Use this procedure together with the applicable installation drawing.

A) EXCAVATION

1. Excavation for the installation of a Proceptor separator must conform to OSHA and/or local excavation codes and standards. Topsoil removed during excavation should not be used as approved backfill material.

2. Excavation should include an allowance for shoring and bracing where required. For multiple tank units, ensure adequate space between tanks for performing compaction when required and making connections between tanks.

3. In areas with a high water table, contact Zurn Green Turtle for custom tank design.

B) INSTALL AND LEVEL GRANULAR BASE

1. A 6" layer of pea gravel (or approved equivalent backfill compacted to 98% S.P.D.) must be installed and leveled at the bottom of the excavation to the proper elevation for the installation of the separator base.

2. For installations where the subsurface water level may rise above the bottom of the tank at any time, continue to step C. Otherwise, install and level the tank(s) and go to step D.

C) CONCRETE SLAB

A slab is required for installations where the subsurface water level may rise above the bottom of the tank at any time. There is potential for significant buoyancy forces on empty fiberglass tanks during periods of high subsurface water levels. Accordingly, 20 MPa (3000 psi) concrete must be poured around the lower portion of the tank as an anti-buoyancy backfill.

1. If material other than pea gravel is used, install a geo-textile filter fabric in the excavation to prevent migration and compact backfill in 6" to 8" layers to 98% S.P.D. The contractor is responsible for purchasing and installing the filter fabric.

2. Install and level the tank on the backfill. Use metal lifting lugs on upper sides of tank for handling, if equipped. Do not use any of the pipe fittings on the tank for lifting purposes. When lifting with slings, use load level beams.

3. The contractor must fill the separator with water up to the outlet pipe prior to pouring concrete around the unit.

4. Pour ready mix concrete slab all around the separator cells to the volume, height, and dimensions shown on the Installation Drawing. Ensure that the anchor brackets (if equipped) on the side of the tank are covered.

D) BALLAST TANK

Fill the separator with water up to the outlet pipe.

E) GRANULAR BACKFILL TO THE INLET AND OUTLET PIPES
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Pea Gravel (or an approved equivalent backfill compacted to 98% of Standard Proctor Density in each layer) must be placed in uniform layers of 150 mm (6") to not more than 200 mm (8") in depth up to the bedding for the inlet and outlet pipes.

Note: Backfill is not to contain topsoil. See end of document for backfill specification.

F) INLET, OUTLET AND VENT PIPES

1. Install standard pipe bedding for the inlet and outlet pipes per the sewer design. Attach inlet and outlet pipes to the Proceptor unit. If this is a PDI installation, install the flow control provided on the inlet of the tank, with the vent up. Connect the flow control vent according to local plumbing code and PDI requirements.

2. Vent ports are provided on the top of all Proceptor separators. The vent ports should be extended to above grade per the Plumbing Codes governing the installation location. Vents maintain equilibrium with the atmosphere and prevent the creation of a vacuum within the Proceptor. A goose neck must be provided at the top of the venting system to help prevent foreign particles and storm water from entering the Proceptor or plugging the vents.

G) CONNECT EXTENSION COLLAR TO TANK BODY

Proceptor separators are manufactured with a short neck at the top, which is marginally less in diameter than the extension collar. The fiberglass extension collar slides over the neck. Use only Green Turtle fiberglass extension collar (EC2 for 24” dia accessways and EC3 for 36” dia accessways). This collar is designed to fit physically and perform structurally for this application.

1. To trim the extension collar to fit, dry fit on the tank and measure from bottom of collar to Final Finished Grade. (= A).

2. Measure the height that the frame and cover will add to the collar (= B). Note that the cast iron covers bell fit over the collar. If the frame and cover is fiberglass, it should be factory bonded to the extension collar already.

3. If the frame and cover is cast iron, allow for a gap (prox 1") between the frame and extension collar so that loading at grade is not transferred to the extension collar. This gap should be filled with flexible sealant after installation. (Gap =C)

4. Calculate the required collar height: A – B – C = Final extension height.

5. Measure and cut the fiberglass extension collar with a grinder or other appropriate cutting tool. Suggested grinding wheel material is zirconia alumina grit 24.

6. Place the extension collar on the tank.

7. Seal the joint between the tank and collar from the inside, with SIKAFLEX 221 or 255. A standard caulking gun will hold a 300 mL tube of Sikaflex. This joint is normally dry on the inside, but if the sewer line backs up the oil or grease may rise in the extension. Sealing the joint at the time of installation prevents backed up oil or grease from leaking into the ground.

H) CLEANOUT AND SAMPLE PORTS

Extend to grade or cap as required by customer, design engineer or local code.
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I) ACCESSORIES (OPTIONAL)

1. **Suction Line** - If a suction line has been provided as an option on the Proceptor separator, the contractor is responsible for extending the line to above top of grade using SCH 40 PVC pipe (or equivalent pipe as specified in the plans). The pipe must be suitable for use as a suction pipe. Limit to four bends. Do not use 90° elbows - use ≤ 45° elbows. The maximum horizontal run recommended is 200 ft, and maximum vertical rise recommended is 15 ft. Install a quick disconnect fitting (i.e., Type "D" cam lock fitting) at the outside termination of the suction line for easy connection to a vacuum truck hose. Ensure that the exposed suction port is protected from damage, i.e. use bollards.

2. **Oil/Grease Alarm** – Information is provided as a separate document.

3. **Coalescer** – Tanks shipped on their sides with coalescers will have retaining tabs to keep the coalescer in place while tank is being moved. If equipped, remove the bolts and tabs once the tank is set in place. If left installed, they may impede removal of coalescer pack(s) for maintenance. Further information on the coalescer is provided as a separate document.

4. **Double Wall** - Connect interstitial leak monitor conduit. Extend conduit with water tight seal. Install accessible port directly above bottom of tank so probe can be pulled out for inspection in the future. See tank detail and installation drawings. To install leak monitor device, see Level Monitor wiring instructions provided as a separate document.

J) BACKFILL TO ABOVE THE BASE OF THE EXTENSION COLLAR

Backfill with pea gravel (or an approved equivalent compacted to 98% S.P.D.) to 18" above the base of the extension collar.

K) BACKFILL TO THE SURFACE RELIEVING SLAB

Pea gravel (or an approved equivalent backfill compacted to 98% S.P.D. in each layer) must be placed around the extension collar to the bottom of the concrete bearing slab, surface grade or pavement sub-grade in layers 150 mm (6") to 200 mm (8") thick.

L) FRAME AND COVER

Place the frame above the extension collar with the cover at finished grade elevation. Leave a gap between frame and top of extension of approx. 1 inch to prevent the vertical load transfer from the frame to the tank. Pour concrete around the frame to secure it in place, size to be determined by Engineer or local code based on site use. If necessary, seal any small gaps between collar and frame with flexible watertight material, i.e. Sikaflex.
M) REINFORCING (BEARING) SLAB - FOR TRAFFIC LOADING ONLY

Pour concrete relieving slab, 25 MPa (3600 psi), at the surface with traffic loading frame and cover embedded in slab and centered over extension collar to secure the frame and transfer live loads to the surrounding soil around the tank. The design of the slab shall be based on AASHTO H-20 loading; 16,000-pound dynamic wheel load. Pour the concrete slab in place with steel reinforcing bars as shown on the Proceptor installation drawings.

Slab designs for standard Proceptors are available from Green Turtle. The contractor must verify that the concrete relieving slab design is suitable for the application and conforms to local codes and standards.

GRANULAR BACKFILL SPECIFICATION

PEA GRAVEL

Pea Gravel is a naturally rounded aggregate with a particle size not less than 3mm (1/8") and not greater than 18mm (3/4"). Gravel must be clean and free flowing, free from large rocks, dirt, sand, roots, organic materials or debris. Upon screening, analysis of the backfill material must have no more than 3% of its weight passing through a #8 sieve (2.38 mm square screen opening). Dry density must be a minimum of 96.3 lbs/ft³.

CRUSHED STONE (APPROVED EQUIVALENT TO PEA GRAVEL)

Crushed stone or gravel is not less than 3 mm (1/8") and not greater than 12mm (1/2"). Aggregate must be clean and free flowing, free from large rocks, dirt, sand, roots, organic materials or debris. Materials should be washed or screened to remove fine particles. Upon screening, analysis of the backfill material shall have no more than 3% of its weight passing through #8 sieve (2.38 mm square screen opening). Dry density must be a minimum of 95 lbs/ft³.