

***NB-0321ASTD***

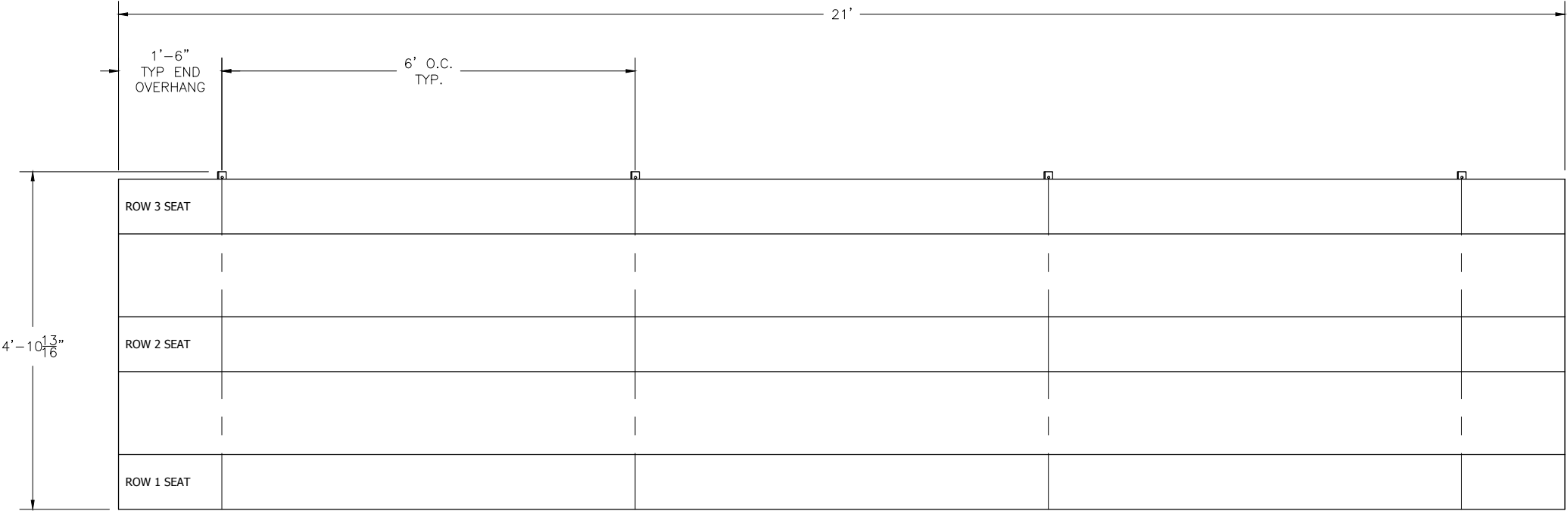
***NON ELEVATED 3 ROW x 21'-0" BLEACHER***

**National Recreation Systems, Inc.**

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

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

BLEACHER TOP VIEW



SECTION LENGTH	GROSS SEATS	ACTUAL SEATS	NO. OF ROWS	NET SEATS
21	14.00	14.00	3	42
NET SEATS				42
WHEELCHAIR SPACES				0
TOTAL NET SEATING CAPACITY				42
(BASED ON 18" PER SEAT)				

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National Recreation Systems, Inc.

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

SCALE: N.T.S.

DATE: 10/21/16

REVISION:

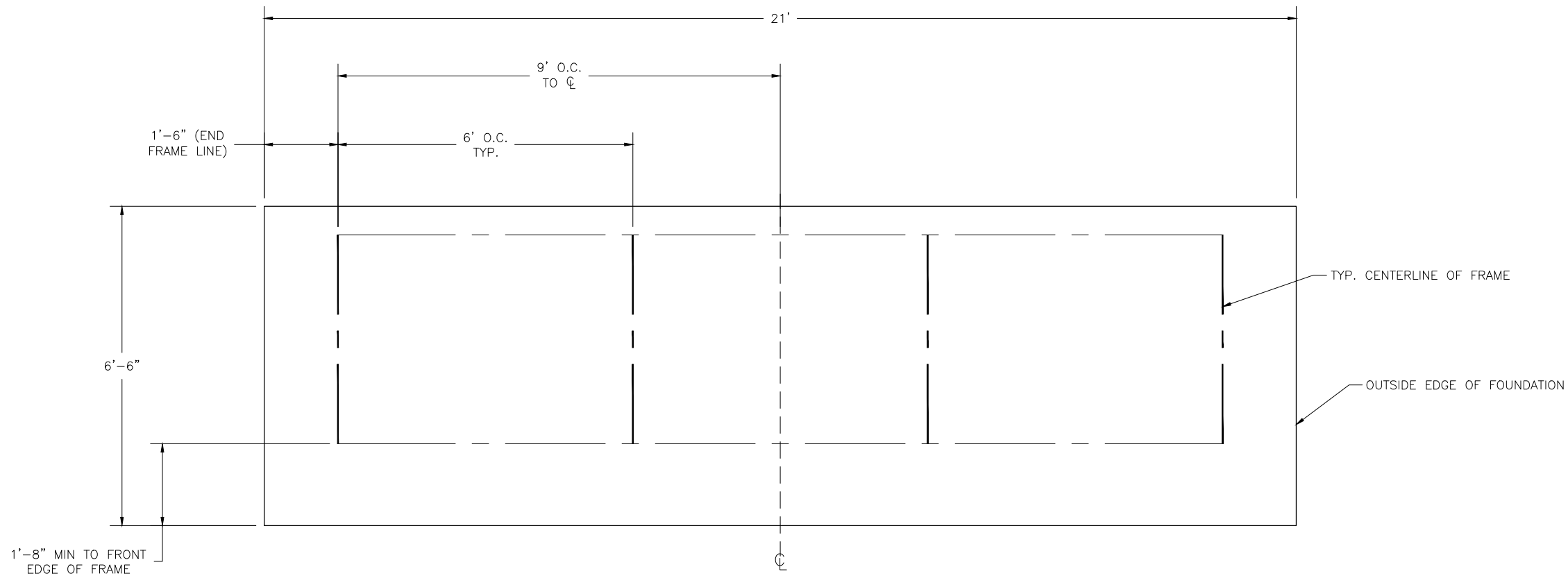
DRAWN BY: IMP

TITLE: 3 ROW x 21'-0" BLEACHER SEATING PLAN

BLEACHER MODEL #: NB-0321ASTD

DRAWING NUMBER: TD.1

LOCATE FRAMES ON FOUNDATION



\* MINIMUM FOUNDATION AREA SHOWN. DEPENDING ON LOCAL SOIL CONDITIONS, BLEACHER CAN BE INSTALLED ON A CONCRETE PAD OR FOOTERS, OR ATTACHED TO 2x6 TREATED LUMBER GROUND SILLS AND PLACED ON COMPACTED STONE, ASPHALT, OR ANY OTHER SMOOTH, SOLID, LEVEL SURFACE. CONSULT YOUR LOCAL CONCRETE CONTRACTOR TO DETERMINE PROPER CONCRETE SPECIFICATIONS FOR YOUR LOCAL SOIL AND WEATHER-RELATED CONDITIONS. THE BEARING SURFACE MUST BE CAPABLE OF SUPPORTING A MINIMUM OF 660 POUNDS PER LINEAR FOOT. TO MEET LOCAL CODES, BLEACHERS WILL NEED TO BE ANCHORED. ANCHORING SYSTEMS FOR ALL SURFACE TYPES ARE AVAILABLE - CONTACT YOUR BLEACHER SALES REPRESENTATIVE FOR MORE INFORMATION.

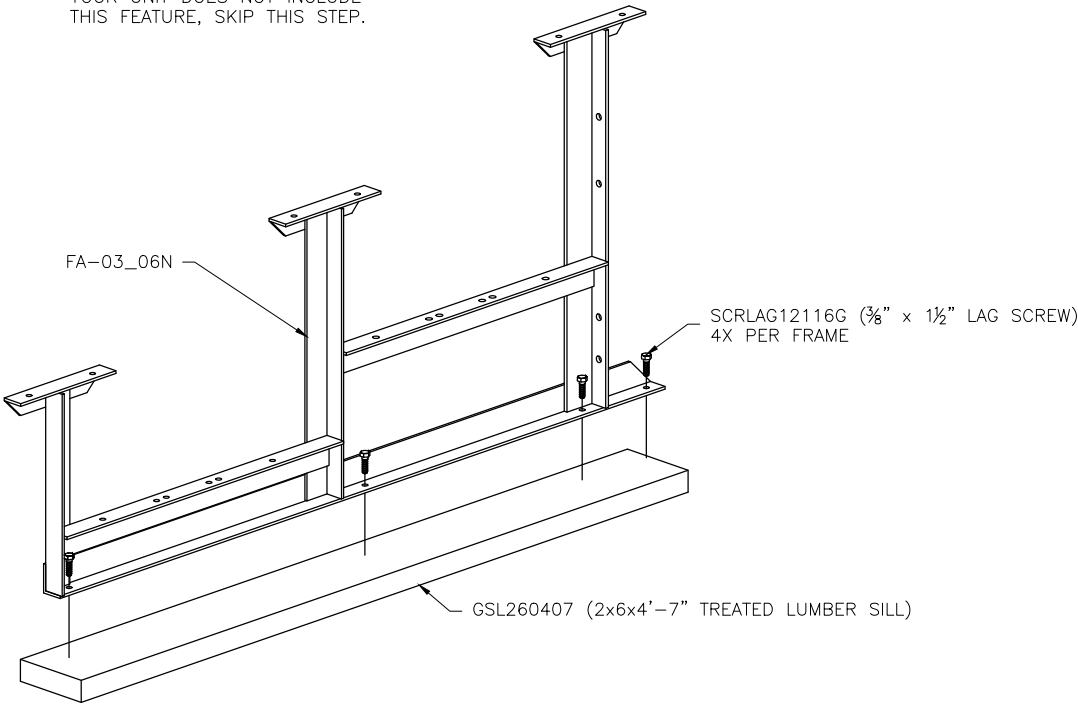
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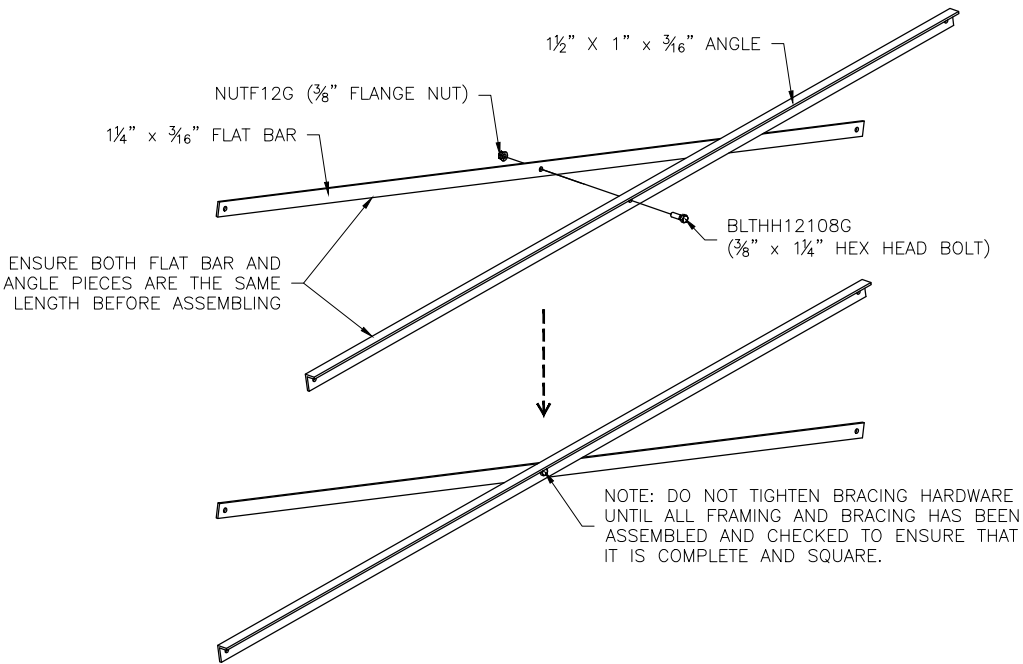
SCALE: N.T.S.	REVISION:	DRAWN BY: IMP
DATE: 10/21/16		
TITLE: 3 ROW x 21'-0" BLEACHER FOUNDATION PLAN		
BLEACHER MODEL #: NB-0321ASTD	DRAWING NUMBER: FP.1	

**(OPTIONAL) ATTACH GROUND SILLS \***

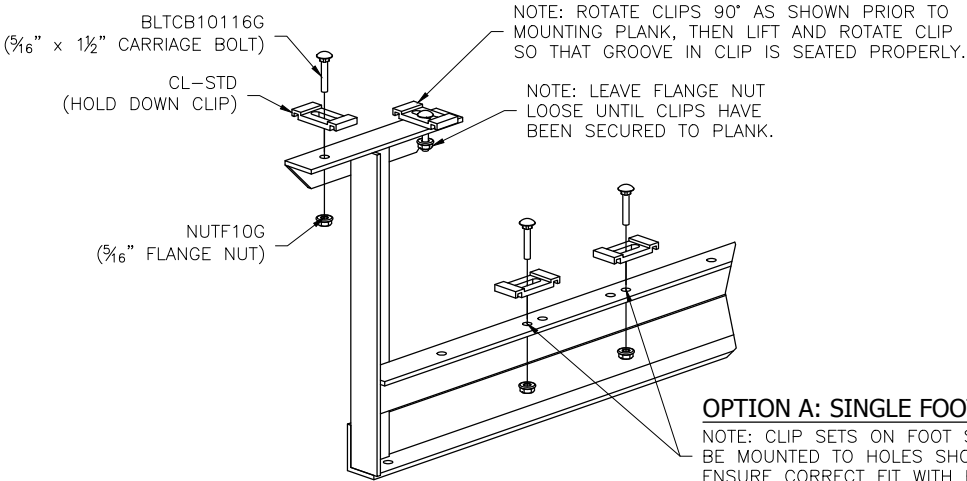
\*NOT ALL BLEACHERS WILL RECEIVE GROUND SILLS. IF YOUR UNIT DOES NOT INCLUDE THIS FEATURE, SKIP THIS STEP.



**PRE-ASSEMBLE X-BRACE PAIR(S)**

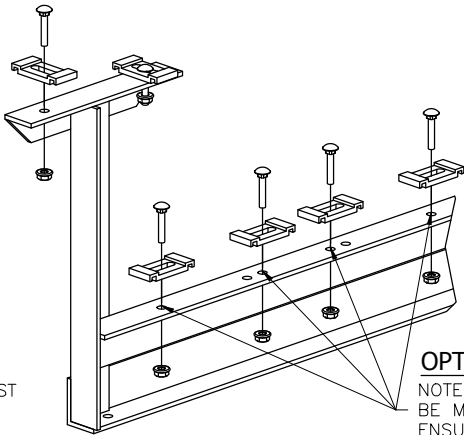


**ONCE FRAMING IS COMPLETE,  
PRE-ASSEMBLE CLIP SETS ON BLEACHER FRAMES**



**OPTION A: SINGLE FOOT BOARDS**

NOTE: CLIP SETS ON FOOT SUPPORTS MUST BE MOUNTED TO HOLES SHOWN HERE TO ENSURE CORRECT FIT WITH FOOT PLANK.



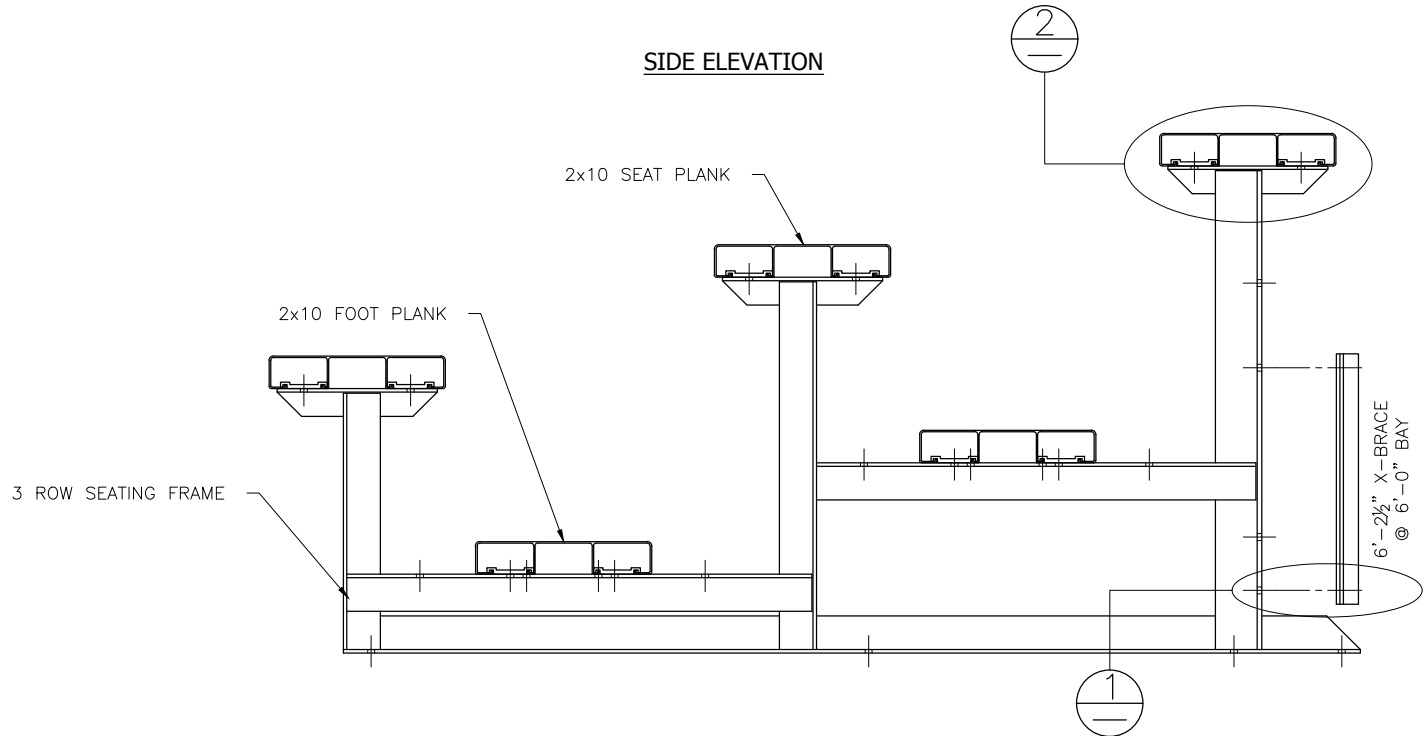
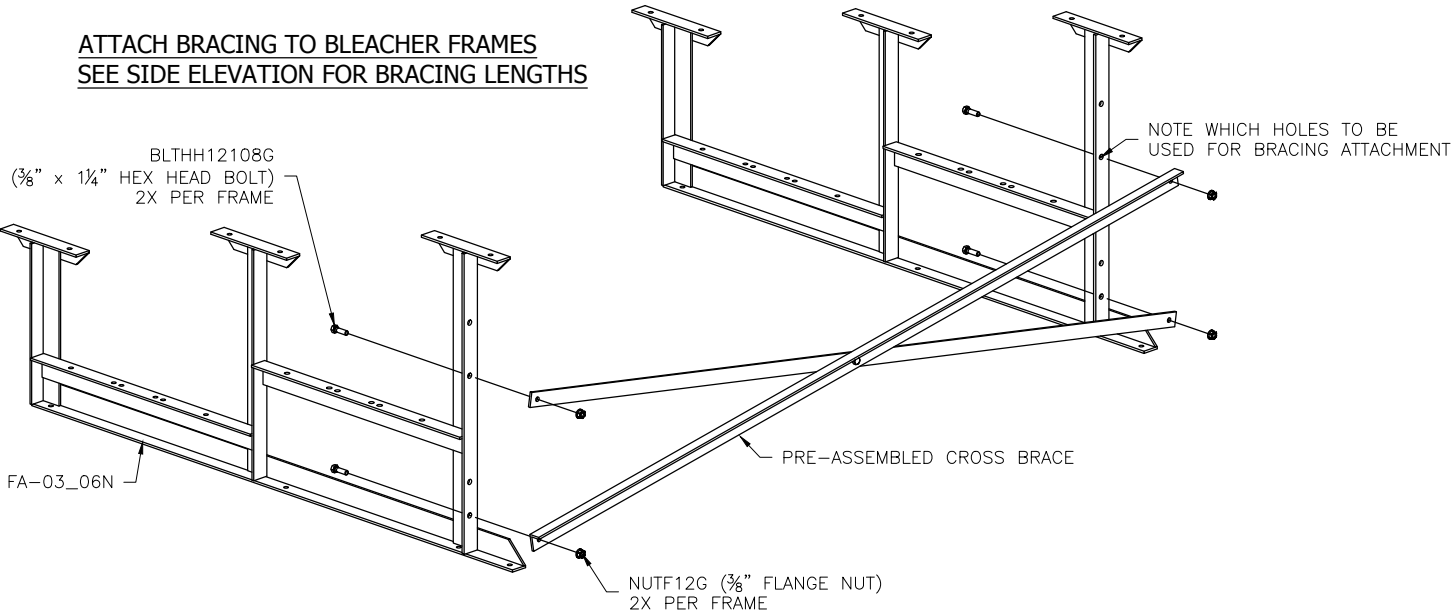
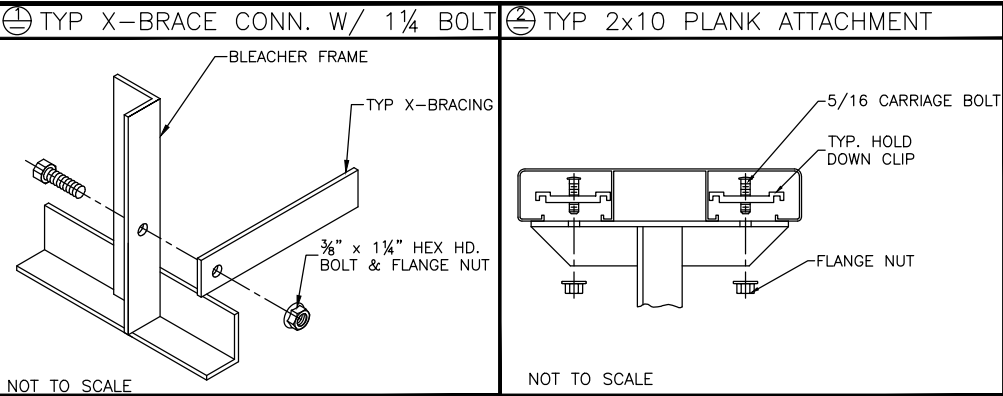
**OPTION B: DOUBLE FOOT BOARDS**

NOTE: CLIP SETS ON FOOT SUPPORTS MUST BE MOUNTED TO HOLES SHOWN HERE TO ENSURE CORRECT FIT WITH FOOT PLANK.

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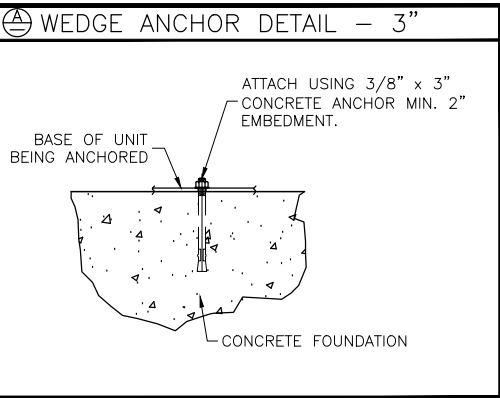
SCALE: N.T.S.	REVISION:	DRAWN BY: IMP
DATE: 10/21/16		
TITLE: 3 ROW X 21'-0" FRAMING & CLIP SET PREPARATION		
BLEACHER MODEL #: NB-0321ASTD		DRAWING NUMBER: BA.1



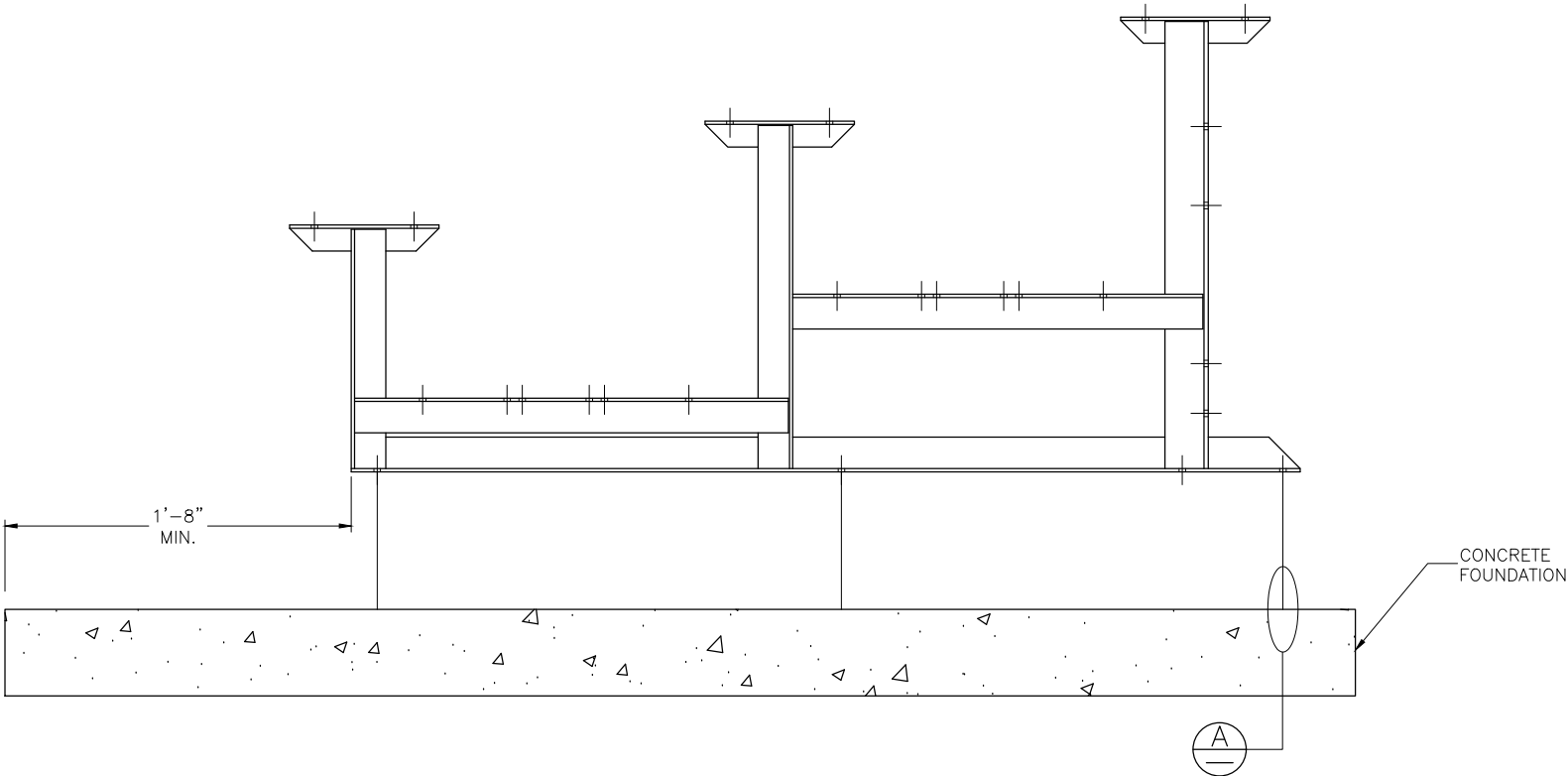
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SCALE: N.T.S.	REVISION:	DRAWN BY: IMP
DATE: 10/21/16		
TITLE: 10 ROW X 21'-0" FRAMING ASSEMBLY		
BLEACHER MODEL #: NB-0321ASTD	DRAWING NUMBER: BA.1	



(OPTIONAL) ANCHOR BLEACHER TO CONCRETE FOUNDATION \*

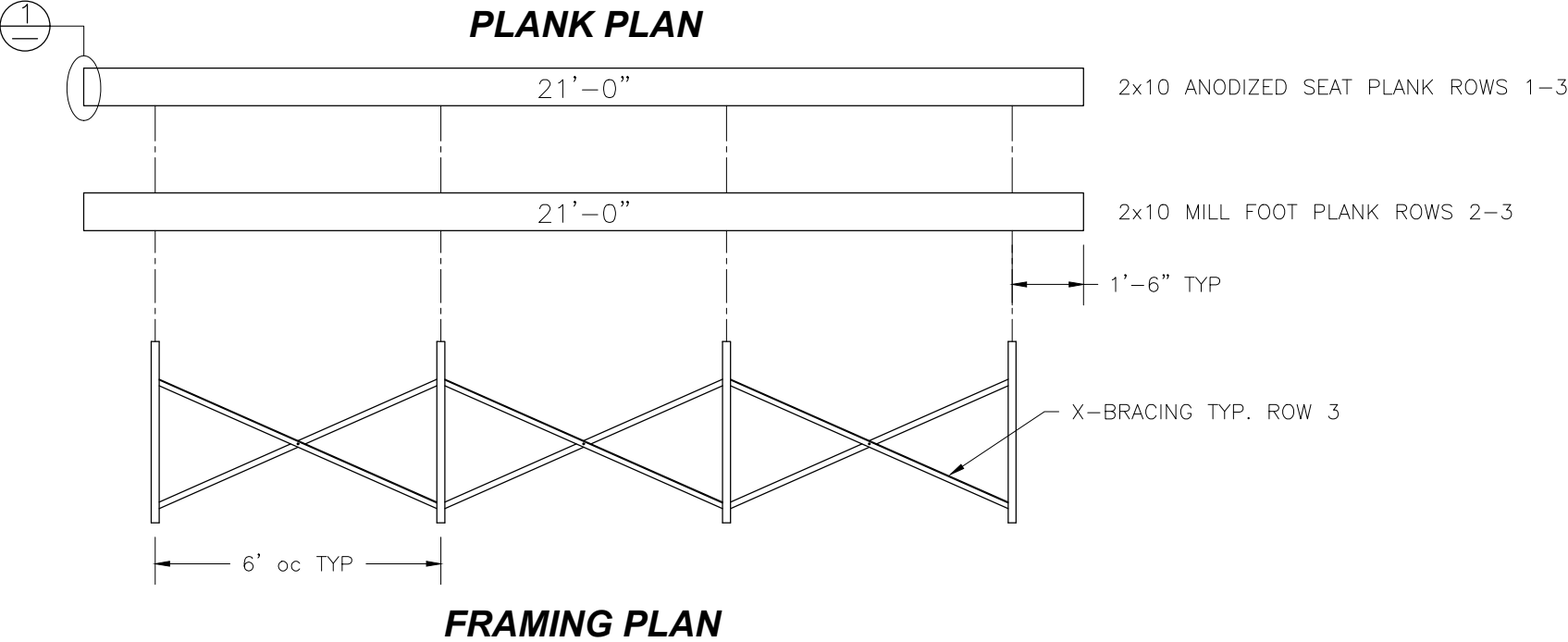
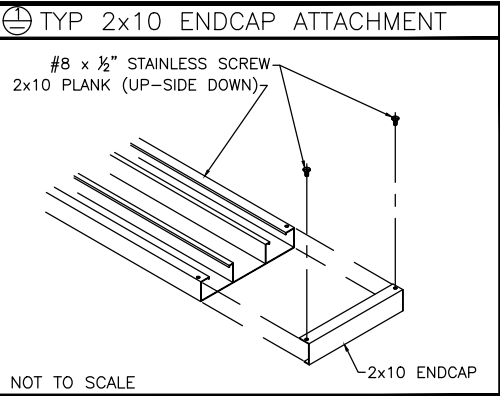


\* CONCRETE WEDGE ANCHORS NOT INCLUDED WITH ALL UNITS. IF USING OTHER ANCHORING SYSTEM, SKIP THIS STEP AND REFER TO INSTRUCTIONS SPECIFIC TO THE ANCHORING SYSTEM PURCHASED FOR YOUR UNIT. SEE PRINT FP.1 (INCLUDED IN THIS PACKET) FOR GENERAL CONCRETE FOUNDATION SPECIFICATIONS.

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SCALE: N.T.S.	REVISION:	DRAWN BY: IMP
DATE: 10/21/16		
TITLE: 3 ROW CONCRETE ANCHORING PLAN		
BLEACHER MODEL #: NB-0321ASTD	DRAWING NUMBER: AP.1	



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SCALE: N.T.S.	REVISION:	DRAWN BY: IMP
DATE: 10/21/16		
TITLE: 3 ROW x 21'-0" BLEACHER PLANK & FRAMING PLAN		
BLEACHER MODEL #: NB-0321ASTD	DRAWING NUMBER: PF.1	

# Bleacher Specifications

## Non-Elevated Aluminum Angle Frame

### SECTION 13125

#### NON-ELEVATED ALUMINUM ANGLE 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.  
1300-D Airport North Office Park, Ft. Wayne, IN, 46825
- 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: 2012/2015 International Building Code / ICC 300 2012.

##### 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 at an additional fee.

##### PART 2 – PRODUCTS

##### 2.01 ACCEPTABLE MANUFACTURER

- A. National Recreation Systems, Inc.

##### 2.02 DESIGN

- A. Applicable Codes:  
INTERNATIONAL BUILDING CODE (IBC), 2012/2015 EDITION / ICC 300 2012  
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) 3 rows high x 21 long.  
Net seating capacity per unit 42 (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



- 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 Depth Dimensions: 6" vertical rise and 24" tread depth, Seat height is 17" above its respective tread. (first seat height is 16")
- F. Seats: Nominal 2" x 10" anodized aluminum with anodized end caps.
- G. Treads: Nominal one (1) 2" x 10" mill finish aluminum with anodized end caps on rows 2 & 3.  
Nominal two (2) 2" x 10" mill finish aluminum with anodized end caps on all other rows.
- H. Risers: Nominal two (2) 1" x 6" mill finish aluminum with mill finish end caps on top row.  
Nominal 1" x 6" mill finish aluminum with mill finish end caps on rows 4 & up.
- I. Guardrail: Rails shall be anodized aluminum tube with end plugs and elbows where required.  
All Rails shall be secured to angle supports 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 support s 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 endcaps, and wire ties.

## 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 alloy 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 6105-T5, 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.

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