

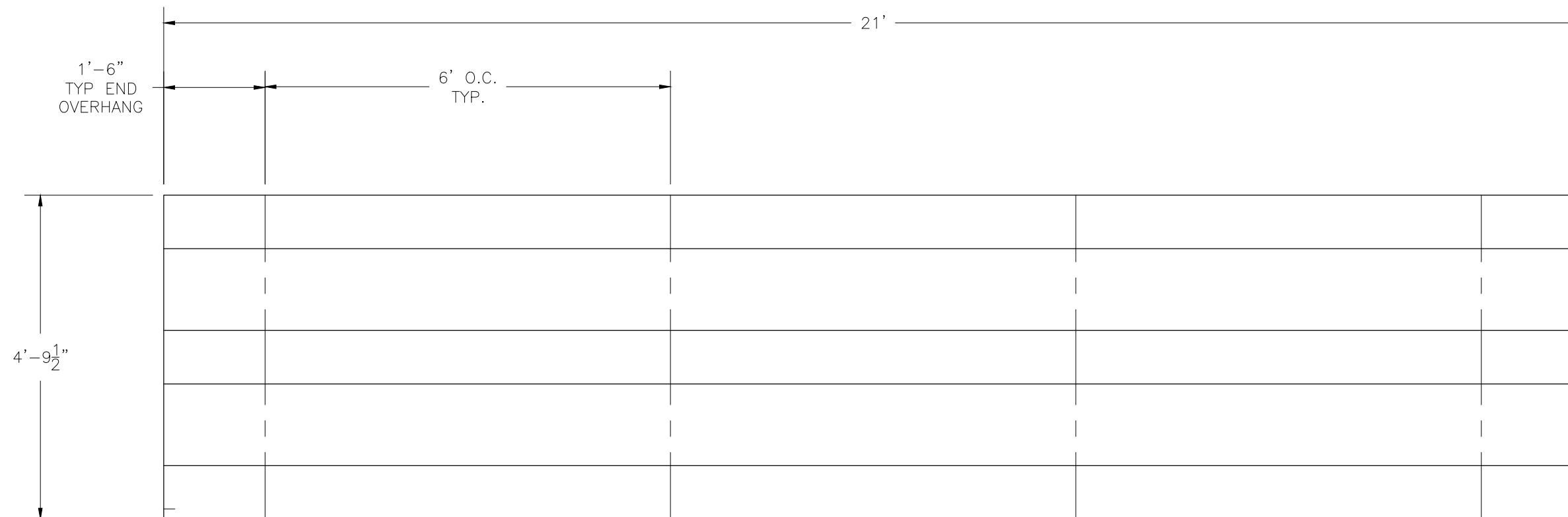
# ***NB-0321GSTD***

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

### **National Recreation Systems, Inc.**

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

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PF.1	- PLANK & FRAMING PLAN
BR.1	- BRACING PLAN

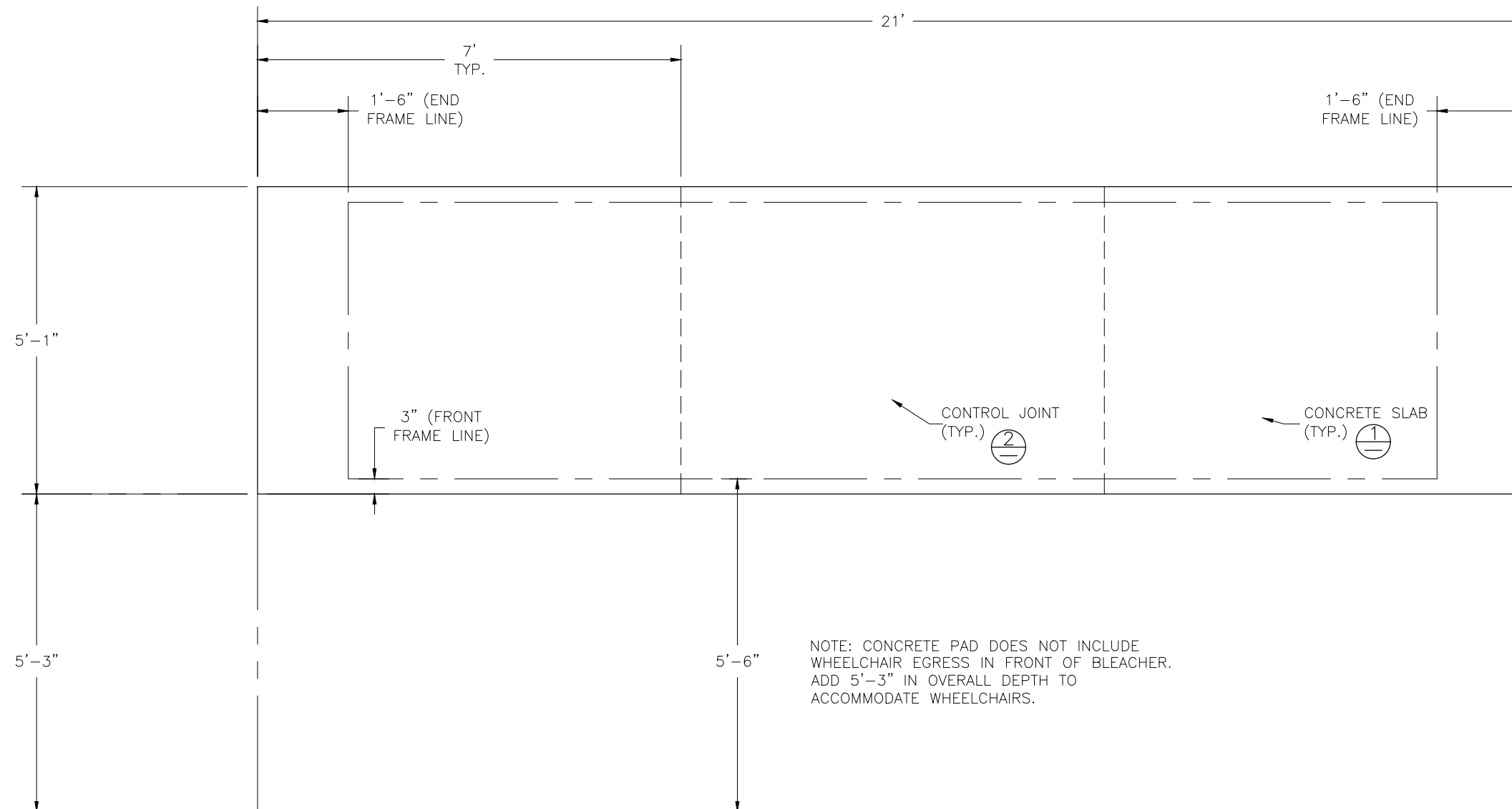


SECTION LENGTH	GROSS SEATS	ACTUAL SEATS	NO. OF ROWS	NET SEATS
21	14.00	14.00	3	42
				<b>NET SEATS 42</b>
				<b>WHEELCHAIR SPACES 0</b>
				<b>TOTAL NET SEATING CAPACITY 42</b>
				<b>(BASED ON 18" PER SEAT)</b>

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SCALE: N.T.S.	APPROVED BY:	DRAWN BY: JML
DATE: 08/08/2016		
TITLE: BLEACHER SEATING PLAN		
BLEACHER MODEL #: NB-0321GSTD	DRAWING NUMBER: TD.1	



**CONCRETE FOUNDATION SPECIFICATIONS**

**SCOPE:**

Foundation construction is not part of National Recreation Systems, Inc.'s (NRS) scope of work unless noted otherwise in the contract documents. The owner shall review the foundation design with the local code authorities, and coordinate with NRS.

**FOUNDATION DESIGN & ANCHORS:**

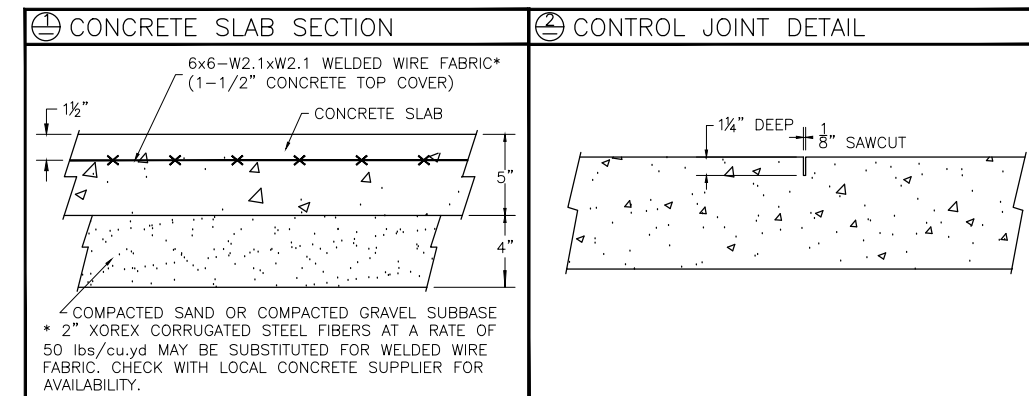
- 1) The foundation designs are based on the following:
  - a. Minimum presumed soil bearing 1000 psf.
  - b. Bleacher frame dead and live load 700 lbs./ft.
  - c. Bleacher frame wind uplift load 250 lbs./ft.
- 2) Unless otherwise noted on the drawings the bleacher frames shall be attached to the concrete with 3/8" dia. x 3" wedge type expansion anchors. The anchors shall be embedded a minimum of 2" into the concrete.

**CONCRETE SPECIFICATIONS:**

- 1) All concrete construction shall be in accordance with *ACI 318-08*.
- 2) All concrete shall have a minimum 28-day strength of  $F_c=3000$  psi.
- 3) A 1/4" bituminous expansion joint material shall be placed between strip and slab foundations when adjacent to each other.
- 4) The depressions in the top of the foundations between high spots shall not exceed 5/16" below a 10-foot long straightedge. The 10-foot straightedge method used to measure foundation flatness shall be in accordance with Section of ACI 302.1R-04 "Guide for Concrete Floor and Slab Construction".

**CONCRETE SLAB SPECIFICATIONS:**

- 1) Concrete slab shall have a minimum thickness of 5" (NRS, Inc. recommends, and some areas may require 6" thickness) and placed on 4" of compacted gravel or compacted sand sub-base.
- 2) NRS, Inc. recommends that the concrete slab be reinforced with 6x6-W2.1xW2.1 welded wire fabric at 1 1/2" concrete cover from the top. In lieu of welded wire fabric, 2" XOREX by Ribbon Technology Corporation or equal corrugated steel fibers applied at a rate of 50-lbs./Cubic Yard may be used. Nylon or polypropylene fiber are not recommended.
- 3) Crack control joints shall be sawed into slab to form approximate square patterns. The maximum spacing for control joints shall not exceed 12'-6", unless shown otherwise on this drawing. The bleacher frames shall not be set on control joints. The designer shall contact NRS to coordinate joint spacing requirements with the specific bleacher design.
- 4) The slab may be sloped a maximum of 1/8 inch per foot for drainage. The maximum overall out of level slope for the slab perpendicular to the seats (front to rear) shall not exceed 2" and parallel to the seats (end to end) shall not exceed 4".

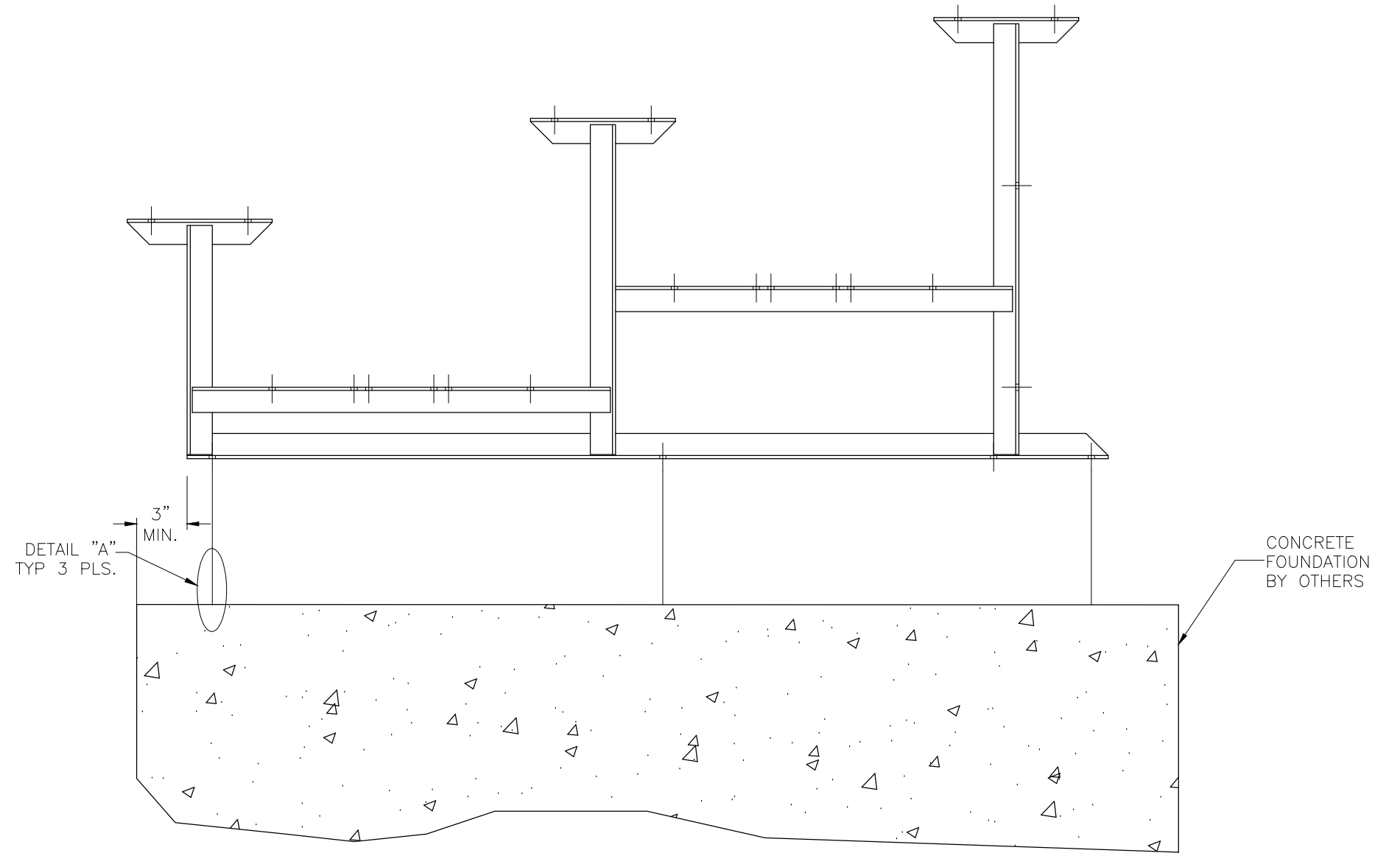
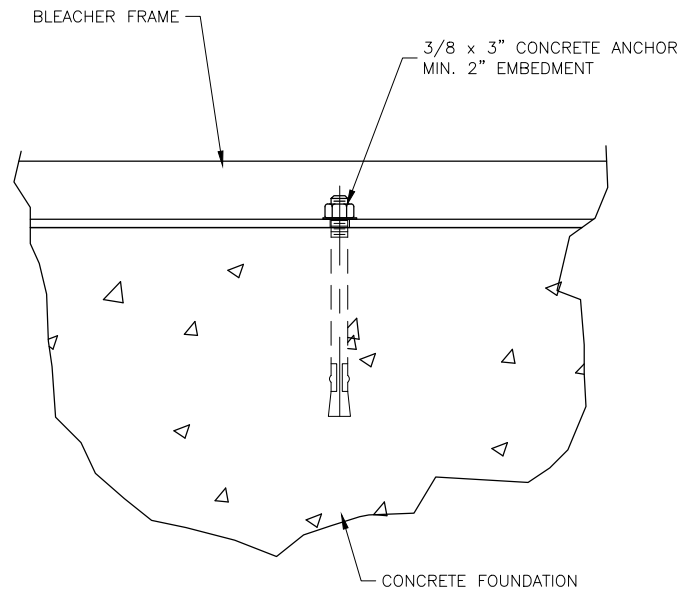


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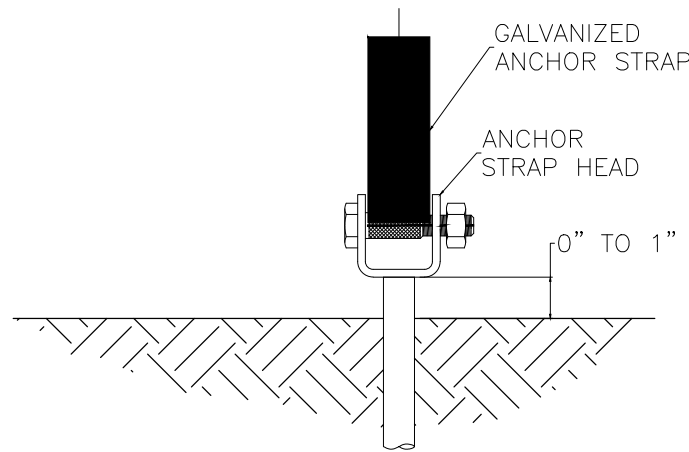
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: JML
DATE: 08/08/2016		
TITLE: FOUNDATION PLAN		
BLEACHER MODEL #: NB-0321GSTD	DRAWING NUMBER: FP.1	

**DETAIL "A" - CONCRETE ANCHOR ATTACHMENT**

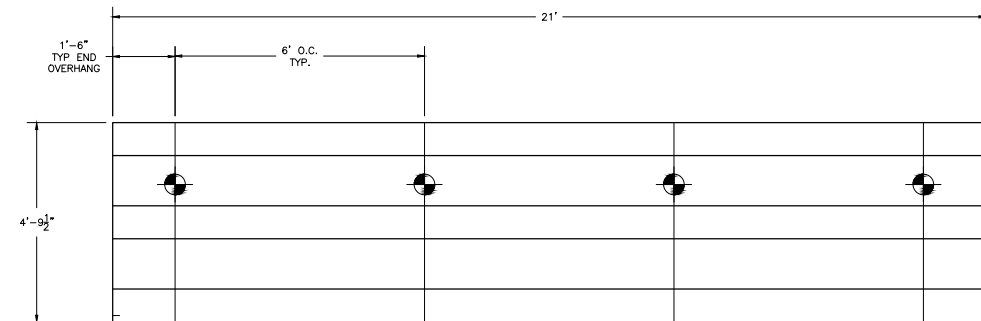
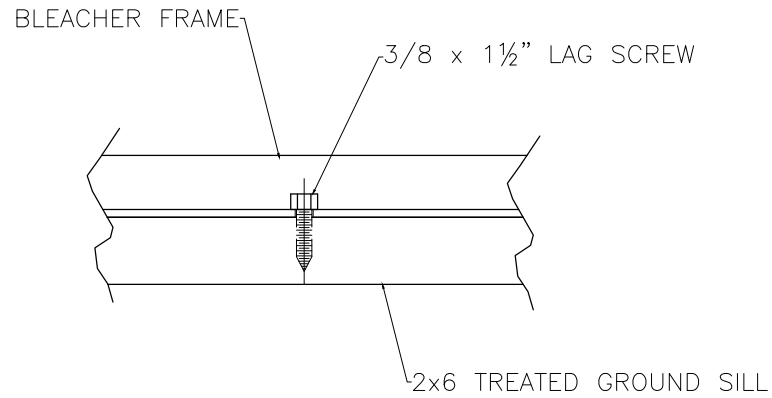


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			SCALE: N.T.S.	APPROVED BY:
DATE: 08/08/2016		TITLE: ANCHORING PLAN		
BLEACHER MODEL #:	NB-0321GSTD	DRAWING NUMBER:		AP.1

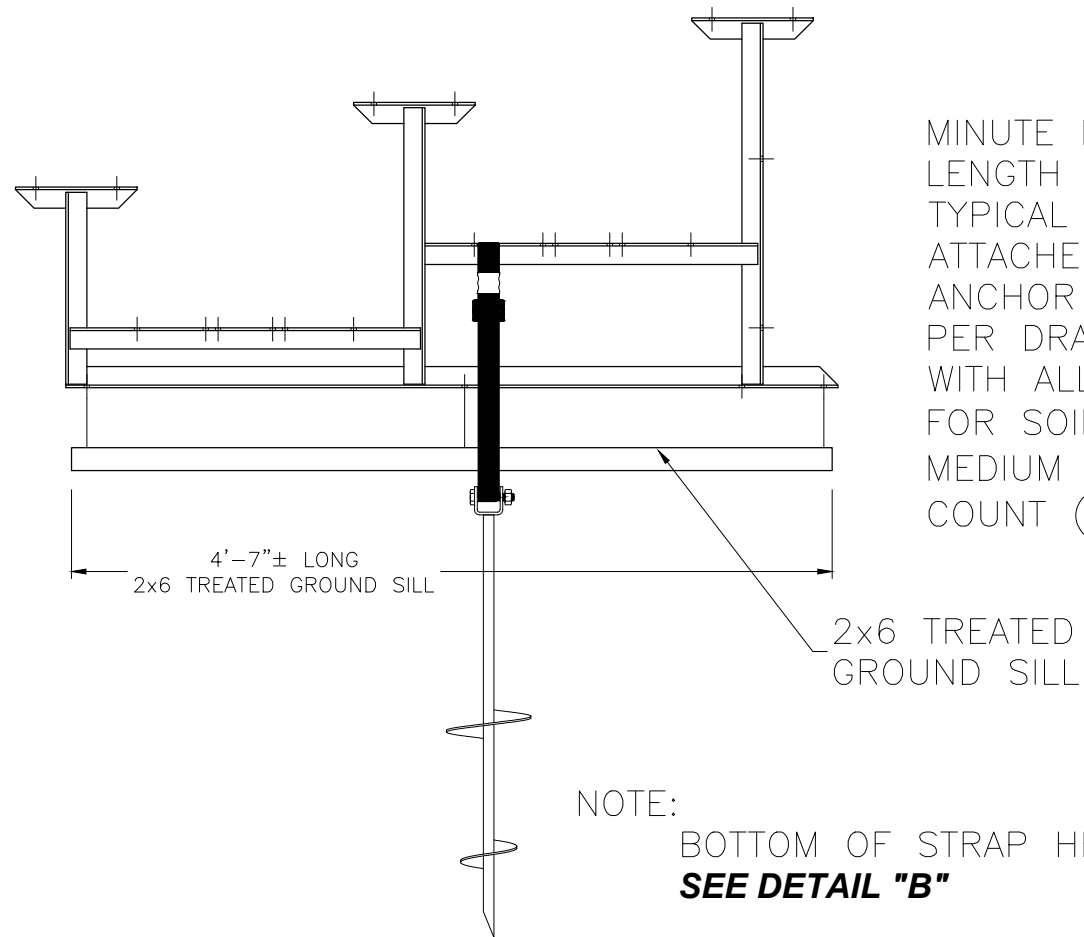
**DETAIL "A" - GROUND SILL ATTACHMENT**



**DETAIL "B" - STRAP HEAD DETAIL**



**AUGER ANCHOR LOCATIONS  
FOR 3 ROW 21'-0"  
NON ELEVATED BLEACHER SYSTEM**



MINUTE MAN SOIL ANCHOR MARK MMA-52, MODEL 4636-DH 3/4, 4" & 6" DISKS, 36" LENGTH  
TYPICAL ATTACHED TO BLEACHER FRAMES BY MINUTE MAN BUCKLE STRAP AND ATTACHED FROM STRAP TO ANCHOR HEAD BY MINUTE MAN STRAP BOLT. ANCHORS SHALL BE FIELD INSTALLED AS PER DRAWINGS STARTING WITH ALL OUTSIDE FRAMES AND ALTERNATE FRAME LINES. THE ANCHOR IS DESIGNED FOR SOILS OF "LOOSE TO MEDIUM DENSE SANDS; FIRM TO STIFF CLAYS AND SILTS; ALLUVIAL FILLS" WITH A BLOW COUNT (ASTMD1586) OF 18-23.

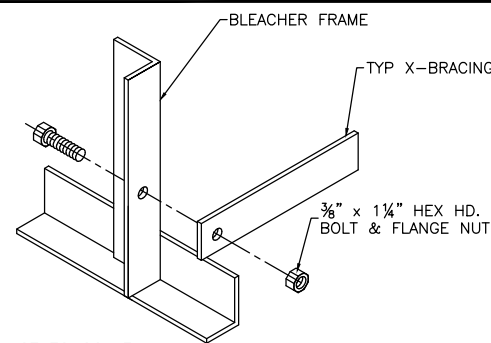
NOTE:  
BOTTOM OF STRAP HEAD TO BE SET AT GROUND LEVEL.  
**SEE DETAIL "B"**

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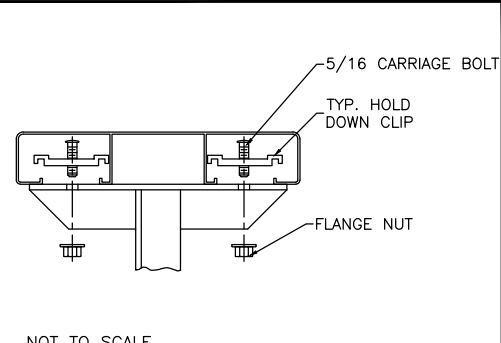
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: JML
DATE: 08/08/2016		
TITLE: ANCHORING PLAN		
BLEACHER MODEL #: NB-0321GSTD	DRAWING NUMBER: AP.2	

⊕ TYP X-BRACE CONN. W/ 1 1/4" BOLT

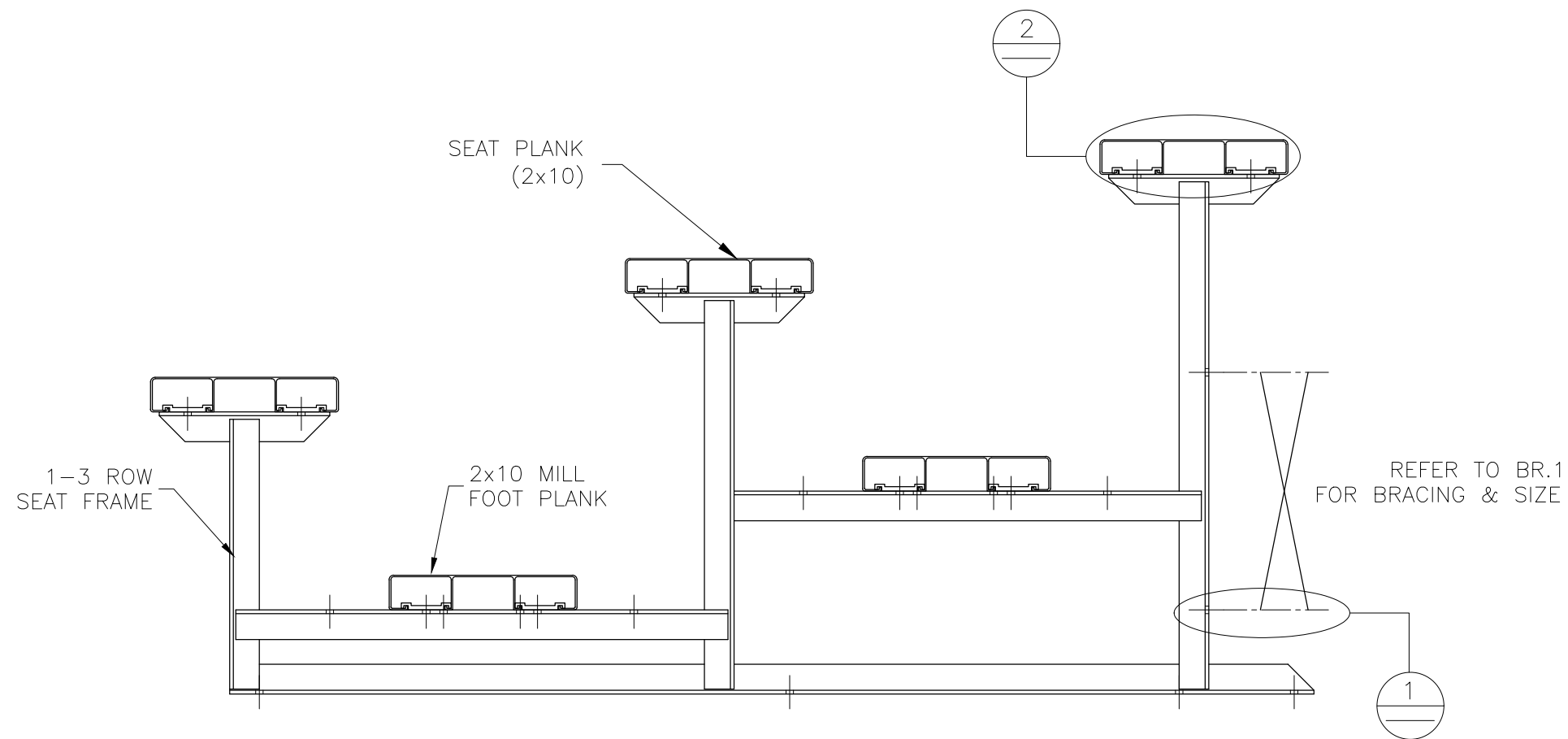


NOT TO SCALE

⊕ TYP 2x10 PLANK ATTACHMENT



NOT TO SCALE



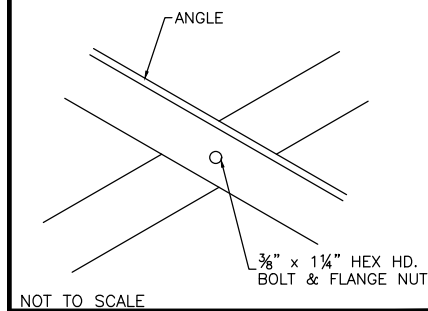
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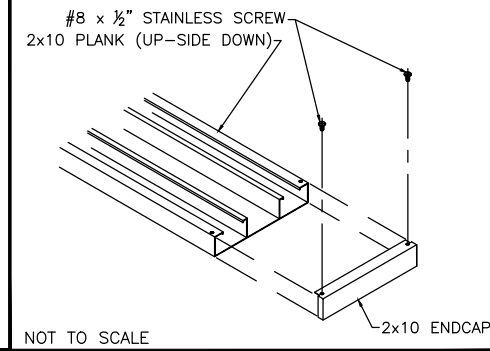
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: JML
DATE: 08/08/2016		
TITLE: BLEACHER ASSEMBLY		
BLEACHER MODEL #: NB-0321GSTD	DRAWING NUMBER: BA.1	

⊕ TYP X-BRACE CONN. W/ 1 1/4" BOLT

⊕ TYP 2x10 ENDCAP ATTACHMENT

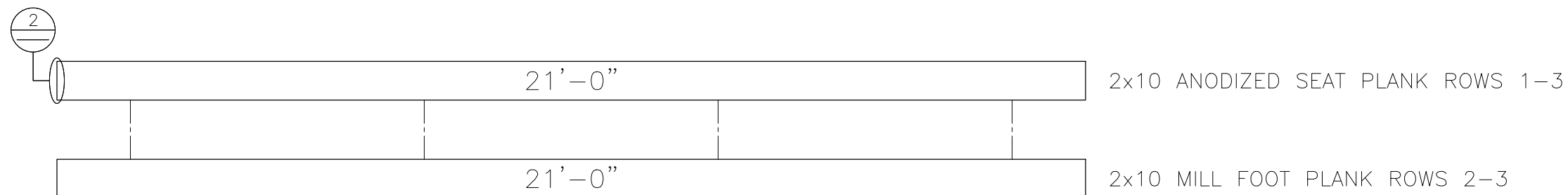


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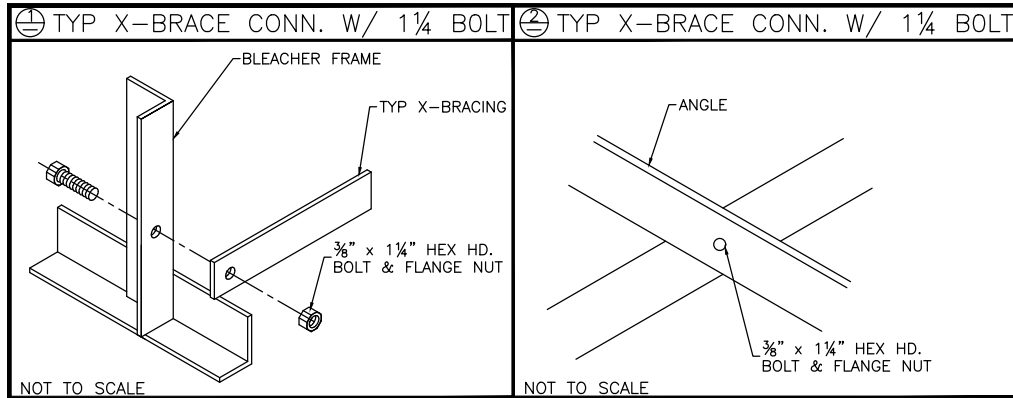
### PLANK PLAN



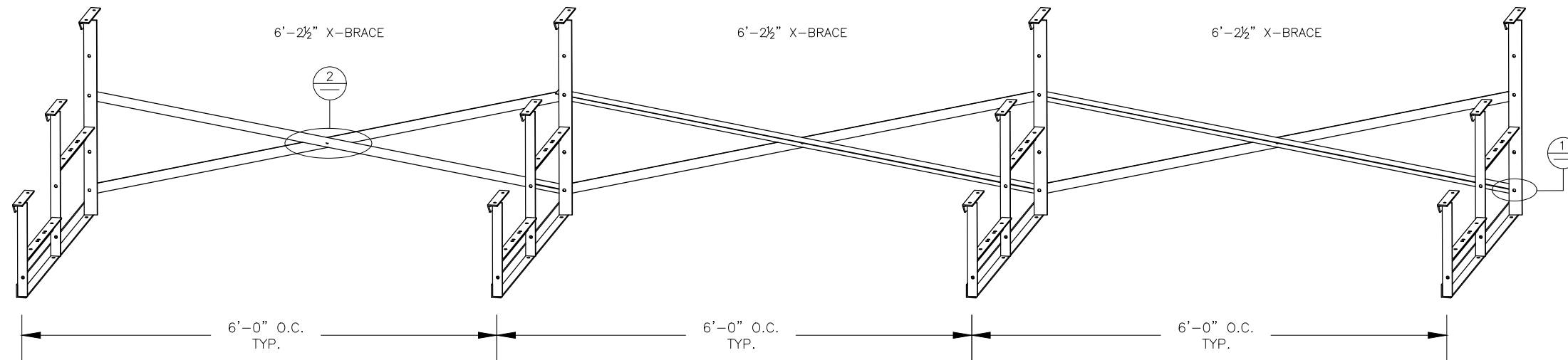
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TITLE: PLANK & FRAMING PLAN		
BLEACHER MODEL #: NB-0321GSTD	DRAWING NUMBER: PF.1	



PRE-ASSEMBLE X-BRACE SETS. EACH SET CONSISTS OF ONE FLAT BAR AND ONE ANGLE. ONCE ASSEMBLED, THEY WILL BECOME AN "X". THEY BOLT TOGETHER WITH A 3/8" X 1 1/4" HEX HEAD BOLT AND FLANGE NUT THRU THE CENTER HOLE. (SEE DETAIL 2)



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SCALE: N.T.S.	APPROVED BY:	DRAWN BY: JML		
DATE: 08/08/2016				
TITLE: BRACING PLAN				
BLEACHER MODEL #: NB-0321GSTD				DRAWING NUMBER: BR.1