

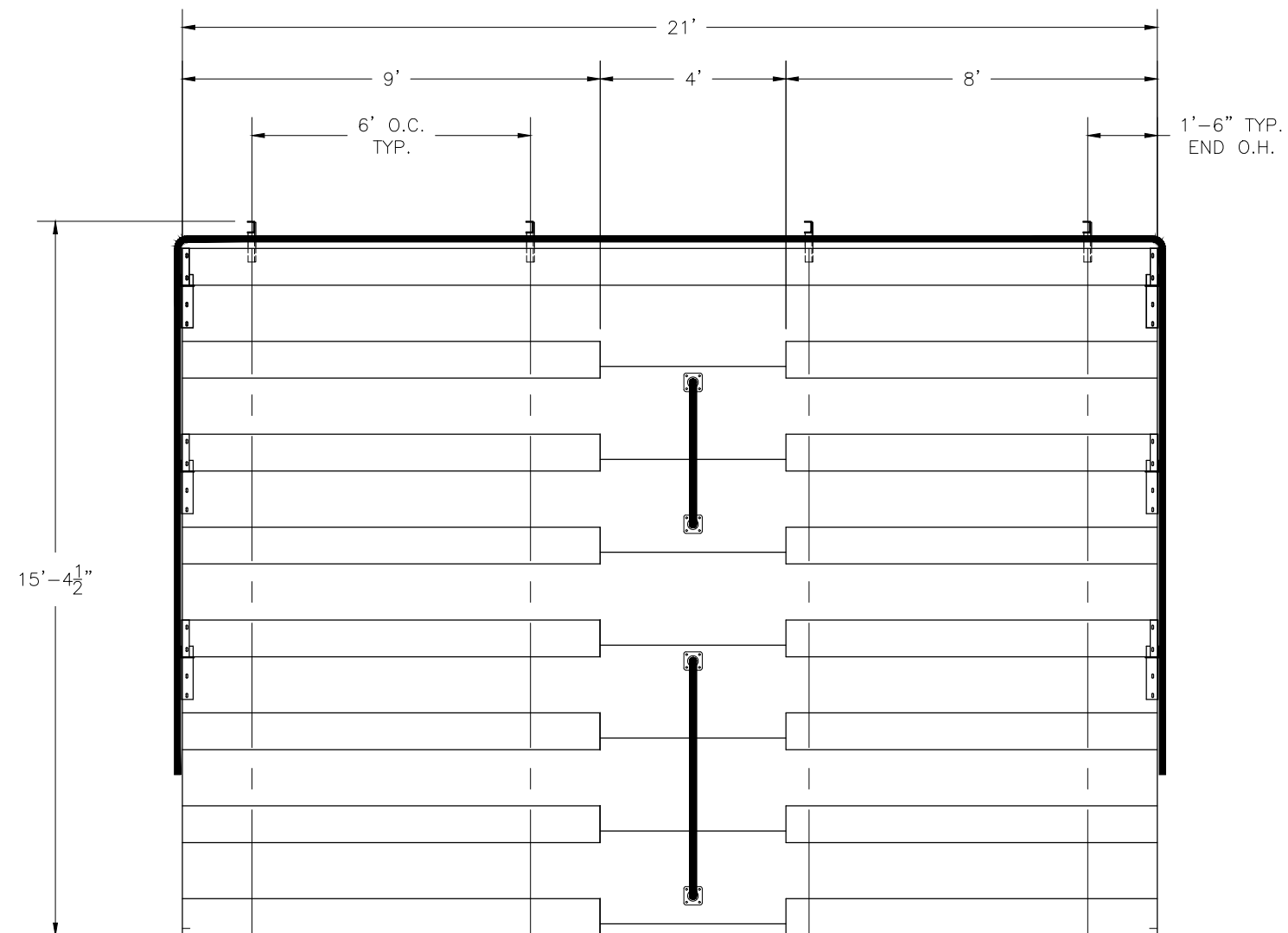
NA-0821DLX_CL

NON ELEVATED 8 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 FRAMING & CLIP PRE-ASSEMBLY
BA.2	- BLEACHER BRACING LOCATION PLAN
BA.3	- BLEACHER ASSEMBLY
AP.1	- ANCHORING PLAN
PF.1	- PLANK & FRAMING PLAN
VA.1	- VERTICAL AISLE ASSEMBLY
GR.1	- GUARDRAIL ASSEMBLY



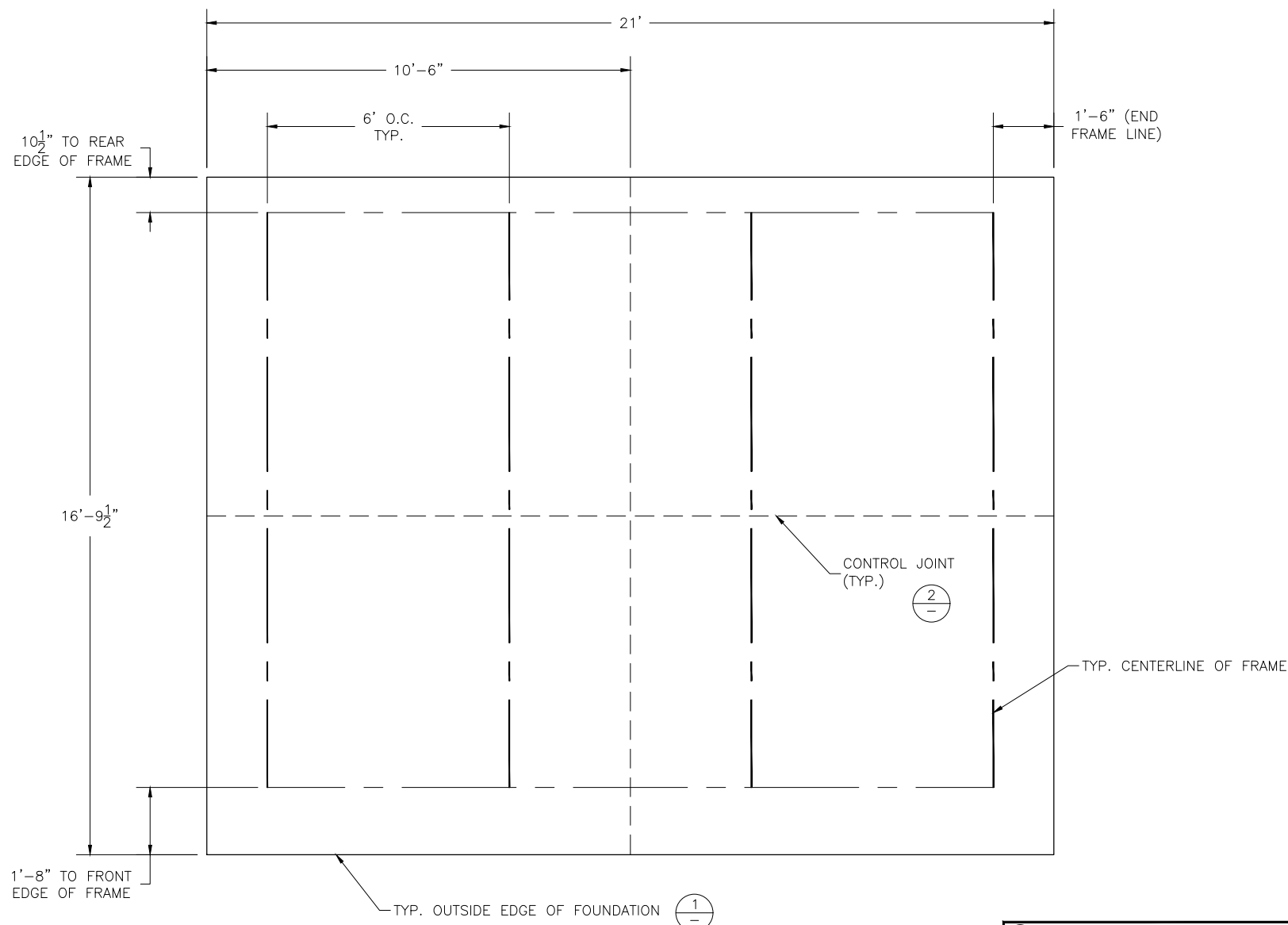
SECTION LENGTH	GROSS SEATS	ACTUAL SEATS	NO. OF ROWS	NET SEATS
21	14.00	14.00	1	14
9	6.00	6.00	7	42
8	5.33	5.00	7	35
NET SEATS				91
WHEELCHAIR SPACES				0
TOTAL NET SEATING CAPACITY (BASED ON 18" PER SEAT)				91

This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

National Recreation Systems, Inc.
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825

SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW X 21'-0" BLEACHER SEATING PLAN		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: TD.1	

LOCATE FRAMES ON FOUNDATION



CONCRETE FOUNDATION SPECIFICATIONS

SCOPE:

Foundation construction is not part of NATIONAL RECREATION SYSTEMS, INC's., scope of work unless noted otherwise in the contract documents. The OWNER shall review the foundation design with local code authorities and coordinate with NRS, Inc.

FOUNDATION DESIGN & ANCHORS:

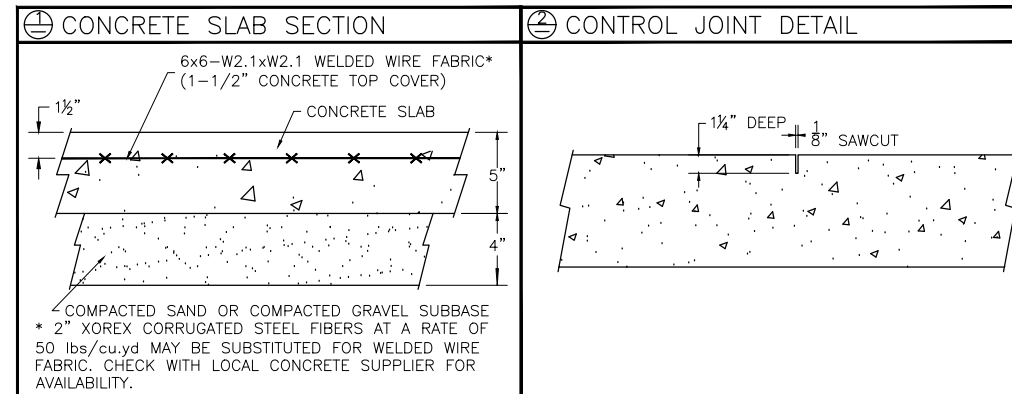
- 1) The foundation designs are based on the following:
 - a) Minimum presumed soil bearing of 1000 psf.
 - b) Bleacher frame dead and live load of 700 lbs./ft.
 - c) Bleacher frame wind uplift of 250 lbs./ft.
- 2) Unless otherwise specified on the drawings the bleacher frames shall be attached to concrete with a 3/8" dia. x 3" wedge type expansion anchor. 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 be air-entrained using an air entraining admixtruing meeting *ASTM C620*. Total air content: 5%-7% per *ASTM C173*.
- 3) All concrete shall have a minimum 28-day strength of Fc=3000psi. Concrete shall have air-entrainment
- 4) A 1/4" bituminous expansion joint material shall be placed between strip and slab foundations when adjacent to each other.
- 5) The depressions in the top of the foundations between high spots shall not exceed 3/16" below 10-foot long straightedge. The 10-foot straightedge method used to measure foundation flatness shall be in accordance with *ACI 302.1R-04 "Guide for Concrete Floor and Slab Construction"*.

CONCRETE SLAB RECOMMENDED SPECIFICATIONS:

- 1) Concrete slab shall have a minimum thickness of 5" (some areas may require 6") and placed on 4" of compacted gravel or compacted 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, steel fiber substitution requires OWNER approval and his understanding of potential maintenance issues.
- 3) Contractor may substitute blended fiber reinforcing, provided the blend consists of multifilament polypropylene fibers and cold drawn steel wire fibers. Novamesh 950 or approved equivalent, applied at a dosage rate of 5lb/CY unless specified otherwise or a different recommendation is made by the manufacturer.
- 4) Crack control joints shall be sawed into slab to form approximate square patterns. The maximum spacing for control joints shall not exceed 13'-6", UNLESS INDICATED OTHERWISE. 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.
- 5) 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".

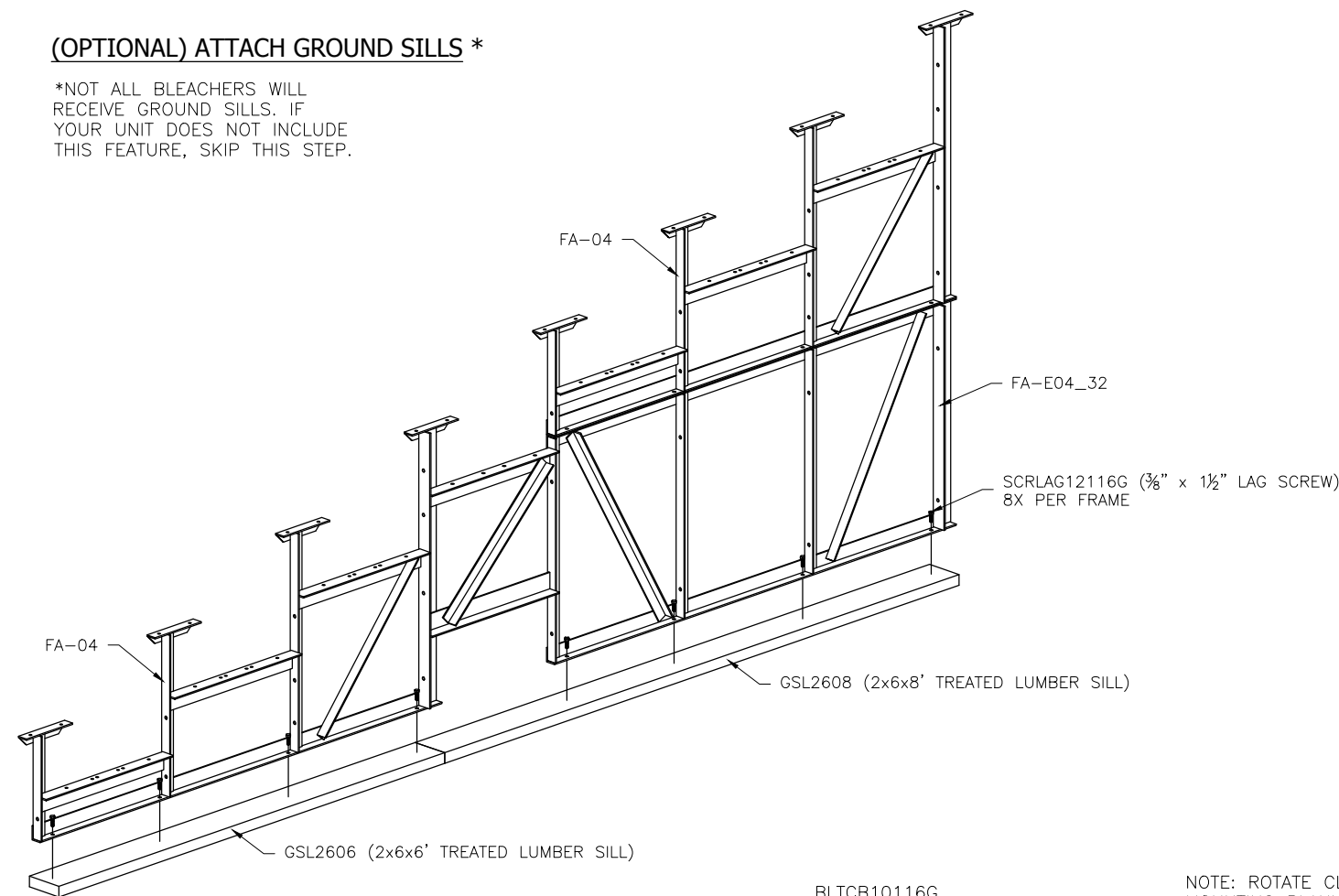


This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

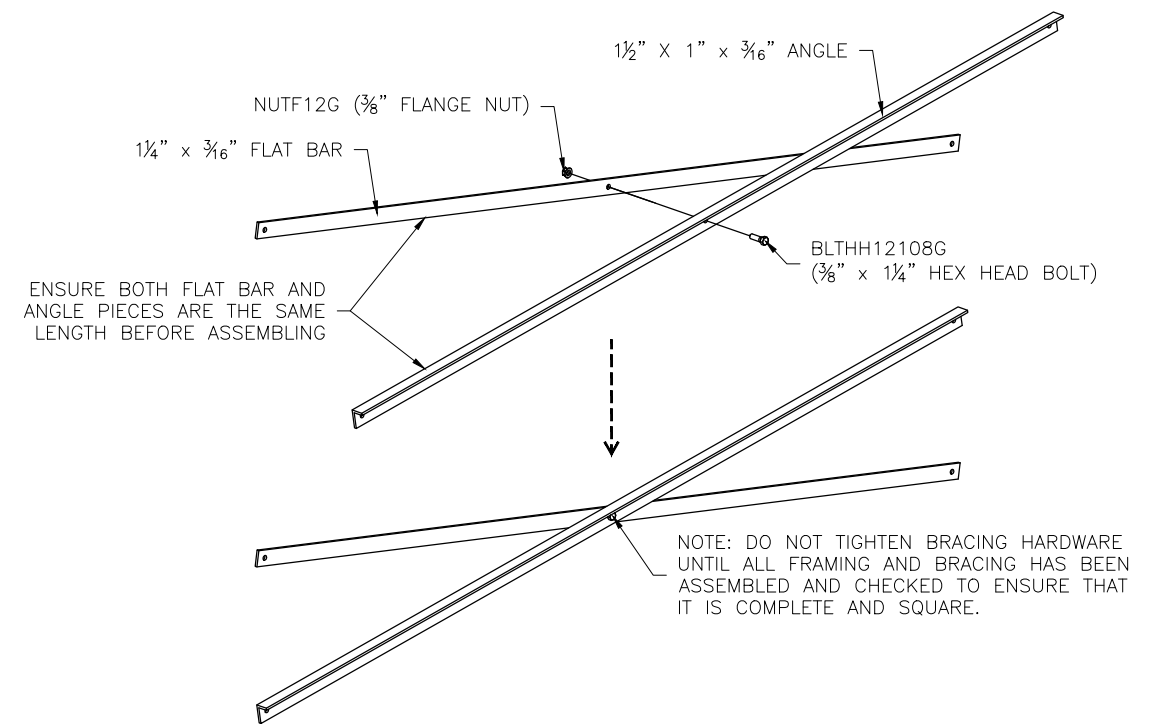
National Recreation Systems, Inc.		
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825		
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW 21'-0" FOUNDATION PLAN		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: FP.1	

(OPTIONAL) ATTACH GROUND SILLS *

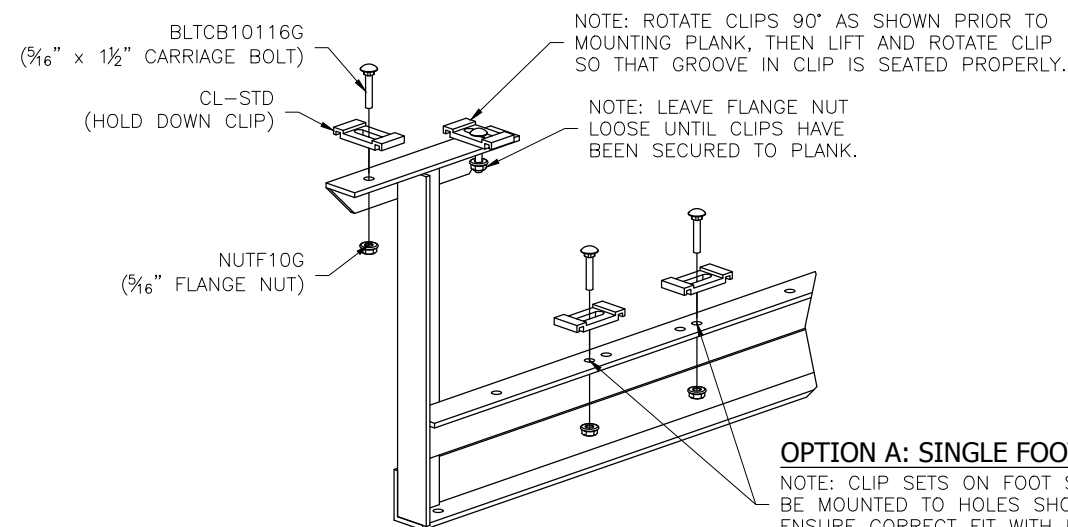
*NOT ALL BLEACHERS WILL RECEIVE GROUND SILLS. IF YOUR UNIT DOES NOT INCLUDE THIS FEATURE, SKIP THIS STEP.



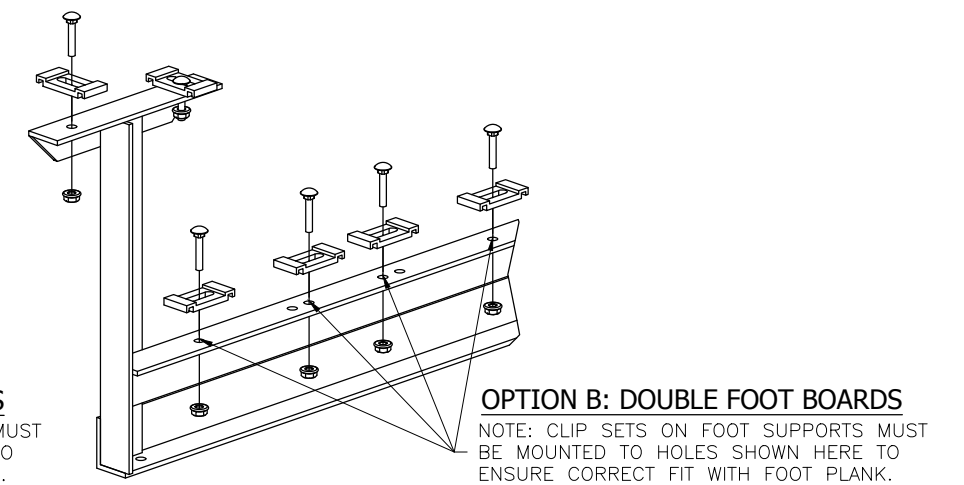
PRE-ASSEMBLE X-BRACE PAIR(S)



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.

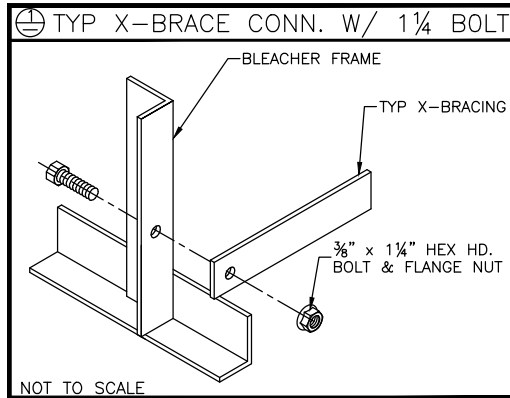


OPTION B: DOUBLE FOOT BOARDS
NOTE: CLIP SETS ON FOOT SUPPORTS MUST BE MOUNTED TO HOLES SHOWN HERE TO ENSURE CORRECT FIT WITH FOOT PLANK.

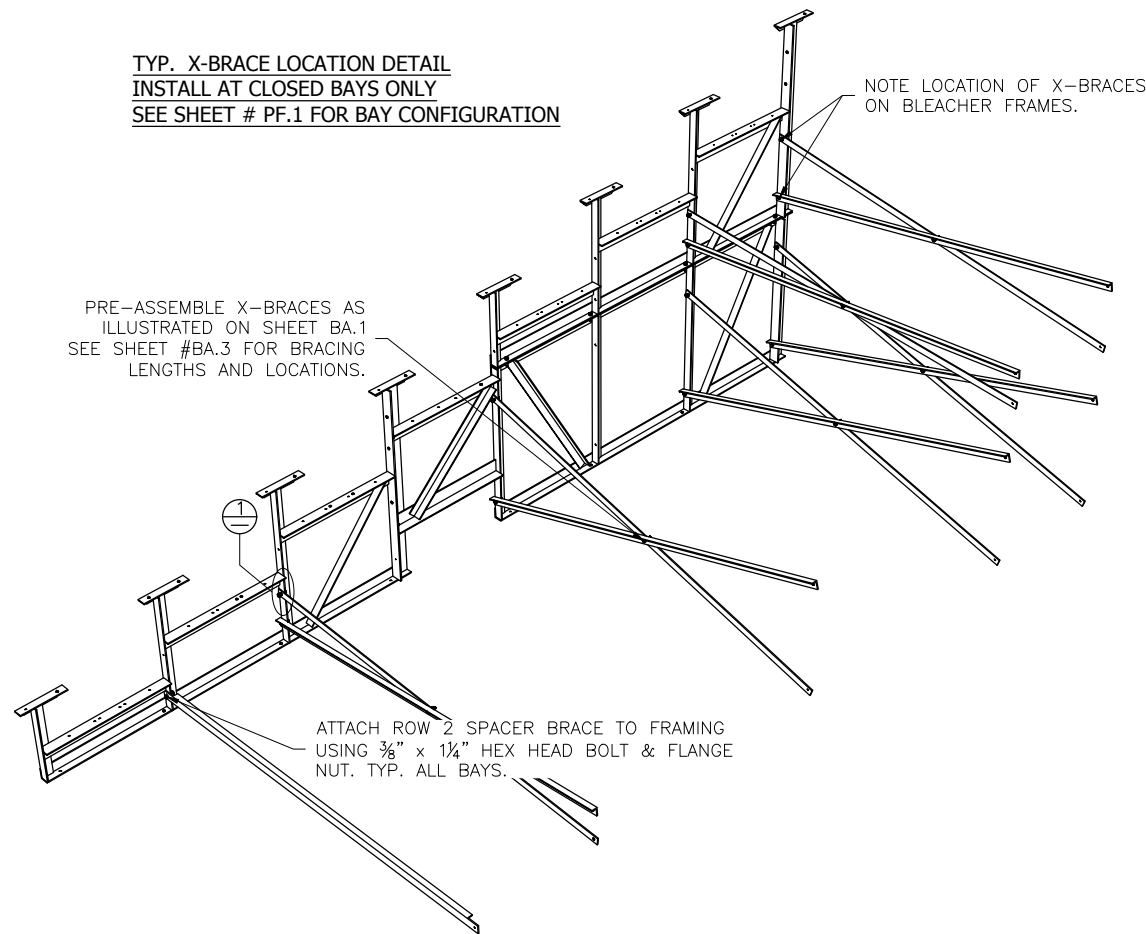
This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

National Recreation Systems, Inc.
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825

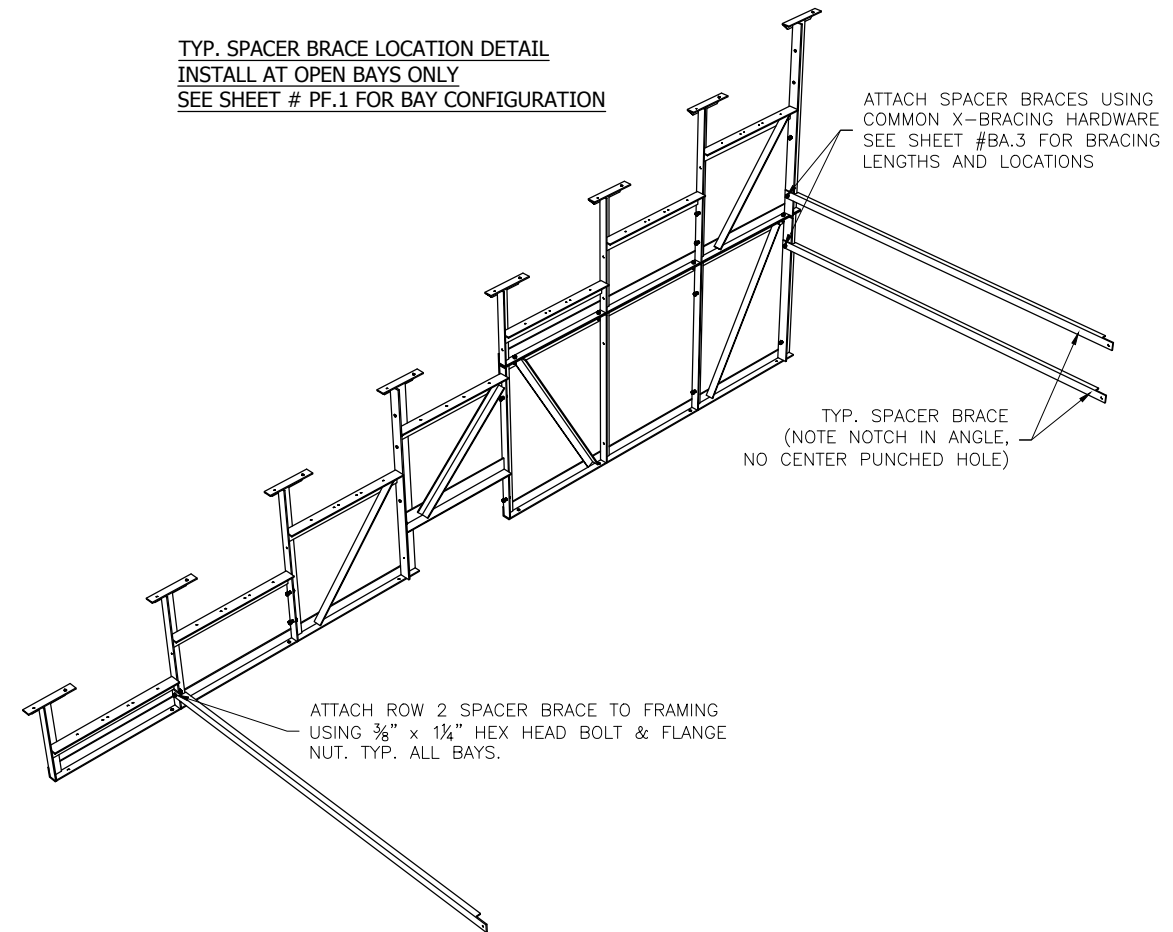
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW X 21'-0" FRAMING & CLIP SET PREPARATION		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: BA.1	



TYP. X-BRACE LOCATION DETAIL
INSTALL AT CLOSED BAYS ONLY
SEE SHEET # PF.1 FOR BAY CONFIGURATION



TYP. SPACER BRACE LOCATION DETAIL
INSTALL AT OPEN BAYS ONLY
SEE SHEET # PF.1 FOR BAY CONFIGURATION



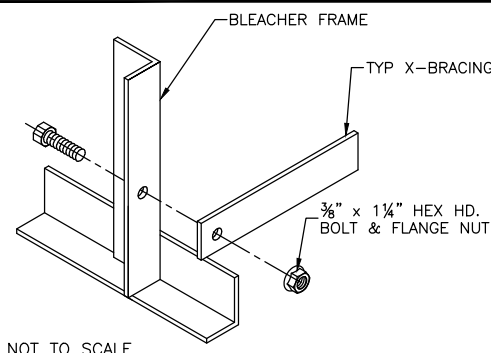
This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

National Recreation Systems, Inc.

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

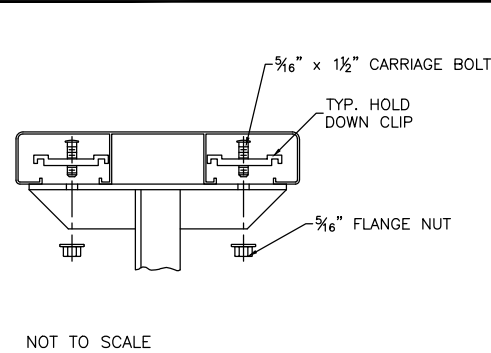
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW X 21'-0" BLEACHER BRACING LOCATION		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: BA.2	

⊕ TYP X-BRACE CONN. W/ 1/4 BOLT



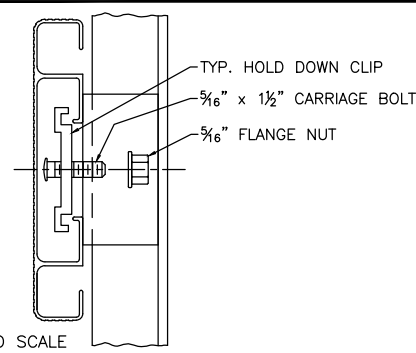
NOT TO SCALE

⊕ TYP 2x10 PLANK ATTACHMENT

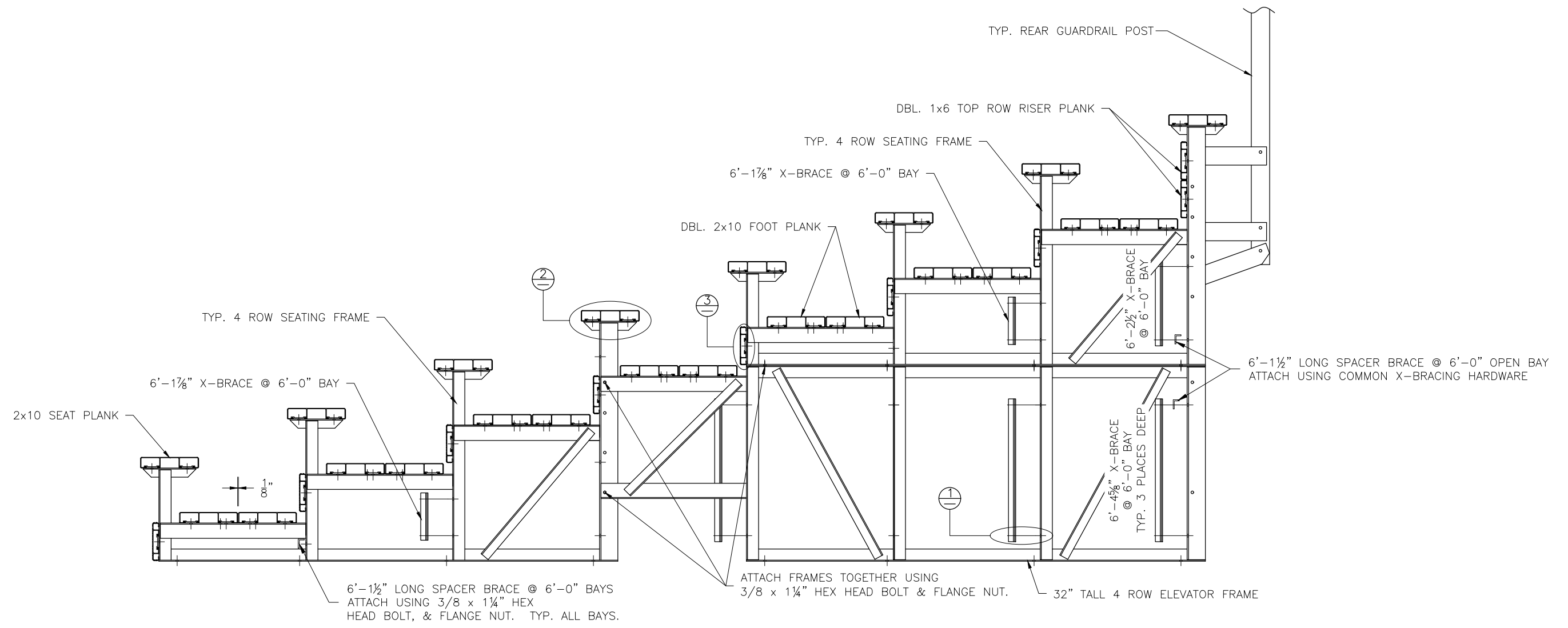


NOT TO SCALE

⊕ TYP 1x6 PLANK ATTACHMENT

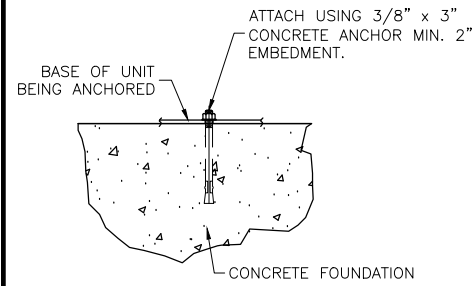


NOT TO SCALE

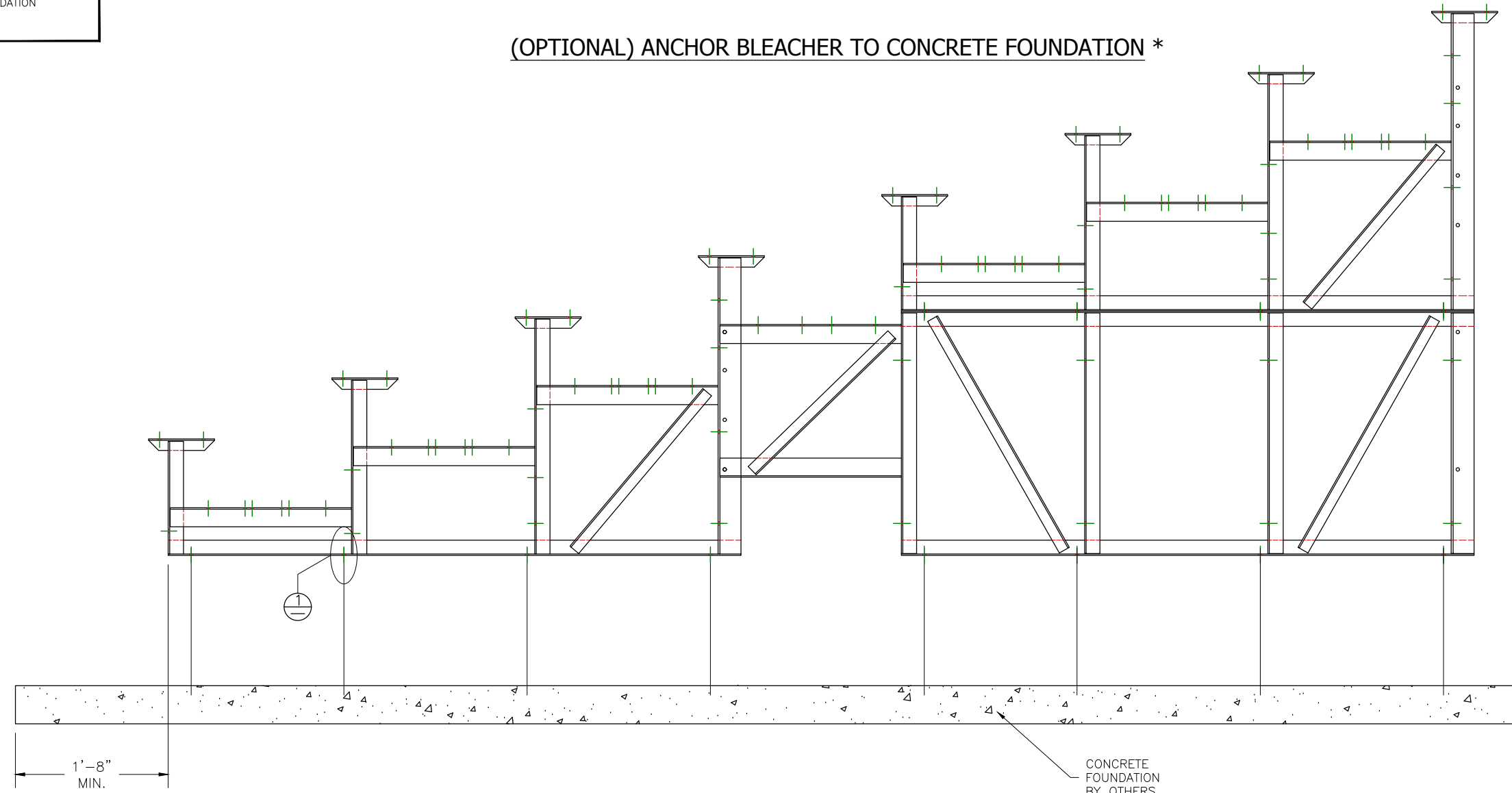


This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.		
National Recreation Systems, Inc. 1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825		
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW X 21'-0" BLEACHER ASSEMBLY		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: BA.3	

⊕ WEDGE ANCHOR DETAIL - 3"



(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.

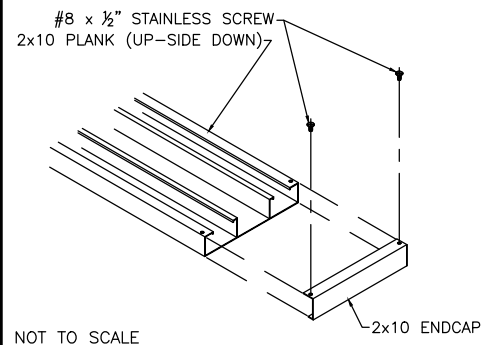
This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

National Recreation Systems, Inc.

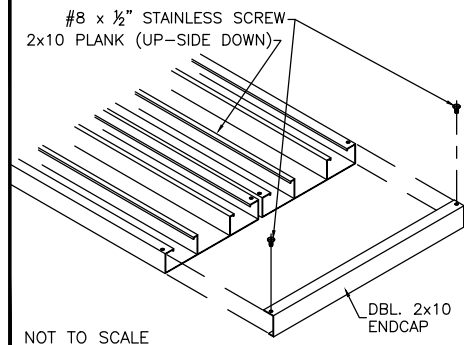
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825

SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW X 21'-0" ANCHORING PLAN		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: AP.1	

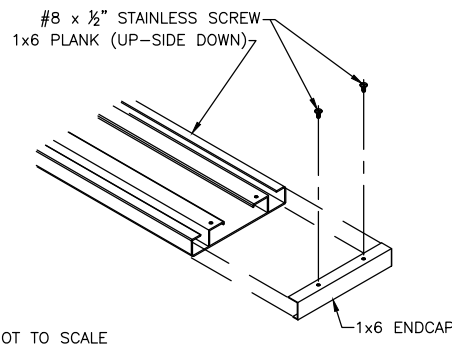
⊕ TYP 2x10 ENDCAP ATTACHMENT



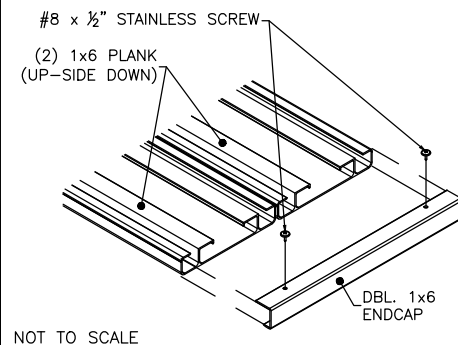
⊖ DBL. 2x10 ENDCAP ATTACHMENT



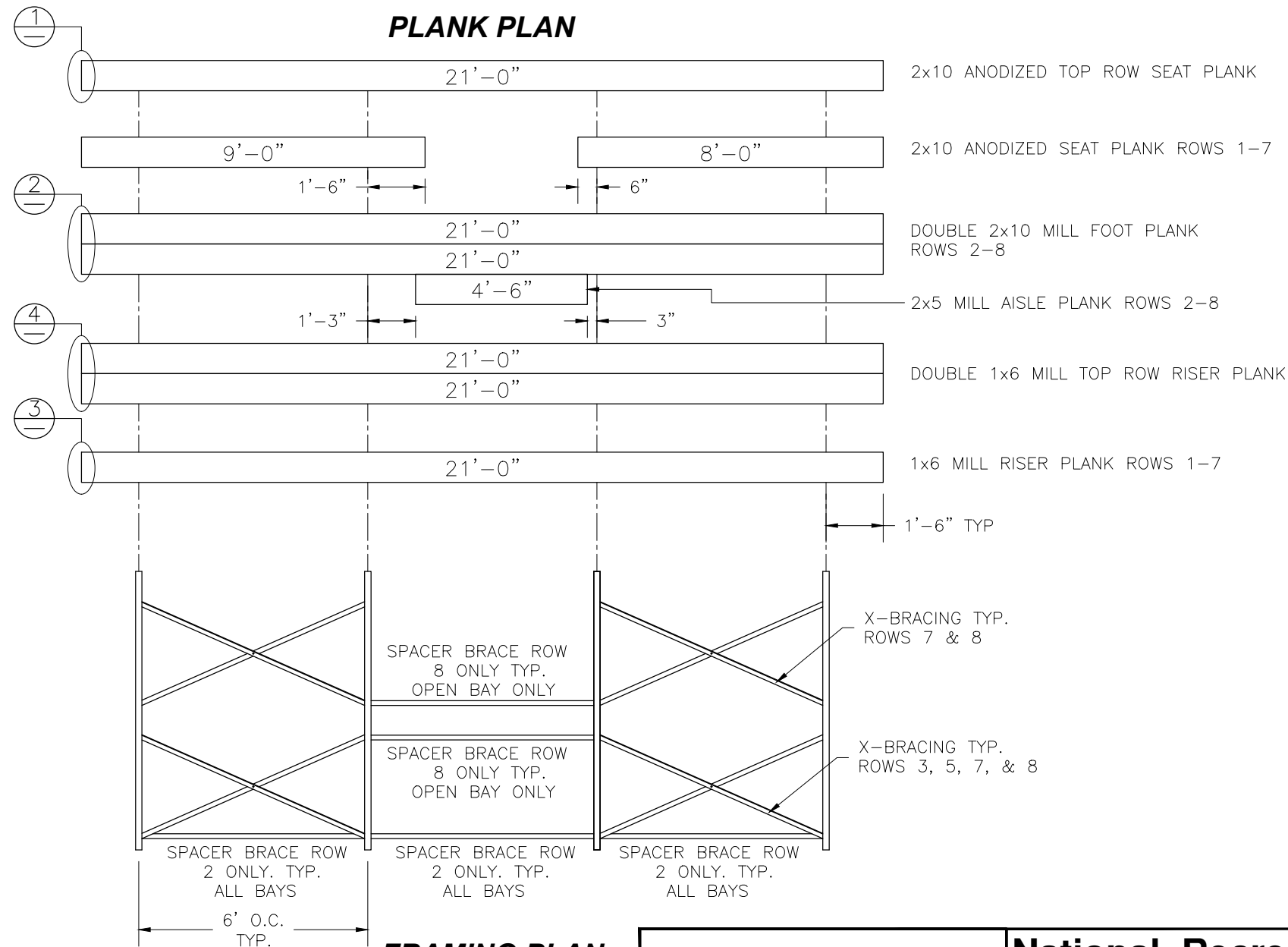
⊕ TYP 1x6 ENDCAP ATTACHMENT



⊖ DBL. 1x6 ENDCAP ATTACHMENT



PLANK PLAN

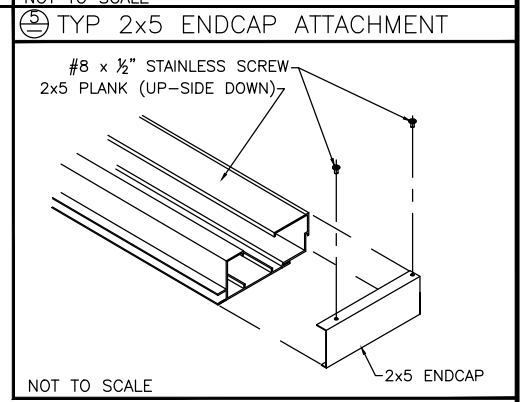
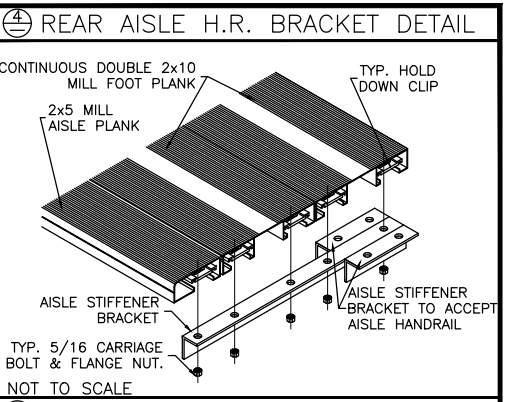
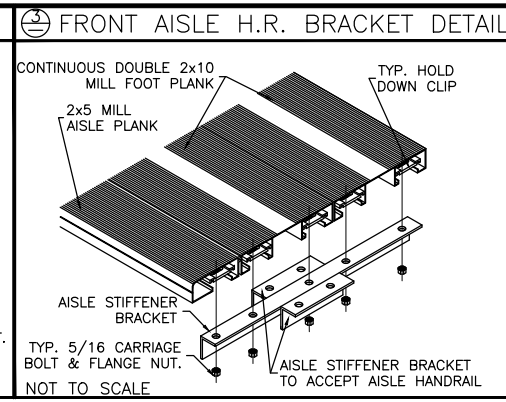
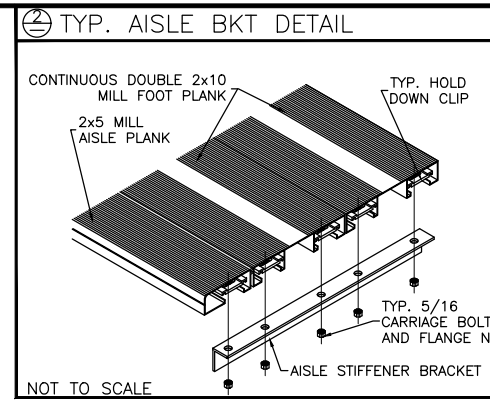
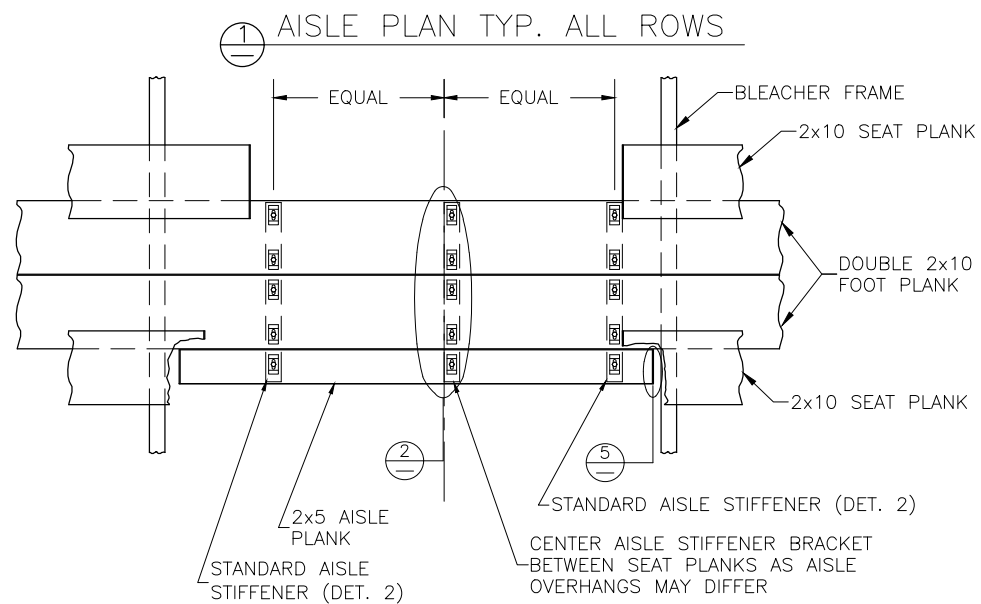


FRAMING PLAN

This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

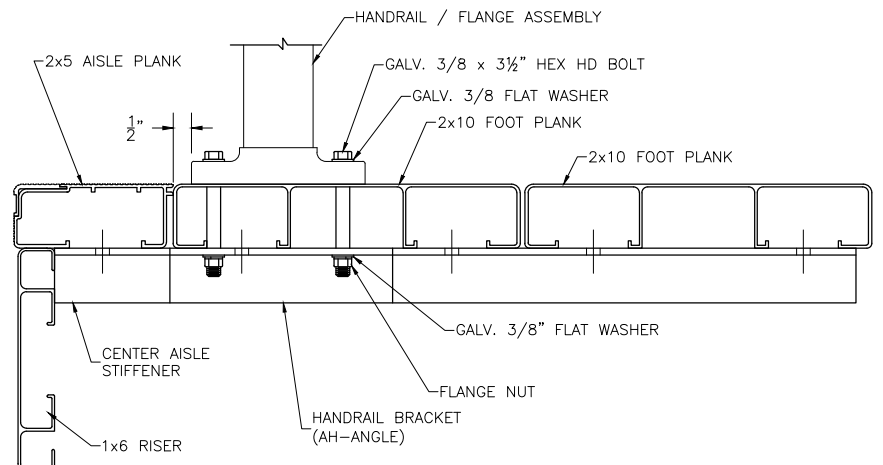
National Recreation Systems, Inc.
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825

SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW 21'-0" PLANK & FRAMING PLAN		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: PF.1	



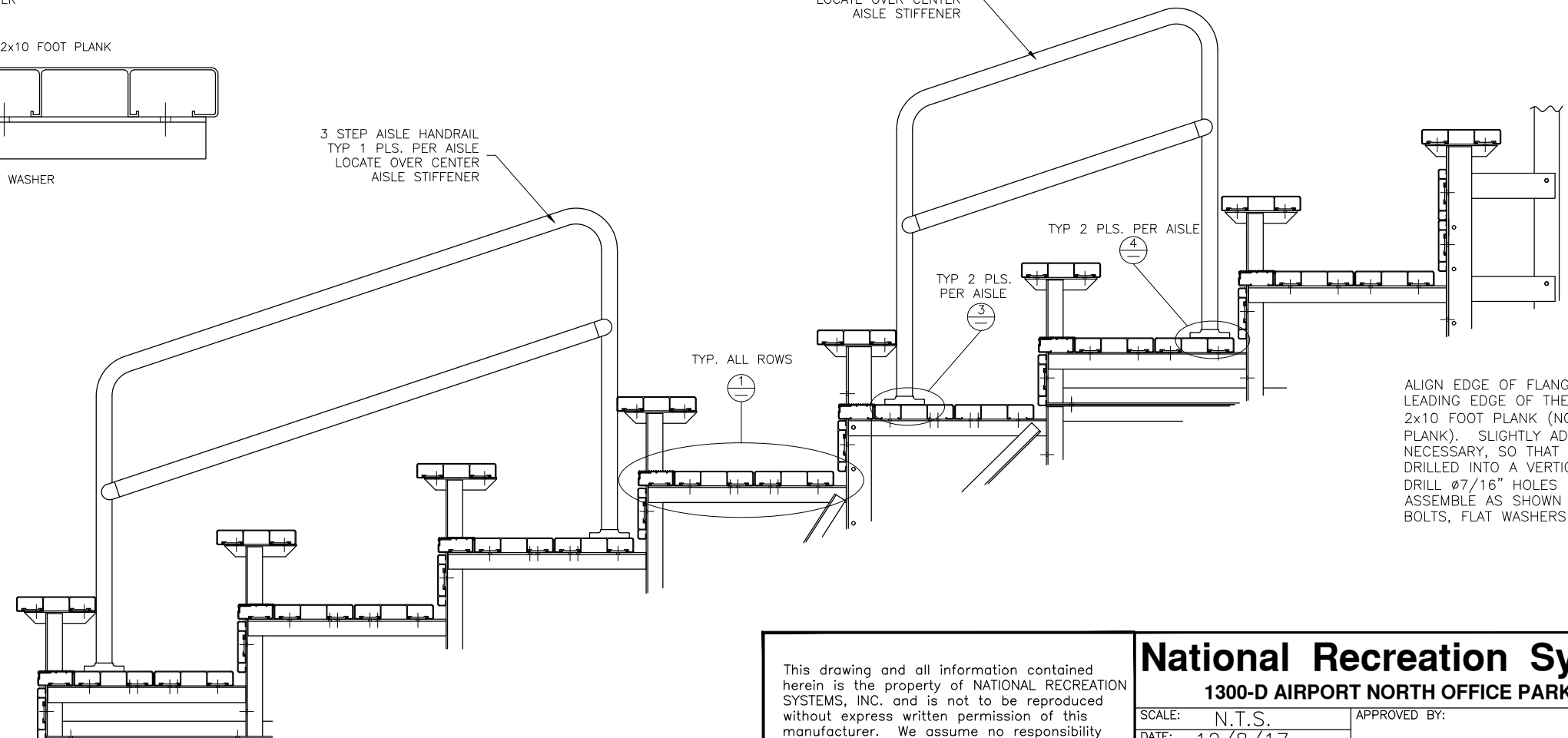
DETAIL A

FRONT HANDRAIL ASSEMBLY SHOWN
LOCATE OVER REAR FOOT PLANK FOR REAR ASSEMBLY



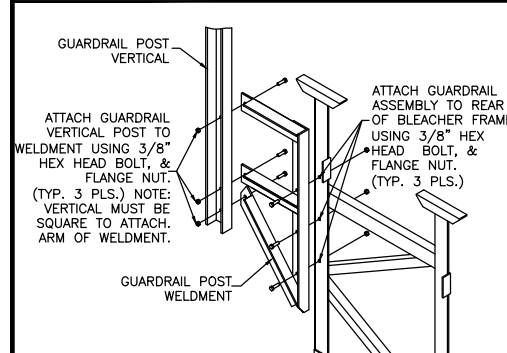
3 STEP AISLE HANDRAIL
TYP 1 PLS. PER AISLE
LOCATE OVER CENTER
AISLE STIFFENER

2 STEP AISLE HANDRAIL
TYP 1 PLS. PER AISLE
LOCATE OVER CENTER
AISLE STIFFENER

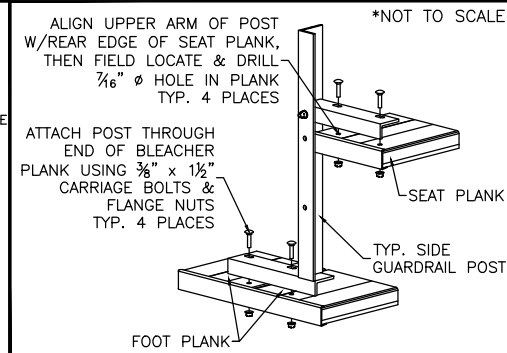


<p>This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.</p>		
<p>National Recreation Systems, Inc. 1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825</p>		
SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW VERTICAL AISLE ASSEMBLY		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: VA.1	

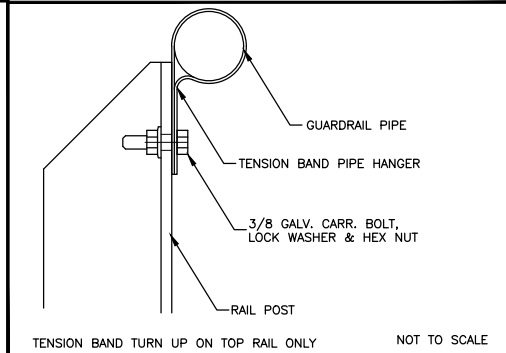
1 REAR GUARDRAIL POST ATTACH.



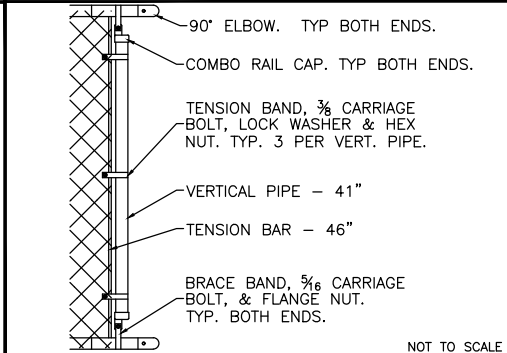
2 SIDE GD. RAIL POST INSTALLATION



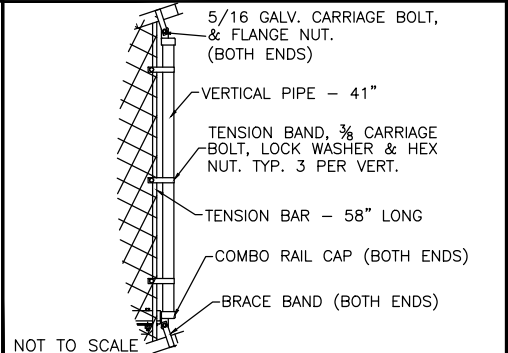
3 TENSION BAND ATTACHMENT



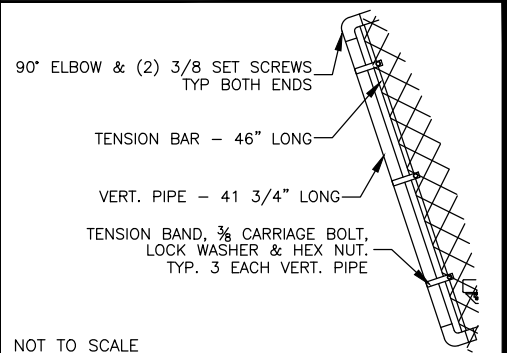
4 VERT. PIPE DETAIL-REAR, TOP



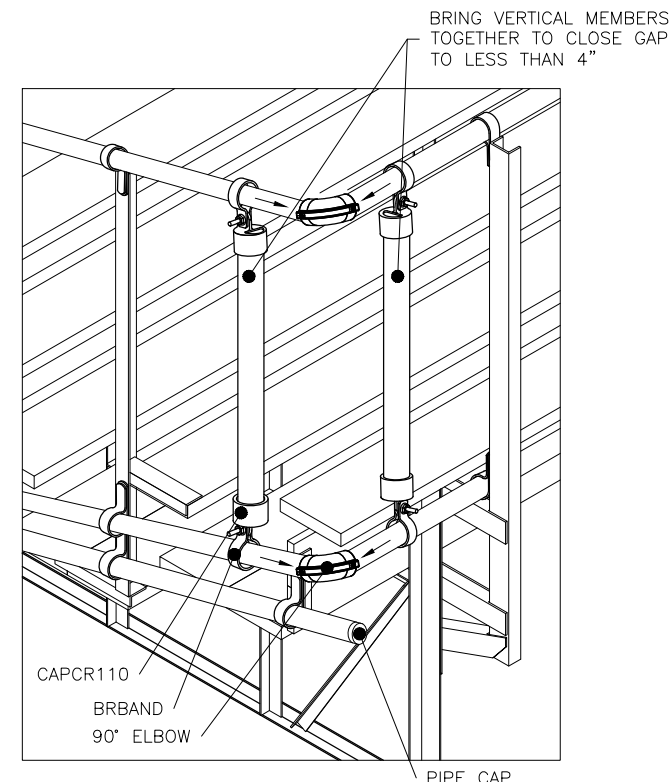
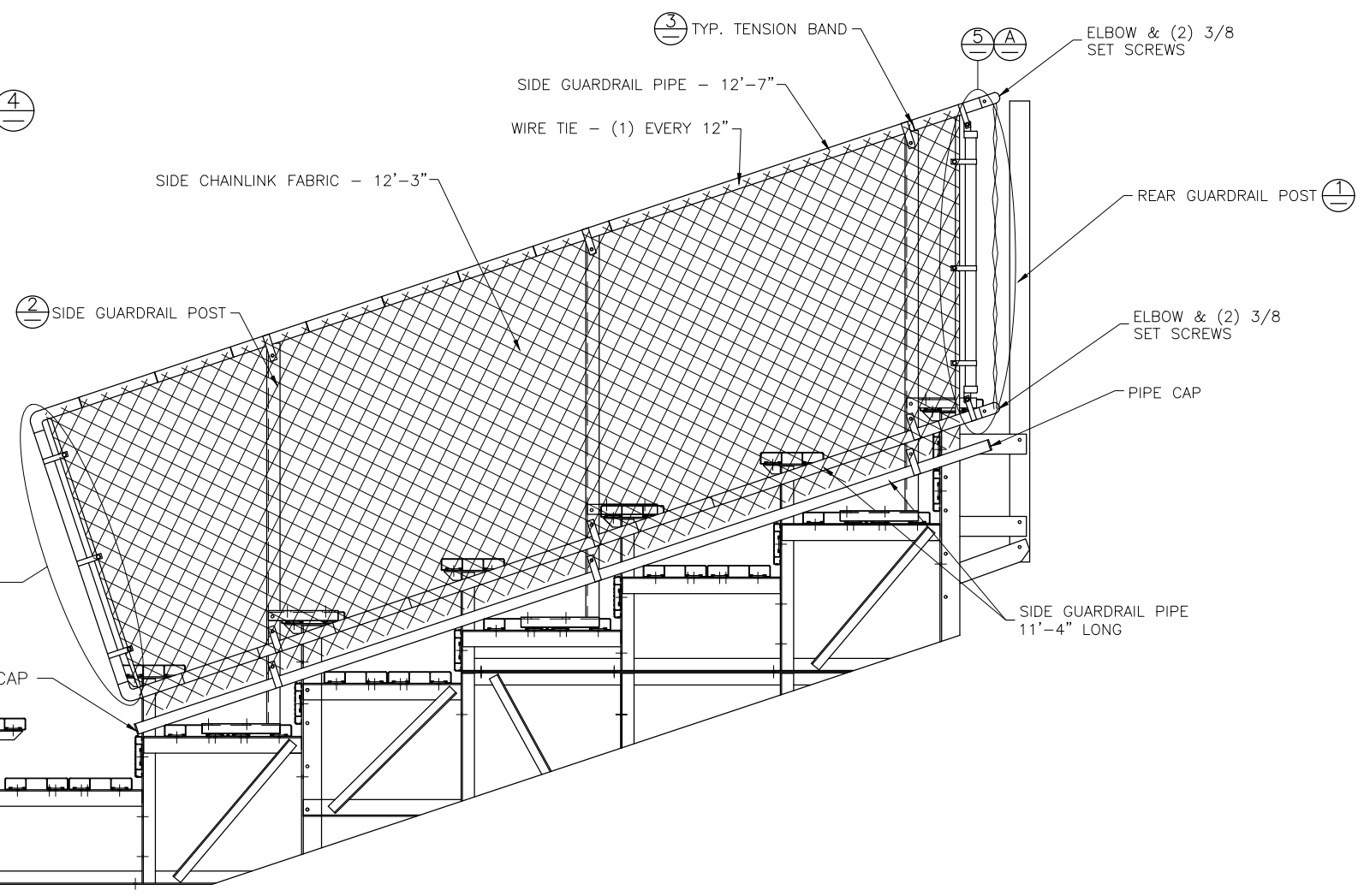
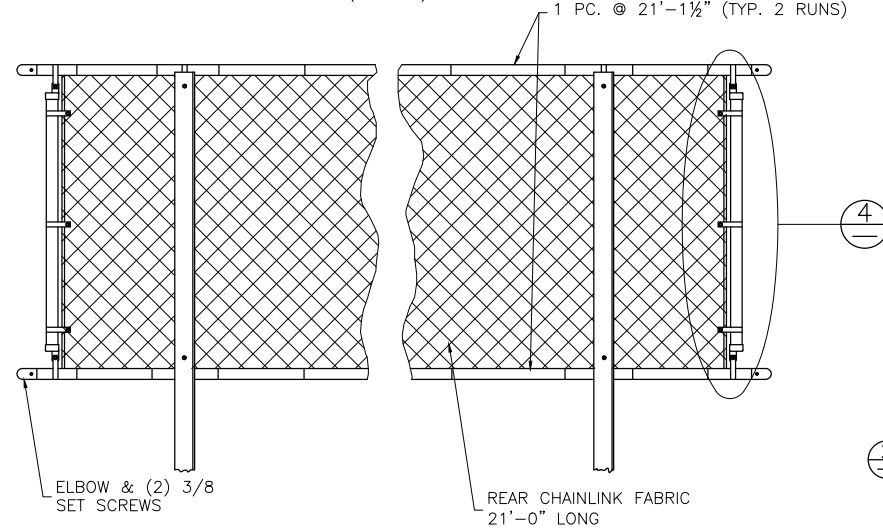
5 VERT. PIPE DETAIL (SIDE, TOP)



6 VERT. PIPE DETAIL (NE-SIDE, BOT.)



REAR GUARDRAIL (REAR VIEW)



DETAIL "A" - REAR CORNER GUARDRAIL ASSEMBLY

This drawing and all information contained herein is the property of NATIONAL RECREATION SYSTEMS, INC. and is not to be reproduced without express written permission of this manufacturer. We assume no responsibility for unauthorized use of this drawing. National Recreation Systems, Inc. is not responsible for local permits and occupancy requirements.

National Recreation Systems, Inc.
1300-D AIRPORT NORTH OFFICE PARK FORT WAYNE, IN 46825

SCALE: N.T.S.	APPROVED BY:	DRAWN BY: IMP
DATE: 12/8/17		
TITLE: 8 ROW X 21'-0" GUARD RAIL ASSEMBLY		
BLEACHER MODEL #: NA-0821DLX_CL	DRAWING NUMBER: GR.1	