

**SECTION 13125
ANGLE FRAME BLEACHERS**

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Design and fabrication of angle frame bleachers

1.02 QUALITY ASSURANCE

A. Manufacturer: National Recreation Systems, Inc.
5120 Investment Drive Fort Wayne, In 46808
(888) 568-9064 email sales@bleachers.net

B. Manufacturer Qualifications: Manufacturer must have a minimum of ten years experience in the design and manufacture of bleachers.

C. Welders must conform to AWS standards.

D. Codes and Standards: International Building Code 2009 Edition and ICC 300-2007

1.03 WARRANTY

A. Warranty shall guarantee bleachers to be free from defect in materials and workmanship for a period of 1 year under normal use. Warranty period shall begin on date of completion for projects installed by manufacturer, or its subcontractors.

B. Anodized finish of plank extrusions shall be covered by a 5 year warranty against loss of structural strength or finish deterioration due to exposure to weather conditions or UV rays. Discoloration of mill finish aluminum due to galvanic reaction not covered.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

A. National Recreation Systems, Inc. (888) 568-9064
5120 Investment Drive, Fort Wayne, In 46808

2.02 DESIGN

A. Applicable Codes:

International Building Code (IBC), 2009 Edition and ICC 300-2007

B. Design Loads:

1. Live Loads: Uniform loading - Structure = 100 psf
Uniform loading - Seat and Tread plank = 120 plf
2. Sway Loads: Perpendicular to seats = 10 plf
Parallel to seats = 24 plf
3. Guardrail Loads: Uniform load = 50 plf applied in any direction. Concentrated load = 200 pounds applied in any direction
4. Wind Loads: per local building code requirements

2.03 ANGLE FRAME BLEACHERS

- A. Quantity and Size: Shall consist of ___ unit(s)
___ rows high x ___ ' - ___ " long.
Net seating capacity per unit ___ + ___ HC
(excluding aisles, based on 18" per seat).
- B. Framework: Prefabricated aluminum angle or galvanized steel angle at max. 6' spacing joined by means of aluminum angle cross bracing.
- C. Shop connections: Welded to meet AWS standards
- D. Joint Sleeve Assembly: Internal splices, where required shall be two per joint and shall penetrate the joint a minimum of 8 in each direction and be riveted at one end only to allow for contraction and expansion.
- E. Rise and Run Dimensions:
 1. Standard rise/run = 8" rise/ 24" run .
Seat height 17" above tread.
 2. Low rise = 6" rise / 24" run.
Seat Height: Row 1= 10-1/2"-,
Row 2= 12-1/2" , Rows 3-5 = 14-1/2"
 3. Other rise/run dimensions available
(10"-12" -14" rise/ 24"- 30"- 36" run)
- F. Seats: Nominal 2" x 10" , or 2 x 12" (Low Rise) anodized aluminum with anodized end caps.
- G. Treads: (1) Nominal 2" x 10" or optional (2) 2"x 10" mill finish aluminum with anodized end caps
- H. Risers: Nominal (1) 1" x 6" mill finish aluminum with end caps on all rows except top row, (2) 1" x 6" mill finish aluminum on top row. (1" x 4" , 1" x 8" also available)
- I. Aisles: Aisle footboards shall be of aluminum alloy 6063-T6 and be of mill finish with black anodized contrasting aisle nosing. Three

aisle stiffener angles shall be used to strengthen the aisle step.

There shall be ___ aisle(s) ___" wide.

J. Aisle Handrail: Anodized aluminum pipe with intermediate rail.

K. Entry Stairs: ___ sets(s) of entry stairs, ___" in height.

Guardrails and handrails shall be provided as required.

L. Front Walkway: ___" in height and 63" in clear width, to consist of

(7)- 2"x 10" mill finish aluminum planks. (other widths available)

Standard elevation = 36"

(optional elevations include 18",24",30",42",48",54",60")

M. Guardrail: Rails shall be anodized aluminum tube with end plugs

and elbows where required. All Rails shall be secured to support

with galvanized fasteners. Top rails at sides, rear and front shall

be 42" above the leading edge of seat or walking surfaces. Rear

rail support members shall be aluminum channel, side and front

rail supports shall be aluminum angle.

1. Chainlink System: Fencing shall consist of 9 gauge, 2" mesh

galvanized chainlink fabric, heavy duty tension bands, tension

bars, brace bands, combo rail end caps, and wire ties.

2. Vertical Picket System: Aluminum pipe and bar anodized after

fabrication & attached to supports with galvanized fasteners.

N. Handicap Accessibility (where applicable) shall be provided as

required by the code listed above.

2.04 MATERIALS / FINISHES

A. Framework:

1. Aluminum: Structural fabrication with aluminum alloy 6061-T6

mill finish. Each frame shall be unit-welded, using metal inert
gas method, under guidelines by the American Welding Society.

2. Galvanized Steel: ASTM A529 GR50 . All

steel is hot dipped galvanized after fabrication to ASTM A 123
specifications.

3. All cross bracing and horizontal bracing shall be aluminum
angle 6061-T6 mill finish.

B. Extruded Aluminum:

1. Seat planks: Aluminum alloy 6063-T6, clear anodized 204R1,

AA-M10C22A31 Class II with a wall thickness nominally .078"

for impact and deformation resistance.

2. Tread and Riser Planks: Aluminum alloy 6063-T6, mill finish with

a wall thickness nominally .078" for impact and deformation

resistance.

3. Guardrail Pipe: 1-5/8 OD schedule 40 aluminum alloy 6061-T6, clear anodized 204R1, AA-M10C22A31, Class II.

4. Handrail Pipe: 1-7/8 OD schedule 40 aluminum alloy 6105-T1, clear anodized 204R1, AA-M10C22A31, Class II.

C. Accessories:

1. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.

2. Hardware: Bolts and Nuts shall be hot dipped galvanized.

3. Hold Down Clip Assembly: Aluminum alloy 6063-T6 mill finish.

4. Joint Sleeve Assembly: Aluminum alloy 6061-T6, mill finish.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install bleacher unit in accordance with manufacturer written instructions and shop drawings.