FILL CHART

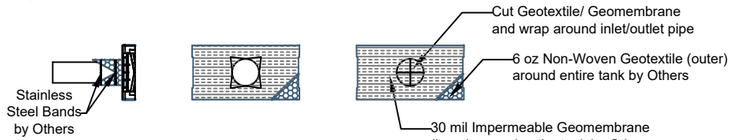
Material Location	Description	Material Classification			Compaction/Density Requirement (NOTE 3)
FINAL FILL Fill starting from the top of the embedment fill layer. (NOTE 1 and 2)	Suitable Fill Materials as noted in the Project Geotechnical Report and noted on the Site Design Engineer's Plans	See Project Geotechnical Report and Site Design Engineer's Plans			Plate Compact or Static Roll loose lifts to densify fill. Use at least two full passes of the equipment to level the layer. Continue until 24 inches of total fill thickness has been placed above the tank. For AASHTO M145 soils, a minimum of 95% of the Standard Proctor Maximum Dry Density is recommended. After 24 inches of fill is placed, place fill in accordance with the engineer of record's relative compaction requirement or to 95% of the Standard Proctor Maximum Dry Density - whichever is greater.
EMBEDMENT FILL Fill Immediately Surrounding the sides and top of tank (NOTE 4) **BEDDING FILL** Fill Immediately below the tank (NOTE 4)	Sand-Gravel Mixtures or Open-Graded Crushed Aggregate Blends	AASHTO M145 A-1, A-2-4, A-3	or	AASHTO M43 3, 357, 4, 467, 5, 56, 57	Plate Compact or Static Roll loose lifts to densify fill. Use at least two full passes of the equipment to level the layer. For AASHTO M145 soils, a minimum of 95% of the Standard Proctor Maximum Dry Density is recommended.

NOTE 1: This layer can include pavement subbase
NOTE 2: If open-graded aggregates are used for embedment fill, fines migration from the final to embedment fill layer may be reduced by installing a layer of 6 oz non-woven geotextile fabric at the final and embedment fill interface.
NOTE 3: See Construction Equipment Table for more information for construction equipment limitations.
NOTE 4: Import or native soils may be used if the soils meet the material classification listed. Fill material should be selected based on classification, groundwater conditions, and tank invert elevation.

CONSTRUCTION EQUIPMENT CHART

Equipment Make (NOTE 1)	Maximum Gross Vehicle Weight (lbs)	Minimum Fill Depth over Tank (in)
Plate Compactor	1,500	6
Compact Track Loader (NOTE 2)	7,500	6
Rubber-Tired Skid Steer (NOTE 3)	7,500	14
Low Ground Pressure Tracked Vehicles (NOTE 4)	20,000	14
Roller - Static Mode	12,000	18
Roller - Vibratory Mode	12,000	24
Dump Trucks and Pans	NOTE 5	

NOTE 1: Vehicles shall make straight runs only across tank footprint.
NOTE 2: Maximum ground pressure = 5 psi
NOTE 3: Maximum axle load = 5,250 lbs
NOTE 4: Maximum ground pressure = 7 psi
NOTE 5: Contact ACO for more information regarding dump truck and pan traffic during construction.
NOTE 6: Backfill material may be temporarily unloaded near the excavation. Material shall not be stockpiled near the excavation for longer than 24 hours.



DETAIL A
PIPE WRAP
NTS

COVER CHART

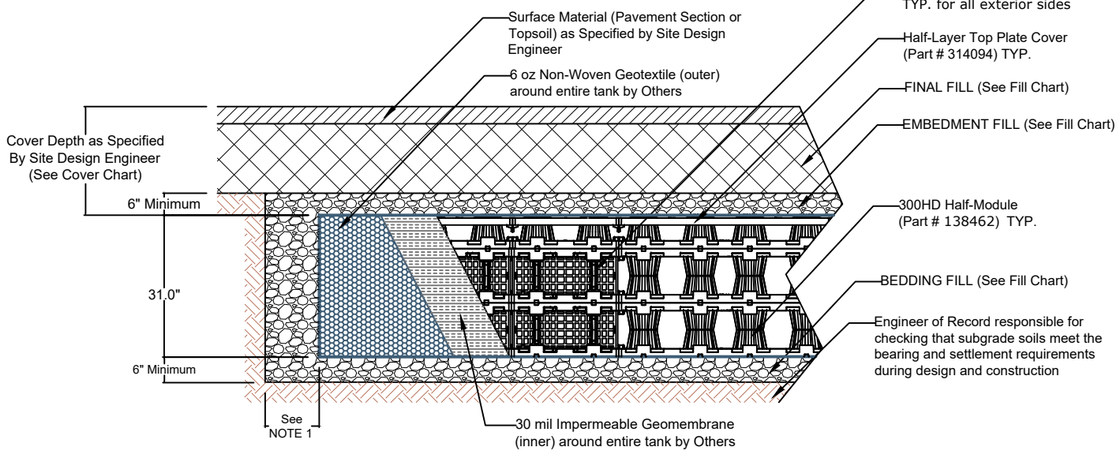
Live Loading Condition	Cover Thickness (inches)	
	Minimum	Maximum
Non-Trafficked Areas (i.e. Landscaping)	12	134
Passenger Vehicles Parking Lot (i.e. Gross Vehicle Weight <10,000 lbs)	18	134
Passenger Vehicle Parking Lot with one weekly AASHTO HS-20 vehicle	20	134
Frequent AASHTO HS-20 Traffic	22	134
Passenger Vehicle Parking Lot with one weekly AASHTO HS-25 vehicle	24	134
Frequent AASHTO HS-25 Traffic	26	134

NOTE 1: Minimum Cover Thickness in non-trafficked areas is based on landscape surface with a 40 degree load distribution. In trafficked areas, Minimum Cover Thicknesses are based on an asphalt-surfaced pavement with a 30 degree load distribution.
NOTE 2: Calculations assume backfill with a minimum 32-degree angle of internal friction and a maximum density of 120 lbs per cubic foot, and a seasonal groundwater elevation at least 2 feet below the invert of the tank.

SIDE PANEL PIPE DIAMETER CHART

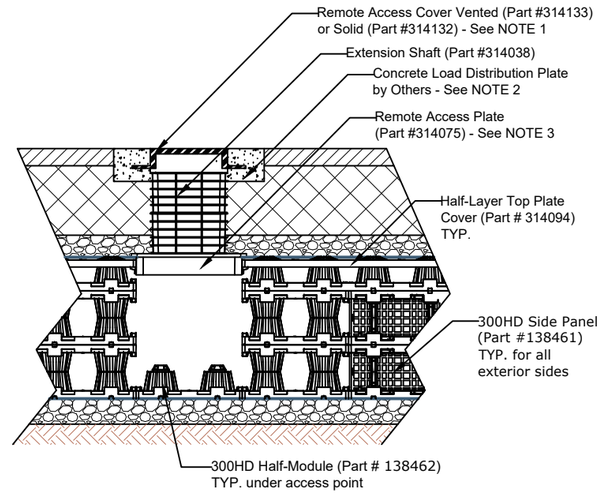
Inlet/Outlet Pipe Diameter	
Minimum	Maximum
4 inches	6 inches

NOTE 1: Cut inlet / outlet pipe hole prior to side panel installation.
NOTE 2: Contact ACO for guidance for inlet / outlet pipes larger than 6-inch diameter
NOTE 3: 0.5-layer 300HD module does not have side panels and allows for a 4-inch diameter pipe only. Pipe may be set between top plate cover and bottom of module body. Contact ACO for guidance.



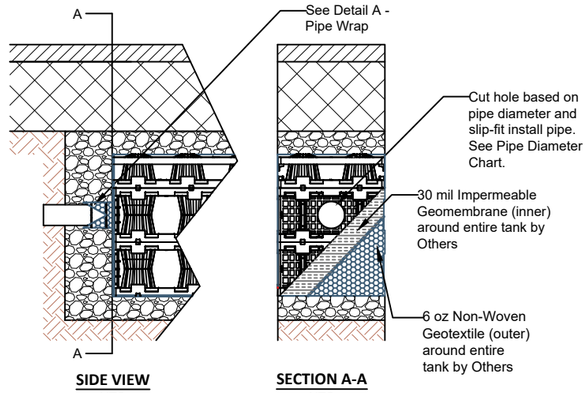
2.5 LAYER 300HD
DETENTION CROSS SECTION
NTS

NOTE 1: The minimum width of sidewall backfill is 12" or large enough to accommodate selected compaction equipment, whichever is greater.



2.5 LAYER 300HD
ACCESS POINT CROSS SECTION
NTS

NOTE 1: Ventilation may be crucial to reducing the pressure build up within the system. If solid access covers are used, alternative methods of ventilation are recommended.
NOTE 2: Concrete Load Plate not required for unpaved applications. Consult Engineer of Record for requirements
NOTE 3: The Remote Access Plate is approximately the size of half of a half-module. The half-module at the top of the tank must be cut in half to accommodate the Remote Access Plate



2.5 LAYER 300HD
PIPE INSTALLATION
NTS

DRAWN BY	CHECKED BY
A Frye	**J Jonke**
DATE	REV.
12/11/2024	**1**

STORMBRIXX STANDARD DETAILS

300HD SYSTEM - 2.5 LAYER - DETENTION

ACO, INC.

WEST SALES OFFICE
825 W BEECHCRAFT ST.
CASA GRANDE, AZ 85122
Tel. (888) 490-9552
Fax (520) 421-9899

EAST SALES OFFICE
9470 PINECONE DRIVE
MENTOR, OH 44060
Tel. (800) 543-4764
Fax (440) 639-7235

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481 MUNN RD. SUITE #225
FORT MILL, SC 29715
Tel. (440)-639-7230
Fax (803)-802-1063

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