

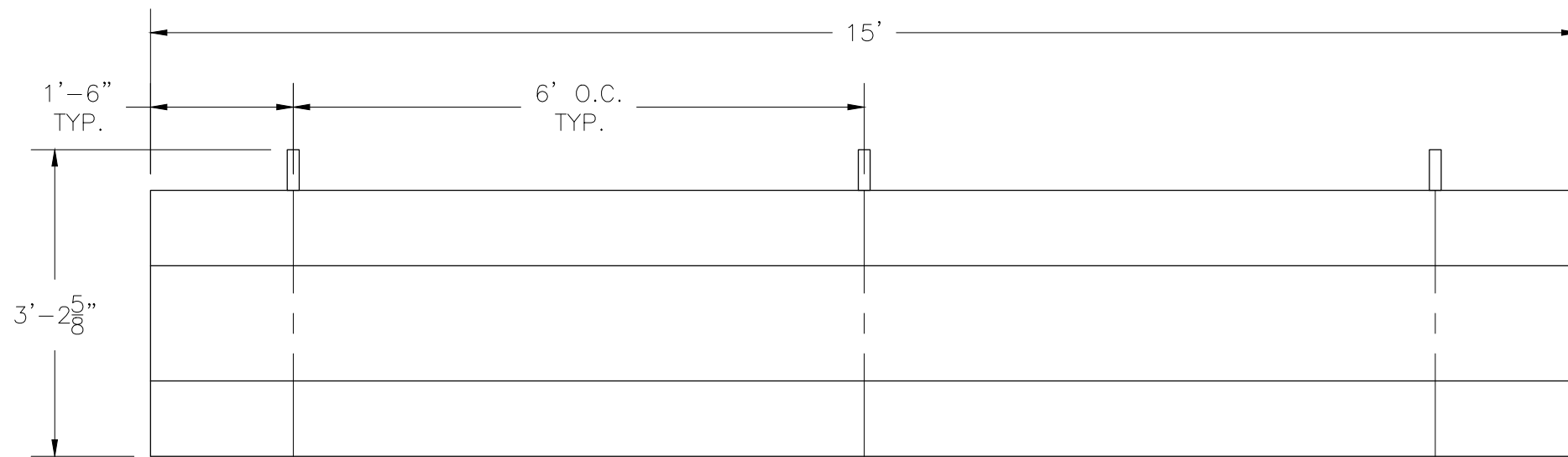
***TR-0215STD***

***TIP & ROLL ALUMINUM 2 ROW x 15'-0" BLEACHER***

**National Recreation Systems, Inc.**

1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825

CS.1	- COVER SHEET
TD.1	- BLEACHER SEATING PLAN
BA.1	- BLEACHER ASSEMBLY
PF.1	- PLANK & FRAMING PLAN



SECTION LENGTH	GROSS SEATS	ACTUAL SEATS	NO. OF ROWS	NET SEATS
15	10.00	10.00	2	20
			<b>NET SEATS</b>	<b>20</b>
			<b>WHEELCHAIR SPACES</b>	<b>0</b>
			<b>TOTAL NET SEATING CAPACITY</b>	<b>20</b>
			<b>(BASED ON 18" PER SEAT)</b>	

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**1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825**

SCALE: N.T.S.	APPROVED BY: IMP 8/29/16	DRAWN BY: JML
DATE: 4/5/16		
TITLE: 2 ROW x 15'-0" TIP & ROLL BLEACHER SEATING PLAN		
BLEACHER MODEL #: TR-0215STD	DRAWING NUMBER: TD.1	

⊖ TYP X-BRACE CONN. W/ 1/4 BOLT



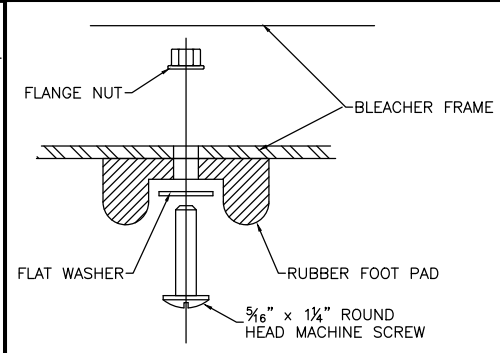
NOT TO SCALE

⊖ TYP 2x10 PLANK ATTACHMENT

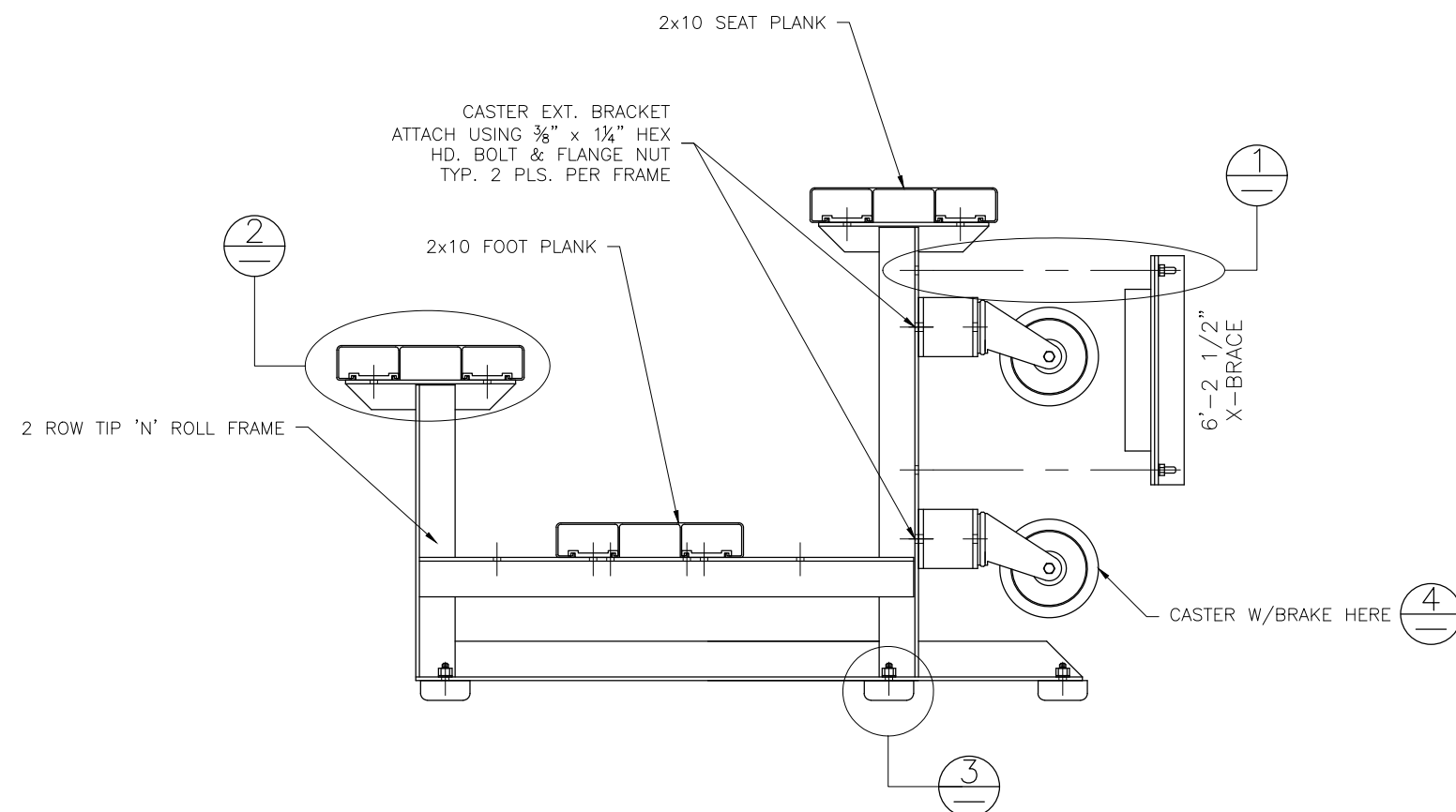
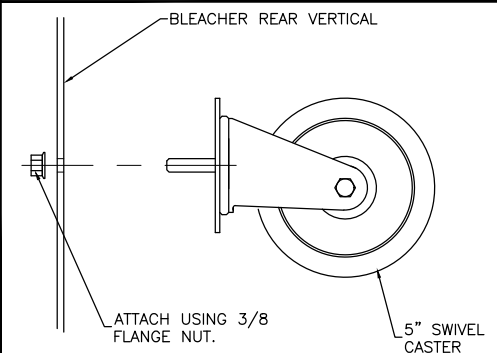


NOT TO SCALE

⊖ RUBBER FOOT PAD ATTACH. DETAIL



⊖ CASTER ATTACHMENT DETAIL



NOTE: MOUNT CASTERS TO END FRAMES ONLY.

# WARNING

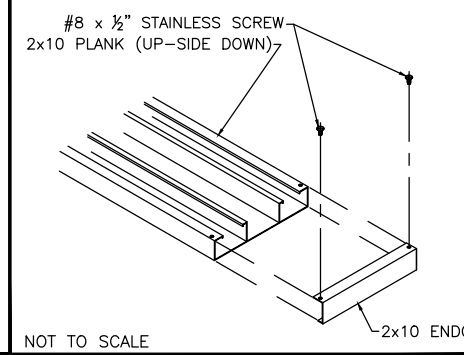
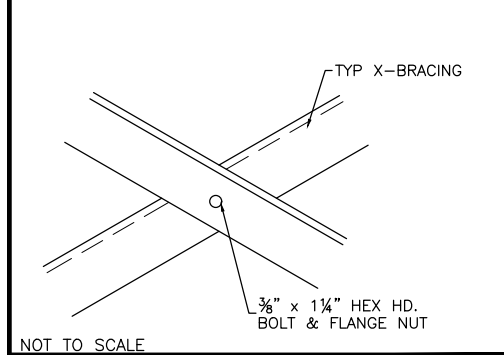
TIP N' ROLL BLEACHERS ARE SUITABLE FOR INDOOR OR OUTDOOR USE. HOWEVER, THEY SHOULD ONLY BE TIPPED UP ON THE CASTERS INDOORS, DUE TO POTENTIAL WIND HAZARDS IF TIPPED UP OUTDOORS. THESE LIGHT-WEIGHT UNITS ARE EASILY TIPPED UP BY ANY ABLE-BODIED ADULT.

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SCALE: N.T.S.	APPROVED BY: IMP 8/29/16	DRAWN BY: JML
DATE: 4/5/16	TITLE: 2 ROW TIP & ROLL BLEACHER ASSEMBLY	
BLEACHER MODEL #: TR-0215STD	DRAWING NUMBER: BA.1	

⊕ TYP X-BRACE CONN. W/ 1 1/4" BOLT

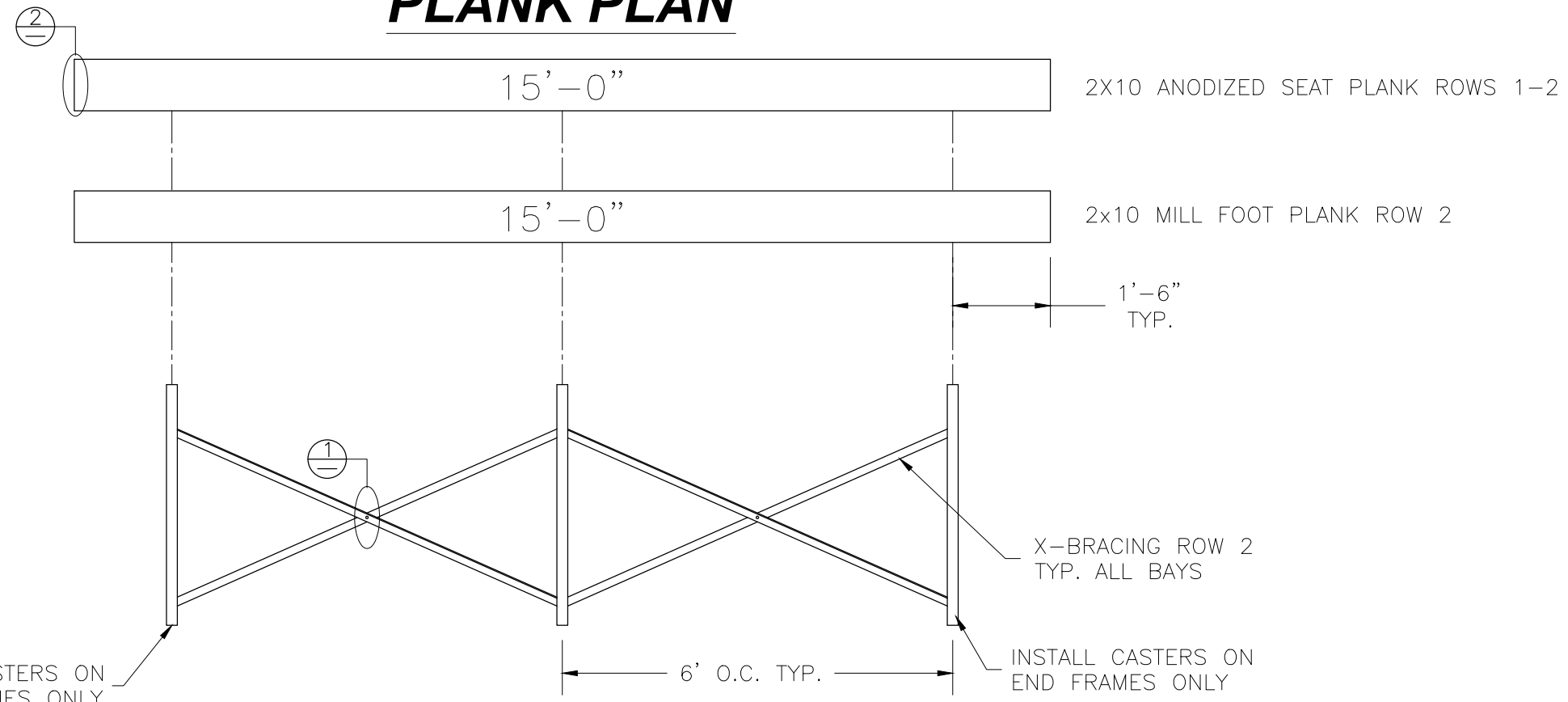
⊕ TYP 2x10 ENDCAP ATTACHMENT



NOT TO SCALE

NOT TO SCALE

## PLANK PLAN



## FRAMING PLAN

INSTALL CASTERS ON END FRAMES ONLY

INSTALL CASTERS ON END FRAMES ONLY

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<b>National Recreation Systems, Inc.</b>		
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825		
SCALE: N.T.S.	APPROVED BY: IMP 8/29/16	DRAWN BY: JML
DATE: 4/5/16		
TITLE: 2 ROW x 15'-0" TIP & ROLL PLANK & FRAMING PLAN		
BLEACHER MODEL #: TR-0215STD	DRAWING NUMBER: PF.1	

# Bleacher Specifications

Non-Elevated Aluminum Angle Tip-N-Roll Frame

## SECTION 13125

### NON-ELEVATED ALUMINUM ANGLE TIP-N-ROLL FRAME BLEACHERS

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

- A. Design and fabrication of Non-Elevated angle frame bleachers

##### 1.02 QUALITY ASSURANCE

- A. Manufacturer: National Recreation Systems, Inc.  
P.O. Box 11487 Fort Wayne, In 46858-1487
- 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. Source Quality Control: Mill Test Certification.
- E. Codes and Standards: 2003 International Building Code.

##### 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, **OR** warranty period shall begin on date of final delivery on projects installed by others.
- 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.

##### 1.04 PRODUCT LIABILITY INSURANCE

- A. Product liability insurance is carried for the life of the product in the amount of \$ 2,000,000.

##### 1.05 ENGINEERING

- A. Engineering certifications and calculations by a Registered Professional Engineer will be provided upon request, for a fee.

#### PART 2 – PRODUCTS

##### 2.01 ACCEPTABLE MANUFACTURER

- A. National Recreation Systems, Inc.

##### 2.02 DESIGN

- A. Applicable Codes:
  - INTERNATIONAL BUILDING CODE (IBC), 2003 EDITION
  - Except aisle and handicapped requirements
- B. Design Loads:
  1. Live Loads: Uniform loading - Structure = 100 psf  
Uniform loading - Seat and Foot plank = 120 plf
  2. Sway Loads: Perpendicular to seats = 10 plf  
Parallel to seats = 24 plf
  3. Guardrail Loads: Uniform vertical load = 100 plf  
Uniform horizontal load = 50 plf  
Concentrated horizontal load = 200 pounds
  4. \*Wind Loads: Basic design wind speed = 150 mph (exposure "B")

**\*Note: Bleacher must be anchored to meet wind loads above**

##### 2.03 NON-ELEVATED ANGLE FRAME BLEACHERS

- A. Quantity and Size: Shall consist of 1 unit(s) 2 rows high x 15 long.  
Net seating capacity per unit 20 (excluding aisles, based on 18" per seat).
- B. Framework: Prefabricated aluminum angle spaced at 6' - 0" intervals joined by means of aluminum angle cross bracing.
- C. Shop connections: Welded to meet AWS standards and local code requirements

**National Recreation Systems, Inc. 5120 Investment Drive Fort Wayne, IN 46808**

- D. Rise and Depth Dimensions: 6" vertical rise and 24" tread depth, Seat height is 16" above its respective tread.
- E. Seats: Nominal 2" x 10" anodized aluminum with anodized end caps.
- F. Treads: Nominal one (1) 2" x 10" mill finish aluminum with anodized end caps on all rows. Each unit will have high grade swivel casters with 5" non-marring wheels and non-marring foot pads.

## 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. After fabrication all steel is hot dipped galvanized to ASTM A-123 specifications. All crossbracing 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.
- 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.

**Note: Building codes may vary from site to site. The customer is responsible for verification of local code requirements.**