

Horizontal Drilling in Soil, Version 1.0

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The previous owner of my home had irrigation pipe run at the boundary between the grass and the crushed rock. Then the brick boarder was added along with the walkway.

Recently I needed to add more pipe. Not a simple task given that no conduit was used to get under the walkway. There were also many places where the brick

boarder crossed back and forth over the pipes.

Desperation is a powerful motivator. I had remembered reading about doing horizontal drilling using water. They used a length of steel pipe with fittings on each end. Given the amount of bending I needed to do plus the lack of steel pipe, I decided to try ½" Schedule 40 PVC.



I happen to have one of these male hose to ½" PVC couplers plus an end cap.

Not shown is a female to female coupler that joined the male end of my garden hose to the PVC coupler.

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The hose coupler was cemented on one end of a 10 foot long piece of $\frac{1}{2}$ " Schedule 40 PVC pipe.

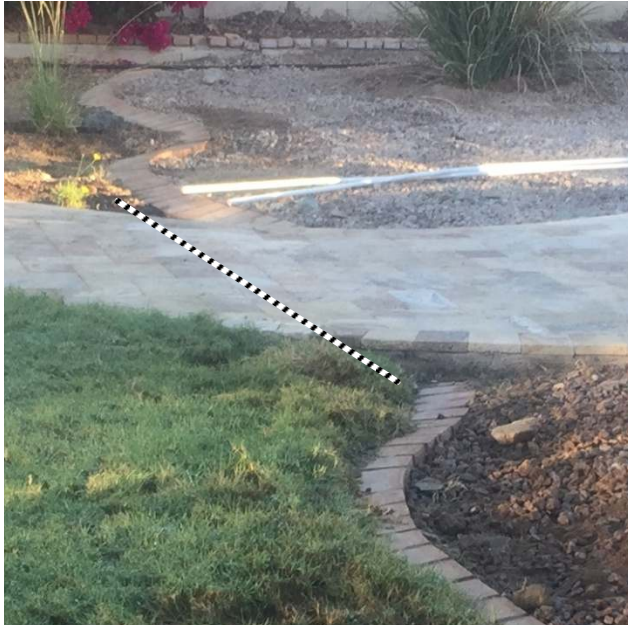


The other end of the pipe was terminated in a cap which had been previously drilled with an $\frac{1}{8}$ inch drill.

The center hole was straight in and the four perimeter holes were drilled at about a 45° angle so water would spray outward.

You can see that this coupler is rather beat up. That is because it had already been used to drill about 25 feet.

The trick is to let the drill do the work. Push the pipe into the dirt, wait a few seconds, and then gently push again. The jets of water will erode a chamber in front of the head. Ramming the drill only clogs up the holes.



My first challenge was to drill under this walkway.

I connected my garden hose to the tool and dug a one foot long trench on both sides. Since the PVC pipe easily bends, that was enough to get it going. I was able to follow the existing pipe which guided the end of my drill.



Then I turned the drill around and went under the bricks. About every 4 feet I dug a small hole in order to verify I was going in the right direction.

You can imagine that there was a lot of water and mud during the drilling. I kept my phone/camera far away and it didn't occur to me to take pictures until it was too late.

The drill worked so well, I have decided not to take it apart. Instead it will use up valuable storage space and insure that I never need to do horizontal drilling again. Such is Murphy's Law.

I welcome your comments and questions.

If you wish to be contacted each time I publish an article, email me with just "Article Alias" in the subject line.

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