



# FLAP GATE FIELD INSTALLATION GUIDE

## Tools Needed

1. Drill with 7/16" drill bit
2. Two 3/4" wrenches or a 3/4" socket on a battery-powered impact driver
3. Two 9/16" wrenches or a 9/16" socket on a battery-powered impact driver
4. Standard 10 oz. caulk gun

## Supplies and Hardware Needed

1. One bolt bag per flap gate
  - a. Three 3/8" x 1.25" bolts
  - b. Three 3/8" nuts
  - c. Six washers
2. Two 1/2" x 6" bolts (adjustable-style flap gate only)
3. EZ-Stick caulk (sold at TrueNorth Steel)

When possible, assemble the flap gate onto the corrugated steel pipe (CSP) before installing it in the ground.



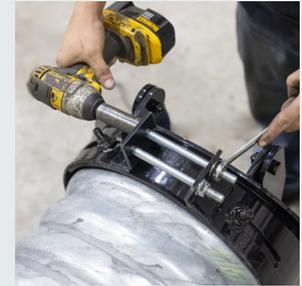
**Step 1:** Apply EZ-Stick caulk around the CSP and push the flap gate into place, perpendicular to the corrugations. Align bolt holes on the flap gate with a peak of a corrugation. *(On the adjustable-style flap gate, the diameter can be altered to assist with installation.)*



**Step 2:** Drill a 7/16" hole through the bolt holes on the flap gate, making sure that, when viewed from the outside of the CSP, the holes remain aligned with a peak of a corrugation.



**Step 3:** Place a washer onto a 3/8" x 1.25" bolt and insert it through a drilled hole so the head of the bolt is on the inside diameter of the pipe. Install the outer washer and tighten the 3/8" nut. Repeat for all bolt holes.



**Step 4:** For the adjustable-style flap gate only: Tighten the 1/2" nuts onto the 1/2" x 6" bolts using a 3/4" wrench and/or socket. Tighten the 1/2" diameter adjustment flange nuts using a 3/4" wrench and/or socket.



**Step 5:** Open the flap gate and seal any gaps between the outside of the CSP and the inside of the flap gate using EZ-Stick caulk.



**Step 6:** Close the flap gate lid and seal any gaps between the CSP and flap gate from the outside with EZ-Stick caulk.



**Step 7:** Installation complete.