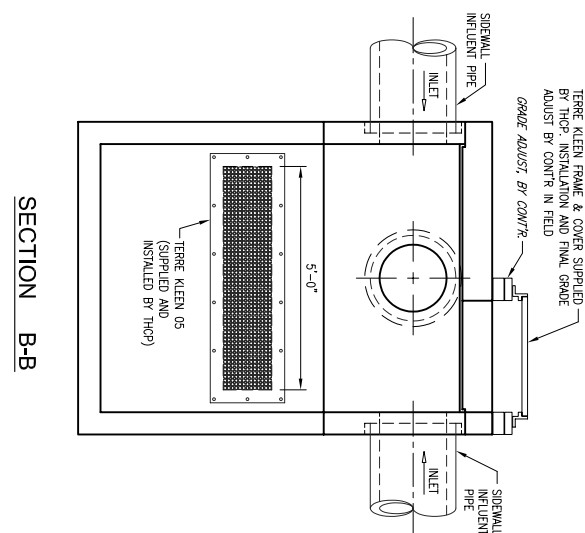
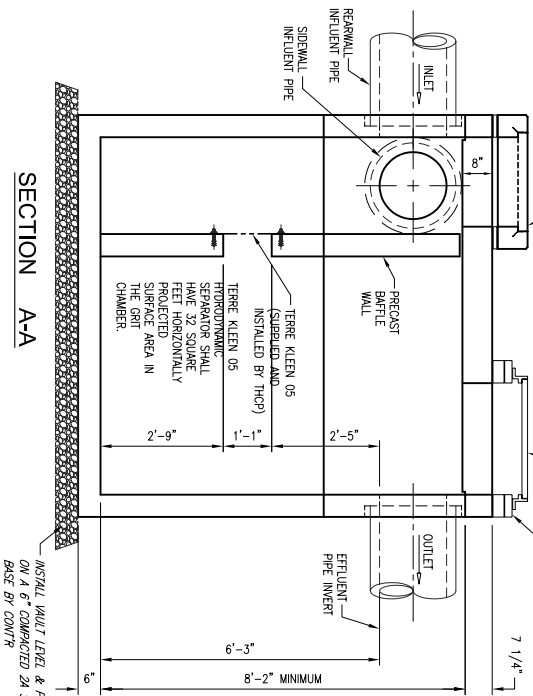


TOP SLAB LAYOUT OPTIONS

TOP UNIT (PA TYPE 'M' SHOWN) 1/2" WELDED STEEL GRADE SUPPLIED BY THCP. INSTALLATION AND FINAL GRADE ADJUST BY CONTR. IN FIELD. (PRECAST TOP UNIT SHOWN, TERRE KLEEN FRAME & COVERS MAY BE USED AT THIS LOCATION)



TERRE KLEEN - GENERAL NOTES:

THE TERRE KLEEN™ (US PATENT 6,676,832 B2) HYDRODYNAMIC SEPARATOR AS DESIGNED, MANUFACTURED AND INSTALLED BY TERRE HILL STORMWATER SYSTEMS.
 CONTACT: TERRE HILL STORMWATER SYSTEMS AT P.O. BOX 10, 485 WEAVERDALE VALLEY ROAD, TERRE HILL, PA 17581 (PHONE 1-800-242-1599) OR WWW.TERRERESOLUTION.COM
 CONCRETE: f'c = 5,000 PSI @ 28 DAYS, WITH ASTM C-33 NO. 57 OR NO. 67 CONCRETE AGGREGATE.
 DEFORMED STEEL REINFORCING TO ASTM A615 GRADE 60, WELDED WIRE FABRIC CONFORMS TO ASTM A185, DEFORMED WELDED WIRE FABRIC OF EQUAL SIZE MAY BE SUBSTITUTED FOR SMOOTH WELDED WIRE FABRIC AND SHALL CONFORM TO ASTM A497.
 BRUNER CONSULT, CS-1028 JOINT MATERIAL MANUFACTURED BY CONCRETE SEALANTS, INC. AND CONFORMS TO FEDERAL SPECIFICATION SS-5-2104. JOINT SEALANT MUST BE INSTALLED IN ACCORDANCE WITH CONCRETE SEALANTS, INC. RECOMMENDATIONS.
 ANNUAL SPACE BETWEEN PIPE AND HOLE TO BE FILLED, BY OTHERS, WITH AN APPROVED NON-SHRINK GROUT OR CONCRETE AS SPECIFIED.
 ALL PIPES TO BE CUT FLUSH WITH INSIDE WALL, AFTER GROUT HAS DRIED.
 DRP-IN ANCHORS TO BE HULTI 316 STAINLESS STEEL KIMM BOLT II AS MANUFACTURED BY HULTI CORP. UNIL LIFT ANCHORS MANUFACTURED BY UNIVERSAL FORM CLAMP COMPANY, OR EQUAL, UNIL LIFT ANCHORS TYPICAL FOR HANDLING.
 MANHOLE FRAMES AND COVERS SUPPLIED BY TERRE HILL STORMWATER SYSTEMS. INSTALLATION AND GRADE ADJUST BY OTHERS. COVERS TO BE MARKED WITH "TERRE KLEEN STORMWATER TREATMENT SYSTEM" LOGO. INSTALLATION AND MAINTENANCE MUST BE IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS AND COMPLY WITH LOCAL ORDINANCES AND INDICES PHASE II REGULATIONS.

Terre Kleen Model	Settling area in sq-ft	Design Capacity How head 40" dia	Design Capacity How head 110" dia	Design Capacity How head 150" dia	Design Capacity How head 200" dia	Peak flow	Peak 24 hr Sediment	Standard Storage Oil Volume	Minimum grade to pipe invert	Standard pipe inlet to device bottom
TK01	8 SFT	0.2 cfs	< 0.50 lb	1.0 cfs	< 0.50 lb	1.7 cfs	66 CF	192 Gallon	2.52 Ft	6.25 Ft
TK02	13 SFT	0.2 cfs	< 0.50 lb	1.6 cfs	< 0.50 lb	2.8 cfs	18 lb	238 Gallon	3.27 Ft	6.25 Ft
TK05	32 SFT	0.2 cfs	< 0.50 lb	3.9 cfs	< 0.50 lb	6.9 cfs	132 CF	238 Gallon	3.27 Ft	6.25 Ft
TK09	37 SFT	0.2 cfs	< 0.50 lb	6.3 cfs	< 0.50 lb	12.4 cfs	119 CF	203 Gallon	3.27 Ft	6.25 Ft
TK19	115 SFT	0.2 cfs	< 0.50 lb	19.3 cfs	< 0.50 lb	26.4 cfs	28.0 CF	350 Gallon	3.27 Ft	6.25 Ft
TK30	220 SFT	0.2 cfs	< 0.50 lb	37.2 cfs	< 0.50 lb	49.5 cfs	52.0 CF	327 Gallon	3.27 Ft	6.25 Ft
TK45	288 SFT	0.2 cfs	< 0.50 lb	49.5 cfs	< 0.50 lb	66.0 cfs	68.0 CF	327 Gallon	3.27 Ft	6.25 Ft
TK54	346 SFT	0.2 cfs	< 0.50 lb	60.0 cfs	< 0.50 lb	77.0 cfs	79.0 CF	327 Gallon	3.27 Ft	6.25 Ft

- Design flow rates based on Weighted Removal according to NJDEP lab protocol and adjusted for a particle density. H10s/4h and 60 degree Fahrenheit water temperature.
- Peak headloss is defined by the standard insert clearance and defines peak flow. Higher flows at reduced treatment rates are optional and void external by design.
- Add 6" for grade adjust and frame and cover, otherwise cast into the lid.
- Excess design overflow through a screen is possible above insert.
- Special designs are available to increase these values.

Terre Kleen TMS Performance, Design and Installation Specifications
 Terre Kleen is a HYDRODYNAMIC SEPARATOR consisting of prefinished, slanted inclined plates housed inside a precast structure. Terre Kleen removes pollutants by separating sediment and floatables such as oils, grease, trash and debris from stormwater. Terre Kleen features one or follows:

- capture & permanently retain 100 percent of feedable trash & debris of all flows
- capture & retain 90 percent of feedable sediment
- capture & retain 90 percent of feedable petroleum hydrocarbons (PH) of all flows; unit shall be capable of retaining "oil contents" to permanently remove captured oil, grease and TPH
- capable of removing silt and clay size particles
- All storm water flows shall enter the Terre Kleen unit, flows in excess of design flows, shall pass through the internal flow through duct to the effluent pipe without the use of an external bypass.
- Minimum gross oil storage volume is 248 gallons
- Minimum gross oil storage volume is 1320 Gals
- Minimum gross oil storage volume is 248 gallons
11. 30 inch manhole access for maintenance from grade by vacuum truck; with not less than 18 inch continuous access opening to bottom of sump area
12. 24 inch manhole access opening to bottom of sump area
13. Manufacturer shall submit shop drawings and such other information requested by Engineer to verify Performance and Design Specifications
14. Warranty : Labor and material for 4 years from date of installation in the event that the product supplied is not free from defects that materially affect its performance; Terre Kleen shall be installed and used only in the particular application for which it was specifically designed, engineered and manufactured (see written Terre Kleen warranty for entire warranty)

Product Substitution Procedure

- No stormwater treatment BMP shall be approved as an equivalent substitution unless the Engineer shall review and approve drawings and specifications stamped and sealed by a professional engineer registered in the state wherein the project is located showing the following:
 - project-specific sizing calculations, with 3rd party performance verification, clearly showing that the unit meets or exceeds the Performance and Design Specifications of the Terre Kleen.
 - project-specific hydraulic calculations, with 3rd party performance verification showing the hydraulic grade line (HGL) plotted through the structure for the design flow

Maintenance Procedures

- Quarterly inspection is recommended to record sediment, oil, and trash accumulation.
- Cleaning is recommended when the sediment reaches 16 inches in depth in one or both chambers.
- No confined space entry required. Terre Kleen design allows access from grade, to both chambers by vacuum hose for removal of 100% of all captured pollutants.
- Air and water pressurized sledge dispersion manifold, under included plates
- Removed material must be handled and disposed according to local, state, and federal regulations

Terre Kleen Installation Specifications

- Terre Kleen inclined plate assembly shall arrive at the job site fully assembled inside precast concrete structure. Precast structure may arrive in sections due to weight and transportation issues. Eason precast structure shall contain lifting points with UNL-lifts, and lifting equipment shall be used to install the structure. Lifting equipment shall be used to install the structure. Lifting equipment shall be used to install the structure. Lifting equipment shall be used to install the structure.
- Contractor shall excavate, dewater and shore in accordance with project specifications, as provided by Engineer and OSHA regulations.
- Sub-grade shall be established as shown on the drawings. Underlying soil and sub-grade material shall have design loading of not less than 2000 pounds per square foot (psf). Precast components shall be placed on the compacted base (3% Proctor Density), elevation shall be as shown on the drawings. The entire unit will be properly positioned when fully installed.
- Contractor shall place "CONSEAL" or equivalent water tight mastic material between each precast component.
- Precast structure containing the Terre Kleen component shall be aligned horizontally and vertically plumb. Contractor must confirm that the entire Terre Kleen shall be level during and after completion of backfill of the structure. If required shall be included as shown on the drawings.
- The drainage and grade adjusted to match final grade elevations by Contractor.
- Connect and seal storm drain inlet and outlet pipes to Terre Kleen unit using non-sink grout-fill material in accordance with project specifications.
- BACKFILL SPECIFICATIONS: It is recommended that the stone sub-base be extended a minimum of one foot (1 ft) beyond the exterior face of the precast and compacted to 95% Proctor Density. Upon completion of the precast installation of 95% Proctor Density, a 300-grit sand shall be placed over the precast structure. A 300-grit sand shall be placed over the precast structure. A 300-grit sand shall be placed over the precast structure.
- Contractor shall remove all foreign material and debris including all sediment, oils, grease and debris from the area prior to pipe and Terre Kleen upon completion of installation.

REVISIONS

JOB:	TERRE KLEEN™ 05 6'-0" x 8'-0" PRECAST WATER QUALITY CHAMBER
CONTR:	
ENGR:	
BY:	



TERRE HILL, PA. (717)445-3100

Initial Release 11-12-08

FILE NO.