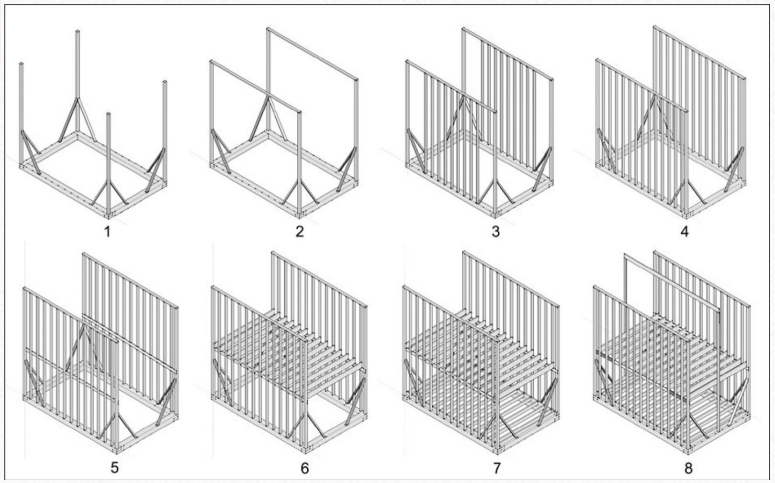
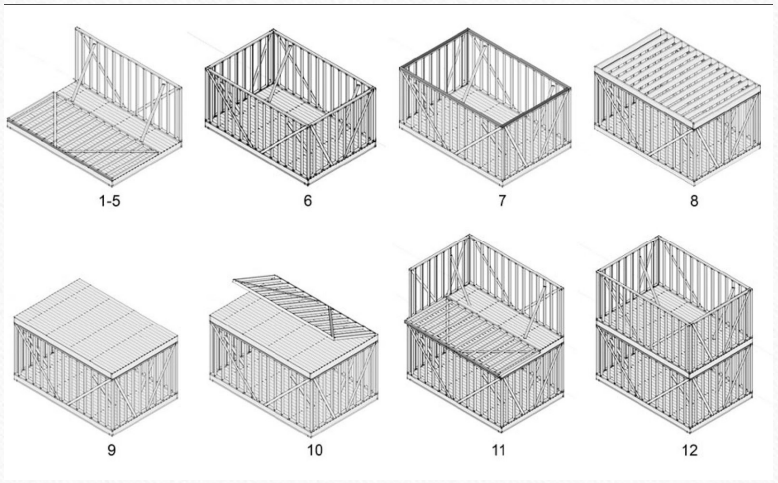
Floor Systems

Preparation for NCCER Exam 27105-06

Balloon Framing

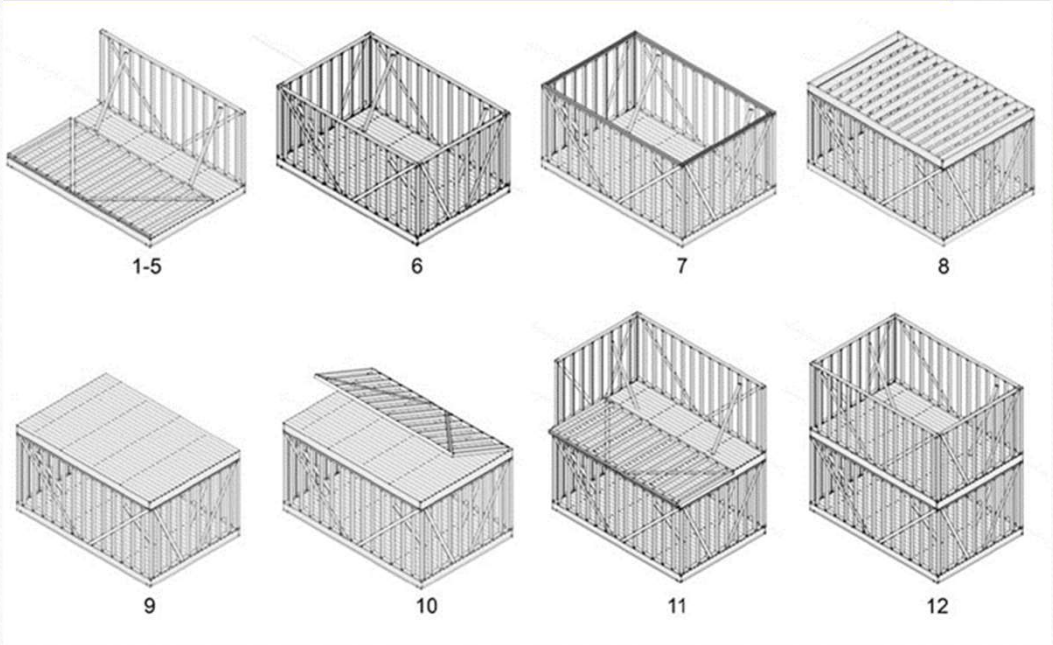
- Balloon Frame construction is rarely used because **of lumber and labor costs.**





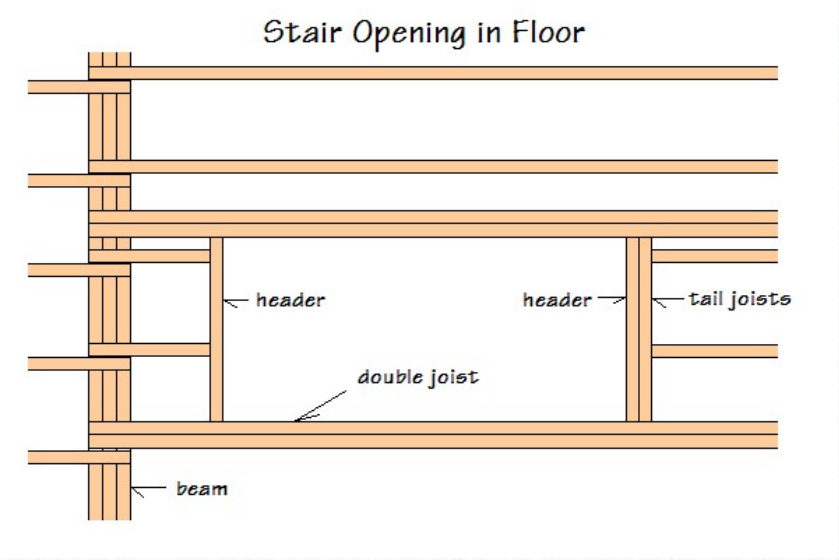
Platform Framing

- The type of structure where each floor of a structure is built as an individual unit is **platform** framing.

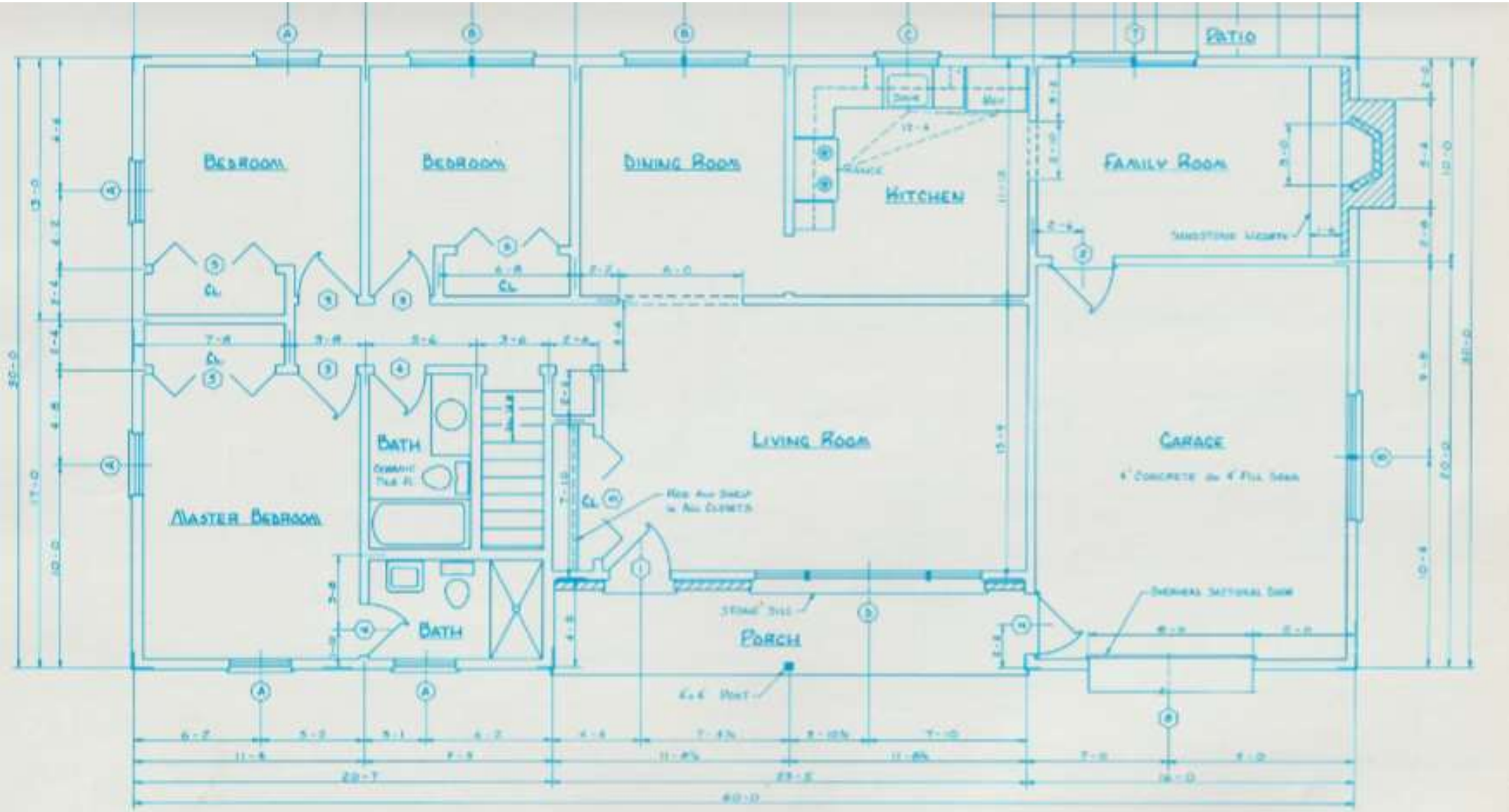


Stairway Openings

- A **Floor Plan** would should the locations of floor openings for stairways.



- These would *not*:
  - Foundation Plan
  - Elevation Drawing
  - Plot Plan



FLOOR PLAN SCALE: ¼" = 1'-0"

SHEET 2 of 8

Specifications

- When looking for the quality of materials and methods of constructions for a floor assembly, you would refer to the **specifications.**

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
FEDERAL HOUSING ADMINISTRATION
U.S. DEPARTMENT OF VETERANS AFFAIRS

FORM APPROVED
(OMB NO. 0575-0042)

☐ Proposed Construction
☐ Under Construction

DESCRIPTION OF MATERIALS

No. _____ (To be inserted by Agency)

Property address _____ City _____ State Oklahoma

Mortgagor or Sponsor _____ (Name) _____ (Address)

Contractor or Builder _____ (Name) _____ (Address)

INSTRUCTIONS

1. For additional information on how this form is to be submitted, number of copies, etc., see the instructions applicable to the FHA Application for Mortgage Insurance, VA Request for Determination of Reasonable Value, or HFA, as the case may be.
2. Describe all materials and equipment to be used, whether or not shown on the drawings, by marking in X in each applicable check box and entering the information called for in each space. If space is inadequate, enter "See exp", and describe under Item 21 or on an attached sheet. Use "Not applicable" or "None" where these are the PROPER or JUST and REASONABLE NOTE: FAILURE TO PROVIDE THE INFORMATION REQUIRED BY LAW IS PROHIBITED.
3. Work not specifically described or shown will not be considered unless required. Then the minimum acceptable will be assumed. Work exceeding minimum requirements cannot be considered unless specifically described.
4. Include no alternates, or equal phrases, or contradictory items. (Consideration of a request for acceptance of substitute materials or equipment is not thereby precluded.)
5. Include signature required at the end of this form.
6. The construction shall be completed in compliance with the signed drawings and specifications, as amended during processing. The specifications include this Description of Materials and the applicable building code.

1. EXCAVATION:
Bearing soil, type Fine clay; Notes: Where fill is in excess of 18", concrete piers to be installed at 8' O.C. and the cost will be added to the contract.

2. FOUNDATIONS:
Footings: concrete mix 1:2:4;3000 PSI ; strength psi 2500 PSI Reinforcing (4) 5/8" steel rebar
Foundation wall material 2500 PSI concrete concrete Reinforcing
Interior foundation wall material 2500 PSI concrete Party foundation wall 2500 concrete
Columns: material and size Piers: material and reinforcing
Girders: material and size Sills: material 2"x6"Cedar Douglas Fir w/sill sealer
Basement entrance stairs Window wells
Waterproofing waterproof mix in concrete Footing drains 4"x6" mortar joints
Termite protection Treatment wall and slab wall with Chlordane and issue 5 year warranty.
Basementless space: ground cover ; insulation ; foundation vents
Special foundations: Thicken slab beam with (2) 5/8" steel rebars to underlayment soil.
Additional information: See garage details. Also porch and fireplace footing.

3. CHIMNEYS:
Material brick Prefabricated: make and size
Flue lining: material terra cotta Heater flue size 8" metal/aluminum Fireplace flue size 12"x12"
Vents: material and size: gas or oil heater ; water heater metal/aluminum
Additional information

4. FIREPLACES:
Type ☐ solid fuel ☒ gas burning ☐ circulator (make and size) 12" metal Ash dump and clean-out metal
Fireplace: Facing Brick ; lining Firebrick ; hearth brick ; mantel wood
Additional information Metal Fireplace studded and taped for gas outlet.

5. EXTERIOR WALLS: 2x6 studs @ 16" O.C. 1/2" plywood at corners
Wall frame: wood grade, and species s.y.p. utility #.2 ☒ Corner bracing: Building paper or felt 15# felt
Sheathing plywood ; thickness 1/2" ; width/grade ; ☒ solid ☐ open ; "x4" ☐ diagonal
Siding Polyethylene ; grade ; type ; size ; exposure " ; fastening
Shingles ; grade ; type ; size ; exposure " ; fastening
Stucco ; thickness ; Lath ; weight lb.
Masonry veneer face brick Mix brick Ties wire supporting brick Base flashing
Masonry: ☐ solid ☐ faced ☐ cavity wall wall thickness "; facing thickness "; facing material
Backup material ; thickness " ; bonding
Door sills Window sills Lintels Base flashing
Interior surfaces: dampproofing ; coat of ; finish
Additional information Two coats of exterior paint or stain as selected by owner.
Exterior painting: material ; number of coats
Gable wall construction: ☐ same as main walls ☒ other construction Cedar plywood or vertical siding as shown on elevation.

6. FLOOR FRAMING:
Joists: wood, grade, and species ; other ; bridging ; anchors 1/2"x8"
Concrete slab ☐ basement floor ☐ first floor; ☒ ground supported ☐ self-supporting; mix 2500 PSI concrete; thickness 4"; reinforcing 6x6-W2.9xW2.9 WWF ; membrane 15# gum/tarpaper ; membrane waterproof concrete
Fill under slab: material sand fill ; thickness 6 " Additional information

7. SUBFLOORING: (Describe underflooring for special floors under Item 21.)
Material: grade and species 5/8" AC exterior plywood ; size ; type
Laid ☐ first floor ☐ second floor ☒ attic 700 sq. ft. ☐ diagonal; ☐ right angles. Additional information

8. FINISH FLOORING: (Wood only. Describe other finish flooring under Item 21.)

LOCATION	WOODS	GRADES	SPECIES	FACING BEVEL	WIDTH	BLDG. PAPER	FINISH
First floor							
Second floor	Hall and bedrooms	Select merchantable		Center match			Alternate per square foot
Attic floor	sq. ft.						

Additional information

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0575-0042. Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

HUD-92544 2005
VA Form 26-1852

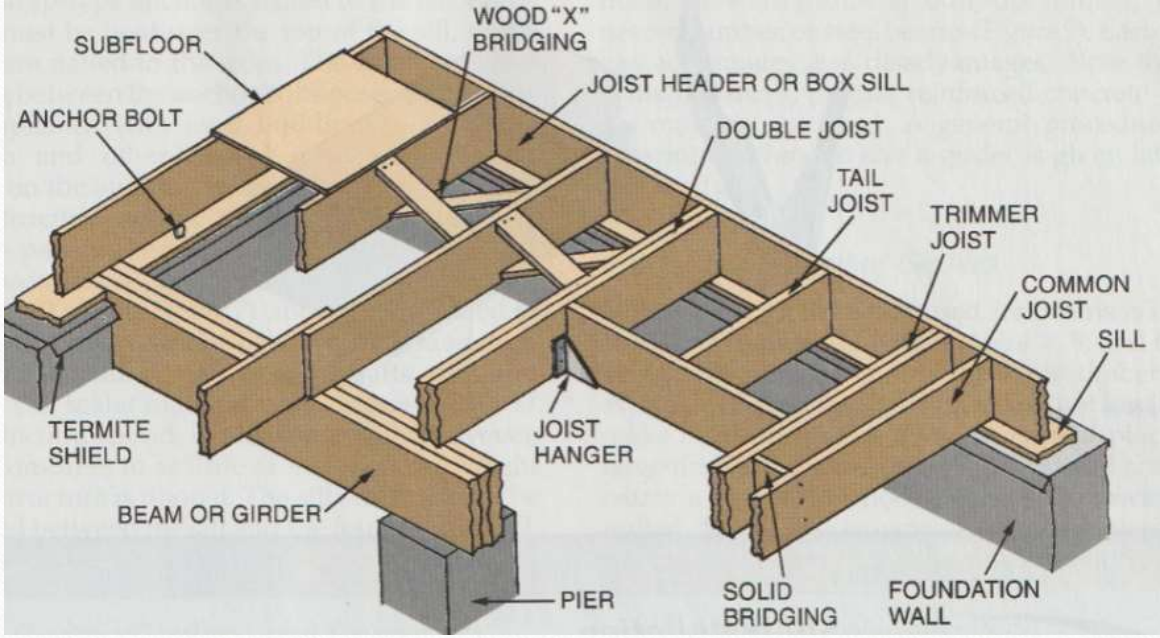
RD 1924-2 (Rev. 7-99)

104F27A.EPS

Typical materials specification (1 of 4).

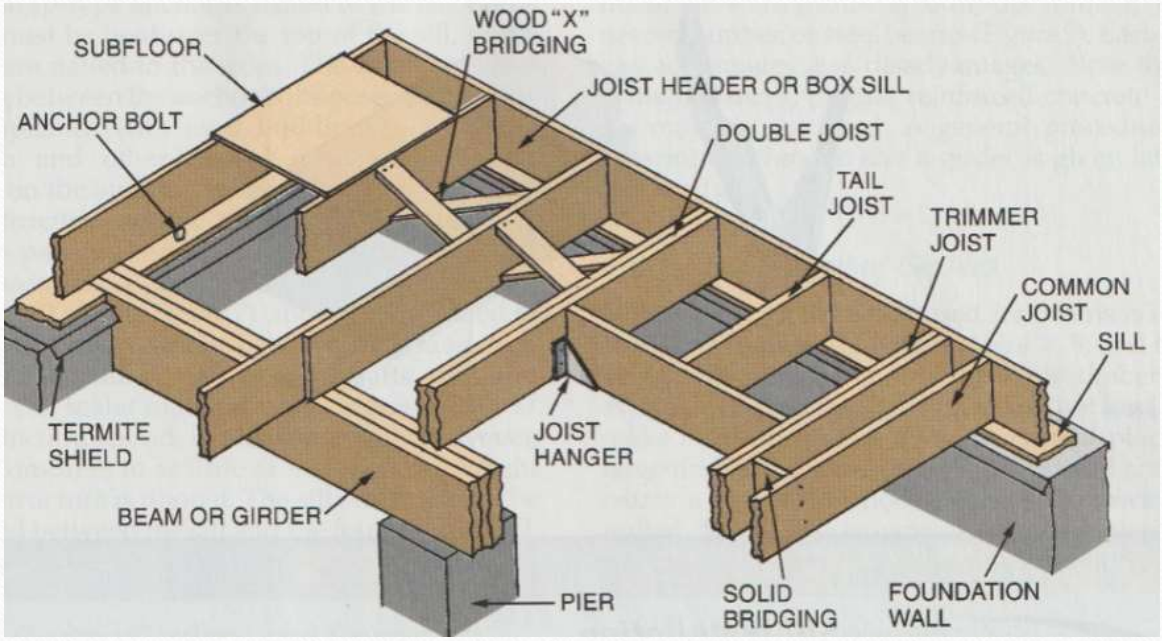
Subfloor

- Subfloor



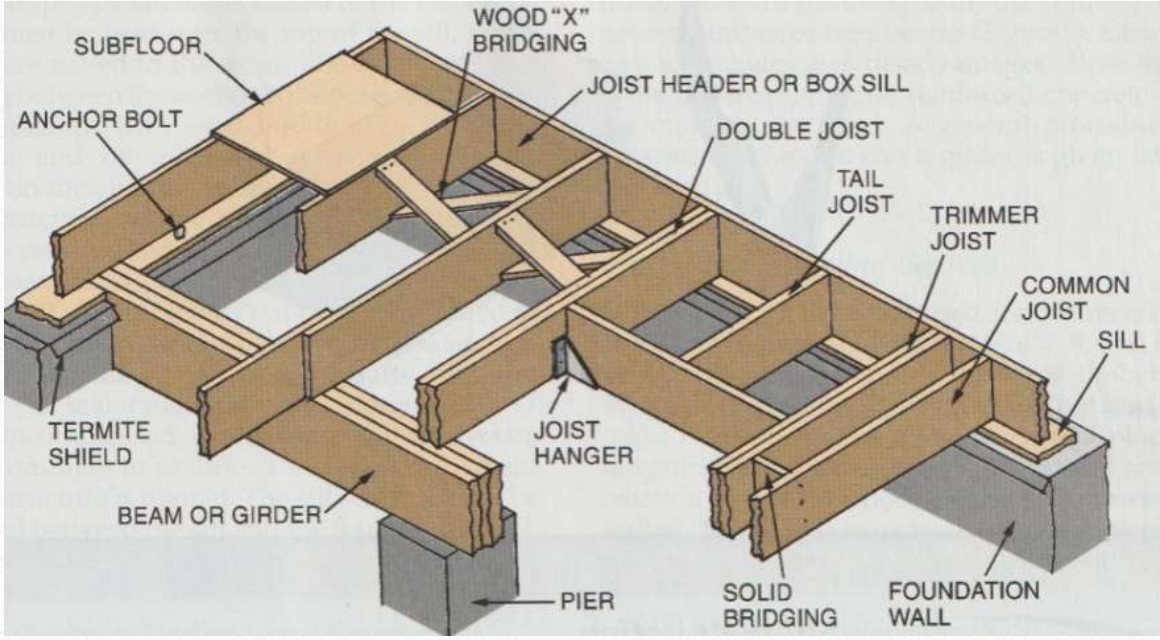
Double Joist

- Double Joist



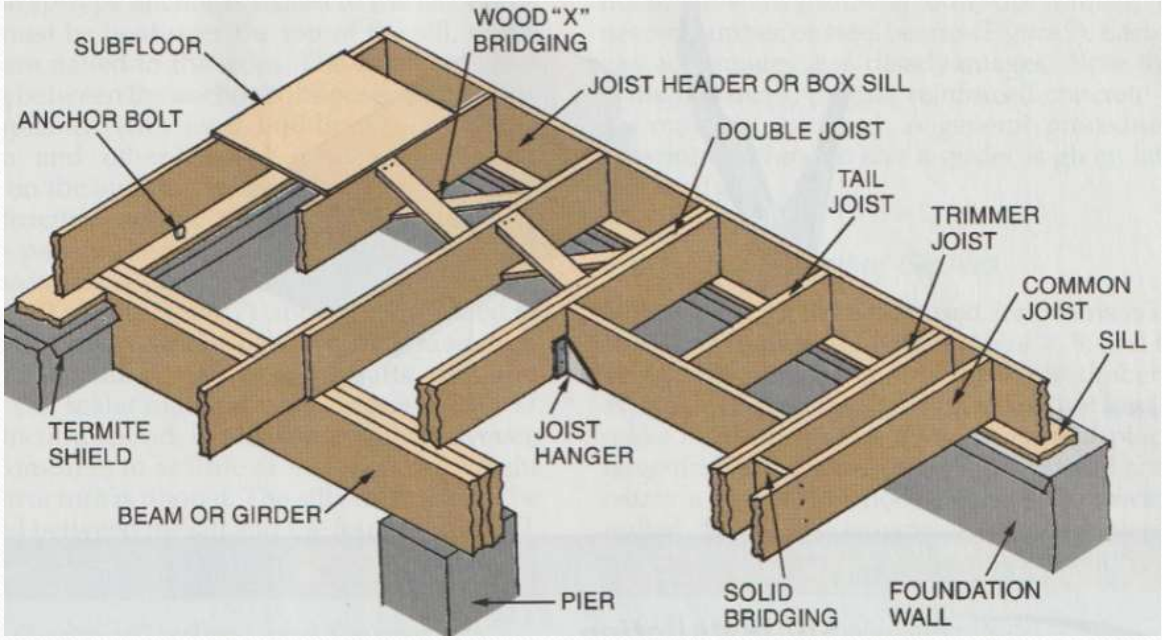
Bridging

- Wood "X" bridging.



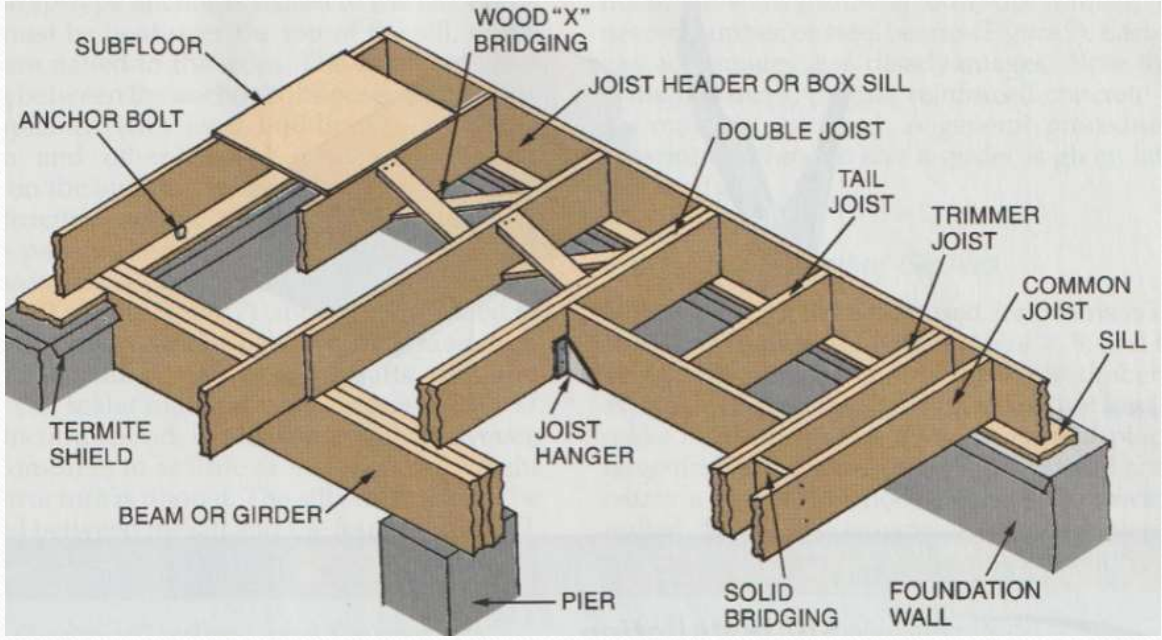
Termite Shield

- Termite shield



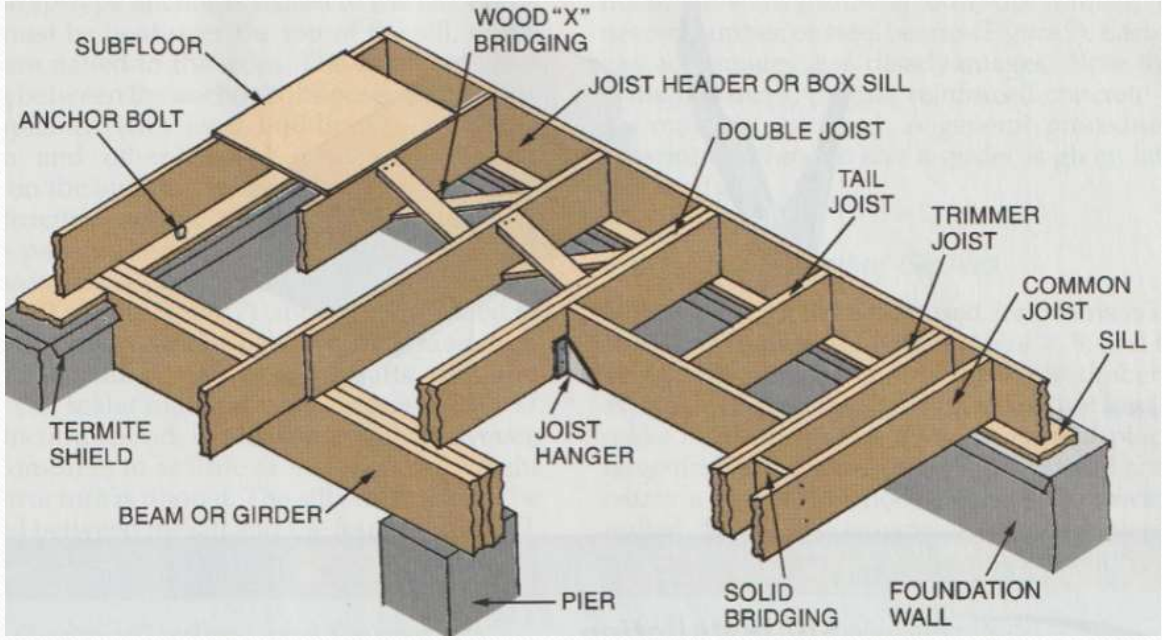
Bridging

- Solid Bridging



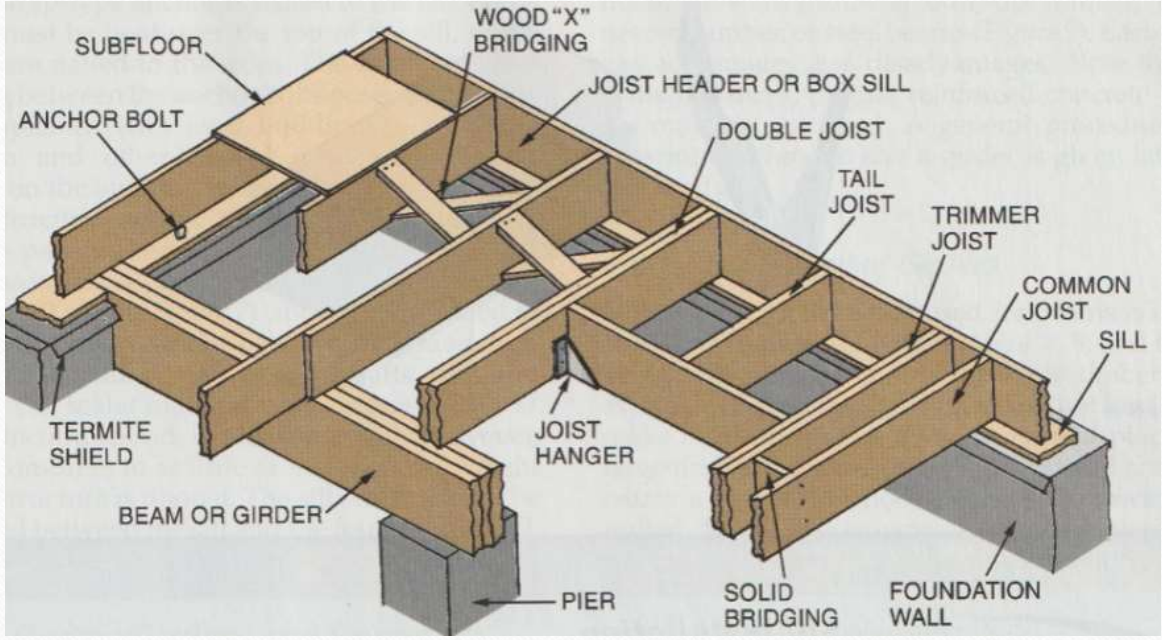
Joist Hanger

- Joist Hanger



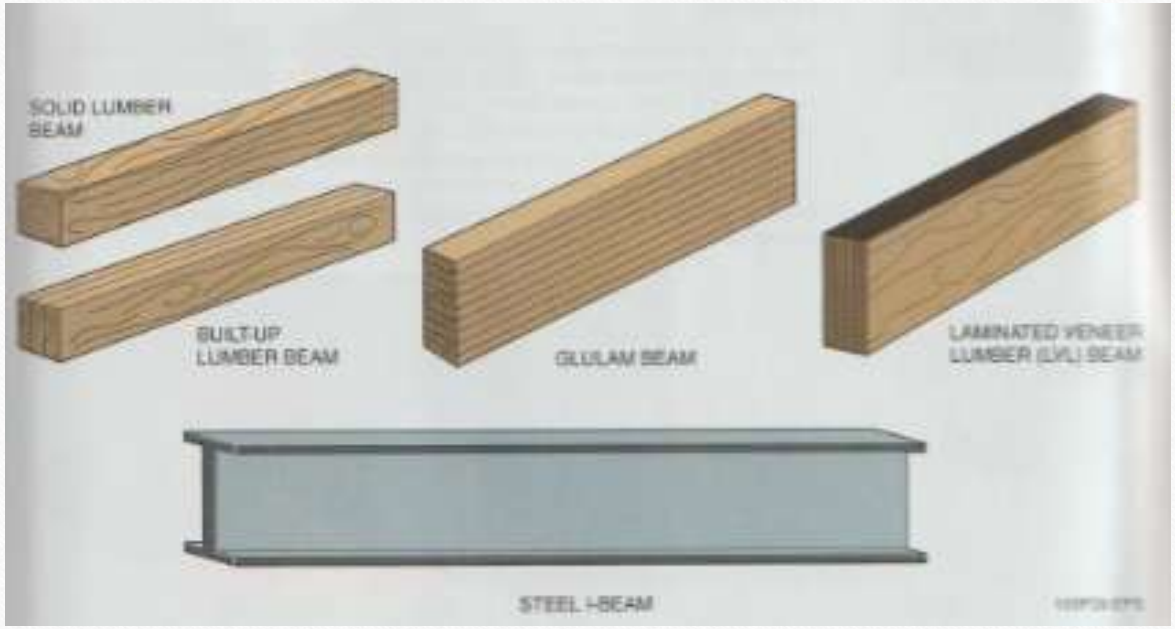
Sills

- Sills are normally made from **2 x 6** lumber.



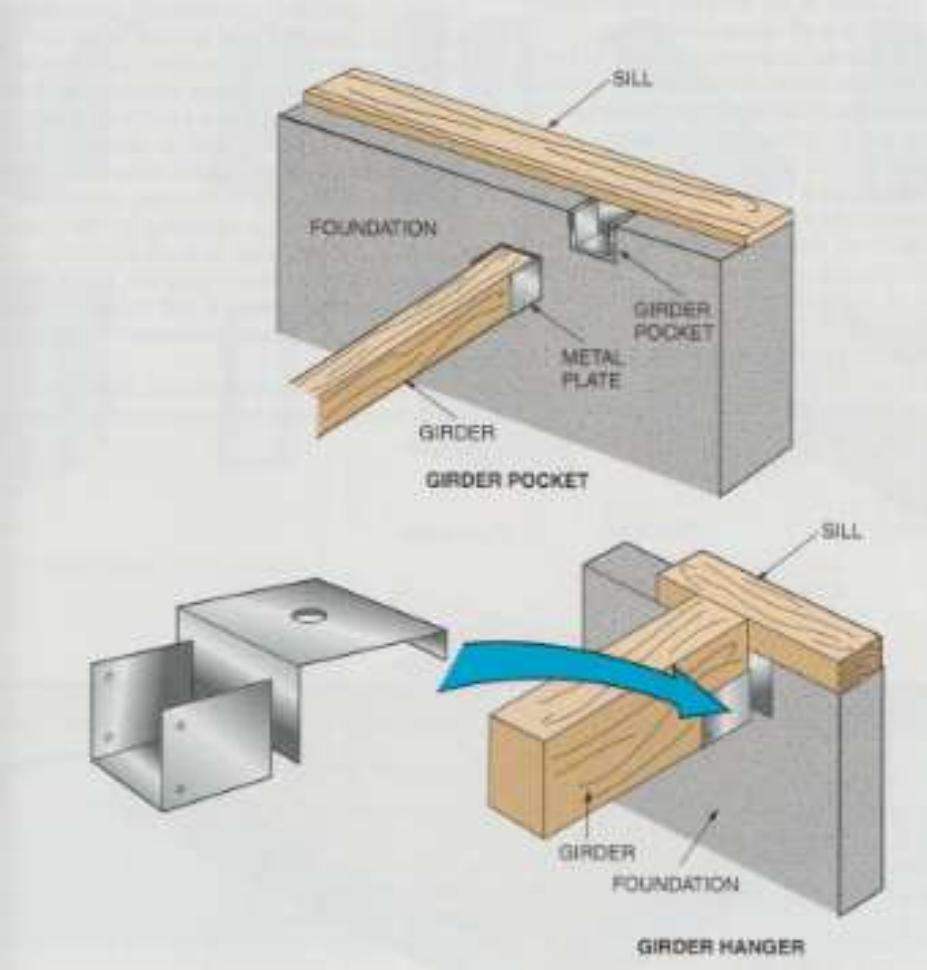
Girders

- For a given size, the type of support with the most strength is the **steel I-beam.**



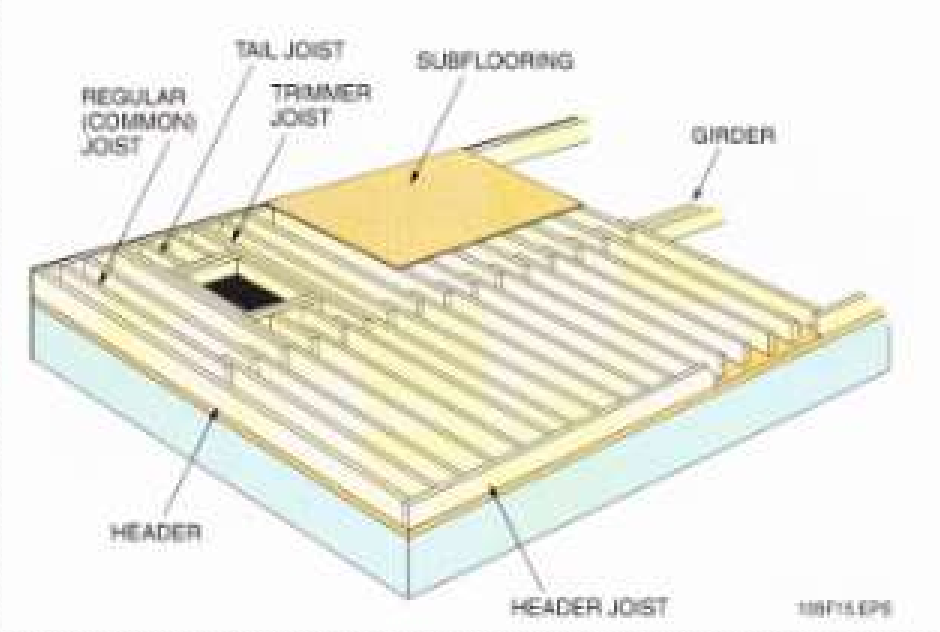
Girder Pockets

- A rule of thumb for constructing girder pockets is that the pocket should be at least **1”** wider than the girder, and the girder must have at least **4”** of bearing on the wall.



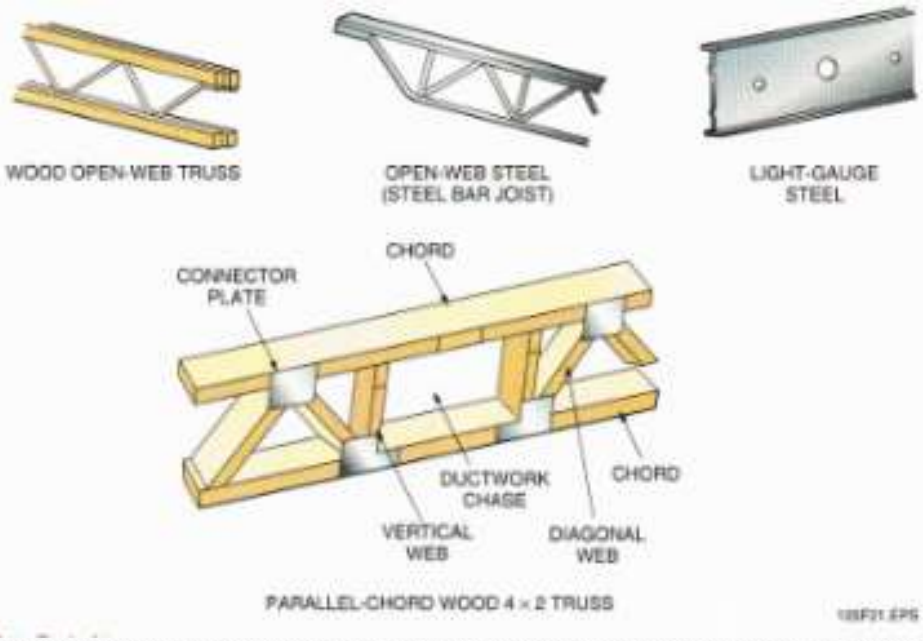
Wooden Floor Joists

- Wooden Floor joists are normally placed **16”** o.c. (on center) with the crown **up**.



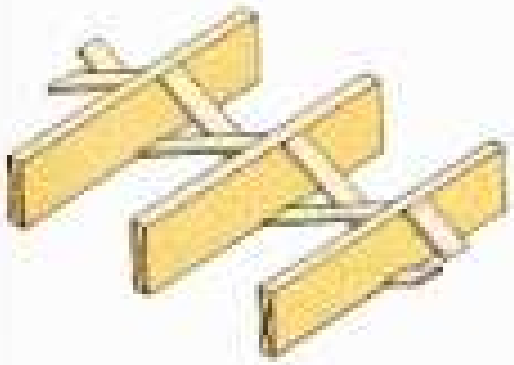
Floor Joists

- For a given length and size, the type of floor joist with the most strength is a **truss with a steel web.**

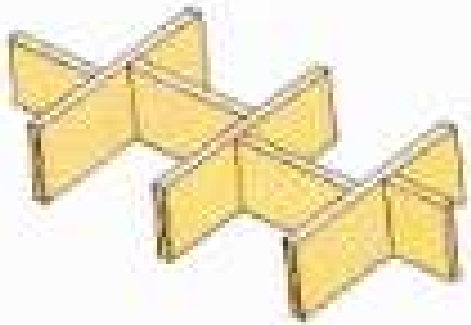


Bridging

- Most building codes require that bridging be installed in rows between floor joists at intervals of not more than **8'.**



WOOD CROSS BRIDGING

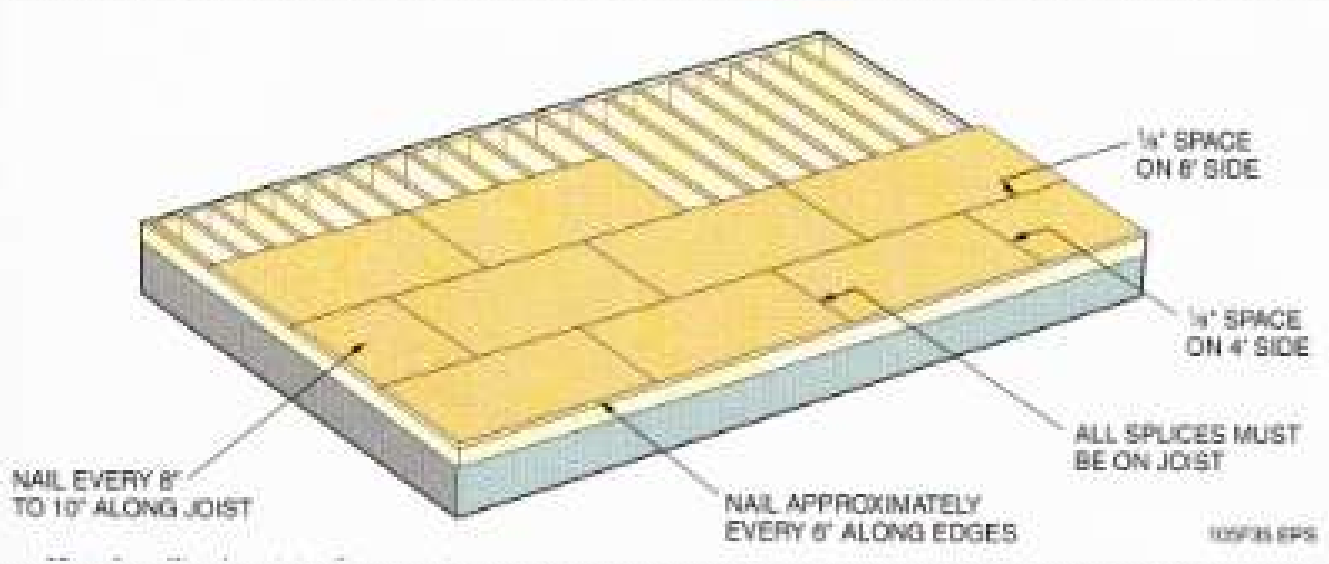


SOLID WOOD BRIDGING

STEEL CROSS BRIDGING

Nailing Patterns

- When installing plywood subflooring, nail the panels every **6”.**

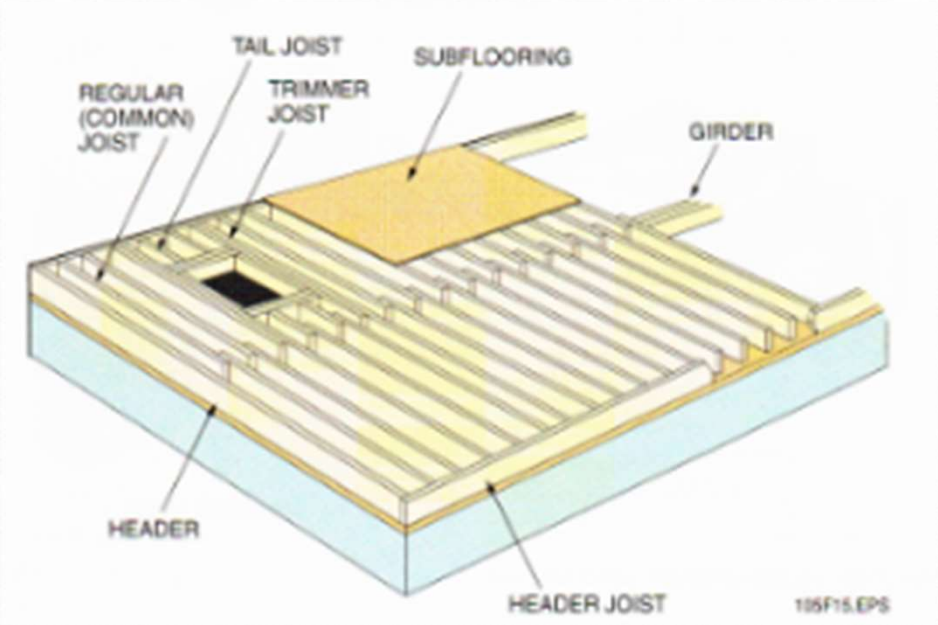


Nailing Patterns

- To fasten wood cross-bridging and subfloors, you would use **8d** box nails.

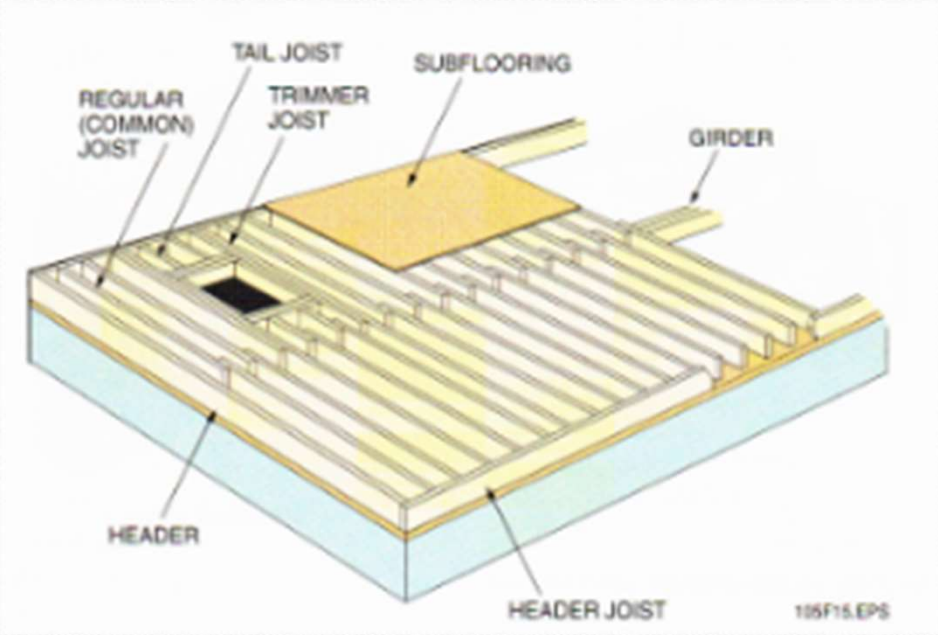
Nailing Patterns

- To fasten headers to joists, you would use **16d** box nails.



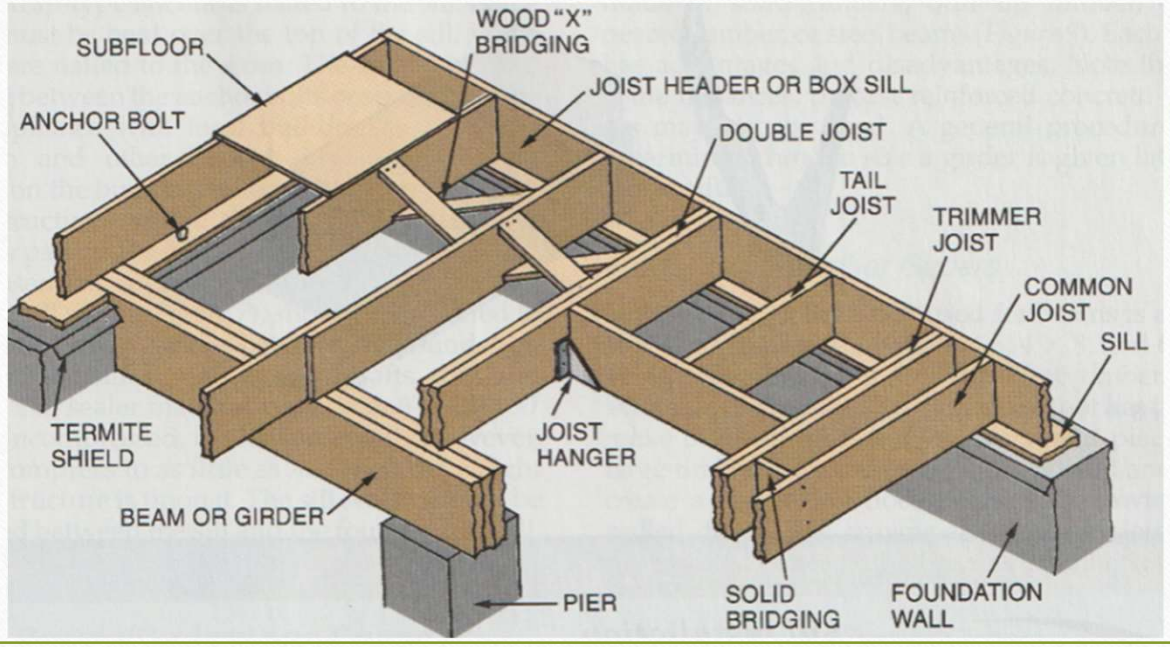
Reading Construction Drawings

- Length of sill



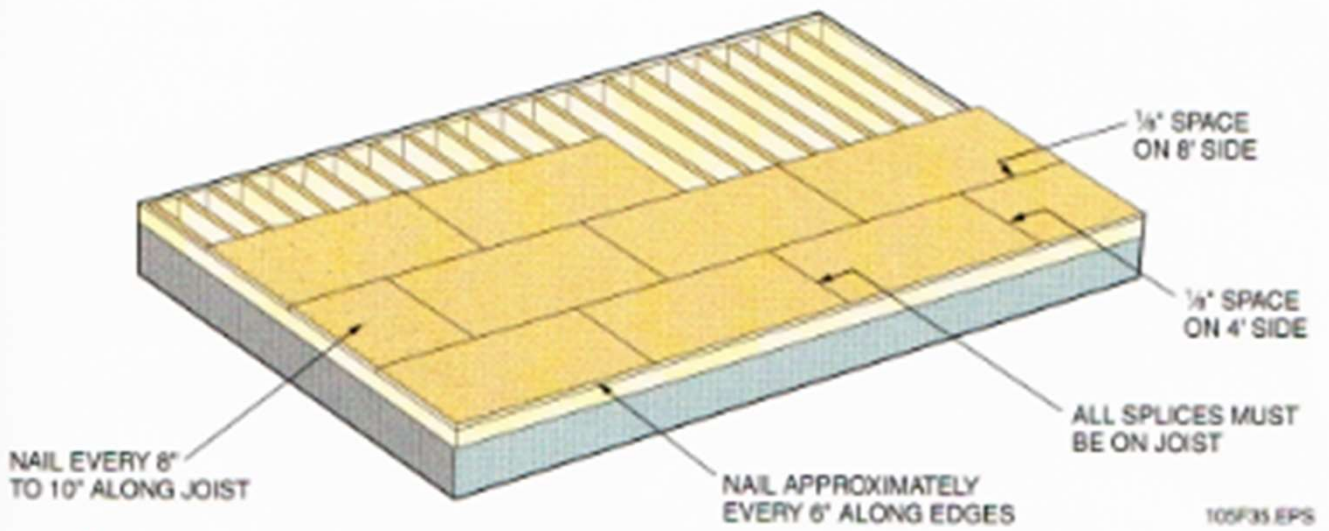
Reading Construction Drawings

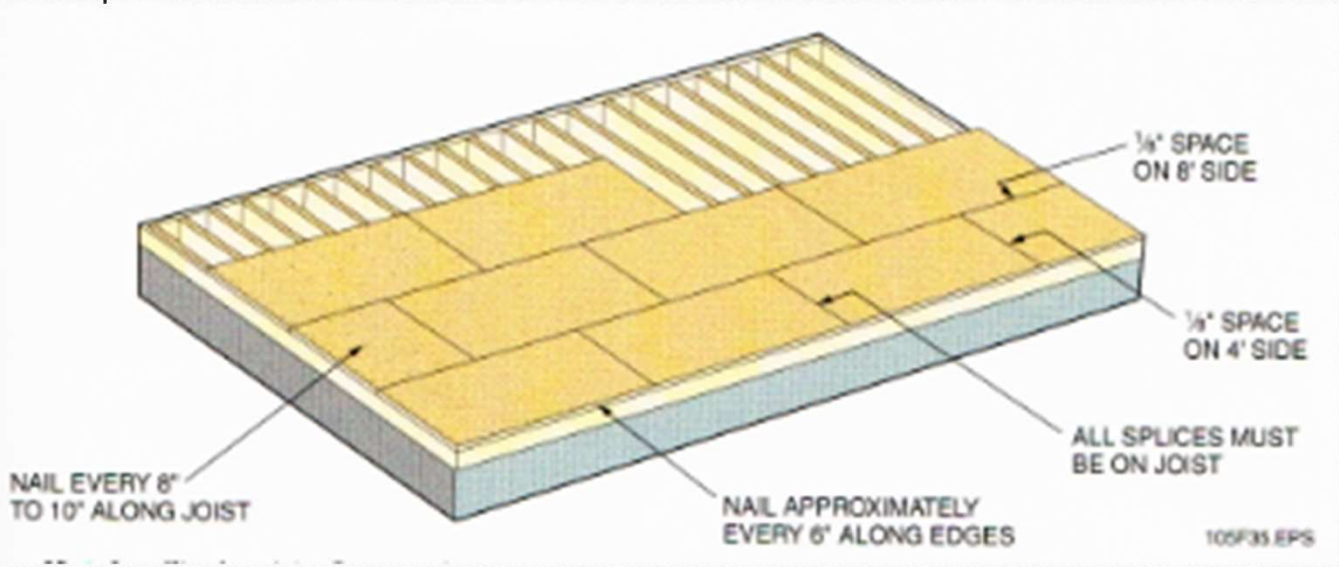
- Floor Beams



Reading Construction Drawings

- Number of joists



Reading Construction Drawings

- Number of plywood panels