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**Unforeseen Site Conditions:**

Unforeseen site conditions may cause a deviation from the construction documents and all dimensions must be field verified by the builder/contractor and sub-contractors. It is the sole responsibility of the builder/contractor to ensure structural stability and conformance to all applicable codes.

**Final Grade & Site Conditions:**

The final finish grade around the structure may vary from the construction documents submitted. Due to unforeseen site conditions the number of stairs to meet the finished grade and/or finished floors of the garage and/or house shall be as required to meet all applicable building and civil codes.

**GENERAL NOTES:**

**Definitions:**

- (IBC) = International Building Code 2015
- (IRC) - International Residential Code 2015
- (MA-T80CMR) = Massachusetts (9th Edition) IRC Addendums
- (MA-T80CMR) = Massachusetts (9th Edition) IRC Addendums
- (NFPA) = National Fire Protection Association

**General Plan Notes:**

Where discrepancies exist between the standard comments and notes from the design professional or the code, the most restrictive shall apply. All construction shall comply with the 2015 International Residential Code (IRC) and applicable state code addendums.

All dimensions, notes, and other information conveyed in these drawings are for construction purposes and are subject to change. All dimensions must be field verified by builder/contractor and sub-contractors. All work performed is to be in accordance with all local and state building codes.

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**CONSTRUCTION DESIGN CRITERIA**

Occupancy Type	R3
Construction Type	5B
Live Load (All Habitable Floors)	40 PSF
Live Load (Bedrooms)	30 PSF
Dead Load (All Habitable Floors)	14 PSF
Roof Snow Load	30 PSF
Dead Load Roof (Truss/Conventional)	20/15 PSF
Live Load (Decks/Balconies)	40/60 PSF
Attic Live Load (Habitable)	30 PSF
Attic Dead Load (Habitable)	12 PSF
Attic Live Load (Uninhabitable)	20 PSF
Attic Dead Load (Uninhabitable)	10 PSF
Soil Bearing Pressure (Assumed)	2000 PSI
Design Wind Zone	110/138 MPH
Design Wind Exposure	B
Frost Depth	4'-0"
Maximum Building Height	35'-0"

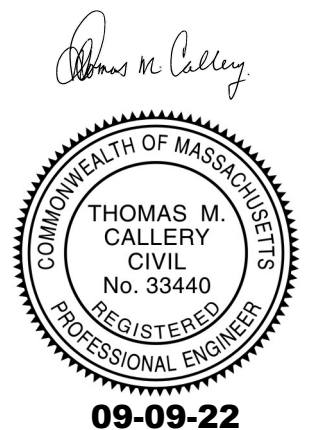
**210806 - PROVOST RESIDENCE - 18 BEACH STREET WAREHAM, MA**

CODE REVIEW SCHEDULE	
Building Code	International Residential Code (IRC) 2015 (9th Edition) T80 GMR + MA Amendments
Plumbing Code	Uniform State Plumbing Code 248 GMR
Mechanical Code	International Mechanical Code (IMC)
Electrical Code	NFPA 70 (2017 edition) with MA amendments
Energy Code	2020 Massachusetts Energy Code as amended from the 2018 International Energy Conservation Code
Fire Safety Code	NFPA 1 (2015 edition) with MA amendments

LAYOUT PAGE TABLE		
PAGE	TITLE	DESCRIPTION
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A-5	DECK DETAILS	

REVISION TABLE			
NUMBER	DATE	REVISED BY	DESCRIPTION
1	4/2/2022	MWP	UPDATED PER TEXTS FROM KATHY ON 4/2/22
2	5/23/2022	MWP	UPDATED TO SHOW ROOMS UNFINISHED AND NOT LIVING SPACE
3	9/7/2022	MWP	MODIFIED 3 SEASON ROOM TO FIT WITHIN SETBACKS

THESE PLANS ARE FOR BUILDING PERMIT AND DESIGN/LAYOUT PURPOSES ONLY. FINAL FRAMING PLAN, MATERIALS & CONSTRUCTION DETAILS MAY VARY AND WILL BE PER CODE AND PER THE FINAL CONTRACT DOCUMENTS. THE GRADES SHOWN ON THE HOUSE PLANS DO NOT REFLECT THE ACTUAL GRADES ON THE LOT. THE AMOUNT OF EXPOSED FOUNDATION AND THE ACTUAL NUMBER OF STEPS WILL BE DETERMINED ON SITE AND AT THE BUILDER'S DISCRETION.



COVER PAGE

PROJECT INFORMATION:  
JOB #: 210806  
JOB NAME: PROVOST RESIDENCE  
ADDRESS: 18 BEACH STREET  
WAREHAM, MA

CLIENT INFORMATION:  
NAME: WILLIAM & KATHLEEN PROVOST  
ADDRESS: 36 K-MARIE DRIVE  
ATTLEBORO, MA 02703  
PHONE: (508) 226-2810

DESIGNER INFORMATION:  
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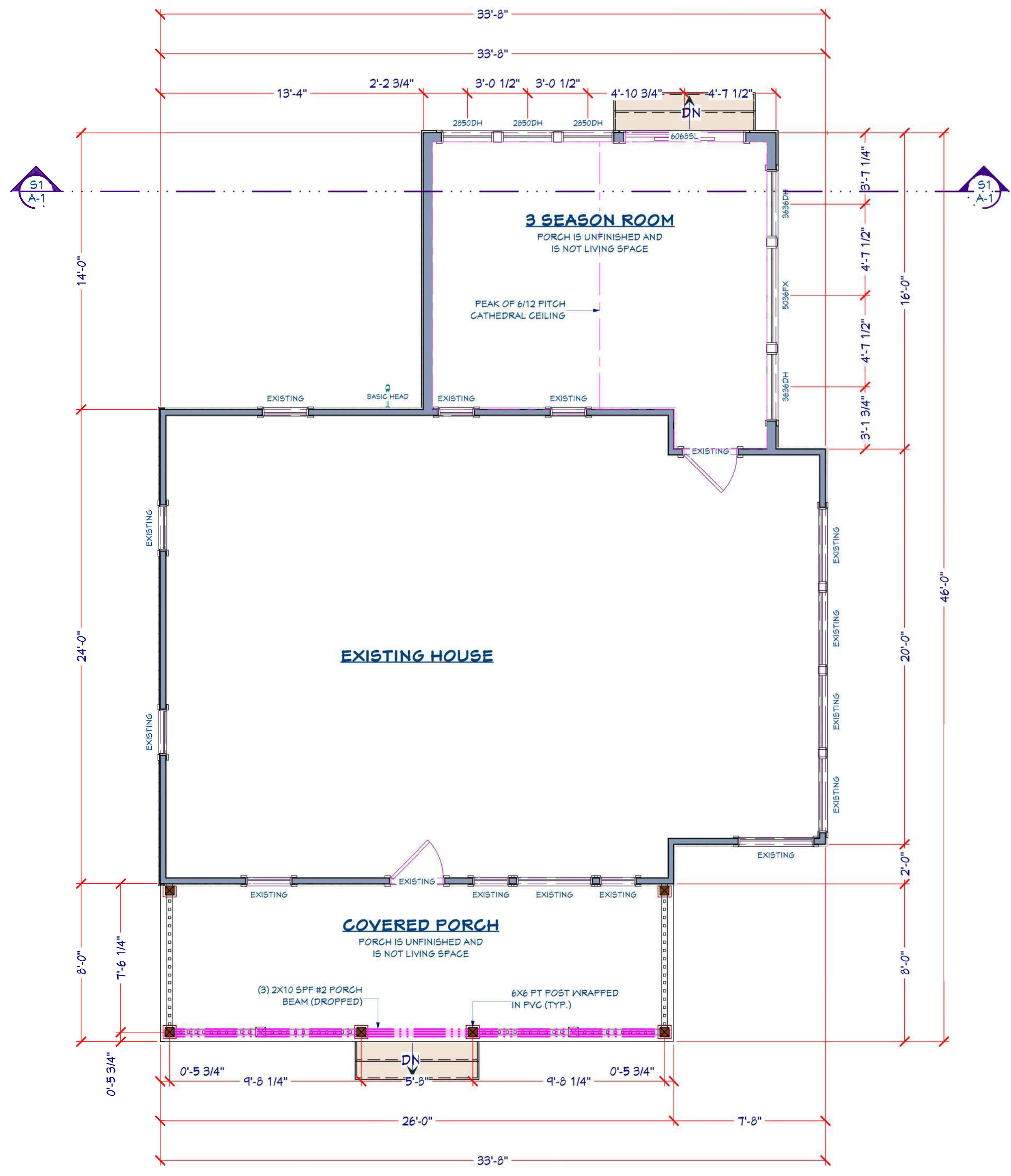
DATE:  
9/7/2022

SCALE:  
AS NOTED

SHEET:  
C-1

Window Schedule													
Elev	RM Name	Label	MFG.	Qty	Flr	Top	R/O	Egress	Temp	Description	HDR	HDR Type	Area, Actual (sq ft)
	3 Season Room	2850DH	Generic	3	1	80"	32"x60"			Double Hung	2x10x35" (3)	Lumber	19.02
	3 Season Room	3636DH	Generic	2	1	80"	42"x42"			Double Hung	2x10x45" (3)	Lumber	11.46
	3 Season Room	6036FX	Generic	1	1	80"	60"x42"			Fixed Glass	2x10x63" (3)	Lumber	17.15
Totals:												47.63	

Door Schedule												
RM Name	Label	MFG	Qty	FLR	R/O	Type	Fire	HDR	HDR Type	EX/IN	Hinge/S	Swing/S
3 Season Room	6065SL	Generic	1	1	72"x80"	Slider		2x10x78" (3)	Lumber	EX	L	In



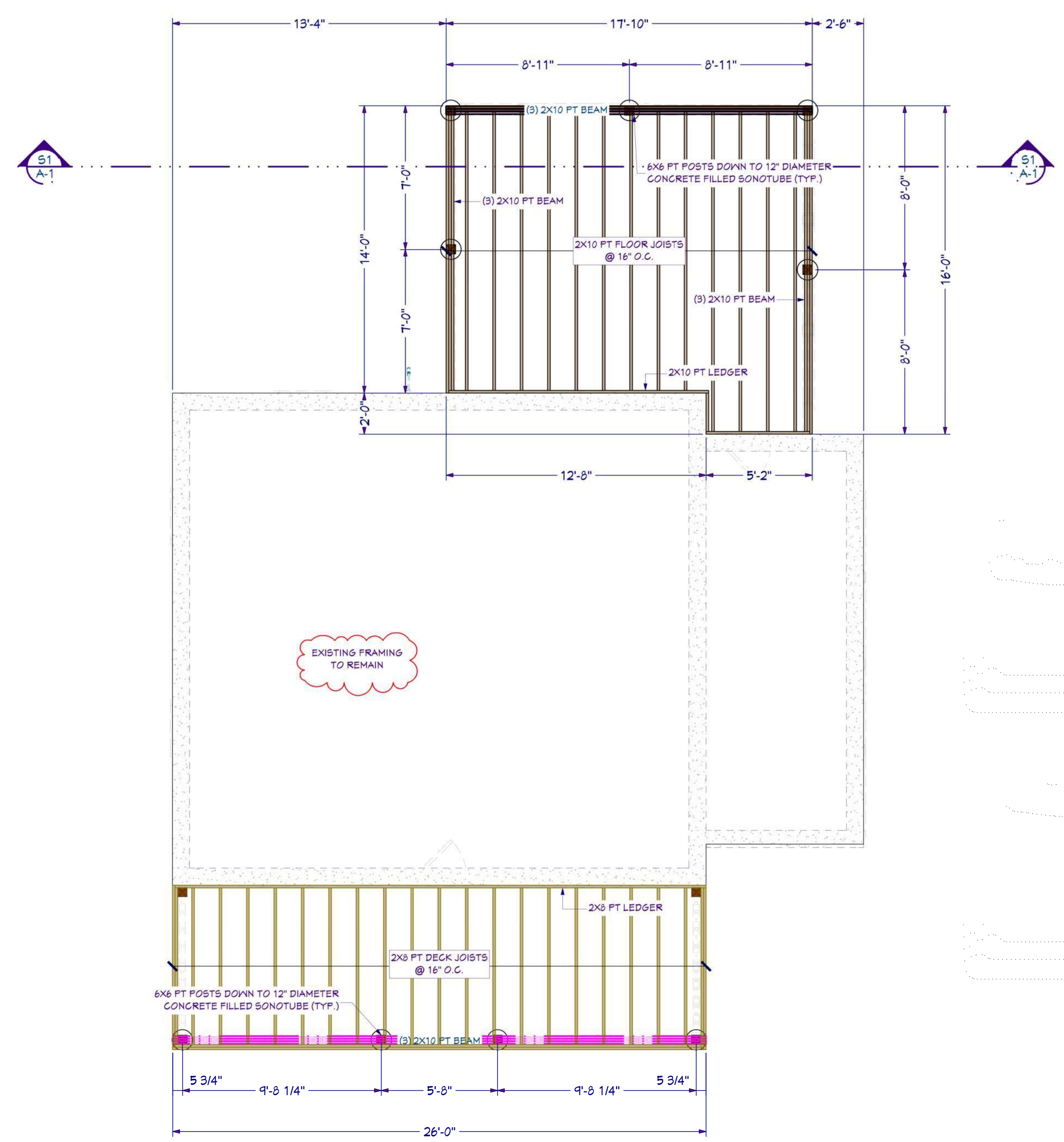
**FIRST FLOOR PLAN - SCALE: 1/4" = 1'-0"**  
**NEW LIVING AREA = 0 sq ft**

Living Area Schedule			
Room Name	Floor	Area, Standard (sq ft)	Dimensions
Existing House	1	715	39'-0" x 23'-4"
Covered Porch	1	211	26'-0" x 11'-11"
3 Season Room	1	262	16'-11" x 13'-8"
Totals:		1245	

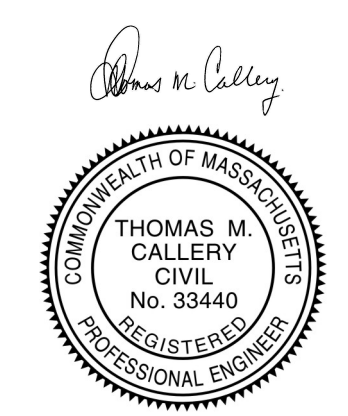
Wall Schedule						
2D Symbol	Wall Type	Floor	Gravity R. Value	Total Width	Qty	
(Symbol)	Existing Exterior Wall	1	15	5 1/4"	8	
(Symbol)	2x6 Frame w/ Lap Siding - No SR	1	0	6 3/4"	3	
(Symbol)	9m - Deck Railing/Fence	1	0	3 1/2"	4	



**CROSS SECTION S1 - SCALE: 1/4" = 1'-0"**



**FIRST FLOOR FRAMING PLAN - SCALE: 1/4" = 1'-0"**



**FIRST FLOOR PLAN & FRAMING PLAN**

**PROJECT INFORMATION:**  
 JOB #: 210806  
 JOB NAME: PROVOST RESIDENCE  
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 WARHAM, MA

**CLIENT INFORMATION:**  
 NAME: WILLIAM & KATHLEEN PROVOST  
 ADDRESS: 36 K-MARIE DRIVE  
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**DESIGNER INFORMATION:**  
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**DATE:**

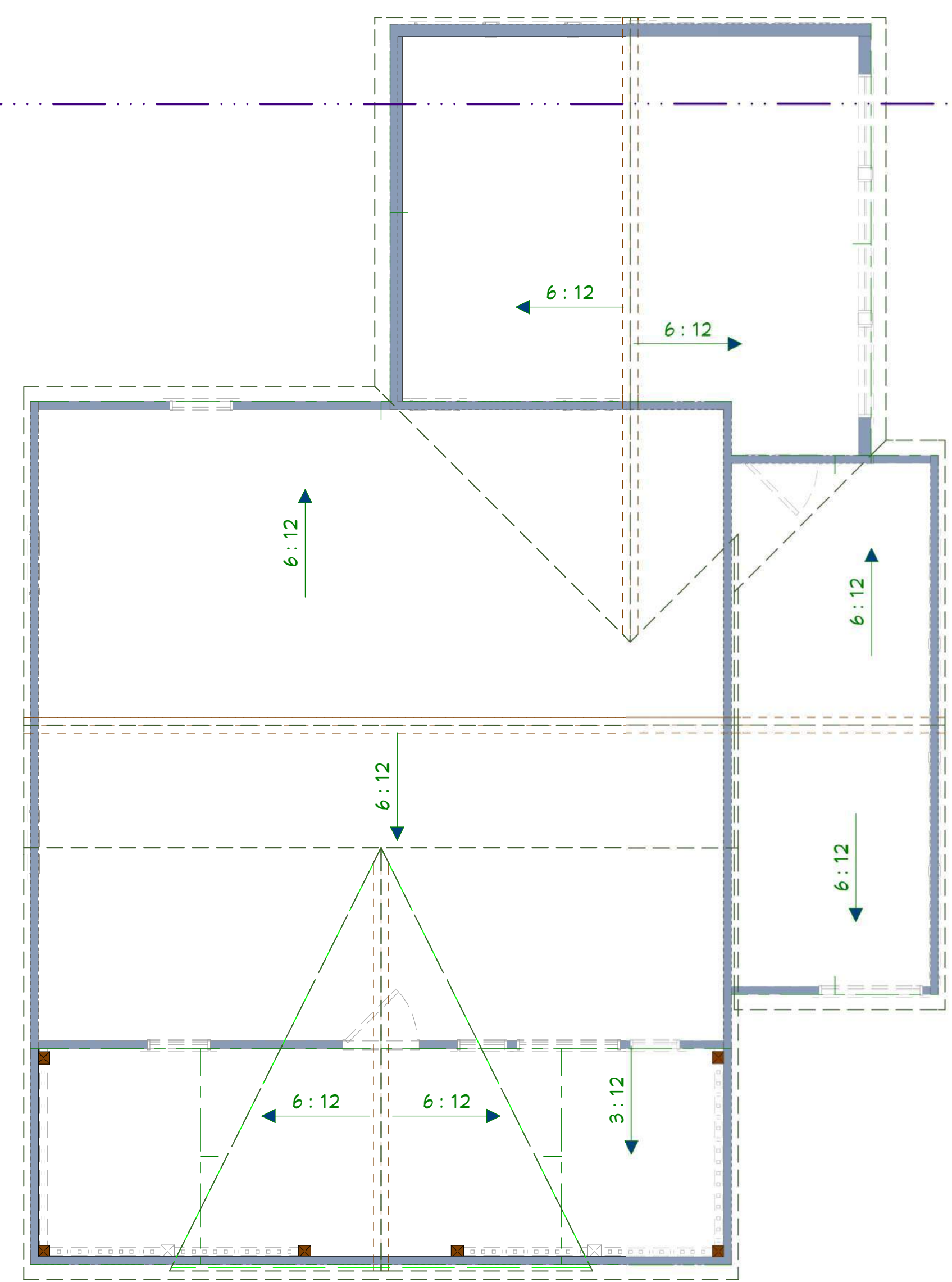
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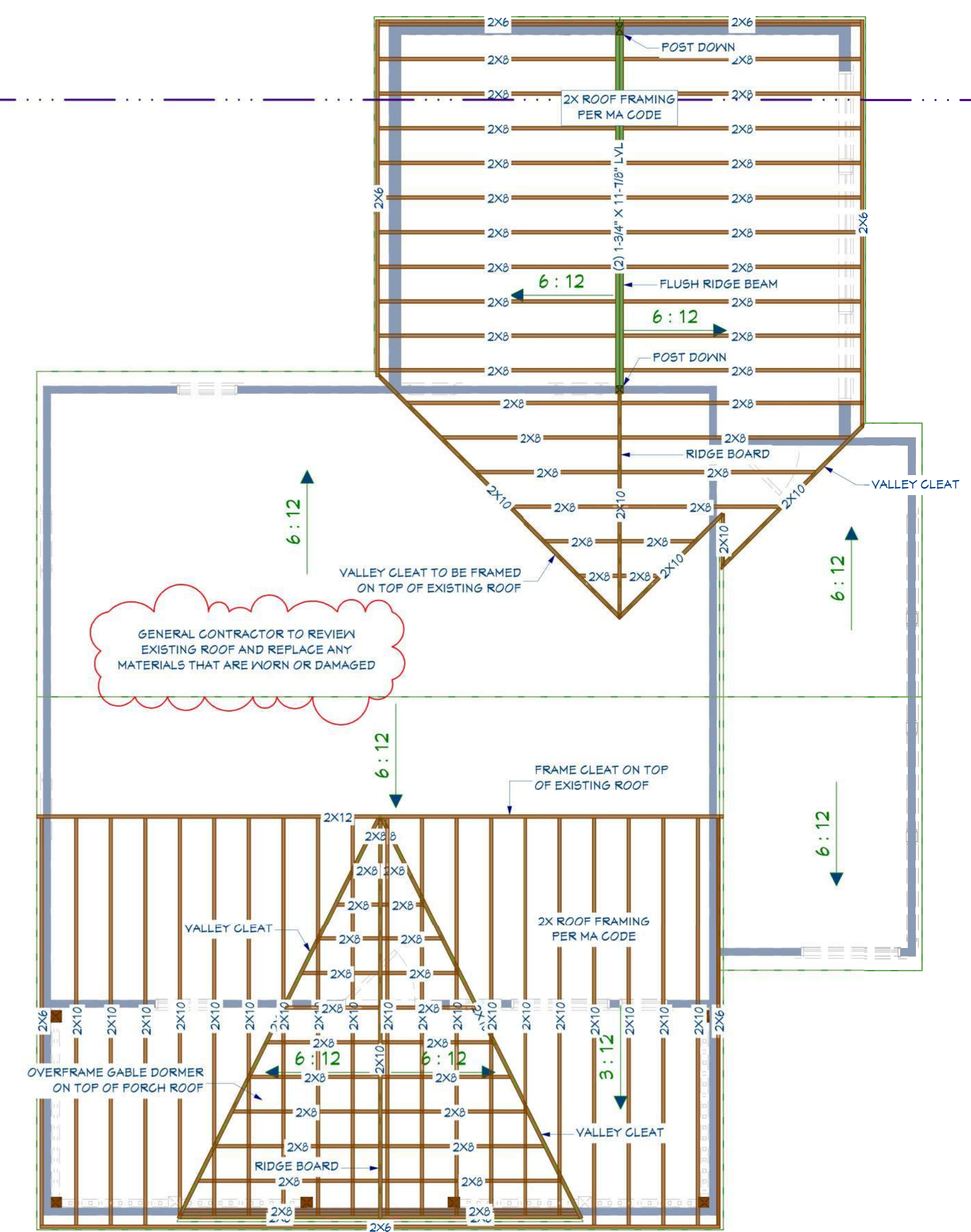
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A-1



ROOF OVERVIEW PLAN - SCALE: 1/4" = 1'-0"



ROOF FRAMING PLAN - SCALE: 1/4" = 1'-0"

**BC CALC Member Report**  
 Build: 8381  
 Job name: 210806 - Provost Residence  
 Address: 19 Beach St  
 City, State, Zip: Warrenham, MA  
 Customer: Bill & Kathy Provost  
 Code reports: ESS-1040

**Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP**  
 RB01 (Roof Flush Beam)  
 Dry | 1 span | No cant. September 7, 2022 15:42:53

**Reaction Summary (Down / Uplift) (lbs)**

Reaction	Live	Dead	Snow	Wind	Roof Live
B1, 3'-12"	1030 / 0	1889 / 0			
B2, 5'-12"	1054 / 0	1934 / 0			

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	100%	90%	115%	160%	Roof Live	Tributary
0	Self Weight	Uplift Area (lb/ft)	L	00-00-00	14-03-08	Top	12					00-00-00
1		Uplift Area (lb/ft)	L	00-00-00	14-03-08	Top	15					08-11-00

**Controls Summary**

Item	Value	% Allowable	Duration	Case	Location
Pos. Moment	9649 ft-lbs	39.4%	115%	4	07-05-12
End Shear	2389 lbs	26.3%	115%	4	01-03-08
Total Load Deflection	L/763 (0.332")	36.4%	n/a	4	07-05-12
Live Load Deflection	L/763 (0.332")	31.5%	n/a	5	07-05-12
Max Def.	0.332"	33.2%	n/a	4	07-05-12
Span / Depth	13.8				

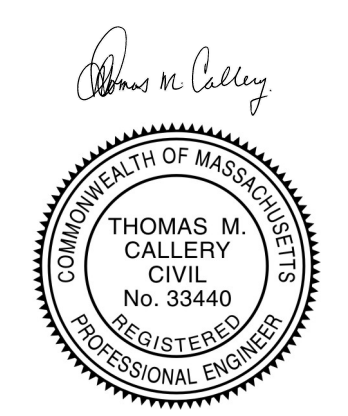
**Bearing Supports**

Support	Dim (LxW)	Value	% Allow Support	% Allow Member	Material
B1	3'-12" x 3'-12"	2919 lbs	n/a	31.8%	Unspecified
B2	5'-12" x 3'-12"	2988 lbs	n/a	20.7%	Unspecified

**Cautions**  
 For roof members with slope (1:12) or less final design must ensure that ponding instability will not occur.  
 For roof members with slope (1:12) or less final design must account for Rain-on-Snow surcharge load.

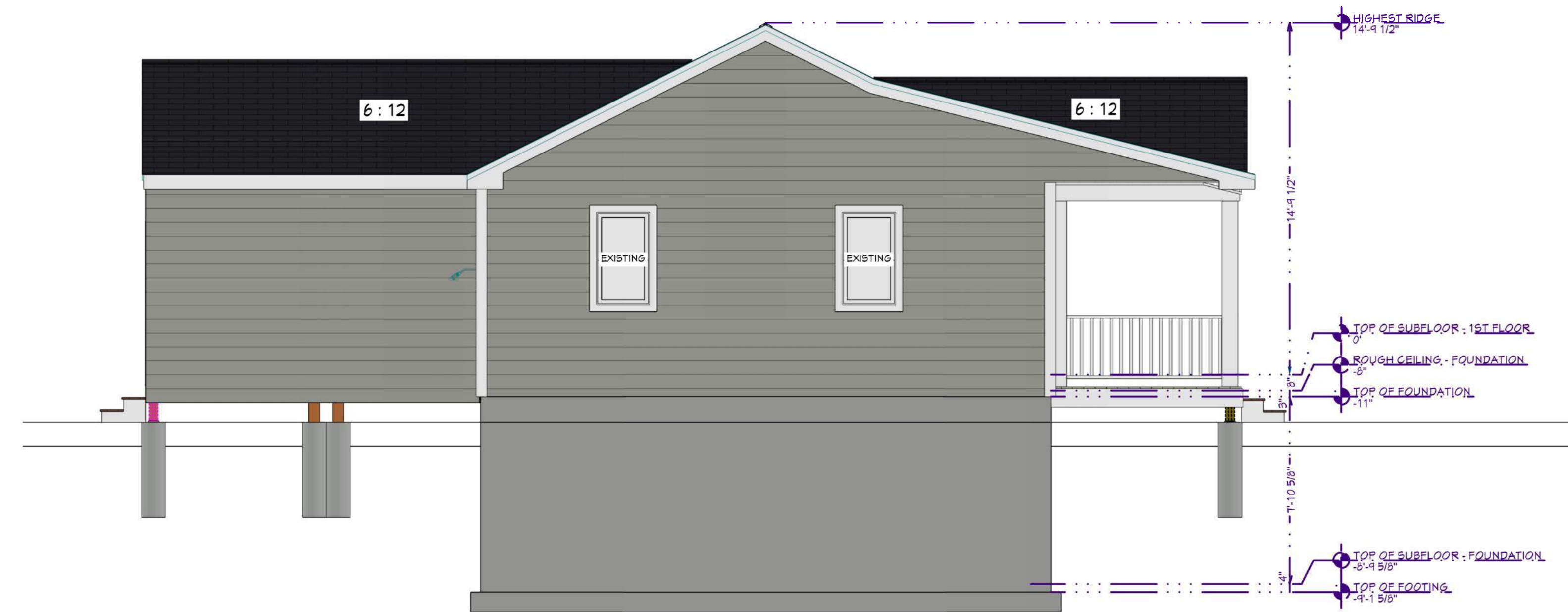
**Notes**  
 Design meets Code minimum (E788) Total load deflection criteria.  
 Design meets Code minimum (L240) Live load deflection criteria.  
 Design meets arbitrary (T) Maximum Total load deflection criteria.  
 Design based on Dry Service Condition.  
 BC CALC analysis is based on IRC 2009.  
 Calculations assume member is fully braced.

Page 1 of 2





FRONT ELEVATION - SCALE: 1/4" = 1'-0"



LEFT ELEVATION - SCALE: 1/4" = 1'-0"



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



RIGHT ELEVATION - SCALE: 1/4" = 1'-0"

ELEVATIONS

PROJECT INFORMATION:  
 JOB #: 210806  
 JOB NAME: PROVOST RESIDENCE  
 ADDRESS: 18 BEACH STREET  
 WAREHAM, MA

CLIENT INFORMATION:  
 NAME: WILLIAM & KATHLEEN PROVOST  
 ADDRESS: 36 K-MARIE DRIVE  
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DATE:

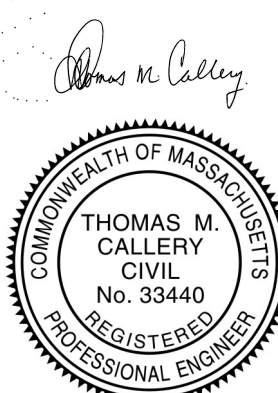
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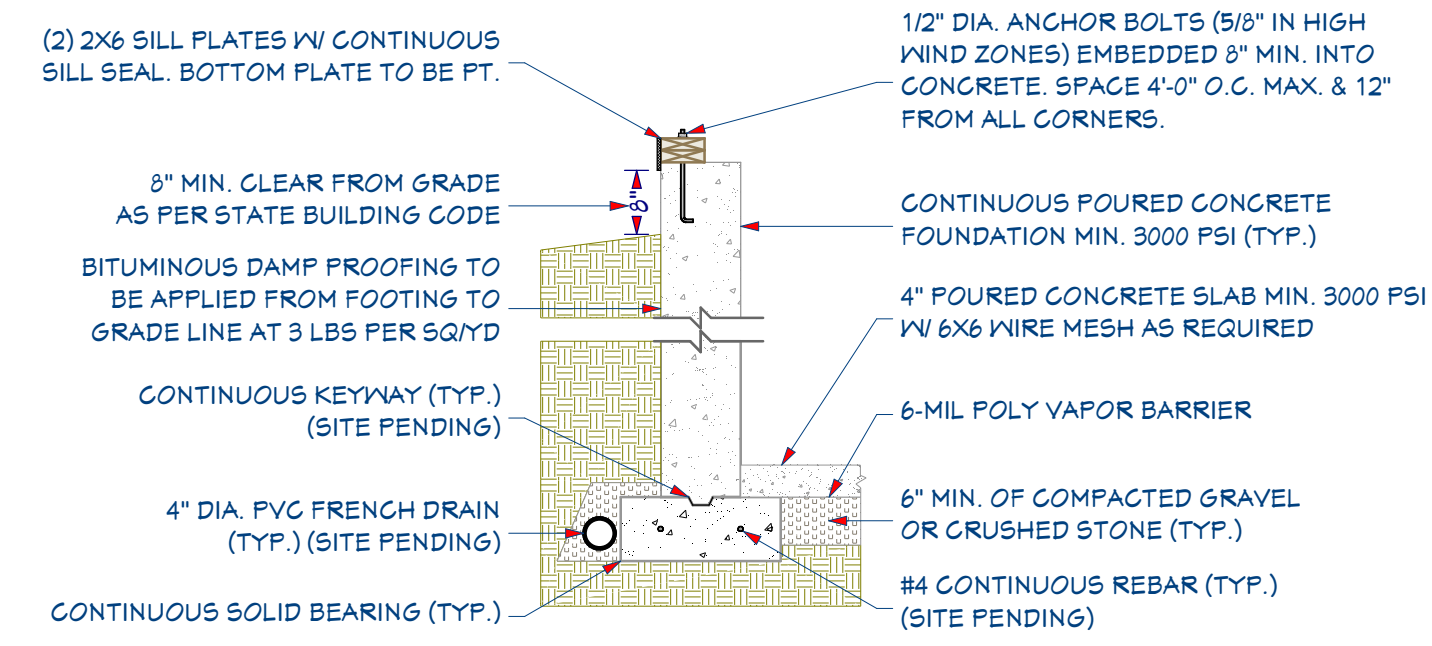
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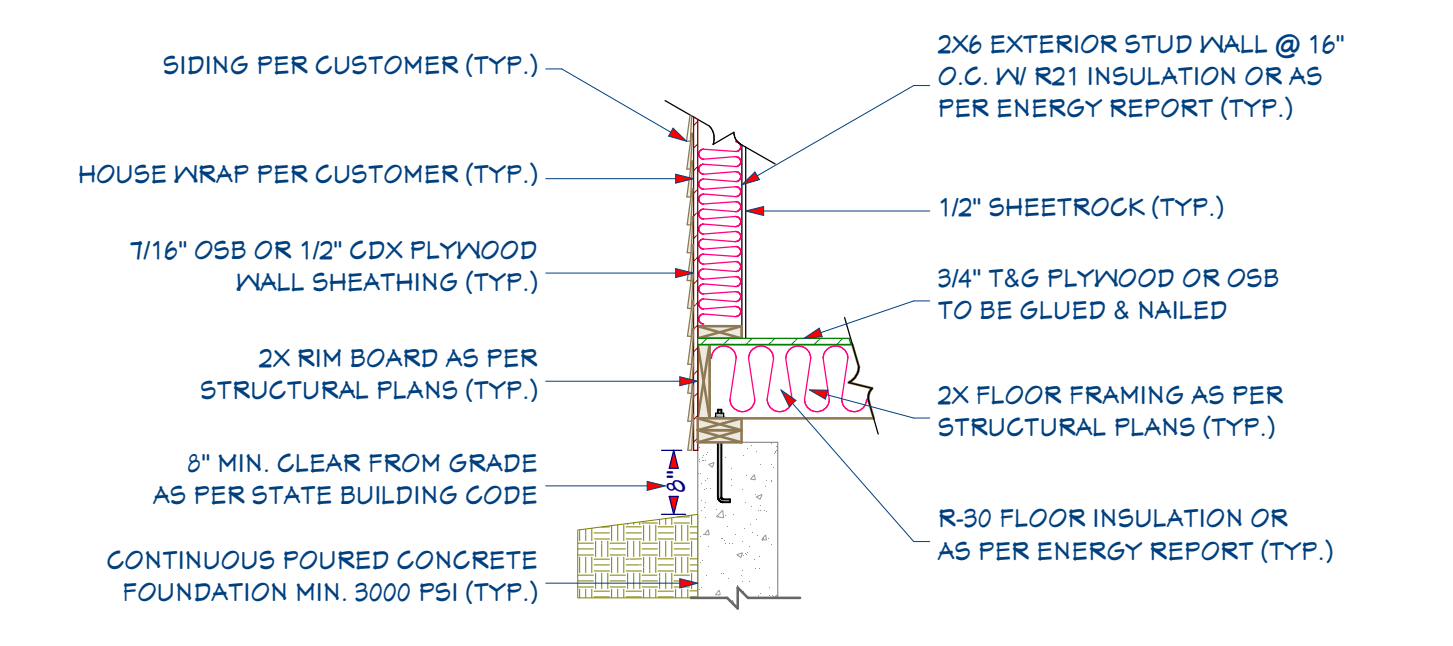
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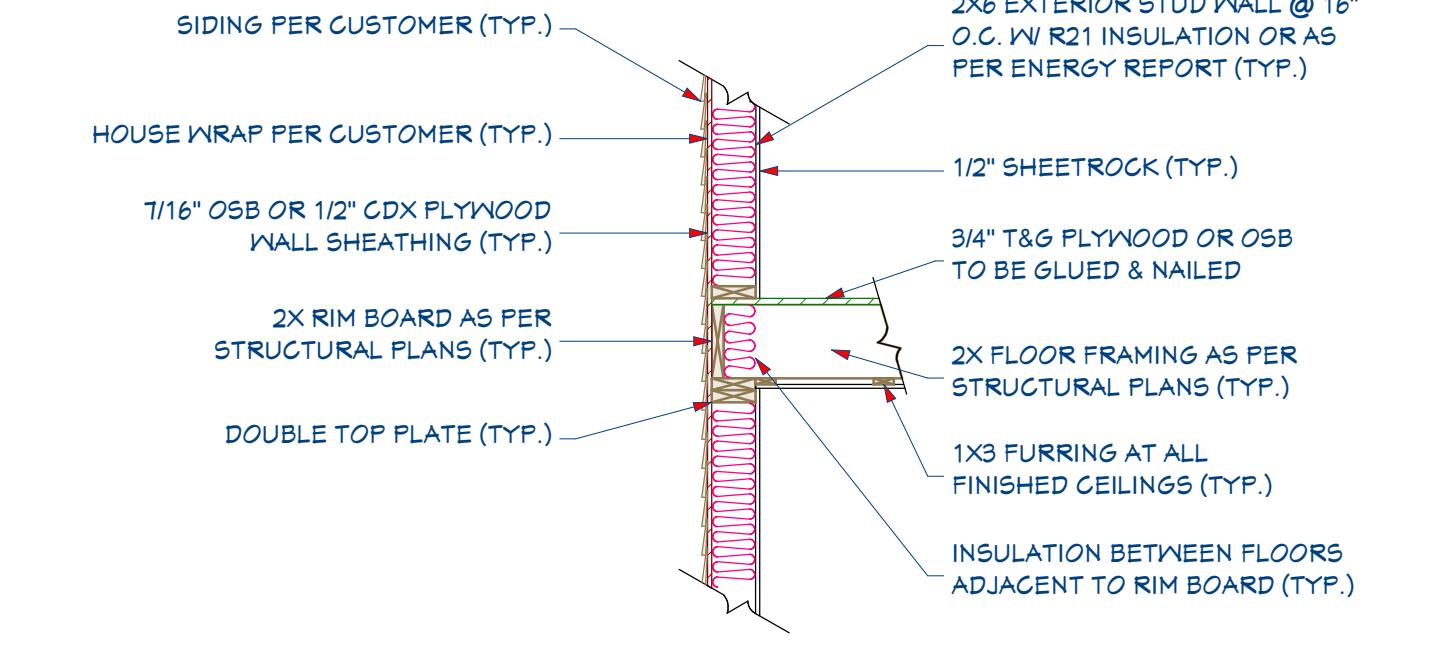




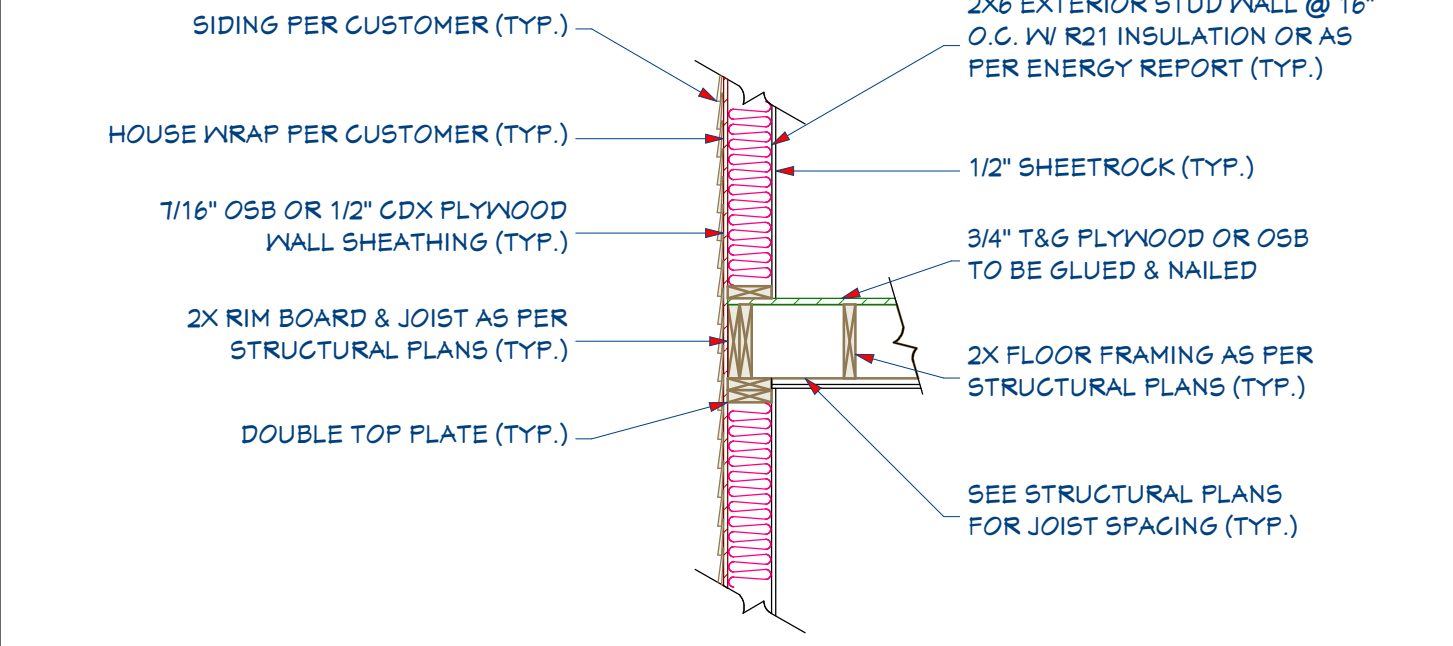
D1 - FOUNDATION WALL W/ DOUBLE SILL PLATES



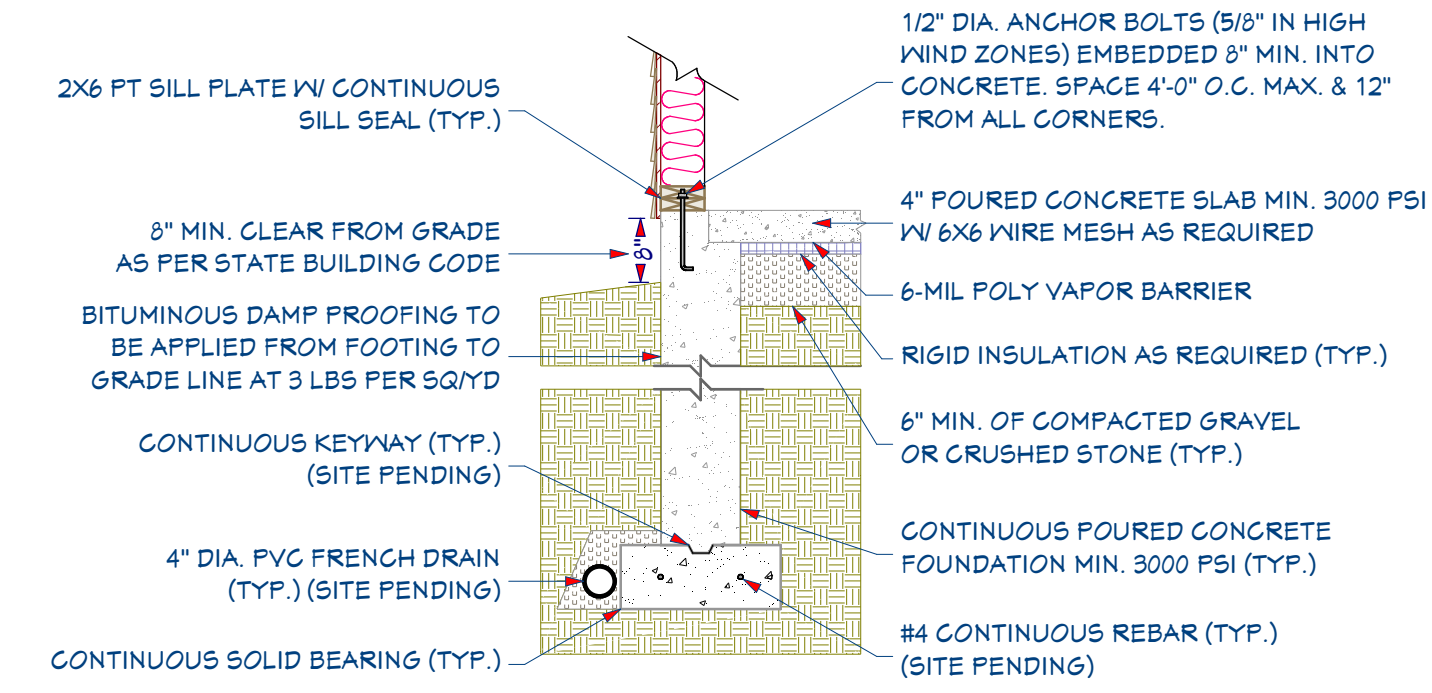
D2 - 2X FLOOR JOISTS ON DOUBLE SILL PLATES



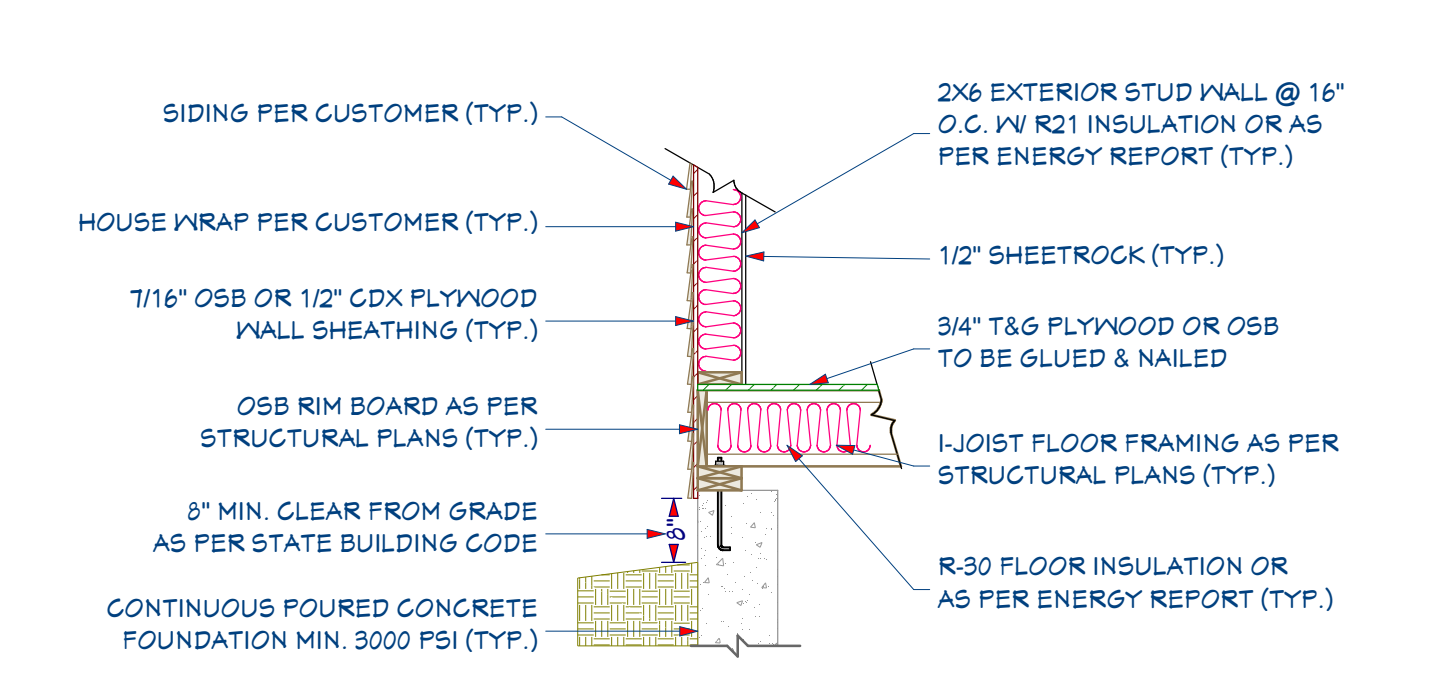
D3 - 2X FLOOR BETWEEN LEVELS



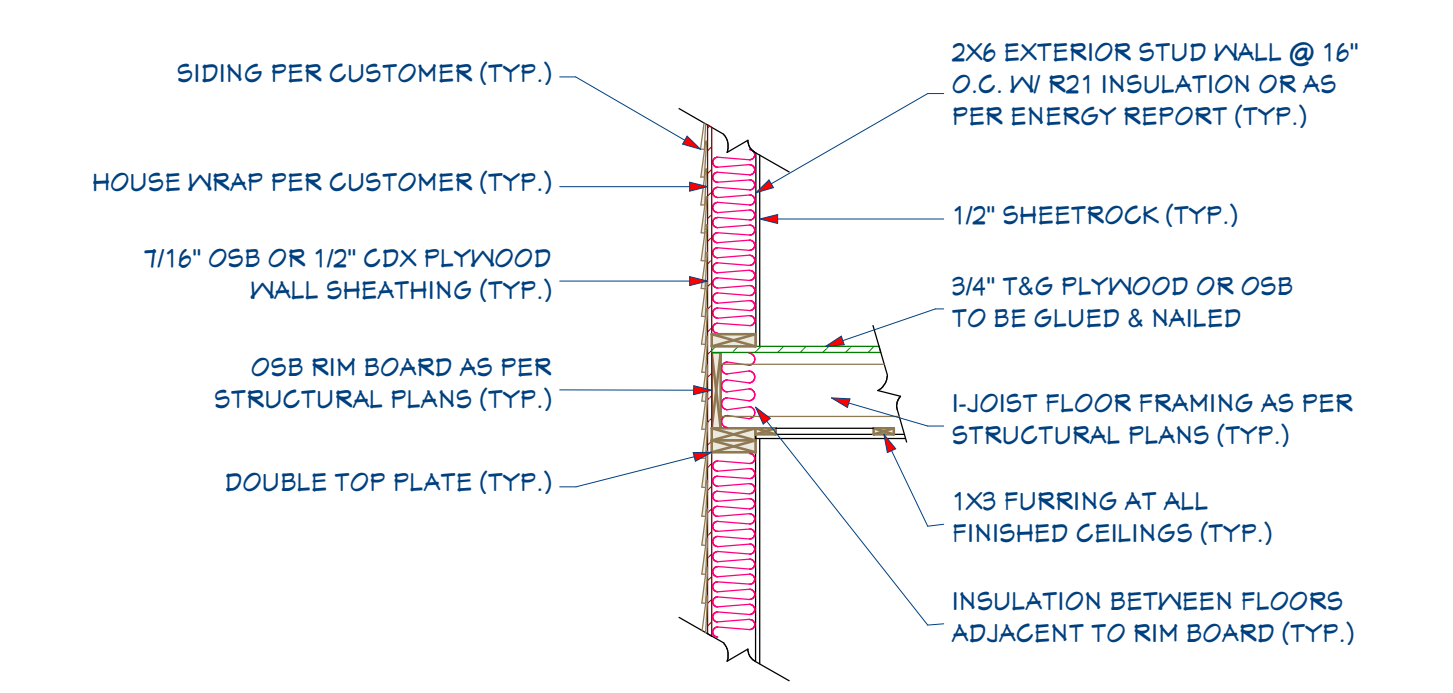
D4 - 2X FLOOR JOISTS PARALLEL TO WALLS



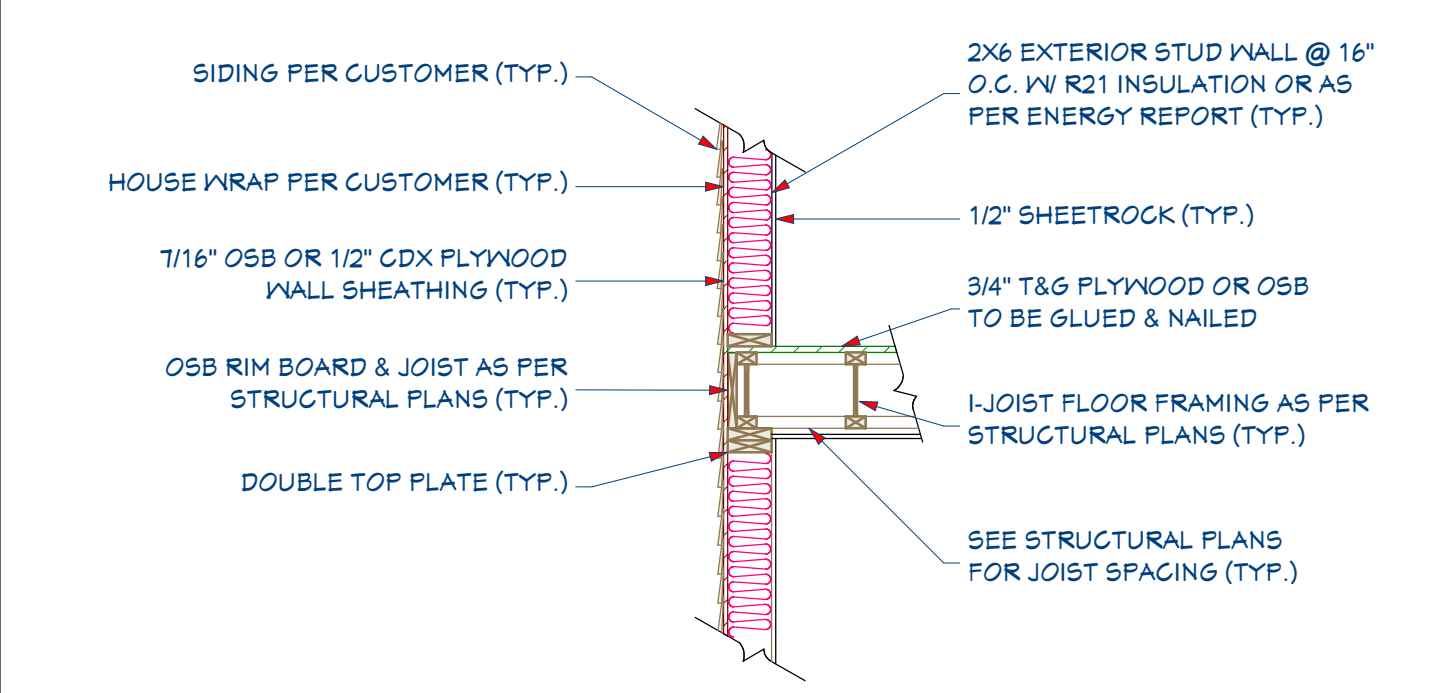
D5 - SLAB ON GRADE FOUNDATION AT WALK-OUT



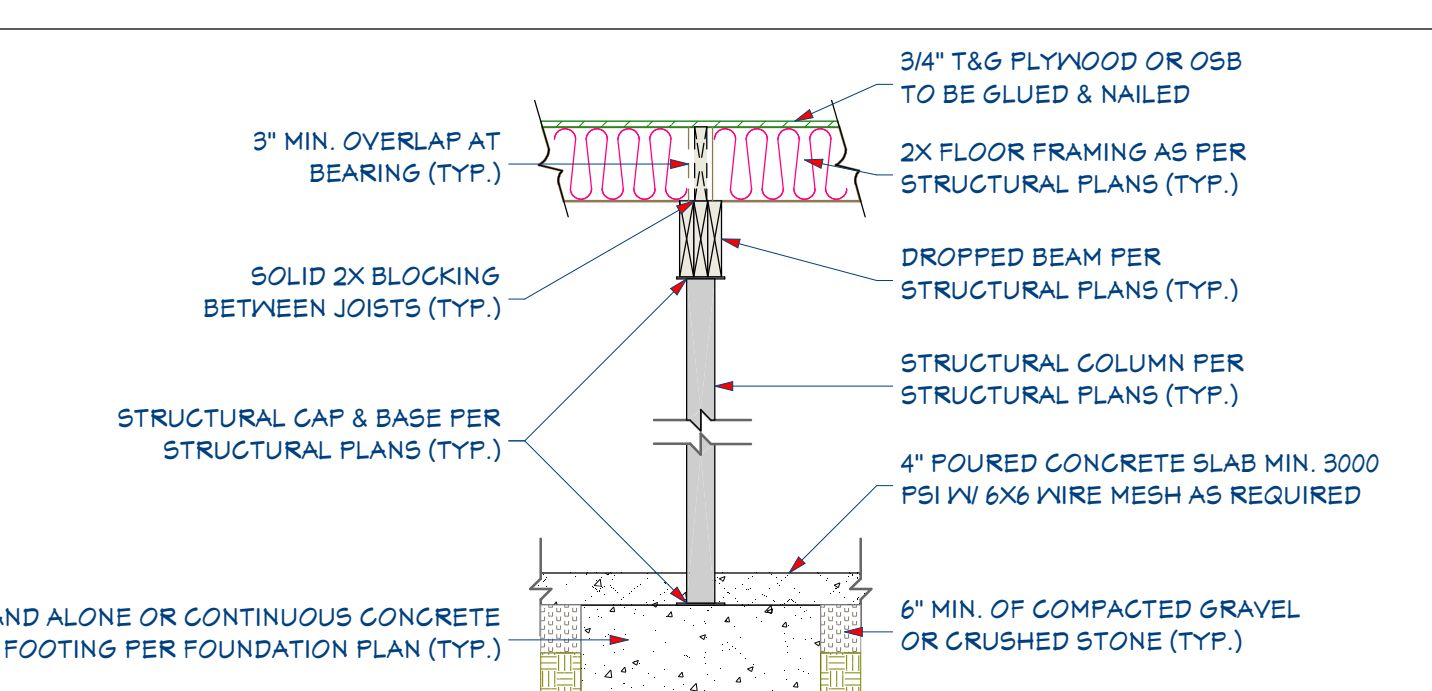
D6 - 1-JOIST FLOOR JOISTS ON DOUBLE SILL PLATES



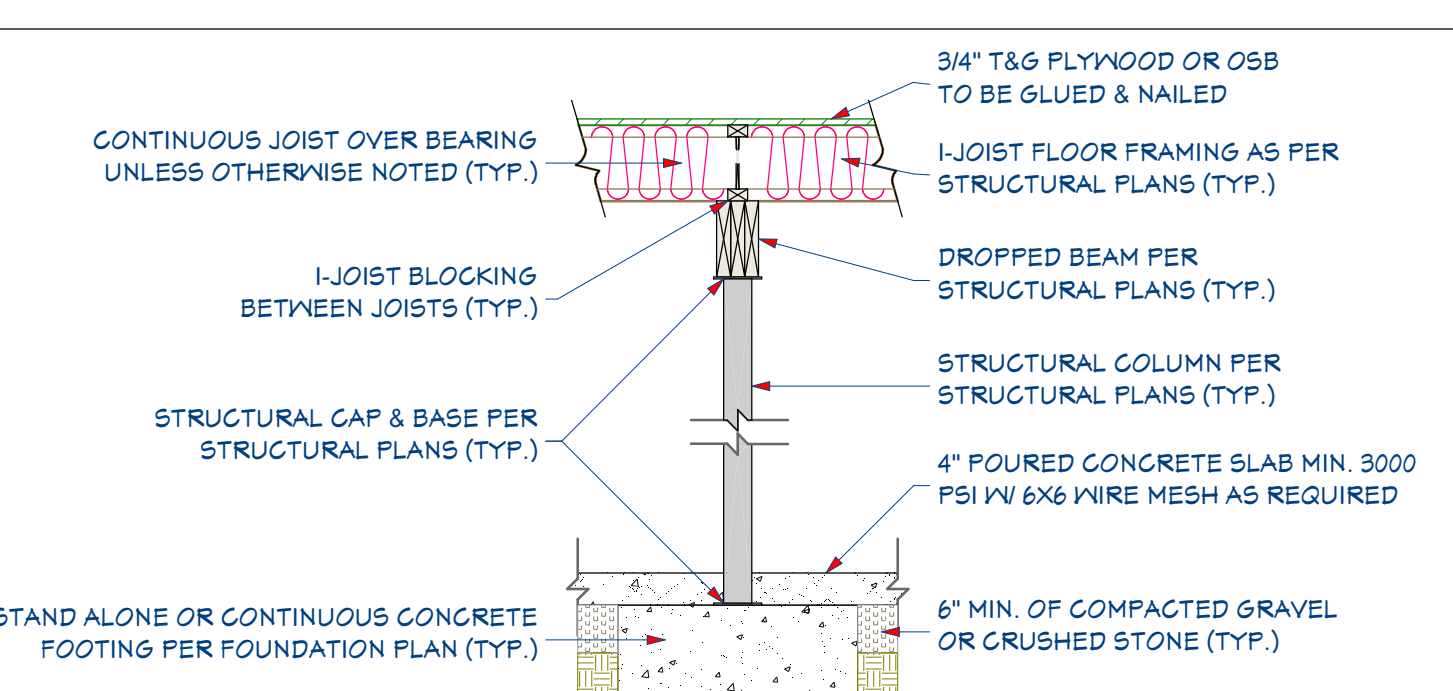
D7 - 1-JOIST FLOOR BETWEEN LEVELS



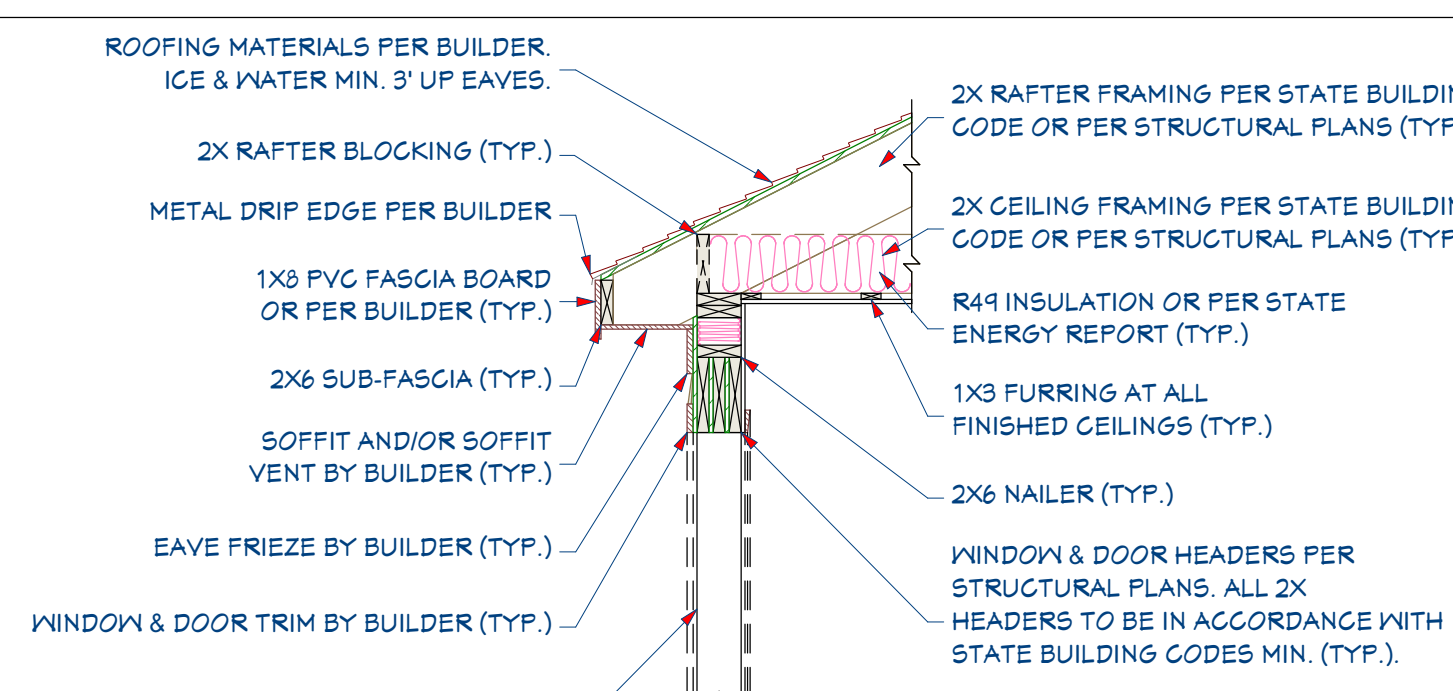
D8 - 1-JOIST FLOOR JOISTS PARALLEL TO WALLS



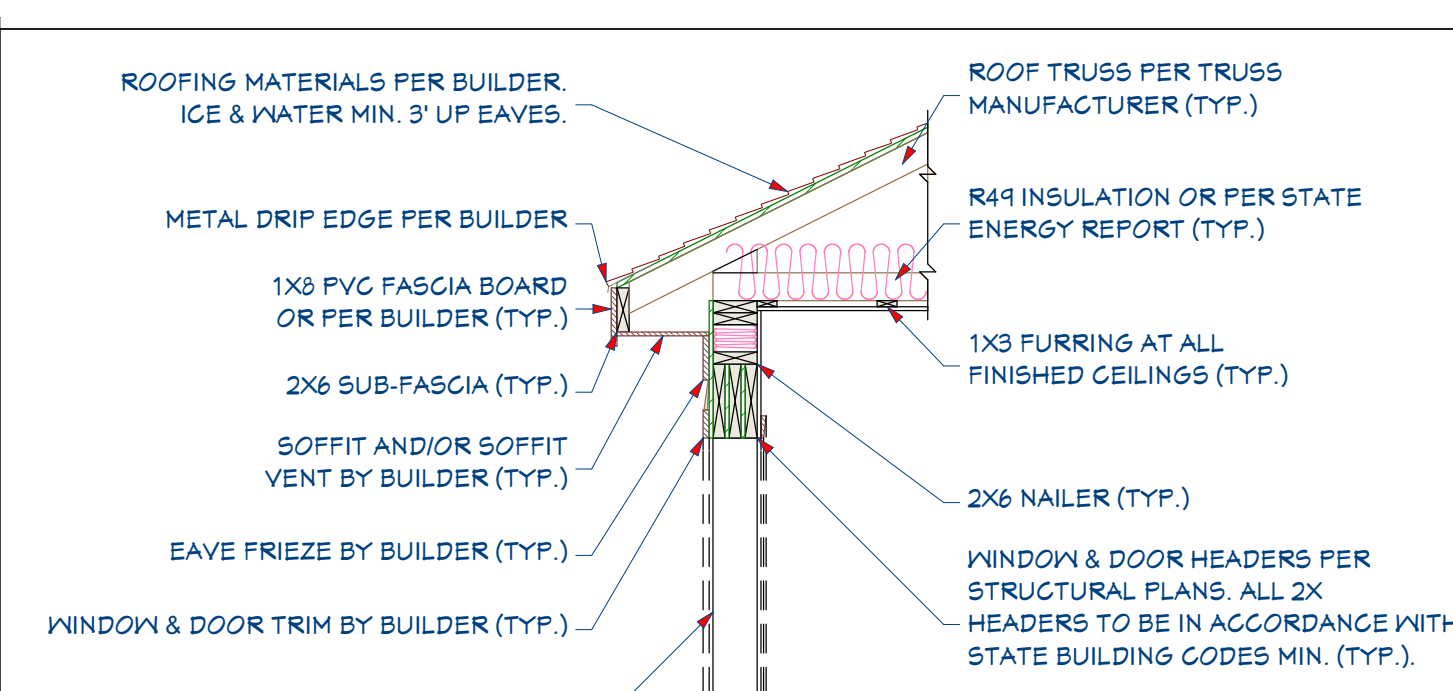
D9 - 2X FLOOR JOISTS ON DROPPED BEAM



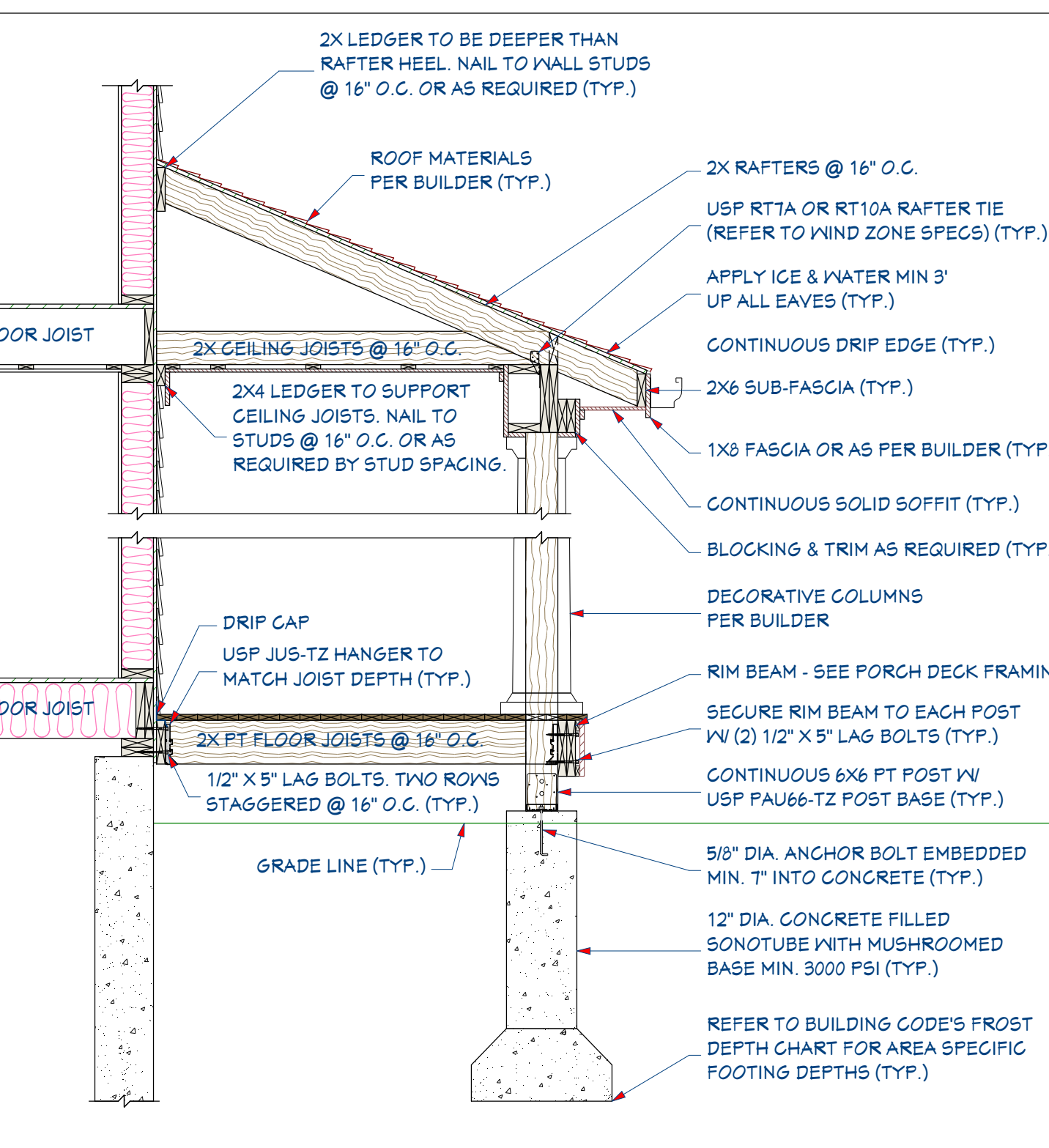
D10 - 1-JOIST FLOOR JOISTS ON DROPPED BEAM



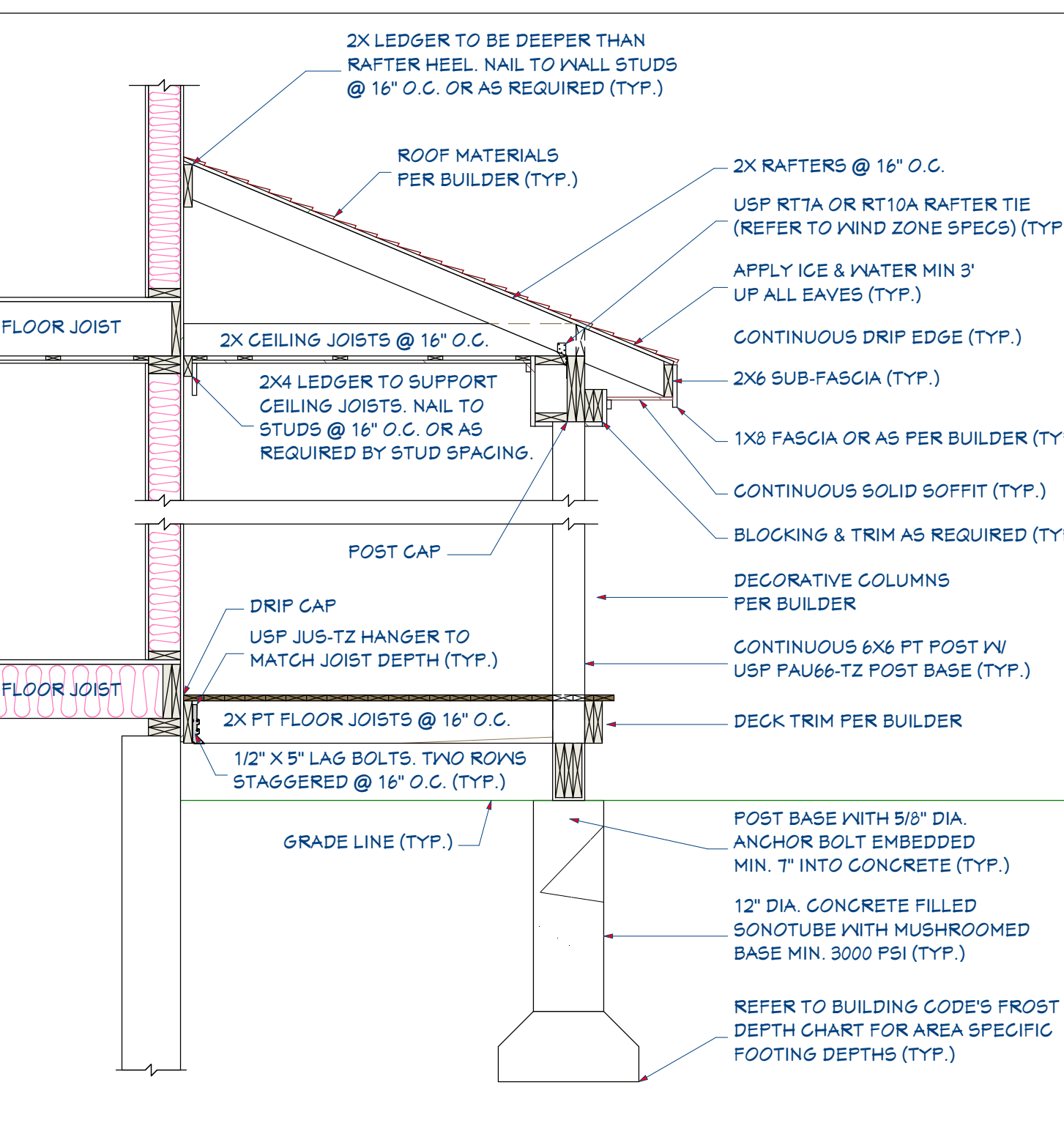
D11 - 2X RAFTER FRAMING ON EXTERIOR WALL



D12 - ROOF TRUSS FRAMING ON EXTERIOR WALL



D13 - 2X PORCH FRAMING



D14 - 2X PORCH FRAMING

ARCHITECTURAL  
DETAILS

PROJECT INFORMATION:  
JOB #: 210806  
JOB NAME: PROVOST RESIDENCE  
ADDRESS: 18 BEACH STREET  
WARRENHAM, MA

CLIENT INFORMATION:  
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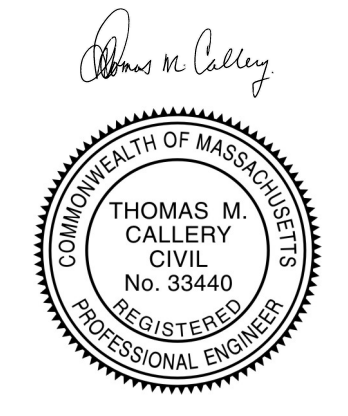
DESIGNER INFORMATION:  
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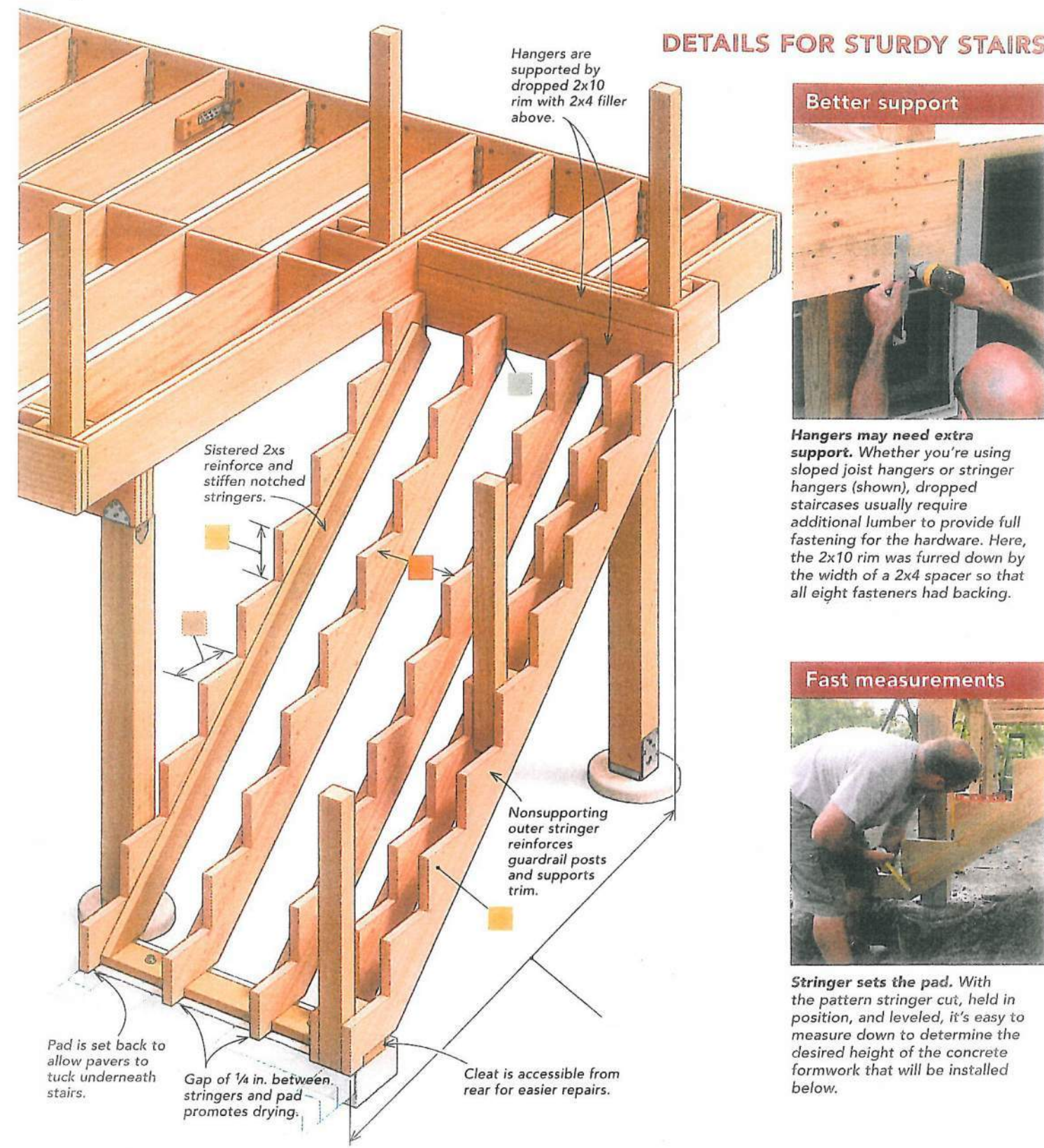


DATE:  
9/7/2022

SCALE:  
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A-4





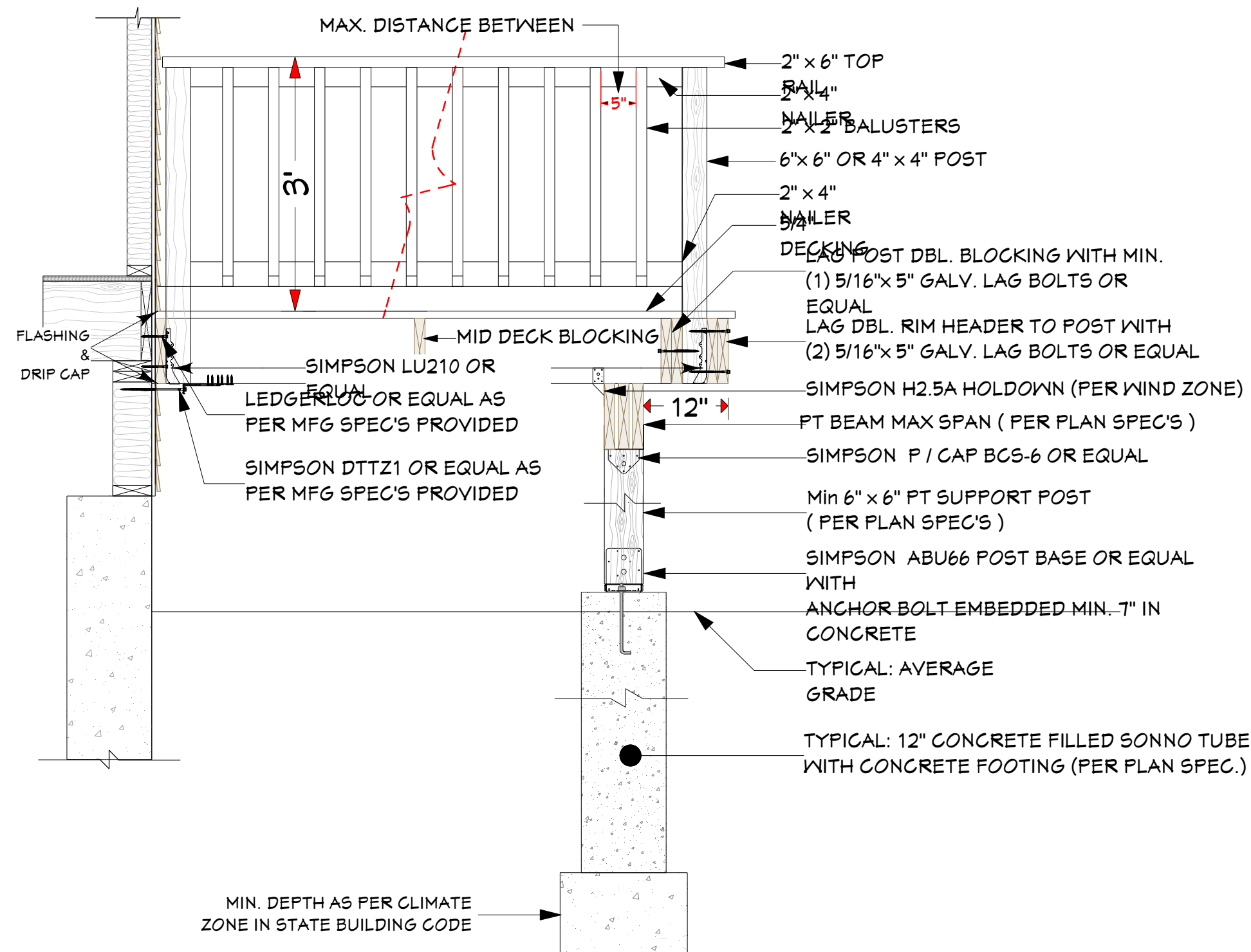
**Know the code** Here are some of the most notable details to brush up on before framing your next set of deck stairs.

Stringers must be cut from a minimum of 2x12 stock.	Maximum span is 6 ft. for notched stringers (13 ft. for solid stringers).	Sloped joist hangers or stringer hangers are required at the upper end of the stringers.	Maximum width between stringers is 18 in.	Maximum riser height is 7 1/2 in.	Minimum tread width is 10 in.
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APRIL/MAY 2016 67

**NOTE :** FOR ALL EXPOSED FRAMING AND STRUCTURAL MATERIAL IT SHALL BE PRESSURE TREATED. ALL NAILS, BOLTS & HARDWARE TO BE A MINIMUM OF ASTM A 653 TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.  
**(NOTE):** IF DECK HEIGHT EXCEEDS 30" OR MORE ABOVE GRADE GUARDRAILS ARE REQUIRED AND ALL HANDRAILS, GUARDRAILS, AND STAIRS AS PER STATE BUILDING CODES.  
**(ALL HANGERS AND HOLD DOWNS AS PER WIND ZONE OR PLAN SPEC'S)**



TYPICAL DECK WITH BEAM DETAIL - #61

Technical Evaluation Report (TER)

Loading Condition (Live Load, psf)	2x Nominal Ledger Species	Rim Joist Material	Maximum Deck Joist Spans						
			Up to 6'	Up to 8'	Up to 10'	Up to 12'	Up to 14'	Up to 16'	Up to 18'
40	HF/SPF	2x Nominal Sawn Lumber	20	15	12	10	8	7	6
		1" min EWP	25	19	15	12	10	9	8
60	DF/SP	Nominal Sawn Lumber	24	18	14	12	10	9	8
		1" min EWP	25	19	15	12	10	9	8

1. Based on load duration of 1.0. Spacing may be adjusted by the applicable load duration as specified in NDS 2005.  
 2. Fasteners are required to have full thread penetration into the main member. Excess fastener length extending beyond the main member is not reflected in the table above.  
 3. Solid sawn band joists shall be HF, SPF, DF-L or SP species.  
 4. Fastener spacing is based on tested loads. The design values use the lesser of a 1/8" deflection or a factor of safety equivalent to or greater than that of the code compliant lag screw application as defined in Figure 2.  
 5. A maximum 1/2" structural sheathing may be installed between the ledger and the band joist.  
 6. Table values assume 10 psf dead load.

Table 2: LedgerLok Fastener Spacing for Items in IRC Table 502.2.2.1 & Other Materials & Loading Conditions

- 5.4. When installed in accordance with the spacing requirements of Table 2, LedgerLok Ledger Board Fasteners provide equivalent performance to 2009 IRC Table R502.2.2.1.
6. Installation:
- Choose a 3-3/8" or 5" LedgerLok Ledger Board Fastener so that the threads fully engage the rim material and the fastener tip extends beyond the back face of the rim material when fully seated against the installed ledger.
  - Using a high-torque, 1/2" variable-speed drill (18V if cordless), drive the fasteners through the ledger and sheathing. Continue into the rim joist until the built-in washer head is drawn firm and flush to the ledger board. Do not overdrive.
  - Figure 2 shows a detail of the LedgerLok Ledger Board Fastener deck connection, including minimum edge and end distances.

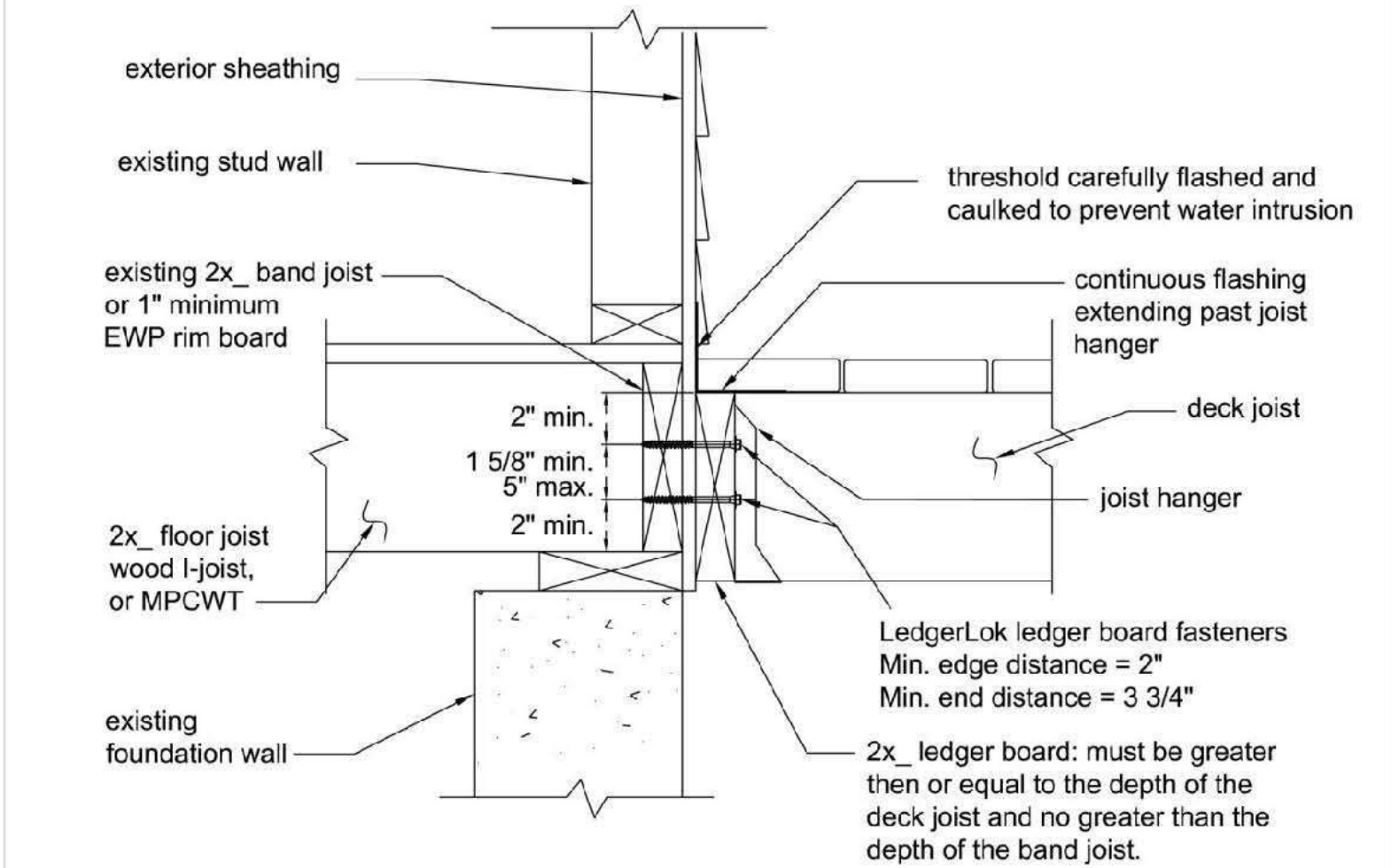


Figure 2: LedgerLok Ledger Board Fastener Deck Connection

TER No. 1203-03  
 FastenMaster LedgerLok™ Ledger Board Fasteners

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NOTES FROM THE FIELD

KNOWLEDGE FOR THE BUILDER

Although no substitute for specific code requirements or the manufacturer's installation instructions, here are some helpful insights, often overlooked caveats, and general advice for properly installing hardware and metal connectors on a typical deck.

Rim and guardrails

Technically, you can attach guardrail posts however you like, as long as you can prove that the attachment will allow them to withstand 200 lb. of concentrated live load applied anywhere along the top. Tension ties and blocking are the most common solutions, however.

Working together with midspan blocking, a deck's rim keeps the joists from rolling over.

To do its job, the rim must be fastened to the joists with 3-in.-long #10 wood screws, or 10d 3-in. threaded nails. If a double rim is used, these fasteners should be installed before the second layer is applied.

Guardrail posts attached to a rim are only as strong as the rim's attachment to the joist ends.

Posts in these locations should be tied to joists with blocking or tension ties, too.

If guardrail posts are being reinforced with tension ties approved for that application (such as Simpson's DTT2, right), the joists must be 2x8 or larger.

Smaller joists don't provide enough depth for the fasteners to resist the leverage applied to the railings.

Beam, posts, and footings

Clearance from the post base to the edge of the footing varies by the type of connector and anchor. Generally, the shallower the anchor embedment, the closer to the edge of the footing you can get. Keep in mind that minimum edge distances are a separate issue from sizing a footing to carry deck loads, and honest calculations for these two criteria usually result in a need for larger footings than are commonly used.

Post caps, regardless of type or thickness, are not designed to provide sway resistance.

If you need to resist racking forces in a tall deck, the posts must be stiffened with angled wood bracing between post and beam or by sinking the posts into the footings.

Even when installing beams so that they bear directly on posts, you can't rely on toenails for this connection.

Ledger, joists, and stringers

Overdriving ledger screws reduces their holding strength. They should be driven only until the back of the washer head contacts the face of the wood.

Joists must be cut to sit within 1/8 in. of the ledger, and to satisfy code, must maintain at least 1 1/2 in. of full bearing contact with the seat of the hanger.

Hangers must match the joist they support. Hangers that are undersize place all of the forces into the bottom of the bearing contact with the ledger, which can split off.

Much of a joist hanger's capacity relies on the 45° fasteners, which must be 3 in. long to pass through the joists and into the ledger.

Deck frames must be tied back through the ledger and into the house framing, usually using tension ties.

Depending on the type, you need at least two, but sometimes four, of these connectors.

Only inverted flange hangers are tested for use at ledger ends.

Never bend or cut a standard hanger for this spot.

Toenails are a fast way to attach the joists to the beam but aren't a long-term solution for preventing movement.

Hurricane ties are a more durable way to reinforce the connection between the joists and beam.

Stringer hangers have minimum bearing requirements.

If the first racking force in a tall deck surface, then a wider header or dropped header will be needed.

Midspan support is required for notched stringers that span more than 6 ft. (measured horizontally).

Distances longer than that require midspan support posts that land on a minimum 6-in.-thick footing.

You don't need joist hangers at the rim opposite the ledger unless it's also acting as a flush carrying beam.

FOUR GENERAL REQUIREMENTS

Before diving into the details of each metal connector, learn these golden rules for deck hardware.

- The right connector:** Connectors are designed and tested for specific applications. There are no tested values to support their use—either in their original form or an altered form—of reinforcing other connections.
- The right finish:** The mistake inspectors see most frequently is the use of metal connectors with one type of weather resistance (galvanization or stainless steel) and fasteners with another type.
- The right fasteners:** In many cases, using hardware screws rather than nails is allowed. These screws are specifically designed with a ductile (softer) core, which allows them to bend under load rather than snap. You can't use deck screws or other general-construction screws.

4. The right fastening pattern.

Achieving the designed strength of a metal connector means using the proper number of fasteners. The punched holes in each connector—the only places where fasteners should be driven—are shaped by the manufacturer to match fastening guidelines (see key, right).

Always fill	For ease of nailing in tight locations (e.g., skewed joist hangers)	To temporarily fasten a connector to ease installation	Fill to achieve maximum strength
Simpson Strong-Tie	USP Structural Connectors	N/A	

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DECK DETAILS

PROJECT INFORMATION:  
 JOB #: 210806  
 JOB NAME: PROVOST RESIDENCE  
 ADDRESS: 18 BEACH STREET  
 WARRENHAM, MA

CLIENT INFORMATION:  
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DATE:

9/7/2022

SCALE:

AS NOTED

SHEET:

A-5

