

Two-Story Frame Worksheet

Complete this form and email it to us, or print it and fax it to us at (925) 847-1605.

1. Project Information

Project Name: _____ Date: _____
 Project Address: _____ Phone: _____
 Engineer: _____ e-mail: _____

2. Design Criteria

Design Code¹: 2006 IBC 2009 IBC
 Response Modification Coefficient, R, for OMF Design: R=3.5 R=3.0 R<3.0 R= _____
 Beam Deflection Limits Deflection Amplification Factor, C_d: C_d=3.0 Other: _____
 System Overstrength Factor, Ω_o: Ω_o=3.0 Ω_o=2.5
 Siesmic Importance Factor, I: I=1.00 I=1.25 I=1.50
 Seismic Drift Limit: 0.025h 0.020h 0.015h
 Seismic S_{DS} Value: S_{DS} = _____ g.
 LL: Beam 1 L/_____ Beam 2 L/_____
 DL + LL: Beam 1 L/_____ Beam 2 L/_____
 Snow/Wind: L/_____ L/_____
 Wind Drift h/_____

¹ Design is also based on ASCE 7-05 for both the 2006 and 2009 editions of the IBC.

3. Loading (Provide all loads at ASD level. Negative values for uplift direction)

3.1 Lateral Loads

F_{EO1}=_____ lbs
 F_{EO2}=_____ lbs
 R used to calculate F_{EO}:
 R=3.5
 R=6.5
 R=8.0
 Other: _____
 F_{Wind1}=_____ lbs
 F_{Wind2}=_____ lbs

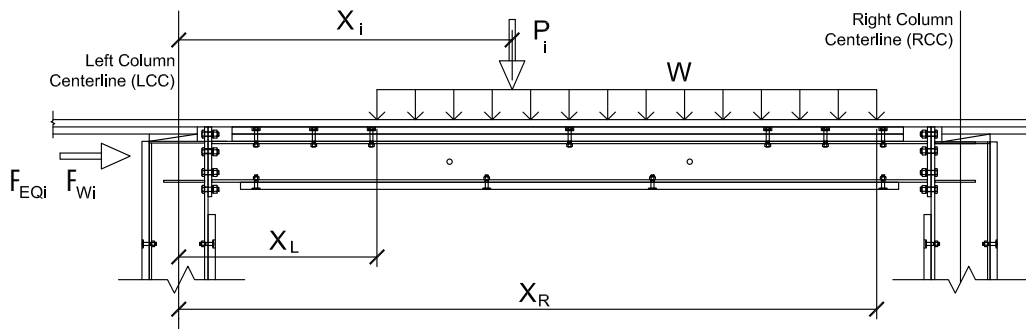
3.2 Uniform Loads

	Load (plf)	X _L (ft)	X _R (ft)	To RCC	Beam	
W _{DL1}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{DL2}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{DL3}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{RLL1}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{RLL2}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{LL1}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{LL2}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
W _{LL3}				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
Snow				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
Wind				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2
Rain				<input type="checkbox"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2

3.3 Vertical Point Loads on Beam

(Include Ω_o as applicable)

	DL	LL	RLL	Snow	Rain	Wind	Seismic	Beam		X _i (ft)	To RCC
P ₁ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₁	<input type="checkbox"/>
P ₂ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₂	<input type="checkbox"/>
P ₃ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₃	<input type="checkbox"/>
P ₄ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₄	<input type="checkbox"/>
P ₅ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₅	<input type="checkbox"/>
P ₆ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₆	<input type="checkbox"/>
P ₇ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₇	<input type="checkbox"/>
P ₈ (lbs)								<input type="checkbox"/> 1	<input type="checkbox"/> 2	X ₈	<input type="checkbox"/>



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Date: _____

Engineer _____

Phone: _____

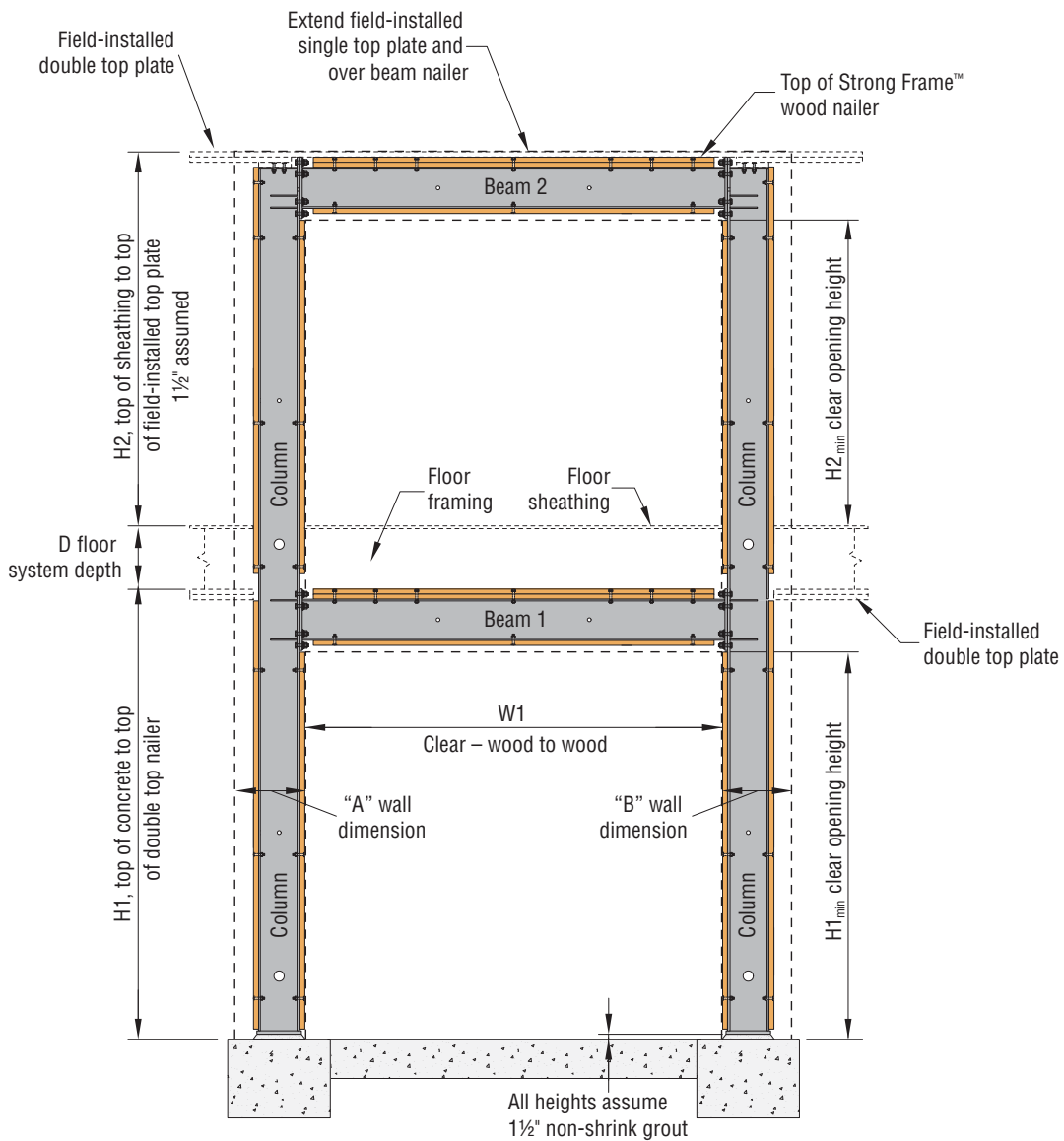
4. Frame Geometry

4.1 First Story

Minimum Clear Opening Width: $W1 =$ _____ in. (Min.=5'0", Max.=24'0")
 Wall Width at Left Column: $A =$ _____ in.
 Wall Width at Right Column: $B =$ _____ in.
 Top of Concrete to Top of Beam Nail: $H1 =$ _____ in. (Min.=6'0", Max.=20'0")
 Minimum Clear Opening Height: $H1_{min} =$ _____ in.

4.2 Second Story

Floor System Depth: $D =$ _____ in.
 Top of Sheathing to Top of Plate: $H2 =$ _____ in. (Min.=6'0", Max.=20'0")
 Minimum Clear Opening Height: $H2_{min} =$ _____ in.



NOTE: $H1 + H2 + D \leq 35'0"$
 $H1 - H1_{min}$ must be $\geq 13"$
 $H2 - H2_{min}$ must be $\geq 13"$