

# Sturdisteel®



Corsicana, TX

## GRANDSTANDS



Mt. Pleasant, TX

## BLEACHERS



Frisco, TX

## ALUMINUM SEATING



# GRANDSTANDS – Football

Permanent Grandstands set the standard in outdoor seating. Each grandstand is designed and constructed to withstand daily use, regardless of weather conditions, size of crowds, or type of event. Grandstand design provides open space beneath the stands for restrooms, team rooms, concessions, and storage.

Ease and speed of installation, as well as conformity with local building codes, are attractive design features with all of our grandstand packages. In addition, Sturdisteel offers complimentary engineering services to adapt our standard designs to your needs. Regardless of site requirements, Sturdisteel engineers will design seating to meet your specifications.

Sturdisteel stands are offered with a choice of finishes and finish applications. Other options include roofing over seating areas, press box support structures, and aluminum seatboards, footboards, and riser boards.

Regardless of size or location, Sturdisteel grandstands represent premium quality in long-term seating. School boards and athletic directors across the country know Sturdisteel grandstands are an investment in quality.



Corsicana, TX



Little Elm, TX (Chairs by Irwin Seating)

## Stadium Seating Expansion:

Have your seating needs outgrown your existing facility? Contact Sturdisteel for our expertise in expanding your stadium. Options include end zone additions, upper deck additions, or additions to the rear of your existing stand. Sturdisteel has the ability to handle any of these situations at a competitive price.



Levittown, NY



Centerville, TN



Aubrey, TX



Lexington, KY



Bloomington, IN

Football Stadium Seating requires different seating capacities based on the level of the competition and popularity in that specific area. Nevertheless, maximizing your seating capacity to fit your budget is an integral part of building a stadium that your school and community can be proud of. Our years of experience in football stadium seating, allow us to continue to be a leader in this division of our industry. The versatile clear span understructure offers a variety of uses from concession stands to restrooms, storage areas, or dressing facilities. Sturdisteel offers a variety of seating options whether your seating requirements are 500 or 50,000.



San Benito, TX



Belfry, KY



Citronelle, AL



Jefferson City, TN (Chairs by Preferred Seating)

# GRANDSTANDS – Baseball

Sturdisteel can provide a variety of seating options to help fit your needs and budget. Our staff's hands on approach with the customer allows us to offer the most efficient and economical solution to your baseball and softball seating needs.

For those on a restricted budget, the angle frame bleacher provides superior seating at a low cost. For those seeking added comfort, the Horizontal Beam design is the best choice, allowing the addition of seat backs, armrests, and/or chairs. Each design is available in individual stands and/or miters to best conform to the radius of your backstop. If your stadium is in need of additional seating, Sturdisteel's expertise in grandstand design can assist you in increasing the capacity of your already existing facility.



MCC – Waco, TX (Chairs by American Seating)



Daytona Beach, FL (Chairs by KAL 100 VIP)



UNT – Denton, TX



Hobbs, NM

**Collegiate Baseball Seating:** Sturdisteel's ability to assist athletic directors and facility planners in their seating needs is unmatched in this industry. Our goal is to provide you with the facility you desire, within the constrictions of your budget. No matter if you are a junior college or a Division I university, Sturdisteel is interested in helping develop your project.

**Minor Leagues:** Sturdisteel's list of minor league customers continues to grow. Our expertise in offering the best and most comfortable facility design is appreciated by owners and general managers alike. We offer a variety of seating options to ensure that you are able to allow for an optimum ticket price.

**Professional Baseball:** Sturdisteel offers a full range of individual seating options for your stadium. Our experience can also assist you in turning open areas in stadiums into revenue producing seats.

# PERMANENT GRANDSTANDS SPECIFICATIONS

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

Design, fabrication, and installation of permanent grandstands including:

1. Steel Structure
2. Aluminum Decking System
3. Concrete Foundation
4. Press Box Support
5. Press Box

### 1.02 SUBMITTALS

- A. Shop Drawings: Submit shop drawings sealed by a registered professional engineer indicating location, size, details, and quantity of all concrete, steel, and aluminum components and accessories.
- B. Color Chart: Submit for selection if applicable.
- C. Product Sample: Submit if applicable.
- D. Manufacturers product data. Submit if applicable.
- E. Certificates: Submit if applicable.

### 1.03 QUALITY ASSURANCE

- A. Codes and Standards: Design, fabrication, and installation shall be in accordance with applicable codes, regulations, and accessibility requirements (ADA). Owner will furnish local code requirements.
- B. Manufacturer Qualifications: Minimum 10 years experience in the design and manufacture of permanent grandstands.
- C. Installer Qualifications: Employ persons trained and experienced in the installation of permanent grandstands.
- D. Welders: AWS certified.

### 1.04 PROJECT CONDITIONS

- A. Owner will verify site location.
- B. Owner will locate all underground utilities and obstructions.
- C. Owner will furnish geotechnical report indicating soil conditions and allowable soil bearing pressure.
- D. Owner will verify grandstand location and benchmark dimensions and elevation.

### 1.05 WARRANTY

Warranty permanent grandstands to be satisfactory as to design, workmanship, and materials for 1 year beginning after substantial completion of project. This warranty excludes any results of abnormal use in service, intentional damage, or accidental damage or other occurrence beyond the control of Sturdisteel.

### 1.06 MAINTENANCE

Annual inspection and evaluation to be conducted by a qualified person retained by the owner. Required maintenance of grandstand to insure safe conditions by owner.

## PART 2 PRODUCTS

### 2.0 MANUFACTURER

Sturdisteel Company, P.O. Box 2655, Waco, Texas 76702-2655  
Tel (800) 433-3116 Fax (254) 666-4472

### 2.02 PERMANENT GRANDSTANDS

- A. Size: \_\_\_\_\_ feet long by \_\_\_\_\_ rows. Gross seating capacity of \_\_\_\_\_. (Refer to Seating Capacity Chart for permanent grandstands.) To obtain the approximate number of net seats, multiply the gross seats by 0.85. Press box size \_\_\_\_ x \_\_\_\_\_. Press Box Support Length \_\_\_\_ x \_\_\_\_.
- B. Design: Design shall be in accordance with American Institute of Steel Construction, AA-94 Aluminum Design Manual, and ACL.
- C. Design Loads:
  1. Live Load: 100 pounds per square foot (psf) gross horizontal area.
  2. Perpendicular Sway Load: 10 pounds per linear foot (plf) of seat plank.
  3. Lateral Sway Load: 24 plf of seat plank.
  4. Wind Load: Per local building code requirements.
  5. Live Load for Seat and Tread Planks: 120 plf.
  6. Guardrail and Handrail Loads: A single 200 pound concentrated or 50 plf distributed load applied in any direction, at any location.
  7. Note: Seismic loads never control the design of these systems.
- D. Shop Connections: Welded and capable of carrying stress put upon them.

E. Welding: AWS standards.

F. Steel Members:

1. Stringers: 6'-0" on center.
2. Columns: Spaced at 18' on center longitudinal and 11'-18" on center transverse (standard). Spacing may vary from this depending on application.
3. Cross bracing: Steel rod bracing or angles.

G. Dimensions:

1. Front Walkway: 68 inches minimum.
2. Seat Height: 17 inches.
3. Walkway Elevation: 48 inches above owner supplied benchmark grade (standard).
4. Aisle Width: 48 inch minimum middle aisle width and 36 inch minimum end aisle width. Type R25 Stand: Rise 9-3/4 inches. Tread 25 inches. Greater width as needed to meet code egress requirements. Type R30 Stand: Rise 13-1/4 inches. Tread 30 inches.

H. Decking/Seating:

1. Standard tread depths: 24", 25", 26", 27", 28", 29", 30", 33" (30" required with backrests, 33" required with chairs).
2. Standard riser heights: 8", 9", 10", 11", 12", 13".
3. Decking type:
  - a. Full
  - b. Closed
  - c. Tongue & groove
  - d. Tongue & groove - NTB (no thru bolting)
  - e. Interlocking
  - f. Interlocking - NTB (no thru bolting)
  - g. Welded
4. Seating:
  - a. 2" x 10" - nominal standard
  - b. 2" x 12" - nominal optional
  - c. KAL 100 aluminum chair - optional
  - d. Custom chair - optional
  - e. Backrest - optional
  - f. Armrest - optional
5. Aisles:
  - a. Midsteps required for rise above 8". Midstep treads approximately tread width. Solid riser front required.
  - b. Aisle midrails and end aisle handrails per building code.

I. Guardrail: Furnish at all sides of bleacher, entry stairs, walkways, ramps, portals, and landings where 30 inches or more above adjacent area or grade. Material shall be anodized aluminum pipe with end plugs at ends of straight runs or elbows at corners. Secure to angle posts by galvanized fasteners. Top rail shall be 42 inches (min.) above walkways and entrances and 42 inches (min.) above any adjacent seat. Include 9 gauge galvanized chain link fencing fastened in place with galvanized fittings and aluminum ties.

J. Handrails: Shall be provided at all ramps and stairs. 1 5/8" OD clear anodized aluminum with extensions and returns per building code.

K. Stairs: 2 x 12 aluminum with maximum of 7" rise and minimum 11" tread. Guardrails and handrails per code.

L. Accessibility: Incorporate ramps and wheelchair spaces within permanent grandstand system in accordance with applicable code requirements and ADA. Wheelchair spaces to be equally dispersed along front walkway and other crosswalks. Companion seat required for each wheelchair space.

### 2.03 MATERIALS

- A. Steel: ASTM A36, A529, GR50, or A992.
- B. Aluminum: Extruded alloy 6063-T6.
- C. Concrete Foundation: Minimum compressive strength of 3,000 psi at 28 days.
- D. Accessories:
  1. Structural Steel Bolts and Nuts: ASTM A325, galvanized. All structural connections are snug tight per RSCC 2000 specification.
  2. Accessory and aluminum component bolts: ASTM A307, galvanized
  3. Hold-Down Clip Assembly: Aluminum alloy 6063-T6.
  4. End Caps: Aluminum alloy 6063-T6.

### 2.04 FINISHES

- A. Steel: Galvanized: Hot-dipped galvanized after fabrication in accordance with ASTM A123.
- B. Aluminum:
  1. Anodized: Aluminum seats, riser boards, backrests, stanchions and KAL-100 Chair, clear anodized 204R1, AA-M10C22A31, Class II. Powder coat (optional).
  2. Mill Finish: Aluminum extrusions for all walking surfaces. (anodized optional) The Owner, Architect and Contractor acknowledge and accept that mill finish aluminum as specified will have water stains present from transportation and storage during installation. Removal of these stains is not part of this contract. Clear anodized aluminum may be used to avoid any water stains if selected as an upgrade finish at additional cost at the time of the order and contract.
  3. Mill Finish: Aluminum footboards and riser boards.

## PART 3 EXECUTION

### 3.01 FOUNDATIONS

Install either drilled pier or spread footing foundations as determined by local soil conditions. Total dead and live loads shall not exceed the allowable soil bearing pressure.

1. Drilled Piers: Extend minimum 5 feet below grade, unless solid rock is encountered.
2. Spread Footings: Extend minimum 2'-6" below grade, unless solid rock is encountered.

### 3.02 INSTALLATION

Install permanent grandstands complete in accordance with manufacturer's written instructions and approved shop drawings.

### 3.03 ADJUSTING

Inspect completed permanent grandstands and make necessary adjustments to ensure proper installed conditions.

## I Beam Grandstand Seating Capacities

(Gross seats based on 18" per seat)

Gross vs. Net Seating: *This chart is based on Gross Seating Capacity. Net Seating Capacity will vary due to code requirements.*

| Length | 10 Rows | 16 Rows | 22 Rows | 28 Rows | 34 Rows | 40 Rows |
|--------|---------|---------|---------|---------|---------|---------|
| 30'    | 200     | 320     | 440     | 560     | 680     | 800     |
| 48'    | 320     | 512     | 704     | 896     | 1088    | 1280    |
| 66'    | 440     | 704     | 968     | 1232    | 1496    | 1760    |
| 84'    | 560     | 896     | 1232    | 1568    | 1904    | 2240    |
| 102'   | 680     | 1088    | 1496    | 1904    | 2312    | 2720    |
| 120'   | 800     | 1280    | 1760    | 2240    | 2720    | 3200    |
| 138'   | 920     | 1472    | 2024    | 2576    | 3128    | 3680    |
| 156'   | 1040    | 1664    | 2288    | 2912    | 3536    | 4160    |
| 174'   | 1160    | 1856    | 2552    | 3248    | 3944    | 4640    |
| 192'   | 1280    | 2048    | 2816    | 3584    | 4352    | 5120    |
| 210'   | 1400    | 2240    | 3080    | 3920    | 4760    | 5600    |
| 228'   | 1520    | 2432    | 3344    | 4256    | 5168    | 6080    |
| 246'   | 1640    | 2624    | 3608    | 4592    | 5576    | 6560    |
| 264'   | 1760    | 2816    | 3872    | 4928    | 5984    | 7040    |
| 282'   | 1880    | 3008    | 4136    | 5264    | 6392    | 7520    |
| 300'   | 2000    | 3200    | 4400    | 5600    | 6800    | 8000    |

# ALUMINUM SEATING

Aluminum Stadium Seating provides greater spectator comfort and durability. Sturdisteel offers all-aluminum seating that installs quickly, easily, and economically in permanent grandstands or bleachers. Unlike wood, aluminum never needs painting and will not splinter, crack, or absorb spilled liquids. Easy and fast to clean, these bleachers are able to resist water from hosing or rain.

Three different seating models are available for installation on steel and concrete, or new and existing facilities. Anodized seat planks are available in 3 widths: 2" x 10", 2" x 11", and 2" x 12". Footboards are mill finished and are available in 8", 10", 11", 12" and 13" widths. Matching riser boards and optional footboards, backrests, and armrests are also available. For even greater seating comfort order contoured backrests. (All Backrests require a minimum 30" tread depth).

Maintenance departments appreciate Sturdisteel's standard clear anodized finish, which matches the Aluminum Association Architectural Class II specifications (AAC22A31 4 mil. minimum thickness). All plank surfaces are serrated except for a 2" section for ease in numbering.

Sturdisteel aluminum seating is designed for flexibility and ease of installation. Common dimensions of mating parts also facilitate the use of different seating and footboard combinations to meet your individual needs.

Are your existing stadium supports still in good condition, while your wood seating has splintered and degraded? Sturdisteel is a leader in aluminum replacements for existing wood seats, footboards, and riser boards.

*Whatever your needs, Sturdisteel aluminum seating stands in a class by itself for quality, durability, appearance, and low-cost maintenance.*



# BLEACHERS

Continuous Angle Frame Bleachers: The ultimate seating for portability, strength, crowd appeal, easy installation and maintenance.

Sturdisteel bleachers provide the top quality features you want at a cost that will fit your budget. Standardized construction gives you the flexibility of adding seats as your facility grows.

The low initial expense, coupled with low maintenance costs, adds up to long-term investment dividends.



Corsicana, TX



Daytona Beach, FL



Austin, TX (St. Michaels)



Lexington, KY



Austin, TX - Hudson Bend MS

# OUTDOOR SEATING

**Specialty:** Sturdisteel can provide customized seating to conform with your site's requirements. Whether your facility is flat, sloped or stepped, the stadium can be manufactured to meet your needs. Seating options include benches with straight backs, dish backs, or individual chair seats. Armrests can be added to designate exact seating for reserved areas.

**Fair and Rodeo Arenas:** County and State Fairs, as well as rodeos, have special seating needs which Sturdisteel is capable of offering. Typically, these stands require a roof for added comfort and convenience. Sturdisteel designs these stands for increased loads so the roof is part of the existing stand, not a separate cover.

Other available features are announcer's booths accessible by an enclosed catwalk or press box installed at the rear of the stand. In addition, a metal facade can be installed at the rear and sides to give the stand an enclosed look. VIP chair seats or seats with backs (armrests optional) are also available.

Fair Boards and Rodeo Associations have learned to rely on Sturdisteel's superior design and economical approach to assist them in their stadium projects.

**Race Tracks:** Race Track seating requirements can vary from 500 to 50,000. In addition, the amount of use compared to other facilities requires exacting standards to be calculated into the design. Track owners are discovering Sturdisteel's years of experience in the design, fabrication and installation of grandstands to be very important in the planning of their facility. Whether you need additional seating to handle the overflow of crowds or are simply planning a new track, Sturdisteel has the ability to assist you in getting the best facility for your money.



Norco, CA



Katy, TX



Salem, OR (Chairs by Contour Seating)



Lancaster, CA



*Is your existing stand in need of renovation?  
Contact Sturdisteel about the possibility of replacing  
existing wood seats with aluminum.*





**Indoor Sports Seating:** When fixed seating is preferred over retractable bleachers, Sturdisteel can answer the call. Our closed deck or interlocking deck with aluminum closures, allows for clean up from the top side of the bleachers. Fixed design allows for low maintenance and no moving parts. For maximum comfort, plastic or aluminum chair seats can be furnished.



**Gymnasiums:** Sturdisteel's Horizontal Beam or Elevated Angle Frame design bleachers are an economical alternative to concrete or precast substructures. Both systems can be engineered to meet the space confinements confronted within gymnasiums. Before deciding to go with concrete, check with us on price and design capability.



**Exhibition Arenas:** All indoor arenas vary in some way. Let Sturdisteel's team of professionals assist you with your seating needs. For those with budget restrictions, the Angle Frame bleacher is second to none. For added comfort and usable space beneath the stand, our Horizontal Beam system will serve the customer well. Column spacing can vary depending on the space you require. If comfort is a concern, the horizontal beam system provides a backrest or chair option. Sturdisteel can provide the product that gives you the best return for your money.

# PORTABLE BLEACHERS/PRESS BOXES

**Tilt & Roll Bleachers:** Sturdisteel has the answer for an unexpected overflow of crowds...the Tilt & Roll portable bleachers. Three row units stack neatly against the wall and are tilted down providing extra seating in less than a moments notice. Tilt & Roll portable bleachers are designed with non-marking rubber pads for tilting and large swivel casters for portability without damage to floors.

| Tilt & Roll Bleacher Seating<br>(Gross seats based on 18' per seat) |       |
|---|-------|
| Length  | 3 Row |
| 7'6"  | 15    |
| 15'   | 30    |
| 21'   | 42    |
| 27'   | 54    |

**Features:**

- Non-scarring Rubber Pads
- Steel or Aluminum Frames
- Ball Bearing Casters
- Tipping Arm
- 3 Row Units



**Team Benches:** To complete your new facility or to assist with the requirements of an existing facility, Sturdisteel offers several options of benches.

**Features:**

- Bench Seating
- Bench with Backrest
- Portable or Permanent Mount



**Picnic Tables:** Sturdisteel offers heavy-duty constructed picnic tables for commercial and recreational use. Legs are 1 5/8" O.D. galvanized steel pipe with wood or aluminum tops and seats. Handicap accessible tables are available upon request.



**3 & 4 Row Portable Bleachers** are 30" or less in height and meet all building code requirements without aisles, guardrail systems, or decking risers. They are available in standard lengths of 7'-6", 15', 21', and 27'. Framing can be either aluminum or galvanized steel.

**Features:**

- Portable and durable
- Economical design and price
- Use indoors or outdoors



**Press Boxes:** Want a comfortable area for announcers and coaches to view the game? Let Sturdisteel build your press box. Built of the highest quality material, Sturdisteel press boxes top off your new facility. Call for detailed specifications.

**Features:**

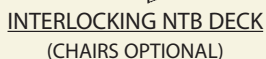
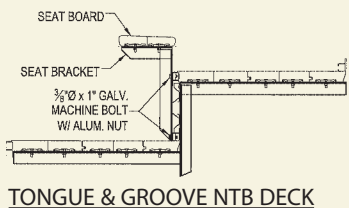
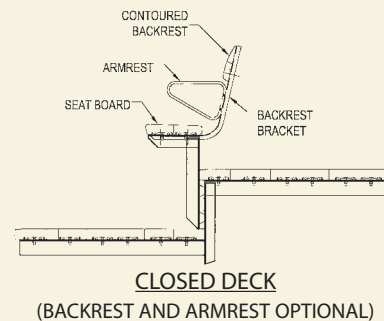
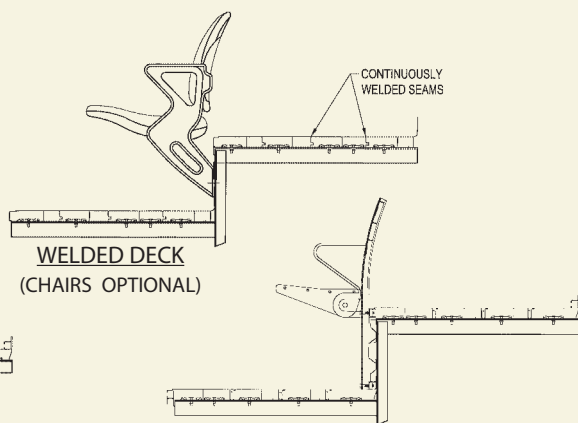
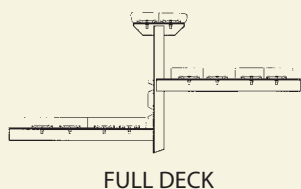
- Exterior 21 Gauge Type R Metal Panels
- 5/8" CD Exterior Grade Plywood
- Inside Wall 3/8" Regular Sheet Rock
- Finished Interior Wall - 1/4" Interior Grade Plywood Paneling
- Pre-wired for Local Power Connection
- 2' x 2' x 5/8" Acoustical Tile

**Options:**

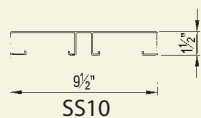
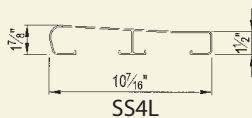
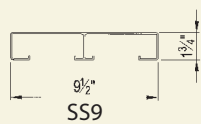
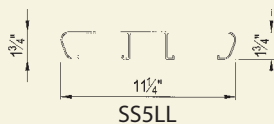
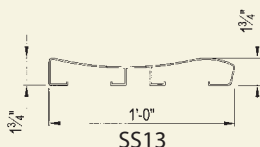
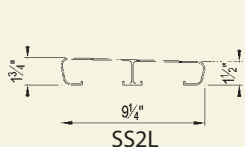
- Filming Deck
- Roof Hatch
- Air Conditioning
- Multiple Rooms
- Non-Combustible Steel Framing
- Security Shutters
- Fixed Glass



## DECK OPTIONS

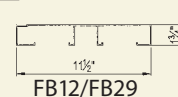
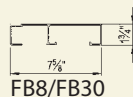


## SEAT BOARDS

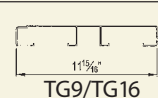
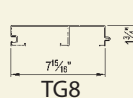


## FOOTBOARDS

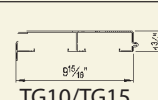
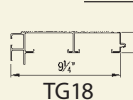
### FULL AND CLOSED DECK



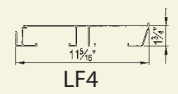
### TONGUE & GROOVE DECK



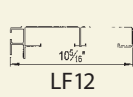
### TONGUE & GROOVE-NO THRU BOLT DECK



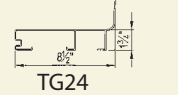
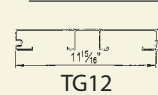
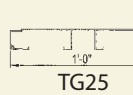
### INTERLOCKING DECK



### INTERLOCKING-NO THRU BOLT DECK

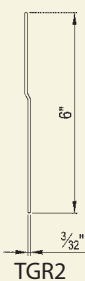
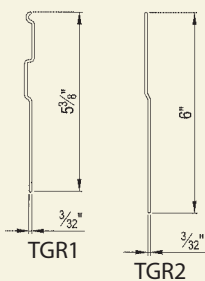


### WELDED DECK

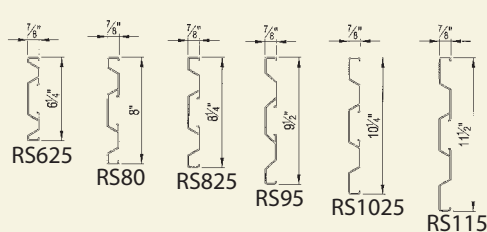


## RISERBOARDS

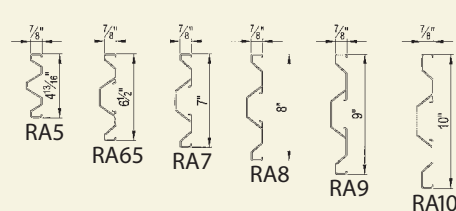
### WELDED DECK RISERS



### GRANDSTAND RISERS



### NO THRU BOLT RISERS



# Sturdisteel®

utilizes the finest and most up to date methods of steel and aluminum fabrication in order to ensure that our best product is on the field. Located in Waco, TX, Sturdisteel's offices include more than 70,000 square feet of manufacturing and warehousing facilities. From the first grandstand in 1934, Sturdisteel has been dedicated to being the most trusted name in stadium seating.

Sturdisteel's number one priority has and always will be the customer. Sturdisteel has made a commitment to provide the finest seating available at fair and competitive prices. Conforming to AISC standards, our control system ensures efficient production from the receipt of raw materials to the finished product.



No matter the size of the job, Sturdisteel provides close, personal attention to make sure that each job is done correctly and efficiently. The cooperation of Sturdisteel with all other partners on the job ensures on-time completion and customer approval. The staff will continue to work with the customer to make sure that the design and quality of the seating is exactly what the customer envisioned. For these reasons, Sturdisteel has become

## THE COMPANY

one of the most known and respected names in outdoor seating.

The quality of Sturdisteel seating begins and ends with the quality of its design. Through extensive research, the engineers at Sturdisteel provide a diverse choice of top-quality designs. These engineers not only provide the design input, but they also oversee the fabrication within our factory. The skill and versatility of our workmen are evident in every grandstand we manufacture.



# Sturdisteel®

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DEALER

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