

# Murphy's Aluminum Fence Laws

**WamBam**  
The only fence that's fun to install.

*"How to Fight with Murphy  
...and WIN!"*

**REALLY**

^ Important stuff  
to know about  
installing your  
WamBam fence.

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# Murphy's Aluminum Fence Laws

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# Welcome to the World of WamBam

**WamBam**  
The only fence that's fun to install.

## A Word From Clever Joe

Howdy again! I'm assuming that you've read over your specific fence and gate instructions before getting this far. If not, please do so.

My intent with the following information is to try and help you foresee some of the possible problems you may encounter with your fence project. After almost twelve years of installing fence the WamBam way, I've seen almost every scenario under the sun. Emphasis on "almost". Solutions to the most common problems I've encountered are outlined in the following pages. If you have a unique problem that we do not cover, please feel free to call us. We'd love to hear from you!



## What's Murphy's Law?

Murphy's Law is an old adage that basically means "anything that can go wrong generally does". Unfortunately, because we live on planet earth (and not in heaven) it applies to both you and I. Another old saying goes like this, "fail to plan, plan to fail". Please take the time to plan your fence project. Walk your fence line. Re-walk your fence line. Planning around potential problems before you get to them allows for options and no unpleasant surprises. If you don't see any obvious problems, you are not home free. Odds are that you could run into some obstructions under the ground, such as rocks, utilities or otherwise. If you are able to complete your fence project without running into one snag or another, be grateful!

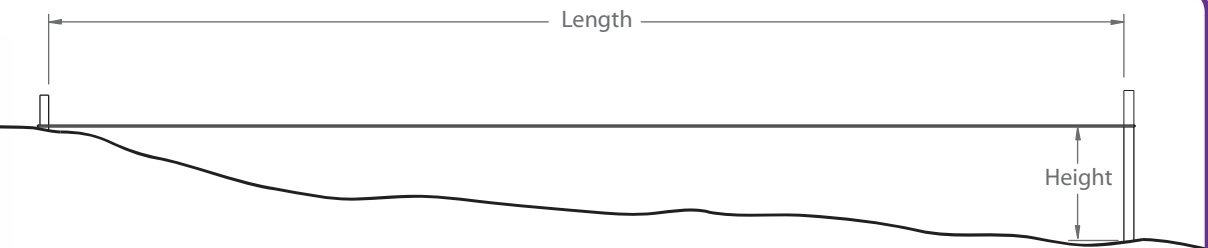
## One Last Word

I have built this information around installing a Slim Jim fence style. You may be installing a different fence style. The principles (with a few more or less nuances), are the same for all aluminum fences. All right...let's go!



### -1- How do I determine whether or not my fence line has a slope?

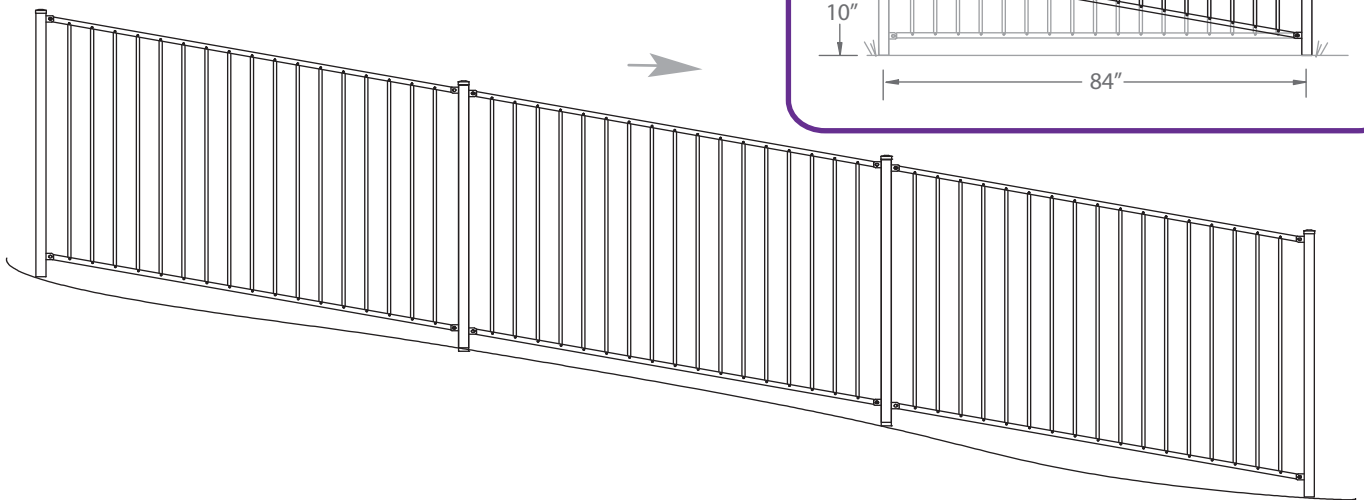
Run a level string line from the start to the finish of your fence line. This will help you understand how much of a fall your fence line has. You will need to compensate for this difference in height either equally throughout your fence panels, or whatever is most visually pleasing to you.



*Often the ground slope of your fence line will be much greater than you think it is.*

### -2- How do I deal with sloping ground?

Our aluminum fence systems are designed to be installed level or sloping with the grade as per the illustration below. This is commonly called rackable. The panels can rack about 10" over a 7' wide panel.

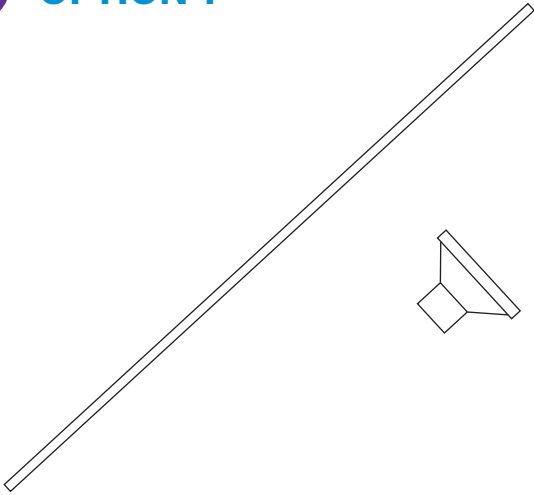


-3-

## How do I determine if obstructions exist underground?

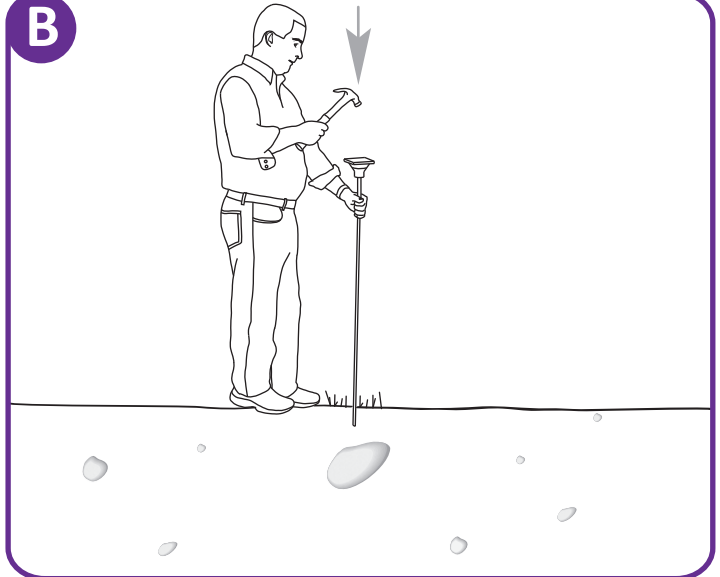
If you're at all suspicious that you might run into some underground obstructions when installing your pipe anchors, we strongly encourage you to do some underground "investigating" prior to ordering your fence.

### A OPTION 1



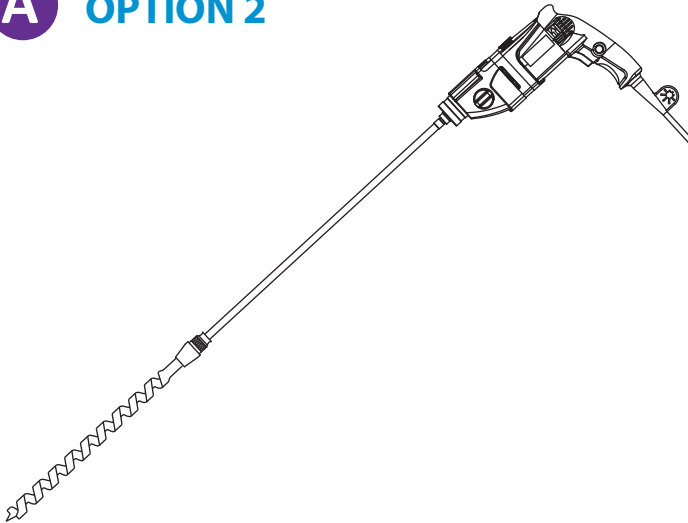
Use a 1/4in. to 1/2in. thick round steel re-bar with a pounding cap or equivalent. These materials can be purchased at your local hardware store. A 36in. to 42in. length can be purchased for less than \$10.00

### B



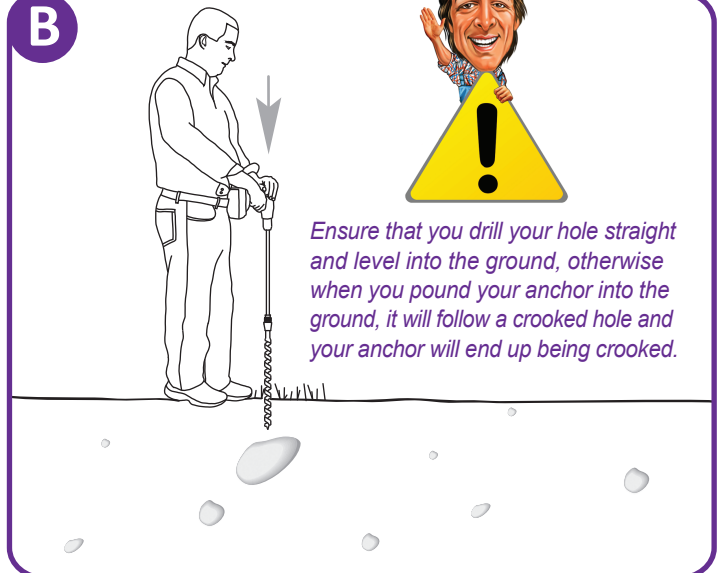
After identifying the future location of your anchors, use the steel bar to probe the ground accordingly.

### A OPTION 2



Use a 1/2in. or 3/4in. diameter x 18in. auger bit with an 18in. extension (both available at most hardware stores). Preferably use a pistol style electrical drill (heavy duty cordless may even be acceptable in some conditions).

### B



*Ensure that you drill your hole straight and level into the ground, otherwise when you pound your anchor into the ground, it will follow a crooked hole and your anchor will end up being crooked.*

After identifying the future location of your anchors, use the drill to probe the ground accordingly.

-4-

## How do I deal with rocks and other underground obstructions?

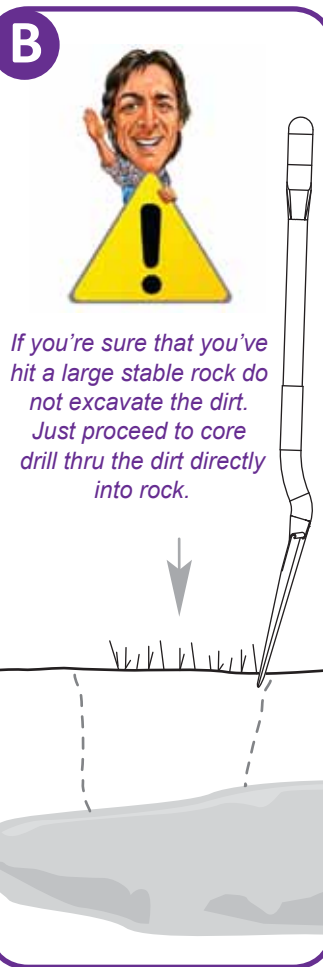
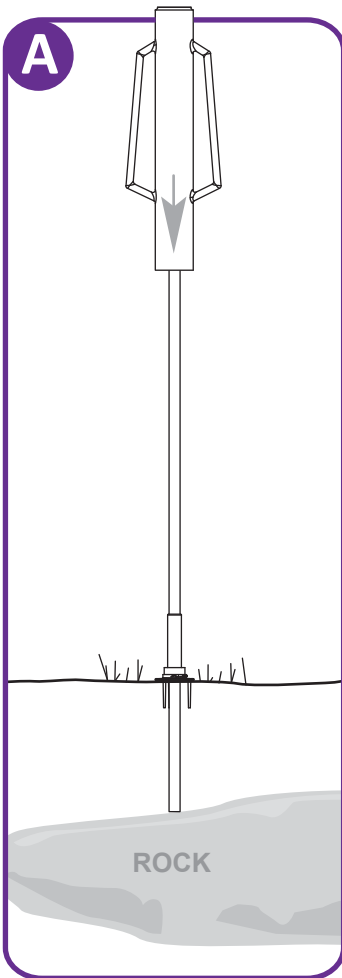
By far the most frustrating part of installing a fence is running into unforeseen obstacles under the ground. It doesn't matter if you go the WamBam way or the traditional way...a big rock or tree root is going to cause you grief.

### Large Rocks?

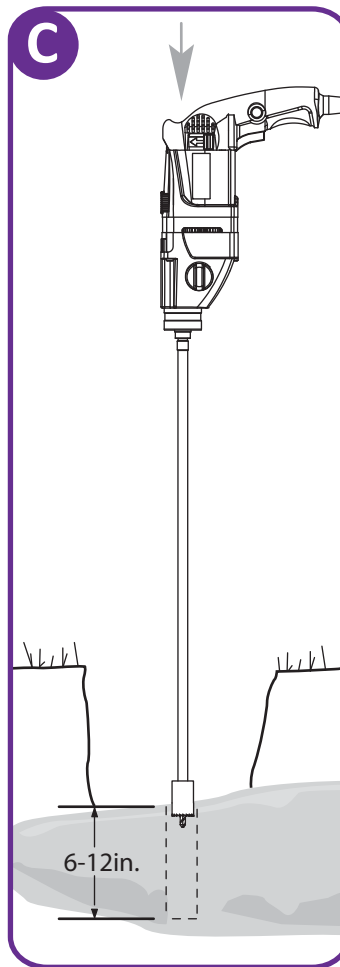
If the rock is large and stable enough it may be the perfect foundation to support your fence. We would recommend a technique called core drilling to mount your anchors or using our Universal Surface Post Mount (see Option #2).



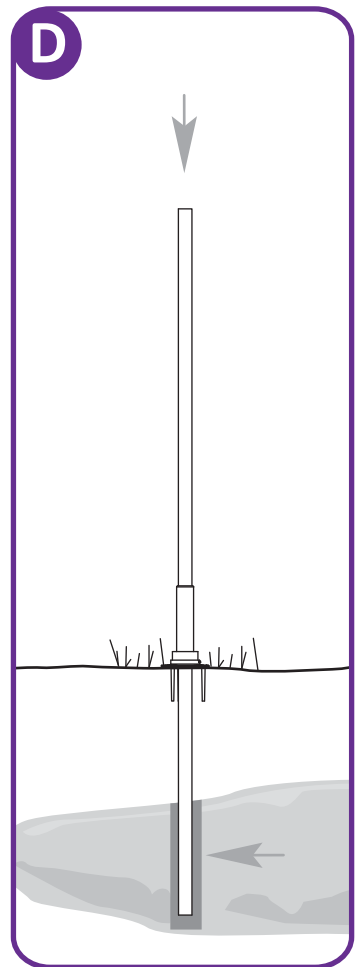
### OPTION 1 - CORE DRILLING



Excavate dirt to determine how large of a rock you have hit.

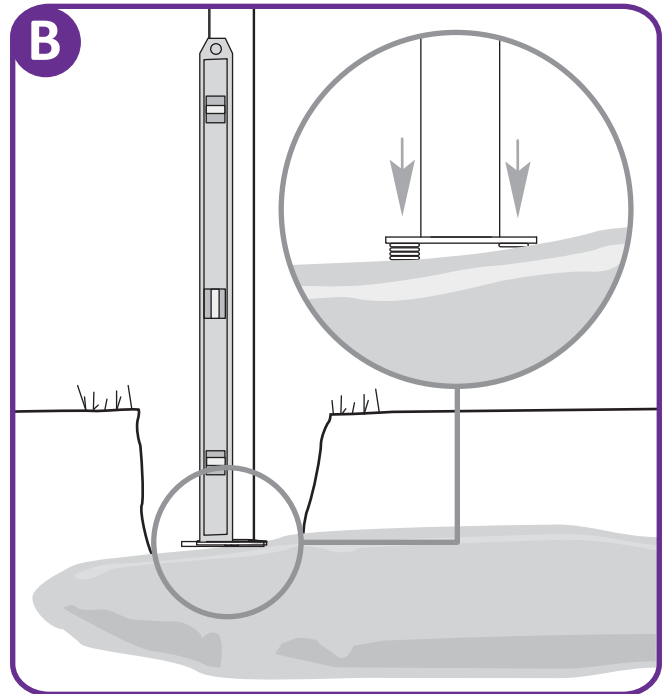
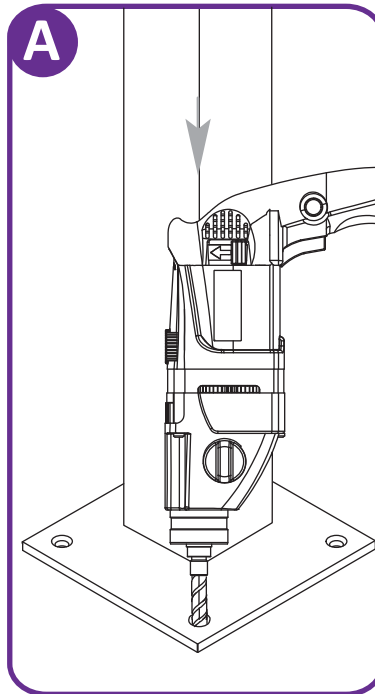
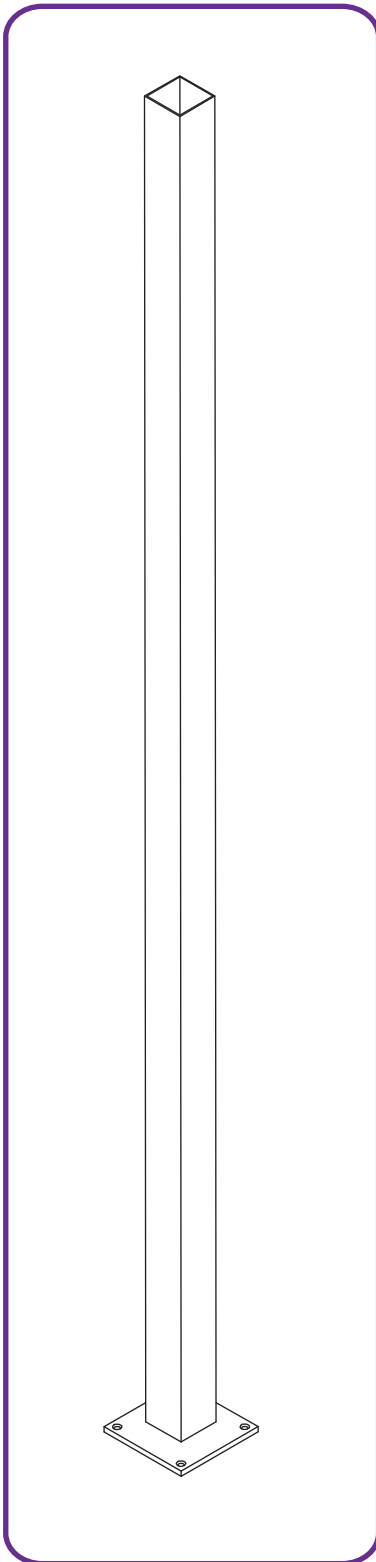


Use a core drill (a powerful drill designed to drill holes in solid rock), to create a 1in. to 1.25in. diameter hole approximately 6in. to 12in. deep.

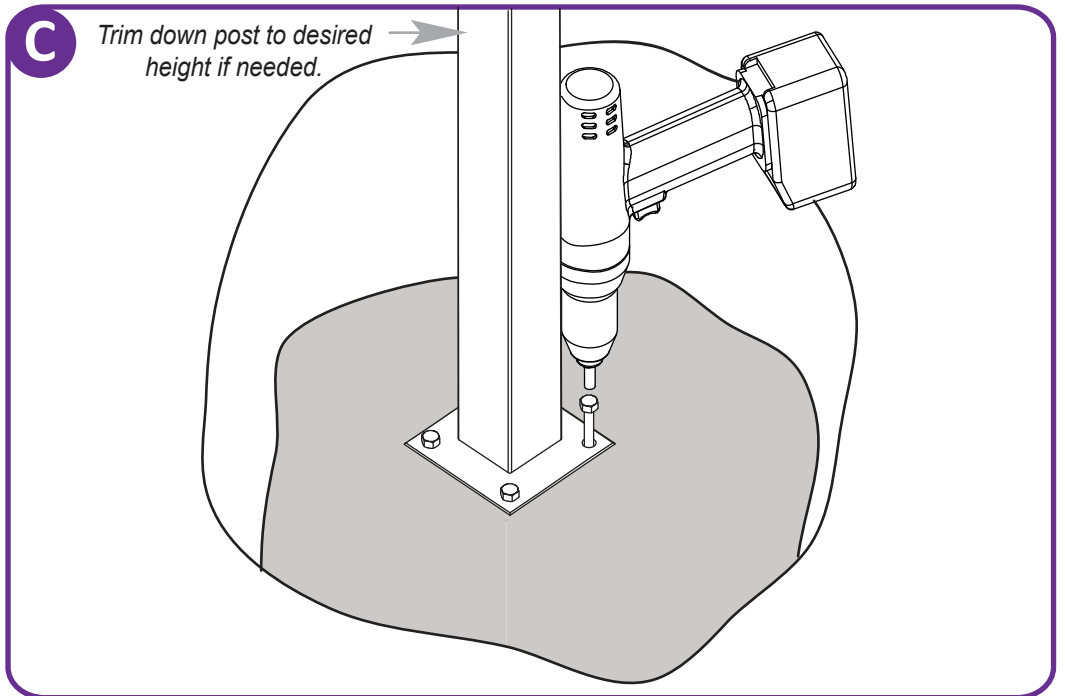


Fill hole with liquid concrete, or wedge the anchor directly into the hole if it is tight enough to create solid compression.

## OPTION 2 - UNIVERSAL SURFACE POST MOUNT



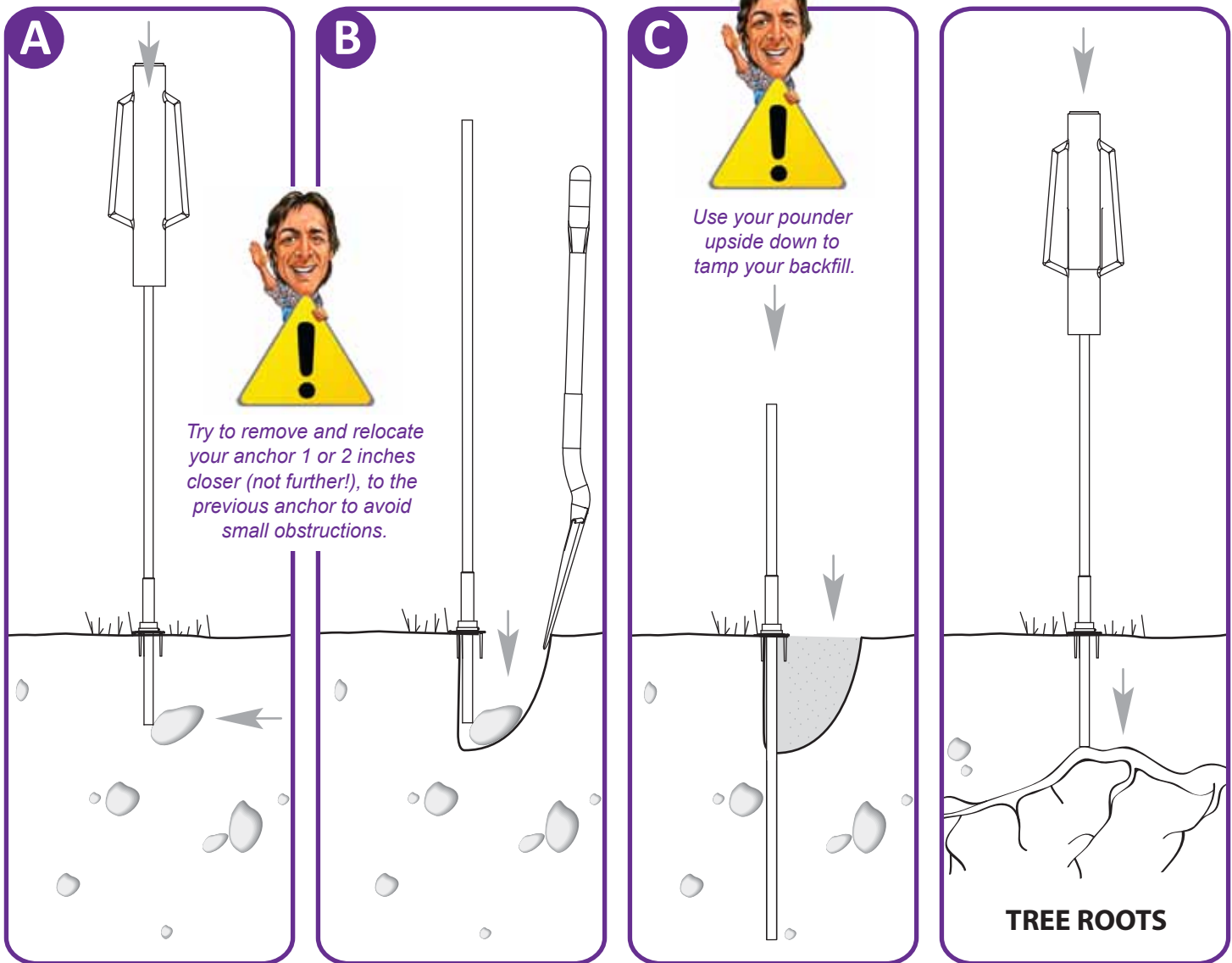
- A** - Using a hammer drill, create the holes necessary for the anchors. You may want to enlarge the holes on the base plate and use expanding bolts to create a stronger connection than the regular fasteners included.
- B** - Level Universal Surface Post Mount with galvanized washers (as shown above).



- C** - Mount post directly to rock.

## Small Rocks?

Your anchor will penetrate smaller intermittent stones (less than 1 inch) with relative ease. For larger rocks, dig them out of the way much in the same way if you were installing a traditional fence footing. Depending how far they are under the surface will determine if you can backfill with granular material (gravel that will compact) and re-drive your anchor into the ground.



You may need to excavate and dig out the small rocks to gain penetration.

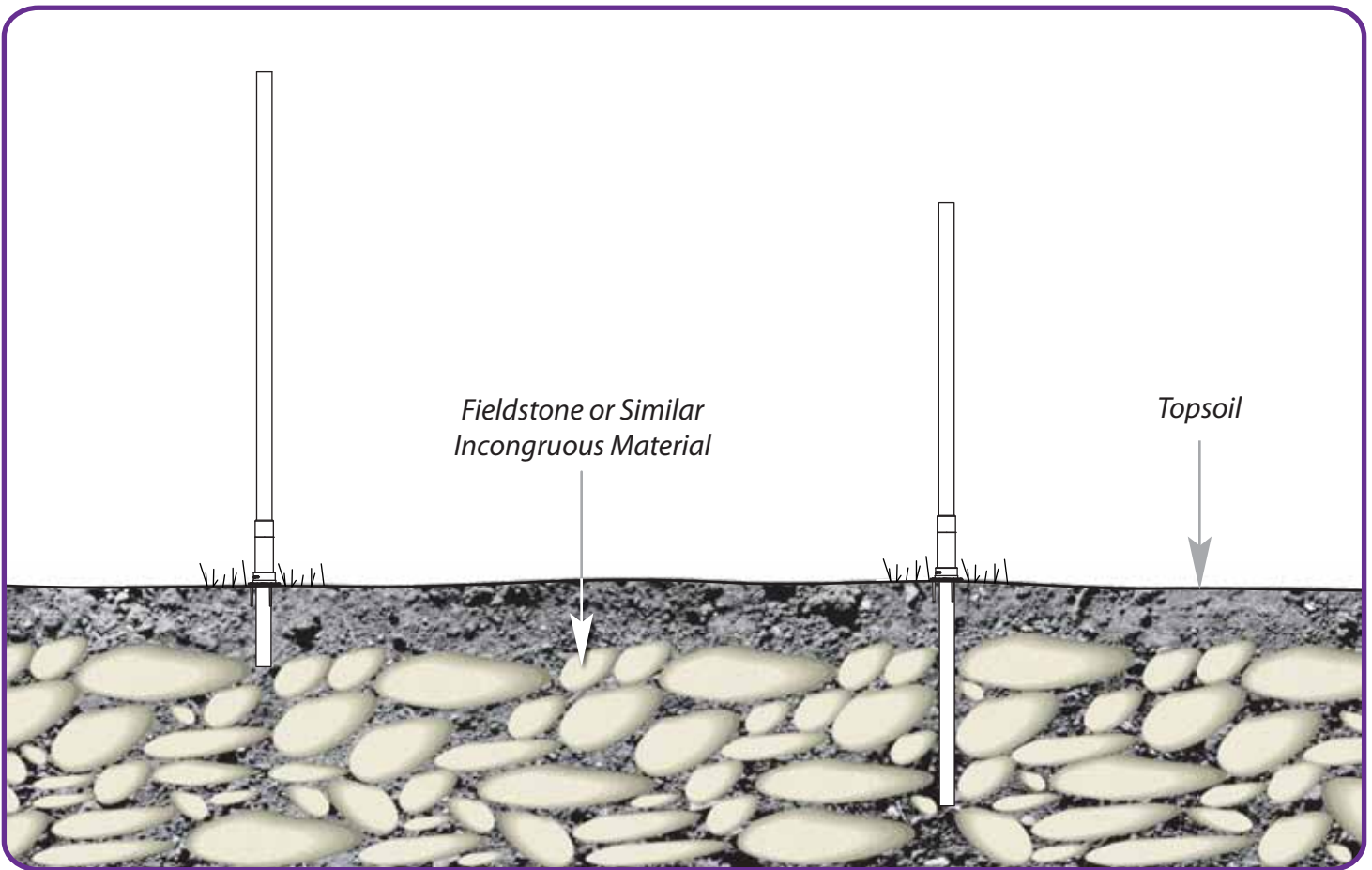
Backfill with material (dirt or gravel) that will compress tightly around the anchor and provide adequate stabilization.

## Tree Roots?

The anchor will slice through roots up to about .75in. in diameter. For larger tree roots, either relocate the anchor (if possible) or excavate and cut out the section of offending root.

## What about ground that has been backfilled?

If your ground has been backfilled with chunks of concrete, field stone or any other materials that can create air pockets under the ground, the WamBam system is not the way to go.

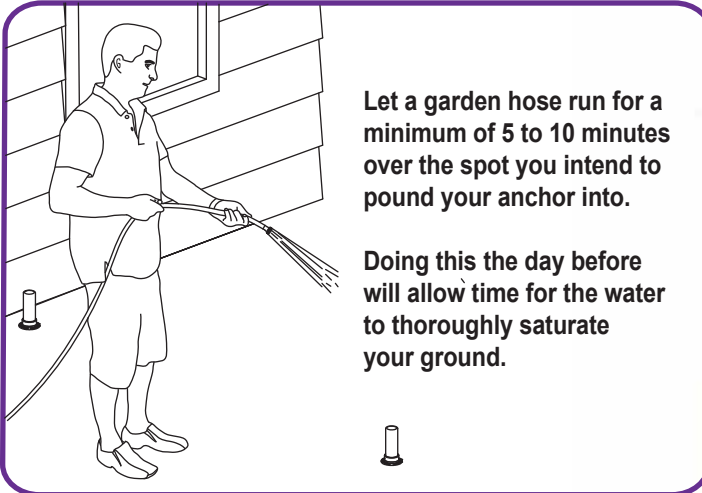


Our system is ideally designed for virgin soil like clay. Underground pockets of air created by incongruous materials will not provide enough structural integrity for our pipe anchors.

If your ground has been backfilled with clean fill, but has not been mechanically compacted or given enough time to settle, this could pose problems as well. In these cases we would recommend you dig traditional concrete footings.

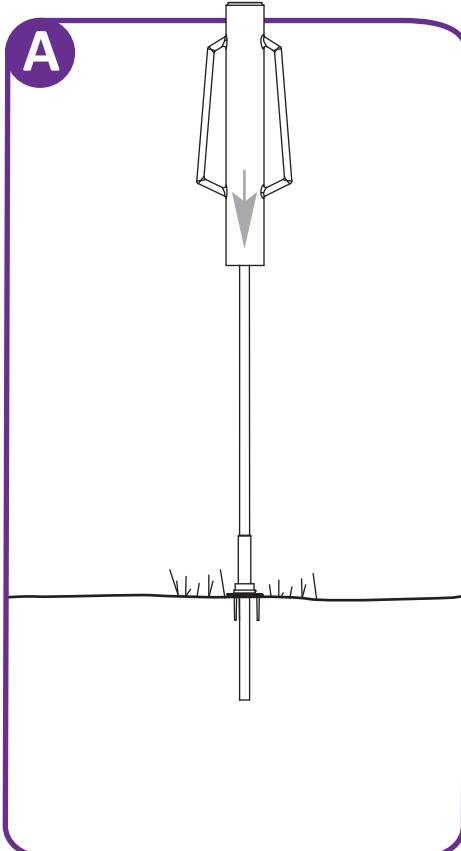
## **-5-** How do I deal with extremely hard or dry ground?

### **OPTION 1** - Use Water to Loosen Soil

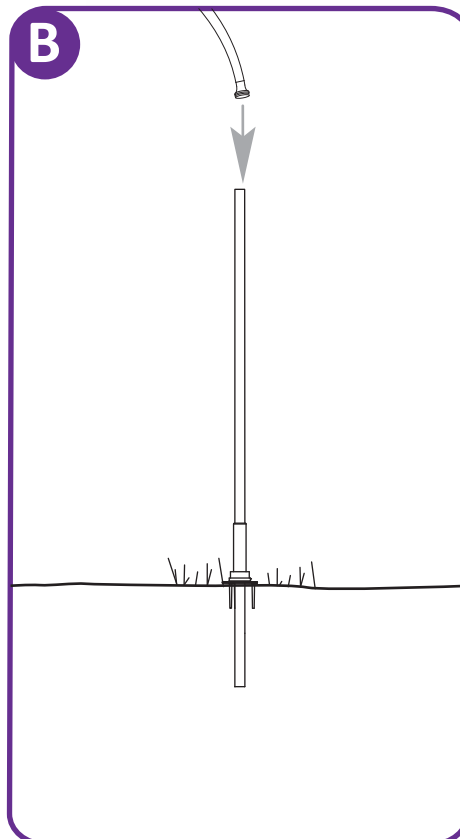


*Outlined below are some additional things you can do if you still find pounding your anchor is going too slow.*

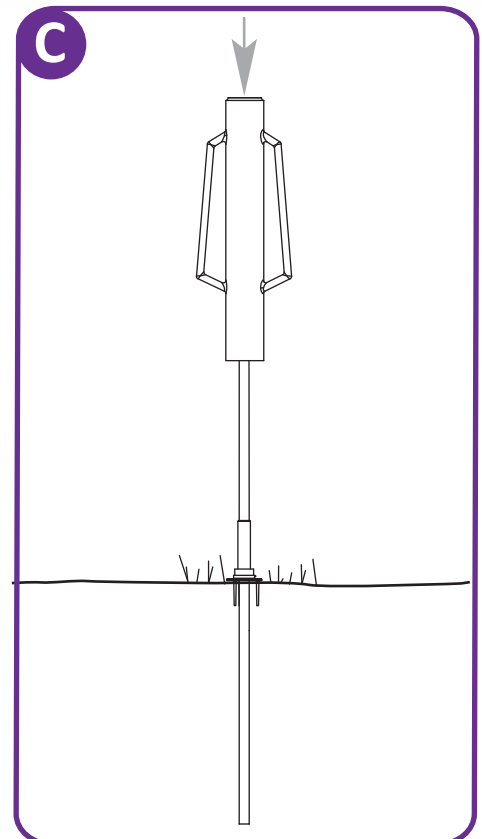
### **OPTION 2** - Use Concentrated Water to Loosen Soil



**Pound anchor into ground as far as possible.**

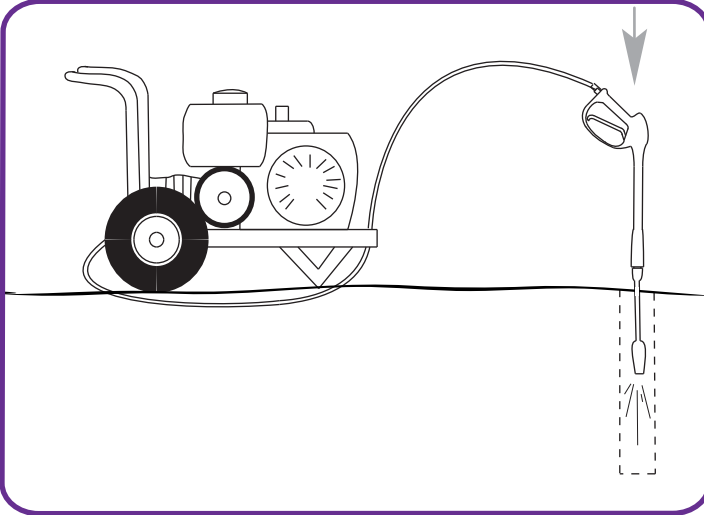


**Fill anchor to the top with water and let sit until water is completely drained.**



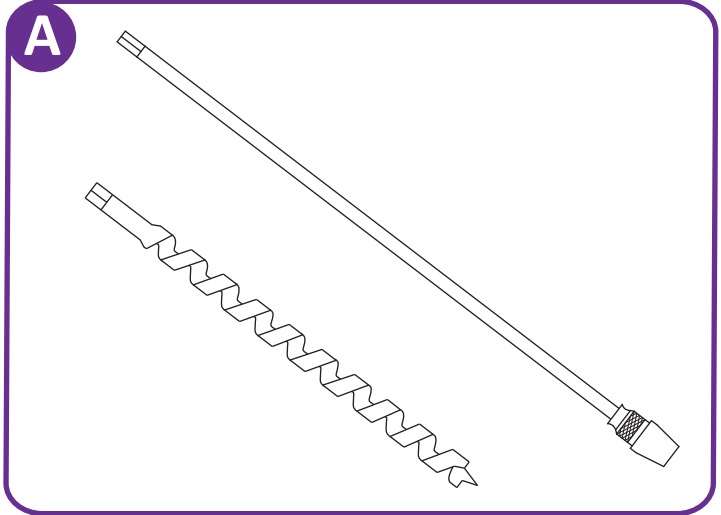
**Continue to pound anchor into ground and repeat steps at separate intervals as needed.**

### OPTION 3 - Use High Pressure Water to Loosen Soil

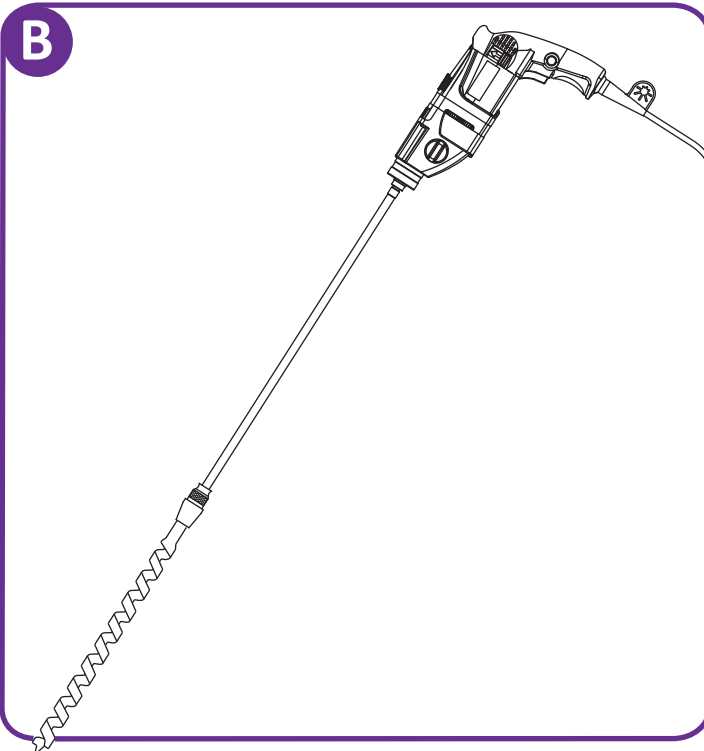


A powerwasher can optionally work well as a pre-drilling device into the ground in advance of the anchor being pounded in. Prepare to get messy even if you fashion a temporary shield. Do not go any deeper than about 24in. using this technique. The anchor needs to penetrate virgin and undisturbed soil beneath the pre-drilled hole, much like a screw being pre-drilled into hardwood.

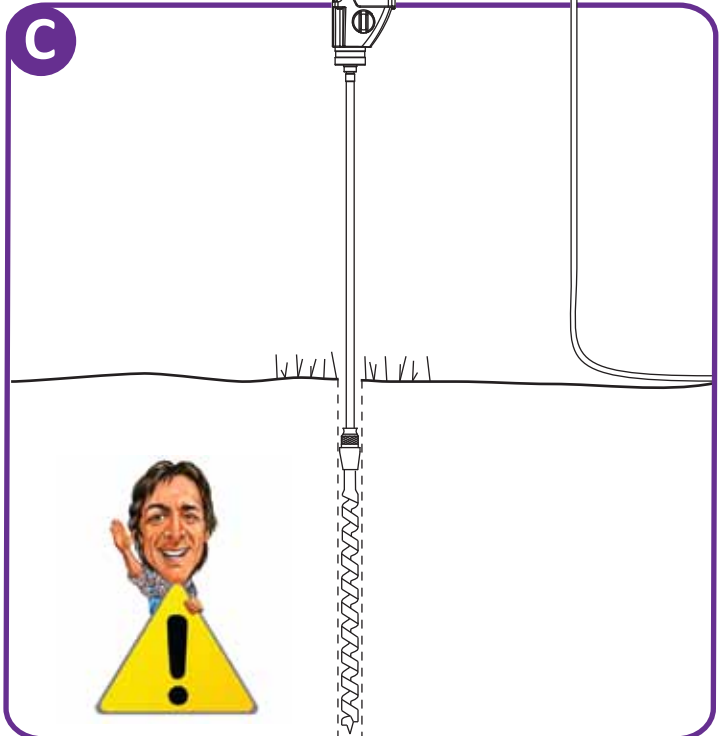
### OPTION 4 - Pre-Drill a Pilot Hole into the Ground



Attempting to pre-drill a pilot hole into the ground before pounding in your anchor may be a possible solution.



Use a 1in. diameter x 18in. long auger bit with an 18in. extension (both are available at most hardware stores). Preferably use a pistol style electrical drill (heavy duty cordless may even be acceptable in some conditions).



Ensure that you drill your hole straight and level into the ground, otherwise when you pound your anchor into the ground, it will follow a crooked hole and your anchor will end up being crooked.

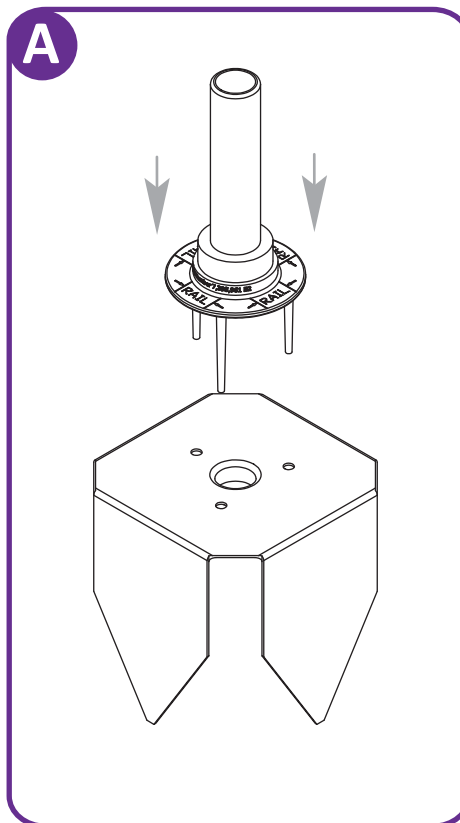
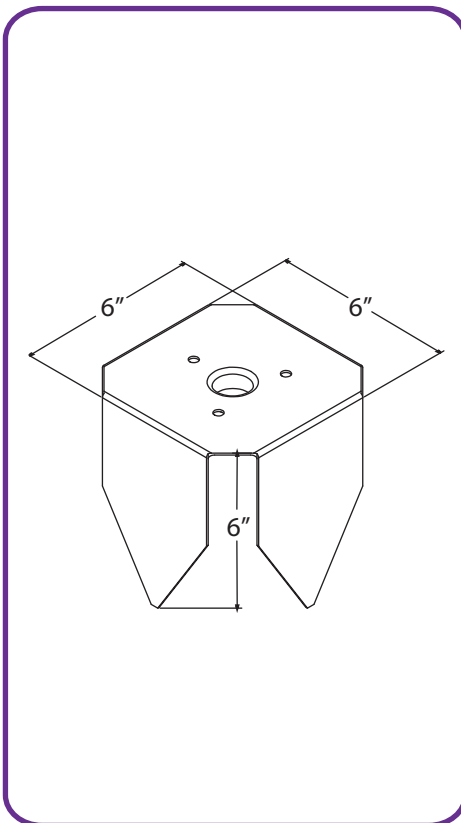
## -6- How do I deal with loose or disturbed soil?

Your pipe anchors, even when driven to the recommended depth of 42in., will have a structural problem if the ground around them is unstable. If your entire fence line is located in loose or extremely loamy conditions, you can install our fence system much like you would if you were installing a traditional fence with concrete footings. Unfortunately, you did not purchase our fence to do that. You wanted to avoid drilling, digging, cementing etc. However, maybe in the course of installing your fence, you've run across a few occasional spots in your fence line that have shifty soil conditions. The following illustrations outline three options to overcome those isolated spots.

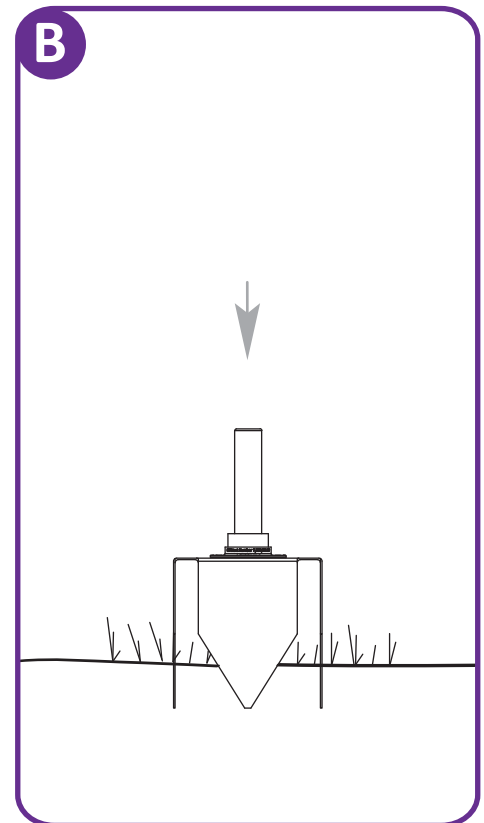


### OPTION 1

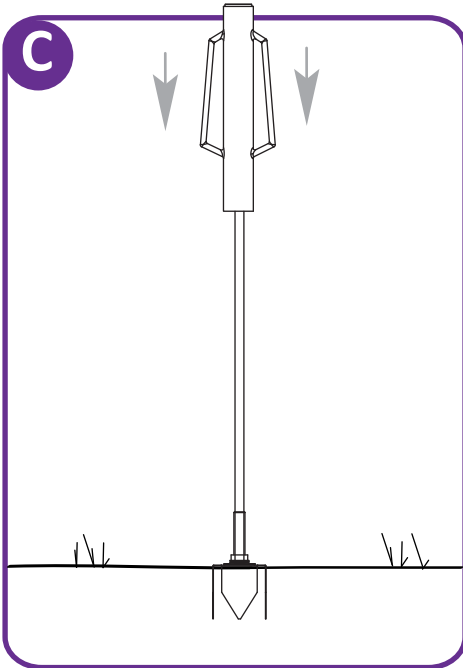
**Install Metal Post Stabilizers (purchase separately).**



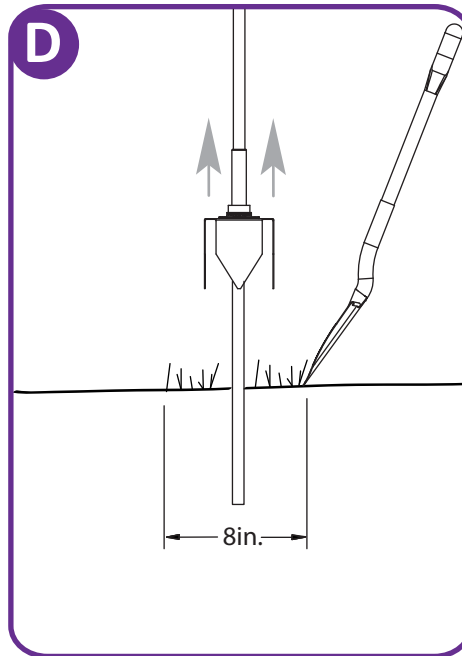
**Insert the three legs on the Anchor Positioner into the three holes on the Metal Post Stabilizer.**



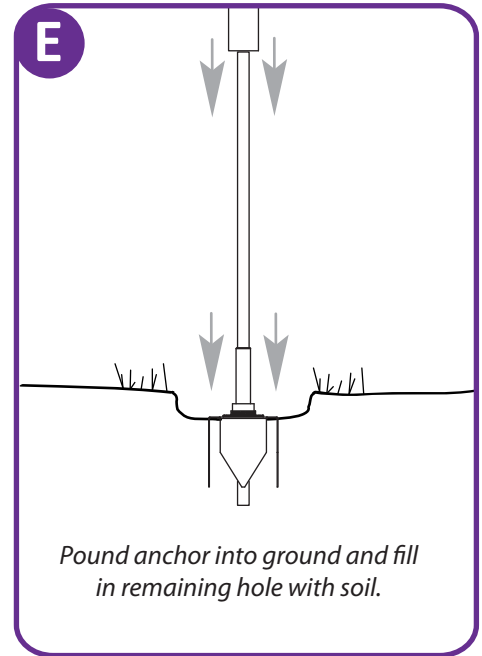
**Identify location and insert temporarily into the ground using hand force.**



Once position is identified insert your anchor and begin to pound into place.



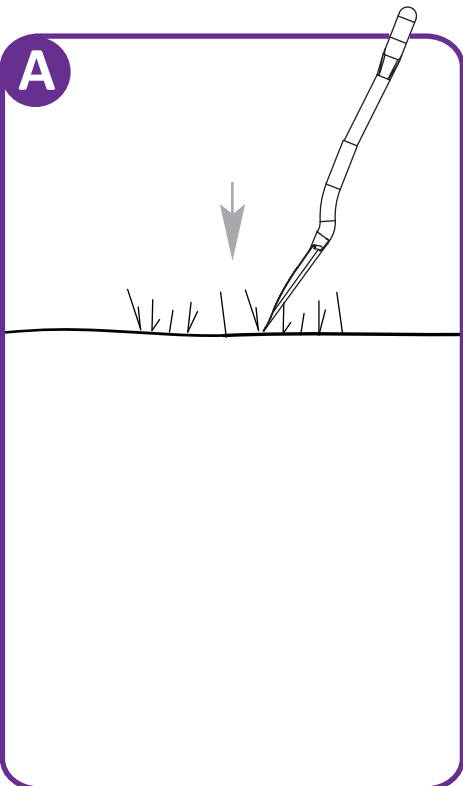
Remove 1in. to 4in. deep and 8in wide of soil underneath the metal anchor stabilizer.



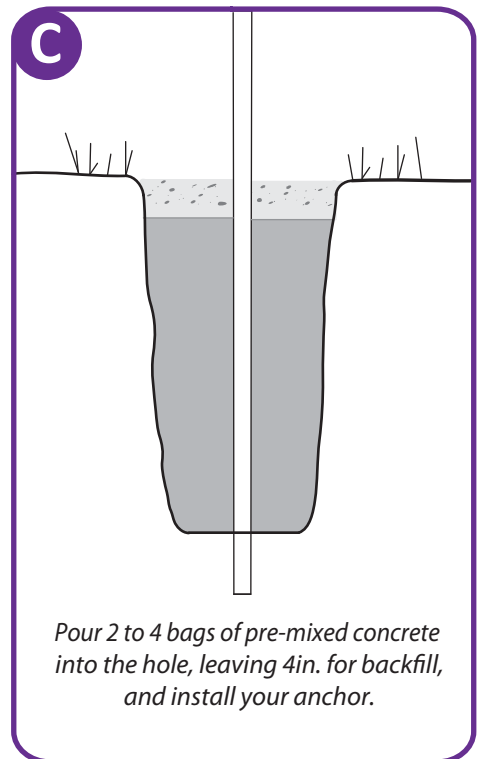
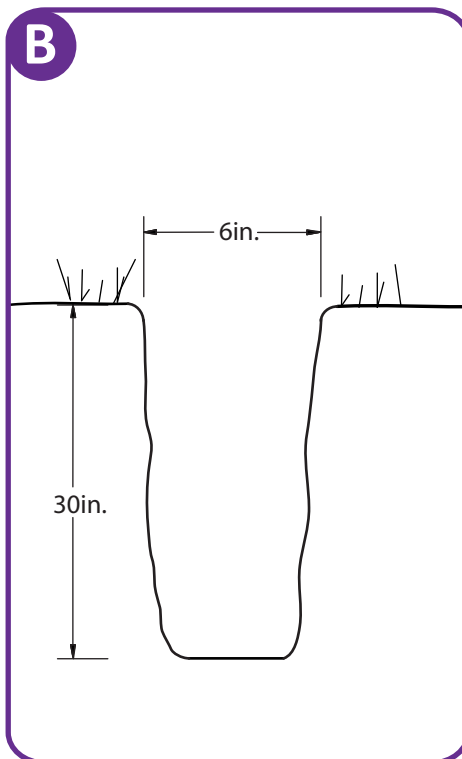
Ensure the entire unit is stomped or pounded tightly into the ground. Use a hammer on exposed metal edges if required. Proceed with installing your leveling donut and post.

## OPTION 2

Install a traditional concrete footing around your anchor.

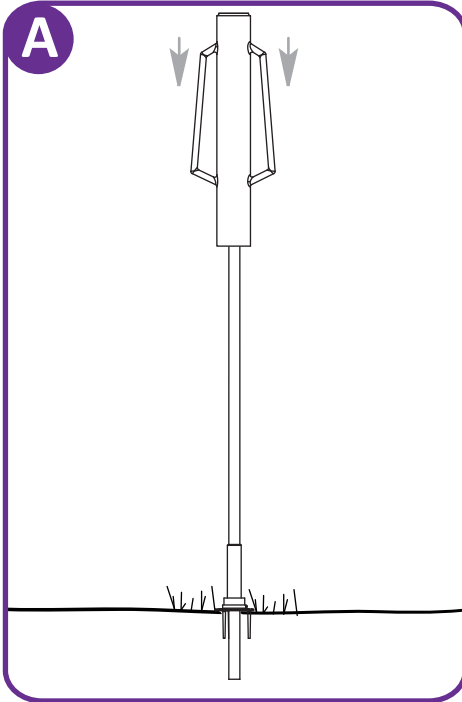


Dig hole 6 inches in diameter by 30 inches deep.

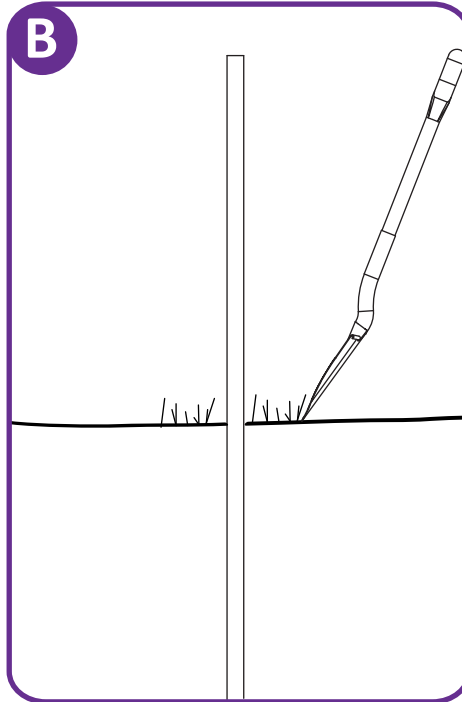


## OPTION 3

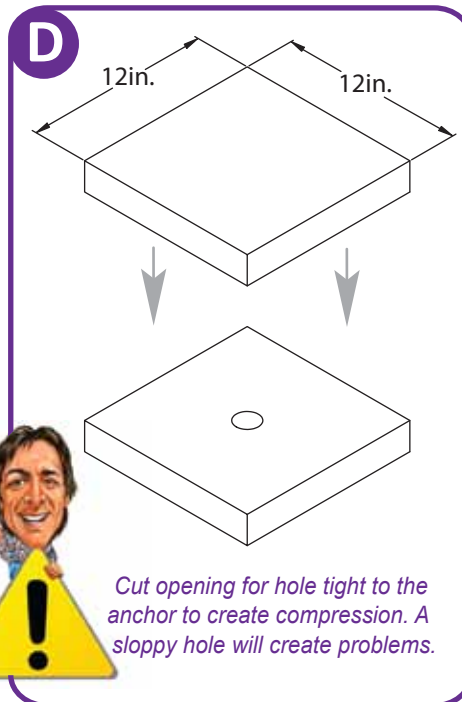
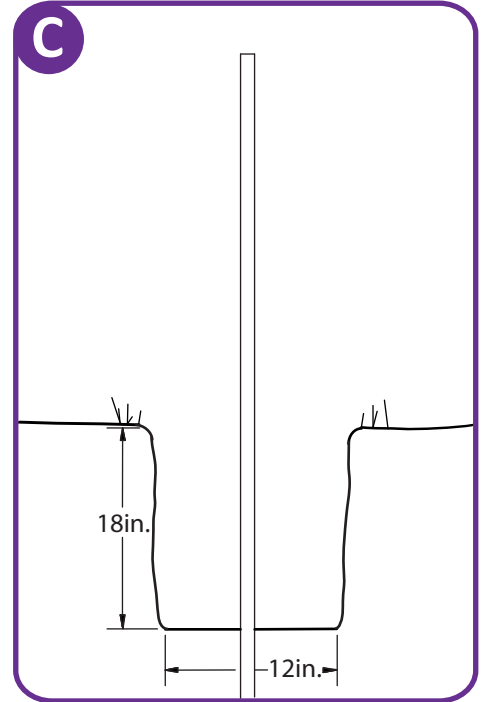
Use Styrofoam filler around your anchor.



WamBam your anchor into the suggested depth, either 36in. or 48in deep.

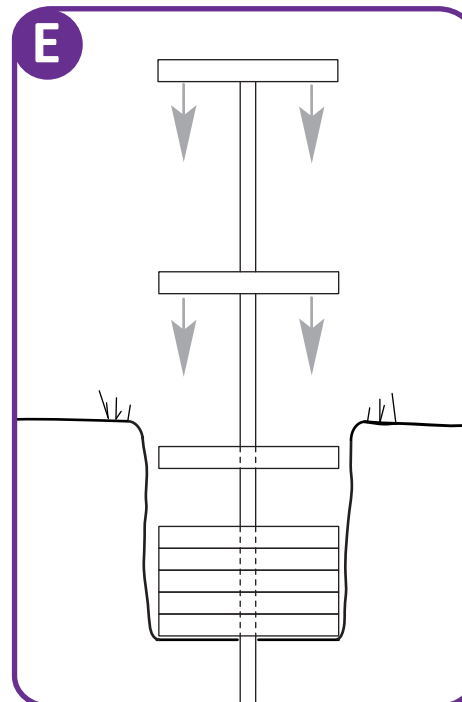


Remove anchor positioner and dig around the anchor a minimum of 18in. deep x 12in. square hole.

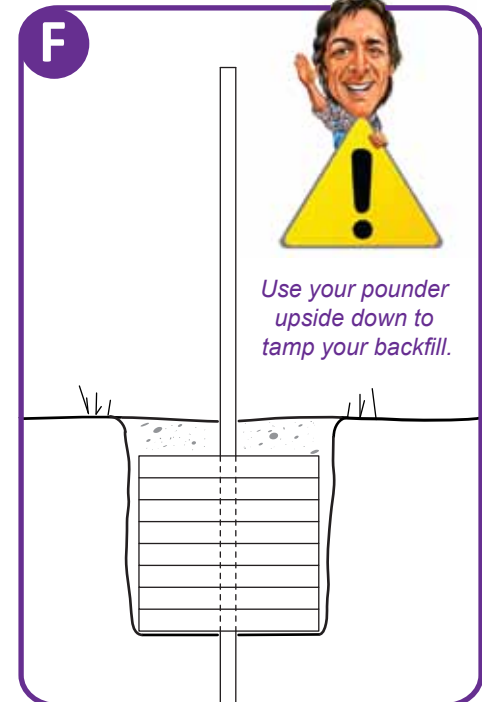


Cut 1 or 2in. Styrofoam into 12in. x 12in. square blocks and cut 1in. hole in the center.

(Purchase large Styrofoam sheets from BigBox store)



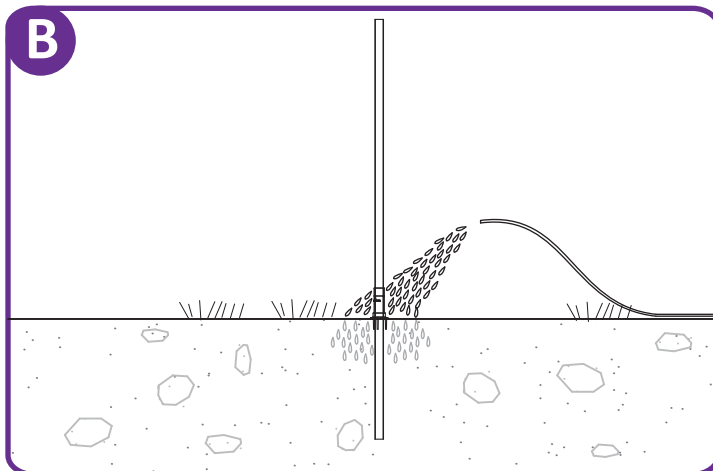
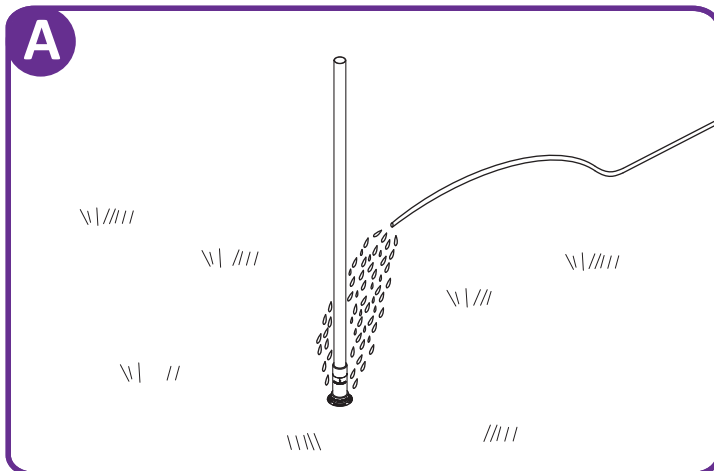
Load Styrofoam blocks over the anchor down into the bottom of the hole.



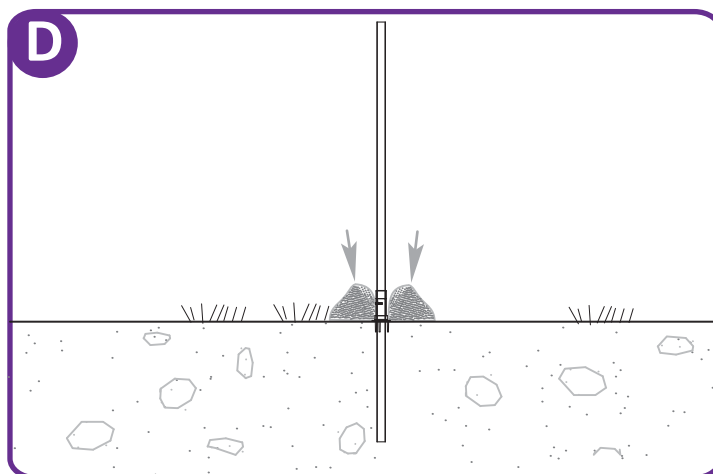
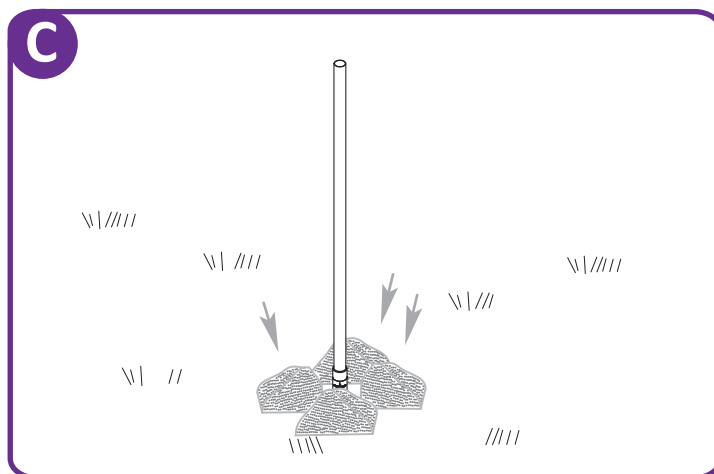
Fill in the last 3in. or 4in. with backfilled dirt.

## OPTION 4

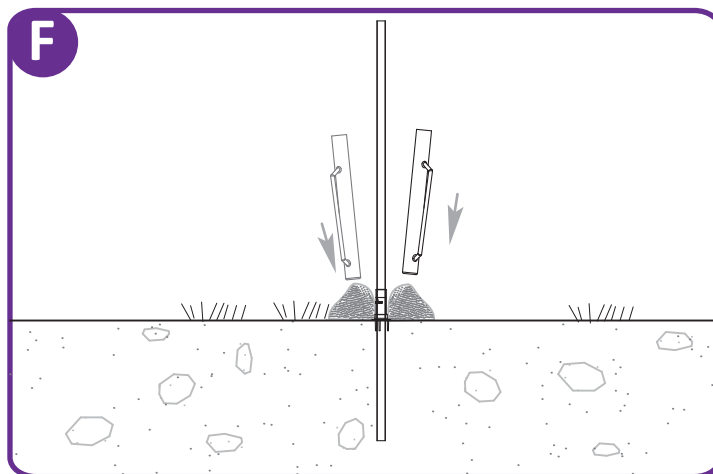
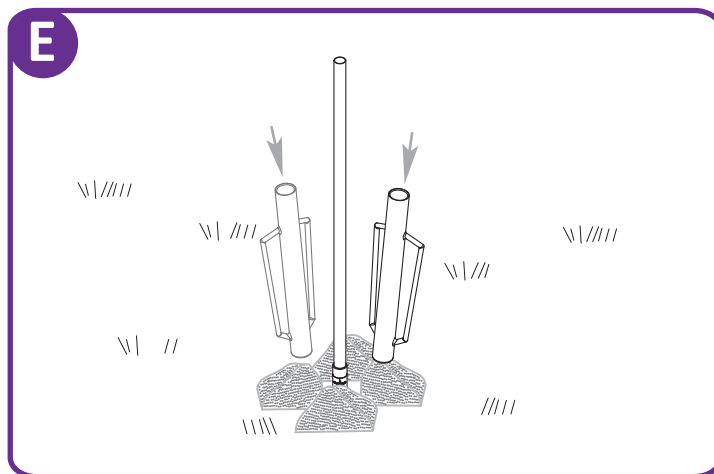
### Compact the Soil Around the Anchor



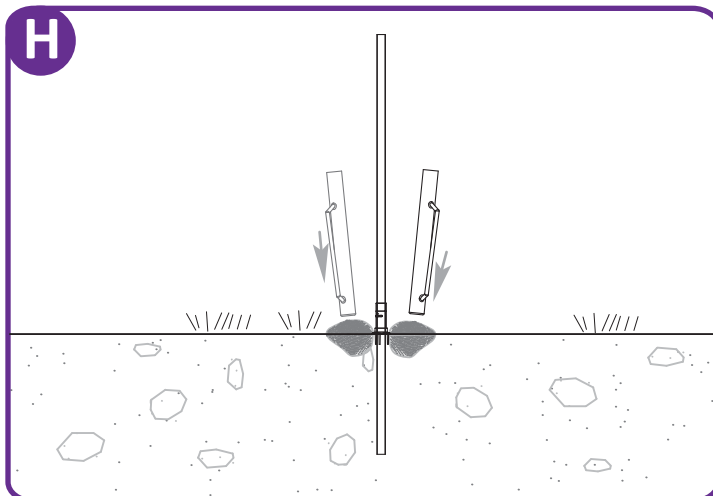
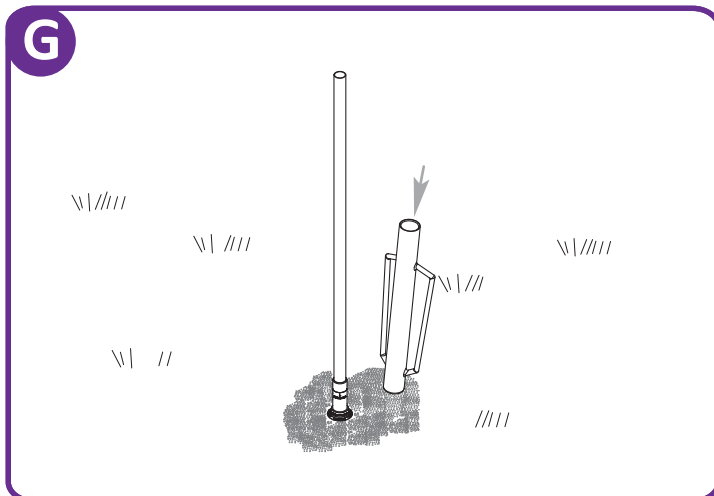
Ensure the ground around the anchor is moist to accelerate compaction



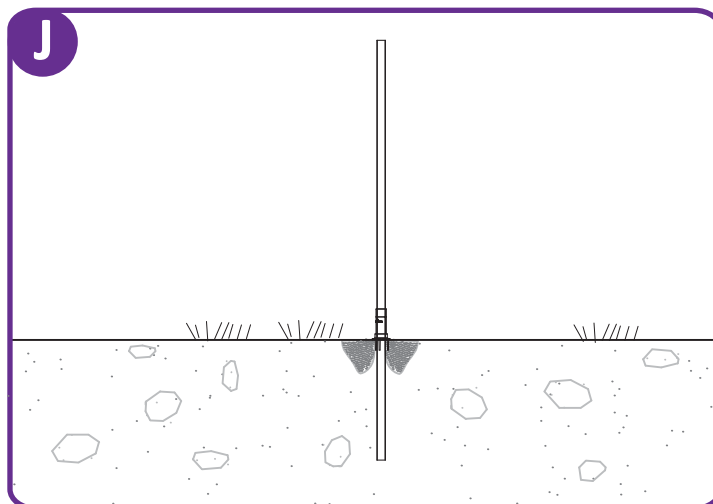
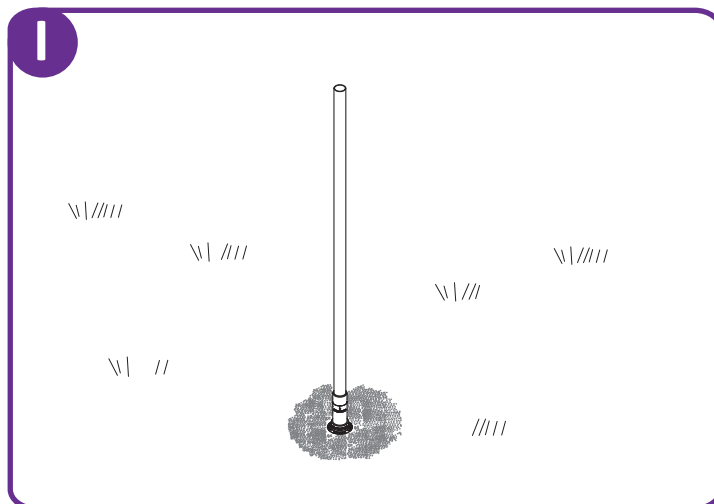
Add additional soil in a 10" to 12" diameter circle as necessary around the anchor.



Flip the post driver upside down to use as a compaction tool.  
A spud bar flipped upside down also works as a great compaction tool.



**Add additional soil and repeat as necessary. The intent is that the ground around your anchor should become very dense and well compacted.**



*Please Note:*

*This can also be done after your fence is installed if necessary.  
Ideally however, it should be done at the pipe anchor installation stage.*



**-7-**

## How do I compensate for anchors that have been pounded in severely crooked?

If your leveling donut will not allow for compensation of a severely crooked anchor, then you have at least two options:

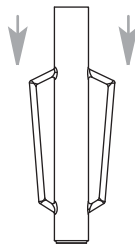
**A**

### OPTION ONE



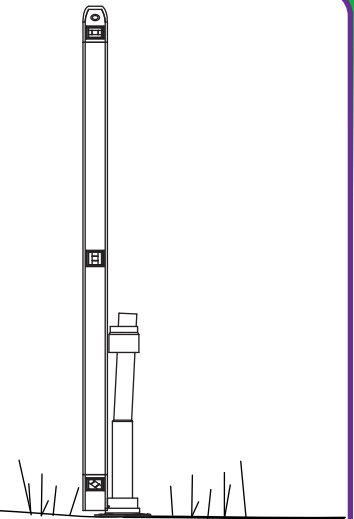
Use your pounder upside down, like a sledgehammer, as necessary.

**B**



16in.  
minimum

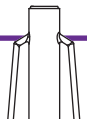
**C**



Continue to pound the anchor deeper into the ground than what we typically recommend. This corrective ability of your leveling donut is amplified the closer it gets to the Anchor Positioner.

### OPTION TWO

**A**



**B**



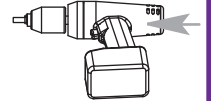
This technique should be used in isolated events. In other words, do not correct back to back anchors using this technique or you may compromise the integrity of your fence panel.

**A**

### OPTION THREE



**B**



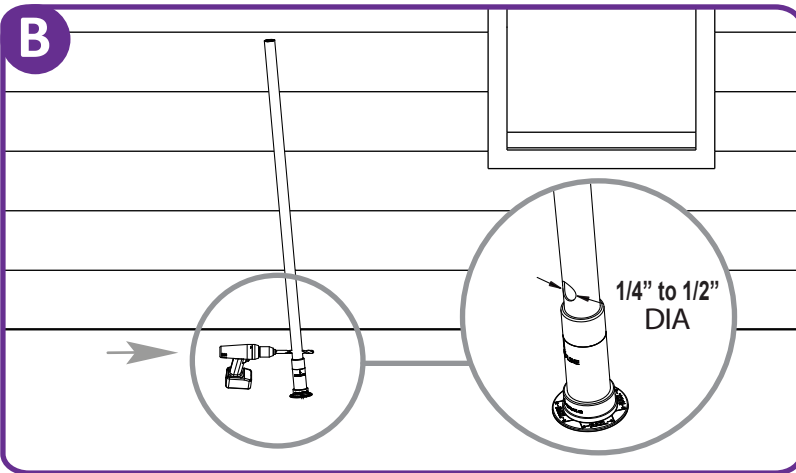
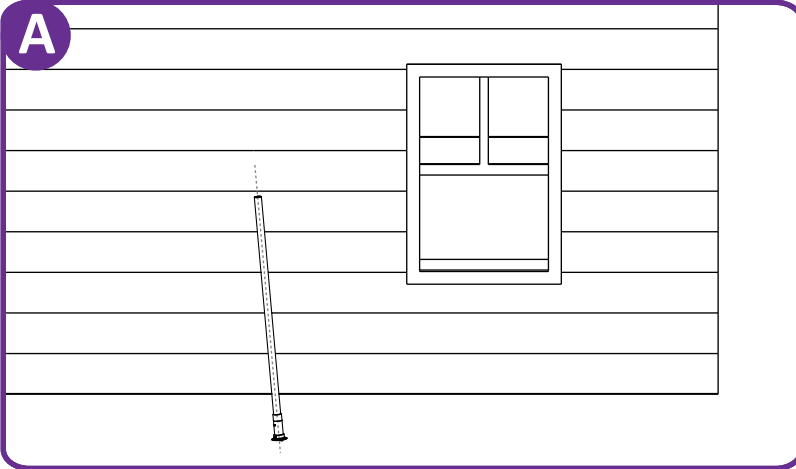
Remove WamBam donut.

Screw post into top of anchor.

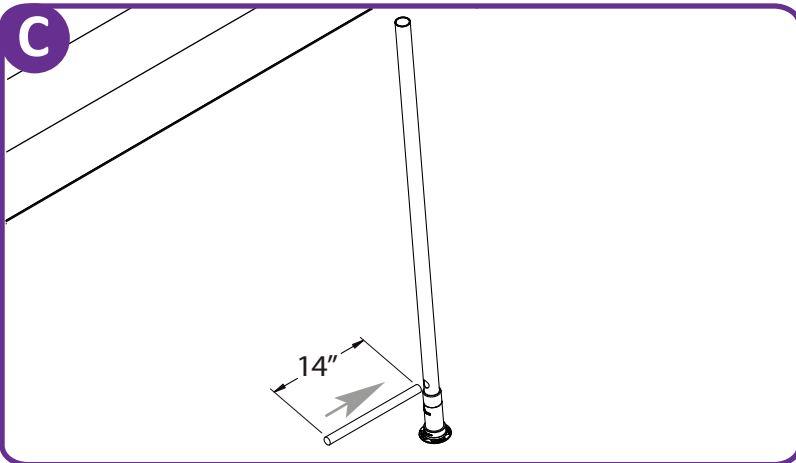
If the ground that your anchor has been driven into is tight, you may be able to bend the anchor as illustrated to compensate. Slip your pounder down over the anchor about 3 to 4 inches. Use the leverage in the pounder to bend your anchor into straight position. The integrity of your anchor will be slightly compromised, but will still perform acceptably.

### OPTION 4

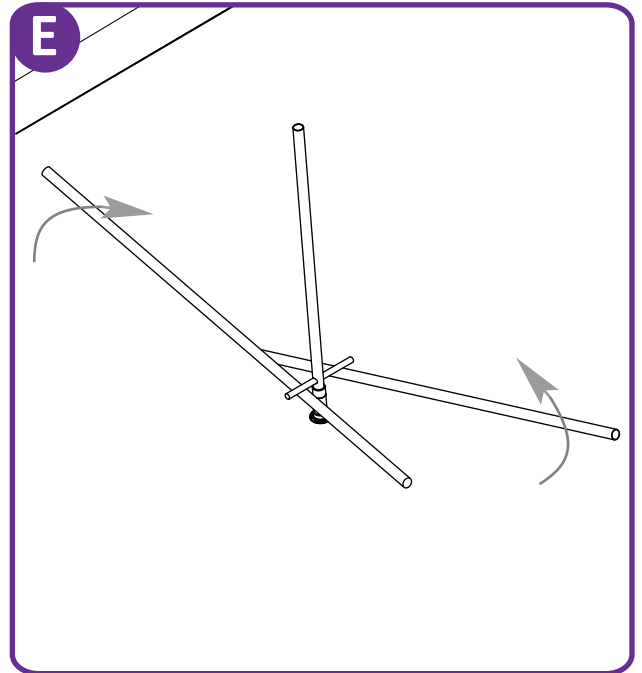
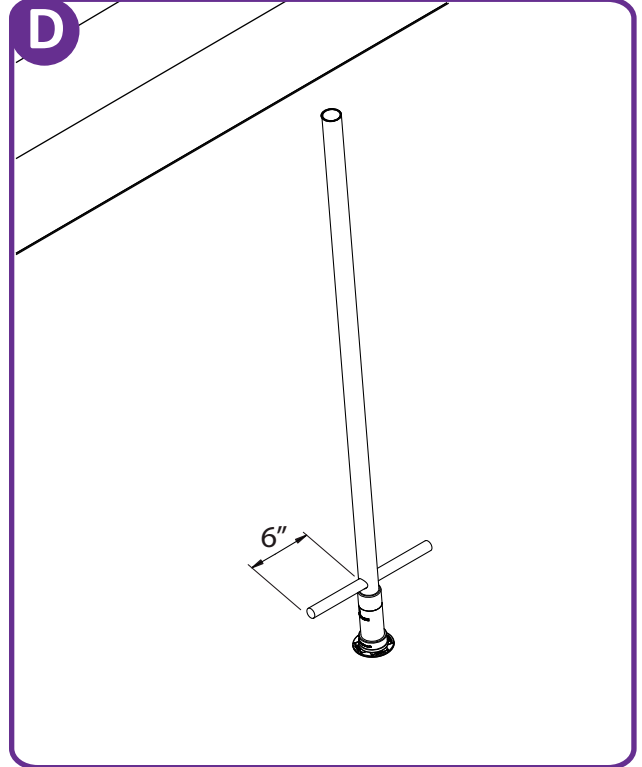
#### How to Remove a Crooked Anchor



Drill a 1/4" to 1/2" diameter hole directly thru the pipe about 7" up from the ground.



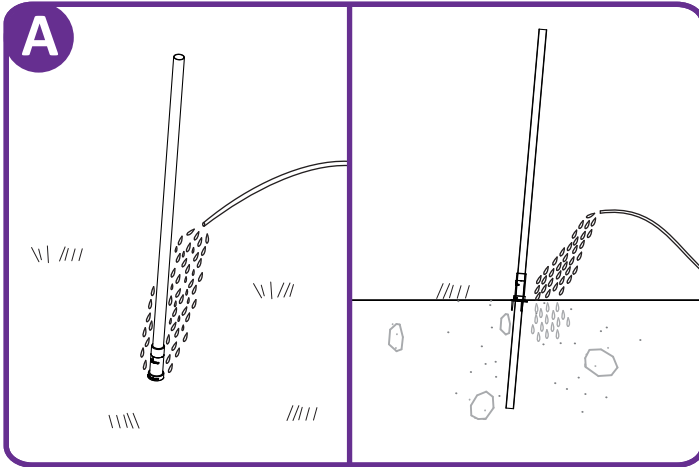
Insert a steel bolt or peg about 6" to 14" long.



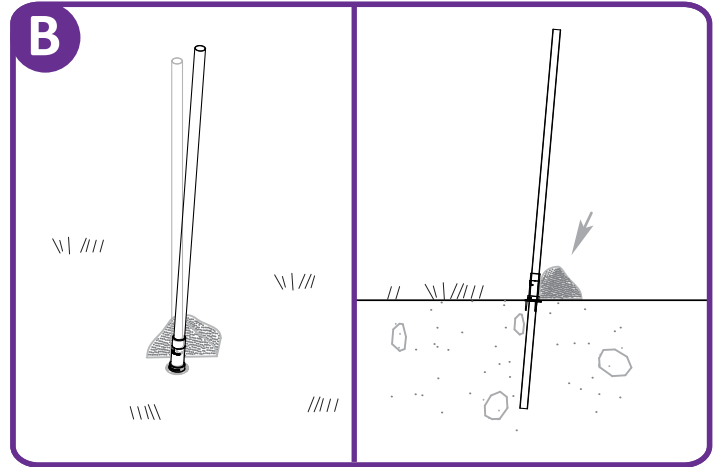
Using one or two pipe anchors (two people) force the pipe up and out of the ground.

### OPTION 5

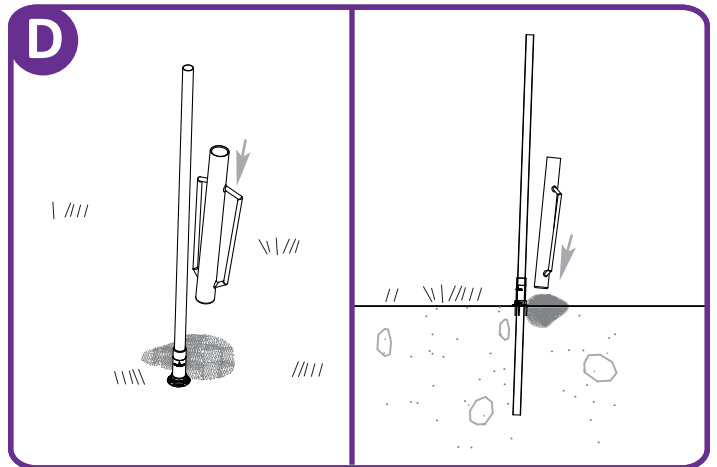
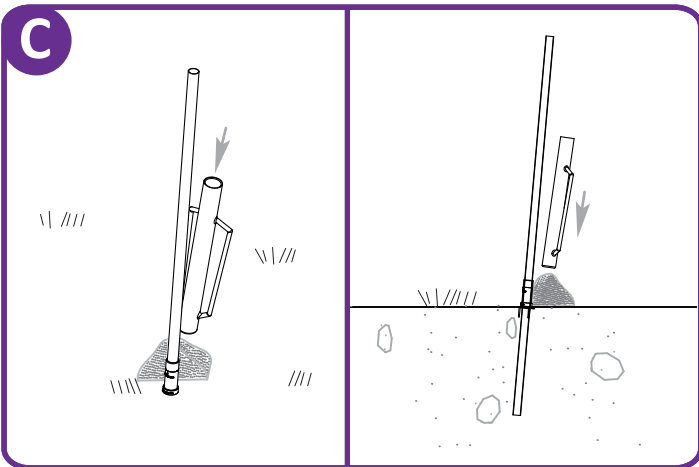
#### How to Straighten a Crooked Anchor



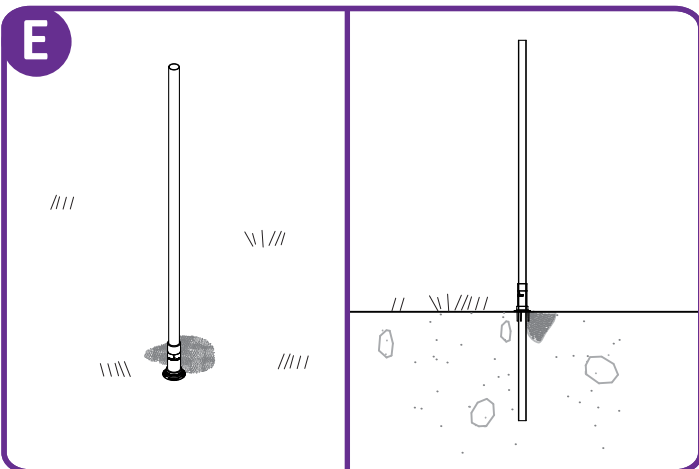
Moisten the soil around your anchor.



Add soil on the offending side of the anchor.



Compact soil using post pounder flipped upside down. A spud bar flipped upside down can also work really well.

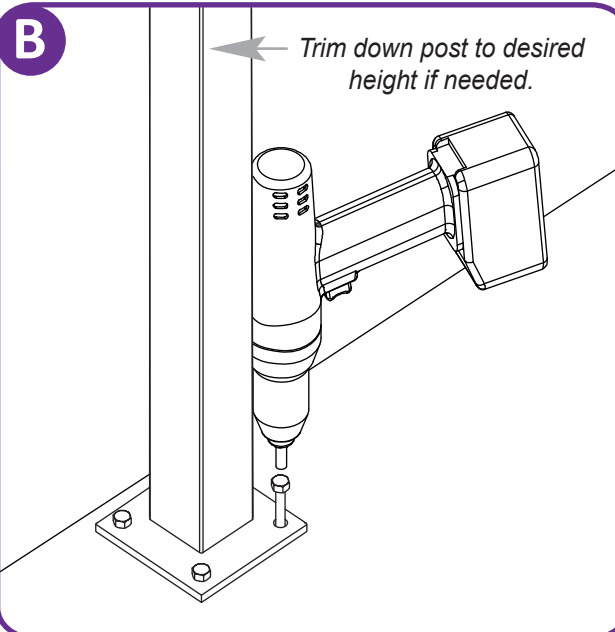
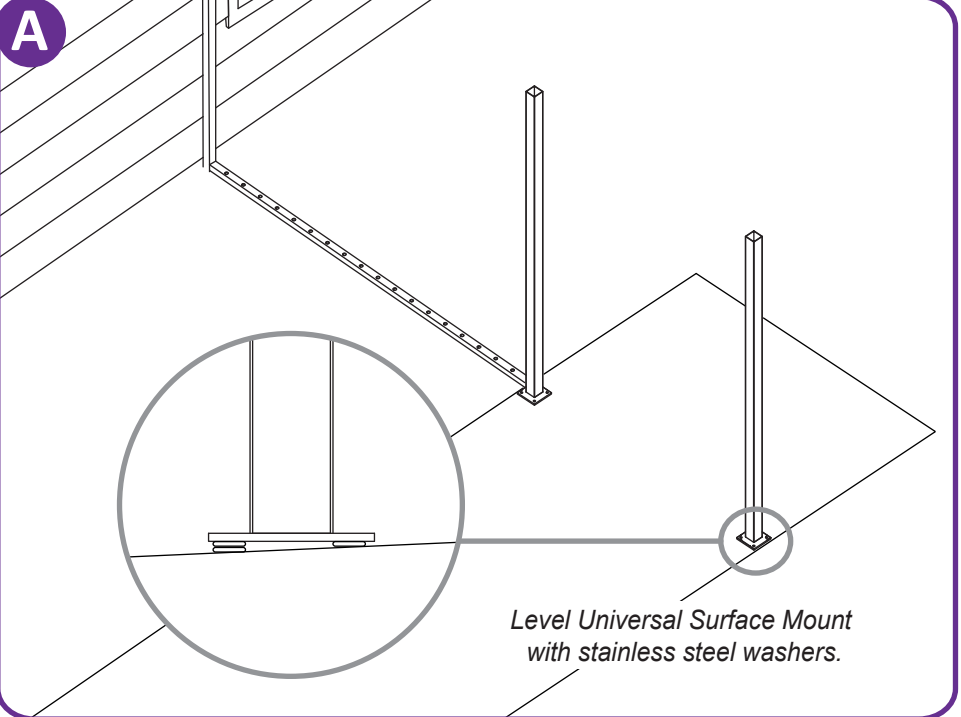
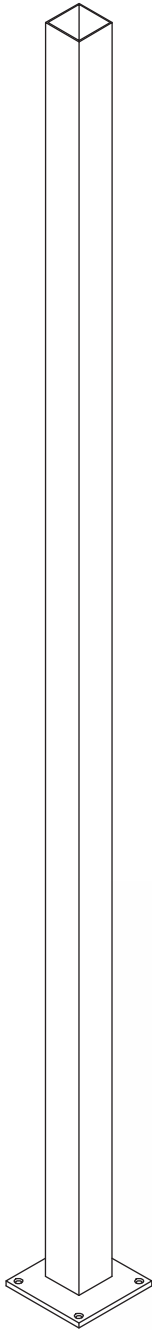


Repeat as necessary until you have forced the bottom of the anchor into level.

-8-

## How do I mount my posts to a concrete or wood surface?

### OPTION 1 - UNIVERSAL SURFACE POST MOUNT



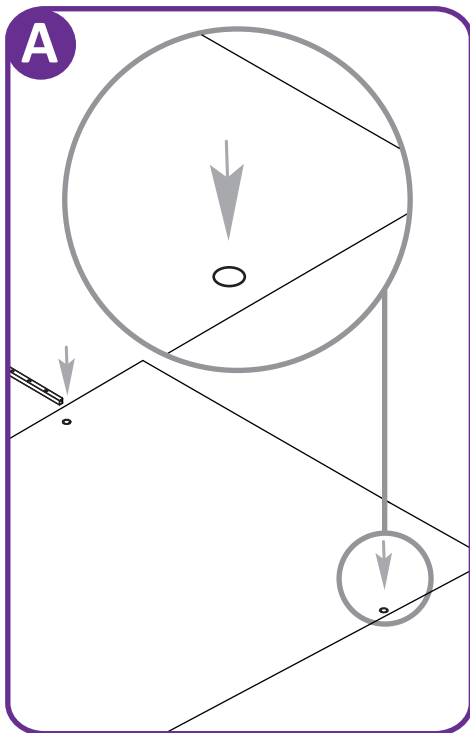
Any WamBam ornamental fence can be mounted to a wood, or concrete surface using our Universal Surface Post Mounts.

Use concrete screws included, and hammer drill (if concrete surface) to drill and mount.

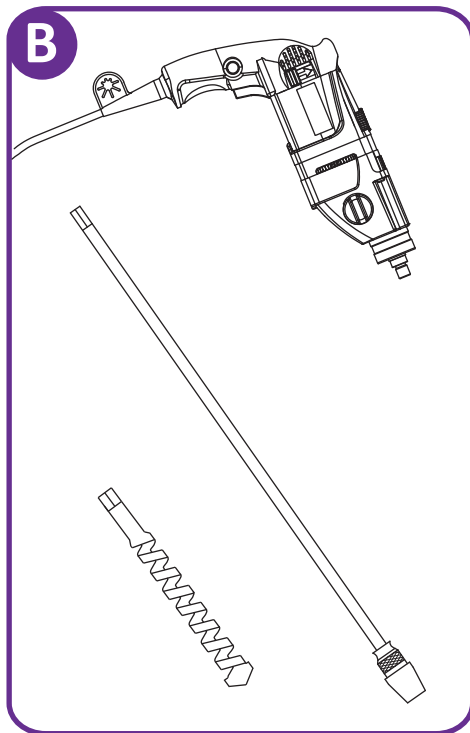


## OPTION 2 - Drill Directly Through Concrete

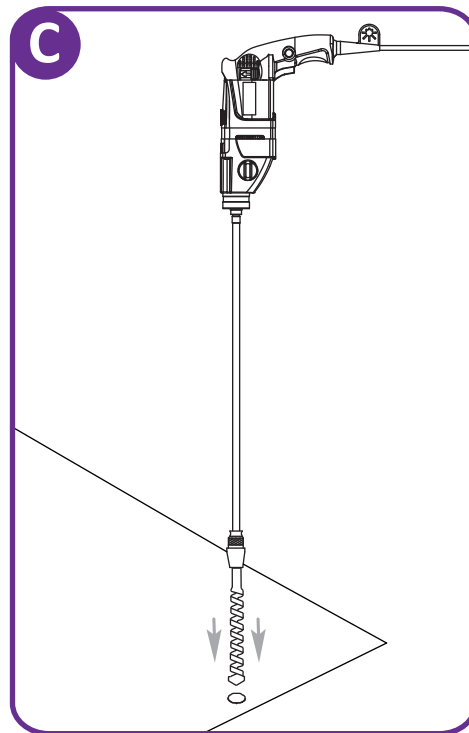
If concrete is less than 4in. thick, you may want to attempt drilling directly through it as illustrated below.



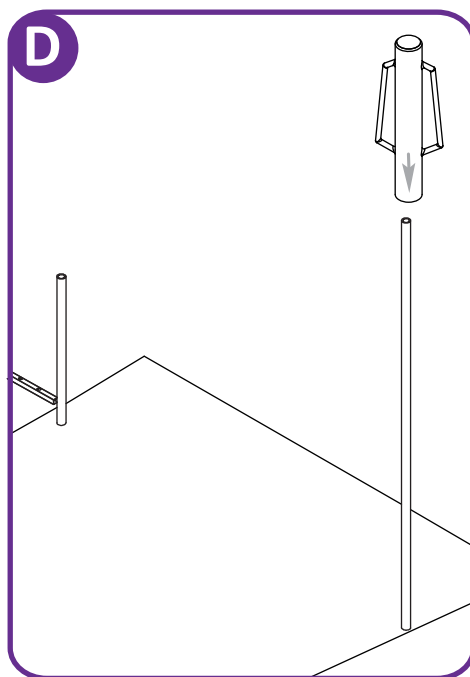
Mark holes for drilling.



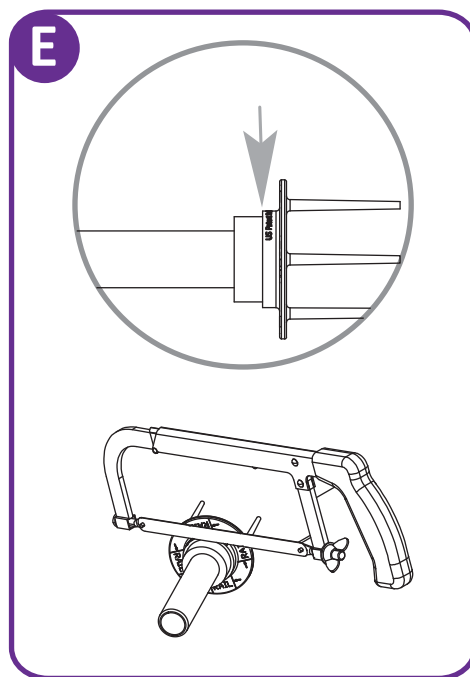
Use a 1in. concrete drill bit, extension if needed, and a concrete hammer drill.



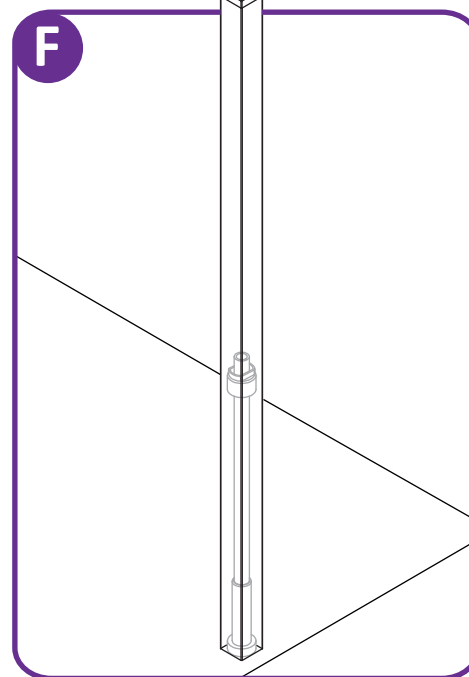
Drill both pre-marked holes completely through concrete.



Pound anchors through holes in concrete to a depth of approx 32in. to 36in.



Trim Anchor Positioner along bottom edge.



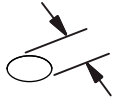
If necessary, see fence instructions for more information on how to install anchors, adjust leveling donuts and install aluminum posts.

## OPTION 3 - Chain Drilling to Create a 1" Hole in Concrete

If you just have a few holes to create, you may want to consider using a normal rotary hammer drill to create a 1" hole.

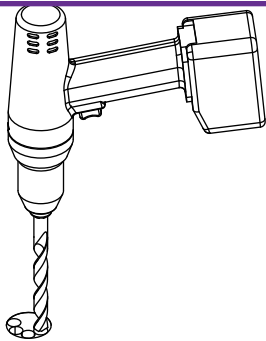
**A**

1" Diameter



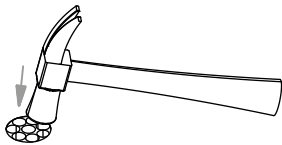
Using pipe as a template,  
draw out a 1" hole.

**B**



Chain drill around the inside of  
that hole. You do not need to  
create a perfectly round hole.

**C**

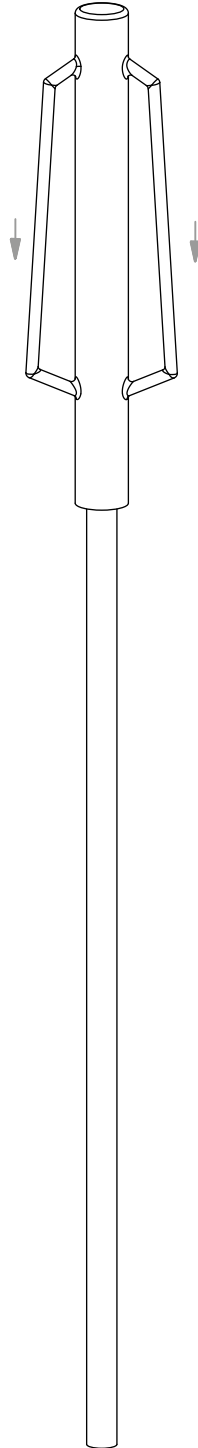


Knock out the concrete in the hole.

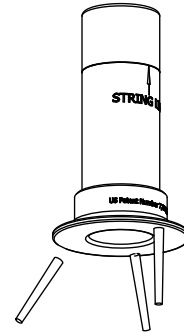
**D**



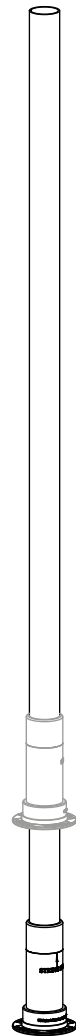
**E**



**F**



Break the three stud pins off  
the bottom of anchor positioner  
to allow it to sit flush to concrete.



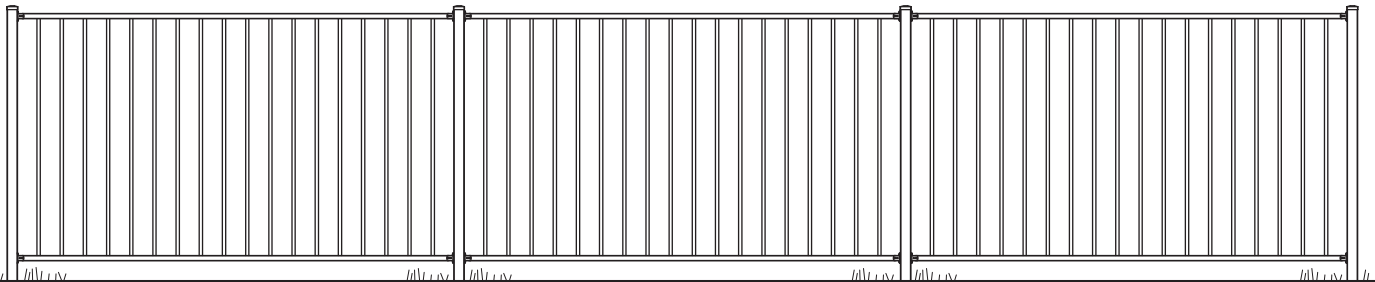
Drive pipe directly thru hole in concrete.

-9-

## How do I equalize my fence sections to fit my overall fence run?

Very rarely will your fence sections all fit perfectly into your fence line. You have three options. You must consider these three options before installing your first anchor.

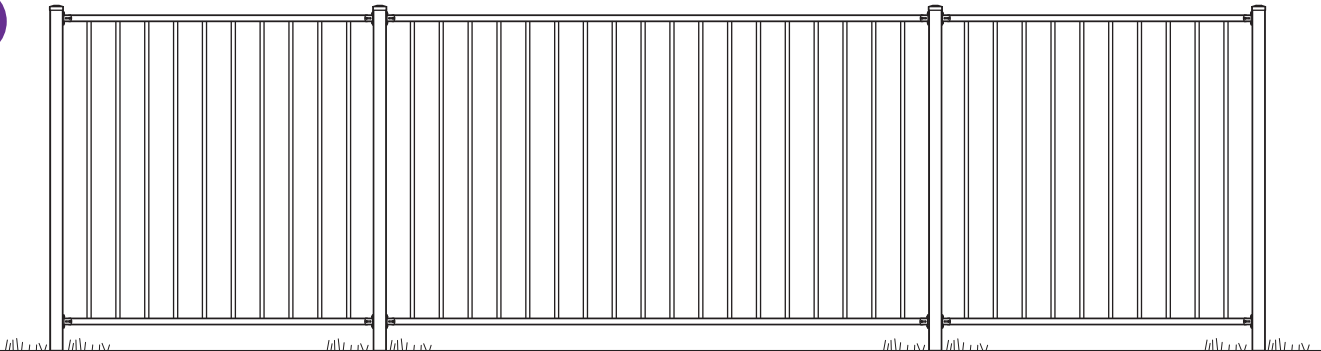
**A**



**BEST**

This is the most pleasing to the eye way to equalize your fence sections. It also is the most work as you will need to trim every panel down in length. If you take pride in what you do, and have the time, this is the way most professional companies would tackle your project.

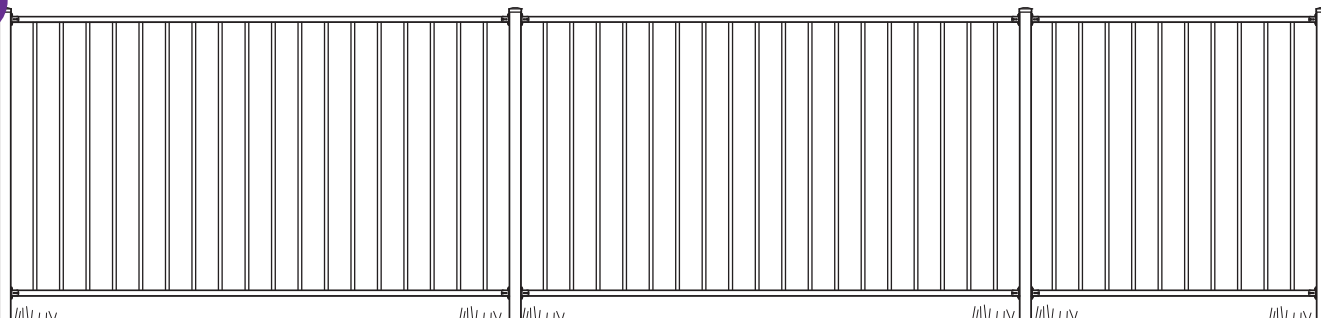
**B**



**ACCEPTABLE**

Trimming down both end panels is an acceptable way to equalize your fence panels. This will minimize having one panel stand out like a sore thumb.

**C**

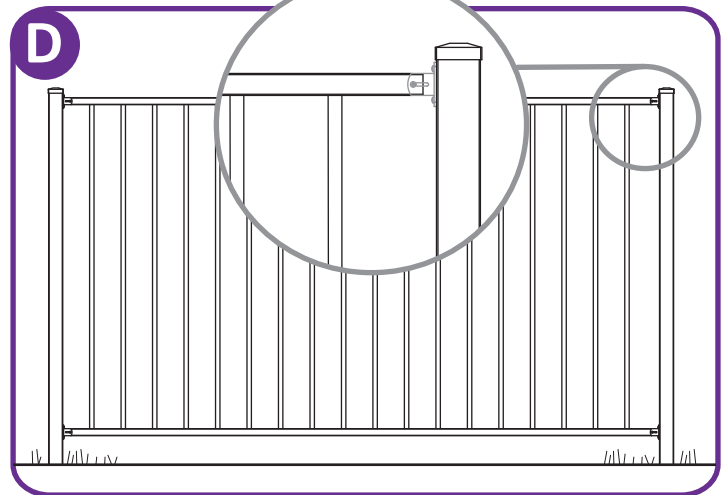
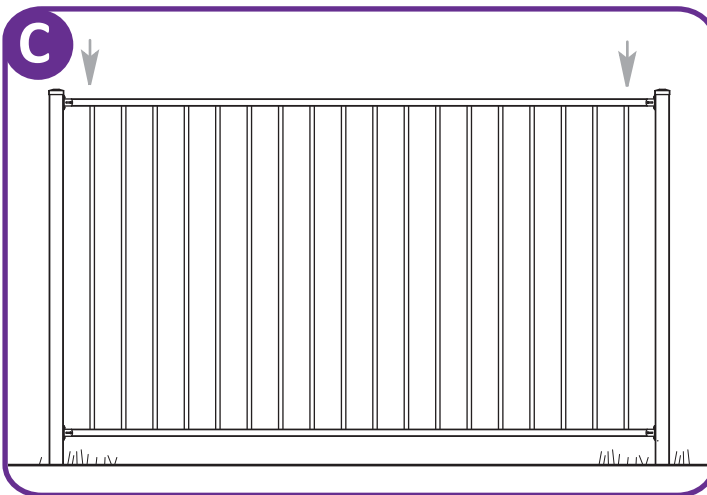
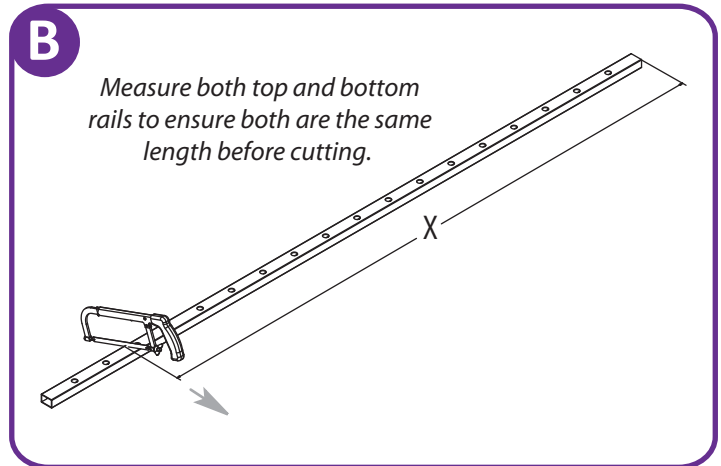
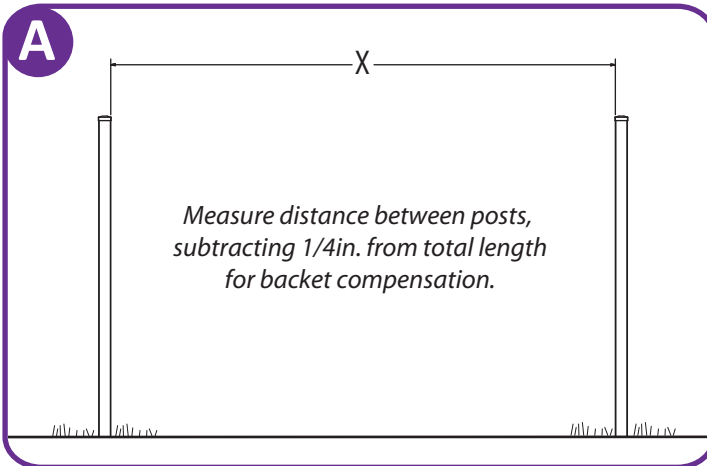


**ACCEPTABLE**

This is not the ideal situation, but this method provides for the least amount of work and the least amount of waste. Professionals typically would not install your fence this way.

For installation videos and more information, visit [www.wambamfence.com](http://www.wambamfence.com)

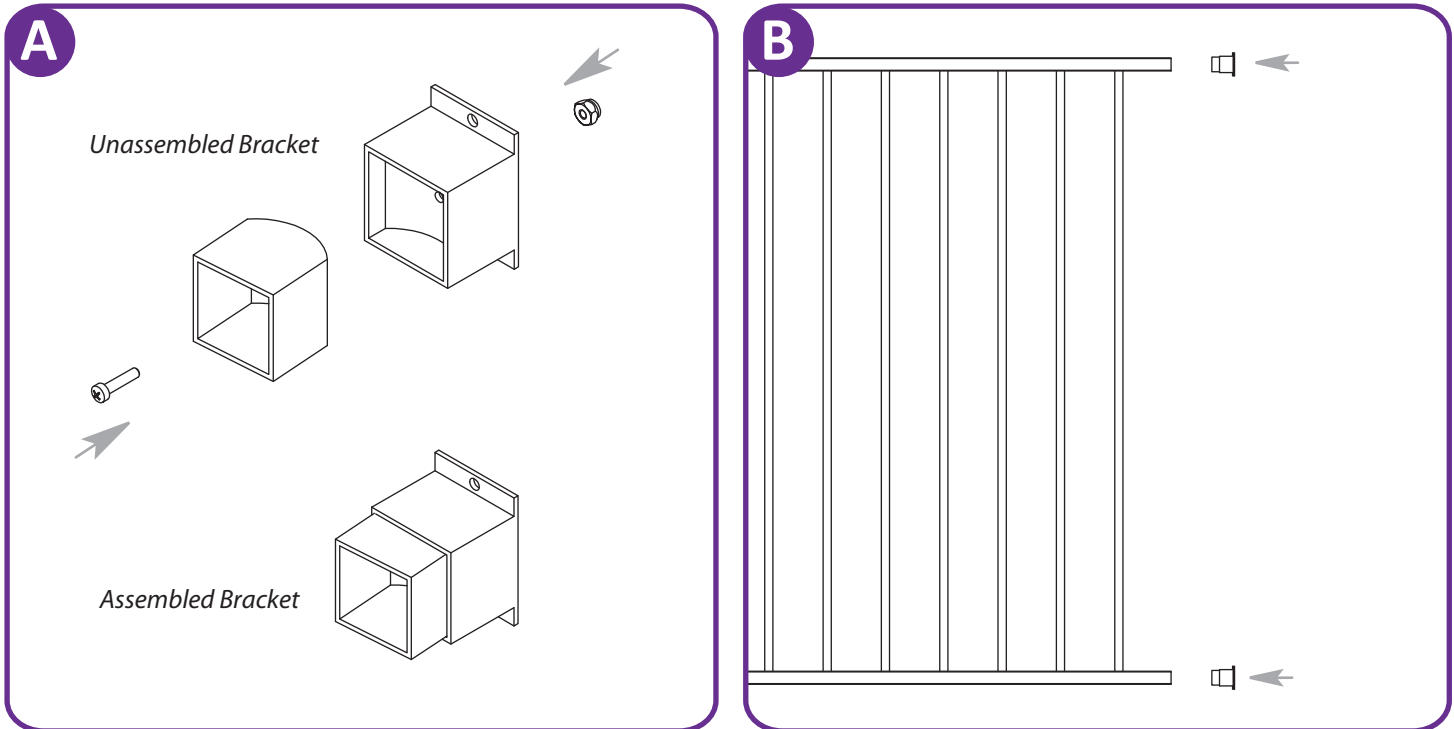
**-10-** How do I trim down or extend my fence panel for a custom fit if necessary?



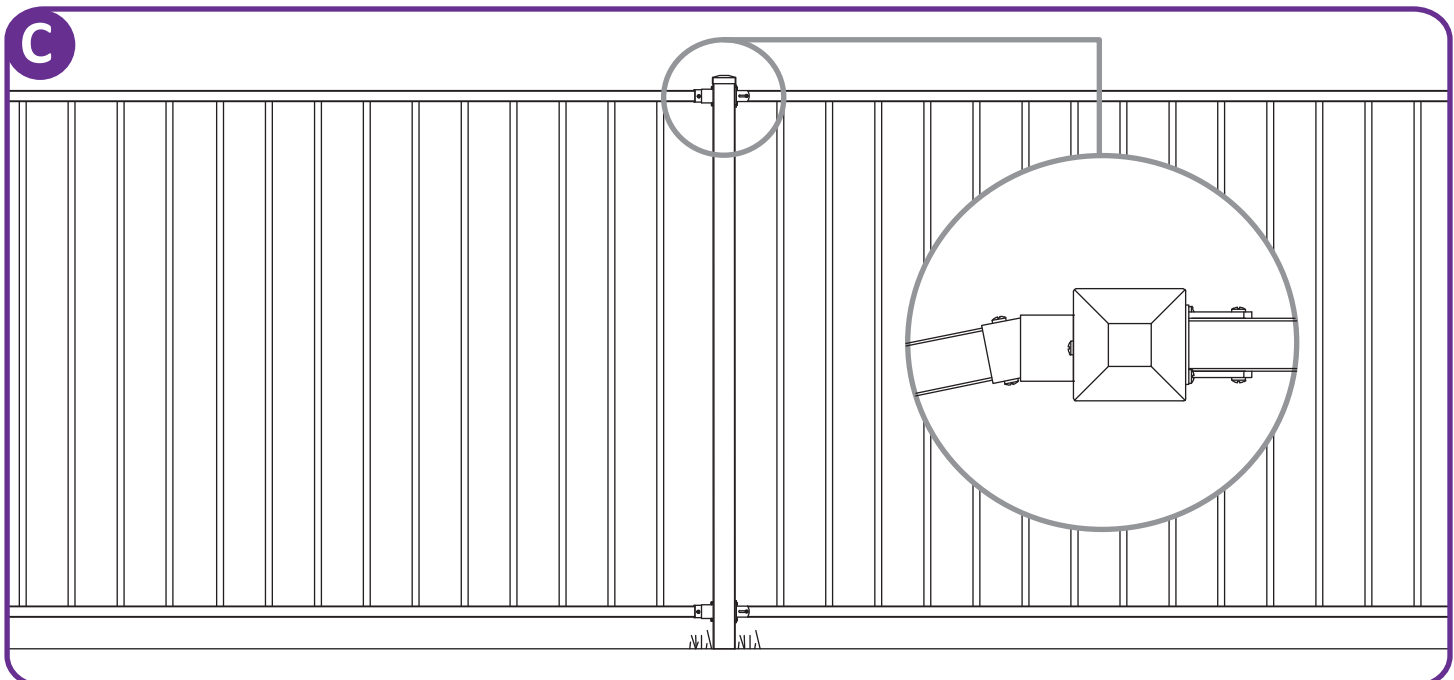
The rail brackets are designed to allow for up to 1in. of extension beyond end of rails on each side for a total of 2in.



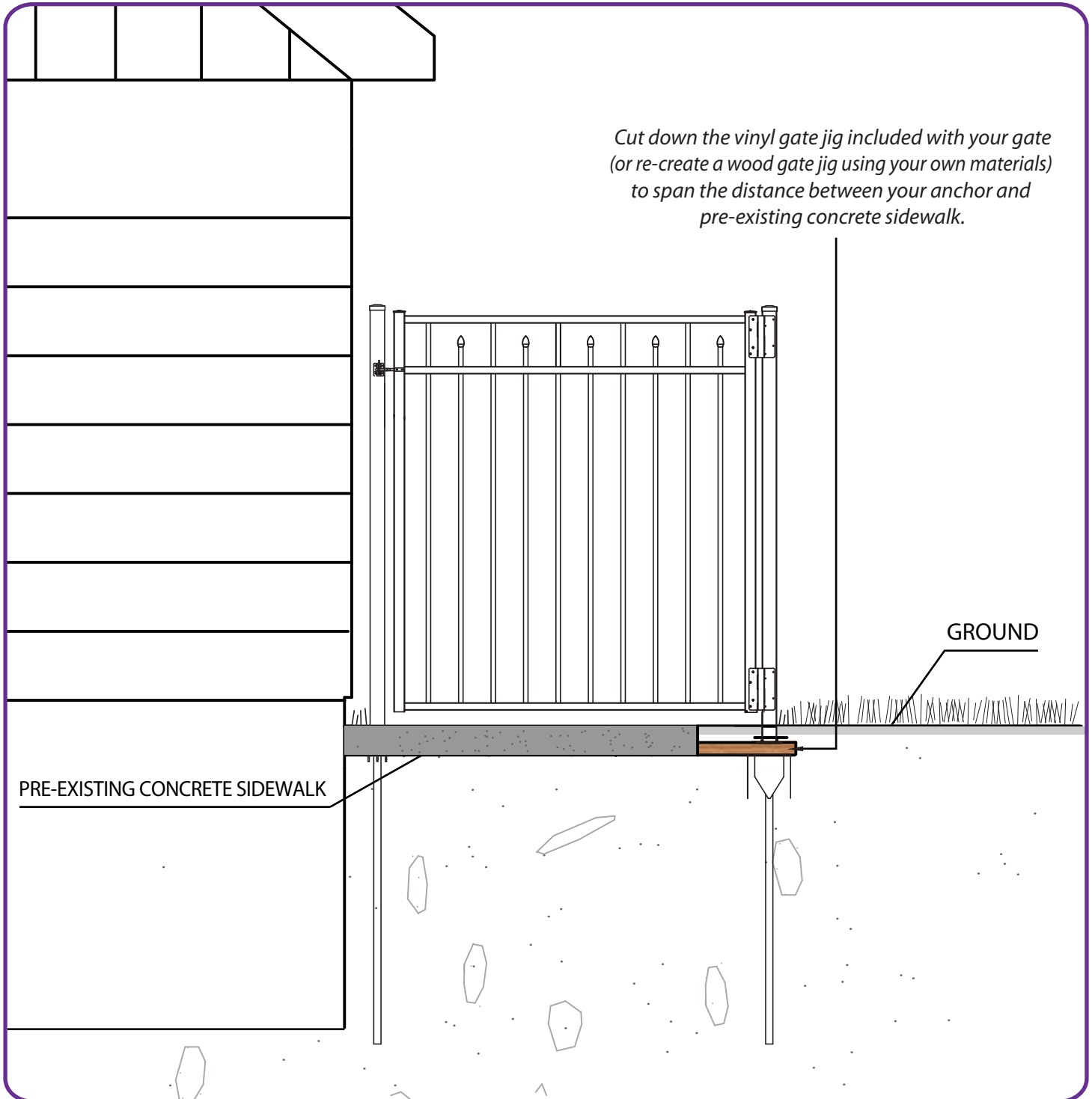
**-11-** How do I deal with angles in my fence line?



Sold separately.

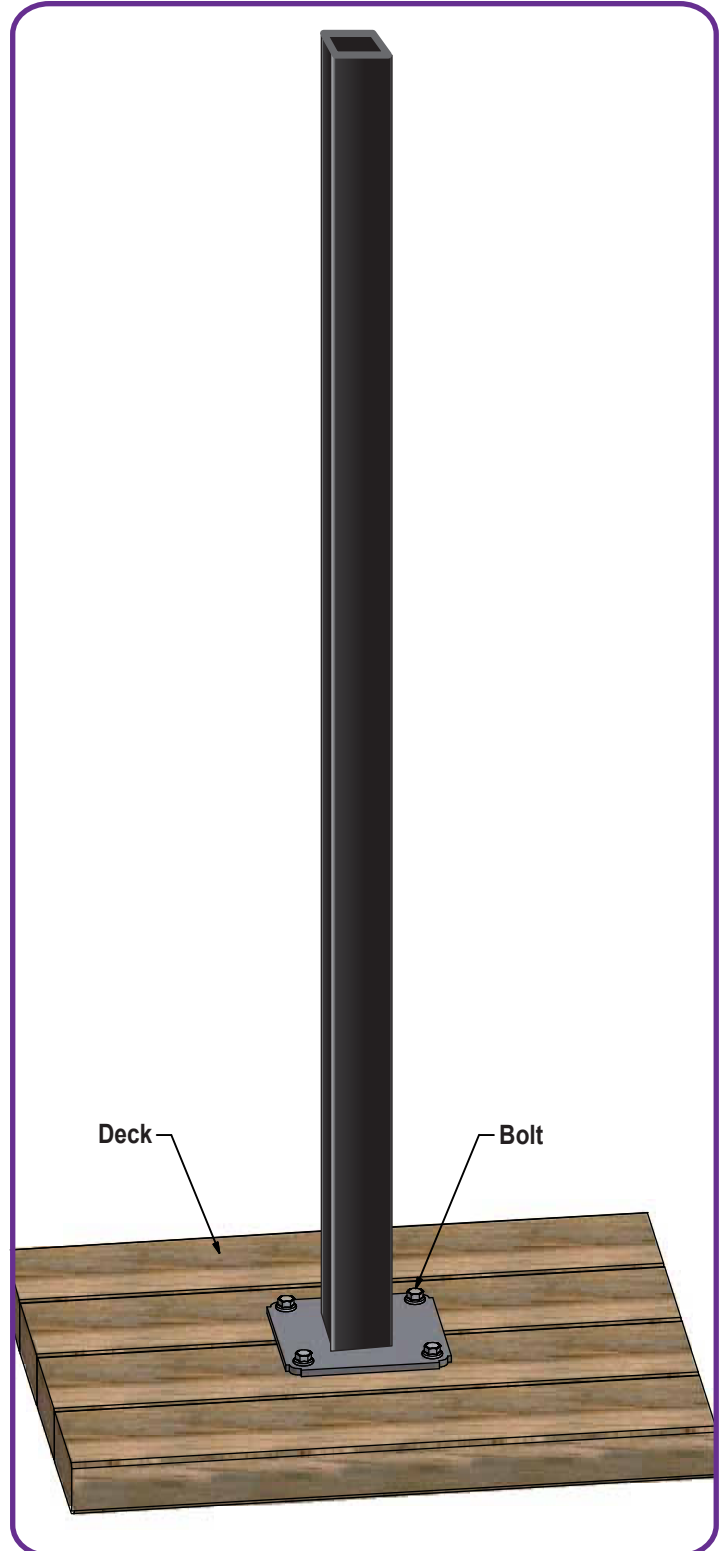


## -12- Installing a Gate Without a Gate Jig



If your sidewalk gets in the way of using the provided gate jig, you can either cut down the provided vinyl gate jig or re-create a small gate jig out of 2x4 wood (see gate instructions) to span the distance between the anchor and the concrete as necessary. The jig can simply be be pressure fitted against the concrete to hold its position.

## **-13- Installing a Surface Mount on a Wooden Deck**



## **-14- Warnings on Using Manual Post Pounder**

### **1 - You're gonna sweat!**

Getting something that's about 20lbs or even 30lbs to move up and down repeatedly takes a lot of work. You can see this by watching the "Manual Post Drivers in Action Video" on our website. Even on a cool day you are going to sweat. Remember you will be sweating about half as much (or less) compared to using a gas powered auger, mixing concrete and getting rid all of your excavated soil. If you want to sweat a little less, you can use a pneumatic pounder. See our website for more details.

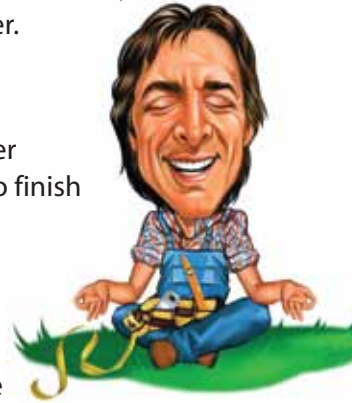


### **2 - Relax your grip on the pounder!**

Relax your grip on the down-stroke to minimize vibration fatigue. If it's possible hang on to the shaft of the pounder versus hanging onto the handles. The handles will tend to give off more vibration and shock. You'll be a little less sore in the morning as well. Clever Joe suggests that "throwing" the pounder down can avoid this completely. In other words, release your hands completely before anchor and pounder impact each other.

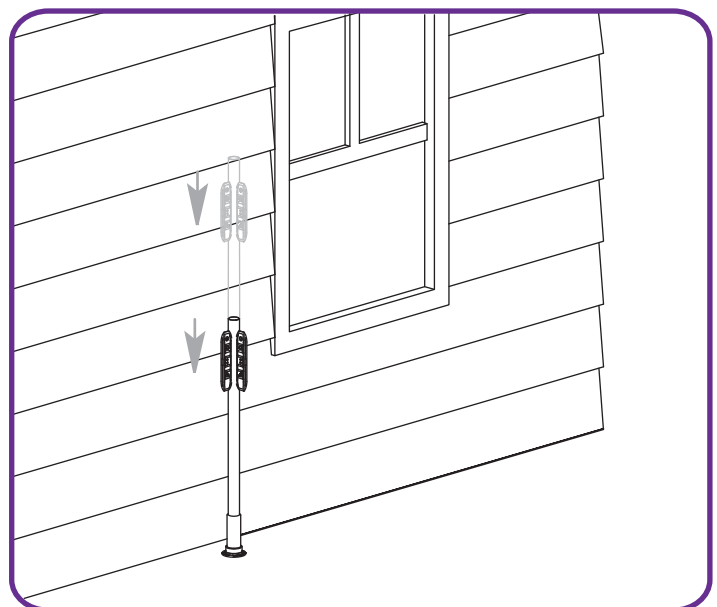
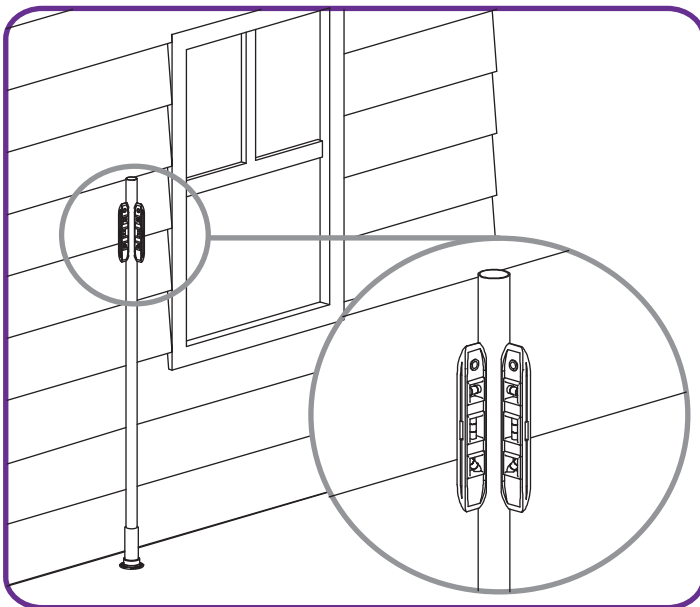
### **3 - Take a break!**

Breaking down the most demanding physical part of your project into smaller chunks will make it easier. Slow down and enjoy yourself. You're still going to finish faster than if you had to auger, mix concrete and clean up.



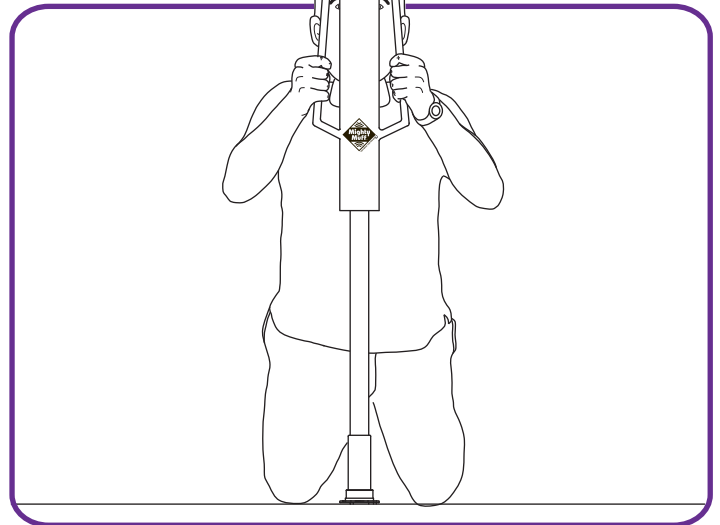
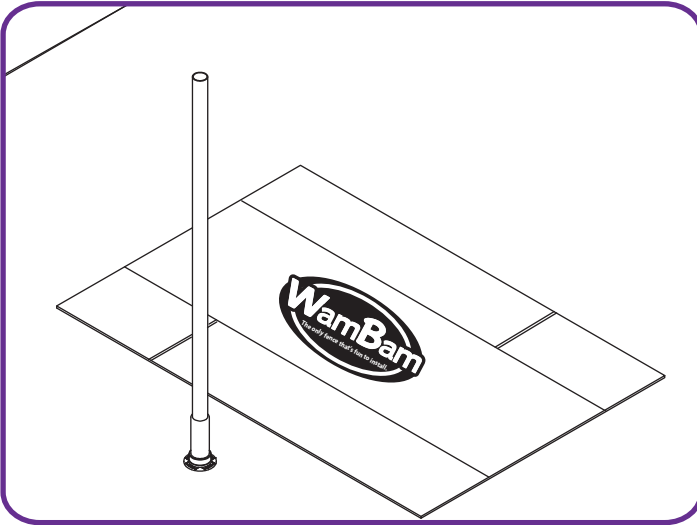
### **4 - Your anchor can get out of level very quickly.**

After your anchor is about 18in. into the ground, begin to check for level at about 6in. intervals during penetration into the ground. This will slow you down significantly but ultimately will save you time by avoiding a severely crooked anchor.



## 5 - Get down on your knees!

Use cardboard box as a mat for your knees when you get down so far into the ground. This position for obvious reasons is the way to go at lower heights.



## 6 - Watch your head!

I've had the post pounder hit me in the head once or twice when getting a little too rigorous on the upstroke. When the pounder comes up just above the anchor, on the down-stroke (especially if you're tired), you can get a little off center. Because you are powering it back down, you might hit the top of the anchor. When this happens, it can cause the post pounder to come down unto your noggin. This is primarily an issue when the pounder is being used at head level or above. If you have a hard helmet, why not wear it? Don't be afraid to look like a slightly anal safety inspector. Those guys and gals have jobs for a reason.

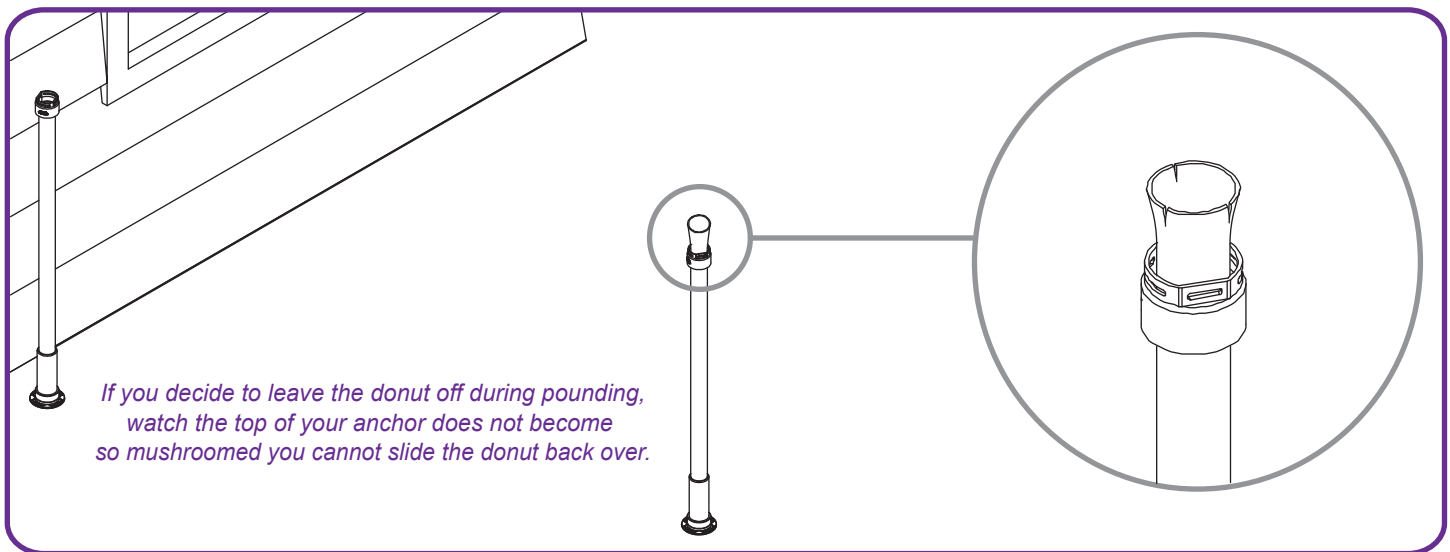
## 7 - Use Gloves

If your hands are not conditioned to manual work, you may want to wear gloves when pounding to avoid blisters. This is especially true on very warm days as the skin on your hands begins to sweat.

## ***TIPS & TRICKS** On Using the Post Pounder*

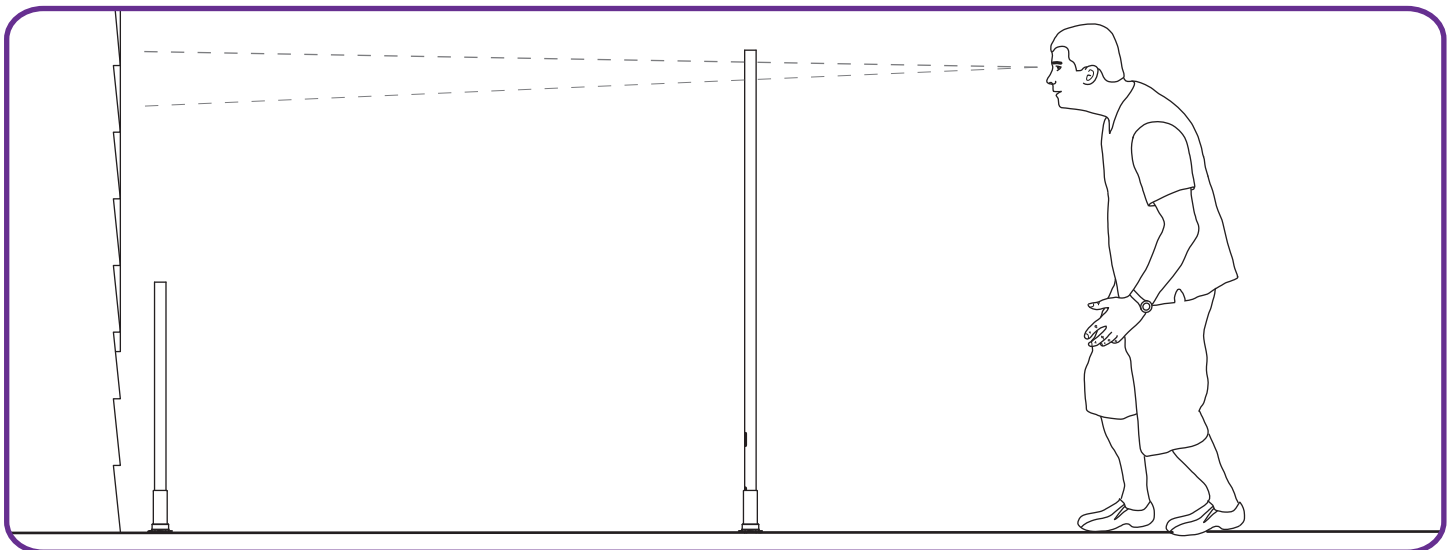
### **1 - You can either leave the leveling donut off or on during pounding.**

In the vast majority of installations, the top of your anchor will not mushroom enough to cause conflict when putting the donut back over the anchor. The only potential problem is really hard or dry ground where repeated blows with the pounder are required.

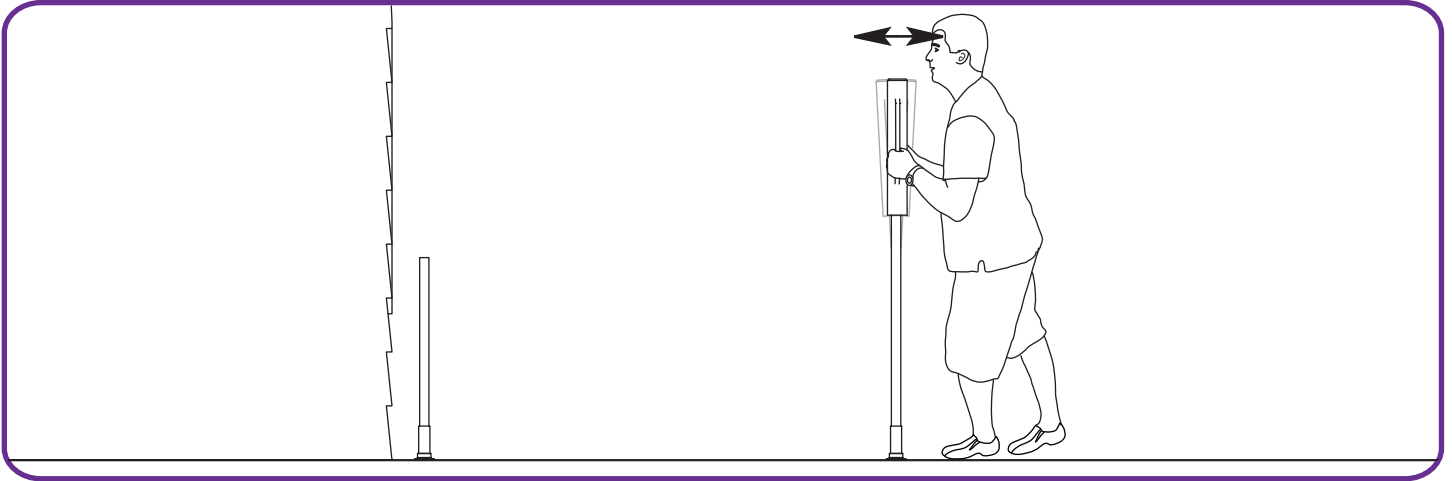


### **2 - Begin to use your level only after your anchor has been pounded about 18 inches into the ground.**

Initially you can use other level reference points (house, another fence etc.) to eyeball level from. Step back 3 or 4 feet from your anchor in both directions to do this.



### 3 - Use the handles of your pounder to either push or pull your anchor into alignment.



### 4 - Slightly over compensate when pushing or pulling your anchor back into alignment.

Your anchor will have a tendency to want to revert or spring back to where it was being adjusted from, especially as it penetrates deeper into the ground. Pounding from the same side you want the anchor to travel towards is also recommended.

### 5 - Try not to adjust your anchor into alignment for the last 6 to 12 inches of penetration.

Adjustment at this stage requires the entire anchor shaft to be overly corrected which can enlarge the side of the hole you have just created during penetration (excessive force at this point can even bend the pipe). You want the ground to be as tight as possible around your anchor. Remember that your anchor can be corrected into level using your leveling donut.

### 6 - Speed things up by using two people on the pounder.

Two people working together in rhythm can really speed things up, and lighten the overall burden. Grab a buddy and get into it.

