

Building a Lasting *Impression*



Star Building Systems
PLANNING GUIDE





Welcome to Star

A Star Building System is a building system that lasts. If you're planning a building project and you want security, both in the integrity of your structure and in your supplier, then Star Building Systems is your first call. At Star, you're not given parameters. You're given options, lots of options, regardless of end use. Schools. Factories. Retail Centers. Warehouses. Star Building Systems does it all. Our state-of-the-art metal construction solutions help ensure your building's longevity.

Star knows firsthand about the importance of longevity. Founded in 1927, Star Building Systems has seen and done it all, from supplying tool sheds for oil derrick drilling sites in the early oil boom days to air hangars during World War II. The key to Star's longevity? Changing with the times and trends and evolving to better serve the construction project at hand.

As a technological leader in the industry, Star sets the standard for innovation. Because of this, a Star building will go the distance. A Star building can be a green building. A Star building can be a beautiful building. A Star building can be your building.

As you read through the Star Planning Guide, consider the longevity and magnitude of Star Building Systems, itself. With nearly a century of experience and over 300,000 satisfied customers, Star Building Systems has more than withstood the test of time. So can your building.

The Power of Star

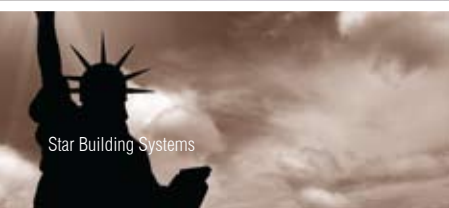
Star Building Systems is an international provider of quality, long lasting metal building systems and metal building components. Looking for longer overall life spans? New or additional roofing solutions? Star has you covered. Our construction capabilities allow you to design and build structures that are multi-functional and multi-faceted. Our vast product lines give you the freedom to create a building that is attractive and cost effective. Star works with you, the architect, the contractor, the builder, the owner, to meet budgetary needs and make room for expansion possibilities later on. Waste reduction practices utilized in the design phase ensure financial value.



Star products are inspected frequently throughout the manufacturing process ensuring your receipt of a top quality and dependable system. Star's national manufacturing facilities function at maximum operating efficiency, promising you timely delivery.

Working with Star is easy. Easy and fast. That's because Star and your Star Builder are there from start to finish. As your business grows, Star grows with you, offering expansion and upgrade opportunities along the way. The benefits of building with Star Steel are numerous and far from limited:

- Building with metal allows for faster construction times, saving time and money.
- Metal construction offers more design flexibility and versatility when compared against more traditional materials like wood or concrete.
- Star metal buildings and products require less long term maintenance.
- Star offers a long line of green solutions that are environmentally and economically friendly.
- Star products are available in multiple colors, finishes and silhouettes for additional design options.
- Star metal construction products can be used in tandem with other, more traditional building materials.



The Star Builder Network

Star is proud to partner with hundreds of Builders that sell Star Building Systems to a variety of end users. Star and Star Builders work together as a team to provide you with the very best solution for your building needs. Star Builders are some of the most qualified, reputable builders in the industry who understand local building codes and permitting requirements. They're full service contractors offering expertise from concept to completion, delivering your project on time and on budget.



Products



Long Bay® – Star Building Systems offers a unique solution when large areas of open space are required in your building. The patented Long Bay® System (LBS) is custom engineered to accommodate structures requiring expanded areas of open floor space. The Long Bay® System does so without prohibiting architectural design opportunities.

Star's LBS is ideal for any building requiring few interior columns: manufacturing facilities, warehouses, retail buildings and recreational buildings. Open web truss sub-framing provides roof support and simplifies the installation of mechanical and electrical systems.

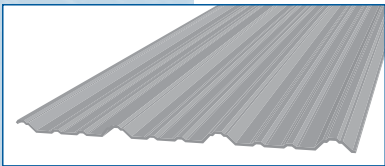
Less bridging, fewer footings and a reduced number of columns result in significant overall cost savings. Compatibility with multiple wall and roofing systems gives you increased flexibility in construction design.

Long Bay® features:

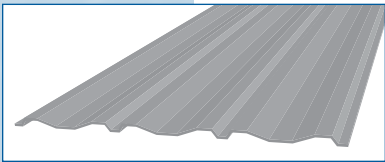
- Offered in bays up to 65'
- Superior strength-to-weight ratios
- Less bridging required than with traditional bar-joist installations
- Stiffer and lighter than traditional bar joists
- Greater design flexibility – can be used with hard wall and metal cladding applications
- Machine rolled for accuracy and tighter tolerances
- Bolted connections to primary frames are standard, with optional welded connections available
- Long Bay Systems® have proven erection cost savings over other types of joist construction

Roof and Wall Systems

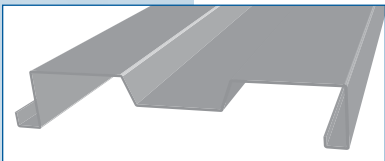
A Star building is more than structurally sound. A Star building is beautiful, eye-catching, attractive. This is due in part to our wide selection of superior-quality roof and wall panels, all of which are available in a variety of colors, coats and applied finishes. Specific finishes like IPS' Natural Stone® color series give the impression of a purely natural aesthetic. Regardless of your project application, Star has the products to get the job done, from simple screw-down panels to state-of-the-art standing seam roof panels. Take a look.



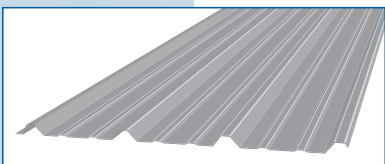
Dura-Rib® Roof and Wall Panel – Dura-Rib® is a 36" wide roof and wall panel that provides durability and cost efficiency. Traditional looks are achieved by the clean profile that refracts light off its 1 1/8" high ribs. Attachment of the panel is made from the exterior with color matched fasteners. Available in 26 and 24 gauge.



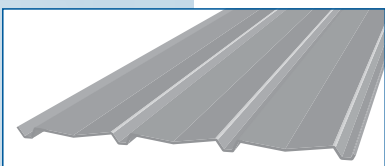
StarMark Wall Panel – StarMark is a functional 36" wide wall panel that provides aesthetics and cost efficiency. An architecturally sculptured shadow panel is achieved with 1" deep ribs to help conceal fasteners. The attachment of the 26 gauge panel is made from the exterior with color matched fasteners.



StarCFW II Wall Panel – StarCFW II is a concealed fastener wall system that provides performance and compatibility. Clean, contemporary looks are achieved by the 1 1/2" deep sculptured profile, embossed texture, and interior attachment. Available in 24 gauge steel and formed into 16" wide, 3" deep sections.



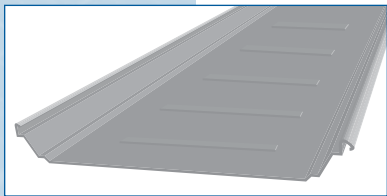
PBR Roof and Wall Panels – PBR is a 36" wide panel that works well for roof and wall, as well as liner, mansard and soffit panel applications. Its 1 1/4" deep ribs create an even-shadowed appearance and the area between the ribs is reinforced with minor ribs. The attachment of the panel is made from the exterior with color matched fasteners. Available in 26 and 24 gauge.



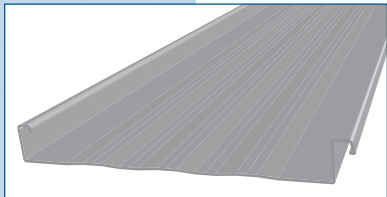
PBA Wall Panel – PBA is a 36" wide panel with semi-concealed fasteners. The panel profile produces a decorative, smooth shadow line resulting in a distinctive architectural effect. Ribs are 1 1/8" deep and major corrugations are spaced 12" on center. The attachment of the panel is made from the exterior with color matched fasteners. Available in 26 and 24 gauge.



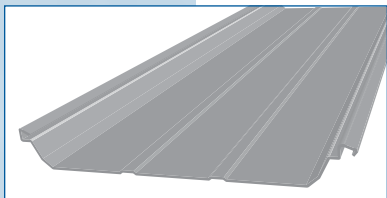
Standing Seam Roof Systems



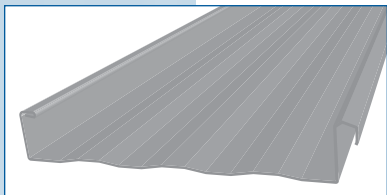
StarShield® Roof Panel – StarShield® is a 24" wide, 24 gauge panel with a standing rib which is field machine double lock seamed $2\frac{7}{8}$ " above the drainage surface. It is a floating roof system—two piece sliding panel clips connect the weathering surface to the structural member, eliminating panel to structural fastener penetrations, and absorbing expansion and contraction forces resulting from seasonal temperature extremes.



BattenLok® HS Roof Panel – BattenLok HS is a 24 gauge field machine seamed system capable of transitioning from roof to fascia applications. This architecturally appealing, 16" wide panel features concealed clips and hot-melt mastic to ensure weathertight seams. It can be installed directly over purlins or bar joists, without a solid substructure for support, on roof slopes of $\frac{1}{2}$:12 or greater.



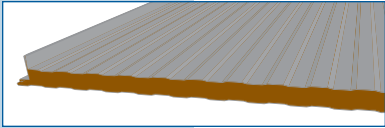
Double-Lok® Roof Panel – DoubleLok is a 24" standing seam panel attached to the sub-framing using a variety of concealed, interlocking clips that provide for minimum panel penetrations. This panel can be used on new construction as well as retrofit on existing structures. The 24 gauge panel provides ultimate weathertightness and wind uplift resistance. Recommended for roof slopes of $\frac{1}{4}$:12 or greater.



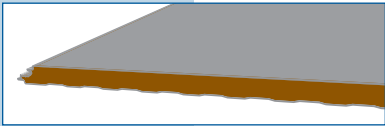
SuperLok® Roof Panel – The SuperLok standing seam panel blends the aesthetics of an architectural panel with the strength of a structural panel. The field machine seamed panel combines a 2" tall slim rib with exceptional uplift resistance and features factory installed hot-melt mastic to ensure weathertightness. Available in 24 gauge steel, 16" wide. Recommended for roof slopes of $\frac{1}{2}$:12 or greater.

Insulated Panel Systems

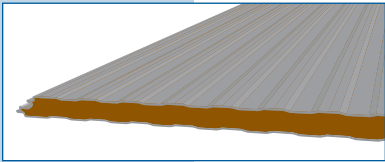
Insulated metal panels are the ideal solution for energy efficiency when it comes to roof and wall applications. They are strong and can be utilized with fewer structural supports than most single skin panels. This is due to their greater spanning and load bearing capabilities. Their incredible green attributes can be found in the *Green In Star* portion of the Star Planning Guide.



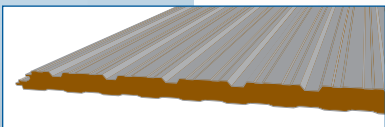
IBL Roof Panel – The IBL insulated standing seam roof panel has a Mesa profile for both the exterior and interior skins. The IBL roof panel has a 2” high standing seam and is attached to the structure with concealed clips to ensure excellent R-values. IBL offers a maximum R-value of up to R-46.1.



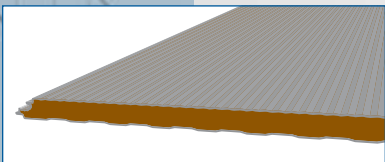
FWP Wall Panel – The FWP wall panel employs a flat appearance providing a monolithic look that is great for high profile, architectural applications. Both the interior and exterior skins are stucco embossed and the interior skin has a Mesa profile. FWP II offers R-values of up to R-30.8.



IPP II Wall Panel – The IPP II wall panel is designed for interior partition and exterior wall applications. The appealing flat exterior and interior skins have a Mesa profile. The versatility of this panel allows for a uniform appearance from outside to inside and from room to room in partition applications. IPP II offers R-values of up to R-46.1.



EWP II Wall Panel – The EWP II wall panel offers traditional style and distinct vertical lines ideal for custom designed or conventional building construction. The interior skin has a Mesa profile. EWP II offers a maximum R-value of up to R-46.1.



ESP II Wall Panel – The ESP II wall panel features minor striations in the exterior skin, giving it a flat look and providing a linear appearance, while blending the panel side joints. The panel is an excellent alternative to typical flat wall panels. The interior skin is a Mesa profile. ESP II achieves R-values up to R-30.8.



Sonora™ Wall Panel – The Sonora wall panel offers a flat exterior profile with an Aztec embossed pattern resembling old-world hand plaster. The interior skin has a Mesa profile. Sonora offers R-values up to R-30.8.



Accessories

From gutters and downspouts to ventilators, windows and canopies, Star offers a complete line of worry-free accessories. All of which add to a finished building with a unique presence. Our accessories are specifically designed to work with Star's durable roof and wall systems. They reinforce the building's structural integrity. They ensure its weather tightness and energy efficiency. If you need overhangs, entry doors, store fronts or thermal windows, Star accessories compliment the appearance and functionality of your building.

The Green in Star

Building energy efficiently has become a priority in the construction industry. Star Building Systems, along with parent company NCI Group, Inc., is leading the way. Our environmentally friendly construction products and practices help reduce excess waste and energy consumption. Simultaneously, Star's products and practices add to the longevity of your structure.

Star's metal roof and wall panels consist of at least 25 percent recycled material. When utilized with Star structural members, a complete Star building can contain anywhere from 30 to 50 percent recycled material.

In an effort to build smarter, Star is proud to provide insulated metal panels (IMPs) and other steel components supplied by Star's sister companies, IPS and MBCI.

Green Products

Star offers a wide range of energy efficient, sustainable solutions including IMPs, NuRoof® Retrofit Roofing and Cool Roof Colors.

Insulated Metal Panels (IMPs) – IMPs are roof and wall panels consisting of two single-skin metal panels with a foamed-in-place core. They are sealed at the side laps and all perimeter boundaries. IMPs provide impressive R-values, enhancing the building's overall energy performance. Thermal bridges are prevented due to the unique interlocking application of the panels. This technique also provides resistance to moisture and air infiltration.

NuRoof® Retrofit Roofing – Star's Retrofit Roofing System assists in improving energy efficiency of pre-existing roofs. LEED Certification can be achieved on existing buildings through the use of this system, in part because the existing roof materials will not become waste added to landfills. When applied at a specified slope and with the addition of cool roof colors, the retrofit system improves Solar Reflective values and provides excellent water runoff solutions.

Cool Roof Colors – Cool Roof Colors can reduce energy consumption, minimize urban heat islands and improve cost savings. Many of Star's Cool Roof Color Options meet the reflectivity and emissivity performance levels required by LEED and ENERGY STAR. Excellent reflectivity properties require less energy to heat and cool the building overall.





Building Applications

Whether you need a small, simple building or a large, complex structure, you will find that Star's time-tested processes and products are an excellent choice for any end use application. If you require modifications to an existing building or your construction project is still in the planning stages, Star stands up to the challenge. Star's wide range of non-residential construction possibilities is endless. Our products are designed for optimal strength and efficiency, resulting in unmatched long-term value and cost savings, benefiting you before, during and after construction.



Our **Retail and Commercial** facilities are attractive, functional and cost effective. Whether you are considering a one-of-a-kind free standing commercial center or a chain of centers across the country, Star Building Systems can offer a solution to fit your needs. Eye-catching design options are possible with Star's broad collection of exterior veneers, finishes and colors. Quick construction times and long-term low maintenance equals unparalleled savings.



Star excels when it comes to **Manufacturing and Industrial** facilities. Complete with design flexibility and expandability, steel structures are inherently weather and pest resistant. Overhead crane systems requiring 90-foot eave heights, storage mezzanines and conveyor systems might pose a design threat for other companies. Not Star. Star Building Systems has been providing safe housing space for these applications and more for years.



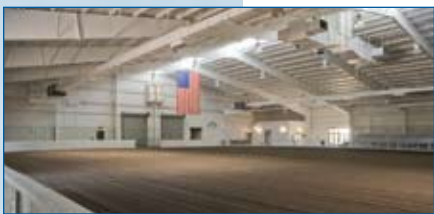
A dependable **Warehouse** offers space and is low maintenance, cost effective and durable. Star is proud to offer creative and dependable warehouse solutions that cater to your every need. Special concerns are eliminated when utilizing Star's clear span design or Long Bay® System. It's guarantee of uninterrupted space saves time and room by removing structural columns, while maintaining the utmost structural integrity.



Institutional and Government Construction accounts for some of the nation's most important facilities: schools, hospitals, fire and police stations and more. These projects are completely customizable to fit your budget and your specifications. Want the building to be functional and visually stunning? Star is your brand. With the additional benefit of green building solutions, your institutional facility can be built to last while building a lasting impression.



Star's **Agricultural and Livestock** facilities are designed with the modern farmer in mind. Thermal efficiency and sustainable ventilation are key elements when constructing from the ground up. Unique drainage techniques are often specified when designing for feed, milk and housing facilities. Star routinely designs these facilities to include light transmitting panels and lofts as a means of increasing storage space. Large clear span interiors provide uninterrupted floor space. Combine this option with concrete, concrete screed flooring or rubber matting and a waterproof surface, and your Star structure will be sure to impress.



Our **Recreational** designs are created with the user in mind. From small gyms to large arenas, Star will make sure your building is a winner. Need to accommodate a swimming pool? Maybe an ice rink? Star does it all. Maintenance costs can remain low due to Star's outstanding performance-proven quality materials. Contact a Star Builder to learn what it's like to be part of the winning team.



Aviation Hangars house an array of costly airplanes, helicopters and more. They must be accommodating to all shapes and sizes while providing security from the elements. Using Star for your aviation hangar will help your building project take off. Reach new heights in quality design and efficiency. Streamline the hangar's look and feel with exterior options including precast concrete, glass, brick, stone and more! Let Star be your co-pilot to success.

*All Star construction projects can be designed and built to meet local building codes.



Retrofit and Re-Roof Solutions

Tired of your existing roof? Has your existing roof tired out on you? Star's retrofit and re-roof capabilities help you bring your worn roofing system back to life. Increase water runoff and energy efficiency by taking advantage of Star's retrofit and re-roof products and techniques. Whether your Star roof is constructed atop an existing roof, or stands as the master roof, weathertightness is assured. The Star Retrofit roofing system also lasts longer than traditional wood and shingle roof options. Utilizing one of Star's numerous cool roof colors increases your roof's reflectivity. This keeps internal temperatures lower. Request a Star NuRoof® retrofit brochure for more information about how to ensure your building project is covered.





Star's Network

Star Building Systems is a division of NCI Group (NYSE: NCS), a family of companies and people dedicated to delivering a higher standard of performance to you and your business. NCI Group is the largest integrated manufacturer and marketer of custom designed metal building systems, metal building components and metal coil coaters in North America.

Some products offered through Star are manufactured by Star's sister companies, MBCI, IPS and DBCI. Star Building Systems is proud to align itself with these companies.

MBCI is the industry-leading manufacturer of metal construction components. MBCI supplies metal roof and wall panels to the architectural, industrial, commercial, institutional, residential and agricultural markets. With manufacturing facilities located strategically throughout the U.S., MBCI has the capability to serve you in an efficient manner.

IPS, also known as Insulated Panel Systems, is a leading manufacturer of insulated metal panels. IPS produces top quality IMPs for both roof and wall applications, which are ideal for a wide range of building projects and green building construction.

Since 1990, DBCI has remained a leading manufacturer and marketer of commercial-grade steel curtain roll-up doors and self-storage doors, components and solutions. DBCI continues to provide our customers with the highest quality products and services in the industry.



A Star Building System stands the test of time. A Star building is never out of place. Our building solutions allow for endless construction possibilities. As your next project approaches, reach for Star.

Star Building Systems is not liable for damages incurred as the result of improper erection procedures. Star buildings are erected by independent contractors who are not agents of Star. Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. Star reserves the right to discontinue or change specifications and/or designs without notice and without incurring obligation.



Reach for Star

For more information about how Star can add to your success,
call 1-800-879-7827 or visit www.StarBuildings.com.
Join the team you know you can depend on.

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