

# BaySaver® Separation System

## Installation Instructions



**Questions? Call 1-800-229-7283**

### Materials Checklist:

Please verify all necessary materials are on-site or have been ordered!

#### Supplied by BaySaver Technologies, Inc.

- (1) HDPE BaySaver Separator Unit
- (2) HDPE Connecting Pipes
- (1) HDPE Reducer Adapter
- (2) MarMac Couplers (note, if diameter is greater than 36" a tensioning tool is included)
- (2) Fernco Couplers
- (2) Shear Rings

#### Purchased Locally by Contractor

- (2) Manholes
- (2) Manhole Covers and Frames
- Riser Rings (as necessary)
- Flowable Backfill
- Non-Shrink Grout
- Locally Approved Seals/Boots

# BaySaver® Separation System Installation Instructions

Verify dimensions of man-holes. Consult details sheet to ensure adequate space for both structures.



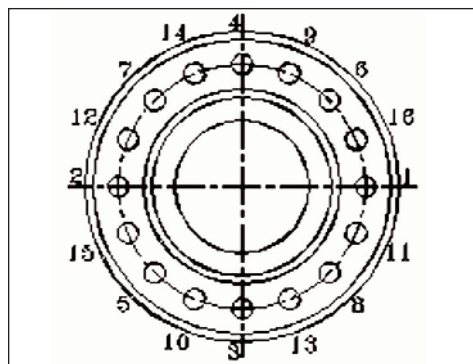
Flange



Flanged unit



1. Contact utility locator to mark underground utilities and to make certain it is safe to excavate.
2. Reference the BaySaver standard detail sheet to determine the location of the BaySaver Separation System. Determine the separator configuration (right-handed or left-handed), and compare it to the configuration specified on the site plan. To determine the configuration, look at the plans and imagine standing upstream and looking downstream through the system. If the storage manhole is located on the right - then the unit is "right-handed", and vice versa. If the unit is not properly configured, the stub pipes must be repositioned, see instruction 3. If correct go to instruction 8.
3. Beginning with one flange, unscrew the nuts from each of the bolts. With the nuts removed, lift the stub pipe vertically away from the body of the separator unit.
4. Turn the stub pipe 180 degrees from its original configuration.
5. Before placing the stub pipe back down on the unit make sure that the neoprene gasket located between the flanged end of the stub pipe and the flanged end of the separator unit, is sitting flush on the separator unit flange, void of any wrinkles.
6. Place the stub pipe back down onto the unit. The bolts will pass directly back up through the holes in the stub pipe flange. Screw the nuts back on to the bolt until they are finger tight.
7. In order to ensure a watertight seal between the stub pipe flange and the separator unit flange, the bolts must be tightened in the following pattern and to the appropriate torque. Always use a criss-cross pattern for tightening. For example, tighten 1 to 20% of final torque, then tighten 2 to 20% of final torque, then tighten 3 to 20% of final torque, then tighten 4 to 20% of final torque, and so on and forth until all bolts are tightened to 100% of the final torque.



System	Pounds of Torque
1/2K	40 Ft
1K	40 Ft
3K	50 Ft
5K	60 Ft
10K	70 Ft

Excavate to solid subgrade.



Verify subgrade elevation.  
Adjust base as needed.



Install manholes.

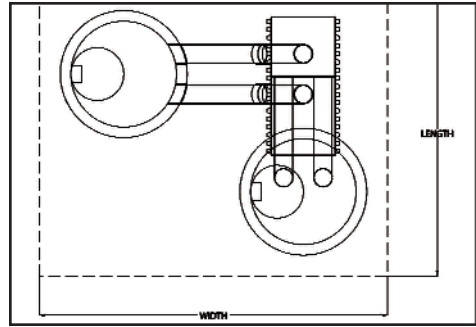


Backfill base sections to  
invert of storage manhole to  
the connecting pipes.



8. Excavate to proper depth, length, and width in accordance with regulations to ensure safe site conditions.

Unit	Footprint Length	Footprint Width
1/2K	13'-5"	11'-2"
1K	15'-2"	11'-2"
3K	16'-0"	13'-0"
5K	17'-8"	14'-6"
10K	24'-0"	22'-4"

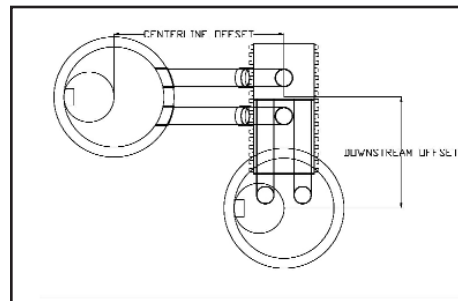


9. Level subgrade to the proper elevation and check against finished grade dimensions to ensure adequate depth.

10. On solid subgrade, set the base of the primary manhole.

11. Set the base of the storage manhole downstream as specified by dimension AE on BaySaver standard detail sheet and off to either the left or right side as specified by dimension AF on the BaySaver standard detail sheet.

Unit	Downstream Offset	Center Line Offset
1/2K	4'-4"	6'-7"
1K	4'-4"	8'-4"
3K	5'-0"	8'-0"
5K	5'-4"	8'-2"
10K	8'-6"	10'-2"

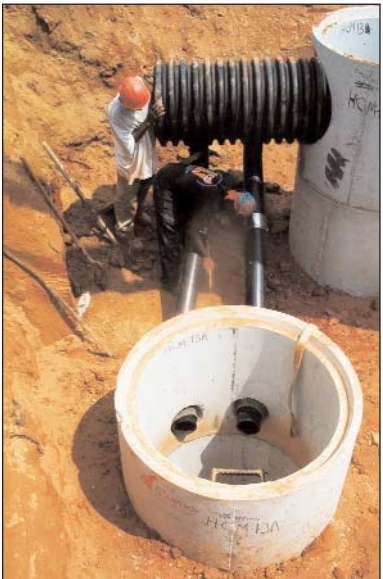


12. Check the level of both the primary and storage manhole bases and correct level if needed before adding additional risers.

Install BaySaver Separator Unit and connecting pipes.



Line up the Connector Pipes.



- 13.** Add water tight seal (either mastic rope or rubber gasket) to the base of each manhole.
- 14.** Set riser section on the base of each structure.
- 15.** Add additional riser sections as previously detailed, until structures reach grade. Be sure to install water tight seals.
- 16.** Align the opening in the primary manhole for the separator unit with the proposed outlet to the storm drain.
- 17.** Align the inlet and outlet holes in the storage manhole such that they will be 90 degrees on center to the separator unit.
- 18.** Once the inlets and outlets for the primary and storage manholes are properly aligned, back fill to the bottom of the inlet and outlet of the storage manhole.
- 19.** Insert the BaySaver Separator Unit into the primary manhole. Be sure of the following:
  - A - The BaySaver Separator Unit penetrates the inside wall of the primary manhole to a depth of at least 1 corrugation.
  - B - The tee pipes of the BaySaver Separator Unit are vertical and not skewed.
- 20.** Support the body of the BaySaver Separator Unit and level the unit so that there is no slope from the front to the back of the separator unit.
- 21.** Once the BaySaver is level, insert the two connector pipes into the inlet and outlet of the storage manhole. Be sure the end of the connector pipe labeled "IN" is inserted into the storage manhole.
- 22.** Line up the connector pipes with the connector pipe stubs coming out of the bottom of the BaySaver Separator Unit.
- 23.** Tighten the water tight boots in the storage manhole down on the connector pipes.

Backfill separator unit and manholes.



Attach reducer adapter (if required) with Marmac.



Attach reducer adapter or separator unit to outfall pipe with Marmac.



Primary manhole w/unit



- 24.** Tighten Fernco couplers and shear rings on the joint between the connector pipe stubs and the connector pipes.
- 25.** Back fill a flowable fill around the connector pipes up to the bottom of the separator unit. This backfill must have a compaction of 95%.
- 26.** If the outlet pipe that is to be attached to the BaySaver Separator Unit is of a different diameter than the BaySaver, then the supplied reducer/adapter must be used to make the connection.
- 27.** Align reducer/adapter such that the small end of the reducer/adapter is in alignment with the outlet pipe.
- 28.** Use the larger supplied MarMac to couple the BaySaver to the reducer/adapter. Use the smaller MarMac to couple the reducer to the outlet pipe. For further information see instructions included with MarMacs.
- 29.** Using non-shrinking grout, seal the separator unit into the primary manhole.
- 30.** Continue backfill with flowable fill to the mid-point of the BaySaver Separator Unit, ensure 95% compaction.
- 31.** Backfill with flowable fill to 1' above the crown of the 1/2K, 1K, 3K, and 5K; and 1 1/2' over the crown for the 10K separator unit.
- 32.** Install additional grade riser as needed and install frame and covers.
- 33.** Backfill to grade.
- 34.** Once the site is stabilized, the primary and storage manhole must be evacuated and recharged with clean water.



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