Rigid Frame

"RED IRON" I-BEAM BUILDING

STEEL COMMANDER CORP

ADVANTAGES OF

RIGID FRAME "RED IRON"

Red iron buildings represent the gold standard in structural steel construction. Built from hot-rolled steel beams and columns, these structures deliver unmatched strength and durability for demanding commercial and industrial applications.

The distinctive "red iron" name comes from the rust-colored primer coating applied to the steel, but the true distinction lies in the engineering. This construction method creates rigid frame systems specifically engineered to support larger spans and heavier loads than conventional building methods. This system is comprised of a solid beam coated in Carbo coat/charcoal grey upgraded primer accompanied by all galvanized secondaries.
***Refer to the photos below for examples of this type of building system.**







CHOOSING

RIGID FRAME

Red iron construction excels in challenging environments where structural integrity is paramount. Consider this robust building solution when your project faces:

High Snow Loads – Heavy winter precipitation demands exceptional load-bearing capacity that red iron frames deliver with confidence.

Strong Wind Conditions – Coastal areas and open plains require buildings that can resist sustained high winds and severe weather events.

Seismic Activity – Earthquake-prone regions benefit from the inherent flexibility and strength of engineered steel frames.

Large Open Spaces – Warehouses, manufacturing facilities, and retail centers requiring column-free interiors find ideal solutions in red iron construction.

- **Size of the Building:** For smaller buildings or those with a width under a certain limit, cold formed buildings are often more cost-effective and easier to assemble. For larger structures, especially those over 50 feet wide, red iron buildings offer the necessary strength and support.
- **Load Requirements:** Assess the environmental conditions where the building will be constructed. For areas with high snow, wind, or seismic loads, red iron buildings provide superior durability and stability.
- **Budget and Timeline:** Cold formed buildings offer a more affordable option with quicker construction times, ideal for smaller projects with budget constraints. RIGID/Red iron buildings, while potentially more expensive, construction can be around the same as hybrid I beam or slightly longer, and normally the building for higher budget/need projects.











WHY

RIGID FRAME

Uncompromising Strength

Red iron buildings provide superior load-bearing capacity that makes ambitious projects possible. From expansive warehouses to bustling manufacturing plants and modern retail centers, these structures support the demands of large-scale operations. The rigid frame system distributes weight efficiently, allowing for heavy equipment, multi-level storage systems, and substantial roof loads without compromise.

Built to Last

Extreme weather is no match for properly engineered red iron construction. These buildings stand firm against heavy snow accumulation, resist powerful wind forces, and maintain structural integrity during seismic events. The inherent properties of hot-rolled steel, combined with thoughtful engineering, create structures designed for decades of reliable service in the most demanding conditions.

Design Freedom

The structural efficiency of red iron framing enables wide, open interior spaces without interior support columns. This flexibility allows you to configure your space exactly as your operation demands, whether that means open floor plans for manufacturing efficiency, adaptable retail environments, or warehouse layouts optimized for material handling. As your needs evolve, the clear-span design accommodates reconfiguration without structural modifications.











RIGID FRAME

GARAGES





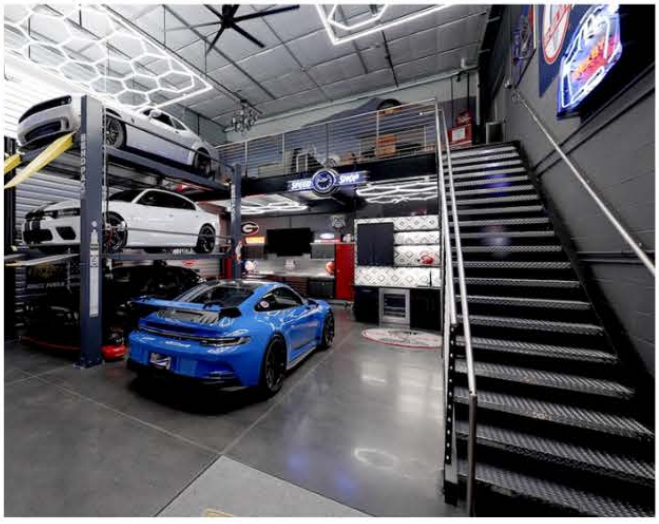












RIGID FRAME

AGRICULTURE



















RIGID FRAME

RESIDENTIAL

















RIGID FRAME

COMMERCIAL











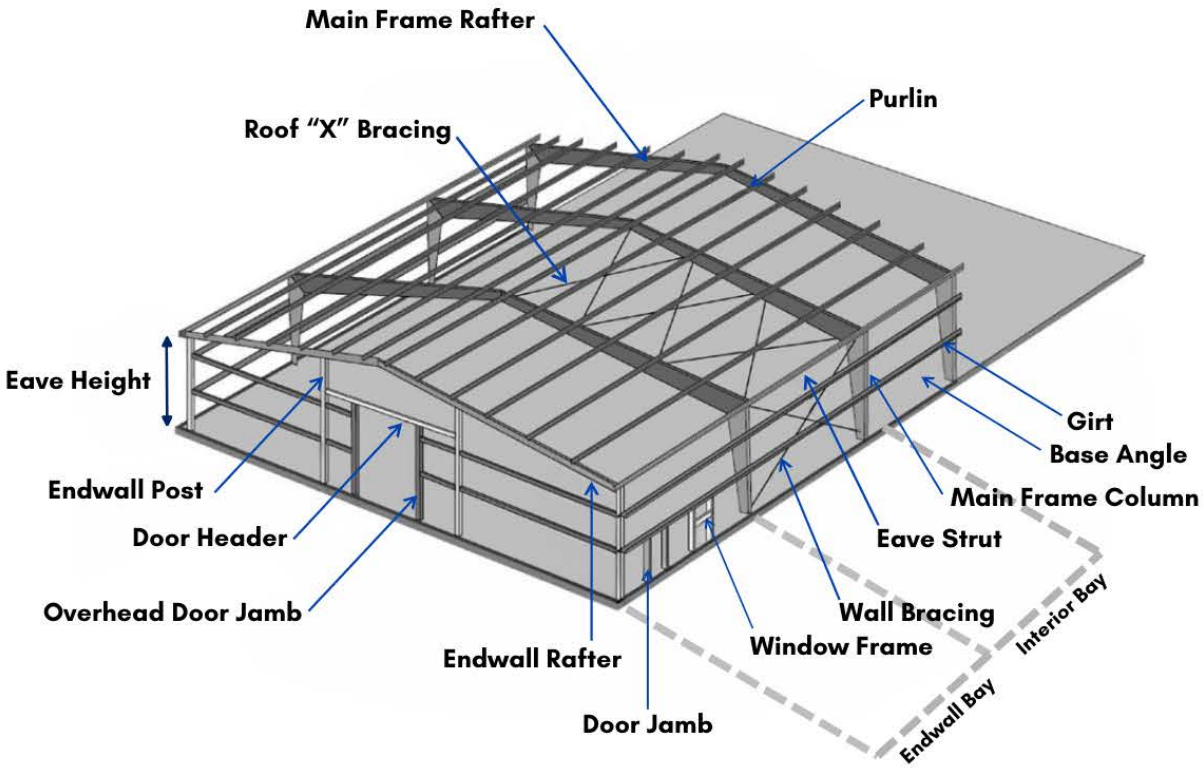


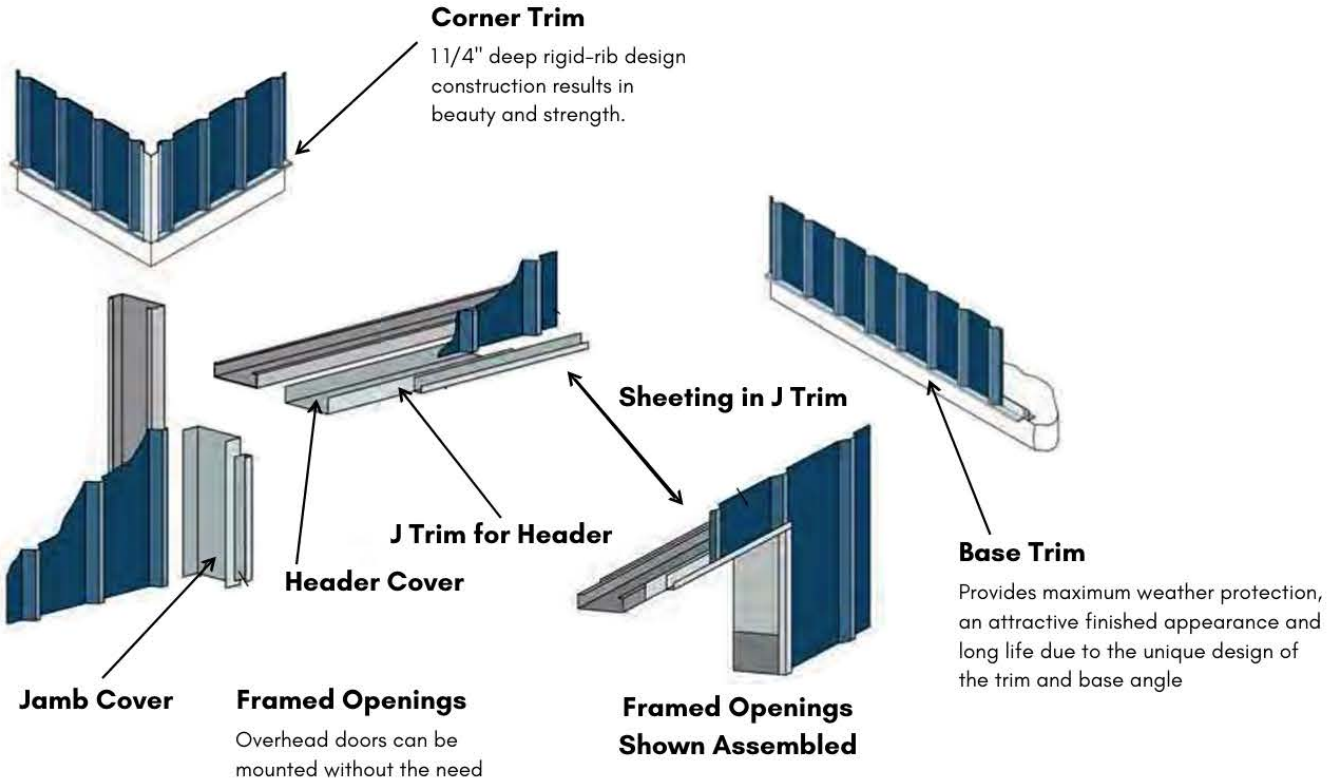


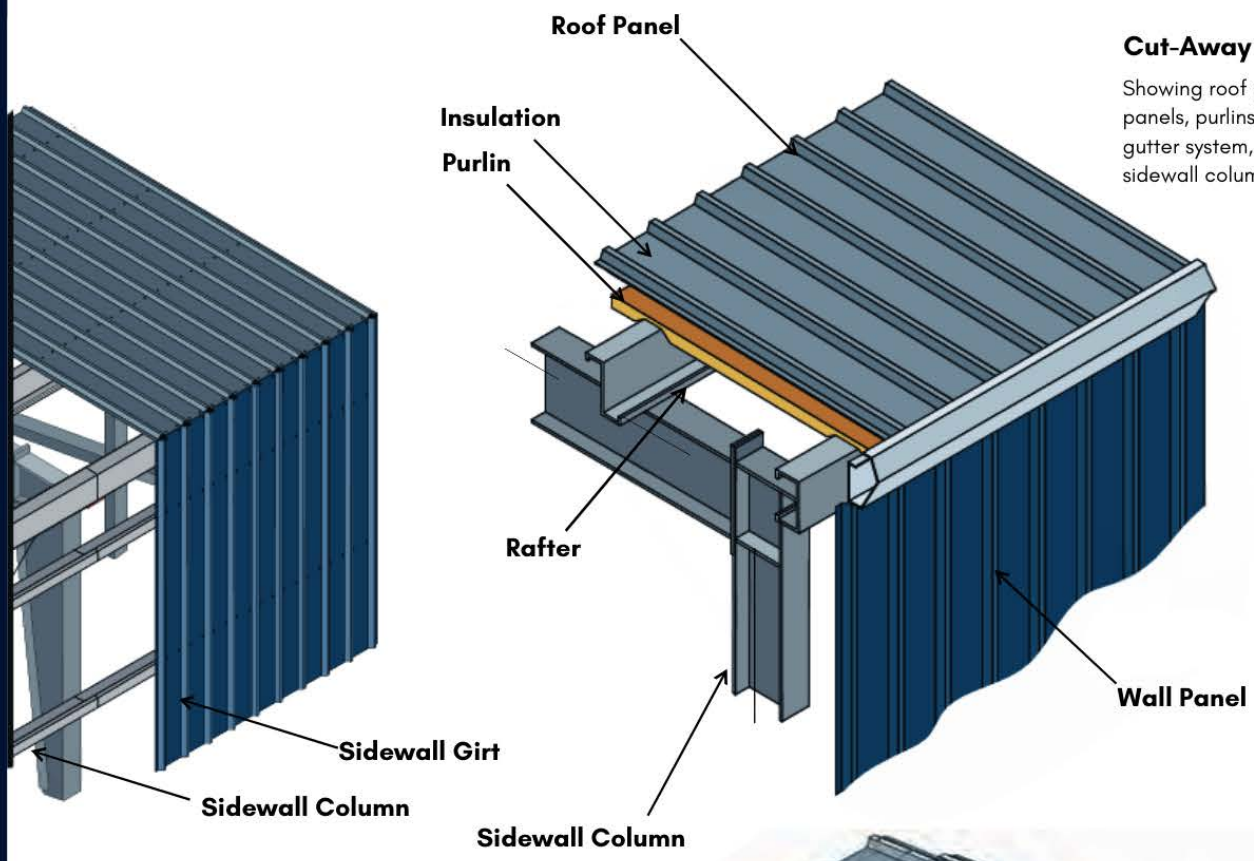







Main Frame Rafter
Purlin
Roof "X" Bracing
Eave Height
Girt
Base Angle
Endwall Post
Main Frame Column
Door Header
Eave Strut
Overhead Door Jamb
Wall Bracing
Interior Bay
Window Frame
Endwall Rafter
Endwall Bay
Door Jamb


Corner Trim
11/4" deep rigid-rib design construction results in beauty and strength.
Sheeting in J Trim
J Trim for Header
Header Cover
Base Trim
Provides maximum weather protection, an attractive finished appearance and long life due to the unique design of the trim and base angle
Jamb Cover
Framed Openings
Overhead doors can be mounted without the need for additional steel or hardware
Framed Openings Shown Assembled



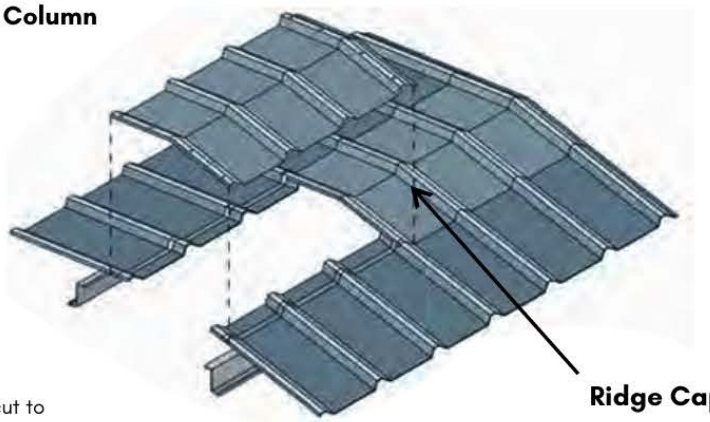
Cut-Away View

Showing roof panels, wall panels, purlins, optional gutter system, rafter and sidewall column.



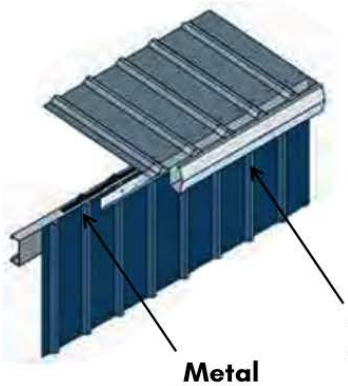
Roof Panels

Rigid-rib panels pre-cut to building dimensions and designed for long life.



Ridge Cap

Factory formed for easy installation with a high-rib design for severe weather.

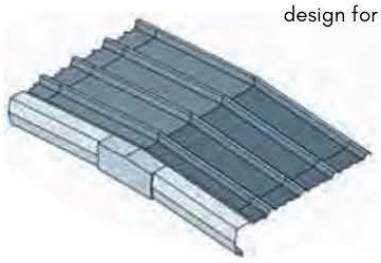


Optional Gutter System

Contour design efficiently controls drainage from rain and show over doors.

Metal Eve Trim

Optional Gutter System



Ridge Cap

Factory formed for easy installation with a high-rib design for severe weather.



RIGID/Red Iron Steel Building

Warranty

50 yrs
Structural

40 yrs
Panel against rust corrosion oxidation

40 yrs
Paint Color System

Carbo-Coated Main Frames
All Galvanized Secondaries
***Unless other wise specified**

Unless otherwise specified

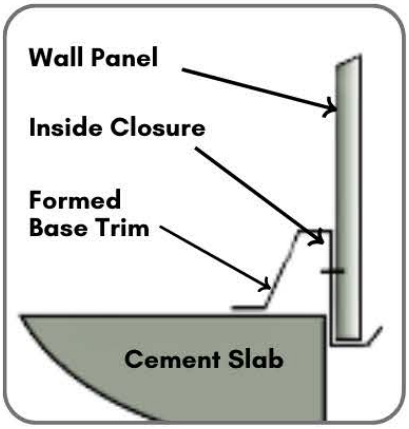
Financing Available through HFS financing

Financing Available through Hearth financing

844.722.4766
SteelCommanderCorp.com

WHY

KEY FEATURES & BENEFITS



Premium self-drilling panel screws

#12-14 Galvanized self-taping screw with nyopreme washer color matched to panel color



Purlin Bearing Rib & Benefits

PBR means one side has a longer "leg" or lap, designed to sit over the adjacent panel's rib, which creates a stronger, more weather-proof connection.

Deep Ribs

PBR panel allows for smaller rib widths allowing for a much better astetic and preventing oil canning all why providing significant strength, rigidity.

Durability

Made from 26-gauge steel and designed to withstand harsh weather, offering high wind, hail (Class 4), and fire resistance (Class A).

Versatility

Installed vertically and installs well with trim for custom windows, doors, and other framed openings.

Aesthetics

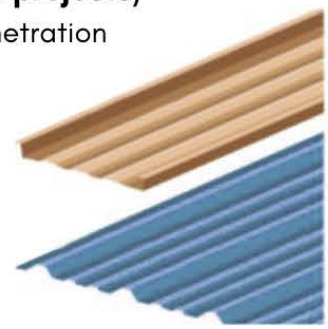
Available in many colors and finishes to suit different visual preferences.

STANDING SEAM ROOF (For specific projects)

24 gauge panel featuring minimal penetration

PBR PANEL(Standard Panel)

26 gauge, 80ksi high tensile steel with higher thermal values then most wood and tube constriction panels.



PURLIN BEARING RIB PANELS



Standard Roof & Wall Panels

This is the panel often used by competitors on the roof and especially the walls. Not having a "purlin bearing rib", this system creates a void in the lap thus making it less rigid and less weathertight.



Renegade PBR Panels Renegade

Uses the "PBR" panel standard on the roof and walls of all of our buildings. The purlin bearing rib feature gives the system rigidity and complete weathertightness. Other standard panel profiles are available and all have the purlin bearing system.

STANDARD SIDEWALL

Polar White | Pearl Gray | Lightstone | Sahara Tan | Burnished Slate | Charcoal | Brite Red

Slate Gray | Black | Rustic Red | Hawaiian Blue | Gallery Blue | Colony Green | Fern Green

STANDARD TRIM COLORS

Polar White | Pearl Gray | Slate Gray | Lightstone | Sahara Tan

Brite Red | Gallery Blue | Fern Green | Burnished Slate | Black

METAL

Galvalume

Stainless Steel Capped Fasteners with a Limited Warranty
Engineered to Meet Local Building Code Requirements
DIY Building Erection
All Galvinized Framing
40-Year Limited Warranty on Valspar® WeatherXL
40-Year Limited Chalking and Paint Color Change Warranty
25-Year, 6 Month Limited Rust-Through Perforation Warranty
(AZ55 Galvalume®Coating)



STANDARD SCREW COLORS


Polar White


Pearl Gray


Lightstone


Sahara Tan


Burnished Slate


Charcoal


Brite Red


Slate Gray


Black

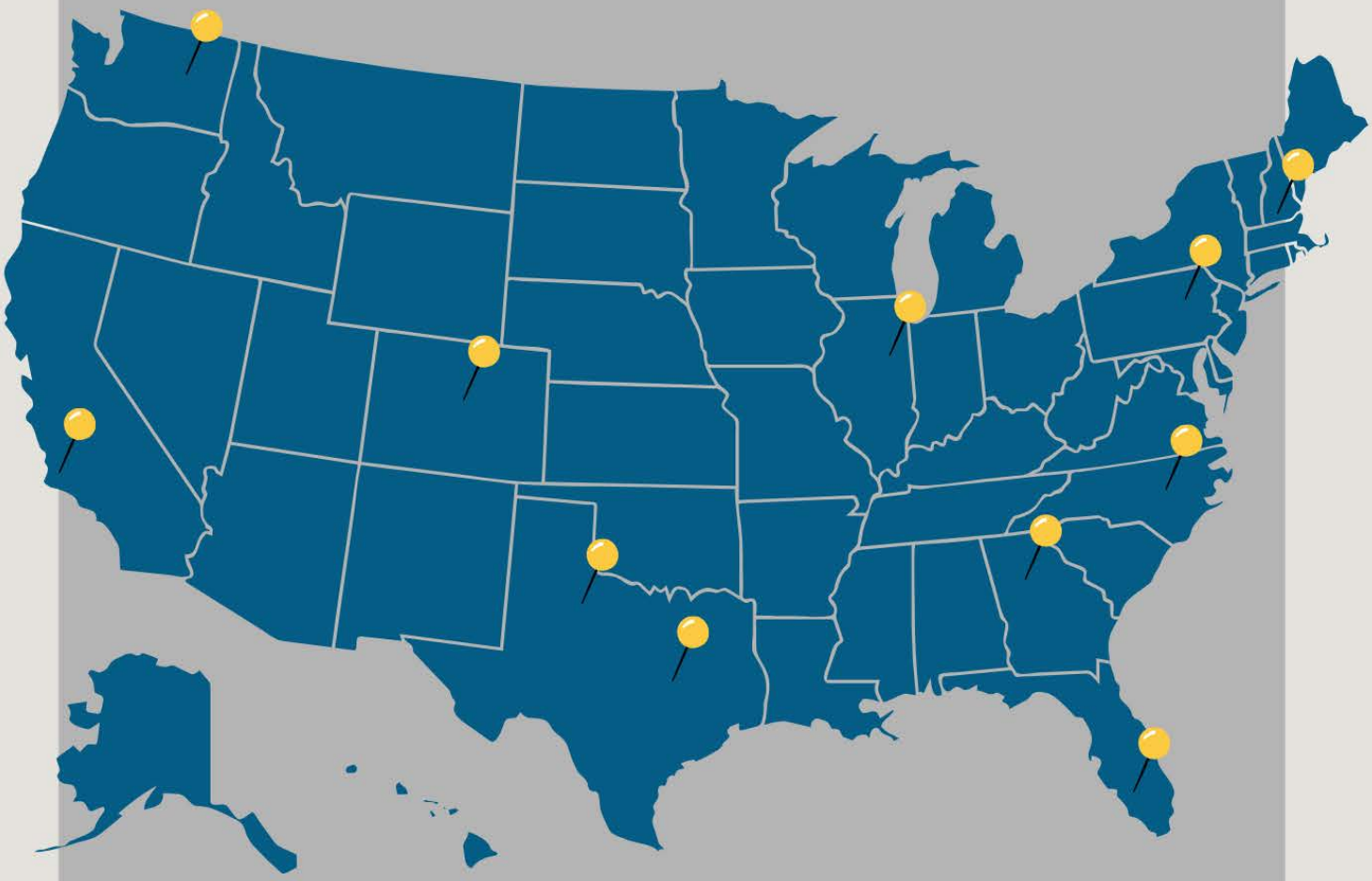

Rustic Red


Hawaiian Blue


Gallery Blue


Colony Green


Fern Green



MADE IN
THE USA



WE PROUDLY SERVE ALL 50 STATES

We are an all American Steel Building Manufacturer & Steel Building Kit provider, shipping factory direct to all United States territories. We work with you to create the building solution you need for commercial, industrial, residential, garage, storage, and other industries.

SCC STEEL COMMANDER CORP

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