

Metal Builder

RURAL BUILDER MAGAZINE SPECIAL SECTION



**CHOOSING
BIG DOORS**

METAL'S ROLE IN HANGARS

WHAT YOU NEED
TO KNOW ABOUT
AC472



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Subsection	Cost	Price		Weight
		Taxable	Nontaxable	
Framing	\$10,288.86	\$10,803.30	\$0.00	14384.72
Sheathing	\$5,830.05	\$6,122.18	\$0.00	3101.85
Trim	\$2,315.14	\$2,430.90	\$0.00	596.73953
Doors & Windows	\$14,544.81	\$15,271.93	\$0.02	946.9
Accessories	\$80.94	\$84.99	\$0.00	50
Trusses	\$3,801.45	\$3,991.52	\$0.00	2805
Labor	\$0.08	\$0.00	\$0.08	0
Freight	\$0.00	\$0.00	\$0.00	0
Taxable:		\$38,704.82		
Sales Tax:	7.000%	\$2,709.34		
Nontaxable:		\$0.10		
Grand total:	\$36,861.93	\$41,414.26		21885.20953

The History of Metal in Iceland

Necessity mothers invention, as we know, and I just read about one such experiment in Reykjavik, the capital city of Iceland, dating back more than 100 years.

Everything below comes from a fascinating article on Bloomberg's site: <https://www.bloomberg.com/news/articles/2020-09-23/the-history-of-reykjavik-s-iron-and-wood-homes>

Not having much wood because of its proximity to the North Pole, homes there were built out of earth and sod. Eventually in the 1700s and 1800s, the country started importing wood from Scandinavian countries, and then the "experiment" I'm referencing started, according to the article, "when Icelanders started trading with the U.K. in the 1880s, they discovered a new-fangled material that was more durable: wrought iron sheets, sealed against corrosion by dipping them in molten zinc."

I'll borrow an entire paragraph from the article here, because I can't paraphrase it any better than author Feargus O'Sullivan wrote it:

These houses became the default type both in Reykjavik and elsewhere in Iceland. When the city experienced a major fire in 1915 that left metal-clad houses largely unharmed, the city made this trend into law, requiring a corrugated coating for all new houses built close together. Kept in place until the mid-1920s, this bylaw ended up giving Iceland's capital the largest cluster of metal-clad buildings in the world.

The article says that most of Reykjavik's ironclad homes were built between 1880 and 1925. At that point, the country moved largely to concrete, and for societal reasons, the metal buildings were associated with poverty and often deconstructed. Only in



Traditional corrugated ironclad houses on a street in Reykjavik.

the recent past has there been a movement to save the homes and refurbish them, now that they're seen as historic and not emblematic of poverty.

There's a lesson in this that the metal building industry already knows. The sod houses crumbled, the wood houses burned down, and the metal buildings remain. They'll still be standing beautifully 100 years from now.

— Rocky



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On the cover: Pioneer Inc. and Varco Pruden Buildings contributed to this new manufacturing facility for the WACO Aircraft Corporation.
Photo by Jason Keen Photography.



BIG DOORS:

Pick One for Your Project

Selecting an overhead door for a project, especially when there are so many options available today, can be quite intimidating for the unseasoned industry professional. Not only do you have to sift through an array of providers, but each provider has a breadth of products, options, and services.

To make things even more complicated, everyone's marketing to you that they're the very best. Luckily, with some sound, industry advice and a few simple steps, we can make an overwhelming door selection process easy. Breaking the process down step-by-step is key. It's time to put the marketing aside and get down to business.

STEP 1: DETERMINE THE SIZE OF THE OPENING

The first step in narrowing down your door selection is to determine the exact size of your finished opening. Knowing these

measurements up front will be fundamental to your door order, no matter the type of door or provider you go with. Since different overhead doors have specific size restrictions and requirements, it's important to get this step right.

How to determine the exact size of the finished opening:

1. Measure your rough opening size. This is the exact width and height of the finished opening. Doors are ordered by opening size, such as 10' wide x 12' high. An incorrect example would be 10'x12'.
2. Check the side room. This is the area required on each side of the door for the installation of the guides. You'll want to make sure you have enough clearance to install the door.
3. Check the head room. This is the top of the door to the ceiling, or to the nearest obstruction.
4. Check the back room from the face of the door jamb.

5. Measure the clearance from the inside edge of the jamb to the wall or to the nearest obstruction.

6. Determine the jamb type. Is it masonry, steel, or wood?

Once you've taken these measurements and established the jamb type, you'll have everything you need to start your door order. We suggest seeking a leading provider that has a variety of door models, sizes, and options available to accommodate virtually any application and meet your every need. As a door dealer, partnering with a leading provider that has quality products and dependable service can be extremely beneficial to your operations.

STEP 2: CHOOSE THE TYPE OF DOOR

Different applications call for different types of doors. For example, you typically wouldn't install the same overhead door on your home garage as you would a commercial warehouse. Identifying the application will help you determine what type of overhead door you need. For example, if you're looking for an overhead door to enclose a backyard shed, a light-duty commercial sheet door is likely the most appropriate solution. However, if you're looking for an overhead door to enclose an oversized opening inside of a freight terminal, a heavy-duty rolling steel door might be the better choice. When choosing your overhead door, it's important to note that there are three main types of overhead doors in the industry:

- Sheet Doors
- Rolling Steel Doors
- Sectional Doors

SHEET DOORS

Sheet doors are constructed in sections of corrugated steel sheets. They share a compact design that rolls up to store in a coil above the door's opening when in the open position. You can find sheet doors in a variety of applications from self-storage facilities to garages and sheds, barns, and warehouses. Because of their compact design, sheet doors are the ideal solution for buildings struggling with limited headroom.

There are two main types of sheet doors to choose from, sheet doors with dead-axle assemblies vs. sheet doors with live-axle assemblies. Dead-axle door assemblies have a fully enclosed barrel that protects the door's springs and strengthens the axle assembly. Unlike the live-axle assembly, a dead-axle assembly remains stationary when the door is operated and doesn't turn with the door. This eliminates axle push and shift that commonly occurs with live-axle doors, and it allows for a straighter travel path for the door's curtain in the guides.

With dead-axle door assemblies, springs are pre-greased in the factory and enclosed inside the barrel assembly. The grease penetrates the innermost pores of the sheet door's spring with additives, which displaces moisture and prevents the formation of rust and corrosion. Pre-greased springs also relieve the friction typically created between spring coils, which is why sheet doors with dead-axle assemblies are known to operate much smoother.

When a door's springs are enclosed inside of the barrel assembly, they're also protected from harmful environmental elements such as dust and dirt that could negatively impact the door's life cycle. Not only does this dead-axle design increase the sustainability of your door, but it means you can say goodbye to wasting time, money, and resources on maintenance such as re-lubricating your sheet door's springs to keep them operating in optimal condition.

There are many models of sheet doors, varying in size and duty. The biggest difference between light-duty, medium-duty, and heavy-duty sheet doors is the gauge and depth of their guides. A stronger guide allows the door to handle more frequent and demanding operations. However, heavy-duty doors aren't always needed. Going with the door that best fits your application can help ensure you're selecting the most cost-effective product for your project.



Shed with Sheet Door

ROLLING STEEL DOORS

Rolling steel doors are constructed differently than sheet doors but operate in a very similar way. Rather than a corrugated sheet of steel, rolling steel doors are constructed with narrow, thin slats of steel that interlock to form one continuous curtain. The slatted design increases the strength and durability of the door's curtain. Because of their unique design, rolling steel doors can often be produced in large sizes to accommodate oversized openings. Some leading providers have sizing options all the way up to 40' wide and 30' high, varying by model.

Commonly found with leading providers, rolling steel doors can be designed with extended service cut-outs. This is a unique advantage in the overhead door industry because it allows you to cost-effectively repair your overhead door if it experiences damage. By removing the service cut-out, you can remove and replace the individual slats that were subject to damage, rather than replacing the door's entire curtain. This greatly reduces material, maintenance, and labor costs associated with overhead door repairs.



Rolling Steel Door

There are many options when it comes to rolling steel doors. For example, a full line includes service doors, insulated service doors, wind-rated doors, fire-rated doors, counter shutters, fire-rated counter shutters, and even rolling grills. Each model maximizes space with its unique design, freeing up the ceiling which allows you to enhance lighting, utilize emergency fire sprinklers, and maximize HVAC systems.

SECTIONAL DOORS

You're probably already familiar with sectional doors, as they're commonly found in residential garages. But, did you know these doors can operate in two different ways? Sectional doors can retract vertically up the wall or up and over the floor space. While they have unique advantages such as high R-values and low U-factors, they don't always make the best fit for commercial and industrial applications. This is because sectional doors have many working parts, and they're exposed to environmental elements 100% of the time. Not only can they take longer and cost more to install, but their exposed parts are prone to damage and often require routine, consistent, and costly maintenance. You can also run into a problem with sectional doors if you have headroom or side room restrictions. Because they take up a significant amount of ceiling and wall space, they can interfere with HVAC systems, lighting, and emergency fire sprinklers. Identifying your application will help you determine if a sectional door will be beneficial or burdensome to your project.



Sectional Door

STEP 3: CONSIDER LOCATION AND ENVIRONMENT

Depending on the location and environment of your project, there could be certain building and safety codes that you're required to meet. For example, if you're working on a project in Florida, you'll likely be required to install a door that's wind load certified. Luckily, leading providers carry an array of models, sizes, and options and likely have products with the specifications you need. If you'd like to learn more about the codes and requirements in your area, be sure to check out the International Building Code produced by the International Code Council at codes.iccsafe.org.

STEP 4: CHOOSE OPTIONS AND ENHANCEMENTS

Toward the end of your door selection process, you have the liberty to get creative. For example, if the door is going to be used frequently, you might want to consider adding an operator to open and close the door automatically. Leading providers will have a variety of operators to accommodate your overhead door selection, from slim-fit designs to weather-resistant options.

Another option to consider is the color of your door. After all, the color you choose for your door says a lot about your project. From Polar Blue to Sunset Orange, leading providers have a breadth of color options to choose from.

Choosing an overhead door doesn't have to be difficult. With the right provider, you can narrow down your door selection and come up with the perfect product to meet your application's needs. Most leading providers can provide you with a comprehensive door comparison chart that breaks down each model by size and option. If you need help finding the right overhead door or provider, don't hesitate to turn to the experts. Many professionals in the door industry have been doing this for years and can help you find the perfect closure for your building. **MB**

■ MBCEA AND MBMA HOLD ANNUAL CONFERENCE

The MBCEA (Metal Building Contractors & Erectors Association) and MBMA (Metal Buildings Manufacturers Association) met for a co-located annual event in Nashville on May 8-10. The 54th Annual MBCEA Conference hosted more than 500 people.

"I would like to acknowledge Sasha Demyan for all her time and efforts to bring the conference to fruition," said Jen Heimbürger, President of the MBCEA, in the organization's email newsletter. She is also the President of Heimbürger Construction. She also thanked the committee members: David Leinbach (Kaiser Martin Group), Robert Tiffin (Silvercote), Alexander Carey (Svenska Builders), Jarrod Turner (TBT Construction), Tucker Cope (C Tucker Cope and Associates), and Dave Tomchak (Bay Insulation). Tony Bouquot and Kerry Sinclair represented the MBMA in the planning of this joint meeting.

Heimbürger said the MBCEA used the show to continue its mission of elevating the professionalism of the industry by "creating our metal building assembly curriculum, focusing on re-roof with our new video and presentation at METALCON, enhancing the member experience on our website, and continuing our commitment to AC 478."

She said membership grew by more than 100 members to over 600 members in the past 12 months. One of the organization's next big initiatives is the Metal Building Assembly Training Program, which has a goal of \$1 million in funds and is two-thirds of the way there. The program will have a goal of training new employees on metal building assembly.

Next year's conference will be in April in San Diego.

■ MBMA ANNOUNCES STUDENT CONTEST WINNERS

The MBMA in February granted \$28,500 in awards to six winners and to

their faculty sponsors in an online ceremony that culminated the second annual Student Design Competition.

Bobby Buttrick, a graduate student at the University of Massachusetts at Amherst, took home the top prize of \$5,000. He was advised by Professor Stephen Schreiber, Chair of the Department of Architecture in the College of Humanities and Fine Arts.

The competition took place during the 2022 fall semester. The contest for undergraduate and graduate architecture students challenged each participant to create an innovative metal building design for a fire station and department headquarters.

The five-member panel of judges included: Eric Pros, AIA, director of design for DS Architecture in Cleveland, Ohio; Terri Meyer Boake, LEED AP, professor at the University of Waterloo's School of Architecture, Cambridge, Ontario; Lauren Gwaltney, AIA, senior associate with Williams Blackstock Architects in Birmingham, Alabama; John Underwood, consultant to Behlen Mfg. Co., Columbus, Nebraska; and Robert Tiffin, national accounts manager with Silvercote in Greenville, South Carolina, and chair of the MBMA Architecture Committee.

In other MBMA news, the organization announced that Christen Funk, President of Butler Manufacturing, has been added to the board of directors.

■ AISI GETS NSSF GRANT

A research project progressing from the American Iron and Steel Institute's (AISI) Small Project/Fellowship Program has received significant funding through the National Science Foundation (NSF) to advance performance-based fire design for cold-formed steel structures.

Thomas Gernay, Ph.D., Assistant Professor in the Department of Civil and Systems Engineering at Johns Hopkins University (JHU), was named a recipient of the NSF's Faculty Early Career Development (CAREER) Award for nearly \$580,000 over five years. The award will

enable research to develop an advanced science-based framework for assessing the fire performance of cold-formed steel structures that results in more accurate modeling to ensure increased public safety, resource efficiency and resilience. The NSF award will run from July 1, 2023 through June 30, 2028.

The NSF funding will allow Dr. Gernay to build on research initiated through a 2021 AISI Small Project/Fellowship Program award for "Structural Design for Fire Conditions of a Prototype Metal Building Using the New Proposed Appendix to AISI S100, North American Specification for the Design of Cold-Formed Steel Structural Members."

The AISI also recently announced four winning research proposals for its 2023 Small Project/Fellowship Program. Four universities are receiving funding to research topics including shear walls sheathed by corrugated sheets, bare steel deck diaphragms, steel roof decks, and framing seismic design.

Also, the AISI formed a new group that will be primarily responsible for the ongoing development of AISI S250, North American Standard for Thermal Transmittance of Building Envelopes With Cold-Formed Steel Framing. The new Committee on Energy Standards falls under the administrative oversight of the AISI Standards Council, which also oversees the Committee on Specifications and the Committee on Framing Standards.

■ LINETEC PROMOTES PUPP TO REGIONAL SALES MANAGER

Linetec has promoted Tony Pupp to regional sales manager, responsible for leading the company's outside sales team serving specific territories across the United States. Headquartered in Wisconsin, Linetec offers a central, single source solution for architectural finishing of aluminum products in both residential and commercial buildings, and other applications. Pupp has been with Linetec for more than 30 years. **MB**



JASON KEEN PHOTOGRAPHY

Hanging With Style

Hangars Fit for Specialty Planes

HANGING BIPLANES

BY AMANDA WELCH,
BUILDER ENGAGEMENT
MANAGER, VARCO PRUDEN

Erecting airplane hangars can be quite challenging. The clear span widths and costs alone make it quite the undertaking. When WACO Aircraft Corporation

(WACO), a producer of biplanes, expanded their operations at Battle Creek Executive Airport in Battle Creek, Michigan, they considered their options and went with Pioneer Inc. using metal building technology from Varco Pruden Buildings (Varco Pruden).

To achieve the clear spans needed

for the interior of the buildings and at the hangar door end frames, the Varco Pruden Rigid Frame system was used, which does not require any interior columns. Providing clear spans up to 300' or more, along with on-center and off-center ridges and single-slope designs, these structures allow flexibility in the



JASON KEEN PHOTOGRAPHY

use of interior space. The Hangar Area D utilized 165'4" wide clear span Rigid Frames, and the Hangar 2 (Areas A-B) used 205'4" wide clear span Rigid Frames. The Engine Assembly building has Rigid Frames with a 96'8" clear span and the Fab Shop building has Rigid Frames with a 71'4" wide clear span.

Pioneer Inc. used two cranes simultaneously to set the main frames because of the clear span. The building team had a detailed erection plan showing how to temporarily brace the building during erection until all the permanent bracing was installed. Because the work was performed at an active airfield, every crane pick was a "critical pick" that had to be carefully coordinated.

There are two parapets on the hangars that were cut on a radius. A company with specialized expertise was hired to lay out the curved parapet, as it needed to be impeccably consistent along the entire width of the hangar. They gave the building team a point every 3 feet along the wall so that the team could connect the dots to cut the panels.

The SSR™ standing seam roof system was used for the 66,300-square-foot building project, with a 490:12 roof pitch. The SSR™ System has durable, low-maintenance panels that are interlocked and mechanically field-seamed into place, yielding a single membrane that allows for an efficient and affordable roof solution.

For the WACO building complex, the architectural appeal was enhanced using a ThermalClad™ wall system. ThermalClad™ wall panels offer thermal performance with an attractive profile. The double-walled sandwich panels have an insulated core made from foamed-in-place, blister-free, non-CFC polyurethane. The embossed G-90 steel exterior panels are coated in a 70% fluoropolymer finish to provide long-term, low-maintenance performance. For two of the four buildings, the wall panels were positioned horizontally to give each building a long, sleek, elegant visual aesthetic.

The buildings are topped with a ThermoDeck roof system. The ThermoDeck system combines the Varco Pruden roof system with a multipurpose Deck-liner which provides multiple layers



of uncompressed insulation to offer in-place thermal values of R-20 to R-38.5. The result is decreased energy usage long term. With its continuous vapor retarder, this system controls condensation to provide an extended product life.

The crew had not previously installed a ThermoDeck system, so the group gained expertise as the project progressed. "The result was a success," said Adam Wheeler, director of metal buildings at Pioneer, Inc. "It turned out to be an excellent, clean system that the owners were thrilled with."

AeroDoor International, well known for designing, manufacturing, and installing steel sliding aircraft hangar doors, provided two steel, horizontal rolling hangar motorized doors with sensing edges. Each has a height of 28 feet, with widths ranging from 120 to 160 feet. The doors are built to withstand wind loads up to 115 mph.

METAL: The Material of Choice

Metal buildings are the primary airplane hangar solution in the U.S. today. Metal buildings first gained a significant market share when they became popular during the Second World War.

Metal building systems are the principal design solution for aircraft hangars for several reasons, explains Tony Bouquot, general manager of the Metal Building Manufacturers Association. "Metal building systems are popular choices for airport hangars because they are cost-effective and can offer clear spans to suit any size aircraft. From an environmental perspective, metal buildings use steel for the primary structural members, and we know that steel is the most recycled and recyclable building material in the world." Bouquot says another added value is that the structural members in a metal building system are custom engineered to handle the specific load needs for the building, an important attribute to accommodate the heavy loads in both hangars and aircraft manufacturing facilities. **MB**





HANGING HISTORY

**BY CULLEN ENDERS,
MARKETING, THE HANGAR
AT 743**

The Hangar at 743 is an exclusive event venue that maintains and houses World War II aircraft and artifacts. The recently restored hangar is located on the runway of Albany International Airport.

From the outside, The Hangar at 743 looks like any other airplane hangar; however, if you take a look inside, you'll see a rejuvenated airplane hangar like you've never seen before.

The original construction and use of the hangar was for the New York State Police Aviation Unit. In 2015, it was refurbished and then used as executive offices and hangar space for an electronics company, that was sold in 2019.

The hangar is now known as The Hangar at 743 and is used as an exclusive and unique venue with historical aircraft and artifacts on display.

The high-end venue space is equipped

with a cocktail bar, modern kitchenette area, mezzanine, and a 60-foot x 20-foot hydraulic Schweiss hangar door that opens to the runway for the perfect background setting.

The décor of the hangar is completed with custom made art pieces from Mecha

Art and Moto Art. The second hangar located next door to the venue space is where The Warbird Factory and Mecha Art operate.

Warbird Factory works to keep our greatest generation alive through living aircraft. Keeping them operational





provides enthusiasts and the public with an experience that elevates the senses, as opposed to something sitting still and static in a museum. Mecha Art takes pieces of historical aircraft that can no longer be used in the airplanes and turns them into custom art pieces that tell a story. Many of these pieces can be found throughout the venue's décor. The Hangar at 743, Warbird Factory, and Mecha Art work together to provide guests with experiences like no other.

The Hangar did not have original plans on file with the county building department. It came to light during construction that the building needed additional depth footings which, in turn, caused the need for additional structural welding for the door support. This challenge was well handled by Hoffman/Riley and BBL.

General Contractor Bishop Beaudry Construction LLC of Schenectady NY led the remodeling project with architect Hoffman and Riley of Albany, New York.

The hangar walls are clad with ribbed metal plate, trimmed with walnut boards re-purposed from an old barn. The



The Warbird Factory conducts aircraft maintenance, repairs, and restoration. Specializing in vintage warbirds Their major project right now is the complete restoration of a 1944 B-25 Mitchell aircraft that, according to unclear records, may have dropped bombs in Italy. The airplane crashed in 2020, and the Warbird Factory's goal is to get it flying again. Learn more at Hangar743.com

flooring is custom color epoxy.

The hangar door was originally composed of three different panels. The new door with hydraulic lift and custom windows for optimal lighting is from Schweiss Doors.

The remodel included a built-in kitchen with seating, four bathrooms, lockers,

overhead LED lights on dimmers, a lobby, a conference room, new ventilation, and a mezzanine/balcony.

The interior design and concept was created by Diane Meyers, who is now with Interior Designs Atelier.

The roofing was done by Titan Roofing Inc. and Garland Co. Inc. **MB**



AC472 Accreditation

Why You Should Consider Getting Certified or Buying From Companies That Are

The International Accreditation Service (IAS) accredits the inspection programs of companies that design and fabricate custom engineered metal building systems. The accreditation is based on requirements in IAS Accreditation Criteria AC472, International Building Code® and related standards. The accreditation criteria covers inspections of metal building system elements that are essential for designing, specifying, building or approving metal building systems. Here is more detail on the program.

The AC472 Accreditation Program is the most comprehensive quality assurance accreditation program of its kind. A unique characteristic of the AC472 Accreditation Program is that it audits the integrity of design engineering and manufacturing processes. It focuses on several key areas:

- Audit of order documents providing the customer with clear information on what he/she has ordered.
- Audit of the design/detailing process to assure adherence to requested codes and to confirm that the project require-

ments are met in a rational engineering manner. This audit not only covers the building-code applications but also the proper use of design standards such as AISC, AISI, etc.

- Audit of raw material usages including proper ASTM standards, ordering practices, tracking of mill certifications, product traceability, etc.
- Audits assure comprehensive traceability of materials and workmanship.
- Audit of manufacturing practices including machinery calibrations, measuring tools, weld certifications, etc.
- Audits to ensure the metal building manufacturer has a well-managed quality assurance system and a qualified staff. This includes verification of licensed professional engineers who design and detail the metal building system, and certified weld inspectors.

This is all verified annually through two on-site inspections of the firm's design and manufacturing facilities and of representative projects to confirm that the appropriate standards are in place and being applied.

This assures building officials that the

manufacturer has comprehensive quality assurance processes in place that provide high-quality, reliable buildings.

Why require an accredited manufacturer?

Requiring an AC472-accredited manufacturer provides an extra level of assurance that the building supplier's engineering/order/design fabrication processes all conform to high-quality standards and are evaluated by a respected independent third party.

Building officials can deem AC472-accredited manufacturers as approved fabricators as defined in Chapter 17 of the International Building Code; elimination of additional inspections; cost savings to verify code compliance of metal building fabrication; and assurance the metal building manufacturer's staff has a well-qualified quality system in place.

What is the International Accreditation Service, Inc.?

The International Accreditation Service (IAS) is a wholly-owned subsidiary of the International Code Council, which

evaluates and accredits building departments, special inspection agencies, testing and calibration laboratories, fabricator inspection programs, and oversees the AC472 Accreditation Program for Metal Building Systems Manufacturers.

IAS measures a manufacturer's ability to conform to documents and standards referenced in building codes through on-site assessment and periodic monitoring by IAS-accredited third-party inspection agencies. It also scrutinizes a manufacturer's quality assurance program.

Why was the AC472 Accreditation Program developed?

As industry products and design programs advanced, metal building systems became very successful in entering new markets involving larger buildings with high human occupancy. Thus, the members of the Metal Building Manufacturers Association (MBMA), who developed this expanding technology, felt a respon-

sibility to work with IAS to develop an accreditation program to critically evaluate the sales, engineering and manufacturing functions in the metal building systems industry and to comply with the special inspection requirements in Chapter 17 of the International Building Code®.

Don't ISO and AISC accomplish the same things as AC472?

No. Those programs only address the manufacturing process — not the unique needs of building systems. Since the design, detailing and manufacturing is done by the same company, these processes are mutually dependent and need to be evaluated together.

With conventional construction, I receive a set of design calculations and drawings stamped by a registered professional engineer. Why isn't that adequate for metal building systems?

When a conventional designer selects

standard beam sizes off of AISC tables or out of SJI manuals, those sections are then manufactured by a fabricator. In the case of metal building systems, the design and fabricating processes are customized and require ongoing communications between the engineering and fabricating teams. The only way to be assured that these functions are being properly integrated is to require that the supplier have AC472 accreditation.

Are there areas in the country where building codes have adopted criteria requiring AC472 accreditation on building systems projects?

Yes. Most jurisdictions throughout the country have adopted the International Building Code® or an amended version of the code and enforce Chapter 17 special inspection requirements and rely on the AC472 Accreditation Program for Metal Building Systems Manufacturers to designate approved fabricators. **MB**

What Does AC472 Accreditation Mean to Manufacturers and Builders?

WHY SHOULD A MANUFACTURER GET ACCREDITED?

- It provides third party verification that your firm is an approved manufacturer that meets specific and comprehensive requirements as described in Chapter 17 of the International Building Code.
- It is a benchmark for companies that design and manufacture engineered metal building systems. It shows a level of serious commitment to providing products and services that meet the highest industry standards.
- It provides a level of confidence to all constituents — owners, architects, builders, code officials, etc. — that your buildings will be designed and manufactured according to code and specifications.
- When competing against other

building manufacturers, it gives the accredited firm a competitive advantage because the firm has achieved the highest level of industry recognition as defined by the highly respected International Code Council.

WHY SHOULD A BUILDER USE STEEL FROM AN ACCREDITED COMPANY?

Here are five good reasons:

1. Your local building code official has the means to approve the inspection programs of manufacturers involved in the fabrication of metal building systems and meet the requirements of Chapter 17 of the IBC. This should expedite the approval process.
2. Allowing only accredited suppliers

helps protect your good name by guaranteeing that an audited supplier is on the project.

3. Since the building supplier is doing the structural design, accreditation assures that the product is designed by professional engineers with demonstrated knowledge of building systems and applicable codes.

4. Accreditation requires that the manufacturer has a certified weld inspector, uses raw materials that comply with applicable specifications and can provide product and workmanship traceability.

5. Accreditation requires that Letters of Certification and erection drawings are clearly written and show all necessary information for the proper erection of the building. **MB**