TUBE LEG HOMES & BARNDOMINIUMS

Why would you want to build a custom steel frame home?

- Open concept design with clear span for customized floor plans
- Structurally sound and fabricated with strict specifications for safety from weather damage
- Reduced maintenance costs for the life of your steel home
- Steel is a green material (a 2,000 sq ft house with a steel frame is the equivalent of about six recycled cars versus approximately 40-50 mature trees needed to build the framework in a conventional wood construction)
- Fire resistant and non-combustible
- Takes less time to build your home
- Energy efficiency
- Lower insurance rates
- Money savings

WORLDWIDE STEEL BUILDINGS

STEEL BUILDINGS SINCE 1983

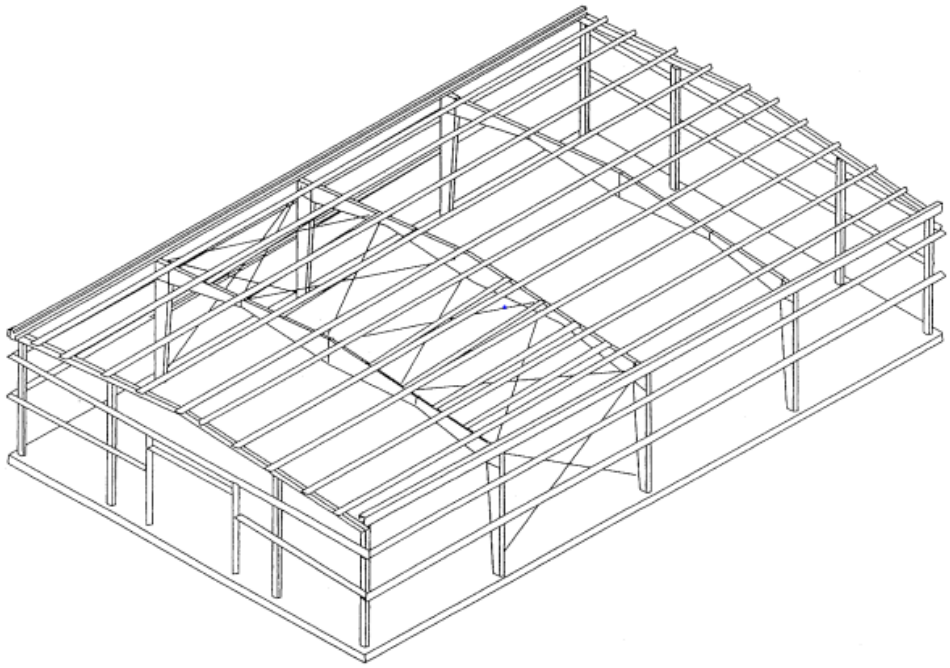
Made in the USA with 100% American steel

We are your one stop shop for all aspects of designing and building your new home. We cut out the middle man for cost-effective, steel frame building kits because we are the manufacturer with our own fabrication facility.

What Types of Steel Buildings are Available for Homes?

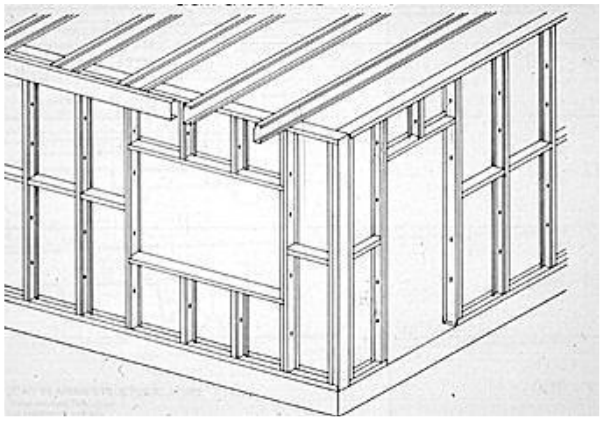
Many companies advertise they offer steel and metal homes when in fact they are offering wood framed buildings with steel sheet metal siding. These are pole barns and would require you to build perimeter stud walls inside the buildings. Below are the available types of steel and metal homes using steel frames.

Rigid Frame (Red Iron) Steel Design



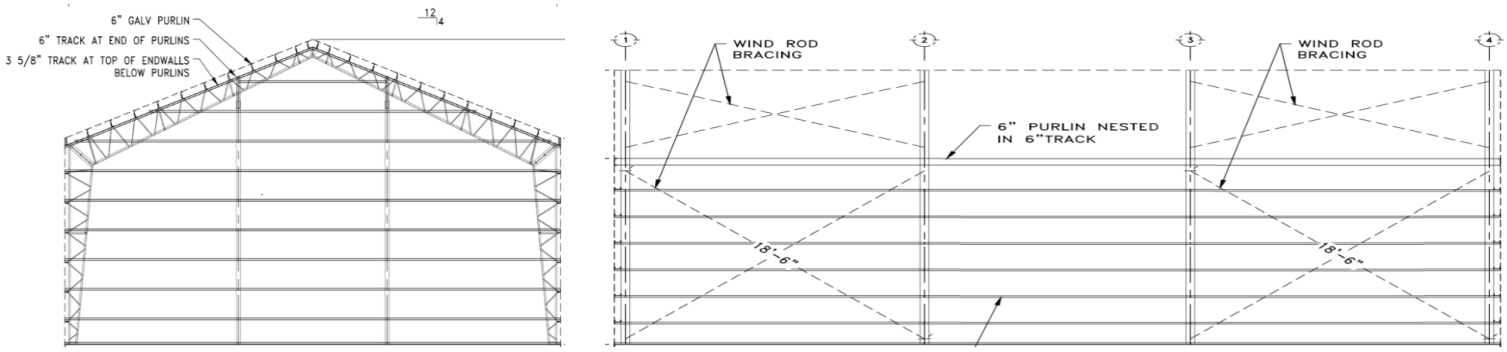
Red iron building was designed for commercial and industrial applications. Although some people use this product for homes it is the worst fit for interior finishing and having the exterior have any characteristics of a home. The 8-10" girts (studs) will be on 5 -7' centers, this will be lost interior space because you will need to build perimeter stud walls inside of the building. This design does not allow you to use alterative materials for the exterior, because the sheet metal on the building is part of the structural integrity of the building. The trusses will be set on 25-30' centers and may intrude into the building up to 3' with cord bracing going back to the girt (stud). You will need to build additional stud walls on the perimeter of the building. Unless you are looking for that warehouse feel for your home, this style of steel building will have many challenges including lost interior space and extra expense in interior finish. Another disadvantage is the standard roof pitch is a 1 or 2:12 which is considerably flat.

Light Gauge Steel Design



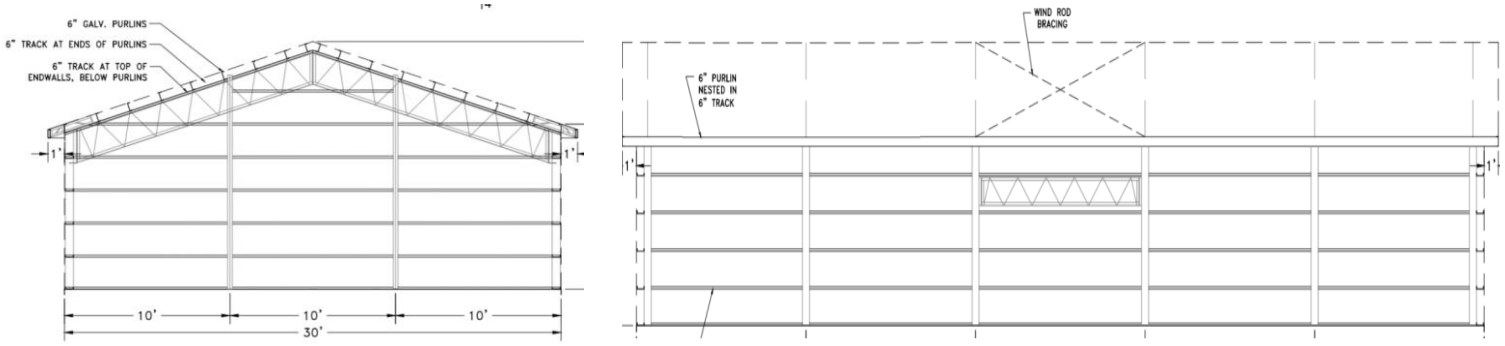
Light gauge steel design is very similar to wood construction with light gauge metal framework that is ultimately the backbone of your home. The wood is replaced with a thin light gauge steel section. Steel is stronger than wood, and the members are galvanized, cold rolled steel. Common shapes are C or S shapes in a 2"x 4" or 2"x 6". These shapes are screwed together using self-drilling and self-tapping screws. One benefit is this design takes minimal equipment to build, but build time will take longer. Disadvantages with light gauge steel is the transfer of sound and can quickly lose strength in a fire.

Open Web Column Design



Open web column design brings several favorable benefits to a steel frame home. Trusses are set closer together, normally 12' on center and the secondary framing girts (studs) are set on edge on 2' centers. This creates superior strength and allows you to finish direct to the perimeter building secondary framing, avoiding the cost of stud walls for the perimeter of the home. Second floors, lofts and porches (including wrap around porches) are easily accomplished with the open web design. Open web truss also come in a hybrid version for the customer that wants to use wood for their secondary framing. Disadvantages are that you will still need to work around the cord bracing, wind bracing, and the intrusion of the trusses. Standard roof pitch is a 4:12 with available pitches up to 12:12.

Open Web Tube Leg Column Design



Open web tube leg was developed by demand in the industry to address the challenges of other steel buildings when using a steel or metal building for a home. Like the open web steel design, the trusses are closer together, but the straight steel tube leg is used replacing the standard tapered leg. Use of the tube leg means that you get a flat interior and exterior surface with no intrusion in the home from a truss leg. Additional benefits when using the tube leg design is that you do not have to work around wall cord bracing or wind bracing, allowing the interior finish to be clear of obstacles. Wall girts (studs) are set on edge and flush mounted on 2' centers, creating superior strength and allowing to finish the interior direct to the building secondary framing. An additional girt line is added for sheet rock finish.

What is Interior Finish?

Interior finish can be done per customer preference. Sheet rock is on the top of the list for finishing walls. Ceilings can be vaulted or flat above the rooms with either sheet rock or the use of a drop ceiling. Some customers leave an unfinished, ceiling showing the trusses and the white vinyl back of the insulation. Issue: The issue with interior finish with most steel buildings is that they require you to build additional perimeter walls in front of the girts (studs) that are part of the building. Once you build those walls you still must figure out a way to dress up the cord bracing and box around the intrusion of the truss columns. If you are looking for the rustic industrial look this is not an issue, but if not, these items not only add expense to your home project, they are not always aesthetically pleasing. There is a building design that has a cure… What is roof pitch? The pitch of a roof is its vertical rise divided by its horizontal span (or "run"). In steel buildings the standard pitch can be from 1/2:12 (which is a ½” rise per foot) to a 12:12 (which is 12” rise per foot). Most red iron buildings will have a standard pitch between a ½:12 and 2:12., whereas open web and light gauge designs have a steeper standard pitch. The standard pitch for homes is 4:12 through 9:12.

HOME DESIGN WITH LOW MAINTENANCE MATERIALS: TUBE LEG STEEL HOMES BY WORLDWIDE STEEL BUILDINGS!

BENEFITS OF TUBE LEG FRAMING

What are the Benefits of using a Tube Leg Building System for your Home?

- Sheet metal warranty ranges from 25 years to a lifetime warranty.
- Reduced construction cost - steel buildings are easy and less expensive to build.
- Steel buildings are less vulnerable to termites, bore bees, insects and/or other pests.
- Steel won't rot, warp, split, shrink, twist, bend or decompose like wood.
- Steel won't mold or mildew.
- Goes up faster than conventional construction.
- Easy to insulate with multiple solutions, which can reduce utility costs.
- Structural strength, making them safer during storms of all types.
- Steel has a higher weight to strength ratio than wood.
- Steel has higher durability.
- Easy to customize exterior finishes and accents.
- Multiple roof pitches available, allowing for a custom look.
- Eave and gable extensions available.
- No need for roof replacement every 15 years.
- Steel holds its value.
- Lower insurance premiums.
- Heating and cooling savings.
- A green alternative.
- Non-combustible.
- Create your own floor plan!

More Benefits of a Tube Leg Steel Building Kit from Worldwide Steel:

- No need to build perimeter stud walls - Finish to the building framing with no loss of space, and saves the expense of stud walls.
- No truss intrusions into the living areas.
- Girts located for easy sheetrock finish, with Additional 6" insulation cavity in walls.
- 50-year structural warranty and lifetime sheet metal warranty.
- No cord bracing in walls that will be intruding into the interior.
- No wind bracing to work around in walls.
- Versatility for loft areas and second floors.
- Available porch overhangs, including wrap around porches.
- Direct from our factory (not a broker).
- Options to use different materials for the exterior finishing.
- Use of Tube legs and tapered trusses for garage can save additional money.
- Connected buildings with different roof lines.
- Available Dormers.

Myths about Steel and Metal Houses: Here is the Truth

1. Lightning strikes are not a danger in a steel home because the steel is a positive conductor to the earth, so the energy is sent straight to the ground instead of into the frame of a conventional wood construction which could potentially start a fire. The same thing happens when exposed to live electrical wires. If these are inside the home, they would be protected just like in conventional construction with circuit breakers.
2. Mold and mildew will not form on steel homes. There are three things required to grow mold & mildew; mold spores, moisture and organic material which provide food for mold growth. Steel does not contain any organic materials.
3. Steel frame homes are not “noisier” than conventional wood frame homes when both are properly insulated.
4. Steel frame homes will not interfere with radio or television reception.
5. Steel frame homes do not interfere with your Wi-Fi reception.

CHALLENGES WHEN BUILDING A STEEL HOME

Some steel homes have a few challenges that you may not be aware of during the planning phase. The biggest is the requirement of **cord bracing** and **wind bracing** followed by the **truss depth** and interior finish.

What is Cord Bracing?

Cord bracing is a piece of steel that goes from each side of the truss leg to the girt (stud) and the roof girder to the purlin (roof rafter). Depending on how tall your home is there can be more than one of these cord braces on each leg.

> **Issue:** When finishing the interior wall, these braces will protrude through the finished wall and tie back to the truss - making the finished interior less than desirable. There is a building design with a cure...

What is Wind Bracing?

Wind bracing is required in all steel buildings. This bracing is what gives the strength in the long direction of a building. The amount of required bracing varies by manufacturer and building size. This bracing is made of steel rod or steel cable and reaches from truss to truss, set on the inside of the girts (studs).

> **Issue:** The issue with wind bracing is that you must work around it when doing interior finish. If you are building interior walls, you shouldn't lose more than 1½". This may also create issues on window and door placement. There is a building design with a cure...

What is Truss Depth?

Truss depth is the depth of the truss intrusion into the interior of a building. These may be straight legs or tapered legs but will intrude on the inside of your interior walls.

> **Issue:** The issue is they are difficult to finish around, and they will have at least one cord brace coming off both sides of the truss going back through the finished wall. There are times when you can hide the truss intrusions in a room dividing wall, but depending on the width of the truss and the cord brace, this may be difficult to do. There is a building design that has a cure...

Cost Estimate Formula for your Complete Project:

National average build price for a steel building home range from can vary by square foot and system used. Some systems require you to build a house inside the steel building adding additional cost. Conventional wood construction average $120 - $180. The below prices are average and may be higher or lower for your area. Not only will you save money using the right steel building for your home, you will avoid the maintenance that comes with building and painting a conventional home. You should be able to save between 10% & 20% building your home using the right steel building, along with big time savings. Below are national averages for cost you should consider.

Building Package Cost = _____

Building Assembly Square Footage of Building _____x $6.00 base = _____ (plus options)

Concrete Square Footage _____x $6.00 - $8.00 = _____

Electric & Plumbing Square Footage _____ x $8.00 - $10.00 = _____

HVAC Square Footage _____ x $7.00 - $9.00 = _____

Insulation Square Footage _____x $2.00 - $3.00 = _____

Interior Finish Square Footage _____ x $30.00 - $35.00 = _____

Architectural Drawings _____ Permits _____

Utility Connection Fees _____

Total (excludes land, landscape, driveway, patio etc.) _____

Other Considerations:

- There is less material waste when building with steel vs. wood.
- With all steel buildings, it is suggested to use a thermal break insulation to wrap your exterior so the cold and heat are not transferred into your home.
- If you have a HOA, make sure the building you buy has exterior options available other than sheet metal.

COMMON QUESTIONS

What is a Barndominium?

Our barndominium designs are steel framed buildings with an open floor plan that can be divided up however you like between living quarters, garage space, workshop, hobby area and storage space.

How long has Worldwide Steel Buildings been in business?

Worldwide Steel Buildings has been in business since 1983

Can Worldwide supply a Barndominium or steel home kit in my area?

Worldwide has supplied building kits in all 50 states, including Alaska as well as several other countries. Each are designed and manufactured to meet each local building codes.

Can I build my own Barndominium?

Yes, Worldwide has designed their buildings with the DIYer in mind. Each building comes with an assembly manual and we have a staff on hand to answer any questions throughout the building process.

What is the square footage price of a Worldwide Barndominium kit?

Depending on the option you go with (second floors, wrap around porches, etc.) the price starts around $10.00 a square foot and can go up to about $30.00 a square foot.

What is supplied with a Worldwide Barndominium kit?

The standard kit includes all main framing, secondary framing (for all steel), exterior sheeting, trim, closures, fasteners and stamped building plans. These packages can be added to with second floors, overhangs, wrap around porched, etc. or reduced if you want to do you own exterior material of a different roofing material.

What type of Barndominiums are available through Worldwide?

Worldwide offers 5 different steel or steel/wood kits with the most popular being the steel tube leg system because the interior finishing benefits.

Does Worldwide offer financing?

Worldwide Steel Buildings is partnered with New Century Bank and First Federal Bank of Kansas City. These lenders understand the Barndominium industry and the steel home market and is able to assist our customers with their financing needs nationwide.

What is the final cost to build a Barndominium or Steel home?

Using national averages and depending on what high end finishing you want to incorporate, including the building kit from Worldwide Steel Buildings, should range between $70 - $100 a square foot. This number does not include items such as driveways and sidewalks. Worldwide supplies the structure only.

About Worldwide Steel Buildings

Worldwide Steel Buildings has manufactured their own building packages since 1983 with buildings in all 50 states and several countries around the world. We are known for the strength of our buildings and the ease of installation. Currently we maintain a 33% referral base business which increases every year. We do this by making sure we supply the best product and service available with one goal in mind...

"Happy Customers"

We look forward to working with you on your new home and offer the most options available to give you exactly want you want! If you would like to get a free quote on your home project, simply call us toll free at:

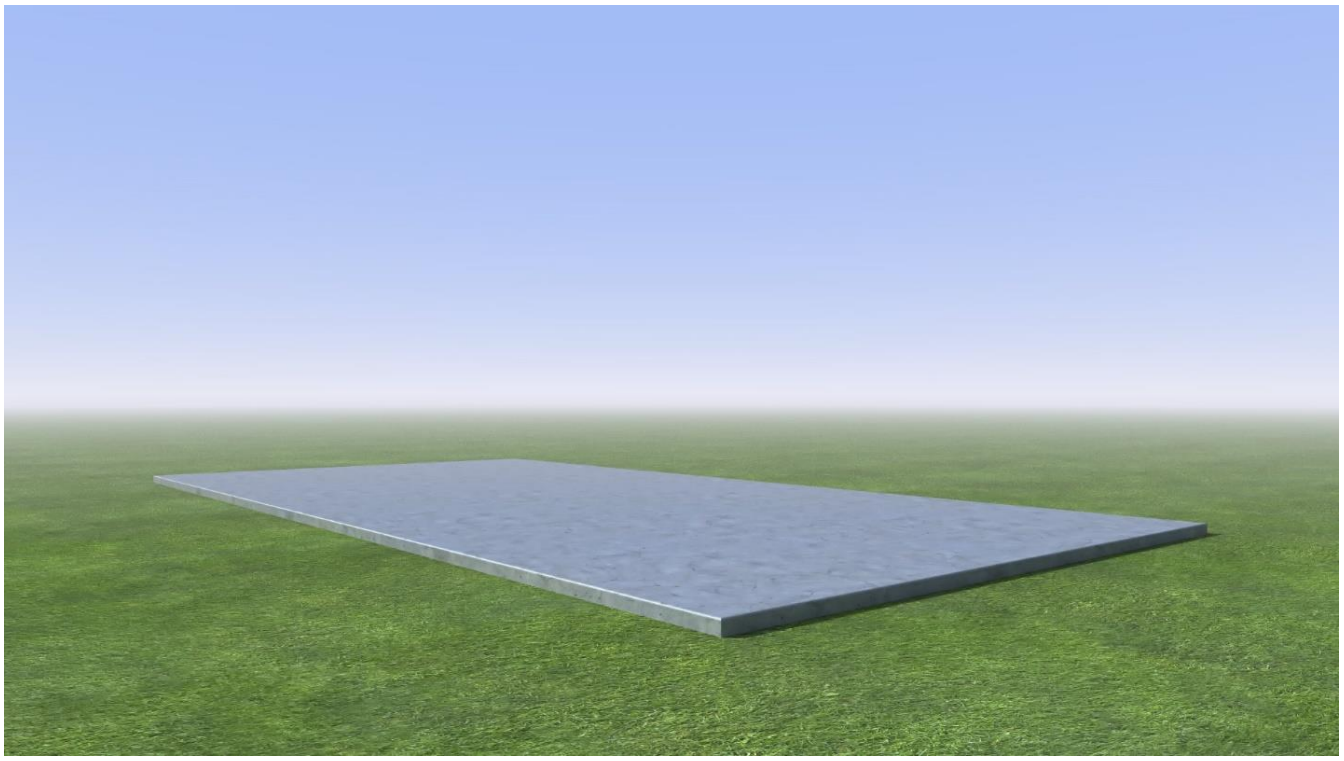
(800) 825-0316

One of our building consultants will be happy to put one together for you. You may also do so by completing the contact us form located on our web site link below:

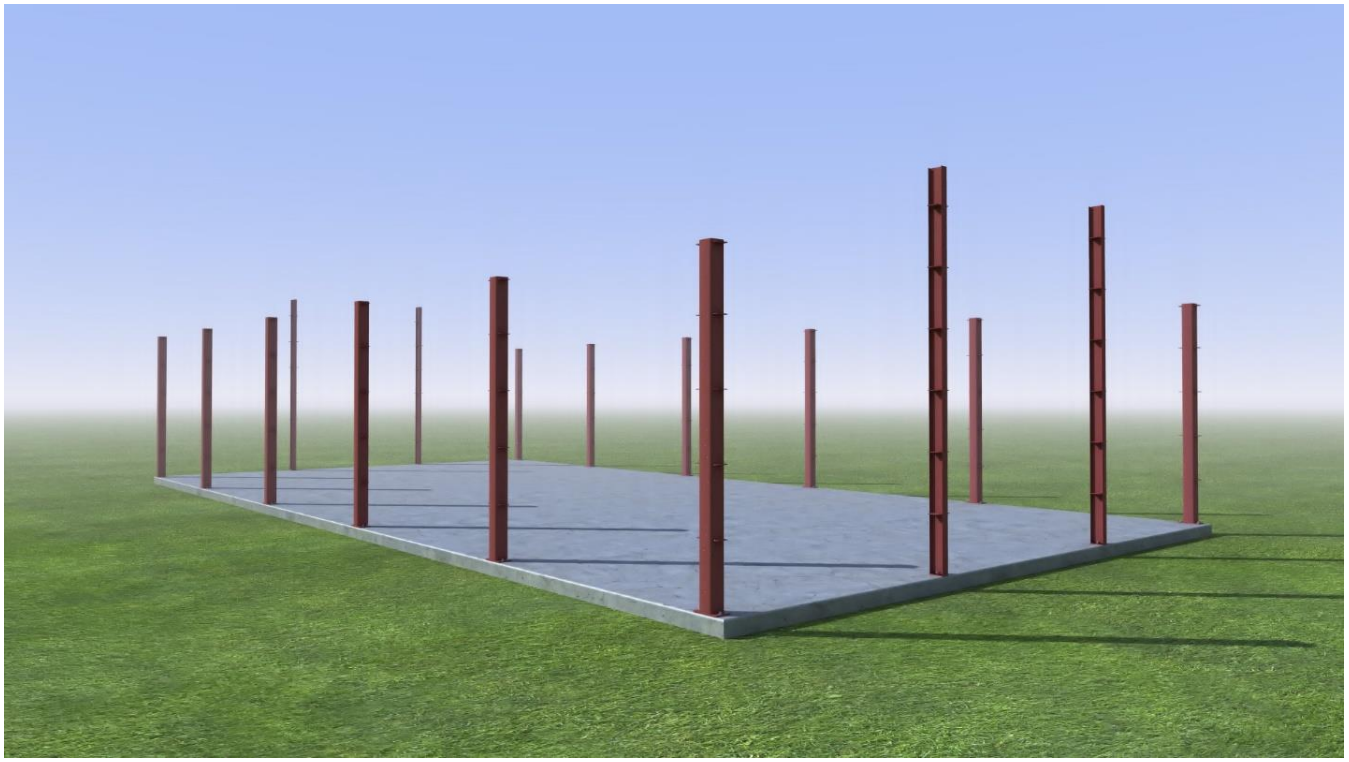
https://www.worldwidesteelbuildings.com/steel-buildings/barndominiums/

How does a Tube Leg Building go together?

1. Foundation Creation

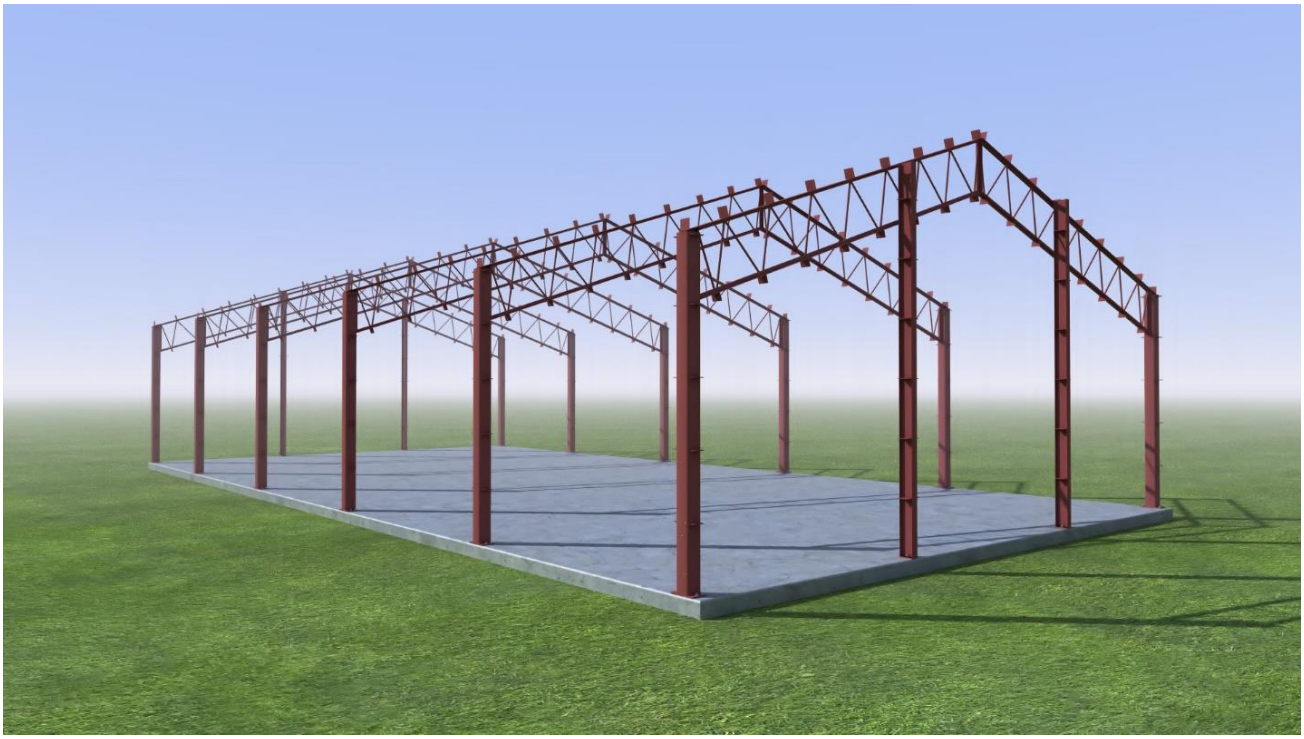


2. Set Columns (Heavy 6" steel tubes that won't intrude into your rooms)

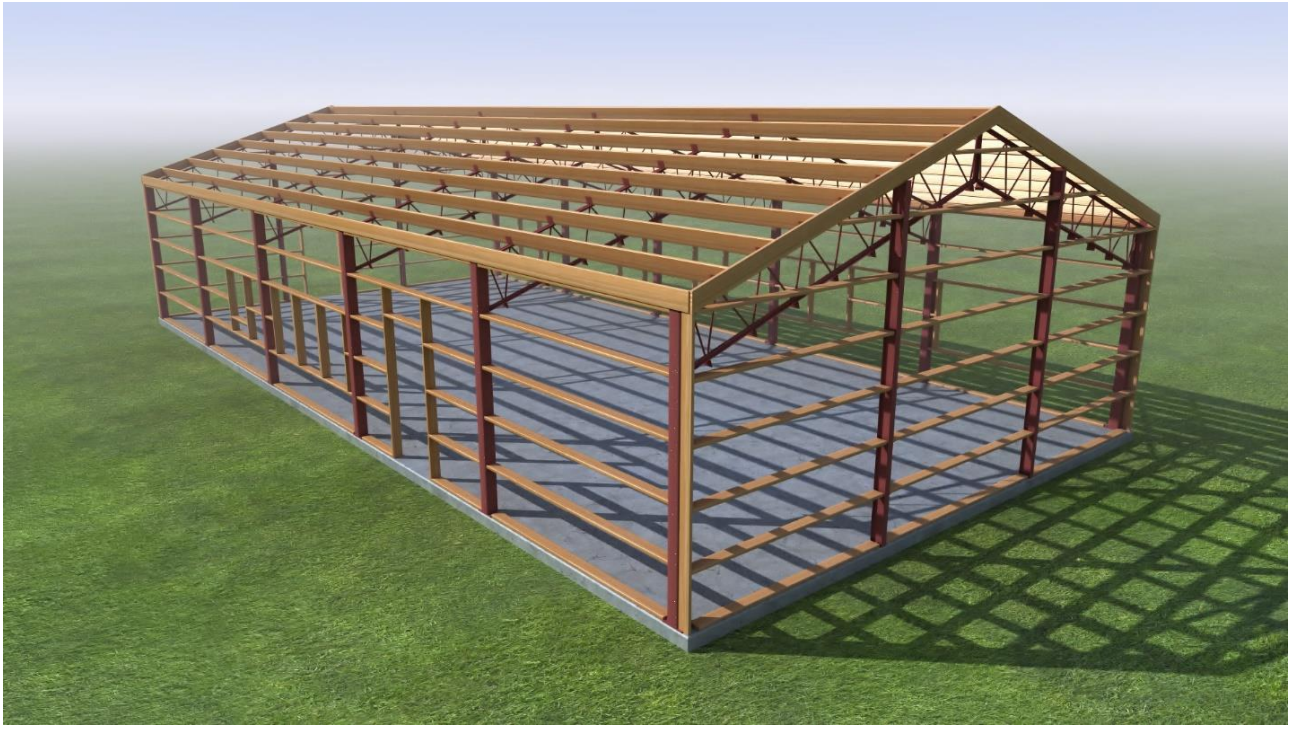


Building a Tube Leg Building: steps 3/4

3. Roof Trusses (clips can be added for a finished vaulted ceiling)

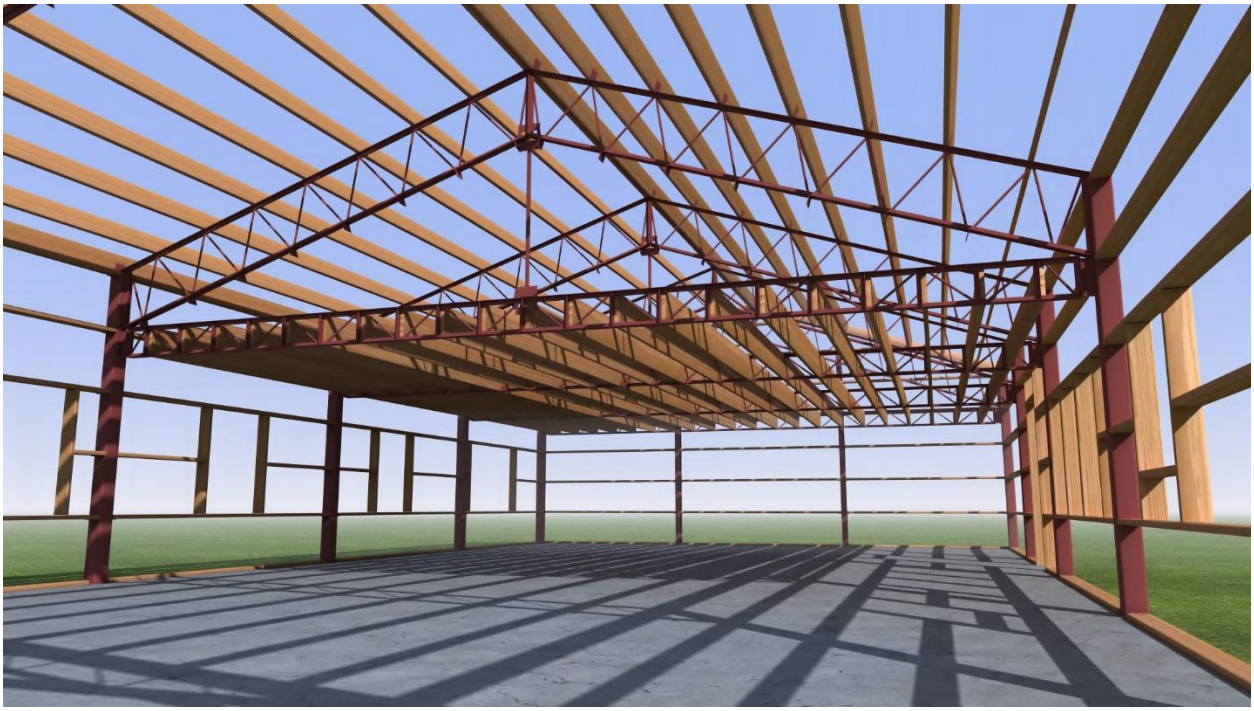


4. Secondary framing and openings using our steel purlins and girts or wood can be used as an alternative material



Building a Tube Leg Building: steps 5/6

5. Add a second floor with our exclusive mezzanine system for more living space or storage



6. Add thermal break insulation and sheet wall (if other exterior materials are preferred just let us know what you plan to use)

Building a Tube Leg Building: steps 7/8

7. Add your roof insulation and roof sheeting panels

8. Finished applying your roof trim materials

Building a Tube Leg Building: steps 9/10

9. Your interior is now ready to finish out

10. Insulate and sheet rock your walls

Building a Tube Leg Building: steps 11/12

11. Insulate and sheet rock your ceiling

12. Stud in your interior walls

Building a Tube Leg Building: steps 13/14

13. Sheet rock your interior walls

14. Install your interior door frames, cabinets, etc.

Building a Tube Leg Building: steps 15/16

15. Install your flooring and your doors

16. Your building is now move-in ready!

Available Size Options

What other custom features are available and in what sizes?

Sizes: Available from 600 square feet to 12,000 square and larger

Home Widths: 12’ through 60’ wide

Soffitted Eave and Gable Extensions: Available 1’ through 3’

Overhangs: Available from 4’ through 14’ self-supporting

Lean to or Half-Truss: Available from 12’ through 50’

Wrap Around Porches: Available as partial or full with widths 4’-14’

Second Floors: Available partial or full second floor post supported or hung from roof supported

Use of other Exterior Materials: Multiple choices supplied by customer Insulation option: Spray foam, batt, rigid board

Roof Pitches: Available from 1:12 through 12:12

Connected Buildings: Different heights, L shape, T shape or connected with breezeways

Steel or Wood Secondary Framing: Customer’s choice