



Installing the Jaypro Max-1 Adjustable Crossbar Football Goal Posts



Models:

FBGP-520AX/FBGP-820AX (Expandable 18'-6" – 23'-4" with 20FT Uprights)

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1 Introduction

This user guide describes how to install the Jaypro Max-1 football goal post models FBGP-820AX, and FBGP-520AX. The telescoping feature of the crossbar allows the Max-1 football goal post to be set at either 23'-4" between uprights for official High School use or 18' 6" for official College width. Included are instructions on installing optional ground sleeves both with and without a height adjuster.

This user guide is written for experienced mechanical contractors. If you need additional information or support to install your Jaypro goal post, you can reach the Jaypro Sports customer support team, Monday through Friday, 8:00 A.M. to 5:00 P.M. Eastern Time at 1-800-243-0533.

IMPORTANT NOTICE

- It is the installer's responsibility to ensure that the goalpost, gooseneck, and crossbar are properly located and lined up with respect to the field. Proper location and alignment should be confirmed with each step.

- It is the installer's responsibility to ensure that the crossbar is level and the uprights are plumb.
 - All critical holes are to be drilled by the installer in an effort to help ensure that all components are square, plumb, and level.

 - Verify after every drilling operation that affected components are still square, plumb, and/or level. Correct as necessary.

 - It is recommended that drilled holes be piloted with a 3/16" drill bit, and opened up incrementally to the final size.

2 Safety

Some of the goal post components are heavy and require at least three people to maneuver into place. To maintain control and prevent injury when moving heavy components, ensure you have a sufficient number of technicians to support the components without dropping them.

3 Equipment and Materials

Gather the following user-supplied equipment and materials:

- Equipment to excavate a 74- by 36-inch hole
- 20-foot high scaffold (or scissor lift or boom)
- 10-foot (minimum) high step ladder
- Mechanic's tool set

- Wrench Set
- Level, 3' minimum
- 100-foot tape measure
- Electric Drill
 - Drill Bits: 5/16", 1/2", and 5/8" bits
- Rubber mallet

The following equipment is optional, but strongly recommended:

- 17/32", 21/32", and 11/16" transfer punches (highly recommended)
- 3/16", 3/8" drill bits to pilot holes (highly recommended)
- Heavy grease or white lithium grease
- Antiseize Lubricant
- Baling wire (if using rebar)
- (6), 54-inch lengths of 5/8-inch rebar

4 Check Components

Goal posts are sold in pairs. Inspect your goal post shipment and ensure you received these parts:

Parts List

2 Ground sleeves (absent for permanent installations)

*Verify that you have the correct style ground sleeve (see Figure 3)

2 Goosenecks

2 Crossbars

4 Twenty foot uprights

4 Upright end fittings

4 Wind socks

Yellow spray paint

Check Figure 1 to confirm that your Goal Post has shipped with all hardware. If any hardware or components are missing, contact the Jaypro Sports customer support team, Monday through Friday, 8:00 A.M. to 5:00 P.M. Eastern Time at 1-800-243-0533 for replacements.

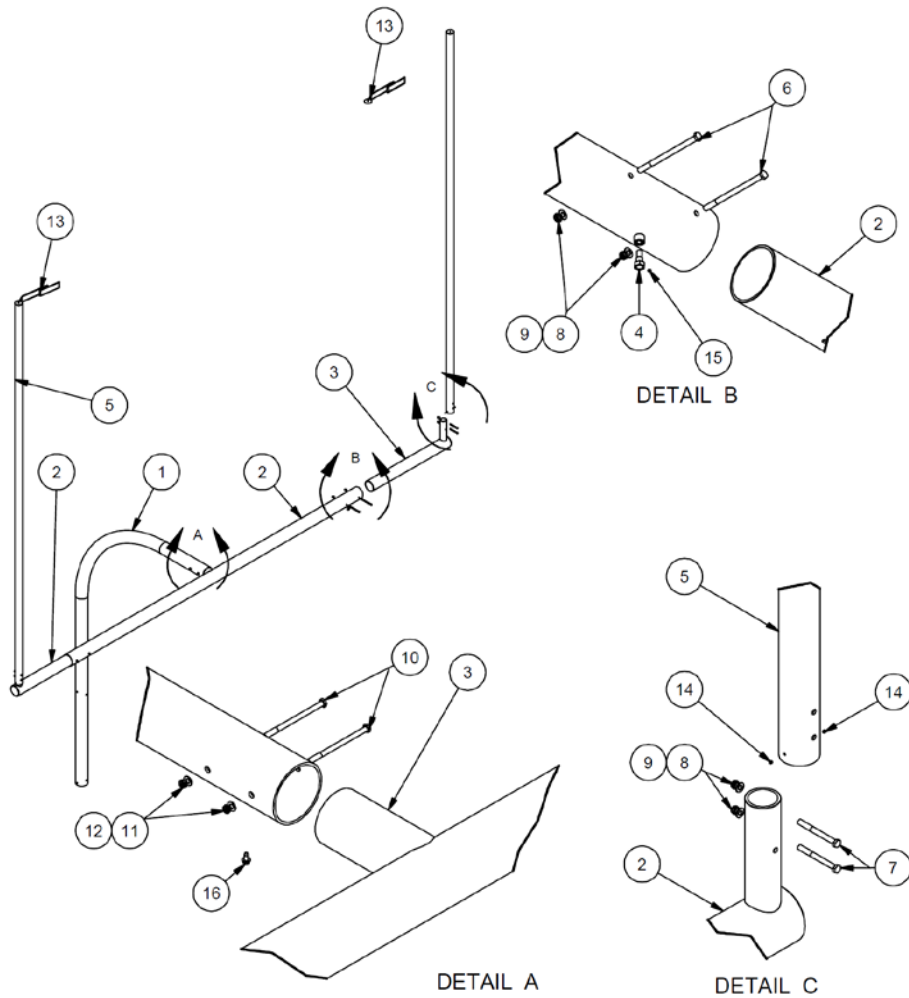
Optional Height Adjuster Mechanism

If ordered, you will receive:

2 Height adjusters Figure 2

2 63-1/2" EXTENDED ground sleeves (in place of the standard 60-1/4" sleeve), see **Figure 2**.

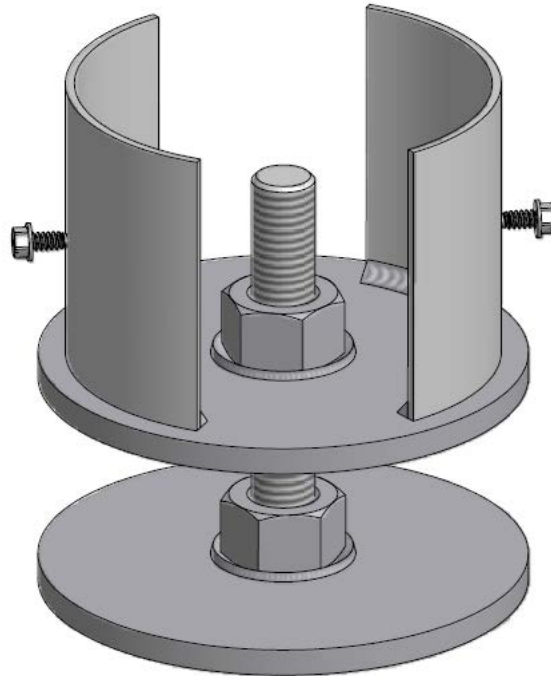
Figure 1: FBGP-800AX & FBGP-500AX Included Components and Hardware.



(Quantities Given Per Goal Post)

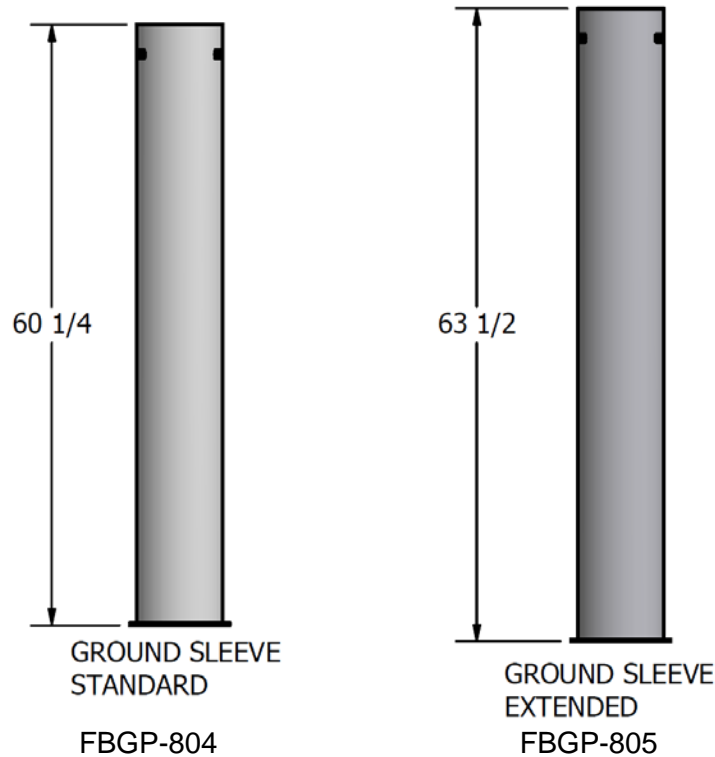
ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	6 5/8 in GOOSENECK	9	8	1/2 in SAE FLAT WASHER
2	1	ADJUSTABLE CROSSBAR	10	2	5/8-11 x 7 1/2 HX HD BOLT
3	2	ADJ END FITTING	11	2	5/8 in FLAT WASHER
4	2	ANTI-ROTATION BOLT	12	2	5/8-11 NYLOCK NUT
5	2	20 FT UPRIGHT	13	1	STREAMER
6	6	1/2-13 x 8 in HX HD BOLT	14	6	1/4-20 1/4 in SET SCREW-CONE POINT
7	4	1/2-13 x 5 HX HD BOLT	15	2	1/4-20 -1/4 in SET SCREW NYLON TIP
8	8	1/2-13 THIN NYLOCK NUT	16	2	3/8-16 x 3/4 in HX HD SELF TAP BOLT

Figure 2: Height Adjuster Mechanism.



FBGP-806K

Figure 3: Comparison of ground sleeves.



5 Where to Install the Ground Sleeves and Goosenecks

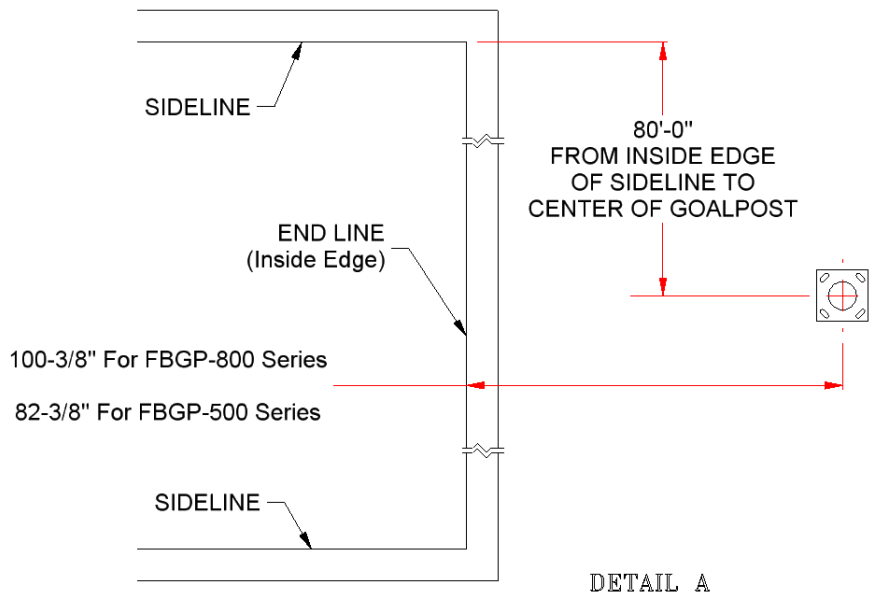
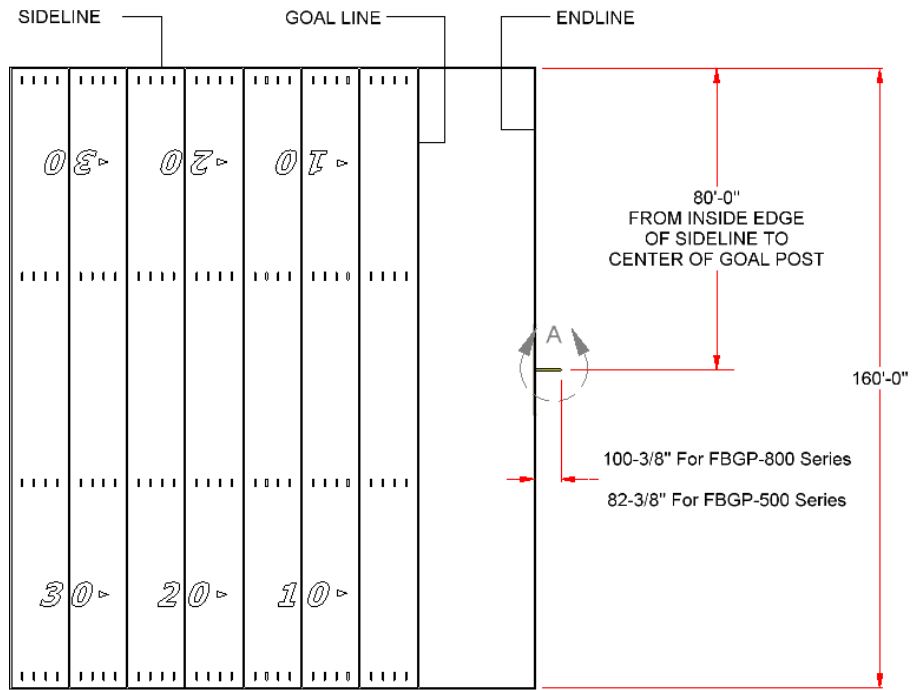
Installing the ground sleeves in the proper location at each end of the field ensures that the gooseneck, cross bar, and uprights will be positioned according to high school and college football regulations. By rule, the front edge of the crossbar should be even with the inside edge (field side) of the end line, such that the crossbars measure 360 ft apart, inside to inside^{1,2}. Follow these steps to locate each ground sleeve.

1. From the field layout plan, determine and mark the location of the inside corners of the playing field including the end zone.
2. From the field layout plan or through consultation with the field contractor determine the final field elevation.
3. Using the corners as reference points, mark the points exactly 80 feet in from the inside edge of the sideline and **100-3/8 inches for FBGP-800 Series offset Goal Posts (82-3/8 in for FBGP-500 Series offset)** in from the inside edge of the end zone at each end of the field (**Figure 4**).

¹ NFHS Football Rules Book, 2009

² NCAA Football Rules and Interpretations, 2002

Figure 4: Location of the Center of the Ground Sleeve
 All measurements from field-side edges of lines.



6 Install the Ground Standard

Use of a ground sleeve allows the goalpost to be removed at a later date if necessary. The MAX-1 may be ordered with a 60-1/4-inch tall ground sleeve (**FBSLV8**) or, if you ordered the height adjuster, a taller 63-1/2-inch ground sleeve (**FBGPGS-8**). Installation in either case is similar except for the depth of the footing.

IMPORTANT: MEASURE GROUND SLEEVE BEFORE CONTINUING WITH INSTALLATION TO ENSURE THAT YOU HAVE THE CORRECT MODEL FOR YOUR INSTALLATION (SEE Figure 3):

Alternatively, the MAX-1 may be permanently installed without a ground sleeve. For installation without a ground sleeve skip ahead to Section 9.

Note: Use the dimensions in **Figure 5** if you are installing the standard ground sleeve. Use the dimensions in **Figure 6** if you are installing the taller ground sleeve that comes with the height adjuster.

Key points you must remember when installing the ground sleeves:

- The top of the standard ground sleeve must be exactly 8 inches below the ground level to obtain the correct cross bar height.

- You must install the ground sleeves so they will center the goosenecks at the points determined in **Section 5**.

- Use the footing hole requirements as a guide. You should consult local codes and examine soil conditions to determine final depth and size. A 36-inch diameter footing hole is an absolute minimum and you should not use a smaller footing hole. Larger diameter footing holes are acceptable.

- Consider the turf to be the ground level.

NOTE: The dimensions provided account for the deflection of the gooseneck under the weight of the crossbar and uprights.

Installation Steps

Follow these steps to install the ground sleeves at each end of the playing field.

1. Excavate the footing hole:
 - a. Refer to **Figure 5** if you are installing the standard ground sleeve.

- b. Refer to **Figure 6** if you are installing the taller 63-1/2-inch ground sleeve.
- c. Skip ahead to **Section 9** if you are installing the gooseneck w/o ground sleeve.

Note: If you are unable to excavate a clean hole due to soil conditions, excavate a wider hole, install a 36" diameter Sonotube, and backfill the Sonotube.

2. Pack the bottom of the footing hole with 12 inches of gravel or concrete block or pour a 12 inch deep concrete pad and allow the concrete pad to cure for 48 hours.
3. Lower the ground sleeve into the footing hole. With the standard ground sleeve, the top of the ground sleeve should be exactly 1-5/8 inches below the ground level.
4. While not required, Jaypro recommends using 6 lengths of 5/8-inch rebar, 54 inches long, wired together into a 24-inch diameter basket and placed around the ground sleeve in the footer hole.
5. Ensure that the ground sleeve is plumb.
6. Ensure that the center of the ground sleeve opening is positioned exactly at the point determined in Section 5.
7. Support the ground sleeve so it will not move while pouring concrete.
8. Fill the footing hole with 4,000 psi (minimum) concrete to 6 inches below ground level.
9. Allow the concrete to cure for 48 hours before installing the crossbar and uprights.

Figure 5: Installation of the Standard 60-1/4-inch Ground Sleeve
 (See Figure 6 for installation of the 63-1/2-inch height-adjuster ground sleeve.)

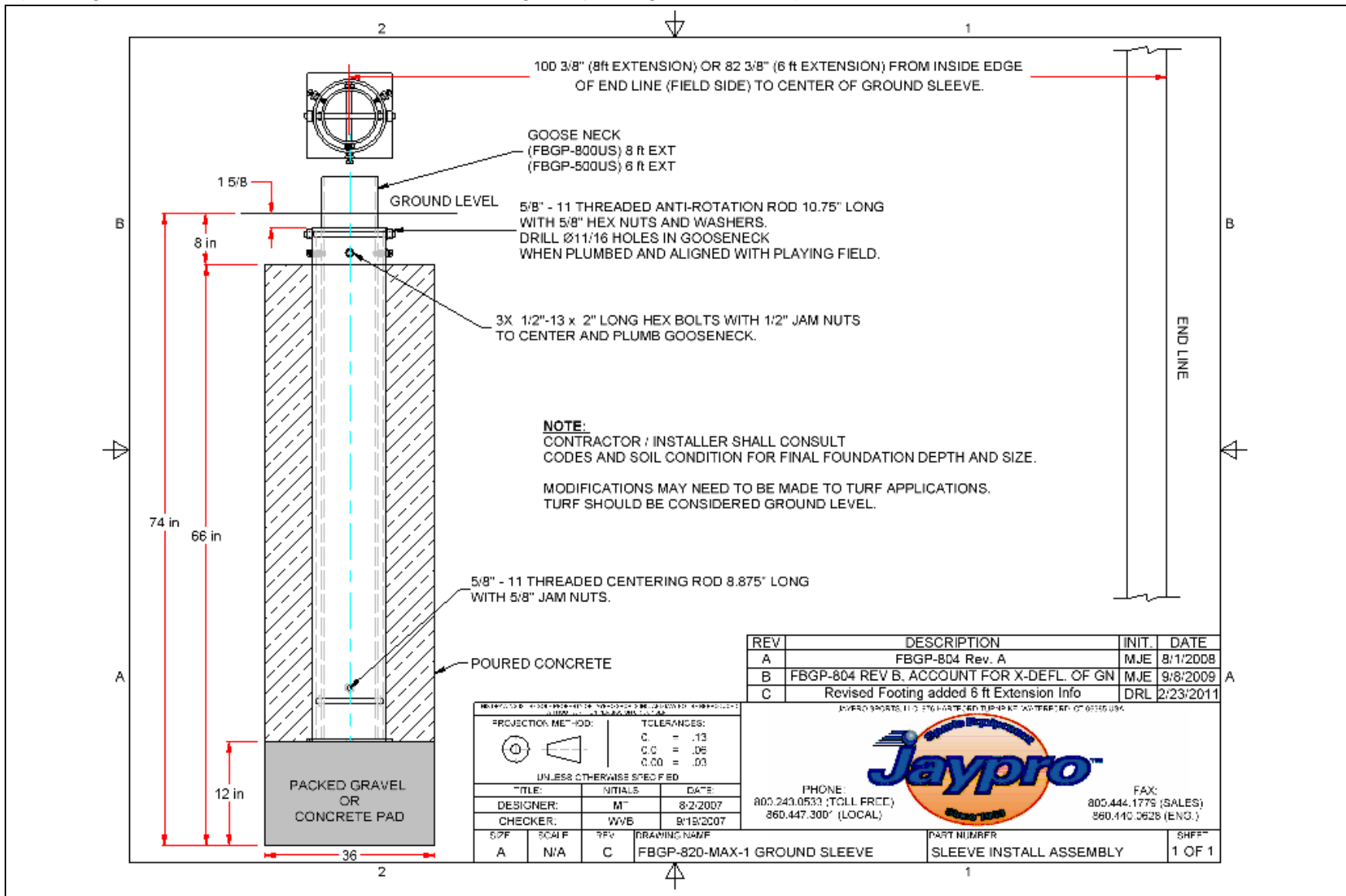
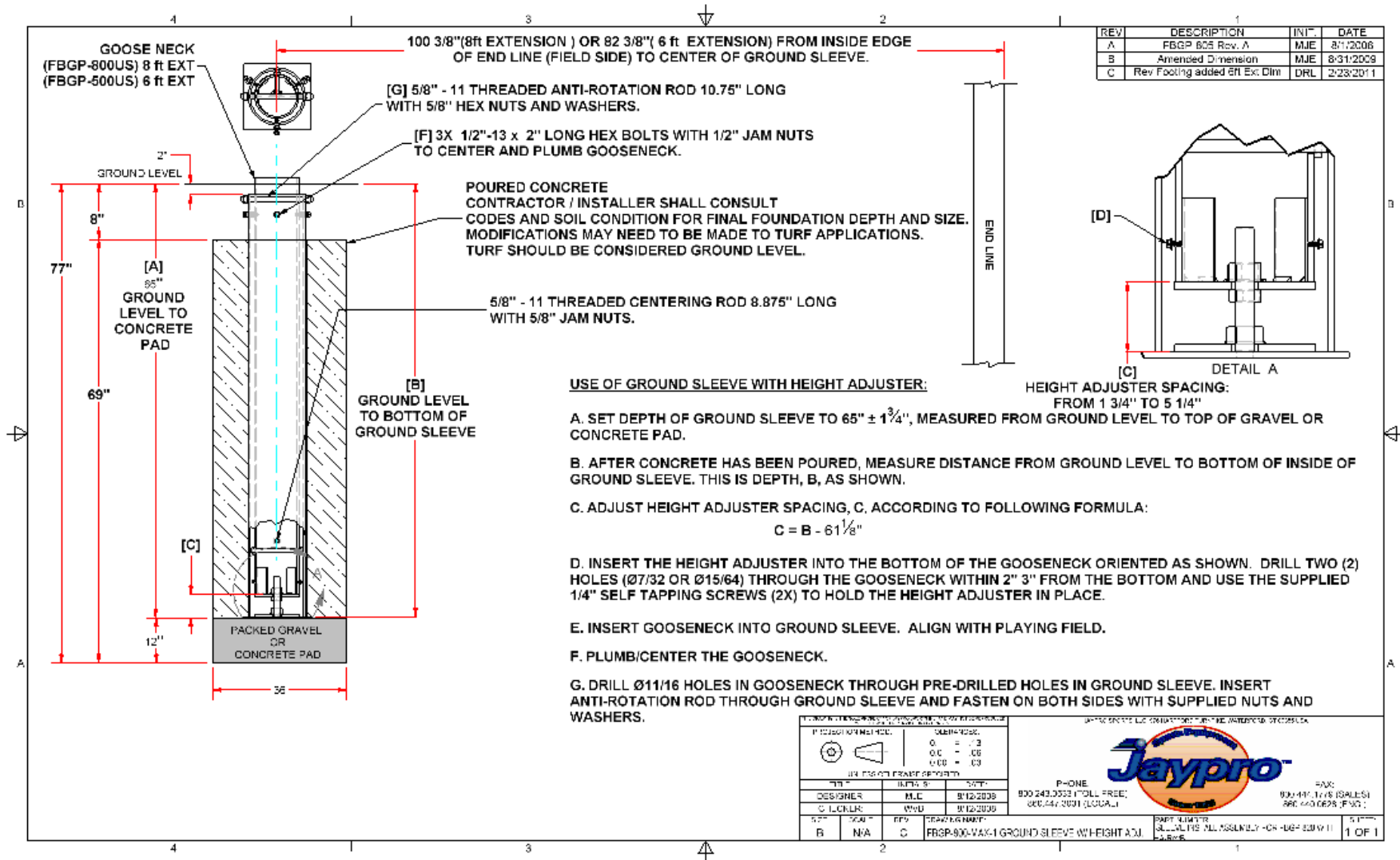


Figure 6: Installation of the 63-1/2-inch Ground Sleeve used With Height- Adjuster

See Figure 5 for installation of the standard 60-1/4" ground sleeve



7 Install the Gooseneck (No Height Adjuster)

The procedure below describes the installation of the gooseneck into the standard, ground sleeve without the height adjuster; see Figure 5 and for details.

Note: If you are using the optional height adjuster mechanism, skip this section and follow the instructions in section 8. If you are installing the gooseneck without a ground sleeve, skip ahead to section 9.

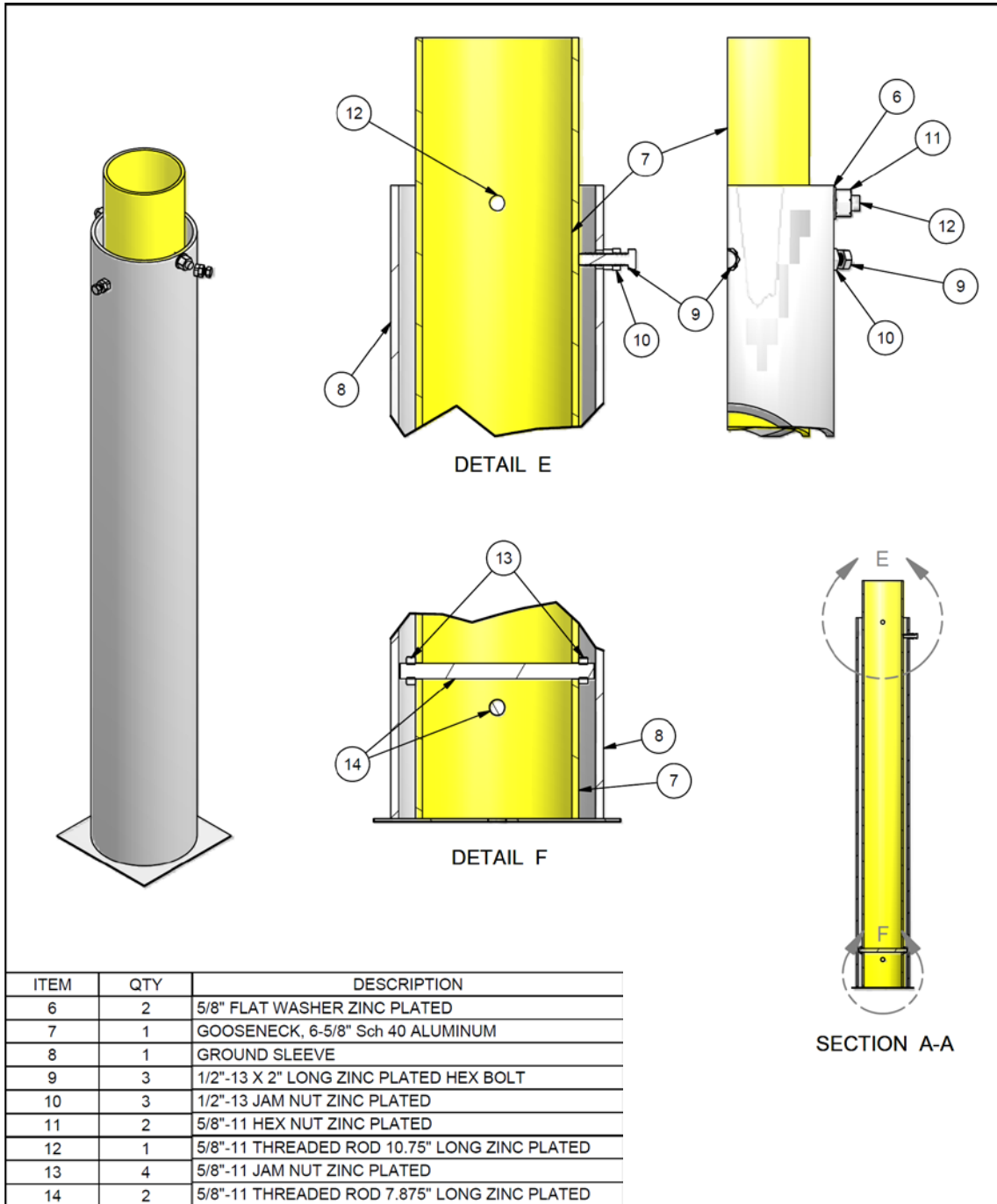
The gooseneck slides into the non-adjustable ground sleeve and is centered within the sleeve using centering rods installed at the bottom of the gooseneck and centering/plumbing hex bolts and jam nuts at the top of the ground sleeve.

Install both 5/8-11 x 8-7/8"-long threaded centering rods in the centering holes at the bottom of the gooseneck. Install jam nuts on each end of the centering rods. Center the rods and tighten the jam nuts against the gooseneck to hold the centering rods in place.

1. Thread all three 1/2"-13 jam nuts all the way onto the three 1/2"-13 x 2" long hex bolts.
2. Install the three 1/2"-13 hex bolts into the three 1/2"-13 nuts welded into the top of the ground sleeve.
3. Lift the gooseneck and slide it into the ground sleeve. Align the gooseneck overhang so it is exactly perpendicular to the goal line.
4. Plumb and center the gooseneck (with respect to the ground sleeve) and ensure that the gooseneck is properly aligned with the field of play.
5. Tighten the three hex bolts as much as possible to lock it in position.
 - a. Once all three bolts are pressed against the gooseneck, tighten each bolt in sequence a quarter-turn at-a-time to ensure that the alignment is not altered when tightening bolts.
 - b. Tighten the 1/2"-13 jam nuts against the ground sleeve.
6. Confirm that the gooseneck is till plumb and correctly aligned.
7. Drill two 5/8" holes in the gooseneck using the pre-drilled holes in the ground sleeve for location and alignment.

- a. It is strongly recommend that an 11/16" transfer punch be used to locate the holes to ensure correct alignment of the holes.
8. Install a 5/8"-11 x 10-3/4"-long threaded anti-rotation rod through the holes in the ground sleeve (and through the holes drilled in step 7, above).
9. Install two 5/8" washers and two 5/8"-11 nuts on the ends of the anti-rotation rods.

Figure 7: Installation of the Gooseneck in the Standard Ground Sleeve



8 Install the Gooseneck with Height Adjuster

The procedure below describes how to install the gooseneck into the ground sleeve (63-1/2") with a height adjuster mechanism, see . **Note:** If you are using the standard ground sleeve with no height adjuster, follow the instructions in Section 7. If you are installing the gooseneck without a ground sleeve, skip ahead to section 9.

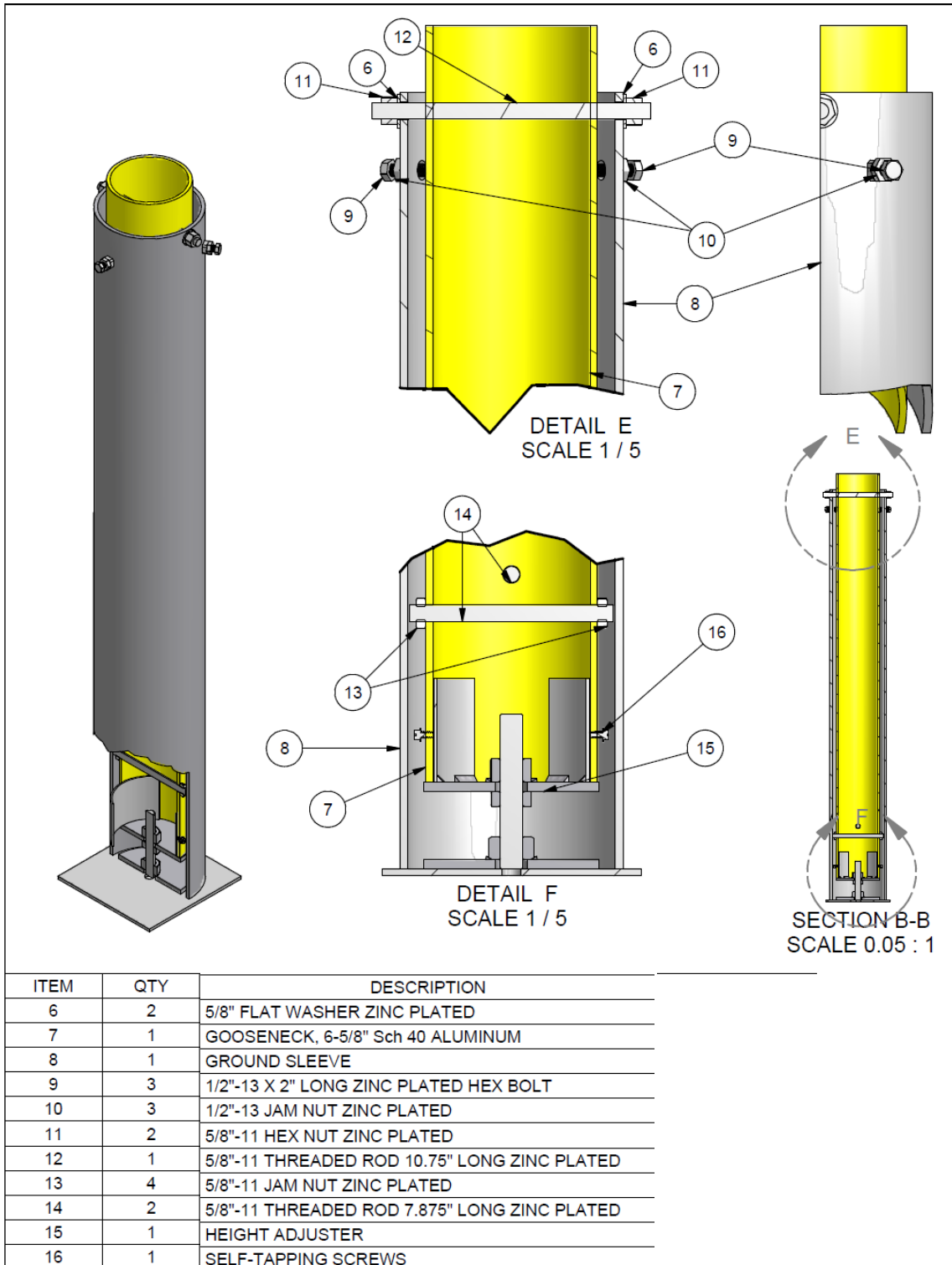
1. Set height of height adjuster mechanism (see):
2. Measure the distance from the bottom of the ground sleeve to the ground level, this is depth B (see)
3. Adjust the height setting on the height adjuster (dimension C in detail A of) according to the following formula:

$$C = B - 61-1/8''$$

4. Slide the height-adjuster mechanism into the bottom of the gooseneck shaft. Hold it in place by drilling two holes (7/32" or 15/64") through the wall of the gooseneck and into the guide tabs on the height-adjuster; then install two self tapping screws in the holes.
5. Install both 5/8-11 x 8-7/8"-long threaded centering rods in the centering holes at the bottom of the gooseneck. Install jam nuts on each end of the centering rods. Center the rods and tighten the jam nuts against the gooseneck to hold the centering rods in place ().
6. Thread all three 1/2"-13 jam nuts all the way onto the three 1/2"-13 x 2" long hex bolts.
7. Install the three 1/2"-13 hex bolts into the three 1/2"-13 nuts welded into the top of the ground sleeve.
8. Lift the gooseneck and slide it into the ground sleeve. Align the gooseneck overhang so it is exactly perpendicular to the goal line.
9. Plumb and center the gooseneck (with respect to the ground sleeve) and ensure that the gooseneck is properly aligned with the field of play.
10. Tighten the three hex bolts as much as possible to lock it in position.
 - a. Once all three bolts are pressed against the gooseneck, tighten each bolt in sequence a quarter-turn at-a-time to ensure that the alignment is not altered when tightening bolts.

- b. Tighten the 1/2"-13 jam nuts against the ground sleeve.
11. Drill two 5/8" holes in the gooseneck using the pre-drilled holes in the ground sleeve for location and alignment.
 - a. It is strongly recommend that an 11/16" transfer punch be used to locate the holes to ensure correct alignment of the holes.
 12. Install a 5/8"-11 x 10-3/4"-long threaded anti-rotation rod through the holes in the ground sleeve (and through the holes drilled in step 11, above).
 13. Install four 5/8" washers and four 5/8"-11 nuts on the ends of the anti-rotation rods.

Figure 8: Installation of the Gooseneck Using the Height Adjuster



9 Install the Gooseneck Without Ground Sleeve

Installation Steps

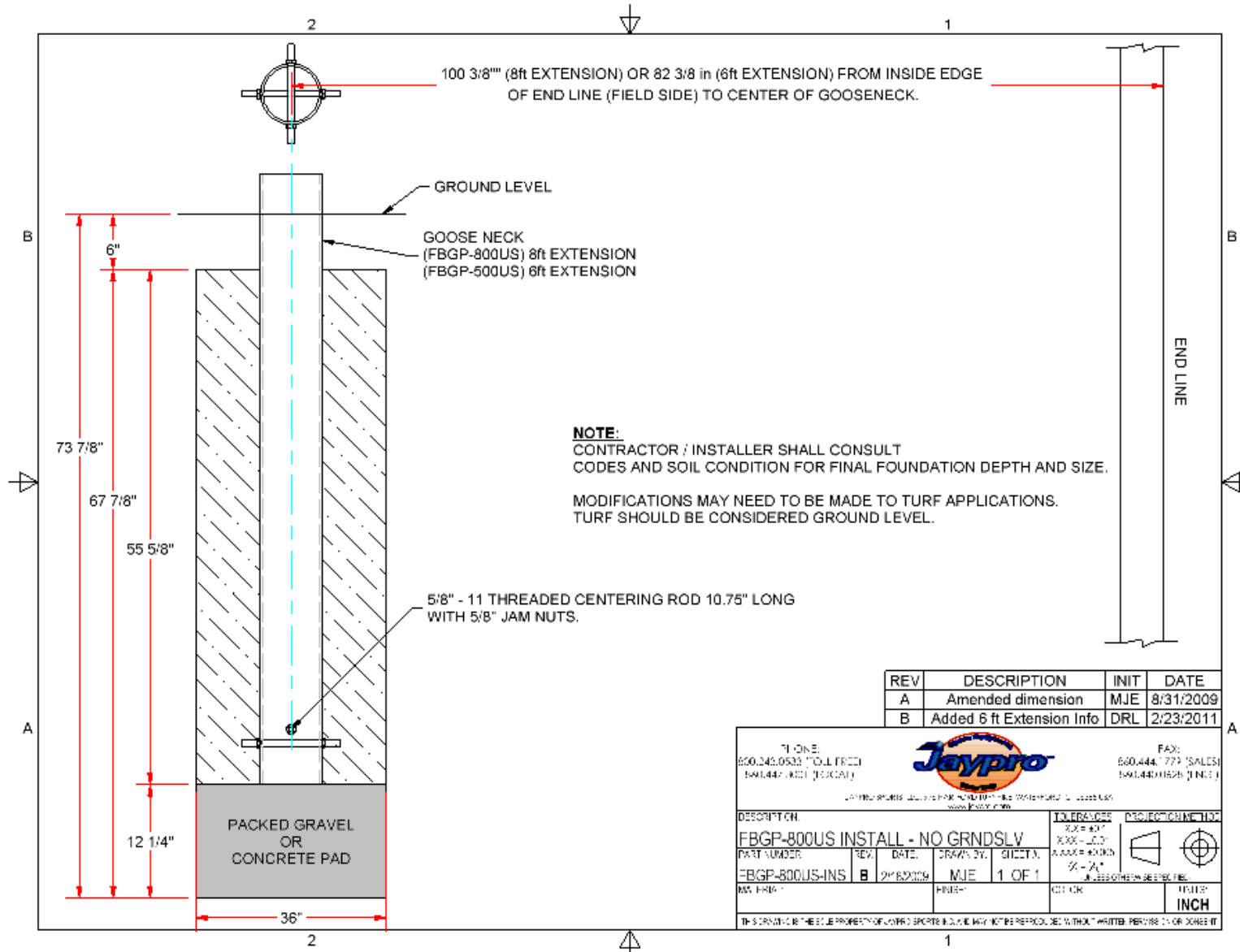
Follow these steps to install the goosenecks at each end of the playing field.

Excavate a footing hole using the dimensions shown in **Figure 9**.

Note: If you are unable to excavate a clean hole due to soil conditions, excavate a wider hole, install a Sonotube, and backfill the Sonotube.

1. Pack the bottom of the footing hole with 12-1/4 inches of gravel or concrete block, or pour 12-1/4-inch deep concrete pad and allow the concrete pad to cure for 48 hours.
2. Install 2 lengths of 5/8"-11 x 10-3/4" threaded rod into holes in bottom of gooseneck.
 - a. The unit ships with two different lengths of 5/8"-11 threaded rod (2 pcs each). Be sure to use the longer 10-3/4" lengths and not the 8-7/8" lengths.
3. Center threaded rod and fasten with 5/8" washers and nuts.
4. Lower the gooseneck into the footing hole.
5. While not required, Jaypro recommends using 6 lengths of 5/8-inch rebar, 54 inches long, wired together into a 24-inch diameter basket and placed around the ground sleeve in the footer hole.
6. Ensure that the gooseneck is plumb and that the overhang is perpendicular to the goal line.
7. Ensure that the center of the gooseneck is positioned exactly at the point determined in Section 5.
8. Support the gooseneck such that it remains plumb and its alignment is maintained as the concrete is poured. Do not remove supports until concrete has cured.
9. Fill the footing hole with 4,000 psi concrete (minimum) to 6 inches below ground level.
10. Allow the concrete to cure for 48 hours before installing the crossbar and uprights.

Figure 9: Installation of the Gooseneck Without Ground Sleeve
 See Figure 5 and for installation with ground sleeve.

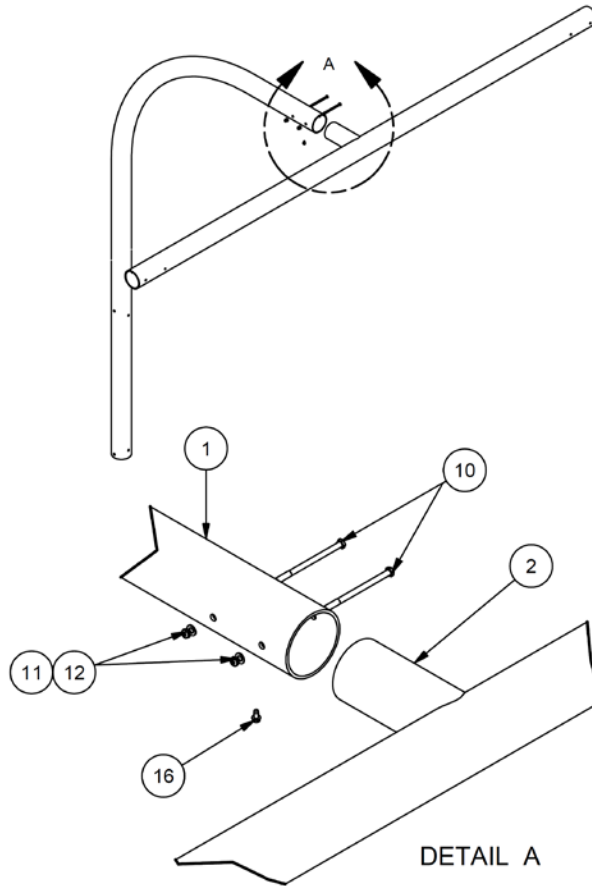


10 Install and Level the Crossbar

Follow these steps to install and level the crossbar (refer to **Figure 10 Installing and Leveling Crossbar**)

1. Carefully insert the crossbar nipple into the gooseneck.
 - a. Application of lubricant to crossbar and inside of gooseneck is strongly recommended.
2. Set the depth of the crossbar in the gooseneck such that the front edge of the crossbar is aligned with the inside (field side) edge of the end line. See **Figure 4**.
3. Level the crossbar.
 - a. It is recommended that you fasten a level to the crossbar to quickly and easily verify level after each step.
4. Drill a 5/8" hole in crossbar insert using either of the holes in the gooseneck as a guide.
 - a. Use of a 21/32" transfer punch is strongly recommended.
 - b. It is recommended that you pilot the hole with a 3/16" bit, step up to a 3/8" bit and finish with a 5/8" bit.
 - c. To ensure proper alignment of holes, do not try to drill all the way through both faces of crossbar at once. Instead drill from each side of crossbar and check for level after each drilling operation.
5. Insert a 5/8"-11 x 7 1/2 inch-long hex head bolt through the hole in the gooseneck and crossbar fitting. Install 5/8-inch washers and 5/8"-11 nuts on the bolts, tighten, and verify the depth and levelness of the crossbar.
6. Drill a second 5/8" hole in the same manner as the first.
7. Verify depth and levelness of crossbar and tighten both nuts as much as possible.
8. Drill two 5/16" holes in the bottom of the gooseneck through the gooseneck and crossbar insert. Drill the holes approximately 3 and 6 1/2-inches from the edge of the gooseneck (where the crossbar inserts). See Figure 10 Item 15
 - a. Check level of crossbar after each drilling operation. If the crossbar has come out of level, re-level and drill a new hole ~1" away.
9. Thread the 3/8"-16 self-tapping screws into the drilled holes.

Figure 10: Installing and leveling the crossbar



ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	GOOSENECK	11	2	5/8 in FLAT WASHER
2	1	ADJ CROSSBAR	12	2	5/8-11 NYLOCK NUT
10	2	5/8-11 x 7 1/2 HX HD BOLT	16	2	3/8-16 x 1/4 SELF TAPPING

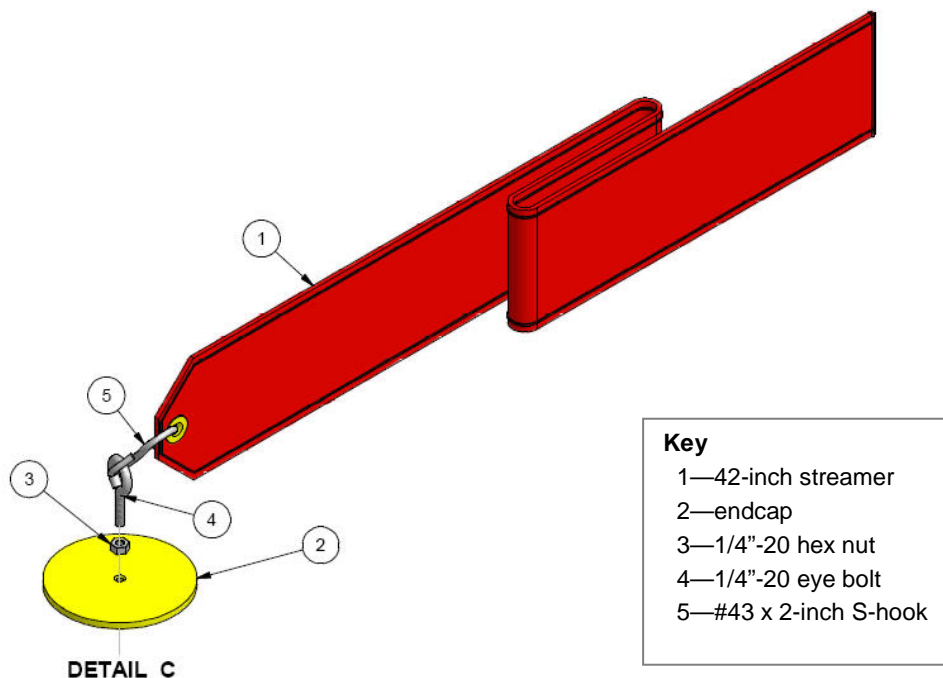
11 Install the Wind Streamers

Before installing the uprights, install the wind streamer following these steps (see **Figure 11**).

1. Hook one end of the #43, 2-inch S hook into the streamer eyelet and crimp the hook with pliers .
2. Hook the other end of the S hook into the 1/4"-20 eye-bolt and crimp the hook with pliers.

3. Thread the ¼"-20 jam nut onto the eye-bolt, and thread the eye-bolt into the upright cap.
4. Tighten the jam nut against the end cap.
5. Repeat the above steps for the other wind streamers.

Figure 11: Installing the wind streamers



12 Install the End Fittings & Uprights

Follow the steps below to install the end fittings and uprights (See **Figure 12**).

12.1 Preliminary Installation of First Upright and End Fitting

1. Insert one end fitting into one end of the crossbar.
 - a. It is recommended that you lubricate the end fitting and the inside of the crossbar with white lithium grease.

2. Rotate end fitting such that the upright insert is pointing downward at about a 45-degree angle.
3. Lift one upright over the upright insert on the end fitting.
4. Install a 1/2-13 x 5-inch bolt, a 1/2" washer and 1/2-13 nut in through the upright and pre-drilled hole in the upright insert.
5. Rotate the end fitting until the upright is vertical and install the anti rotational bolt in the crossbar along with the 1/4-20 x 1/4 in set screw to lock it in position (See Figure 14). It is recommended that you use an Antiseize Lubricant on both the anti rotation bolt and the set screw.
6. The end fittings are adjustable, spaced 23'-4" between uprights for High School play and 18'-6" between uprights for College play. Start by inserting the end fitting into the crossbar to the College position measuring 5 inches between the inside on the upright to the outer edge of the Crossbar.(see Figure 13). This should give you 18'-6" between the inside edges of both uprights suitable for College play.
 - a. Again it is recommended that the end fitting and the inside of the crossbar be lubricated with white lithium grease.
 - b. Use a rubber mallet if necessary to move the upright in or out as needed.
7. Plumb the upright/end fitting in two directions: front to back (perpendicular to goal line) and side to side (parallel to goal line).
 - a. Use the two set screws in the upright to adjust and maintain the plumb of the upright in the direction parallel to the goal line (DO NOT DRILL HOLE IN UPRIGHT INSERT YET).
8. Drill a 1/2" hole in end fitting using the hole in the crossbar closest to the gooseneck as a guide.
 - a. Use of a 17/32" transfer punch to center hole is strongly recommended.
 - b. It is recommended that you pilot the hole with a 3/16" bit, step up to a 3/8" bit and finish with a 1/2" bit.
 - c. To ensure proper alignment of holes, do not try to drill all the way through both faces of end fitting at once. Instead drill from each side of end fitting and check for plumb after each drilling operation.
9. Insert a 1/2-13 x 7 1/2 inch-long hex head bolt through the hole in the crossbar and end fitting. Install two 1/2-inch washers and 1/2 -13 nut and tighten.

12.2 Installation of Second Upright and End Fitting

1. Repeat steps 1 through 9 of section 12.1 for the other end fitting and upright.
2. Confirm level of crossbar and plumbness of both uprights, adjust as necessary.
3. Drill second hole in end fitting in manner described above, using the other hole in crossbar as a guide.
4. Install 1/2-13 x 7-1/2" hex bolt, washers, and nut.
5. Confirm level of crossbar and plumbness of both uprights, adjust as necessary.
6. Drill second hole in upright insert in manner described above, using the remaining hole in upright as a guide.
7. Install 1/2-13 x 5" hex bolt into hole.

12.3 Complete Installation of First Upright and End Fitting

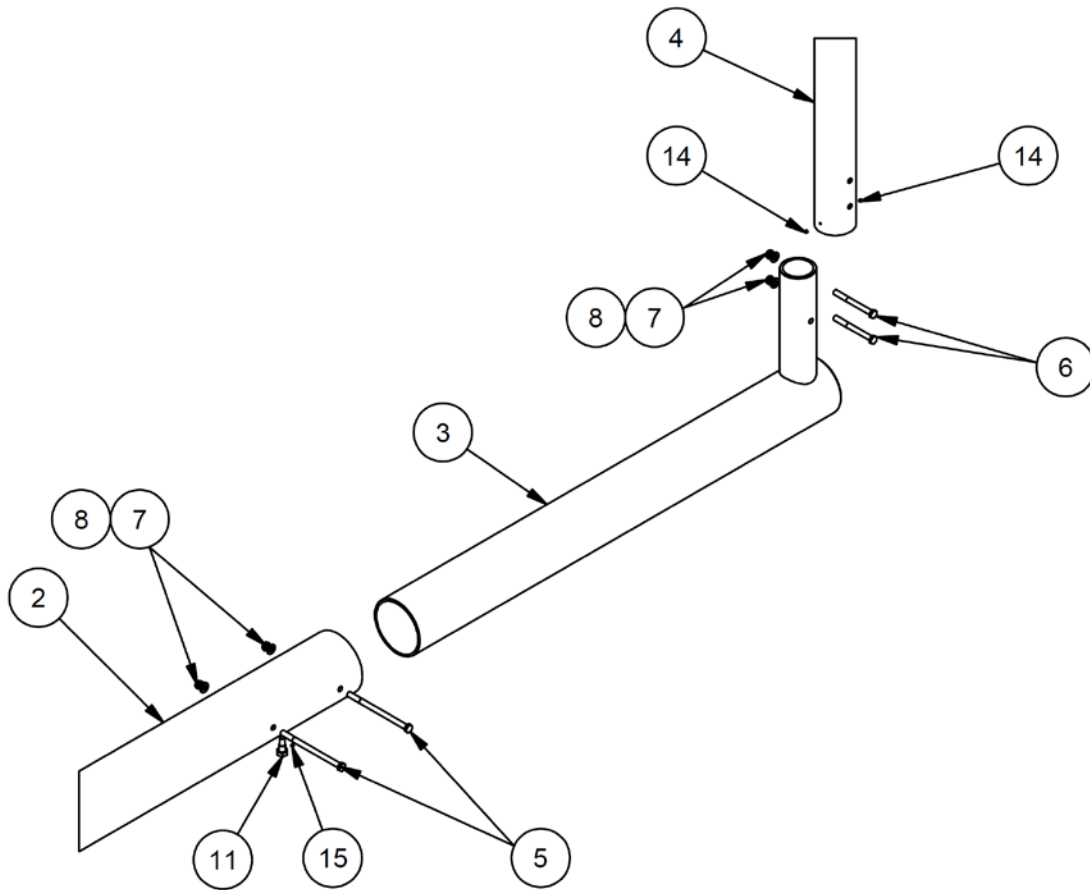
1. Confirm level of crossbar and plumbness of both uprights, adjust as necessary.
2. Repeat steps 3 through 7 in section 12.2 above for other upright and end fitting.
3. Tighten all bolts in end fittings and uprights as much as possible.

12.4 Adjust End Fitting to High School Position.

1. Working with one end fitting at a time, remove the 7 1/2 in bolts that were installed to lock the end fitting into place at the College position.
2. Pull the end fitting out so that the inside of the upright measures 34 inches to the outer end of the crossbar (See Figure 13). Note that the anti rotation bolt will hold the upright vertical but the end fitting will go out further than the 34 inches.
 - a. Use a rubber mallet if necessary to get the end fitting started or to make small adjustments.
3. Check that the upright is still plumb once at the 34 inch position. Follow the procedures in Section 12.1 Steps 8 and 9 to install the 7 1/2 inch long bolts at the High School position.

4. Now go to the other end and install the upright to the High School position repeating the procedures as outlined in Section 12.4 numbers 1 through 3.

Figure 12: Installing End Fittings and Uprights



ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
2	1	ADJ CROSSBAR	7	8	½-13 NYLON LOCK NUT
3	2	END FITTING	8	8	½ in FLAT WASHER
4	2	20' UPRIGHT	11	2	ANTI ROTATION BOLT
5	4	½-13 x 7 ½ In HX HD BOLT	14	4	¼-20 x 1/4 in SET SCREW CONE POINT
6	4	½-13 x 5 in HEX HEAD BOLT	15	2	¼-20 x 1/4 in SET SCREW NYLON TIP

Figure 13 Upright Spacing

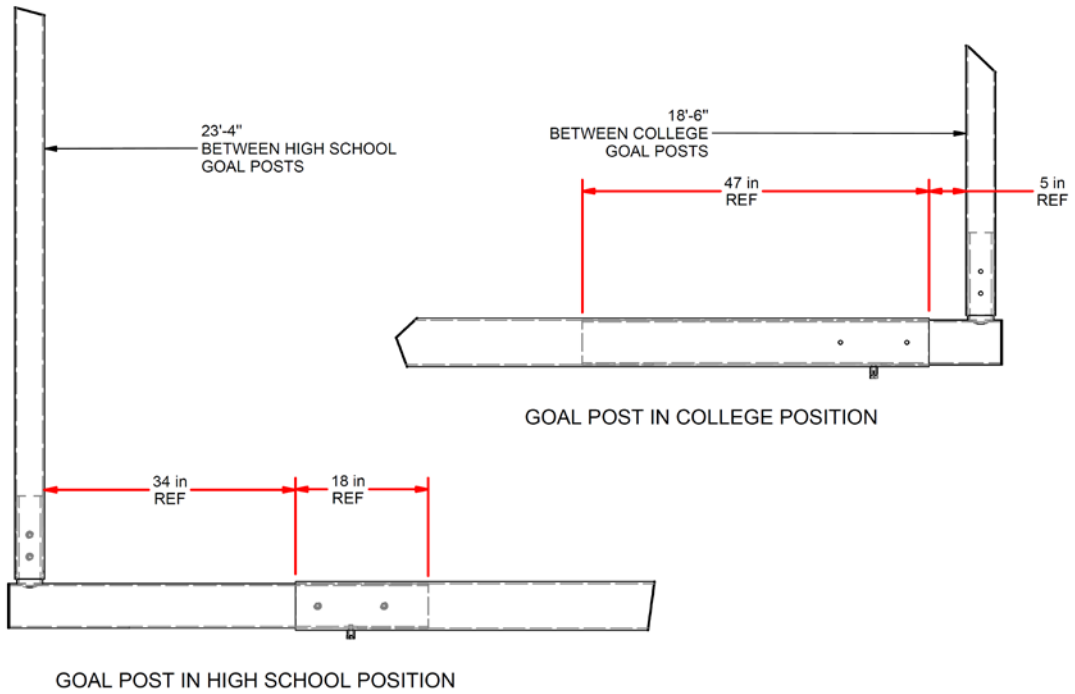
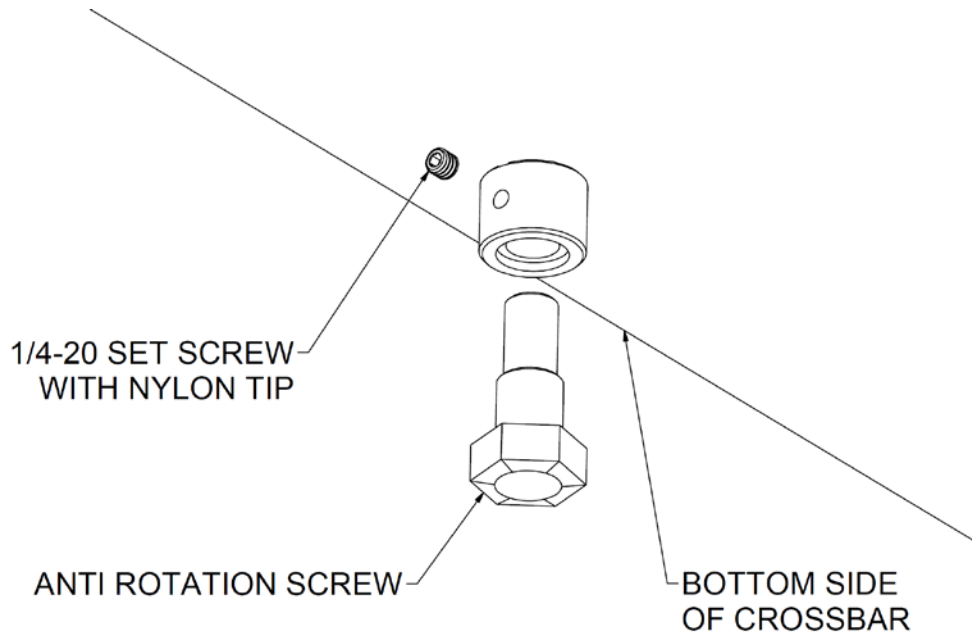


Figure 14 Anti-Rotation Screw



NOTE: It is recommended that you use an Antiseize Lubricant on both the anti rotation screw and the set screw.



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