 x 11.25 LVL | 1 | 500 | 827 | 8 ' - 4" | Lb | 0.259 | 53 | 222 |
| 2 x 8 SPF #2 | 2 | 500 | 827 | 5 ' - 0" | Lb | 0.091 | 53 | 134 |
| 2 x 10 SPF #2 | 2 | 500 | 827 | 6 ' - 2" | Lb | 0.098 | 53 | 164 |
| 2 x 12 SPF #2 | 2 | 500 | 827 | 7 ' - 1" | Lb | 0.098 | 53 | 190 |
| 2 x 8 SYP #2 | 2 | 500 | 827 | 4 ' - 8" | Lb | 0.071 | 53 | 126 |
| 2 x 10 SYP #2 | 2 | 500 | 827 | 5 ' - 7" | Lb | 0.068 | 53 | 149 |
| 2 x 12 SYP #2 | 2 | 500 | 827 | 6 ' - 10" | Lb | 0.082 | 53 | 182 |
| 1.5 x 7.25 LVL | 2 | 500 | 827 | 7 ' - 9" | Lb | 0.354 | 53 | 206 |
| 1.5 x 9.25 LVL | 2 | 500 | 827 | 9 ' - 9" | Lb | 0.438 | 53 | 260 |
| 1.5 x 11.25 LVL | 2 | 500 | 827 | 11 ' - 10" | Lb | 0.519 | 53 | 315 |
| 2 x 8 SPF #2 | 3 | 500 | 827 | 6 ' - 2" | Lb | 0.137 | 53 | 164 |
| 2 x 10 SPF #2 | 3 | 500 | 827 | 7 ' - 6" | Lb | 0.147 | 53 | 201 |
| 2 x 12 SPF #2 | 3 | 500 | 827 | 8 ' - 9" | Lb | 0.148 | 53 | 233 |
| 2 x 8 SYP #2 | 3 | 500 | 827 | 5 ' - 9" | Lb | 0.106 | 53 | 154 |
| 2 x 10 SYP #2 | 3 | 500 | 827 | 6 ' - 10" | Lb | 0.101 | 53 | 183 |
| 2 x 12 SYP #2 | 3 | 500 | 827 | 8 ' - 4" | Lb | 0.123 | 53 | 222 |
| 1.5 x 7.25 LVL | 3 | 500 | 827 | 9 ' - 6" | Lb | 0.531 | 53 | 252 |
| 1.5 x 9.25 LVL | 3 | 500 | 827 | 12 ' - 0" | Lb | 0.656 | 53 | 319 |
| 1.5 x 11.25 LVL | 3 | 500 | 827 | 14 ' - 6" | Lb | 0.778 | 53 | 385 |

***** LOADS AND QUANTITIES ARE PER SIDE OF MATING LINE**

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS
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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **DESIGN LIMITATIONS:** | | | | |
| MINIMUM BUILDING LENGTH : | 7.6 | 7.6 | 7.6 | ft (1.1.3.1, pp. 3) |
| MAXIMUM BUILDING LENGTH : | 121.3 | 121.3 | 121.3 | ft (1.1.3.1, pp. 3) |
| MAX. VERTICAL FLOOR OFFSET : | FLOOR DEPTH | FLOOR DEPTH | FLOOR DEPTH | ft (2.1.3.2 pp. 16) |
| MAXIMUM FLOOR DIAPHRAM LENGTH : | 121.3 | 121.3 | 121.3 | ft (2.1.3.2 pp. 16) |
| MAX. FLOOR DIAPHRAGM OPENING WIDTH : | 12 | 12 | 12 | ft (2.1.3.2 pp. 16) |
| MAX. FLOOR DIAPHRAGM OPENING LENGTH : | 12 | 12 | 12 | ft (2.1.3.2 pp. 16) |
| MAXIMUM CEILING DIAPHRAM LENGTH : | 60 | 60 | 60 | ft (2.1.3.2 pp. 16) |
| MAXIMUM SHEARWALL LINE OFFSET : | 4 | 4 | 4 | ft (2.1.3.3 pp. 16) |
| MAXIMUM SHEARWALL STORY OFFSET : | FLOOR DEPTH | FLOOR DEPTH | FLOOR DEPTH | ft (2.1.3.3 pp. 16) |
| MINIMUM SHEARWALL SEGMENT LENGTH : | 2' - 7" | 2' - 7" | 2' - 7" | ft (2.1.3.3 pp. 16) |
| MAXIMUM ROOF DIAPHRAM LENGTH : | 121.3 | 121.3 | 121.3 | ft (2.1.3.4, pp. 16) |

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| | 5/12 PITCH, 30.33 ft WIDTH 11 | 5/12 PITCH, 30.33 ft WIDTH 150 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 11 | 150 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **UPLIFT CONNECTIONS:** | | | | |
| MRH ADJUSTMENT FACTOR ($C_{MRH}$) | 1.208 | 1.208 | 1.208 | (TABLE 2.1.3.1, pp. 15) |
| UPLIFT CONNECTION LOADS FROM WIND : | 58 | 74 | 98 | plf (TRUSS SHEETS) |
| REQUIRED TRUSS TIE DOWN : | | | | |
| AT 12" O.C.: | 58 | 74 | 98 | lbs AT 12" O.C. |
| CONNECTOR EACH TRUSS: | #10 x 5" WOOD SCREW (TOENAILED) | #10 x 5" WOOD SCREW (TOENAILED) | #10 x 5" WOOD SCREW (TOENAILED) | |
| AT 16" O.C.: | 78 | 99 | 131 | lbs AT 16" O.C. |
| CONNECTOR EACH TRUSS: | #10 x 5" WOOD SCREW (TOENAILED) | #10 x 5" WOOD SCREW (TOENAILED) | (1) SIMPSON SDWC15600 SCREW | |
| AT 19.2" O.C.: | 93 | 119 | 157 | lbs AT 19.2" O.C. |
| CONNECTOR EACH TRUSS: | #10 x 5" WOOD SCREW (TOENAILED) | #10 x 5" WOOD SCREW (TOENAILED) | (1) SIMPSON SDWC15600 SCREW | |
| AT 24" O.C.: | 116 | 148 | 196 | lbs AT 24" O.C. |
| CONNECTOR EACH TRUSS: | #10 x 5" WOOD SCREW (TOENAILED) | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | |
| 1ST FLOOR STUD TO TOP PLATE / CEILING BAND | | | | |
| AT 12" O.C.: | 58 | 74 | 98 | lbs AT 12" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 1 | 1 | |
| QTY OF 16 ga. STAPLES EACH END | 2 | 2 | 3 | |
| AT 16" O.C.: | 78 | 99 | 131 | lbs AT 16" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 1 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 2 | 3 | 3 | |
| AT 19.2" O.C.: | 93 | 119 | 157 | lbs AT 19.2" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 3 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 1 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 2 | 3 | 4 | |
| AT 24" O.C.: | 116 | 148 | 196 | lbs AT 24" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 3 | 3 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 3 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 2 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 3 | 4 | 5 | |
| REQUIRED DOUBLE TOP PLATE SPLICE LENGTH : | 6 | 6 | 6 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 12 | 12 | 12 | in O.C. |
| OR | 6 | 6 | 6 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 9 | 9 | 9 | in O.C. |
| OR | 4 | 4 | 4 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 6 | 6 | 6 | in O.C. |
| OR | 2 | 2 | 2 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 3 | 3 | 3 | in O.C. |
| 1st FLOOR STUD TO FLOOR BAND CONNECTION : | | | | |
| AT 12" O.C.: | 0 | 10 | 34 | lbs AT 12" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 0 | 1 | 1 | |
| QTY OF 16 ga. STAPLES EACH END | 0 | 1 | 1 | |
| AT 16" O.C.: | 0 | 13 | 45 | lbs AT 16" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 0 | 1 | 1 | |
| QTY OF 16 ga. STAPLES EACH END | 0 | 1 | 1 | |
| AT 19.2" O.C.: | 0 | 16 | 54 | lbs AT 19.2" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 0 | 1 | 1 | |
| QTY OF 16 ga. STAPLES EACH END | 0 | 1 | 2 | |
| AT 24" O.C.: | 0 | 19 | 67 | lbs AT 24" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 0 | 1 | 1 | |
| QTY OF 16 ga. STAPLES EACH END | 0 | 1 | 2 | |
| FLOOR BAND TO SILL PLATE CONNECTION: | 0 | 0 | 0 | plf |
| ANCHOR BOLT UPLIFT AT 72 in (MAX) SPACING | 0 | 0 | 0 | |
| CONNECTOR EACH STUD WRAPPED AROUND SILL | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 0 | 0 | 0 | |
| QTY OF 16 ga. STAPLES EACH END | 0 | 0 | 0 | |
| CHECK BENDING IN RIMBAND: | | | | |
| DBL. 2x10 SPF #2 RIMBAND DESIGN VALUES: | OK FOR BENDING | OK FOR BENDING | OK FOR BENDING | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **LATERAL CONNECTIONS:** | | | | |
| LATERAL LOADS AT ROOF/CEILING DIAPHRAGM | | | | |
| WALL HEIGHT ADJUSTMENT FACTOR ($C_{WH}$) : | 1.125 | 1.125 | 1.125 | (H / 8) |
| WIND PERPENDICULAR TO RIDGE: | | | | |
| $w_{l\text{-}per}$ : | 78 | 84 | 111 | plf (TABLE 2.5A, pp. 68) |
| $w_{l\text{-}per}$' x $C_{MRH}$ x $C_{WH}$ = | 107 | 115 | 151 | plf |
| WIND PARALLEL TO RIDGE: | | | | |
| $w_{l\text{-}para}$ : | 78 | 94 | 125 | plf (TABLE 2.5B, pp. 69) |
| $w_{l\text{-}para}$' x $C_{MRH}$ x $C_{WH}$ = | 107 | 129 | 171 | plf |
| LATERAL LOADS AT FLOOR DIAPHRAGM | | | | |
| WIND PERPENDICULAR TO RIDGE: | | | | |
| $FL_{l\text{-}per}$ : | 148 | 189 | 251 | plf (TABLE 2.5A, pp. 68) |
| $FL_{l\text{-}per}$' x $C_{MRH}$ x $C_{WH}$ = | 202 | 257 | 342 | plf |
| WIND PARALLEL TO RIDGE: | | | | |
| $FL_{l\text{-}para}$ : | 100 | 128 | 171 | plf (TABLE 2.5B, pp. 69) |
| $FL_{l\text{-}para}$' x $C_{MRH}$ x $C_{WH}$ = | 136 | 174 | 233 | plf |
| LATERAL FRAMING CONNECTION LOADS FROM WIND | | | | |
| $w_{l\text{-}wall}$ : | 80 | 102 | 136 | plf (TABLE 2.1, pp. 62) |
| $W_{l\text{-}wall}$' x $C_{MRH}$ = | 97 | 124 | 165 | plf |
| TRUSS TO TOP PLATE CONNECTION FOR LATERAL LOAD : | | | | |
| AT 12" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 97 | 124 | 165 | lbs AT 12" O.C. |
| IN ADDITION TO THE #10 x 5" WOOD SCREW (TOENAILED) | 1 | 1 | 1 | TOENAILS |
| AT 16" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 130 | 166 | 220 | lbs AT 16" O.C. |
| IN ADDITION TO THE #10 x 5" WOOD SCREW (TOENAILED) | 1 | 1 | 6 | TOENAILS |
| AT 19.2" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 156 | 199 | 264 | lbs AT 19.2" O.C. |
| IN ADDITION TO THE #10 x 5" WOOD SCREW (TOENAILED) | 1 | 2 | 7 | TOENAILS |
| AT 24" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 194 | 248 | 330 | lbs AT 24" O.C. |
| IN ADDITION TO THE #10 x 5" WOOD SCREW (TOENAILED) | 2 | 6 | 8 | TOENAILS |
| PLATE TO PLATE CONNECTION | | | | |
| AND BOTTOM PLATE TO FLOOR CONNECTION: | | | | |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED | 9 | 7 | 5 | in O.C. |
| PLATE TO STUD CONNECTION: | | | | |
| AT 12" O.C.: | | | | |
| | 97 | 124 | 165 | lbs AT 12" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 2 | 2 | 3 | FACE |
| AT 16" O.C.: | | | | |
| | 130 | 166 | 220 | lbs AT 16" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 2 | 3 | 4 | FACE |
| AT 19.2" O.C.: | | | | |
| | 156 | 199 | 264 | lbs AT 19.2" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 3 | 3 | 4 | FACE |
| AT 24" O.C.: | | | | |
| | 194 | 248 | 330 | lbs AT 24" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 3 | 4 | 5 | FACE |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| ROOF SHEATHING SUCTION CONNECTION | | | | |
| FOR ZONE 1 (FIELD) PRESSURE: | 14.7 | 18.7 | 25 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 18 | 23 | 31 | psf |
| AT 12" O.C.: | 18 | 23 | 31 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 24 | 31 | 41 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 29 | 37 | 50 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 24" O.C.: | 36 | 46 | 62 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| FOR ZONE 2 (EDGE) PRESSURE: | 24.6 | 31.5 | 41.9 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 30 | 39 | 51 | psf |
| AT 12" O.C.: | 30 | 39 | 51 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 40 | 52 | 68 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 48 | 62 | 82 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 10 | in O.C. |
| AT 24" O.C.: | 60 | 78 | 102 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 11 | 8 | in O.C. |
| FOR ZONE 3 (CORNER) PRESSURE: | 37 | ~~47.3~~ | 63 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 45 | 58 | 77 | psf |
| AT 12" O.C.: | 45 | 58 | 77 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 11 | in O.C. |
| AT 16" O.C.: | 60 | 77 | 103 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 11 | 8 | in O.C. |
| AT 19.2" O.C.: | 72 | 93 | 123 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 9 | 7 | in O.C. |
| AT 24" O.C.: | 90 | 116 | 154 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 9 | 7 | 5 | in O.C. |
| FOR ZONE 3OH (CORNER OVERHANG) PRESSURE: | 46 | ~~58.8~~ | 78.3 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 56 | 72 | 95 | psf |
| AT 12" O.C.: | 56 | 72 | 95 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 9 | in O.C. |
| AT 16" O.C.: | 75 | 96 | 127 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 11 | 9 | 7 | in O.C. |
| AT 19.2" O.C.: | 90 | 115 | 152 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 9 | 7 | 5 | in O.C. |
| AT 24" O.C.: | 112 | 144 | 190 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 7 | 6 | 4 | in O.C. |
| WALL SHEATHING SUCTION CONNECTION: | | | | |
| FOR ZONE 4 (FIELD) PRESSURE: | 15.9 | 20.3 | 27.1 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 20 | 25 | 33 | psf |
| AT 12" O.C.: | 20 | 25 | 33 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 27 | 33 | 44 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 32 | 40 | 53 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 24" O.C.: | 40 | 50 | 66 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| FOR ZONE 5 (EDGE) PRESSURE: | 19.6 | 25.1 | 33.4 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 24 | 31 | 41 | psf |
| AT 12" O.C.: | 24 | 31 | 41 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 32 | 41 | 55 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 38 | 50 | 66 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 24" O.C.: | 48 | 62 | 82 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 10 | in O.C. |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| ROOF DIAPHRAM: | | | | (TABLE A-3.12A, pp. 193) |
| REQUIRED SHEATHING THICKNESS: | | | | |
| AT 12" O.C.: | 3/8 | 3/8 | 3/8 | FOR 12" O.C. |
| AT 16" O.C.: | 3/8 | 3/8 | 3/8 | FOR 16" O.C. |
| AT 19.2" O.C.: | 3/8 | 3/8 | 7/16 | FOR 19.2" O.C. |
| AT 24" O.C.: | 3/8 | 7/16 | 19/32 | FOR 24" O.C. |
| ROOF SHEATHING DIAPHRAM CONNECTION: | | | | (TABLES 2.5-1 & 2, pp. 70- |
| $v_{roof}$ = | | | | |
| AT 30 ft LENGTH: | 53 | 64 | 85 | plf AT 30 ft LENGTH |
| AT 35 ft LENGTH: | 62 | 74 | 99 | plf AT 35 ft LENGTH |
| AT 40 ft LENGTH: | 71 | 85 | 113 | plf AT 40 ft LENGTH |
| AT 45 ft LENGTH: | 79 | 96 | 127 | plf AT 45 ft LENGTH |
| AT 50 ft LENGTH: | 88 | 106 | 141 | plf AT 50 ft LENGTH |
| AT 55 ft LENGTH: | 97 | 117 | 155 | plf AT 55 ft LENGTH |
| AT 60 ft LENGTH: | 106 | 128 | 169 | plf AT 60 ft LENGTH |
| AT 65 ft LENGTH: | 115 | 138 | 183 | plf AT 65 ft LENGTH |
| AT 70 ft LENGTH: | 123 | 149 | 197 | plf AT 70 ft LENGTH |
| AT 75 ft LENGTH: | 132 | 159 | 211 | plf AT 75 ft LENGTH |
| AT 80 ft LENGTH: | 141 | 170 | 226 | plf AT 80 ft LENGTH |
| USE HORIZONTAL DIAPHRAM ASSEMBLIES (WFCM 2001 TABLE 2C, pp. 272) | | | | |
| TO DETERMINE APPLICABLE ROOF SHEATHING FASTENING | | | | |
| HORIZONTAL FLOOR DIAPHRAM CONTINUITY: | | | | |
| $v_{floor}$= | | | | |
| AT 30 ft LENGTH: | 100 | 127 | 169 | plf AT 30 ft LENGTH |
| AT 35 ft LENGTH: | 117 | 148 | 197 | plf AT 35 ft LENGTH |
| AT 40 ft LENGTH: | 133 | 169 | 226 | plf AT 40 ft LENGTH |
| AT 45 ft LENGTH: | 150 | 191 | 254 | plf AT 45 ft LENGTH |
| AT 50 ft LENGTH: | 167 | 212 | 282 | plf AT 50 ft LENGTH |
| AT 55 ft LENGTH: | 183 | 233 | 310 | plf AT 55 ft LENGTH |
| AT 60 ft LENGTH: | 200 | 254 | 338 | plf AT 60 ft LENGTH |
| AT 65 ft LENGTH: | 216 | 275 | 366 | plf AT 65 ft LENGTH |
| AT 70 ft LENGTH: | 233 | 297 | 395 | plf AT 70 ft LENGTH |
| AT 75 ft LENGTH: | 250 | 318 | 423 | plf AT 75 ft LENGTH |
| AT 80 ft LENGTH: | 266 | 339 | 451 | plf AT 80 ft LENGTH |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG MATE LINE): | | | | |
| TO ATTACH MODULE TO MODULE ALONG MATE LINE: | | | | |
| $V_f$ = | | | | |
| AT 30 ft LENGTH: | 2273 | 2892 | 3848 | lbs AT 30 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 4 | 5 | 7 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 56 | |
| AT 35 ft LENGTH: | 2652 | 3374 | 4489 | lbs AT 35 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 5 | 6 | 8 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 56 | |
| AT 40 ft LENGTH: | 3030 | 3855 | 5130 | lbs AT 40 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 5 | 7 | 9 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 45 ft LENGTH: | 3409 | 4337 | 5772 | lbs AT 45 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 6 | 7 | 10 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 50 ft LENGTH: | 3788 | 4819 | 6413 | lbs AT 50 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 7 | 8 | 11 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 55 ft LENGTH: | 4167 | 5301 | 7054 | lbs AT 55 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 7 | 9 | 12 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 60 ft LENGTH: | 4545 | 5783 | 7695 | lbs AT 60 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 8 | 10 | 13 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 65 ft LENGTH: | 4924 | 6265 | 8337 | lbs AT 65 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 8 | 11 | 14 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 70 ft LENGTH: | 5303 | 6747 | 8978 | lbs AT 70 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 9 | 11 | 15 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 75 ft LENGTH: | 5682 | 7229 | 9619 | lbs AT 75 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 10 | 12 | 16 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 80 ft LENGTH: | 6060 | 7710 | 10260 | lbs AT 80 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 10 | 13 | 17 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG ENDWALLS): | | | | |
| T = | | | | |
| AT 30 ft LENGTH: | 391 | 501 | 670 | lbs AT 30 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 4 | 4 | 6 | |
| QTY OF 16 ga. STAPLES EACH END | 9 | 11 | 14 | |
| AT 35 ft LENGTH: | 336 | 429 | 575 | lbs AT 35 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 3 | 4 | 5 | |
| QTY OF 16 ga. STAPLES EACH END | 7 | 9 | 12 | |
| AT 40 ft LENGTH: | 294 | 376 | 503 | lbs AT 40 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 3 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 7 | 8 | 11 | |
| AT 45 ft LENGTH: | 261 | 334 | 447 | lbs AT 45 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 3 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 6 | 7 | 10 | |
| AT 50 ft LENGTH: | 235 | 301 | 402 | lbs AT 50 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 5 | 7 | 9 | |
| AT 55 ft LENGTH: | 214 | 273 | 366 | lbs AT 55 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 3 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 5 | 6 | 8 | |
| AT 60 ft LENGTH: | 196 | 251 | 335 | lbs AT 60 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 5 | 6 | 7 | |
| AT 65 ft LENGTH: | 181 | 231 | 310 | lbs AT 65 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 7 | |
| AT 70 ft LENGTH: | 168 | 215 | 288 | lbs AT 70 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 6 | |
| AT 75 ft LENGTH: | 157 | 201 | 268 | lbs AT 75 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 6 | |
| AT 80 ft LENGTH: | 147 | 188 | 252 | lbs AT 80 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 4 | 6 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **FOR BUILDING LENGTH = 60 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| **FOR BUILDING LENGTH = 65 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |

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Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| TRUSS BOTTOM CHORD TO TOP PLATE CONNECTION: | | | | |
| $V_{MAX}$ = | | | | |
| AT 30 ft SIDEWALL LENGTH: | 1605 | 1725 | 2265 | lbs AT 30 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 18 | 17 | 13 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 72 | 72 | 72 | |
| AT 35 ft SIDEWALL LENGTH: | 1873 | 2013 | 2643 | lbs AT 35 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 16 | 15 | 11 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 72 | 72 | 72 | |
| AT 40 ft SIDEWALL LENGTH: | 2140 | 2300 | 3020 | lbs AT 40 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 14 | 13 | 10 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 72 | 72 | 69 | |
| AT 45 ft SIDEWALL LENGTH: | 2408 | 2588 | 3398 | lbs AT 45 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 12 | 11 | 8 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 72 | 72 | 61 | |
| AT 50 ft SIDEWALL LENGTH: | 2675 | 2875 | 3775 | lbs AT 50 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 11 | 10 | 8 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 72 | 72 | 55 | |
| AT 55 ft SIDEWALL LENGTH: | 2943 | 3163 | 4153 | lbs AT 55 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 10 | 9 | 7 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 71 | 66 | 50 | |
| AT 60 ft SIDEWALL LENGTH: | 3210 | 3450 | 4530 | lbs AT 60 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 9 | 8 | 6 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 65 | 60 | 46 | |
| AT 65 ft SIDEWALL LENGTH: | 3478 | 3738 | 4908 | lbs AT 65 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 8 | 8 | 6 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 60 | 55 | 42 | |
| AT 70 ft SIDEWALL LENGTH: | 3745 | 4025 | 5285 | lbs AT 70 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 8 | 7 | 5 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 55 | 51 | 39 | |
| AT 75 ft SIDEWALL LENGTH: | 4013 | 4313 | 5663 | lbs AT 75 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 7 | 7 | 5 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 52 | 48 | 36 | |
| AT 80 ft SIDEWALL LENGTH: | 4280 | 4600 | 6040 | lbs AT 80 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 7 | 6 | 5 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 48 | 45 | 34 | |

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Cottage Grove, WI

| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| RIMBAND TO SILL PLATE CONNECTION: | | | | |
| $V_{MAX}$ = | | | | |
| AT 30 ft SIDEWALL LENGTH: | 3878 | 4617 | 6113 | lbs AT 30 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 7 | 6 | 4 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 53 | 45 | 34 | |
| AT 35 ft SIDEWALL LENGTH: | 4525 | 5387 | 7132 | lbs AT 35 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 6 | 5 | 4 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 46 | 38 | 29 | |
| AT 40 ft SIDEWALL LENGTH: | 5170 | 6155 | 8150 | lbs AT 40 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 5 | 4 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 40 | 34 | 25 | |
| AT 45 ft SIDEWALL LENGTH: | 5817 | 6925 | 9170 | lbs AT 45 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 5 | 4 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 35 | 30 | 22 | |
| AT 50 ft SIDEWALL LENGTH: | 6463 | 7694 | 10188 | lbs AT 50 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 32 | 27 | 20 | |
| AT 55 ft SIDEWALL LENGTH: | 7110 | 8464 | 11207 | lbs AT 55 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 29 | 24 | 18 | |
| AT 60 ft SIDEWALL LENGTH: | 7755 | 9233 | 12225 | lbs AT 60 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 26 | 22 | 17 | |
| AT 65 ft SIDEWALL LENGTH: | 8402 | 10003 | 13245 | lbs AT 65 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 24 | 20 | 15 | |
| AT 70 ft SIDEWALL LENGTH: | 9048 | 10772 | 14263 | lbs AT 70 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 2 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 23 | 19 | 14 | |
| AT 75 ft SIDEWALL LENGTH: | 9695 | 11542 | 15282 | lbs AT 75 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 2 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 21 | 18 | 13 | |
| AT 80 ft SIDEWALL LENGTH: | 10340 | 12310 | 16300 | lbs AT 80 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 2 | 2 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 20 | 17 | 12 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| SILL PLATE TO FOUNDATION CONNECTION: | | | | |
| $V_{MAX}$ = | | | | |
| AT 30 ft LENGTH: | 3878 | 4617 | 6113 | lbs AT 30 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 72 | 72 | 67 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 72 | |
| AT 35 ft LENGTH: | 4525 | 5387 | 7132 | lbs AT 35 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 72 | 67 | 56 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 72 | |
| AT 40 ft LENGTH: | 5170 | 6155 | 8150 | lbs AT 40 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 72 | 67 | 48 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 67 | |
| AT 45 ft LENGTH: | 5817 | 6925 | 9170 | lbs AT 45 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 67 | 56 | 42 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 56 | |
| AT 50 ft LENGTH: | 6463 | 7694 | 10188 | lbs AT 50 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 56 | 48 | 37 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 67 | 56 | |
| AT 55 ft LENGTH: | 7110 | 8464 | 11207 | lbs AT 55 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 56 | 42 | 33 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 67 | 48 | |
| AT 60 ft LENGTH: | 7755 | 9233 | 12225 | lbs AT 60 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 48 | 42 | 30 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 67 | 56 | 42 | |
| AT 65 ft LENGTH: | 8402 | 10003 | 13245 | lbs AT 65 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 48 | 37 | 28 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 67 | 56 | 42 | |
| AT 70 ft LENGTH: | 9048 | 10772 | 14263 | lbs AT 70 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 42 | 33 | 26 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 56 | 48 | 37 | |
| AT 75 ft LENGTH: | 9695 | 11542 | 15282 | lbs AT 75 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 37 | 33 | 24 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 56 | 48 | 33 | |
| AT 80 ft LENGTH: | 10340 | 12310 | 16300 | lbs AT 80 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 37 | 30 | 22 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 56 | 42 | 33 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **FOR BUILDING LENGTH = 50 ft:** | | | | |
| FOR 30 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 35 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 40 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 45 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 50 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 55 PERCENT ENDWALL SHEATHING : | 14.972 | 16.092 | ** NG ** | |
| FOR 60 PERCENT ENDWALL SHEATHING : | 14.413 | 15.491 | ** NG ** | |
| FOR 65 PERCENT ENDWALL SHEATHING : | 13.796 | 14.827 | 19.469 | |
| FOR 70 PERCENT ENDWALL SHEATHING : | 13.229 | 14.218 | 18.669 | |
| FOR 75 PERCENT ENDWALL SHEATHING : | 12.624 | 13.567 | 17.815 | |
| FOR 80 PERCENT ENDWALL SHEATHING : | 12.071 | 12.974 | 17.035 | |
| FOR 85 PERCENT ENDWALL SHEATHING : | 11.428 | 12.283 | 16.128 | |
| FOR 90 PERCENT ENDWALL SHEATHING : | 10.851 | 11.662 | 15.313 | |
| FOR 95 PERCENT ENDWALL SHEATHING : | 10.219 | 10.983 | 14.421 | |
| FOR 100 PERCENT ENDWALL SHEATHING : | 9.657 | 10.379 | 13.628 | |
| **FOR BUILDING LENGTH = 55 ft:** | | | | |
| FOR 30 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 35 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 40 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 45 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 50 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 55 PERCENT ENDWALL SHEATHING : | 16.472 | ** NG ** | ** NG ** | |
| FOR 60 PERCENT ENDWALL SHEATHING : | 15.858 | 17.043 | ** NG ** | |
| FOR 65 PERCENT ENDWALL SHEATHING : | 15.178 | 16.313 | ** NG ** | |
| FOR 70 PERCENT ENDWALL SHEATHING : | 14.554 | 15.642 | 20.538 | |
| FOR 75 PERCENT ENDWALL SHEATHING : | 13.888 | 14.927 | 19.598 | |
| FOR 80 PERCENT ENDWALL SHEATHING : | 13.281 | 14.273 | 18.741 | |
| FOR 85 PERCENT ENDWALL SHEATHING : | 12.573 | 13.513 | 17.743 | |
| FOR 90 PERCENT ENDWALL SHEATHING : | 11.938 | 12.83 | 16.846 | |
| FOR 95 PERCENT ENDWALL SHEATHING : | 11.243 | 12.083 | 15.865 | |
| FOR 100 PERCENT ENDWALL SHEATHING : | 10.625 | 11.419 | 14.993 | |
| **FOR BUILDING LENGTH = 60 ft:** | | | | |
| FOR 30 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 35 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 40 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 45 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 50 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 55 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 60 PERCENT ENDWALL SHEATHING : | 17.296 | ** NG ** | ** NG ** | |
| FOR 65 PERCENT ENDWALL SHEATHING : | 16.555 | 17.793 | ** NG ** | |
| FOR 70 PERCENT ENDWALL SHEATHING : | 15.875 | 17.061 | ** NG ** | |
| FOR 75 PERCENT ENDWALL SHEATHING : | 15.148 | 16.281 | 21.378 | |
| FOR 80 PERCENT ENDWALL SHEATHING : | 14.486 | 15.569 | 20.442 | |
| FOR 85 PERCENT ENDWALL SHEATHING : | 13.714 | 14.739 | 19.354 | |
| FOR 90 PERCENT ENDWALL SHEATHING : | 13.021 | 13.994 | 18.375 | |
| FOR 95 PERCENT ENDWALL SHEATHING : | 12.263 | 13.18 | 17.306 | |
| FOR 100 PERCENT ENDWALL SHEATHING : | 11.588 | 12.455 | 16.354 | |
| **FOR BUILDING LENGTH = 65 ft:** | | | | |
| FOR 30 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 35 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 40 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 45 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 50 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 55 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 60 PERCENT ENDWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 65 PERCENT ENDWALL SHEATHING : | 17.937 | 19.278 | ** NG ** | |
| FOR 70 PERCENT ENDWALL SHEATHING : | 17.2 | 18.486 | ** NG ** | |
| FOR 75 PERCENT ENDWALL SHEATHING : | 16.413 | 17.64 | ** NG ** | |
| FOR 80 PERCENT ENDWALL SHEATHING : | 15.695 | 16.868 | 22.148 | |
| FOR 85 PERCENT ENDWALL SHEATHING : | 14.859 | 15.97 | 20.969 | |
| FOR 90 PERCENT ENDWALL SHEATHING : | 14.108 | 15.162 | 19.908 | |
| FOR 95 PERCENT ENDWALL SHEATHING : | 13.287 | 14.28 | 18.75 | |
| FOR 100 PERCENT ENDWALL SHEATHING : | 12.556 | 13.495 | 17.718 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **FOR BUILDING LENGTH = 60 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| **FOR BUILDING LENGTH = 65 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **RIMBAND TO SILL PLATE CONNECTION:** | | | | |
| SHEARWALL REACTION ($R_{end}$) = | 1623 | 1957 | 2594 | lbs |
| $V_{MAX}$ = | 3170 | 3937 | 5245 | lbs |
| V = | | | | |
| AT 30 ft LENGTH: | 106 | 132 | 175 | plf AT 30 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 9 | 7 | 5 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 65 | 52 | 39 | |
| AT 35 ft LENGTH: | 91 | 113 | 150 | plf AT 35 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 10 | 8 | 6 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 61 | 46 | |
| AT 40 ft LENGTH: | 80 | 99 | 132 | plf AT 40 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 12 | 10 | 7 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 69 | 52 | |
| AT 45 ft LENGTH: | 71 | 88 | 117 | plf AT 45 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 14 | 11 | 8 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 58 | |
| AT 50 ft LENGTH: | 64 | 79 | 105 | plf AT 50 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 15 | 12 | 9 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 65 | |
| AT 55 ft LENGTH: | 58 | 72 | 96 | plf AT 55 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 17 | 13 | 10 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 71 | |
| AT 60 ft LENGTH: | 53 | 66 | 88 | plf AT 60 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 18 | 15 | 11 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| AT 65 ft LENGTH: | 49 | 61 | 81 | plf AT 65 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 20 | 16 | 12 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| AT 70 ft LENGTH: | 46 | 57 | 75 | plf AT 70 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 21 | 17 | 13 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| AT 75 ft LENGTH: | 43 | 53 | 70 | plf AT 75 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 23 | 18 | 14 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| AT 80 ft LENGTH: | 40 | 50 | 66 | plf AT 80 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 24 | 19 | 15 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| SILL PLATE TO FOUNDATION CONNECTION: | | | | |
| $V_{MAX}$ = | 3170 | 3937 | 5245 | lbs |
| SPACING OF 1/2" ANCHOR BOLTS: | 72 | 72 | 72 | |
| SPACING OF 5/8" ANCHOR BOLTS: | 72 | 72 | 72 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **PERFORATED SHEARWALL LENGTH REQUIREMENTS** | | | | |
| **WALL CONSTRUCTION:** | | | | |
| **EXTERIOR: 7/16" OSB (BLOCKED) FASTENED w/ 16 ga. STAPLES 6" EDGE / 12" FIELD** | | | | |
| **INTERIOR:1/2" GWB FASTENED w/ 5D NAILS 7" EDGE / 10" FIELD** | | | | |
| $V_{ALLOW}$ = | 277 | 277 | 277 | plf |
| SIDEWALL - FULL HEIGHT SHEATHING REQUIRED (ft): | | | | |
| FOR 30 PERCENT SIDEWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 35 PERCENT SIDEWALL SHEATHING : | 10.463 | ** NG ** | ** NG ** | |
| FOR 40 PERCENT SIDEWALL SHEATHING : | 10.102 | ** NG ** | ** NG ** | |
| FOR 45 PERCENT SIDEWALL SHEATHING : | 9.765 | 11.769 | ** NG ** | |
| FOR 50 PERCENT SIDEWALL SHEATHING : | 9.45 | 11.389 | ** NG ** | |
| FOR 55 PERCENT SIDEWALL SHEATHING : | 9.084 | 10.948 | 14.513 | |
| FOR 60 PERCENT SIDEWALL SHEATHING : | 8.745 | 10.539 | 13.972 | |
| FOR 65 PERCENT SIDEWALL SHEATHING : | 8.37 | 10.088 | 13.373 | |
| FOR 70 PERCENT SIDEWALL SHEATHING : | 8.026 | 9.673 | 12.823 | |
| FOR 75 PERCENT SIDEWALL SHEATHING : | 7.659 | 9.231 | 12.237 | |
| FOR 80 PERCENT SIDEWALL SHEATHING : | 7.324 | 8.827 | 11.701 | |
| FOR 85 PERCENT SIDEWALL SHEATHING : | 6.934 | 8.357 | 11.078 | |
| FOR 90 PERCENT SIDEWALL SHEATHING : | 6.583 | 7.934 | 10.518 | |
| FOR 95 PERCENT SIDEWALL SHEATHING : | 6.2 | 7.472 | 9.906 | |
| FOR 100 PERCENT SIDEWALL SHEATHING : | 5.859 | 7.061 | 9.361 | |

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| | 5/12 PITCH, 30.33 ft WIDTH 115 | 5/12 PITCH, 30.33 ft WIDTH 130 | 5/12 PITCH, 30.33 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| FIRST FLOOR CORNER HOLDDOWN | | | | |
| CORNER STUD CONNECTION: | | | | |
| ENDWALL: | | | | |
| SHEARWALL REACTION (Rend): | | | | |
| AT 30 ft SIDEWALL LENGTH: | 1605 | 1725 | 2265 | lbs |
| AT 35 ft SIDEWALL LENGTH: | 1873 | 2013 | 2643 | lbs |
| AT 40 ft SIDEWALL LENGTH: | 2140 | 2300 | 3020 | lbs |
| AT 45 ft SIDEWALL LENGTH: | 2408 | 2588 | 3398 | lbs |
| AT 50 ft SIDEWALL LENGTH: | 2675 | 2875 | 3775 | lbs |
| AT 55 ft SIDEWALL LENGTH: | 2943 | 3163 | 4153 | lbs |
| AT 60 ft SIDEWALL LENGTH: | 3210 | 3450 | 4530 | lbs |
| AT 65 ft SIDEWALL LENGTH: | 3478 | 3738 | 4908 | lbs |
| AT 70 ft SIDEWALL LENGTH: | 3745 | 4025 | 5285 | lbs |
| AT 75 ft SIDEWALL LENGTH: | 4013 | 4313 | 5663 | lbs |
| AT 80 ft SIDEWALL LENGTH: | 4280 | 4600 | 6040 | lbs |
| DEAD LOAD REACTION (DL): | 1328 | 1328 | 1328 | lbs |
| SIDEWALL: | | | | |
| SHEARWALL REACTION (Rend): | 1623 | 1957 | 2594 | lbs |
| DEAD LOAD REACTION (DL): | | | | |
| AT 30 ft SIDEWALL LENGTH: | 1996 | 1996 | 1996 | lbs |
| AT 35 ft SIDEWALL LENGTH: | 2328 | 2328 | 2328 | lbs |
| AT 40 ft SIDEWALL LENGTH: | 2661 | 2661 | 2661 | lbs |
| AT 45 ft SIDEWALL LENGTH: | 2993 | 2993 | 2993 | lbs |
| AT 50 ft SIDEWALL LENGTH: | 3326 | 3326 | 3326 | lbs |
| AT 55 ft SIDEWALL LENGTH: | 3659 | 3659 | 3659 | lbs |
| AT 60 ft SIDEWALL LENGTH: | 3991 | 3991 | 3991 | lbs |
| AT 65 ft SIDEWALL LENGTH: | 4324 | 4324 | 4324 | lbs |
| AT 70 ft SIDEWALL LENGTH: | 4656 | 4656 | 4656 | lbs |
| AT 75 ft SIDEWALL LENGTH: | 4989 | 4989 | 4989 | lbs |
| AT 80 ft SIDEWALL LENGTH: | 5322 | 5322 | 5322 | lbs |

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## ***SECTION 8***

TRUSS CC557327



JAMES BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW

07/22/19

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER

| Job | Truss | Truss Type | Qty | Ply | Champion Homes 315 NC #108 |
|---|---|---|---|---|---|
| 90954 | CC557327 | HINGED ATTIC | 1 | 1 | Ref. #3157393 |

Universal Forest Products Inc., Grand Rapids, MI 49525, Weston Gorby 8.130 e Dec 12 2017 MiTek Industries, Inc. Thu Feb 15 13:30:55 2018 Page 1 of 2

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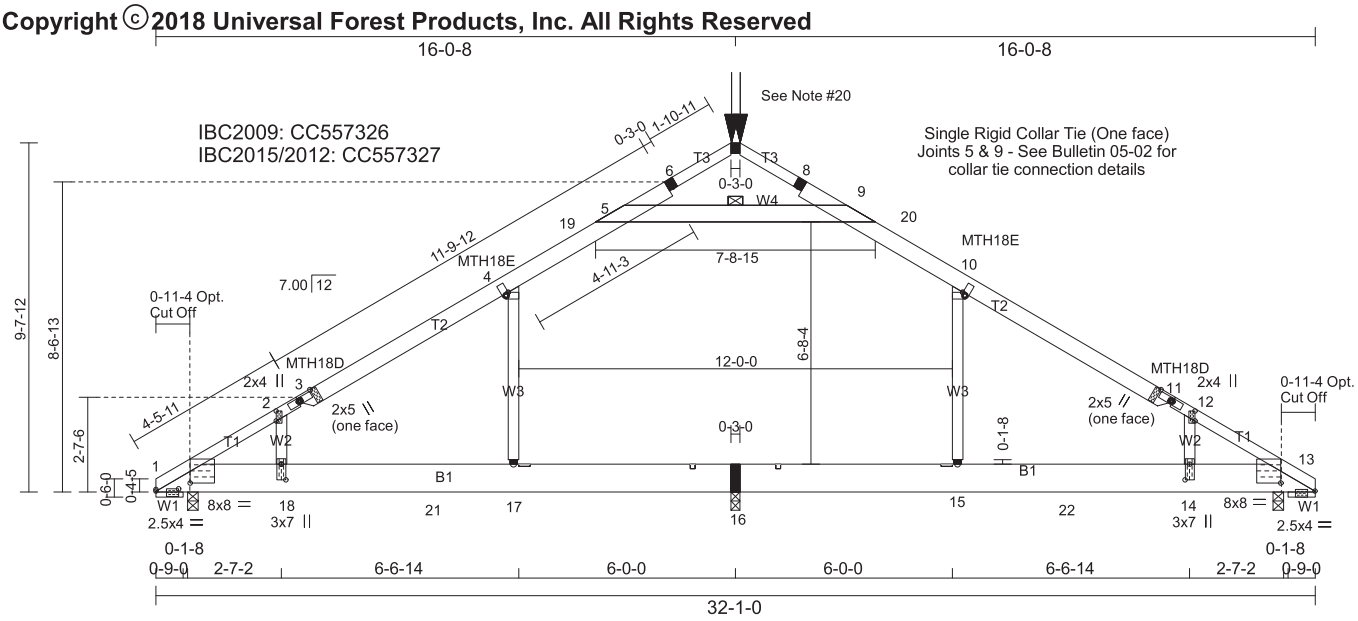


Plate Offsets (X,Y)-- [1:0-11-6,0-2-7], [2:0-2-0,0-0-0], [3:0-1-8,0-5-6], [3:0-0-11,0-0-0], [4:0-0-11,0-1-2], [10:0-0-11,0-1-2], [11:0-0-11,0-0-0], [11:0-1-8,0-5-6], [12:0-2-0,0-0-0], [13:0-11-6,0-2-7], [14:0-5-4,0-1-8], [18:0-5-4,0-1-8], [18:2-10-14,0-8-6], [18:3-5-10,0-8-6]

| LOADING (psf) | | SPACING- | 2-0-0 | CSI. | | DEFL. | in | (loc) | l/defl | L/d | PLATES | GRIP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TCLL | 23.1 | Plate Grip DOL | 1.15 | TC | 0.73 | Vert(LL) | 0.55 | 17-18 | >344 | 240 | MT20 | 197/144 |
| (Ground Snow=30.0) | | Lumber DOL | 1.15 | BC | 0.95 | Vert(CT) | -0.52 | 17-18 | >369 | 180 | MT18HS | 197/144 |
| TCDL | 7.0 | Rep Stress Incr | NO | WB | 0.94 | Horz(CT) | 0.02 | 13 | n/a | n/a | | |
| BCLL | 0.0 * | Code | IBC2015/TPI2014 | Matrix-R | | Attic | -0.35 | 16-17 | 421 | 360 | Weight: 215 lb | |
| BCDL | 7.0 | | IBC2012/TPI2007 | | | | | | | | FT = 0% | |

**LUMBER-**

TOP CHORD 2x4 SP No.2 or 2x4 SPF No.2 *Except* T2: 2x6 SP No.1 or 2x6 SPF No.2

BOT CHORD 2x10 SP No.1 or 2x10 SPF No.2

WEBS 2x4 SP No.2 or 2x4 SPF No.2 *Except* W4: 2x6 SP No.2 or 2x6 SPF No.2, W1: 1-1/2x1-11/16 SPF Stud

**BRACING-**

TOP CHORD Structural wood sheathing directly applied or 4-4-5 oc purlins.

BOT CHORD Rigid ceiling directly applied or 6-11-2 oc bracing.

WEBS 1 Row at midpt 5-9

**REACTIONS.** (lb/size) 1=1151/0-3-8 (min. 0-1-13), 13=1150/0-3-8 (min. 0-1-13), 16=359/0-3-0 (min. 0-1-8)
Max Horz 1=497(LC 8)
Max Uplift 1=-789(LC 9), 13=-791(LC 10), 16=-189(LC 9)
Max Grav 1=1151(LC 1), 13=1150(LC 1), 16=675(LC 2)

**FORCES.** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-1411/840, 2-3=-1502/1077, 3-4=-1469/1065, 4-35=-1287/1114, 5-35=-1188/1128, 5-6=-371/286, 6-7=-271/296, 7-8=-268/293, 8-9=-368/285, 9-36=-1187/1127, 10-36=-1287/1113, 10-11=-1469/1065, 11-12=-1502/1077, 12-13=-1411/835

BOT CHORD 1-18=-686/1191, 18-37=-686/1191, 19-37=-686/1191, 17-19=-686/1191, 17-24=-686/1191, 24-25=-686/1191, 25-26=-686/1191, 22-26=-686/1191, 20-22=-686/1191, 20-21=-686/1191, 21-23=-686/1191, 16-23=-686/1191, 16-29=-686/1191, 27-29=-686/1191, 27-28=-686/1191, 28-30=-686/1191, 30-33=-686/1191, 31-33=-686/1191, 31-32=-686/1191, 15-32=-686/1191, 15-34=-686/1191, 34-38=-686/1191, 14-38=-686/1191, 13-14=-686/1191

WEBS 10-15=-143/262, 2-18=-350/526, 12-14=-351/526, 4-17=-148/261, 5-9=-1012/983

**REQUIRED FIELD JOINT CONNECTIONS** - Maximum Compression (lb)/ Tension (lb)/ Shear (lb)/ Moment (lb-in)
5=1012/983/106/7091, 6=315/292/82/0, 7=212/247/162/0, 8=311/289/80/0, 9=1012/983/105/7175, 15=143/262/0/0, 16=686/1191/385/0, 17=148/261/0/0

**NOTES-**

1) Dado: 0-1-8 length x 0-1-8 deep dado, 1-0-0 to right edge from joint 16 on the top face.
2) Dado: 0-3-10 length x 0-0-12 deep dado, 5-6-14 to right edge from joint 16 on the top face.
3) Dado: 0-1-8 length x 0-1-8 deep dado, 1-0-0 to left edge from joint 16 on the top face.

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Cottage Grove, WI

GEORGIA REGISTERED No.26639 PROFESSIONAL ENGINEER KEVIN W. FREEMAN
2/13/2019

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 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***

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

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PHONE (616)-364-6161 FAX (616)-365-0060 GRAND RAPIDS, MI 49525

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4) Dado: 0-3-10 length x 0-0-12 deep dado, 5-6-14 to left edge from joint 16 on the top face.
5) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=2.8psf; BCDL=2.8psf; h=30ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
6) TCLL: ASCE 7-10; Pg=30.0 psf (ground snow); Ps=23.1 psf (roof snow); Category II; Exp C; Partially Exp.; Ct=1.1
7) Roof design snow load has been reduced to account for slope.
8) Unbalanced snow loads have been considered for this design.
9) All plates are MT20 plates unless otherwise indicated.
10) See HINGE PLATE DETAILS for plate placement.
11) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
12) All additional member connections shall be provided by others for forces as indicated.
13) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
14) * 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, with BCDL = 7.0psf.
15) Ceiling dead load (5.0 psf) on member(s). 4-5, 9-10, 5-9
16) Bottom chord live load (30.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 16-17, 15-16
17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 789 lb uplift at joint 1, 791 lb uplift at joint 13 and 189 lb uplift at joint 16.
18) Fixity of member 5 - 9 has been changed.
19) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
20) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 180 lb down and 238 lb up at 16-0-2 on top chord. The design/selection of such connection device(s) is the responsibility of others.
21) Attic room checked for L/360 deflection.
22) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
23) This truss is designed in accordance with the 2012 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
24) Take precaution to keep the chords in plane, any bending or twisting of the hinge plate must be repaired before the building is put into service.
25) The field-installed members are an integral part of the truss design. Retain a design professional to specify final field connections and temporary supports. All field-installed members must be properly fastened prior to applying any loading to the truss. This design anticipates the final set position.
26) Reference UFP Engineering Bulletin 06-06 for information on re-grading ripped lumber.
27) Based on: CC557326
28) Revision: IBC2015/2012 version

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DATE 10/10/19
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Cottage Grove, WI

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 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.

# Universal Forest Products®

| Job | Truss | MFG | Customer |
|---|---|---|---|
| 90954 | CC557327 | 315 | CHAMPION HOMES |

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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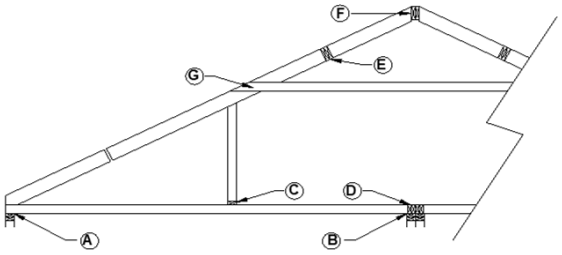
## TRUSS CONNECTIONS

TRUSS NUMBER : **CC557327**
PROJECT NUMBER : **190284**
TRUSS PITCH : **7/12**
MODULE WIDTH : **15'-2"**
TRUSS WIDTH : **32'-1"**




**UPLIFT CONNECTIONS (MWFRS LOADS):**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **150 / 119 mph** | | | | | | | | | |
| **CONDITION "A" - EXTERIOR WALL:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H6 TWIST STRAP |
| 791 | WIND | 1.6 | NO GOOD | N/A | N/A | OK | 3 | 8 | OK |
| | ALTERNATE: | | (9) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (6) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | |
| | ALTERNATE: | | (2) SIMPSON SDWC15600 SCREW | | | | | | |
| | ALTERNATE: | | (4) #10 x 5" WOOD SCREW WITH MINIMUM 2 in PENETRATION | | | | | | |
| **CONDITION "B" - MATING WALL (PER SIDE):** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs / PER SIDE) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON CS20 STRAP |
| 95 | WIND | 1.6 | OK | 2 | 2 | OK | 2 | 2 | OK |
| | ALTERNATE: | | (2) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (2) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | |
| **130 / 101 mph (ADJUSTED)** | | | | | | | | | |
| **CONDITION "A" - EXTERIOR WALL:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H6 TWIST STRAP |
| 594 | WIND | 1.6 | NO GOOD | N/A | N/A | OK | 2 | 6 | OK |
| | ALTERNATE: | | (7) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (5) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | |
| | ALTERNATE: | | (2) SIMPSON SDWC15600 SCREW | | | | | | |
| | ALTERNATE: | | (3) #10 x 5" WOOD SCREW WITH MINIMUM 2 in PENETRATION | | | | | | |
| **CONDITION "B" - MATING WALL (PER SIDE):** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs / PER SIDE) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H3 TWIST STRAP |
| 71 | WIND | 1.6 | OK | 2 | 2 | OK | 2 | 2 | OK |
| | ALTERNATE: | | (2) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (2) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | |
| **115 / 90 mph (ADJUSTED)** | | | | | | | | | |
| **CONDITION "A" - EXTERIOR WALL:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H8 TWIST STRAP |
| 464 | WIND | 1.6 | OK | 3 | 5 | OK | 2 | 5 | OK |
| | ALTERNATE: | | (6) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (4) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | |
| | ALTERNATE: | | (1) SIMPSON SDWC15600 SCREW | | | | | | |
| | ALTERNATE: | | (2) #10 x 5" WOOD SCREW WITH MINIMUM 2 in PENETRATION | | | | | | |
| **CONDITION "B" - MATING WALL (PER SIDE):** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP |
| UPLIFT (lbs / PER SIDE) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON H3 TWIST STRAP |
| 56 | WIND | 1.6 | OK | 2 | 2 | OK | 2 | 2 | OK |
| | ALTERNATE: | | (2) 16 d NAILS TOENAILED THROUGH BC INTO BAND PLUS (2) 16 d NAILS THROUGH SHEATHING INTO BAND AND STUD | | | | | | |

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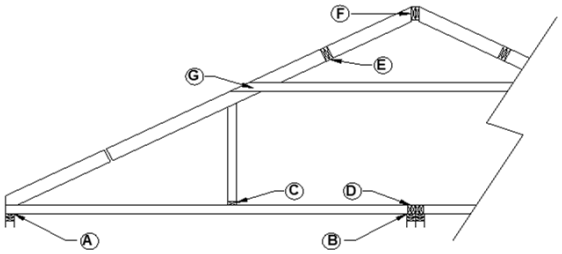
## TRUSS CONNECTIONS

TRUSS NUMBER : **CC557327**
PROJECT NUMBER : **190284**
TRUSS PITCH : **7/12**
MODULE WIDTH : **15'-2"**
TRUSS WIDTH : **32'-1"**




**MAXIMUM OF DL + LL + 30 psf GSL & 150 / 119 mph WIND**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CONDITION "C" - KNEEWALL TO BOTTOM CHORD:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END |
| TENSION (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON CS20 STRAP | 10 d NAILS |
| 261 | SNOW | 1.15 | OK | 3 | 3 | OK | 2 | 3 | OK | 3 |
| **CONDITION "D" - BOTTOM CHORD AT MATING LINE:** | | | | | | | | | | |
| | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END |
| TENSION (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON CS16 STRAP | 10 d NAILS |
| 1191 | SNOW | 1.15 | NO GOOD | N/A | N/A | NO GOOD | N/A | N/A | OK | 11 |
| | | ALTERNATE: | USE (10) 16 d NAILS THROUGH DECKING EACH SIDE | | | | | | | |
| SHEAR (lbs) | CASE | CD | | | | | | | | |
| 385 | SNOW | 1.15 | USE (5) 16 d NAILS TOENAILED INTO BEAM (WHERE NO BEARING WALL BELOW) | | | | | | | |
| | | ALTERNATE: | OK FOR SIMPSON L90 ANGLE | | | | | | | |
| **CONDITION "E" - TOP CHORD FLIP:** | | | | | | | | | | |
| TENSION (lbs) | CASE | CD | | | | | | | | |
| 289 | SNOW | 1.15 | USE (6) 6 d NAILS THROUGH SHEATHING EACH SIDE | | | | | | | |
| | | ALTERNATE: | USE (7) 16 ga STAPLE THROUGH SHEATHING EACH SIDE | | | | | | | |
| SHEAR (lbs) | CASE | CD | | | | | | | | |
| 80 | SNOW | 1.15 | USE (2) 16 d NAILS TOENAILED EACH END PLUS USE 10 d NAILS AT 24 in O.C. THROUGH PLATES | | | | | | | |
| **CONDITION "F" - RIDGE:** | | | CHECK STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END | QTY / END | CHECK ALT. STRAP | QTY / END |
| TENSION (lbs) | CASE | CD | 1 1/2" x 26ga STRAP | 10 d NAILS | 16 ga STAPLE | 1 1/2" x 20 ga STRAP | 10 d NAILS | 16 ga STAPLE | SIMPSON CS20 STRAP | 10 d NAILS |
| 247 | SNOW | 1.15 | OK | 2 | 3 | OK | 2 | 3 | OK | 3 |
| SHEAR (lbs) | CASE | CD | | | | | | | | |
| 162 | SNOW | 1.15 | USE (2) 16 d NAILS TOENAILED INTO BEAM EACH RAFTER | | | | | | | |
| **CONDITION "G" - COLLAR TIE:** | | | SEE UFP BULLETIN 05-02 | | | | | | | |

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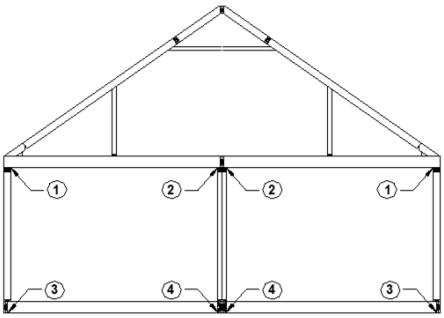
## COMPONENT LOAD SUMMARY

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EXTERIOR WALL DEAD LOAD = | 12 | psf | x | 10 | ft | = | 120 plf |
| MATING WALL DEAD LOAD = | 8 | psf | x | 10 | ft | = | 80 plf |
| FLOOR DEAD LOAD = | 10 | psf | x | 16 | ft / 2 = | | 80 plf |
| FLOOR LIVE LOAD = | 40 | psf | x | 16 | ft / 2 = | | 320 plf |
| CEILING DEAD LOAD = | 5 | psf | x | 16 | ft / 2 = | | 40 plf |

| | |
|---|---|
| LOCATION 1 = | EXT. WALL HEADER & EXT. WALL STUD |
| LOCATION 2 = | M. WALL HEADER & M. WALL STUD |
| LOCATION 3 = | PERIMETER BAND |
| LOCATION 4 = | CENTER GIRDER |
| LOCATIONS 3 & 4 MAY BE USED TO GENERATE FOUNDATION LOADS | |

* CROSS SECTION IS FOR REFERENCE ONLY AND MAY NOT REFLECT ACTUAL TRUSS




TRUSS CC557327, 7/12 PITCH, 32'-1" WIDTH

**COMPONENT LOADS (lbs/ft)**

30 psf GROUND SNOW (MATING WALL LOADS ARE PER SIDE OF LINE)

| LOCATION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| DEAD LOAD | 294 | 86 | 494 | 246 |
| LIVE LOAD | 282 | 83 | 602 | 403 |
| TOTAL LOAD | 576 | 169 | 1096 | 649 |

C & C UPLIFT

| LOCATION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| UPLIFT (0.6) DEAD LOAD | 176 | 52 | 296 | 148 |
| 150 / 119 mph UPLIFT | 396 | 47 | -100 | - |
| 130 / 101 mph UPLIFT | 297 | 36 | -1 | - |
| 115 / 90 mph UPLIFT | 232 | 28 | - | - |

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**101/130 mph WIND, 7/12 PITCH, FIELD PRESSURE (27.73 psf)**

| HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 ft | 2 x 4 SPF STUD GRADE | 12 | 740 | 0.23 | 9 ft | 2 x 4 SPF STUD GRADE | 12 | 295 | 0.376 | 10 ft | 2 x 4 SPF STUD GRADE | 12 | **NG** | - |
| | | 16 | 295 | 0.306 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | 295 | 0.367 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SPF #2 | 12 | 1555 | 0.197 | | 2 x 4 SPF #2 | 12 | 1025 | 0.322 | | 2 x 4 SPF #2 | 12 | **NG** | - |
| | | 16 | 1255 | 0.262 | | | 16 | 730 | 0.43 | | | 16 | **NG** | - |
| | | 19.2 | 1020 | 0.315 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | 665 | 0.394 | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SYP #2 | 12 | 1385 | 0.197 | | 2 x 4 SYP #2 | 12 | 855 | 0.322 | | 2 x 4 SYP #2 | 12 | **NG** | - |
| | | 16 | 1030 | 0.262 | | | 16 | 495 | 0.43 | | | 16 | **NG** | - |
| | | 19.2 | 750 | 0.315 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | 295 | 0.394 | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 6 SPF STUD GRADE | 12 | 4770 | 0.059 | | 2 x 6 SPF STUD GRADE | 12 | 3580 | 0.097 | | 2 x 6 SPF STUD GRADE | 12 | 2585 | 0.15 |
| | | 16 | 4155 | 0.079 | | | 16 | 2915 | 0.129 | | | 16 | 1885 | 0.2 |
| | | 19.2 | 3675 | 0.095 | | | 19.2 | 2385 | 0.155 | | | 19.2 | 1305 | 0.24 |
| | | 24 | 2955 | 0.118 | | | 24 | 1560 | 0.194 | | | 24 | 320 | 0.3 |
| | 2 x 6 SPF #2 | 12 | 7360 | 0.051 | | 2 x 6 SPF #2 | 12 | 5605 | 0.083 | | 2 x 6 SPF #2 | 12 | 4260 | 0.129 |
| | | 16 | 6785 | 0.068 | | | 16 | 5030 | 0.111 | | | 16 | 3695 | 0.172 |
| | | 19.2 | 6355 | 0.081 | | | 19.2 | 4600 | 0.133 | | | 19.2 | 3270 | 0.206 |
| | | 24 | 5740 | 0.101 | | | 24 | 3980 | 0.166 | | | 24 | 2650 | 0.257 |
| | 2 x 6 SYP #2 | 12 | 7265 | 0.051 | | 2 x 6 SYP #2 | 12 | 5430 | 0.083 | | 2 x 6 SYP #2 | 12 | 4055 | 0.129 |
| | | 16 | 6610 | 0.068 | | | 16 | 4790 | 0.111 | | | 16 | 3430 | 0.172 |
| | | 19.2 | 6120 | 0.081 | | | 19.2 | 4305 | 0.133 | | | 19.2 | 2950 | 0.206 |
| | | 24 | 5420 | 0.101 | | | 24 | 3600 | 0.166 | | | 24 | 2240 | 0.257 |

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THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS EVEN IF RATIO MEETS CODE REQUIREMENTS

**101/130 mph WIND, 7/12 PITCH, EDGE PRESSURE (33.66 psf)**

| HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 ft | 2 x 4 SPF STUD GRADE | 12 | 455 | 0.279 | 9 ft | 2 x 4 SPF STUD GRADE | 12 | **NG** | - | 10 ft | 2 x 4 SPF STUD GRADE | 12 | **NG** | - |
| | | 16 | 295 | 0.372 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | **NG** | - | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SPF #2 | 12 | 1360 | 0.239 | | 2 x 4 SPF #2 | 12 | 835 | 0.391 | | 2 x 4 SPF #2 | 12 | **NG** | - |
| | | 16 | 1005 | 0.318 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | 720 | 0.382 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 4 SYP #2 | 12 | 1160 | 0.239 | | 2 x 4 SYP #2 | 12 | 630 | 0.391 | | 2 x 4 SYP #2 | 12 | **NG** | - |
| | | 16 | 730 | 0.318 | | | 16 | **NG** | - | | | 16 | **NG** | - |
| | | 19.2 | 365 | 0.382 | | | 19.2 | **NG** | - | | | 19.2 | **NG** | - |
| | | 24 | **NG** | - | | | 24 | **NG** | - | | | 24 | **NG** | - |
| | 2 x 6 SPF STUD GRADE | 12 | 4375 | 0.072 | | 2 x 6 SPF STUD GRADE | 12 | 3155 | 0.118 | | 2 x 6 SPF STUD GRADE | 12 | 2140 | 0.182 |
| | | 16 | 3645 | 0.096 | | | 16 | 2350 | 0.157 | | | 16 | 1265 | 0.243 |
| | | 19.2 | 3065 | 0.115 | | | 19.2 | 1690 | 0.188 | | | 19.2 | 485 | 0.292 |
| | | 24 | 2165 | 0.144 | | | 24 | 570 | 0.235 | | | 24 | 295 | 0.365 |
| | 2 x 6 SPF #2 | 12 | 6990 | 0.062 | | 2 x 6 SPF #2 | 12 | 5235 | 0.101 | | 2 x 6 SPF #2 | 12 | 3895 | 0.156 |
| | | 16 | 6325 | 0.082 | | | 16 | 4575 | 0.134 | | | 16 | 3245 | 0.208 |
| | | 19.2 | 5830 | 0.098 | | | 19.2 | 4070 | 0.161 | | | 19.2 | 2745 | 0.25 |
| | | 24 | 5110 | 0.123 | | | 24 | 3340 | 0.202 | | | 24 | 1995 | 0.313 |
| | 2 x 6 SYP #2 | 12 | 6840 | 0.062 | | 2 x 6 SYP #2 | 12 | 5015 | 0.101 | | 2 x 6 SYP #2 | 12 | 3650 | 0.156 |
| | | 16 | 6090 | 0.082 | | | 16 | 4275 | 0.134 | | | 16 | 2920 | 0.208 |
| | | 19.2 | 5525 | 0.098 | | | 19.2 | 3705 | 0.161 | | | 19.2 | 2345 | 0.25 |
| | | 24 | 4705 | 0.123 | | | 24 | 2865 | 0.202 | | | 24 | 1465 | 0.313 |

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EVEN IF RATIO MEETS CODE REQUIREMENTS

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CHAMPION HOMES of NC

**EXTERIOR WALL HEADER - 1 STORY & 2 / 3 STORY UPPER LEVEL (LOCATION** Cottage Grove, WI **IBER HEADERS**
**TRUSS CC557327** 2x4 FOR (2) MEMBER HEADERS
**7/12 PITCH, 32.08 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD** 2x6 FOR (3) MEMBER HEADERS

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | MIN. NUMBER OF JACKSTUDS REQ'D EACH END SPF #2 | SYP #2 | SPF STUD | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 x 4 SPF #2 | 1 | 282 | 576 | 2 ' - 3" | Lb | 0.049 | 1 | 1 | 2 | 396 | 458 |
| 2 x 6 SPF #2 | 1 | 282 | 576 | 3 ' - 4" | Lb | 0.058 | 2 | 2 | 2 | 396 | 669 |
| 2 x 8 SPF #2 | 1 | 282 | 576 | 4 ' - 3" | Lb | 0.066 | 2 | 2 | 2 | 396 | 849 |
| 2 x 10 SPF #2 | 1 | 282 | 576 | 5 ' - 2" | Lb | 0.07 | 2 | 2 | 2 | 396 | 1037 |
| 2 x 12 SPF #2 | 1 | 282 | 576 | 6 ' - 0" | Lb | 0.071 | 2 | 2 | 3 | 396 | 1202 |
| 2 x 4 SYP #2 | 1 | 282 | 576 | 2 ' - 1" | Lb | 0.035 | 1 | 1 | 2 | 396 | 419 |
| 2 x 6 SYP #2 | 1 | 282 | 576 | 3 ' - 2" | Lb | 0.045 | 2 | 2 | 2 | 396 | 627 |
| 2 x 8 SYP #2 | 1 | 282 | 576 | 4 ' - 0" | Lb | 0.051 | 2 | 2 | 2 | 396 | 796 |
| 2 x 10 SYP #2 | 1 | 282 | 576 | 4 ' - 9" | Lb | 0.049 | 2 | 2 | 2 | 396 | 945 |
| 2 x 12 SYP #2 | 1 | 282 | 576 | 5 ' - 9" | Lb | 0.059 | 2 | 2 | 2 | 396 | 1149 |
| 1.5 x 3.5 LVL | 1 | 282 | 576 | 3 ' - 2" | Lb | 0.135 | 2 | 2 | 2 | 396 | 643 |
| 1.5 x 5.5 LVL | 1 | 282 | 576 | 5 ' - 0" | Lb | 0.2 | 2 | 2 | 2 | 396 | 996 |
| 1.5 x 7.25 LVL | 1 | 282 | 576 | 6 ' - 6" | Lb | 0.254 | 2 | 2 | 3 | 396 | 1302 |
| 1.5 x 9.25 LVL | 1 | 282 | 576 | 8 ' - 3" | Lb | 0.314 | 3 | 3 | 3 | 396 | 1648 |
| 1.5 x 11.25 LVL | 1 | 282 | 576 | 10 ' - 0" | Lb | 0.373 | 3 | 3 | 3 | 396 | 1991 |
| 1.5 x 12 LVL | 1 | 282 | 576 | 10 ' - 8" | Lb | 0.394 | 3 | 3 | 3 | 396 | 2119 |
| 1.5 x 14 LVL | 1 | 282 | 576 | 12 ' - 5" | Lb | 0.451 | 3 | 3 | 3 | 396 | 2461 |
| 1.5 x 16 LVL | 1 | 282 | 576 | 14 ' - 1" | Lb | 0.506 | 3 | 3 | 3 | 396 | 2800 |
| 1.5 x 18 LVL | 1 | 282 | 576 | 15 ' - 10" | Lb | 0.56 | 3 | 3 | 3 | 396 | 3137 |
| 1.5 x 20 LVL | 1 | 282 | 576 | 17 ' - 6" | Lb | 0.614 | 3 | 3 | 3 | 396 | 3474 |
| 1.5 x 22 LVL | 1 | 282 | 576 | 19 ' - 2" | Lb | 0.668 | 3 | 3 | 4 | 396 | 3810 |
| 1.5 x 24 LVL | 1 | 282 | 576 | 20 ' - 11" | Lb | 0.72 | 3 | 3 | 4 | 396 | 4145 |
| 2 x 4 SPF #2 | 2 | 282 | 576 | 3 ' - 3" | Lb | 0.099 | 1 | 1 | 1 | 396 | 648 |
| 2 x 6 SPF #2 | 2 | 282 | 576 | 4 ' - 9" | Lb | 0.116 | 1 | 1 | 1 | 396 | 946 |
| 2 x 8 SPF #2 | 2 | 282 | 576 | 6 ' - 0" | Lb | 0.131 | 1 | 1 | 2 | 396 | 1200 |
| 2 x 10 SPF #2 | 2 | 282 | 576 | 7 ' - 4" | Lb | 0.141 | 2 | 2 | 2 | 396 | 1466 |
| 2 x 12 SPF #2 | 2 | 282 | 576 | 8 ' - 7" | Lb | 0.141 | 2 | 2 | 2 | 396 | 1700 |
| 2 x 4 SYP #2 | 2 | 282 | 576 | 2 ' - 11" | Lb | 0.069 | 1 | 1 | 1 | 396 | 593 |
| 2 x 6 SYP #2 | 2 | 282 | 576 | 4 ' - 5" | Lb | 0.09 | 1 | 1 | 1 | 396 | 887 |
| 2 x 8 SYP #2 | 2 | 282 | 576 | 5 ' - 8" | Lb | 0.102 | 1 | 1 | 2 | 396 | 1126 |
| 2 x 10 SYP #2 | 2 | 282 | 576 | 6 ' - 8" | Lb | 0.097 | 2 | 2 | 2 | 396 | 1336 |
| 2 x 12 SYP #2 | 2 | 282 | 576 | 8 ' - 2" | Lb | 0.118 | 2 | 2 | 2 | 396 | 1625 |
| 1.5 x 3.5 LVL | 2 | 282 | 576 | 4 ' - 7" | Lb | 0.27 | 1 | 1 | 1 | 396 | 910 |
| 1.5 x 5.5 LVL | 2 | 282 | 576 | 7 ' - 1" | Lb | 0.4 | 2 | 2 | 2 | 396 | 1409 |
| 1.5 x 7.25 LVL | 2 | 282 | 576 | 9 ' - 3" | Lb | 0.508 | 2 | 2 | 2 | 396 | 1841 |
| 1.5 x 9.25 LVL | 2 | 282 | 576 | 11 ' - 9" | Lb | 0.628 | 2 | 2 | 3 | 396 | 2330 |
| 1.5 x 11.25 LVL | 2 | 282 | 576 | 14 ' - 2" | Lb | 0.745 | 3 | 3 | 3 | 396 | 2816 |
| 1.5 x 12 LVL | 2 | 282 | 576 | 15 ' - 1" | Lb | 0.788 | 3 | 3 | 3 | 396 | 2997 |
| 1.5 x 14 LVL | 2 | 282 | 576 | 17 ' - 6" | Lb | 0.901 | 3 | 3 | 3 | 396 | 3480 |
| 1.5 x 16 LVL | 2 | 282 | 576 | 19 ' - 11" | Lb | 1.012 | 3 | 3 | 3 | 396 | 3959 |
| 1.5 x 18 LVL | 2 | 282 | 576 | 22 ' - 4" | Lb | 1.121 | 3 | 3 | 3 | 396 | 4437 |
| 1.5 x 20 LVL | 2 | 282 | 576 | 24 ' - 9" | Lb | 1.228 | 3 | 3 | 4 | 396 | 4913 |
| 1.5 x 22 LVL | 2 | 282 | 576 | 27 ' - 2" | Lb | 1.335 | 3 | 3 | 4 | 396 | 5388 |
| 1.5 x 24 LVL | 2 | 282 | 576 | 29 ' - 7" | Lb | 1.44 | 3 | 3 | 4 | 396 | 5861 |
| 2 x 4 SPF #2 | 3 | 282 | 576 | 4 ' - 0" | Lb | 0.148 | 1 | 1 | 1 | 396 | 793 |
| 2 x 6 SPF #2 | 3 | 282 | 576 | 5 ' - 10" | Lb | 0.174 | 1 | 1 | 1 | 396 | 1158 |
| 2 x 8 SPF #2 | 3 | 282 | 576 | 7 ' - 5" | Lb | 0.197 | 1 | 1 | 1 | 396 | 1470 |
| 2 x 10 SPF #2 | 3 | 282 | 576 | 9 ' - 0" | Lb | 0.211 | 1 | 1 | 1 | 396 | 1795 |
| 2 x 12 SPF #2 | 3 | 282 | 576 | 10 ' - 6" | Lb | 0.212 | 1 | 1 | 1 | 396 | 2082 |
| 2 x 4 SYP #2 | 3 | 282 | 576 | 3 ' - 8" | Lb | 0.104 | 1 | 1 | 1 | 396 | 726 |
| 2 x 6 SYP #2 | 3 | 282 | 576 | 5 ' - 5" | Lb | 0.134 | 1 | 1 | 1 | 396 | 1086 |
| 2 x 8 SYP #2 | 3 | 282 | 576 | 6 ' - 11" | Lb | 0.153 | 1 | 1 | 1 | 396 | 1379 |
| 2 x 10 SYP #2 | 3 | 282 | 576 | 8 ' - 3" | Lb | 0.146 | 1 | 1 | 1 | 396 | 1637 |
| 2 x 12 SYP #2 | 3 | 282 | 576 | 10 ' - 0" | Lb | 0.177 | 1 | 1 | 1 | 396 | 1991 |
| 1.5 x 3.5 LVL | 3 | 282 | 576 | 5 ' - 7" | Lb | 0.405 | 1 | 1 | 1 | 396 | 1114 |
| 1.5 x 5.5 LVL | 3 | 282 | 576 | 8 ' - 8" | Lb | 0.599 | 1 | 1 | 1 | 396 | 1726 |
| 1.5 x 7.25 LVL | 3 | 282 | 576 | 11 ' - 4" | Lb | 0.763 | 1 | 1 | 1 | 396 | 2255 |
| 1.5 x 9.25 LVL | 3 | 282 | 576 | 14 ' - 4" | Lb | 0.942 | 1 | 1 | 1 | 396 | 2854 |
| 1.5 x 11.25 LVL | 3 | 282 | 576 | 17 ' - 5" | Lb | 1.118 | 1 | 1 | 2 | 396 | 3449 |
| 1.5 x 12 LVL | 3 | 282 | 576 | 18 ' - 6" | Lb | 1.182 | 1 | 1 | 2 | 396 | 3671 |
| 1.5 x 14 LVL | 3 | 282 | 576 | 21 ' - 6" | Lb | 1.352 | 1 | 1 | 2 | 396 | 4262 |
| 1.5 x 16 LVL | 3 | 282 | 576 | 24 ' - 5" | Lb | 1.518 | 2 | 2 | 2 | 396 | 4849 |
| 1.5 x 18 LVL | 3 | 282 | 576 | 27 ' - 5" | Lb | 1.681 | 2 | 2 | 2 | 396 | 5434 |
| 1.5 x 20 LVL | 3 | 282 | 576 | 30 ' - 4" | Lb | 1.843 | 2 | 2 | 2 | 396 | 6017 |
| 1.5 x 22 LVL | 3 | 282 | 576 | 33 ' - 3" | Lb | 2.003 | 2 | 2 | 3 | 396 | 6599 |
| 1.5 x 24 LVL | 3 | 282 | 576 | 36 ' - 3" | Lb | 2.16 | 2 | 2 | 3 | 396 | 7179 |

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS
EVEN IF RATIO MEETS CODE REQUIREMENTS



BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

PFS APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

**ALL WINDS, ALL PITCHES, LATERAL PRESSURE (5 psf)**

| HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) | HEIGHT | SIZE | SPACING | LOAD (lbs) | DEF. (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 ft | 2 x 3 SPF STUD GRADE | 12 | 610 | 0.114 | 9 ft | 2 x 3 SPF STUD GRADE | 12 | 435 | 0.186 | 10 ft | 2 x 3 SPF STUD GRADE | 12 | 310 | 0.288 |
| | | 16 | 540 | 0.151 | | | 16 | 370 | 0.248 | | | 16 | 295 | 0.385 |
| | | 19.2 | 490 | 0.182 | | | 19.2 | 320 | 0.298 | | | 19.2 | 295 | 0.461 |
| | | 24 | 420 | 0.227 | | | 24 | 295 | 0.372 | | | 24 | **NG** | - |
| | 2 x 3 SPF #2 | 12 | 830 | 0.097 | | 2 x 3 SPF #2 | 12 | 615 | 0.159 | | 2 x 3 SPF #2 | 12 | 465 | 0.247 |
| | | 16 | 775 | 0.13 | | | 16 | 565 | 0.213 | | | 16 | 415 | 0.33 |
| | | 19.2 | 735 | 0.156 | | | 19.2 | 525 | 0.255 | | | 19.2 | 385 | 0.395 |
| | | 24 | 680 | 0.195 | | | 24 | 475 | 0.319 | | | 24 | 335 | 0.494 |
| | 2 x 3 SYP #2 | 12 | 800 | 0.097 | | 2 x 3 SYP #2 | 12 | 585 | 0.159 | | 2 x 3 SYP #2 | 12 | 435 | 0.247 |
| | | 16 | 740 | 0.13 | | | 16 | 530 | 0.213 | | | 16 | 385 | 0.33 |
| | | 19.2 | 695 | 0.156 | | | 19.2 | 485 | 0.255 | | | 19.2 | 345 | 0.395 |
| | | 24 | 630 | 0.195 | | | 24 | 430 | 0.319 | | | 24 | 295 | 0.494 |
| | 2 x 4 SPF STUD GRADE | 12 | 1920 | 0.041 | | 2 x 4 SPF STUD GRADE | 12 | 1450 | 0.068 | | 2 x 4 SPF STUD GRADE | 12 | 1110 | 0.105 |
| | | 16 | 1810 | 0.055 | | | 16 | 1345 | 0.09 | | | 16 | 1010 | 0.14 |
| | | 19.2 | 1725 | 0.066 | | | 19.2 | 1265 | 0.108 | | | 19.2 | 940 | 0.168 |
| | | 24 | 1605 | 0.083 | | | 24 | 1155 | 0.136 | | | 24 | 830 | 0.21 |
| | 2 x 4 SPF #2 | 12 | 2495 | 0.035 | | 2 x 4 SPF #2 | 12 | 1905 | 0.058 | | 2 x 4 SPF #2 | 12 | 1485 | 0.09 |
| | | 16 | 2400 | 0.047 | | | 16 | 1815 | 0.077 | | | 16 | 1400 | 0.12 |
| | | 19.2 | 2330 | 0.057 | | | 19.2 | 1750 | 0.093 | | | 19.2 | 1340 | 0.144 |
| | | 24 | 2230 | 0.071 | | | 24 | 1660 | 0.116 | | | 24 | 1255 | 0.18 |
| | 2 x 4 SYP #2 | 12 | 2450 | 0.035 | | 2 x 4 SYP #2 | 12 | 1855 | 0.058 | | 2 x 4 SYP #2 | 12 | 1440 | 0.09 |
| | | 16 | 2340 | 0.047 | | | 16 | 1755 | 0.077 | | | 16 | 1345 | 0.12 |
| | | 19.2 | 2260 | 0.057 | | | 19.2 | 1685 | 0.093 | | | 19.2 | 1280 | 0.144 |
| | | 24 | 2150 | 0.071 | | | 24 | 1585 | 0.116 | | | 24 | 1185 | 0.18 |
| | 2 x 6 SPF STUD GRADE | 12 | 6495 | 0.011 | | 2 x 6 SPF STUD GRADE | 12 | 5520 | 0.017 | | 2 x 6 SPF STUD GRADE | 12 | 4600 | 0.027 |
| | | 16 | 6345 | 0.014 | | | 16 | 5340 | 0.023 | | | 16 | 4405 | 0.036 |
| | | 19.2 | 6230 | 0.017 | | | 19.2 | 5205 | 0.028 | | | 19.2 | 4260 | 0.043 |
| | | 24 | 6065 | 0.021 | | | 24 | 5010 | 0.035 | | | 24 | 4060 | 0.054 |
| | 2 x 6 SPF #2 | 12 | 9150 | 0.009 | | 2 x 6 SPF #2 | 12 | 7445 | 0.015 | | 2 x 6 SPF #2 | 12 | 6055 | 0.023 |
| | | 16 | 8980 | 0.012 | | | 16 | 7260 | 0.02 | | | 16 | 5870 | 0.031 |
| | | 19.2 | 8855 | 0.015 | | | 19.2 | 7125 | 0.024 | | | 19.2 | 5735 | 0.037 |
| | | 24 | 8670 | 0.018 | | | 24 | 6935 | 0.03 | | | 24 | 5545 | 0.046 |
| | 2 x 6 SYP #2 | 12 | 9325 | 0.009 | | 2 x 6 SYP #2 | 12 | 7490 | 0.015 | | 2 x 6 SYP #2 | 12 | 6040 | 0.023 |
| | | 16 | 9125 | 0.012 | | | 16 | 7280 | 0.02 | | | 16 | 5835 | 0.031 |
| | | 19.2 | 8970 | 0.015 | | | 19.2 | 7125 | 0.024 | | | 19.2 | 5685 | 0.037 |
| | | 24 | 8760 | 0.018 | | | 24 | 6910 | 0.03 | | | 24 | 5480 | 0.046 |

***** LOADS AND QUANTITIES ARE PER SIDE OF MATING WALL**

PFS APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

CHAMPION HOMES of NC

**MATING WALL HEADER - 1 STORY & 2 / 3 STORY UPPER LEVEL (LOCATION 2)**
**TRUSS CC557327**
**7/12 PITCH, 32.08 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

ER HEADERS
ERS
2x6 FOR (3) MEMBER HEADERS

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | MIN. NUMBER OF JACKSTUDS REQ'D EACH END SPF #2 | SYP #2 | SPF STUD | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 x 4 SPF #2 | 1 | 83 | 169 | 4 ' - 3" | Lb | 0.169 | 1 | 1 | 1 | 47 | 100 |
| 2 x 6 SPF #2 | 1 | 83 | 169 | 6 ' - 2" | Lb | 0.197 | 1 | 1 | 1 | 47 | 147 |
| 2 x 8 SPF #2 | 1 | 83 | 169 | 7 ' - 10" | Lb | 0.223 | 1 | 1 | 2 | 47 | 186 |
| 2 x 10 SPF #2 | 1 | 83 | 169 | 9 ' - 7" | Lb | 0.24 | 2 | 2 | 2 | 47 | 227 |
| 2 x 12 SPF #2 | 1 | 83 | 169 | 11 ' - 2" | Lb | 0.241 | 2 | 2 | 2 | 47 | 263 |
| 2 x 4 SYP #2 | 1 | 83 | 169 | 3 ' - 10" | Lb | 0.118 | 1 | 1 | 1 | 47 | 92 |
| 2 x 6 SYP #2 | 1 | 83 | 169 | 5 ' - 10" | Lb | 0.153 | 1 | 1 | 1 | 47 | 137 |
| 2 x 8 SYP #2 | 1 | 83 | 169 | 7 ' - 5" | Lb | 0.173 | 1 | 1 | 2 | 47 | 175 |
| 2 x 10 SYP #2 | 1 | 83 | 169 | 8 ' - 9" | Lb | 0.165 | 2 | 2 | 2 | 47 | 207 |
| 2 x 12 SYP #2 | 1 | 83 | 169 | 10 ' - 8" | Lb | 0.201 | 2 | 2 | 2 | 47 | 252 |
| 1.5 x 3.5 LVL | 1 | 83 | 169 | 5 ' - 11" | Lb | 0.46 | 1 | 1 | 1 | 47 | 141 |
| 1.5 x 5.5 LVL | 1 | 83 | 169 | 9 ' - 3" | Lb | 0.681 | 2 | 2 | 2 | 47 | 218 |
| 1.5 x 7.25 LVL | 1 | 83 | 169 | 12 ' - 1" | Lb | 0.866 | 2 | 2 | 2 | 47 | 285 |
| 1.5 x 9.25 LVL | 1 | 83 | 169 | 15 ' - 4" | Lb | 1.071 | 2 | 2 | 2 | 47 | 361 |
| 1.5 x 11.25 LVL | 1 | 83 | 169 | 18 ' - 6" | Lb | 1.27 | 2 | 2 | 2 | 47 | 436 |
| 1.5 x 12 LVL | 1 | 83 | 169 | 19 ' - 9" | Lb | 1.342 | 2 | 2 | 2 | 47 | 464 |
| 1.5 x 14 LVL | 1 | 83 | 169 | 22 ' - 11" | Lb | 1.536 | 2 | 2 | 3 | 47 | 539 |
| 1.5 x 16 LVL | 1 | 83 | 169 | 26 ' - 1" | Lb | 1.724 | 3 | 3 | 3 | 47 | 613 |
| 1.5 x 18 LVL | 1 | 83 | 169 | 29 ' - 3" | Lb | 1.91 | 3 | 3 | 3 | 47 | 687 |
| 1.5 x 20 LVL | 1 | 83 | 169 | 32 ' - 4" | Lb | 2.093 | 3 | 3 | 3 | 47 | 761 |
| 1.5 x 22 LVL | 1 | 83 | 169 | 35 ' - 6" | Lb | 2.275 | 3 | 3 | 3 | 47 | 835 |
| 1.5 x 24 LVL | 1 | 83 | 169 | 38 ' - 7" | Lb | 2.454 | 3 | 3 | 3 | 47 | 908 |
| 2 x 4 SPF #2 | 2 | 83 | 169 | 6 ' - 0" | Lb | 0.337 | 1 | 1 | 1 | 47 | 142 |
| 2 x 6 SPF #2 | 2 | 83 | 169 | 8 ' - 9" | Lb | 0.395 | 1 | 1 | 1 | 47 | 207 |
| 2 x 8 SPF #2 | 2 | 83 | 169 | 11 ' - 2" | Lb | 0.447 | 1 | 1 | 1 | 47 | 263 |
| 2 x 10 SPF #2 | 2 | 83 | 169 | 13 ' - 8" | Lb | 0.479 | 1 | 1 | 1 | 47 | 321 |
| 2 x 12 SPF #2 | 2 | 83 | 169 | 15 ' - 10" | Lb | 0.481 | 1 | 1 | 1 | 47 | 372 |
| 2 x 4 SYP #2 | 2 | 83 | 169 | 5 ' - 6" | Lb | 0.237 | 1 | 1 | 1 | 47 | 130 |
| 2 x 6 SYP #2 | 2 | 83 | 169 | 8 ' - 3" | Lb | 0.305 | 1 | 1 | 1 | 47 | 194 |
| 2 x 8 SYP #2 | 2 | 83 | 169 | 10 ' - 6" | Lb | 0.347 | 1 | 1 | 1 | 47 | 247 |
| 2 x 10 SYP #2 | 2 | 83 | 169 | 12 ' - 5" | Lb | 0.331 | 1 | 1 | 1 | 47 | 293 |
| 2 x 12 SYP #2 | 2 | 83 | 169 | 15 ' - 1" | Lb | 0.402 | 1 | 1 | 1 | 47 | 356 |
| 1.5 x 3.5 LVL | 2 | 83 | 169 | 8 ' - 3" | Ld TL - l/240 | 0.846 | 1 | 1 | 1 | 47 | 195 |
| 1.5 x 5.5 LVL | 2 | 83 | 169 | 13 ' - 0" | Ld TL - l/240 | 1.33 | 1 | 1 | 1 | 47 | 307 |
| 1.5 x 7.25 LVL | 2 | 83 | 169 | 17 ' - 1" | Lb | 1.733 | 1 | 1 | 1 | 47 | 403 |
| 1.5 x 9.25 LVL | 2 | 83 | 169 | 21 ' - 8" | Lb | 2.141 | 1 | 1 | 2 | 47 | 511 |
| 1.5 x 11.25 LVL | 2 | 83 | 169 | 26 ' - 3" | Lb | 2.539 | 2 | 2 | 2 | 47 | 617 |
| 1.5 x 12 LVL | 2 | 83 | 169 | 27 ' - 11" | Lb | 2.685 | 2 | 2 | 2 | 47 | 657 |
| 1.5 x 14 LVL | 2 | 83 | 169 | 32 ' - 5" | Lb | 3.071 | 2 | 2 | 2 | 47 | 762 |
| 1.5 x 16 LVL | 2 | 83 | 169 | 36 ' - 10" | Lb | 3.448 | 2 | 2 | 2 | 47 | 868 |
| 1.5 x 18 LVL | 2 | 83 | 169 | 41 ' - 4" | Lb | 3.819 | 2 | 2 | 3 | 47 | 972 |
| 1.5 x 20 LVL | 2 | 83 | 169 | 45 ' - 9" | Lb | 4.187 | 3 | 3 | 3 | 47 | 1077 |
| 1.5 x 22 LVL | 2 | 83 | 169 | 50 ' - 2" | Lb | 4.55 | 3 | 3 | 3 | 47 | 1181 |
| 1.5 x 24 LVL | 2 | 83 | 169 | 54 ' - 7" | Lb | 4.908 | 3 | 3 | 3 | 47 | 1284 |
| 2 x 4 SPF #2 | 3 | 83 | 169 | 7 ' - 4" | Lb | 0.506 | 1 | 1 | 1 | 47 | 174 |
| 2 x 6 SPF #2 | 3 | 83 | 169 | 10 ' - 9" | Lb | 0.592 | 1 | 1 | 1 | 47 | 254 |
| 2 x 8 SPF #2 | 3 | 83 | 169 | 13 ' - 8" | Lb | 0.67 | 1 | 1 | 1 | 47 | 322 |
| 2 x 10 SPF #2 | 3 | 83 | 169 | 16 ' - 8" | Lb | 0.719 | 1 | 1 | 1 | 47 | 393 |
| 2 x 12 SPF #2 | 3 | 83 | 169 | 19 ' - 4" | Lb | 0.722 | 1 | 1 | 1 | 47 | 456 |
| 2 x 4 SYP #2 | 3 | 83 | 169 | 6 ' - 9" | Lb | 0.355 | 1 | 1 | 1 | 47 | 159 |
| 2 x 6 SYP #2 | 3 | 83 | 169 | 10 ' - 1" | Lb | 0.458 | 1 | 1 | 1 | 47 | 238 |
| 2 x 8 SYP #2 | 3 | 83 | 169 | 12 ' - 10" | Lb | 0.52 | 1 | 1 | 1 | 47 | 302 |
| 2 x 10 SYP #2 | 3 | 83 | 169 | 15 ' - 3" | Lb | 0.496 | 1 | 1 | 1 | 47 | 359 |
| 2 x 12 SYP #2 | 3 | 83 | 169 | 18 ' - 6" | Lb | 0.604 | 1 | 1 | 1 | 47 | 436 |
| 1.5 x 3.5 LVL | 3 | 83 | 169 | 9 ' - 6" | Ld TL - l/240 | 0.968 | 1 | 1 | 1 | 47 | 224 |
| 1.5 x 5.5 LVL | 3 | 83 | 169 | 14 ' - 11" | Ld TL - l/240 | 1.522 | 1 | 1 | 1 | 47 | 351 |
| 1.5 x 7.25 LVL | 3 | 83 | 169 | 19 ' - 8" | Ld TL - l/240 | 2.006 | 1 | 1 | 1 | 47 | 463 |
| 1.5 x 9.25 LVL | 3 | 83 | 169 | 26 ' - 7" | Lb | 3.212 | 1 | 1 | 1 | 47 | 625 |
| 1.5 x 11.25 LVL | 3 | 83 | 169 | 32 ' - 1" | Lb | 3.809 | 1 | 1 | 1 | 47 | 756 |
| 1.5 x 12 LVL | 3 | 83 | 169 | 34 ' - 2" | Lb | 4.027 | 1 | 1 | 1 | 47 | 804 |
| 1.5 x 14 LVL | 3 | 83 | 169 | 39 ' - 8" | Lb | 4.607 | 1 | 1 | 1 | 47 | 934 |
| 1.5 x 16 LVL | 3 | 83 | 169 | 45 ' - 2" | Lb | 5.172 | 1 | 1 | 1 | 47 | 1063 |
| 1.5 x 18 LVL | 3 | 83 | 169 | 50 ' - 7" | Lb | 5.729 | 1 | 1 | 1 | 47 | 1191 |
| 1.5 x 20 LVL | 3 | 83 | 169 | 56 ' - 1" | Lb | 6.28 | 1 | 1 | 2 | 47 | 1319 |
| 1.5 x 22 LVL | 3 | 83 | 169 | 61 ' - 6" | Lb | 6.825 | 2 | 2 | 2 | 47 | 1446 |
| 1.5 x 24 LVL | 3 | 83 | 169 | 66 ' - 11" | Lb | 7.362 | 2 | 2 | 2 | 47 | 1573 |

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS EVEN IF RATIO MEETS CODE REQUIREMENTS



BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

PFS APPROVED
Sharron Barry
DATE 10/10/19
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PFS CORPORATION
Cottage Grove, WI

CHAMPION HOMES of NC

**PERIMETER BAND - 1 STORY & 2 / 3 STORY UPPER LEVEL (LOCATION 3)**
**TRUSS CC557327**
**7/12 PITCH, 32.08 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|
| 2 x 8 SPF #2 | 1 | 602 | 1096 | 3 ' - 1" | Lb | 0.034 | -100 | -155 |
| 2 x 10 SPF #2 | 1 | 602 | 1096 | 3 ' - 9" | Lb | 0.037 | -100 | -190 |
| 2 x 12 SPF #2 | 1 | 602 | 1096 | 4 ' - 4" | Lb | 0.037 | -100 | -220 |
| 2 x 8 SYP #2 | 1 | 602 | 1096 | 2 ' - 10" | Lb | 0.027 | -100 | -146 |
| 2 x 10 SYP #2 | 1 | 602 | 1096 | 3 ' - 5" | Lb | 0.026 | -100 | -173 |
| 2 x 12 SYP #2 | 1 | 602 | 1096 | 4 ' - 2" | Lb | 0.031 | -100 | -210 |
| 1.5 x 7.25 LVL | 1 | 602 | 1096 | 4 ' - 9" | Lb | 0.134 | -100 | -238 |
| 1.5 x 9.25 LVL | 1 | 602 | 1096 | 6 ' - 0" | Lb | 0.165 | -100 | -302 |
| 1.5 x 11.25 LVL | 1 | 602 | 1096 | 7 ' - 3" | Lb | 0.196 | -100 | -365 |
| 2 x 8 SPF #2 | 2 | 602 | 1096 | 4 ' - 4" | Lb | 0.069 | -100 | -220 |
| 2 x 10 SPF #2 | 2 | 602 | 1096 | 5 ' - 4" | Lb | 0.074 | -100 | -268 |
| 2 x 12 SPF #2 | 2 | 602 | 1096 | 6 ' - 2" | Lb | 0.074 | -100 | -311 |
| 2 x 8 SYP #2 | 2 | 602 | 1096 | 4 ' - 1" | Lb | 0.053 | -100 | -206 |
| 2 x 10 SYP #2 | 2 | 602 | 1096 | 4 ' - 10" | Lb | 0.051 | -100 | -245 |
| 2 x 12 SYP #2 | 2 | 602 | 1096 | 5 ' - 11" | Lb | 0.062 | -100 | -298 |
| 1.5 x 7.25 LVL | 2 | 602 | 1096 | 6 ' - 8" | Lb | 0.267 | -100 | -337 |
| 1.5 x 9.25 LVL | 2 | 602 | 1096 | 8 ' - 6" | Lb | 0.33 | -100 | -427 |
| 1.5 x 11.25 LVL | 2 | 602 | 1096 | 10 ' - 3" | Lb | 0.392 | -100 | -516 |
| 2 x 8 SPF #2 | 3 | 602 | 1096 | 5 ' - 4" | Lb | 0.103 | -100 | -269 |
| 2 x 10 SPF #2 | 3 | 602 | 1096 | 6 ' - 6" | Lb | 0.111 | -100 | -329 |
| 2 x 12 SPF #2 | 3 | 602 | 1096 | 7 ' - 7" | Lb | 0.111 | -100 | -381 |
| 2 x 8 SYP #2 | 3 | 602 | 1096 | 5 ' - 0" | Lb | 0.08 | -100 | -253 |
| 2 x 10 SYP #2 | 3 | 602 | 1096 | 5 ' - 11" | Lb | 0.077 | -100 | -300 |
| 2 x 12 SYP #2 | 3 | 602 | 1096 | 7 ' - 3" | Lb | 0.093 | -100 | -364 |
| 1.5 x 7.25 LVL | 3 | 602 | 1096 | 8 ' - 3" | Lb | 0.401 | -100 | -413 |
| 1.5 x 9.25 LVL | 3 | 602 | 1096 | 10 ' - 5" | Lb | 0.495 | -100 | -522 |
| 1.5 x 11.25 LVL | 3 | 602 | 1096 | 12 ' - 7" | Lb | 0.587 | -100 | -631 |

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PFS APPROVED
Sharron Barry
DATE 10/10/19
Approval Limited to Factory Built Portion Only
PFS CORPORATION
Cottage Grove, WI

**FLOOR JOIST (10 psf DEAD LOAD / 40 psf LIVE LOAD)**
**ALL LEVELS**

| MEMBER | QTY | SPACING (in O.C.) | TOTAL LOAD (plf) | LIVE LOAD (plf) | MAX. SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) |
|---|---|---|---|---|---|---|---|
| 2 x 8 SPF #2 | 1 | 12 | 50 | 40 | 13 ' - 6 " | Ld LL - l/360 | 0.563 |
| 2 x 10 SPF #2 | 1 | 12 | 50 | 40 | 17 ' - 2 " | Ld LL - l/360 | 0.719 |
| 2 x 12 SPF #2 | 1 | 12 | 50 | 40 | 20 ' - 7 " | Lb | 0.814 |
| 2 x 8 SYP #2 | 1 | 12 | 50 | 40 | 13 ' - 6 " | Ld LL - l/360 | 0.563 |
| 2 x 10 SYP #2 | 1 | 12 | 50 | 40 | 16 ' - 2 " | Lb | 0.559 |
| 2 x 12 SYP #2 | 1 | 12 | 50 | 40 | 19 ' - 8 " | Lb | 0.68 |
| 2 x 8 SPF #2 | 1 | 16 | 66.67 | 53.33 | 12 ' - 3 " | Ld LL - l/360 | 0.512 |
| 2 x 10 SPF #2 | 1 | 16 | 66.67 | 53.33 | 15 ' - 4 " | Lb | 0.607 |
| 2 x 12 SPF #2 | 1 | 16 | 66.67 | 53.33 | 17 ' - 10 " | Lb | 0.61 |
| 2 x 8 SYP #2 | 1 | 16 | 66.67 | 53.33 | 11 ' - 9 " | Lb | 0.44 |
| 2 x 10 SYP #2 | 1 | 16 | 66.67 | 53.33 | 14 ' - 0 " | Lb | 0.419 |
| 2 x 12 SYP #2 | 1 | 16 | 66.67 | 53.33 | 17 ' - 0 " | Lb | 0.51 |
| 2 x 8 SPF #2 | 1 | 19.2 | 80 | 64 | 11 ' - 5 " | Lb | 0.472 |
| 2 x 10 SPF #2 | 1 | 19.2 | 80 | 64 | 14 ' - 0 " | Lb | 0.506 |
| 2 x 12 SPF #2 | 1 | 19.2 | 80 | 64 | 16 ' - 3 " | Lb | 0.509 |
| 2 x 8 SYP #2 | 1 | 19.2 | 80 | 64 | 10 ' - 9 " | Lb | 0.366 |
| 2 x 10 SYP #2 | 1 | 19.2 | 80 | 64 | 12 ' - 9 " | Lb | 0.35 |
| 2 x 12 SYP #2 | 1 | 19.2 | 80 | 64 | 15 ' - 6 " | Lb | 0.425 |
| 2 x 8 SPF #2 | 1 | 24 | 100 | 80 | 10 ' - 3 " | Lb | 0.378 |
| 2 x 10 SPF #2 | 1 | 24 | 100 | 80 | 12 ' - 6 " | Lb | 0.405 |
| 2 x 12 SPF #2 | 1 | 24 | 100 | 80 | 14 ' - 6 " | Lb | 0.407 |
| 2 x 8 SYP #2 | 1 | 24 | 100 | 80 | 9 ' - 7 " | Lb | 0.293 |
| 2 x 10 SYP #2 | 1 | 24 | 100 | 80 | 11 ' - 5 " | Lb | 0.28 |
| 2 x 12 SYP #2 | 1 | 24 | 100 | 80 | 13 ' - 11 " | Lb | 0.34 |

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS
EVEN IF RATIO MEETS CODE REQUIREMENTS

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**CENTER GIRDER - 1 STORY & 2 / 3 STORY UPPER LEVEL (LOCATION 4)**
**TRUSS CC557327**
**7/12 PITCH, 32.08 ft UNIT WIDTH, 30 psf GROUND SNOW LOAD**

| MEMBER | QUANTITY | HEADER LL (plf) | HEADER TL (plf) | MAXIMUM SPAN | LIMITED BY | MID-SPAN DEFLECTION (in) | UPLIFT (plf) | UPLIFT REACTION (lbs) |
|---|---|---|---|---|---|---|---|---|
| 2 x 8 SPF #2 | 1 | 403 | 649 | 4 ' - 0" | Lb | 0.058 | 0 | 0 |
| 2 x 10 SPF #2 | 1 | 403 | 649 | 4 ' - 11" | Lb | 0.062 | 0 | 0 |
| 2 x 12 SPF #2 | 1 | 403 | 649 | 5 ' - 8" | Lb | 0.063 | 0 | 0 |
| 2 x 8 SYP #2 | 1 | 403 | 649 | 3 ' - 9" | Lb | 0.045 | 0 | 0 |
| 2 x 10 SYP #2 | 1 | 403 | 649 | 4 ' - 5" | Lb | 0.043 | 0 | 0 |
| 2 x 12 SYP #2 | 1 | 403 | 649 | 5 ' - 5" | Lb | 0.052 | 0 | 0 |
| 1.5 x 7.25 LVL | 1 | 403 | 649 | 6 ' - 2" | Lb | 0.226 | 0 | 0 |
| 1.5 x 9.25 LVL | 1 | 403 | 649 | 7 ' - 10" | Lb | 0.279 | 0 | 0 |
| 1.5 x 11.25 LVL | 1 | 403 | 649 | 9 ' - 5" | Lb | 0.331 | 0 | 0 |
| 2 x 8 SPF #2 | 2 | 403 | 649 | 5 ' - 8" | Lb | 0.116 | 0 | 0 |
| 2 x 10 SPF #2 | 2 | 403 | 649 | 6 ' - 11" | Lb | 0.125 | 0 | 0 |
| 2 x 12 SPF #2 | 2 | 403 | 649 | 8 ' - 1" | Lb | 0.125 | 0 | 0 |
| 2 x 8 SYP #2 | 2 | 403 | 649 | 5 ' - 4" | Lb | 0.09 | 0 | 0 |
| 2 x 10 SYP #2 | 2 | 403 | 649 | 6 ' - 4" | Lb | 0.086 | 0 | 0 |
| 2 x 12 SYP #2 | 2 | 403 | 649 | 7 ' - 8" | Lb | 0.105 | 0 | 0 |
| 1.5 x 7.25 LVL | 2 | 403 | 649 | 8 ' - 9" | Lb | 0.451 | 0 | 0 |
| 1.5 x 9.25 LVL | 2 | 403 | 649 | 11 ' - 1" | Lb | 0.558 | 0 | 0 |
| 1.5 x 11.25 LVL | 2 | 403 | 649 | 13 ' - 4" | Lb | 0.661 | 0 | 0 |
| 2 x 8 SPF #2 | 3 | 403 | 649 | 6 ' - 11" | Lb | 0.175 | 0 | 0 |
| 2 x 10 SPF #2 | 3 | 403 | 649 | 8 ' - 6" | Lb | 0.187 | 0 | 0 |
| 2 x 12 SPF #2 | 3 | 403 | 649 | 9 ' - 10" | Lb | 0.188 | 0 | 0 |
| 2 x 8 SYP #2 | 3 | 403 | 649 | 6 ' - 6" | Lb | 0.135 | 0 | 0 |
| 2 x 10 SYP #2 | 3 | 403 | 649 | 7 ' - 9" | Lb | 0.129 | 0 | 0 |
| 2 x 12 SYP #2 | 3 | 403 | 649 | 9 ' - 5" | Lb | 0.157 | 0 | 0 |
| 1.5 x 7.25 LVL | 3 | 403 | 649 | 10 ' - 8" | Lb | 0.677 | 0 | 0 |
| 1.5 x 9.25 LVL | 3 | 403 | 649 | 13 ' - 6" | Lb | 0.836 | 0 | 0 |
| 1.5 x 11.25 LVL | 3 | 403 | 649 | 16 ' - 4" | Lb | 0.992 | 0 | 0 |

THE DESIGNER IS TO DETERMINE IF ACTUAL DEFLECTION IS WITHIN ACCEPTABLE LIMITS EVEN IF RATIO MEETS CODE REQUIREMENTS



BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **DESIGN LIMITATIONS:** | | | | |
| MINIMUM BUILDING LENGTH : | 8 | 8 | 8 | ft (1.1.3.1, pp. 3) |
| MAXIMUM BUILDING LENGTH : | 128.3 | 128.3 | 128.3 | ft (1.1.3.1, pp. 3) |
| MAX. VERTICAL FLOOR OFFSET : | FLOOR DEPTH | FLOOR DEPTH | FLOOR DEPTH | ft (2.1.3.2 pp. 16) |
| MAXIMUM FLOOR DIAPHRAM LENGTH : | 128.3 | 128.3 | 128.3 | ft (2.1.3.2 pp. 16) |
| MAX. FLOOR DIAPHRAGM OPENING WIDTH : | 12 | 12 | 12 | ft (2.1.3.2 pp. 16) |
| MAX. FLOOR DIAPHRAGM OPENING LENGTH : | 12 | 12 | 12 | ft (2.1.3.2 pp. 16) |
| MAXIMUM CEILING DIAPHRAM LENGTH : | 60 | 60 | 60 | ft (2.1.3.2 pp. 16) |
| MAXIMUM SHEARWALL LINE OFFSET : | 4 | 4 | 4 | ft (2.1.3.3 pp. 16) |
| MAXIMUM SHEARWALL STORY OFFSET : | FLOOR DEPTH | FLOOR DEPTH | FLOOR DEPTH | ft (2.1.3.3 pp. 16) |
| MINIMUM SHEARWALL SEGMENT LENGTH : | 2' - 7" | 2' - 7" | 2' - 7" | ft (2.1.3.3 pp. 16) |
| MAXIMUM ROOF DIAPHRAM LENGTH : | 128.3 | 128.3 | 128.3 | ft (2.1.3.4, pp. 16) |

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**SHEARWALL DESIGN** CHAMPION HOMES OF NC

| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS L | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **UPLIFT CONNECTIONS:** | | | | |
| MRH ADJUSTMENT FACTOR ($C_{MRH}$) | 1.236 | 1.236 | 1.236 | (TABLE 2.1.3.1, pp. 15) |
| UPLIFT CONNECTION LOADS FROM WIND : | 116 | 149 | 198 | plf (TRUSS SHEETS) |
| REQUIRED TRUSS TIE DOWN : | | | | |
| AT 12" O.C.: | 116 | 149 | 198 | lbs AT 12" O.C. |
| CONNECTOR EACH TRUSS: | #10 x 5" WOOD SCREW (TOENAILED) | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | |
| AT 16" O.C.: | 155 | 199 | 264 | lbs AT 16" O.C. |
| CONNECTOR EACH TRUSS: | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | |
| AT 19.2" O.C.: | 186 | 239 | 317 | lbs AT 19.2" O.C. |
| CONNECTOR EACH TRUSS: | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | |
| AT 24" O.C.: | 232 | 298 | 396 | lbs AT 24" O.C. |
| CONNECTOR EACH TRUSS: | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | (1) SIMPSON SDWC15600 SCREW | |
| 1ST FLOOR STUD TO TOP PLATE / CEILING BAND | | | | |
| AT 12" O.C.: | 116 | 149 | 198 | lbs AT 12" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 3 | 3 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 3 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 2 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 3 | 4 | 5 | |
| AT 16" O.C.: | 155 | 199 | 264 | lbs AT 16" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 3 | 3 | 4 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 3 | 3 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 6 | |
| AT 19.2" O.C.: | 186 | 239 | 317 | lbs AT 19.2" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 3 | 4 | 5 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 3 | 4 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 7 | |
| AT 24" O.C.: | 232 | 298 | 396 | lbs AT 24" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 4 | 5 | 6 | |
| 8d COMMON NAIL (FACE NAILED) | 3 | 4 | 5 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 5 | 7 | 9 | |
| REQUIRED DOUBLE TOP PLATE SPLICE LENGTH : | 7 | 7 | 7 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 12 | 12 | 12 | in O.C. |
| OR | 6 | 6 | 6 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 9 | 9 | 9 | in O.C. |
| OR | 4 | 4 | 4 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 6 | 6 | 6 | in O.C. |
| OR | 2 | 2 | 2 | ft |
| w/ (2) ROWS 16d COMMON NAILS AT | 3 | 3 | 3 | in O.C. |
| 1st FLOOR STUD TO FLOOR BAND CONNECTION : | | | | |
| AT 12" O.C.: | 52 | 85 | 134 | lbs AT 12" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 2 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 1 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 2 | 2 | 3 | |
| AT 16" O.C.: | 69 | 113 | 178 | lbs AT 16" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 3 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 2 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 1 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 2 | 3 | 4 | |
| AT 19.2" O.C.: | 83 | 136 | 214 | lbs AT 19.2" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 2 | 3 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 3 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 2 | 2 | |
| QTY OF 16 ga. STAPLES EACH END | 2 | 3 | 5 | |
| AT 24" O.C.: | 103 | 169 | 267 | lbs AT 24" O.C. |
| THROUGH 7/16" OSB SHEATHING INTO STUD AND BAND: | | | | |
| 15 ga. STAPLE (FACE) | 2 | 3 | 4 | |
| 8d COMMON NAIL (FACE NAILED) | 2 | 2 | 3 | |
| CONNECTOR EACH STUD: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 3 | 4 | 6 | |
| FLOOR BAND TO SILL PLATE CONNECTION: | 4 | 37 | 86 | plf |
| ANCHOR BOLT UPLIFT AT 72 in (MAX) SPACING | 24 | 222 | 516 | |
| CONNECTOR EACH STUD WRAPPED AROUND SILL | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 1 | 2 | 5 | |
| QTY OF 16 ga. STAPLES EACH END | 1 | 5 | 11 | |
| CHECK BENDING IN RIMBAND: | | | | |
| DBL. 2x10 SPF #2 RIMBAND DESIGN VALUES: | OK FOR BENDING | OK FOR BENDING | OK FOR BENDING | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **LATERAL CONNECTIONS:** | | | | |
| LATERAL LOADS AT ROOF/CEILING DIAPHRAGM | | | | |
| WALL HEIGHT ADJUSTMENT FACTOR ($C_{WH}$) : | 1.125 | 1.125 | 1.125 | (H / 8) |
| WIND PERPENDICULAR TO RIDGE: | | | | |
| $w_{l\text{-}per}$ : | 140 | 178 | 237 | plf (TABLE 2.5A, pp. 68) |
| $w_{l\text{-}per}$' x $C_{MRH}$ x $C_{WH}$ = | 195 | 248 | 330 | plf |
| WIND PARALLEL TO RIDGE: | | | | |
| $w_{l\text{-}para}$ : | 93 | 112 | 149 | plf (TABLE 2.5B, pp. 69) |
| $w_{l\text{-}para}$' x $C_{MRH}$ x $C_{WH}$ = | 130 | 156 | 207 | plf |
| LATERAL LOADS AT FLOOR DIAPHRAGM | | | | |
| WIND PERPENDICULAR TO RIDGE: | | | | |
| $FL_{l\text{-}per}$ : | 148 | 189 | 251 | plf (TABLE 2.5A, pp. 68) |
| $FL_{l\text{-}per}$' x $C_{MRH}$ x $C_{WH}$ = | 206 | 263 | 350 | plf |
| WIND PARALLEL TO RIDGE: | | | | |
| $FL_{l\text{-}para}$ : | 100 | 128 | 171 | plf (TABLE 2.5B, pp. 69) |
| $FL_{l\text{-}para}$' x $C_{MRH}$ x $C_{WH}$ = | 140 | 178 | 238 | plf |
| LATERAL FRAMING CONNECTION LOADS FROM WIND | | | | |
| $w_{l\text{-}wall}$ : | 80 | 102 | 136 | plf (TABLE 2.1, pp. 62) |
| $W_{l\text{-}wall}$' x $C_{MRH}$ = | 99 | 127 | 169 | plf |
| TRUSS TO TOP PLATE CONNECTION FOR LATERAL LOAD : | | | | |
| AT 12" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 99 | 127 | 169 | lbs AT 12" O.C. |
| IN ADDITION TO THE #10 x 5" WOOD SCREW (TOENAILED) | 1 | 4 | 5 | TOENAILS |
| AT 16" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 132 | 170 | 226 | lbs AT 16" O.C. |
| IN ADDITION TO THE (1) SIMPSON SDWC15600 SCREW | 4 | 5 | 6 | TOENAILS |
| AT 19.2" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 159 | 204 | 271 | lbs AT 19.2" O.C. |
| IN ADDITION TO THE (1) SIMPSON SDWC15600 SCREW | 4 | 5 | 7 | TOENAILS |
| AT 24" O.C.: | | | | |
| QTY OF #10 x 5" WOOD SCREW (TOENAILED) REQUIRED | 198 | 254 | 338 | lbs AT 24" O.C. |
| IN ADDITION TO THE (1) SIMPSON SDWC15600 SCREW | 5 | 7 | 9 | TOENAILS |
| PLATE TO PLATE CONNECTION | | | | |
| AND BOTTOM PLATE TO FLOOR CONNECTION: | | | | |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED | 9 | 7 | 5 | in O.C. |
| PLATE TO STUD CONNECTION: | | | | |
| AT 12" O.C.: | | | | |
| | 99 | 127 | 169 | lbs AT 12" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 2 | 2 | 3 | FACE |
| AT 16" O.C.: | | | | |
| | 132 | 170 | 226 | lbs AT 16" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 2 | 3 | 4 | FACE |
| AT 19.2" O.C.: | | | | |
| | 159 | 204 | 271 | lbs AT 19.2" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 3 | 3 | 4 | FACE |
| AT 24" O.C.: | | | | |
| | 198 | 254 | 338 | lbs AT 24" O.C. |
| QTY OF 15 ga. STAPLE (FACE) REQUIRED : | 3 | 4 | 5 | FACE |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| ROOF SHEATHING SUCTION CONNECTION | | | | |
| FOR ZONE 1 (FIELD) PRESSURE: | 14.7 | 18.7 | 25 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 19 | 24 | 31 | psf |
| AT 12" O.C.: | 19 | 24 | 31 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 25 | 32 | 41 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 30 | 38 | 50 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 24" O.C.: | 38 | 48 | 62 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| FOR ZONE 2 (EDGE) PRESSURE: | 24.6 | 31.5 | 41.9 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 31 | 39 | 52 | psf |
| AT 12" O.C.: | 31 | 39 | 52 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 41 | 52 | 69 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 50 | 62 | 83 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 10 | in O.C. |
| AT 24" O.C.: | 62 | 78 | 104 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 11 | 8 | in O.C. |
| FOR ZONE 3 (CORNER) PRESSURE: | 37 | 47.3 | 63 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 46 | 59 | 78 | psf |
| AT 12" O.C.: | 46 | 59 | 78 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 11 | in O.C. |
| AT 16" O.C.: | 61 | 79 | 104 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 10 | 8 | in O.C. |
| AT 19.2" O.C.: | 74 | 94 | 125 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 11 | 9 | 7 | in O.C. |
| AT 24" O.C.: | 92 | 118 | 156 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 9 | 7 | 5 | in O.C. |
| FOR ZONE 3OH (CORNER OVERHANG) PRESSURE: | 46 | 58.8 | 78.3 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 57 | 73 | 97 | psf |
| AT 12" O.C.: | 57 | 73 | 97 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 11 | 9 | in O.C. |
| AT 16" O.C.: | 76 | 97 | 129 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 11 | 9 | 6 | in O.C. |
| AT 19.2" O.C.: | 91 | 117 | 155 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 9 | 7 | 5 | in O.C. |
| AT 24" O.C.: | 114 | 146 | 194 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 7 | 6 | 4 | in O.C. |
| WALL SHEATHING SUCTION CONNECTION: | | | | |
| FOR ZONE 4 (FIELD) PRESSURE: | 15.9 | 20.3 | 27.1 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 20 | 26 | 34 | psf |
| AT 12" O.C.: | 20 | 26 | 34 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 27 | 35 | 45 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 32 | 42 | 54 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 24" O.C.: | 40 | 52 | 68 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| FOR ZONE 5 (EDGE) PRESSURE: | 19.6 | 25.1 | 33.4 | psf (TABLE 2.4, pp. 67) |
| x $C_{MRH}$ = | 25 | 32 | 42 | psf |
| AT 12" O.C.: | 25 | 32 | 42 | lbs AT 12" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 16" O.C.: | 33 | 43 | 56 | lbs AT 16" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 19.2" O.C.: | 40 | 51 | 67 | lbs AT 19.2" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 12 | in O.C. |
| AT 24" O.C.: | 50 | 64 | 84 | lbs AT 24" O.C. |
| SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) | 12 | 12 | 10 | in O.C. |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| ROOF DIAPHRAM: | | | | (TABLE A-3.12A, pp. 193) |
| REQUIRED SHEATHING THICKNESS: | | | | |
| AT 12" O.C.: | 3/8 | 3/8 | 3/8 | FOR 12" O.C. |
| AT 16" O.C.: | 3/8 | 3/8 | 3/8 | FOR 16" O.C. |
| AT 19.2" O.C.: | 3/8 | 3/8 | 7/16 | FOR 19.2" O.C. |
| AT 24" O.C.: | 3/8 | 7/16 | 19/32 | FOR 24" O.C. |
| ROOF SHEATHING DIAPHRAM CONNECTION: | | | | (TABLES 2.5-1 & 2, pp. 70- |
| $v_{roof}$ = | | | | |
| AT 30 ft LENGTH: | 91 | 116 | 154 | plf AT 30 ft LENGTH |
| AT 35 ft LENGTH: | 106 | 135 | 180 | plf AT 35 ft LENGTH |
| AT 40 ft LENGTH: | 122 | 155 | 206 | plf AT 40 ft LENGTH |
| AT 45 ft LENGTH: | 137 | 174 | 231 | plf AT 45 ft LENGTH |
| AT 50 ft LENGTH: | 152 | 193 | 257 | plf AT 50 ft LENGTH |
| AT 55 ft LENGTH: | 167 | 213 | 283 | plf AT 55 ft LENGTH |
| AT 60 ft LENGTH: | 182 | 232 | 309 | plf AT 60 ft LENGTH |
| AT 65 ft LENGTH: | 198 | 251 | 334 | plf AT 65 ft LENGTH |
| AT 70 ft LENGTH: | 213 | 271 | 360 | plf AT 70 ft LENGTH |
| AT 75 ft LENGTH: | 228 | 290 | 386 | plf AT 75 ft LENGTH |
| AT 80 ft LENGTH: | 243 | 309 | 411 | plf AT 80 ft LENGTH |
| USE HORIZONTAL DIAPHRAM ASSEMBLIES (WFCM 2001 TABLE 2C, pp. 272) | | | | |
| TO DETERMINE APPLICABLE ROOF SHEATHING FASTENING | | | | |
| HORIZONTAL FLOOR DIAPHRAM CONTINUITY: | | | | |
| $v_{floor}$= | | | | |
| AT 30 ft LENGTH: | 96 | 123 | 164 | plf AT 30 ft LENGTH |
| AT 35 ft LENGTH: | 112 | 143 | 191 | plf AT 35 ft LENGTH |
| AT 40 ft LENGTH: | 128 | 164 | 218 | plf AT 40 ft LENGTH |
| AT 45 ft LENGTH: | 144 | 184 | 245 | plf AT 45 ft LENGTH |
| AT 50 ft LENGTH: | 161 | 205 | 273 | plf AT 50 ft LENGTH |
| AT 55 ft LENGTH: | 177 | 225 | 300 | plf AT 55 ft LENGTH |
| AT 60 ft LENGTH: | 193 | 246 | 327 | plf AT 60 ft LENGTH |
| AT 65 ft LENGTH: | 209 | 266 | 355 | plf AT 65 ft LENGTH |
| AT 70 ft LENGTH: | 225 | 287 | 382 | plf AT 70 ft LENGTH |
| AT 75 ft LENGTH: | 241 | 307 | 409 | plf AT 75 ft LENGTH |
| AT 80 ft LENGTH: | 257 | 328 | 436 | plf AT 80 ft LENGTH |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG MATE LINE): | | | | |
| TO ATTACH MODULE TO MODULE ALONG MATE LINE: | | | | |
| $V_f$ = | | | | |
| AT 30 ft LENGTH: | 2318 | 2959 | 3938 | lbs AT 30 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 4 | 5 | 7 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 56 | |
| AT 35 ft LENGTH: | 2704 | 3452 | 4594 | lbs AT 35 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 5 | 6 | 8 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 56 | |
| AT 40 ft LENGTH: | 3090 | 3945 | 5250 | lbs AT 40 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 5 | 7 | 9 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 45 ft LENGTH: | 3477 | 4439 | 5907 | lbs AT 45 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 6 | 8 | 10 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 50 ft LENGTH: | 3863 | 4932 | 6563 | lbs AT 50 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 7 | 8 | 11 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 55 ft LENGTH: | 4249 | 5425 | 7219 | lbs AT 55 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 7 | 9 | 12 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 57 | |
| AT 60 ft LENGTH: | 4635 | 5918 | 7875 | lbs AT 60 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 8 | 10 | 13 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 65 ft LENGTH: | 5022 | 6411 | 8532 | lbs AT 65 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 9 | 11 | 14 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 70 ft LENGTH: | 5408 | 6904 | 9188 | lbs AT 70 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 9 | 12 | 15 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 75 ft LENGTH: | 5794 | 7397 | 9844 | lbs AT 75 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 10 | 12 | 16 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |
| AT 80 ft LENGTH: | 6180 | 7890 | 10500 | lbs AT 80 ft LENGTH |
| QTY OF 1/2" DIA. THRU BOLTS: | 10 | 13 | 17 | |
| MAXIMUM BOLT SPACING: | 72 | 72 | 58 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG ENDWALLS): | | | | |
| T = | | | | |
| AT 30 ft LENGTH: | 451 | 573 | 766 | lbs AT 30 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 4 | 5 | 7 | |
| QTY OF 16 ga. STAPLES EACH END | 10 | 12 | 16 | |
| AT 35 ft LENGTH: | 386 | 491 | 657 | lbs AT 35 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 4 | 4 | 6 | |
| QTY OF 16 ga. STAPLES EACH END | 8 | 11 | 14 | |
| AT 40 ft LENGTH: | 338 | 430 | 575 | lbs AT 40 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 3 | 4 | 5 | |
| QTY OF 16 ga. STAPLES EACH END | 7 | 9 | 12 | |
| AT 45 ft LENGTH: | 301 | 382 | 511 | lbs AT 45 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 3 | 4 | 5 | |
| QTY OF 16 ga. STAPLES EACH END | 7 | 8 | 11 | |
| AT 50 ft LENGTH: | 271 | 344 | 460 | lbs AT 50 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 3 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 6 | 8 | 10 | |
| AT 55 ft LENGTH: | 246 | 313 | 418 | lbs AT 55 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 6 | 7 | 9 | |
| AT 60 ft LENGTH: | 226 | 287 | 383 | lbs AT 60 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 3 | 4 | |
| QTY OF 16 ga. STAPLES EACH END | 5 | 6 | 8 | |
| AT 65 ft LENGTH: | 208 | 265 | 354 | lbs AT 65 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 3 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 5 | 6 | 8 | |
| AT 70 ft LENGTH: | 193 | 246 | 329 | lbs AT 70 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 6 | 7 | |
| AT 75 ft LENGTH: | 181 | 229 | 307 | lbs AT 75 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 7 | |
| AT 80 ft LENGTH: | 169 | 215 | 288 | lbs AT 80 ft LENGTH |
| CONNECTOR EACH ENDWALL: | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | 1.5 x 20 ga STRAP | |
| QTY OF 8d NAILS EACH END | 2 | 2 | 3 | |
| QTY OF 16 ga. STAPLES EACH END | 4 | 5 | 6 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **FOR BUILDING LENGTH = 60 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | (4) ROWS AT 2 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 2 in O.C. | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| **FOR BUILDING LENGTH = 65 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (3) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | (4) ROWS AT 2 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | (4) ROWS AT 2 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 2 in O.C. | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | (3) ROWS AT 2 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | (2) ROWS AT 2 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | (2) ROWS AT 3 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | (1) ROWS AT 2 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| TRUSS BOTTOM CHORD TO TOP PLATE CONNECTION: | | | | |
| $V_{MAX}$ = | | | | |
| AT 30 ft SIDEWALL LENGTH: | 2925 | 3720 | 4950 | lbs AT 30 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 10 | 8 | 6 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 72 | 59 | 44 | |
| AT 35 ft SIDEWALL LENGTH: | 3413 | 4340 | 5775 | lbs AT 35 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 9 | 7 | 5 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 64 | 51 | 38 | |
| AT 40 ft SIDEWALL LENGTH: | 3900 | 4960 | 6600 | lbs AT 40 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 8 | 6 | 4 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 56 | 44 | 33 | |
| AT 45 ft SIDEWALL LENGTH: | 4388 | 5580 | 7425 | lbs AT 45 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 7 | 5 | 4 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 50 | 39 | 29 | |
| AT 50 ft SIDEWALL LENGTH: | 4875 | 6200 | 8250 | lbs AT 50 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 6 | 5 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 45 | 35 | 26 | |
| AT 55 ft SIDEWALL LENGTH: | 5363 | 6820 | 9075 | lbs AT 55 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 5 | 4 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 41 | 32 | 24 | |
| AT 60 ft SIDEWALL LENGTH: | 5850 | 7440 | 9900 | lbs AT 60 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 5 | 4 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 37 | 29 | 22 | |
| AT 65 ft SIDEWALL LENGTH: | 6338 | 8060 | 10725 | lbs AT 65 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 5 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 34 | 27 | 20 | |
| AT 70 ft SIDEWALL LENGTH: | 6825 | 8680 | 11550 | lbs AT 70 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 32 | 25 | 19 | |
| AT 75 ft SIDEWALL LENGTH: | 7313 | 9300 | 12375 | lbs AT 75 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 30 | 23 | 17 | |
| AT 80 ft SIDEWALL LENGTH: | 7800 | 9920 | 13200 | lbs AT 80 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 28 | 22 | 16 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| RIMBAND TO SILL PLATE CONNECTION: | | | | |
| $V_{MAX}$ = | | | | |
| AT 30 ft SIDEWALL LENGTH: | 5243 | 6679 | 8888 | lbs AT 30 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 6 | 4 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 42 | 33 | 24 | |
| AT 35 ft SIDEWALL LENGTH: | 6117 | 7792 | 10369 | lbs AT 35 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 5 | 4 | 3 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 36 | 28 | 21 | |
| AT 40 ft SIDEWALL LENGTH: | 6990 | 8905 | 11850 | lbs AT 40 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 31 | 24 | 18 | |
| AT 45 ft SIDEWALL LENGTH: | 7865 | 10019 | 13332 | lbs AT 45 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 4 | 3 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 28 | 22 | 16 | |
| AT 50 ft SIDEWALL LENGTH: | 8738 | 11132 | 14813 | lbs AT 50 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 2 | 2 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 25 | 19 | 14 | |
| AT 55 ft SIDEWALL LENGTH: | 9612 | 12245 | 16294 | lbs AT 55 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 2 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 23 | 18 | 13 | |
| AT 60 ft SIDEWALL LENGTH: | 10485 | 13358 | 17775 | lbs AT 60 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 3 | 2 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 21 | 16 | 12 | |
| AT 65 ft SIDEWALL LENGTH: | 11360 | 14471 | 19257 | lbs AT 65 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 2 | 2 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 19 | 15 | 11 | |
| AT 70 ft SIDEWALL LENGTH: | 12233 | 15584 | 20738 | lbs AT 70 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 2 | 2 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 18 | 14 | 10 | |
| AT 75 ft SIDEWALL LENGTH: | 13107 | 16697 | 22219 | lbs AT 75 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 2 | 1 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 16 | 13 | 9 | |
| AT 80 ft SIDEWALL LENGTH: | 13980 | 17810 | 23700 | lbs AT 80 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED) | 2 | 1 | 1 | |
| OR SPACING OF (1) SIMPSON LTP4 PLATE | 15 | 12 | 9 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| SILL PLATE TO FOUNDATION CONNECTION: | | | | |
| $V_{MAX}$ = | | | | |
| AT 30 ft LENGTH: | 5243 | 6679 | 8888 | lbs AT 30 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 72 | 60 | 45 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 72 | |
| AT 35 ft LENGTH: | 6117 | 7792 | 10369 | lbs AT 35 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 72 | 51 | 40 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 60 | |
| AT 40 ft LENGTH: | 6990 | 8905 | 11850 | lbs AT 40 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 60 | 45 | 32 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 72 | 51 | |
| AT 45 ft LENGTH: | 7865 | 10019 | 13332 | lbs AT 45 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 51 | 40 | 30 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 60 | 45 | |
| AT 50 ft LENGTH: | 8738 | 11132 | 14813 | lbs AT 50 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 45 | 36 | 25 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 72 | 51 | 40 | |
| AT 55 ft LENGTH: | 9612 | 12245 | 16294 | lbs AT 55 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 40 | 32 | 24 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 60 | 45 | 36 | |
| AT 60 ft LENGTH: | 10485 | 13358 | 17775 | lbs AT 60 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 40 | 30 | 22 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 51 | 45 | 32 | |
| AT 65 ft LENGTH: | 11360 | ~~14471~~ | 19257 | lbs AT 65 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 36 | 27 | 20 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 51 | 40 | 30 | |
| AT 70 ft LENGTH: | 12233 | ~~15584~~ | 20738 | lbs AT 70 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 32 | 25 | 18 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 45 | 36 | 27 | |
| AT 75 ft LENGTH: | 13107 | 16697 | 22219 | lbs AT 75 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 30 | 24 | 17 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 45 | 32 | 25 | |
| AT 80 ft LENGTH: | 13980 | 17810 | 23700 | lbs AT 80 ft LENGTH |
| SPACING OF 1/2" ANCHOR BOLTS. | 27 | 22 | 16 | |
| SPACING OF 5/8" ANCHOR BOLTS. | 40 | 32 | 24 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **FOR BUILDING LENGTH = 60 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| **FOR BUILDING LENGTH = 65 ft:** | | | | |
| WITH 30% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | (1) ROWS AT 3 in O.C. | |
| WITH 35% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | (1) ROWS AT 4 in O.C. | |
| WITH 40% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 5 in O.C. | |
| WITH 45% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 50% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 55% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 60% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 65% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 70% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 75% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 80% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 85% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 90% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 95% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |
| WITH 100% SHEATHING: USE SHEATHING CONNECTION WITH 8d NAILS: | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | (1) ROWS AT 6 in O.C. | |

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Cottage Grove, WI



| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **RIMBAND TO SILL PLATE CONNECTION:** | | | | |
| SHEARWALL REACTION ($R_{end}$) = | 2086 | 2503 | 3321 | lbs |
| $V_{MAX}$ = | 3771 | 4645 | 6185 | lbs |
| V = | | | | |
| AT 30 ft LENGTH: | 126 | 155 | 207 | plf AT 30 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 7 | 6 | 4 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 54 | 44 | 33 | |
| AT 35 ft LENGTH: | 108 | 133 | 177 | plf AT 35 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 9 | 7 | 5 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 63 | 51 | 38 | |
| AT 40 ft LENGTH: | 95 | 117 | 155 | plf AT 40 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 10 | 8 | 6 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 58 | 44 | |
| AT 45 ft LENGTH: | 84 | 104 | 138 | plf AT 45 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 11 | 9 | 7 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 66 | 50 | |
| AT 50 ft LENGTH: | 76 | 93 | 124 | plf AT 50 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 13 | 10 | 8 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 55 | |
| AT 55 ft LENGTH: | 69 | 85 | 113 | plf AT 55 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 14 | 11 | 8 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 61 | |
| AT 60 ft LENGTH: | 63 | 78 | 104 | plf AT 60 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 15 | 12 | 9 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 66 | |
| AT 65 ft LENGTH: | 59 | 72 | 96 | plf AT 65 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 16 | 13 | 10 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 71 | |
| AT 70 ft LENGTH: | 54 | 67 | 89 | plf AT 70 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 18 | 14 | 11 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| AT 75 ft LENGTH: | 51 | 62 | 83 | plf AT 75 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 19 | 16 | 12 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| AT 80 ft LENGTH: | 48 | 59 | 78 | plf AT 80 ft LENGTH |
| SPACING OF 0.131" x 2.5" COMMON NAIL (TOENAILED): | 20 | 16 | 12 | |
| SPACING OF (1) SIMPSON LTP4 PLATE: | 72 | 72 | 72 | |
| SILL PLATE TO FOUNDATION CONNECTION: | | | | |
| $V_{MAX}$ = | 3771 | 4645 | 6185 | lbs |
| SPACING OF 1/2" ANCHOR BOLTS: | 72 | 72 | 72 | |
| SPACING OF 5/8" ANCHOR BOLTS: | 72 | 72 | 72 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| **PERFORATED SHEARWALL LENGTH REQUIREMENTS** | | | | |
| **WALL CONSTRUCTION:** | | | | |
| **EXTERIOR: 7/16" OSB (BLOCKED) FASTENED w/ 16 ga. STAPLES 6" EDGE / 12" FIELD** | | | | |
| **INTERIOR:1/2" GWB FASTENED w/ 5D NAILS 7" EDGE / 10" FIELD** | | | | |
| $V_{ALLOW}$ = | 277 | 277 | 277 | plf |
| SIDEWALL - FULL HEIGHT SHEATHING REQUIRED (ft): | | | | |
| FOR 30 PERCENT SIDEWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 35 PERCENT SIDEWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 40 PERCENT SIDEWALL SHEATHING : | ** NG ** | ** NG ** | ** NG ** | |
| FOR 45 PERCENT SIDEWALL SHEATHING : | 12.545 | ** NG ** | ** NG ** | |
| FOR 50 PERCENT SIDEWALL SHEATHING : | 12.14 | 14.569 | ** NG ** | |
| FOR 55 PERCENT SIDEWALL SHEATHING : | 11.67 | 14.004 | ** NG ** | |
| FOR 60 PERCENT SIDEWALL SHEATHING : | 11.234 | 13.481 | 17.889 | |
| FOR 65 PERCENT SIDEWALL SHEATHING : | 10.753 | 12.904 | 17.122 | |
| FOR 70 PERCENT SIDEWALL SHEATHING : | 10.311 | 12.373 | 16.419 | |
| FOR 75 PERCENT SIDEWALL SHEATHING : | 9.839 | 11.807 | 15.667 | |
| FOR 80 PERCENT SIDEWALL SHEATHING : | 9.409 | 11.291 | 14.982 | |
| FOR 85 PERCENT SIDEWALL SHEATHING : | 8.908 | 10.689 | 14.184 | |
| FOR 90 PERCENT SIDEWALL SHEATHING : | 8.457 | 10.149 | 13.467 | |
| FOR 95 PERCENT SIDEWALL SHEATHING : | 7.965 | 9.558 | 12.683 | |
| FOR 100 PERCENT SIDEWALL SHEATHING : | 7.527 | 9.032 | 11.986 | |

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| | 7/12 PITCH, 32.08 ft WIDTH 115 | 7/12 PITCH, 32.08 ft WIDTH 130 | 7/12 PITCH, 32.08 ft WIDTH 150 | |
|---|---|---|---|---|
| **DESIGN INFORMATION:** | | | | |
| MEETS LIMITATIONS OF WFCM: | YES | YES | YES | |
| WIND: | 115 | 130 | 150 | mph |
| EXPOSURE: | C | C | C | |
| WALL HEIGHT: | 9 | 9 | 9 | ft |
| FLOOR DEAD LOAD (FDL): | 10 | 10 | 10 | psf |
| WALL DEAD LOAD (WDL): | 12 | 12 | 12 | psf |
| ROOF & CEILING ASSEMBLY DEAD LOAD = | 15 | 15 | 15 | psf |
| FIRST FLOOR CORNER HOLDDOWN | | | | |
| CORNER STUD CONNECTION: | | | | |
| ENDWALL: | | | | |
| SHEARWALL REACTION (Rend): | | | | |
| AT 30 ft SIDEWALL LENGTH: | 2925 | 3720 | 4950 | lbs |
| AT 35 ft SIDEWALL LENGTH: | 3413 | 4340 | 5775 | lbs |
| AT 40 ft SIDEWALL LENGTH: | 3900 | 4960 | 6600 | lbs |
| AT 45 ft SIDEWALL LENGTH: | 4388 | 5580 | 7425 | lbs |
| AT 50 ft SIDEWALL LENGTH: | 4875 | 6200 | 8250 | lbs |
| AT 55 ft SIDEWALL LENGTH: | 5363 | 6820 | 9075 | lbs |
| AT 60 ft SIDEWALL LENGTH: | 5850 | 7440 | 9900 | lbs |
| AT 65 ft SIDEWALL LENGTH: | 6338 | 8060 | 10725 | lbs |
| AT 70 ft SIDEWALL LENGTH: | 6825 | 8680 | 11550 | lbs |
| AT 75 ft SIDEWALL LENGTH: | 7313 | 9300 | 12375 | lbs |
| AT 80 ft SIDEWALL LENGTH: | 7800 | 9920 | 13200 | lbs |
| DEAD LOAD REACTION (DL): | 1580 | 1580 | 1580 | lbs |
| SIDEWALL: | | | | |
| SHEARWALL REACTION (Rend): | 2086 | 2503 | 3321 | lbs |
| DEAD LOAD REACTION (DL): | | | | |
| AT 30 ft SIDEWALL LENGTH: | 2055 | 2055 | 2055 | lbs |
| AT 35 ft SIDEWALL LENGTH: | 2397 | 2397 | 2397 | lbs |
| AT 40 ft SIDEWALL LENGTH: | 2740 | 2740 | 2740 | lbs |
| AT 45 ft SIDEWALL LENGTH: | 3082 | 3082 | 3082 | lbs |
| AT 50 ft SIDEWALL LENGTH: | 3425 | 3425 | 3425 | lbs |
| AT 55 ft SIDEWALL LENGTH: | 3767 | 3767 | 3767 | lbs |
| AT 60 ft SIDEWALL LENGTH: | 4109 | 4109 | 4109 | lbs |
| AT 65 ft SIDEWALL LENGTH: | 4452 | 4452 | 4452 | lbs |
| AT 70 ft SIDEWALL LENGTH: | 4794 | 4794 | 4794 | lbs |
| AT 75 ft SIDEWALL LENGTH: | 5137 | 5137 | 5137 | lbs |
| AT 80 ft SIDEWALL LENGTH: | 5479 | 5479 | 5479 | lbs |