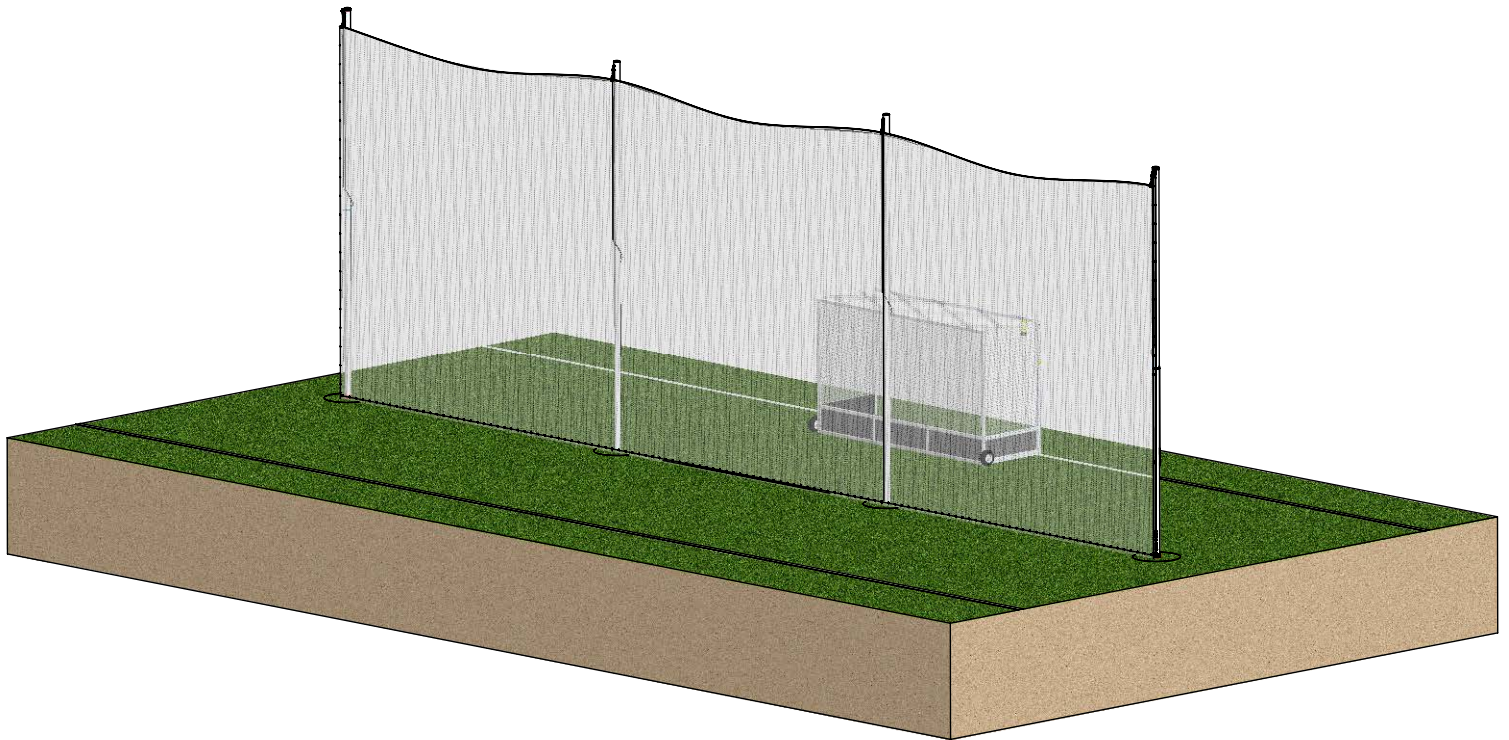
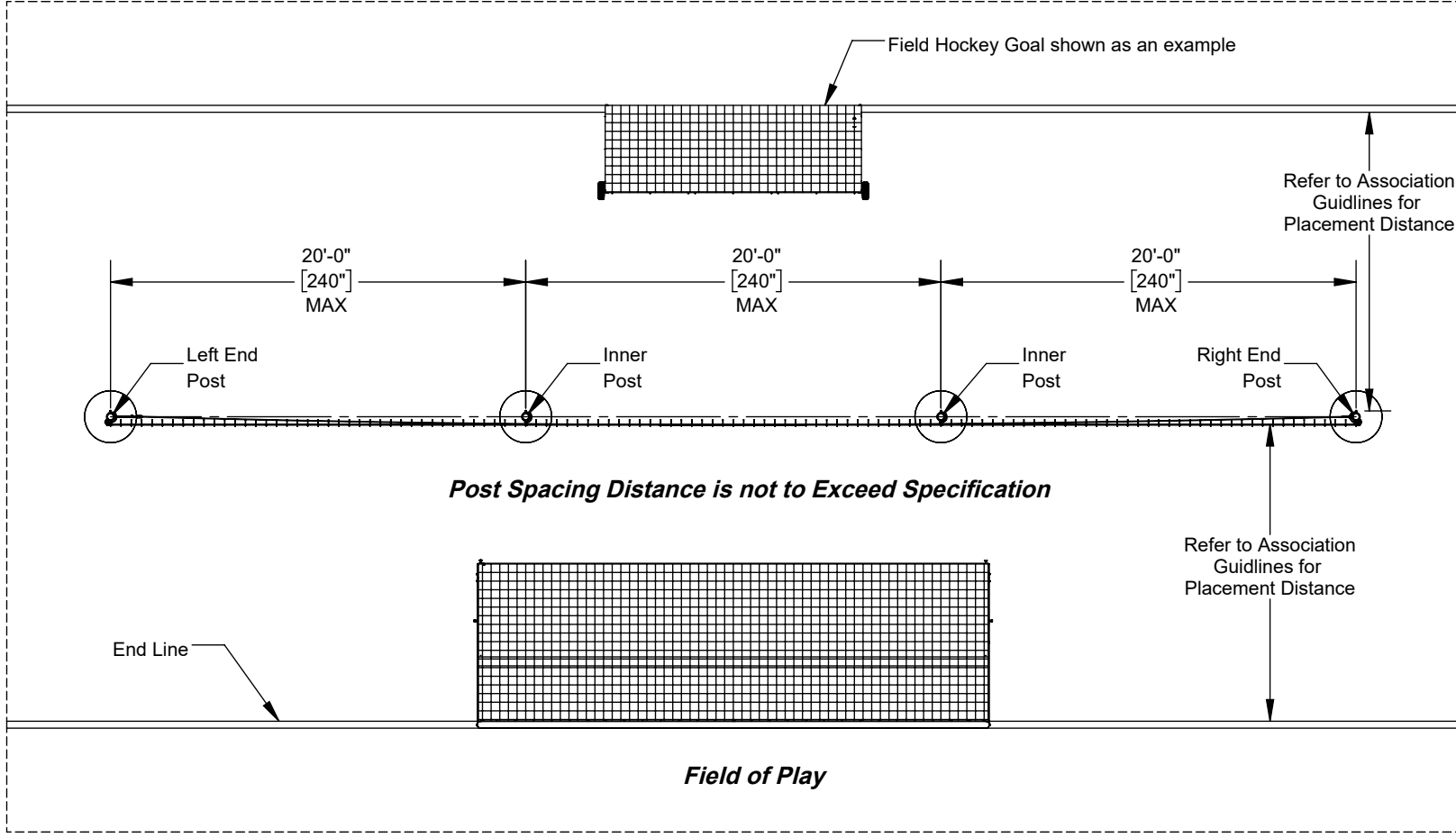


MBS-20
20' High Multi-Sport BallStopper System
Specification



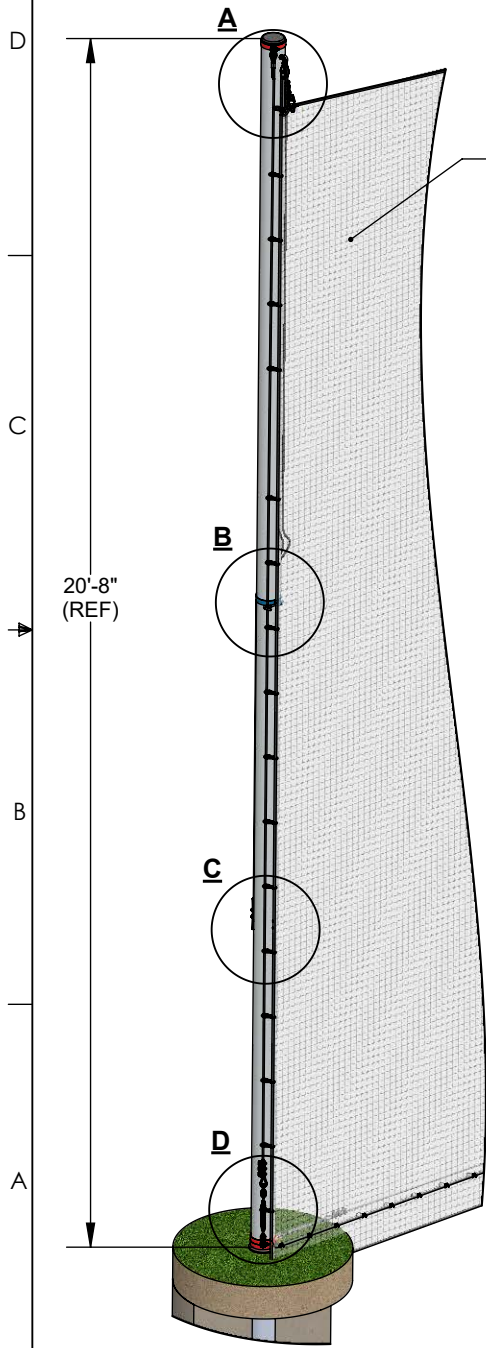
MBS-20 Specifications



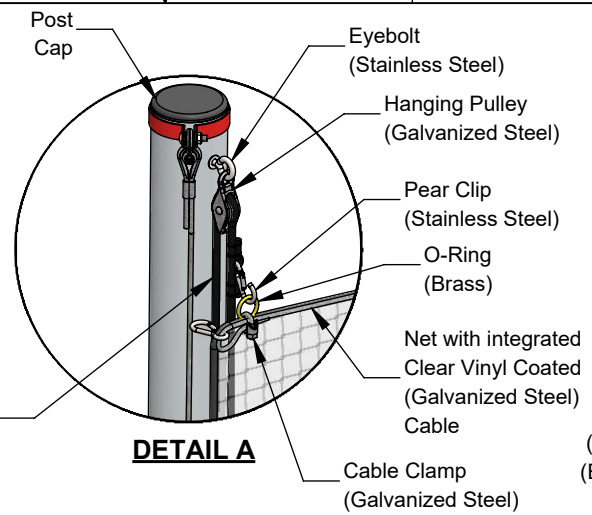
Aluminum Athletic Equipment
 1000 Enterprise Drive, Royersford, PA 19468
 Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

DESCRIPTION:		
Concrete Footing Placement Specification		
NOTE:		
20' HIGH BALLSTOPPER SYSTEM		
MODEL:	CATEGORY:	DATE:
MBS-20	CUSTOMER	9/29/2021
DWN. BY:	CAD FILE:	DWG. NO.:
NR	MBS-20 Specifications	MBS-20-C-002

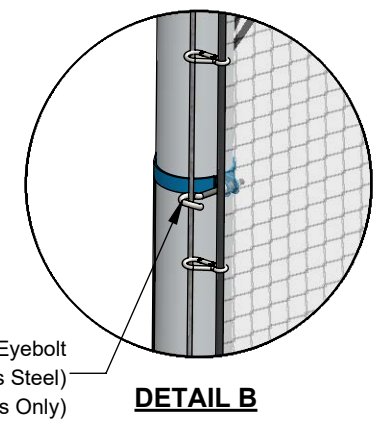
MBS-20 Upright Specification



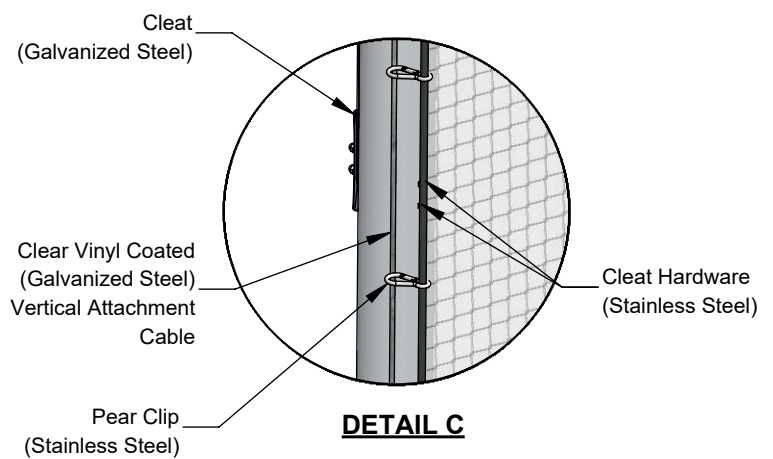
Net
(height varies depending on system height and attachment method)



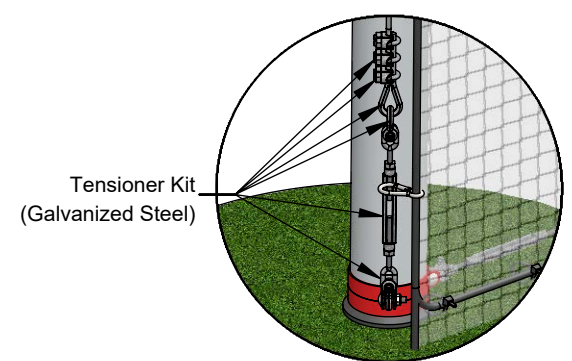
DETAIL A



DETAIL B



DETAIL C



DETAIL D

MBS-20 Specifications

Post (Aluminum):

- $\phi 4''$ x .226" wall aluminum tube (Mill Aluminum 6061T6)
- 24'-0" Overall Length (20'-8" out of ground sleeve)
- Weight = 76lbs./ea.
- All Hardware is RUSTPROOF

Netting:

- Net: #AAE N420, 1-1/2" Sq. Knottless Nylon, FR, DBB, length to vary, 1/4" MFP Rope Border, UV protected and 1/4" cable hog tied to top of net

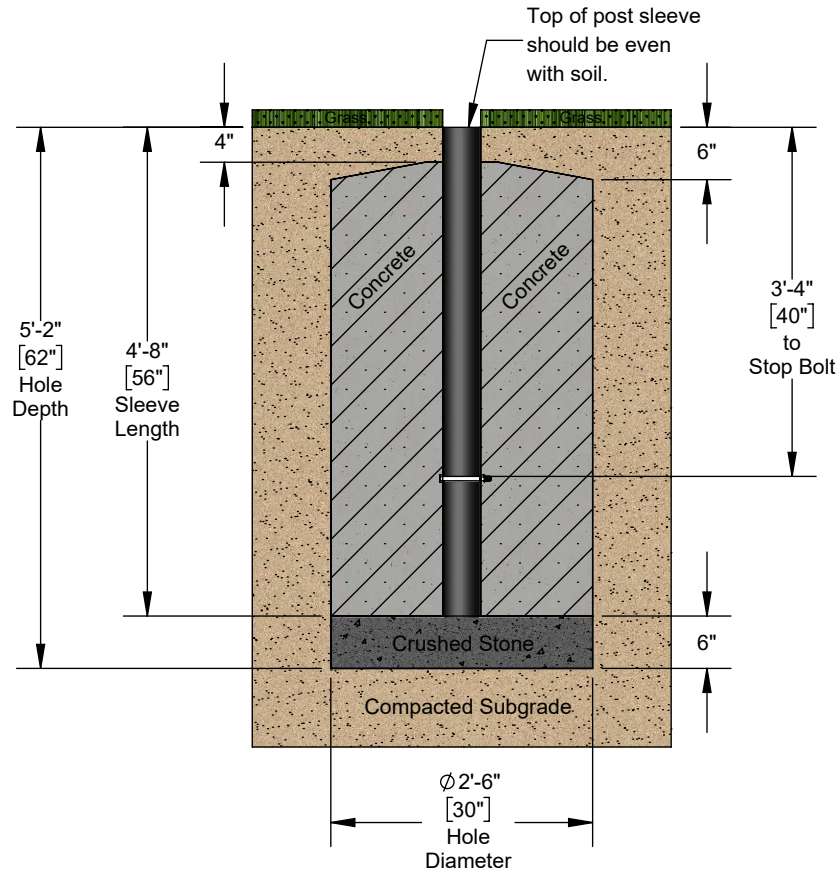


Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

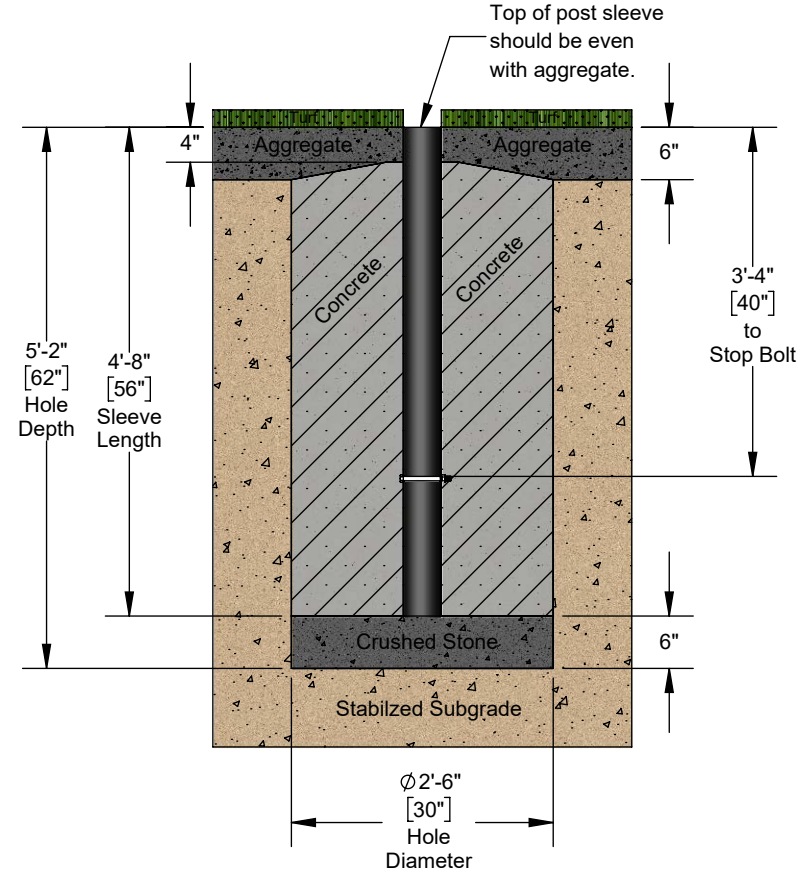
DESCRIPTION			
MBS-20 Upright Specification			
NOTE: Upright Assembly Specification			
MODEL:	MBS-20	CATEGORY:	CUSTOMER
		DATE:	9/29/2021
DRAWN BY:	NR	DWG. NO.:	MBS-20-C-003
			MBS-20 Specifications

MBS-20 Concrete Footing Specification

Natural Grass Field Footing Specification



Artificial Grass Field Footing Specification

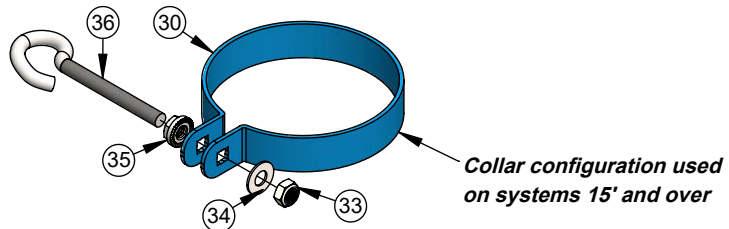


Note: **Consult Local Codes

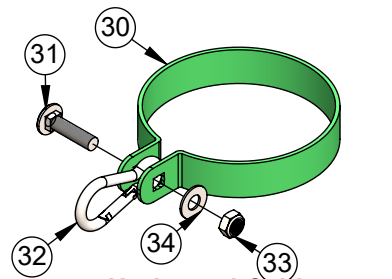


Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

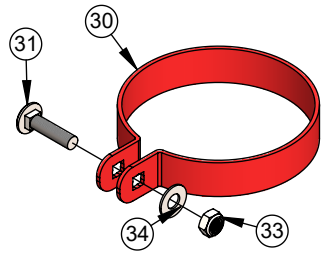
DESCRIPTION		
Concrete Footing Specification		
NOTE: Grass & Turf Concrete Footing Specification		
MODEL:	CATEGORY:	DATE:
MBS-20	CUSTOMER	9/29/2021
DRAWN BY:	CAD FILE:	DWG. NO.:
NR	MBS-20 Specifications	MBS-20-C-004



**Vertical Cable
"Open Eyebolt" Collar Assembly**
Collar configuration used on systems 15' and over

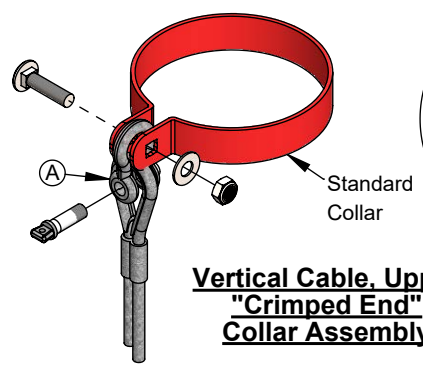


**Horizontal Cable
"Pear Clip" Collar Assembly**

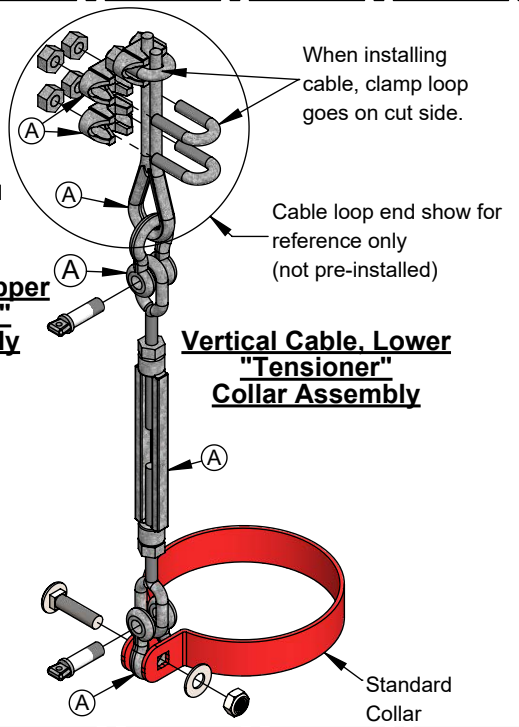


Standard Collar Assembly

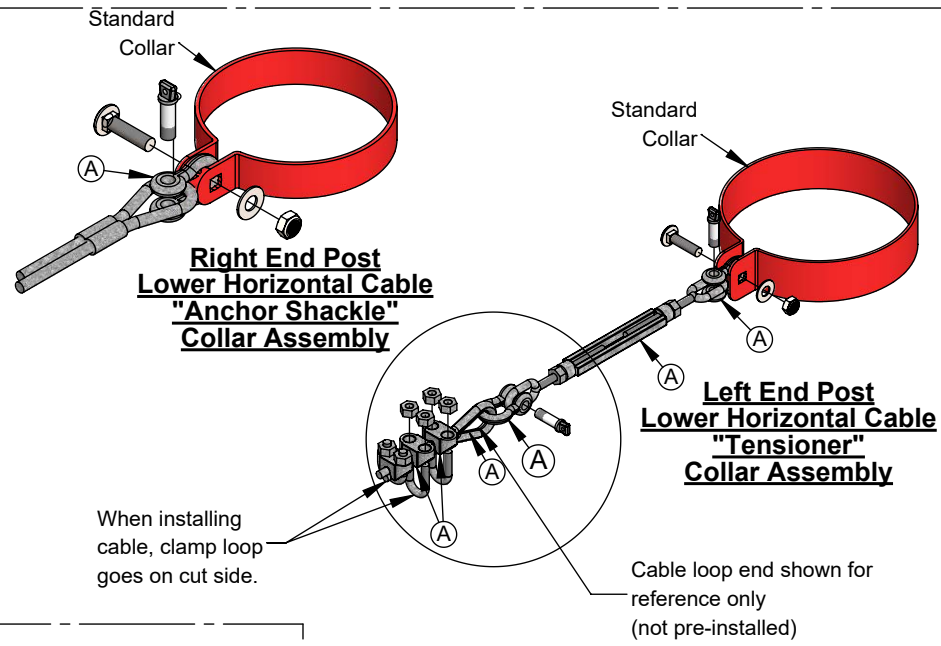
Note:
1. Hardware denoted with "A" is included in the tensioner kit.
2. Not all collar assemblies shown maybe be used, collars types will depend on system height and/or configuration.



**Vertical Cable, Upper
"Crimped End"
Collar Assembly**



**Vertical Cable, Lower
"Tensioner"
Collar Assembly**



**Right End Post
Lower Horizontal Cable
"Anchor Shackle"
Collar Assembly**

**Left End Post
Lower Horizontal Cable
"Tensioner"
Collar Assembly**

When installing cable, clamp loop goes on cut side.
Cable loop end shown for reference only (not pre-installed)

ITEM NO.	ITEM	DESCRIPTION
30	Securing Collar	4", I.D., Securing Collar
31	Bolt	5/16"-18 x 1-1/4", Carriage bolt, SS
32	Snap	1/4", Pear Clip Snap, Plated
33	Ny-Lock Hex Nut, Thin	5/16"-18, Self Locking Nut, SS, Thin
34	Washer	5/16" Flat Washer, SS
35	Wiz-Lock Hex Nut	5/16"-18, Wiz-Lock Nut, SS
36	Open Eyebolt	5/16"-18, Open Eyebolt, SS
37	Shackle	1/4" Anchor Shackle, Galvanized

MBS-20 Cable Collar Assembly Diagrams

Note: Collars are Black in color, shown in different colors to aid in identification.



Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

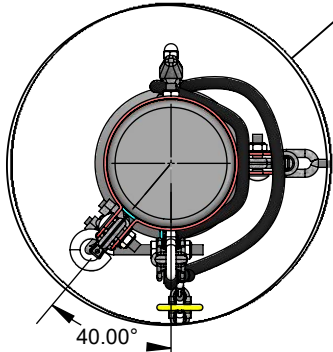
DESCRIPTION			
MBS-20 Collar assemblies			
NOTE: QTY of collar assemblies will vary depending on system			
MODEL:	MBS-20	CATEGORY:	CUSTOMER
			9/29/2021
DRAWN BY:	CAD FILE:	DWG. NO.	
NR	MBS-20 Specifications	MBS-20-C-005	

Model No. MBS-20

Parts List

MBS-20 PARTS LIST			
Part List #	Item	Description	Qty.
1	Post	20' MBS/SBS System Posts w/ Cap	Ω
2	Ground Sleeve	56" Length Ground Sleeve, w/ Stop Bolt	Ω
3	Hoist	Pre-assembled Hoist Rope/Pulley System	Ω
4	Washer	5/16" Flat Washer, SS	Σ
5	Hex Nut	5/16" Hex Nut, Self Locking	Ω
6	Cleat	Tapered Cleat, Glavanized Steel	Ω
7	Bolt	1/4"-20 x 5-1/2" Hex Bolt, SS	Σ
9	Hex Nut	1/4"-20 Thin Hex Nut, SS, Self Locking	Σ
10	Cap Nut	1/4"-20 Cap Nut, SS,	Σ
11	Standard Collar	4" I.D. Standard Collar	Φ
12	Pear Clip Collar	4" I.D. Pear Clip Collar	π
13	Open Eyebolt Collar	4" I.D. Open Eyebolt Collar	λ
14	Tensioner Kit	Ball Stoper Tensioner Kit	Δ
22	Net	#AAE N420, 1-1/2" sq. Mesh, Knottless Nylon	Ψ
23	Pear Clip	1/4" Pear Clip Snap, Plated	ζ
24	Cable Tie	15" Cable Tie, 120 LB., Black	¥
OPTIONAL ACCESSORIES			
25	Debris Collar	Debris Collar, 4" Diameter	Ω
<i>*Qty of posts (will vary depending on length fo system)</i>			
$\Omega = (\# \text{ft. per section} / 20 \text{ft.}) + 1$			
$\Sigma = [(\# \text{ft. per section} / 20 \text{ft.}) + 1] \times 2$			
$\Phi = (6 \text{ per section}) - 2 (\# \text{ shared corner posts (if applicable)})$			
$\pi = \{[(\# \text{ft. per section} / 20 \text{ft.}) - 1] - \# \text{ shared corner posts (if applicable)}\}$			
$\lambda = \# \text{ end post} + [\# \text{ corner post (if applicable)}]$			
$\Delta = 3 (\# \text{ sections}) - (\# \text{ shared corner posts, if applicable})$			
$\Psi = \# \text{ft. per section}$			
$\zeta = (\# \text{ft net height}) \times [\# \text{endpost} + (\# \text{ shared posts, if applicable})]$			
$\text{¥} = (\text{total \#ft. per section, if multiple section, sum of sections}) \times 2$			

MBS-20 Assembly Instruction Left End Post

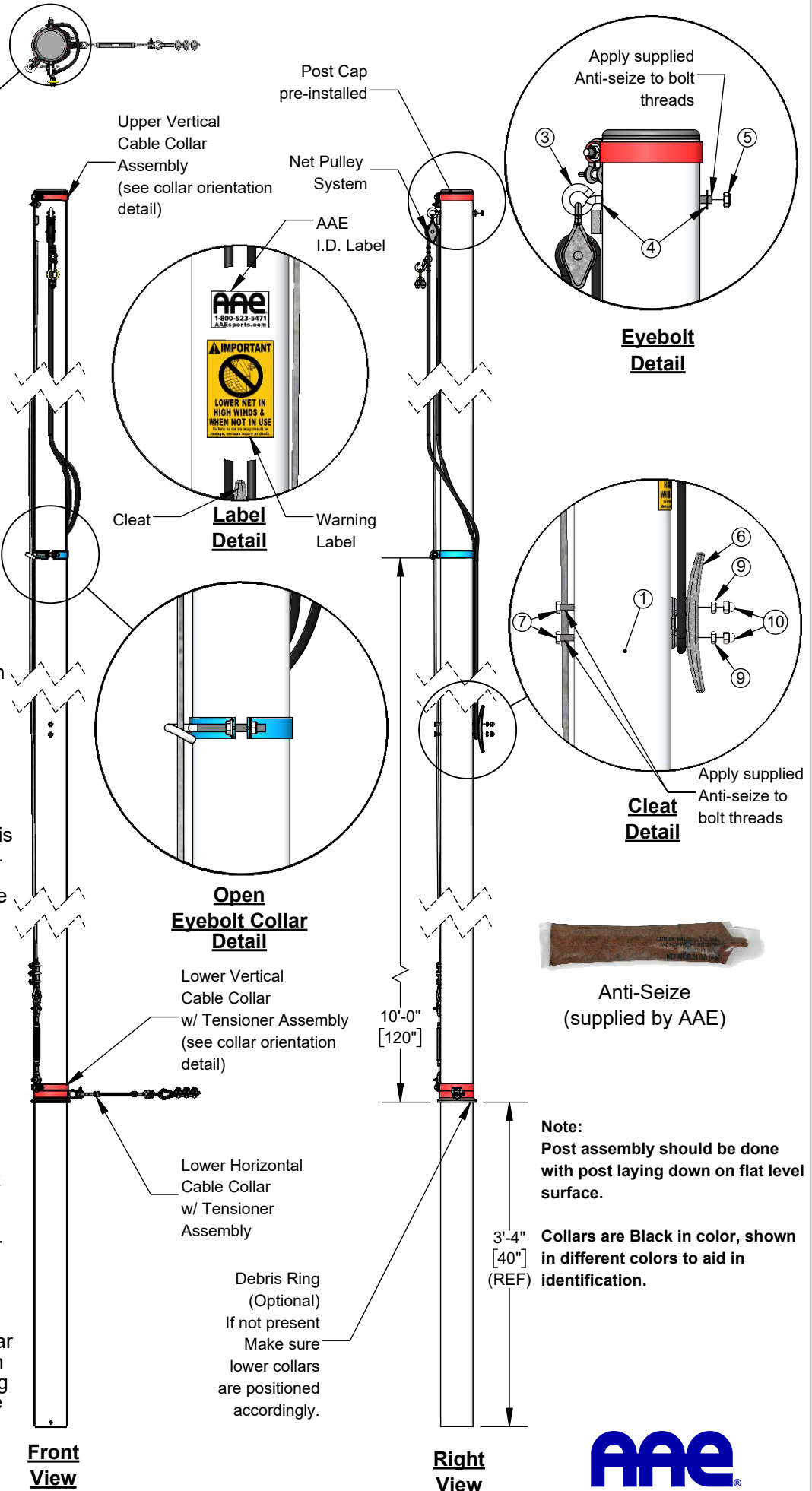


**Collar Orientation
Detail**

(Note: **ONLY** vertical cable collars should be turned away from netting)

Installation Notes:

- Lower Collars:** From bottom of pole slide the lower vertical cable collar, lower horizontal collar and and debris ring (*optional*) into position. To allow proper insertion into ground sleeve, lower most collar should be 40" from end of post. *Before securing collars into place make sure to rotate the lower vertical collar approx 40°.* (refer to diagram)
- Cleat:** Is to be installed so that it is on backside of post, opposite net. Screws will be inserted through post and cleat and secured on the opposite of net side using thin Nylock hex-nuts and cap nuts. (refer to diagram)
- Mid Collar:** Note orientation of collar on post. From top of pole slide the open eyebolt collar into position (refer to diagram) and secure into place.
- Eyebolt:** Pulley system comes preassembled to eyebolt. Install washer onto eyebolt then insert eyebolt with washer through front side of hole at top of post. From opposite side secure eyebolt into place using a flatwasher and self-locking hex-nut. (refer to diagram)
- Upper Collar:** From top of pole slide the upper vertical cable collar into position (collar should rest on eyebolt washers). Before securing into place make sure to rotate the collar approx 40°. (refer to diagram)
- Make sure warning labels are present on goal posts.



**Front
View**

**Right
View**

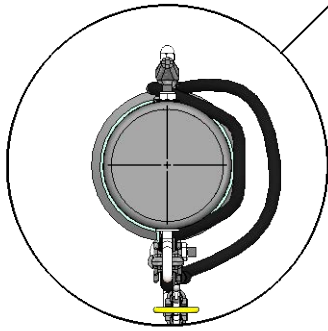
Note:
Post assembly should be done with post laying down on flat level surface.

Collars are Black in color, shown in different colors to aid in identification.



Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

MBS-20 Assembly Instruction Inner Post

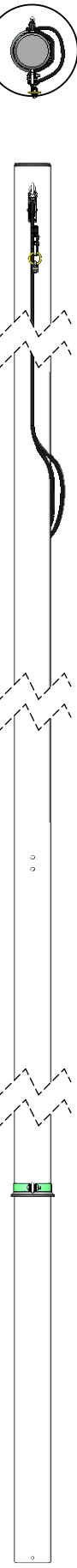


**Collar Orientation
Detail**

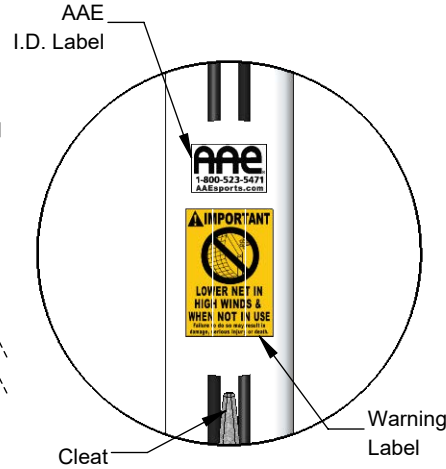
(Note: **ONLY** vertical cable collars should be turned away from netting, this aids in tensioning the net)

Installation Notes:

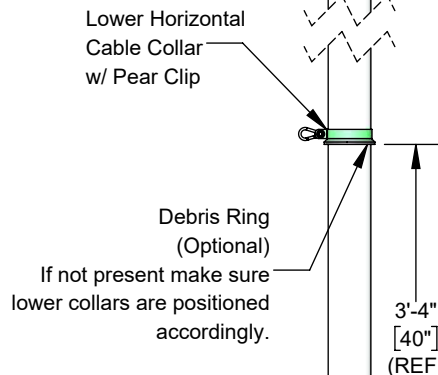
- Lower Collars:** From bottom of pole slide the lower horizontal collar and debris ring (*optional*) into position. To allow proper insertion into ground sleeve, lower most collar should be 40" from end of post. *Before securing collars into place verify correct orientation. (refer to diagram)*
- Cleat:** Is to be installed so that it is on backside of post, opposite net. Screws will be inserted through post and cleat and secured on the opposite of net side using thin Nylock hex-nuts and cap nuts. (*refer to diagram*)
- Eyebolt:** Pulley system comes preassembled to eyebolt. Install washer onto eyebolt then insert eyebolt with washer through front side of hole at top of post. From opposite side secure eyebolt into place using a flatwasher and self-locking hex-nut. (*refer to diagram*)
- Upper Collar:** From top of pole slide the upper vertical cable collar into position (collar should rest on eyebolt washers). *Before securing collars into place verify correct orientation. (refer to diagram)*
- Make sure warning labels are present on goal posts.



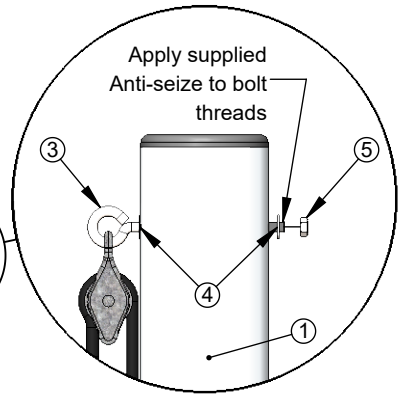
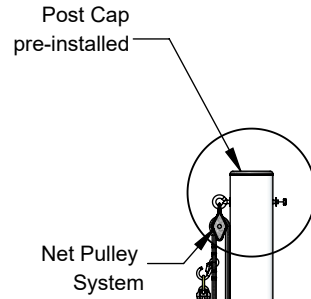
**Front
View**



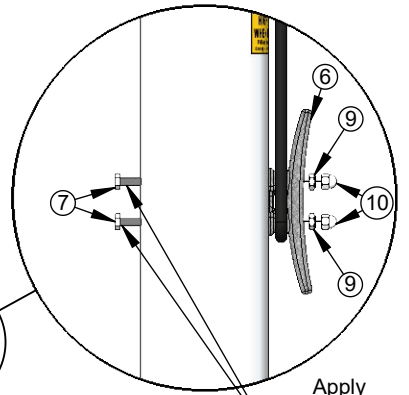
**Label
Detail**



**Right
View**



**Eyebolt
Detail**



**Cleat
Detail**



**Anti-Seize
(supplied by AAE)**

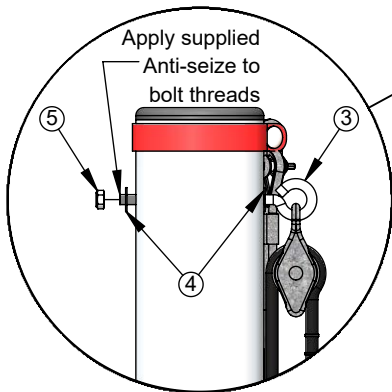
Note:
Post assembly should be done with post laying down on flat level surface.

Collars are Black in color, shown in different colors to aid in identification.



Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

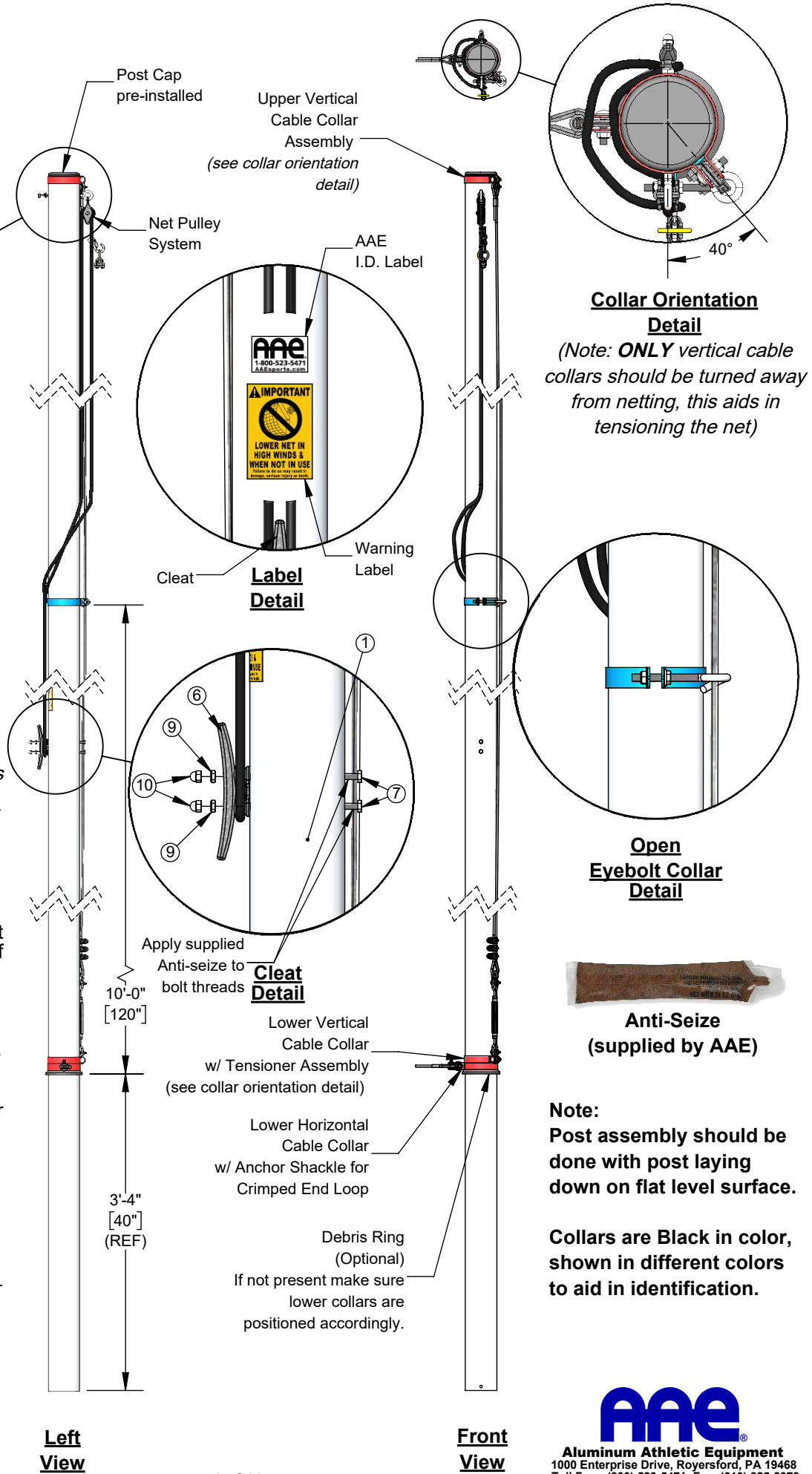
MBS-20 Assembly Instruction Right End Post



Eyebolt Detail

Installation Notes:

- Lower Collars:** From bottom of pole slide the lower vertical cable collar, lower horizontal collar and debris ring (optional) into position. To allow proper insertion into ground sleeve, lower most collar should be 40" from end of post. *Before securing collars into place make sure to rotate the lower vertical collar approx 40°. (refer to diagram)*
- Cleat:** Is to be installed so that it is on backside of post, opposite net. Screws will be inserted through post and cleat and secured on the opposite of net side using thin Nylock hex-nuts and cap nuts. (refer to diagram)
- Eyebolt:** Pulley system comes preassembled to eyebolt. Install washer onto eyebolt then insert eyebolt with washer through front side of hole at top of post. From opposite side secure eyebolt into place using a flatwasher and Nylock hex-nut. (refer to diagram)
- Upper Collar:** From top of pole slide the upper vertical cable collar into position (collar should rest on eyebolt washers). Before securing into place make sure to rotate the collar approx 40°. (refer to diagram)
- Make sure warning labels are present on goal posts.



Left View

Front View

Note: Post assembly should be done with post laying down on flat level surface.

Collars are Black in color, shown in different colors to aid in identification.

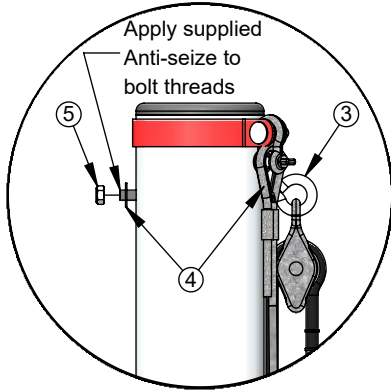


Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

MBS-20

Assembly Instruction

Shared End Post



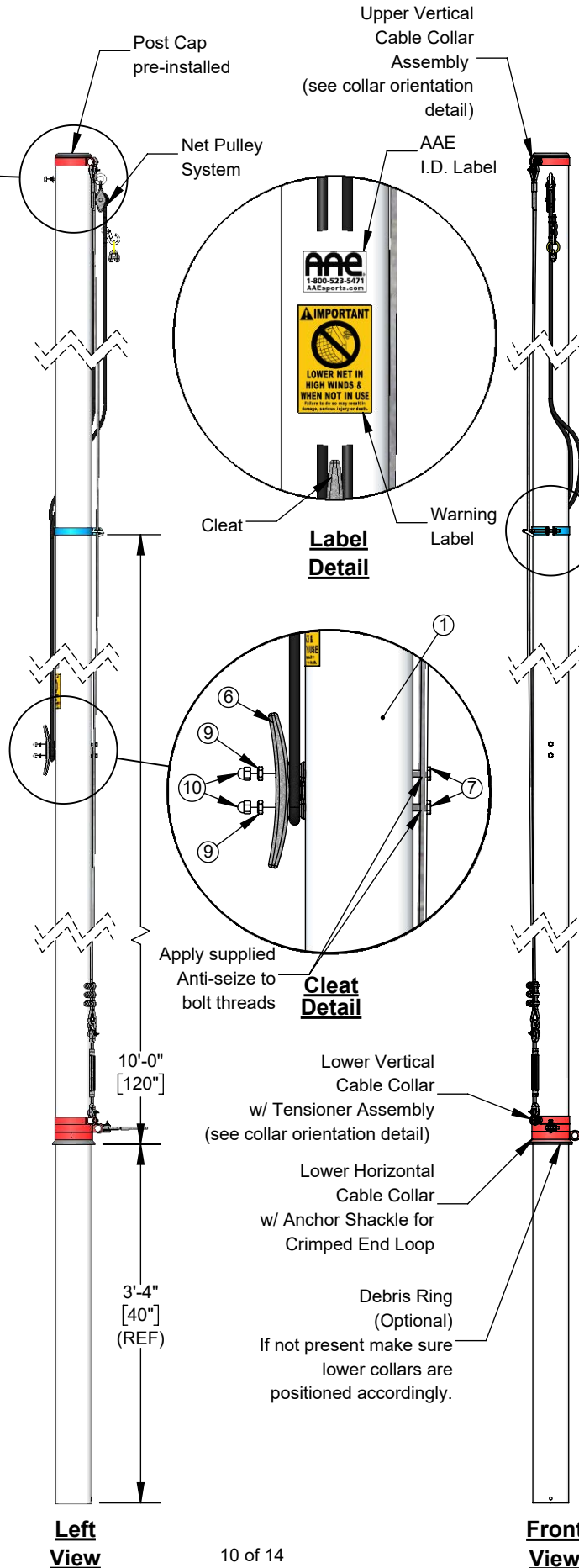
Eyebolt Detail



**Anti-Seize
(supplied by AAE)**

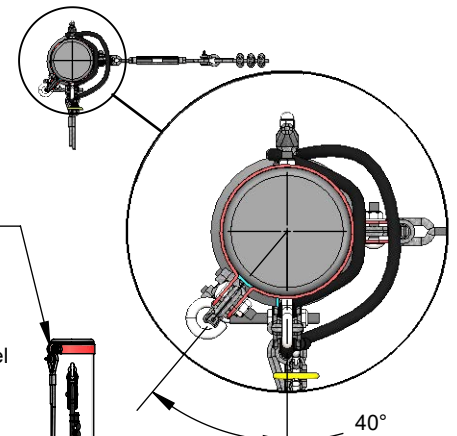
Installation Notes:

- Lower Collars:** From bottom of pole slide the lower vertical cable collar, lower horizontal collar and debris ring (*optional*) into position. To allow proper insertion into ground sleeve, lower most collar should be 40" from end of post. *Before securing collars into place make sure to rotate the lower vertical collar approx 40°.* (refer to diagram)
- Cleat:** Is to be installed so that it is on backside of post, opposite net. Screws will be inserted through post and cleat and secured on the opposite of net side using thin Nylock hex-nuts and cap nuts. (refer to diagram)
- Eyebolt:** Pulley system comes preassembled to eyebolt. Install washer onto eyebolt then insert eyebolt with washer through front side of hole at top of post. From opposite side secure eyebolt into place using a flatwasher and Nylock hex-nut. (refer to diagram)
- Upper Collar:** From top of pole slide the upper vertical cable collar into position (collar should rest on eyebolt washers). Before securing into place make sure to rotate the collar approx 40°. (refer to diagram)
- Make sure warning labels are present on goal posts.



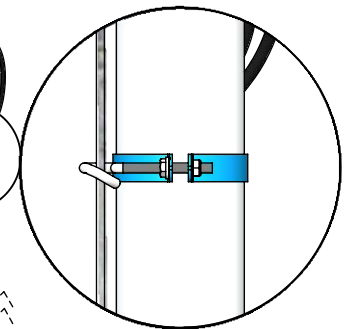
Left View

Front View

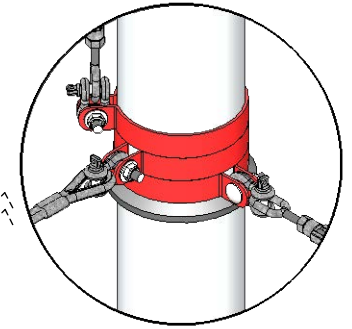


Collar Orientation Detail

(Note: **ONLY** vertical cable collars should be turned away from netting, this aids in tensioning the net)



Open Eyebolt Collar Detail



Shared End Post Bottom Collar Detail

Note:
Post assembly should be done with post laying down on flat level surface.

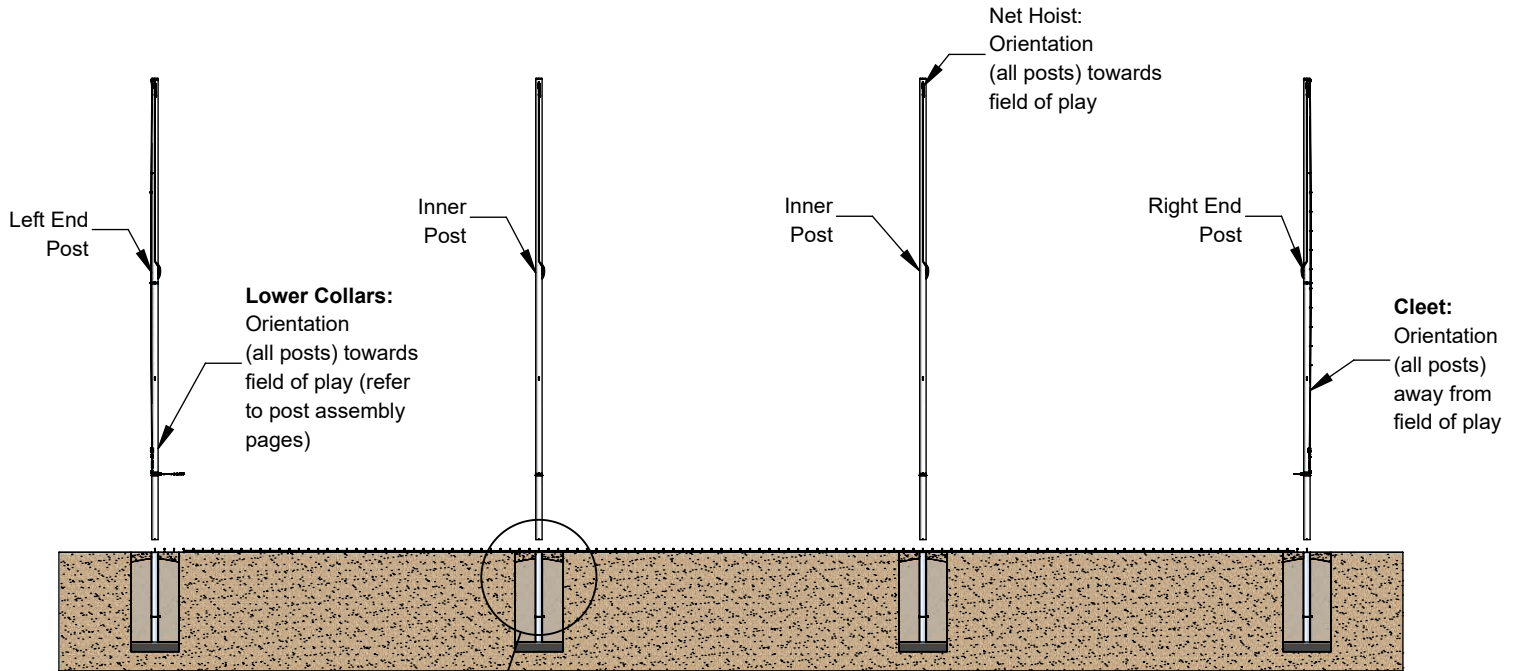
Collars are Black in color, shown in different colors to aid in identification.



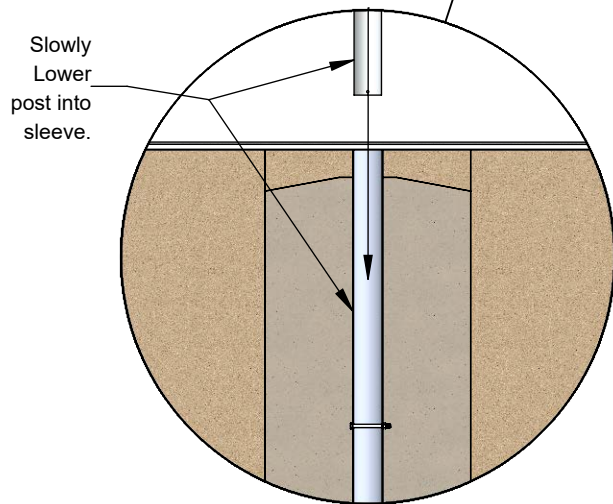
Aluminum Athletic Equipment
1000 Enterprise Drive, Royersford, PA 19468
Toll Free: (800) 523-5471 Fax: (610) 825-2378
www.AAEsports.com

MBS-20 Assembly Instruction Posts to Groundsleeve

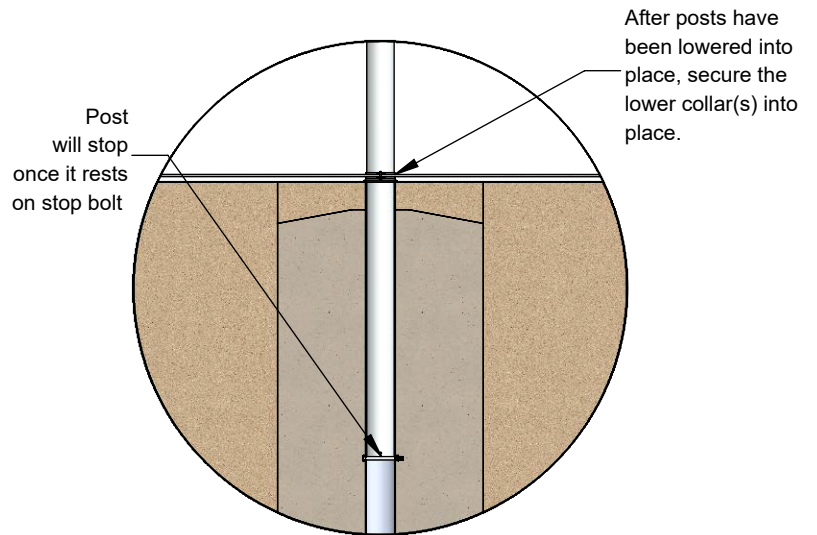
Note: number of inner posts may vary from what is shown.



View from field of Play



Post / Groundsleeve Installation

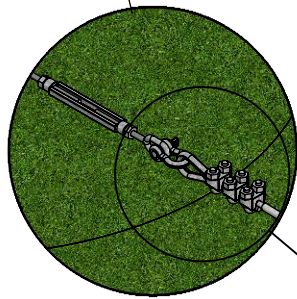
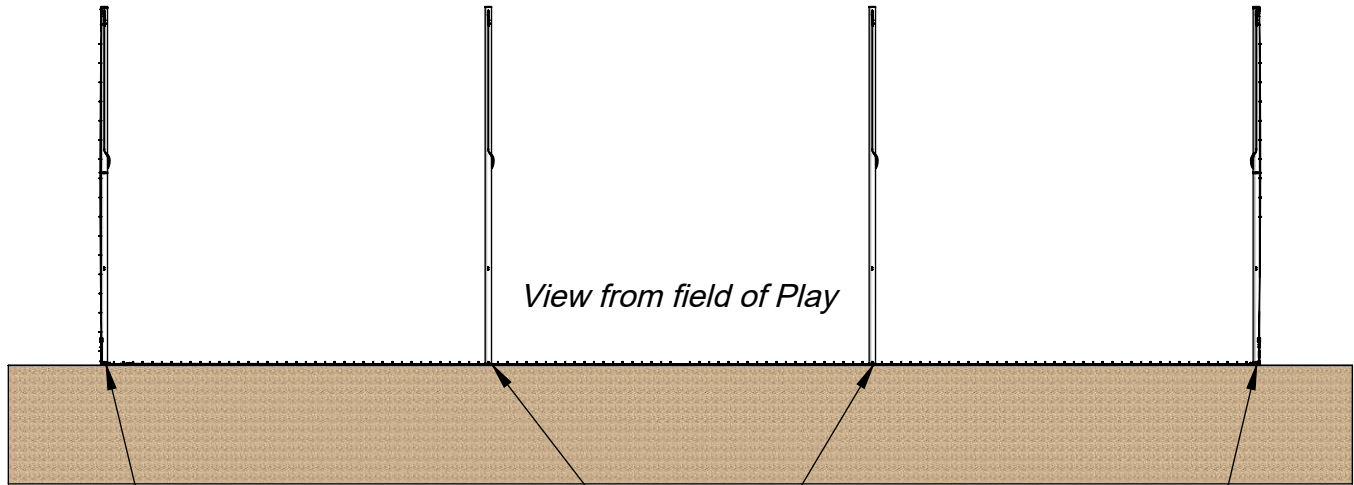


Post / Groundsleeve Installation (fully seated)

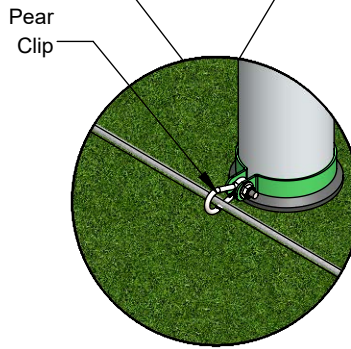
Installation Notes:

1. View above is from net side of post (*field of play*).
2. **Caution**, slowly lower posts into sleeves. Dropping post into sleeve may result in damage to the stop bolt.
3. Make sure all posts are orientated correctly. Pulley system towards field of play and cleet away from field of play. All lower horizontal cable collars should face field of play.
4. Once posts are correctly orientated, make sure the lower collars are properly orientated and secure them into place.

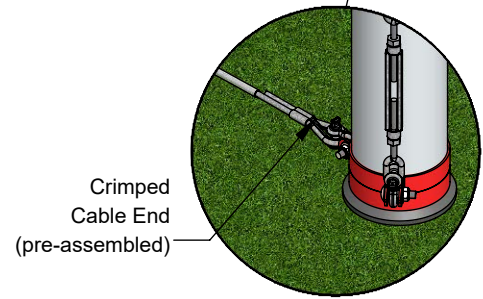
MBS-20 Assembly Instruction Lower Horizontal Support Cable



Left End Post
(Clamped Loop End)



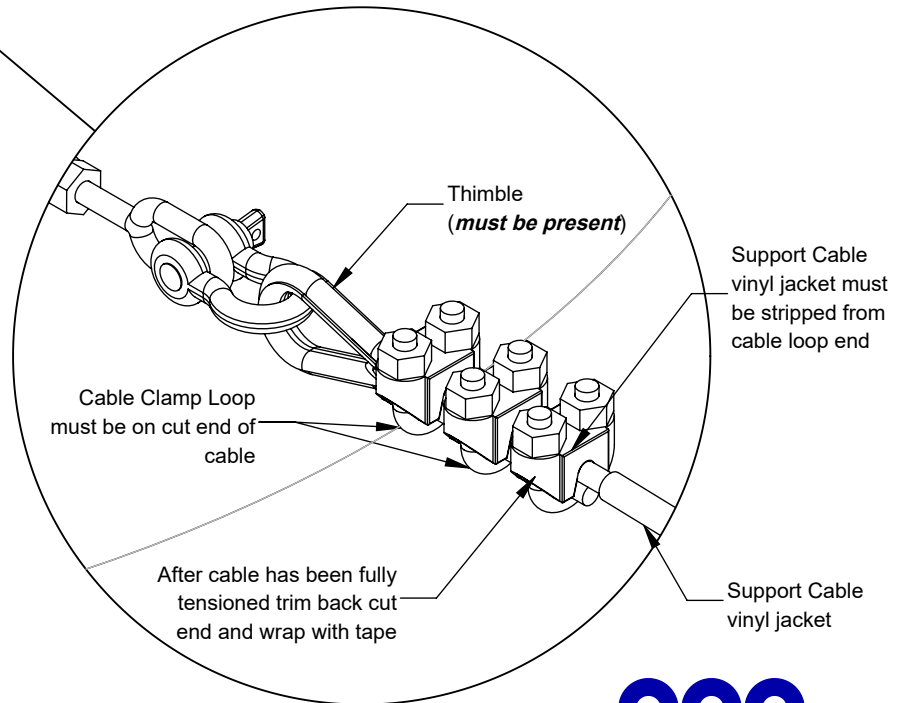
Inner Post
(Pear Clip Collar Assembly)



Right End Post
(Crimped Loop end)

Installation Notes:

1. Refer to collar assembly diagram for further detail on collar and cable assembly.
2. Install Crimped Cable End to Right End Post collar using an anchor shackle.
3. Route cable to Left End Post. Snap cable into Pear Clips of the Inner Posts along the way
4. Before assembling Clamped Cable Loop End, fully open the turnbuckle.
5. With anchor shackle and thimble in place run cable thru the shackle as shown. Pull slack out of cable and mark vinyl sleeve approximately 4" from thimble end. Strip vinyl from mark location towards cable loop end.
6. With the slack still being pulled out of cable install and secure the cable clamps. The first clamp should butt up to the thimble, the second should be spaced approx. 1" on center from the first. Cable clamps must be gripping bare cable to ensure proper seating/grip.



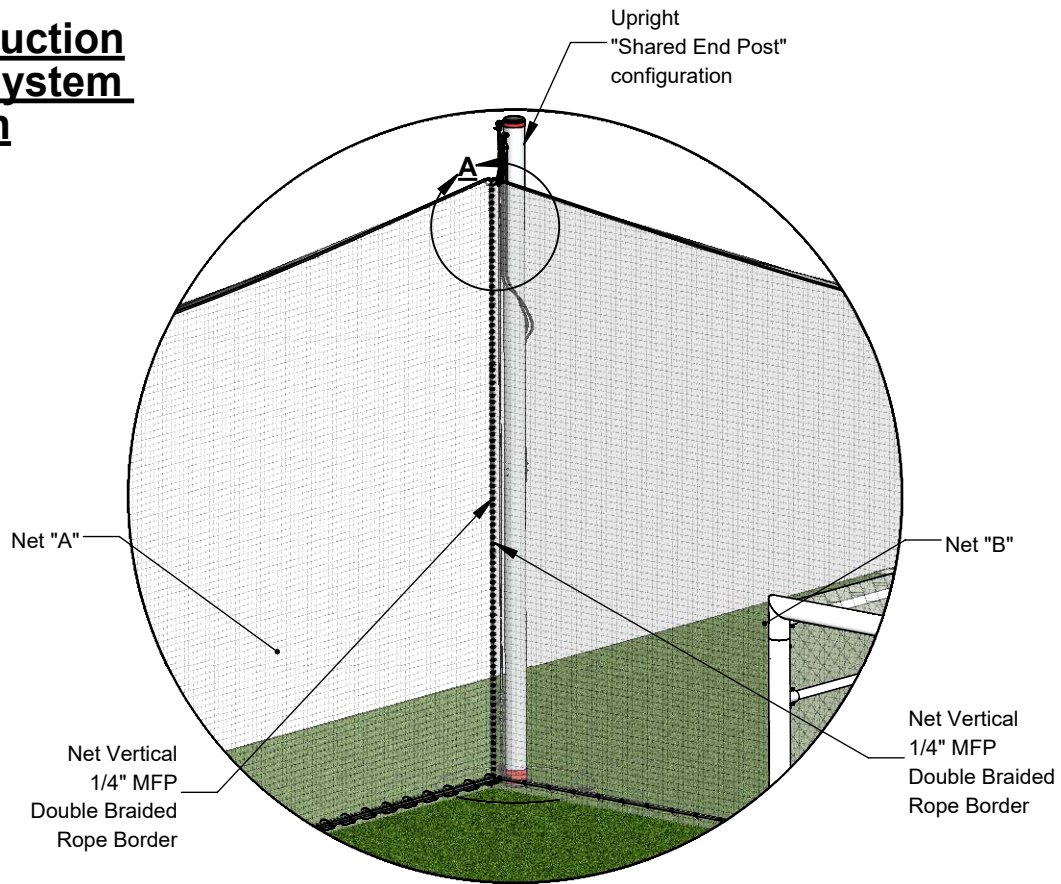
Clamped Loop End
Detail

MBS-20

Assembly Instruction

Multi-Section System

Net Preparation



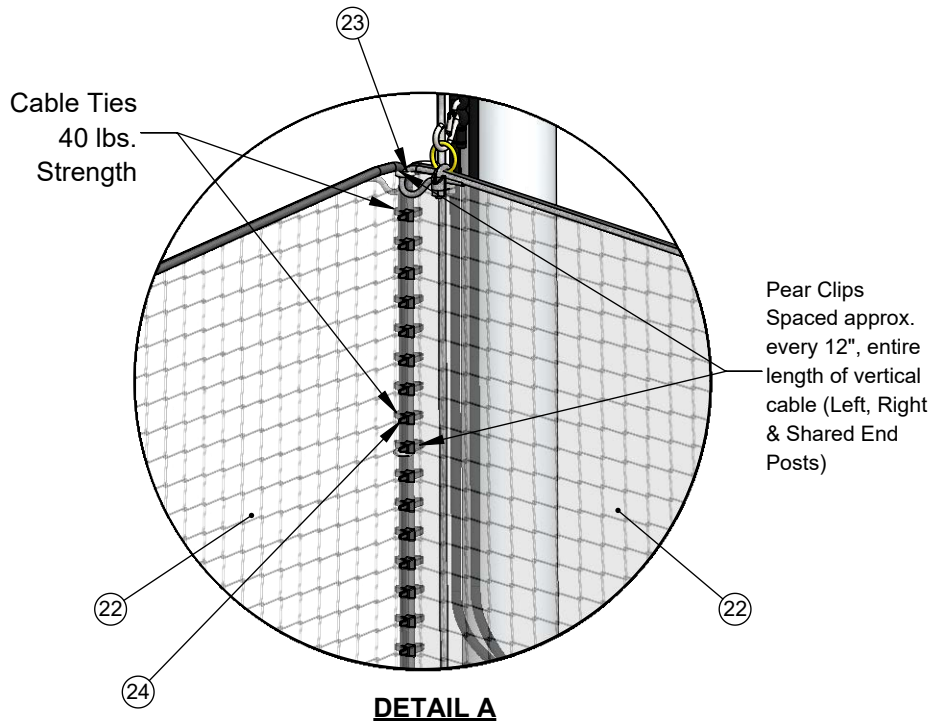
Multi-Section System
Corner Attachment
(shown in raised position)

Installation Notes:

This instruction applies to multi-section systems, if assembling single section/net system proceed to "Net Attachment" page.

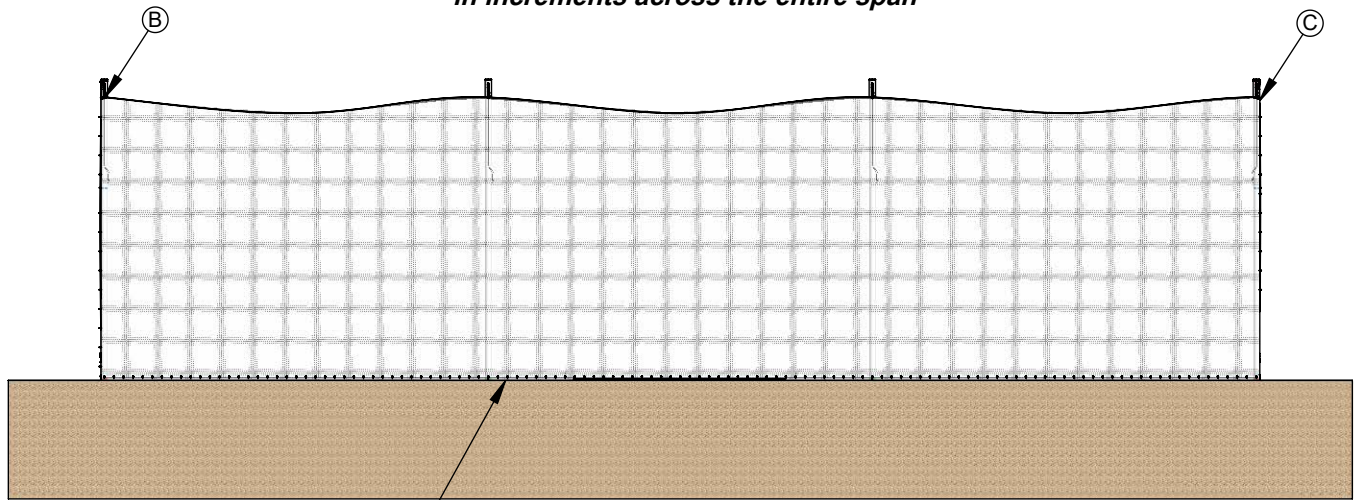
- *assistance from a second person is required to completed this task.*
- *task should be completed prior to raising the net.*
- *Starting at top of the nets ensures alignment across the top edges of the nets being joined together.*
- *One cable tie per nets square is recommended.*

1. Starting with the top corners of Nets A & B, hold together both of the adjacent side rope borders and align the top rope borders of nets A & B.
2. Once the top borders of nets A & B are aligned. Secure both the vertical rope borders together as close as you can to the top rope border using provided cable tie.
3. Begin securing the vertical borders together using provided cable ties. Work your way down the net in about 2' sections, making sure that both vertical rope borders are taut as you proceed.

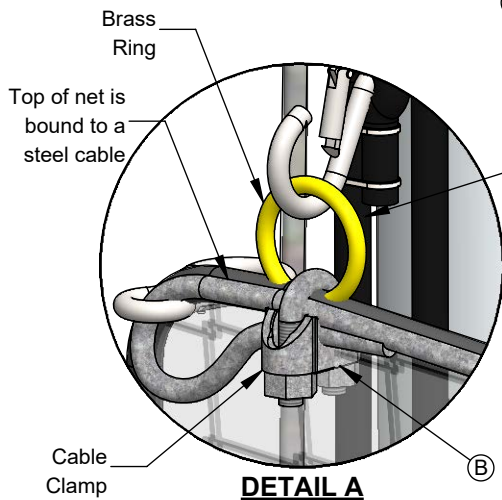


MBS-20 Assembly Instruction Net Attachment

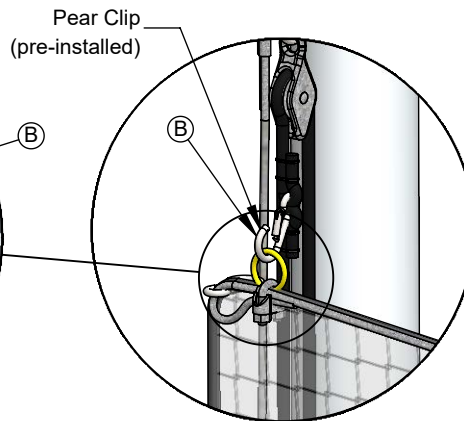
Note: When raising net, it must be done in increments across the entire span



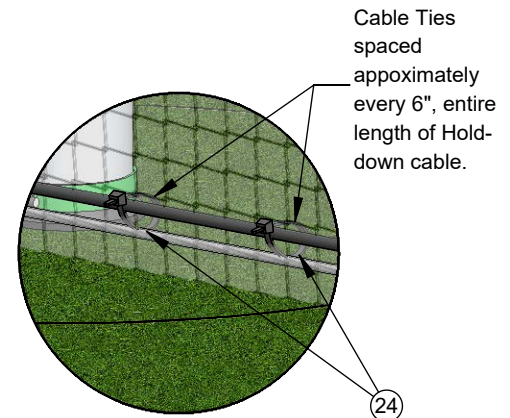
View from field of Play



DETAIL A



**Hoist System
Detail B**

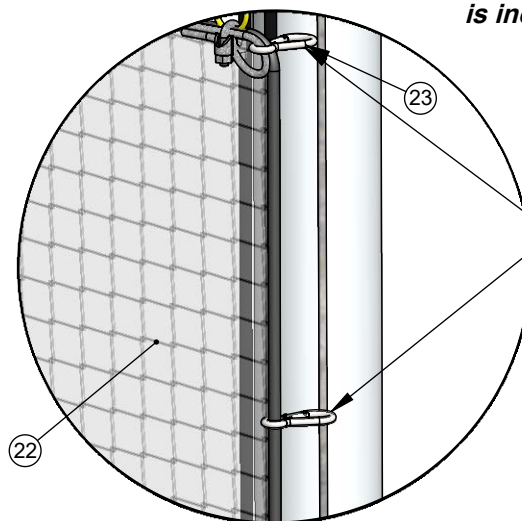


**Hold-down Cable
Detail D**

Installation Notes:

1. Lay net on ground across span of posts. Make sure net is centered across span of posts.
2. Using a Pear Clip Secure upper net corners to End Post Vertical Support Cables (*as shown in Detail C*)
3. Secure Brass Rings to top of net using Cable Clamp (*as shown in Detail A*). One ring and clamp per post and they should be centered as close as possible to its coinciding post.
4. After Brass Rings have been secured to net, clip ring into it's posts hoist system Pear Clip (*as shown in Detail B*).
5. As net is being raised make sure to secure net sides to the vertical support cables using provided **Pear Clips** (*refer to Detail C*). Pear Clips should be spaced approx. 12" or 9 net squares.
6. Once net has been completed raised tie hoist ropes onto cleat.

Note: Hardware denoted "B" is included in item #3 "Hoist Rope"



**Net to End Post
Vertical Support Cable
Detail C**

Pear Clips Spaced approx. every 12", entire length of vertical cable (**Left and Right End Posts Only**)