BIO BASIN DECONTAMINATION TANKS

(Models BB-275, BB-500, BB-750, BB-1000, BB-1500)





Sheet #1 - Series overview and Warranty information

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Sheet #2 - General installation guidelines and Operation/Maintenance guidelines
Sheet #3 - Above Grade installation guidelines (BB-275, BB-500)
Sheet #4 - Below Grade installation guidelines (BB-275)
Sheet #5 - Below Grade installation guidelines (BB-500)
Sheet #6 - Below Grade installation guidelines (BB-750, BB-1000, BB-1500)
Sheet #7 - TeleGlide Riser installation guidelines

Leak/Seal Testing

DO NOT AIR TEST UNIT OR TELEGLIDE RISER SYSTEM! Doing so may result in property damage, personal injury or death.

<u>Base Unit:</u> To perform a leak/seal test on the base unit, cap/plug all plumbing connections, remove the cover, and fill the unit with water just above the highest connection. Inspect unit and connections for leaks. Check water level at specific time intervals per local code.

<u>TeleGlide Riser System:</u> If required by local code, the riser system may be leak/seal tested similar to the base unit. <u>CAUTION:</u> the riser(s) must be supported before filling with water to keep from tipping over. Once the riser system is in place and properly supported, cap/plug all plumbing connections on the main unit, remove the cover from the top of the riser assembly and fill the unit and riser system with water to finished grade level. Carefully, as the riser(s) will be very heavy from the weight of the water, inspect all gasket(s) and clamps (if applicable) for any leaks. Check water level at specific time intervals per local code.

Lifetime Warranty

Effective March 2, 2015 Striem represents and warrants that HDPE products will be free from any and all defects in material and workmanship, including corrosion, during the lifetime of the plumbing system in which the products were originally installed and will, at its option, agree to repair, replace, or supply credit to the original purchaser

This warranty does not cover damage caused by the products normal usage, or wear and tear. It does not cover damage from naturally occurring phenomenon, including, but not limited to UV, freeze-related damage, or natural disasters. This warranty does not cover the purchaser's cost of routine maintenance including replacement of parts required in routine maintenance.

This warranty does not cover fabricated steel products, or any monitoring equipment. This warranty shall be effective if, and only if, the products:

* Were installed in accordance with Striem's notes, specifications and instructions, for installation, operation, and maintenance;

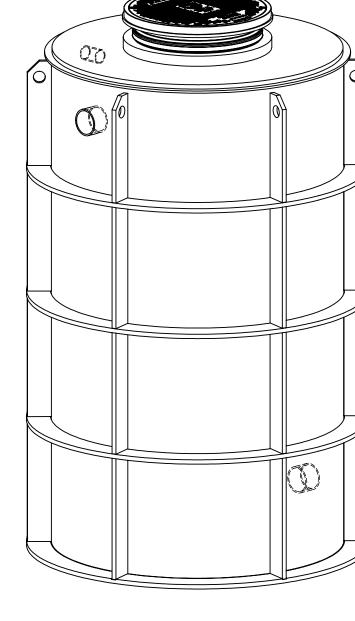
* Were installed in conformance with all applicable building and plumbing codes, and passed all applicable testing methods immediately following installation;

* Have not been subjected to misuse or abuse, whether negligent or intentional; * Were never modified, repaired, or altered by others not authorized by Striem.

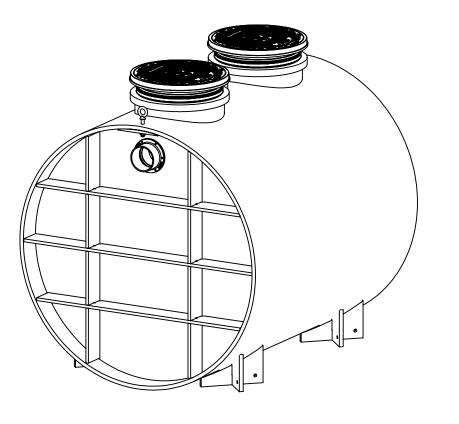
This warranty is the purchaser's sole and exclusive remedy, and acceptance of this exclusive remedy is a condition of the contract for the purchase of these products. In no event shall Striem be liable for any incidental, special, consequential or punitive damages, or for any costs, attorney fees, expenses, losses or delays claimed to be as a consequence of any damage to, failure of, or defect in any products including, but not limited to, any claims for loss of profits, transportation, removal and installation charges. This warranty is exclusive and in lieu of all other warranties or conditions, written or oral, expressed or implied.



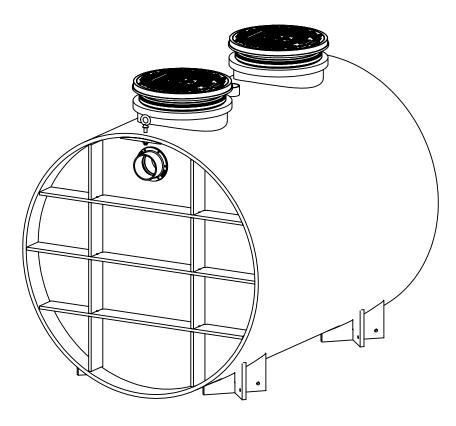
BB-275 275 gallons



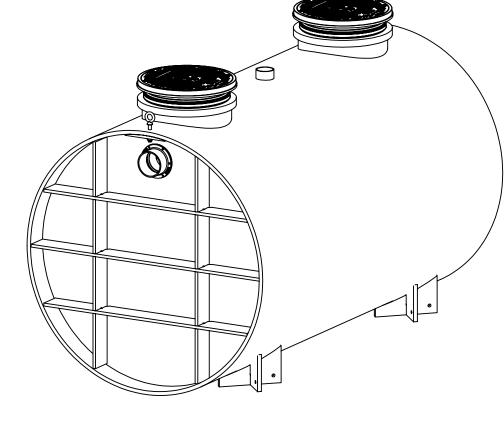
BB-500 500 gallons



BB-750 750 gallons



BB-1000 1,000 gallons



BB-1500 1,500 gallons

ECO:

DESCRIPTION:

BIO BASIN SERIES INSTALLATION, OPERATION AND MAINTENANCE GUIDE

SHEET NUMBER: 1 of 7

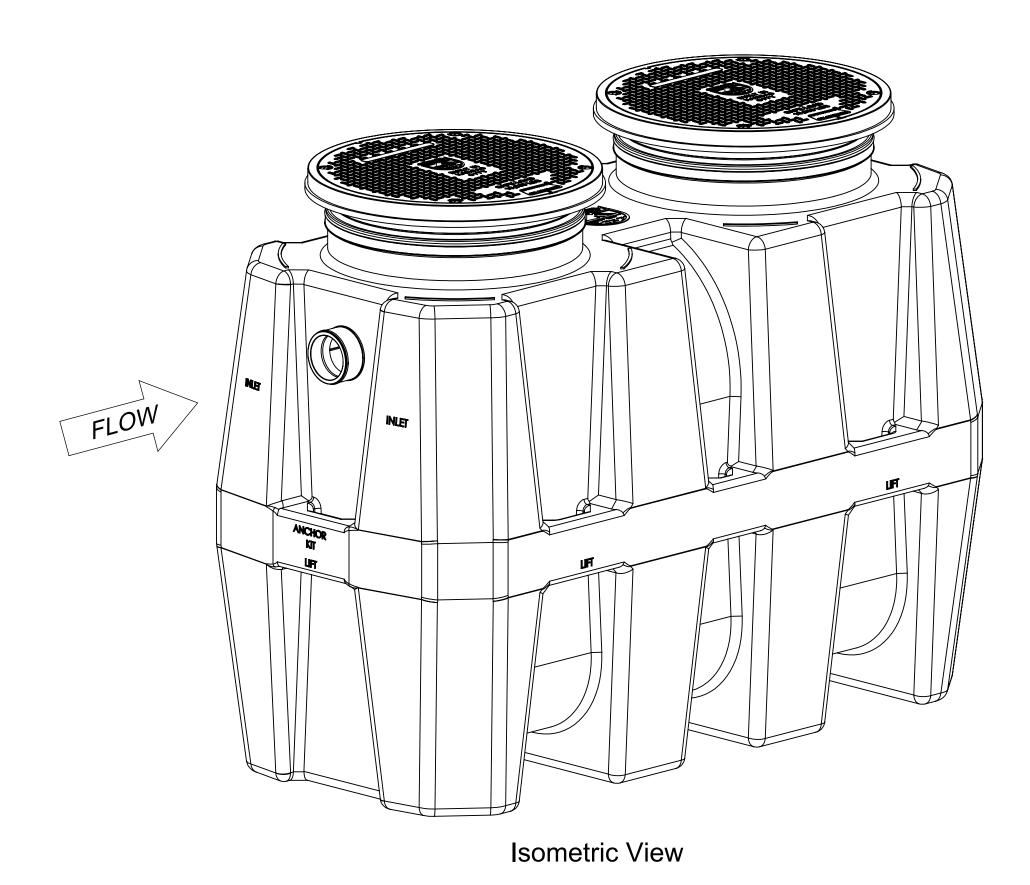
DWG BY: MJ | **DATE:** 12/07/18 | **REV:**

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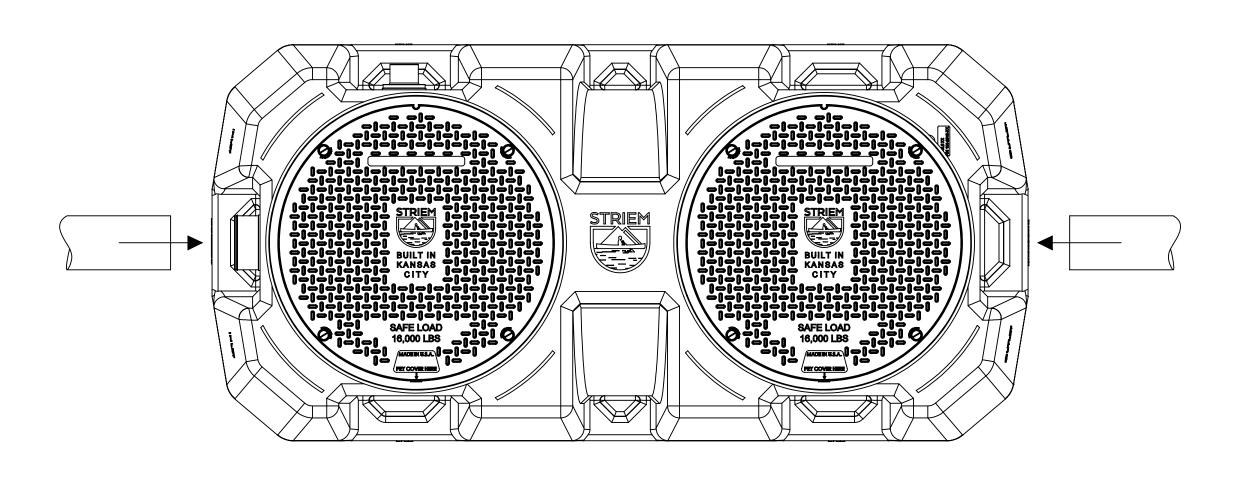
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GENERAL DECONTAMINATION TANK INSTALLATION INSTRUCTIONS **(BB-275 SHOWN)**



Set unit on level solid surface as close as possible to fixtures being served. If unit is to be installed below grade refer to below grade installation instructions. (sheet #3)



Top View

Connect inlet and outlet drainage lines to unit. Mechanically couple to unit. Do not solvent weld.

NOTES:

Striem Decontamination tanks are not to be installed in any other manner except as shown. Consult local codes for separate trapping requirements, cleanout locations and additional installation instructions

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OPERATION:

Striem offers a complete series of decontamination (holding) tanks to collect and store biological and contaminated liquid waste. These tanks offer a safe and economical way to contain potentially hazardous liquid waste for testing, pumping, or releasing into the public sewer system, once determined suitable for evacuation.

MAINTENANCE

- Remove cover(s).
- Contact a professional contractor to verify if wastewater is acceptable to pass to the sewer system.
 Clean the drain lines thoroughly of all debris.
 Inspect gaskets for wear and tear. Replace cover(s).
 Dispose of waste per local code.

PUMPING FREQUENCY:

Tank contents shall be inspected by a professional contractor to verify whether it is contaminated waste or noncontaminated waste.

Tank shall be inspected frequently to check liquid level if there is no monitoring panel. Tank shall be considered full when level is at, or near inlet connection.

Outlet options vary, depending on jobsite requirements. Options are; * No outlet (pump out manually)

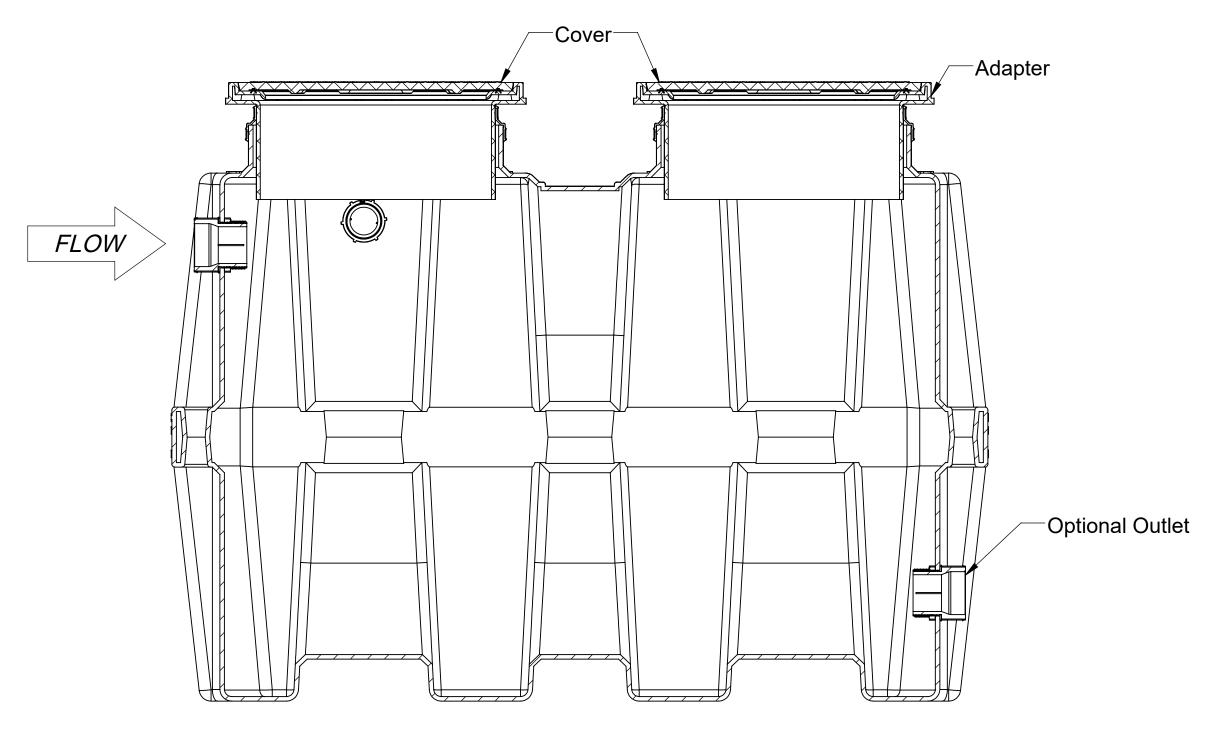
- * Outlet with manual valve
- * Outlet with electic actuated valve

TROUBLESHOOTING TIPS:

SHEET NUMBER: 2 of 7

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Slow drainage is course for immediate inspection! Action required depends on tank outlet option. Call a professional contractor for assistance. Call Striem for details on tank specifications.



BB-275 Shown

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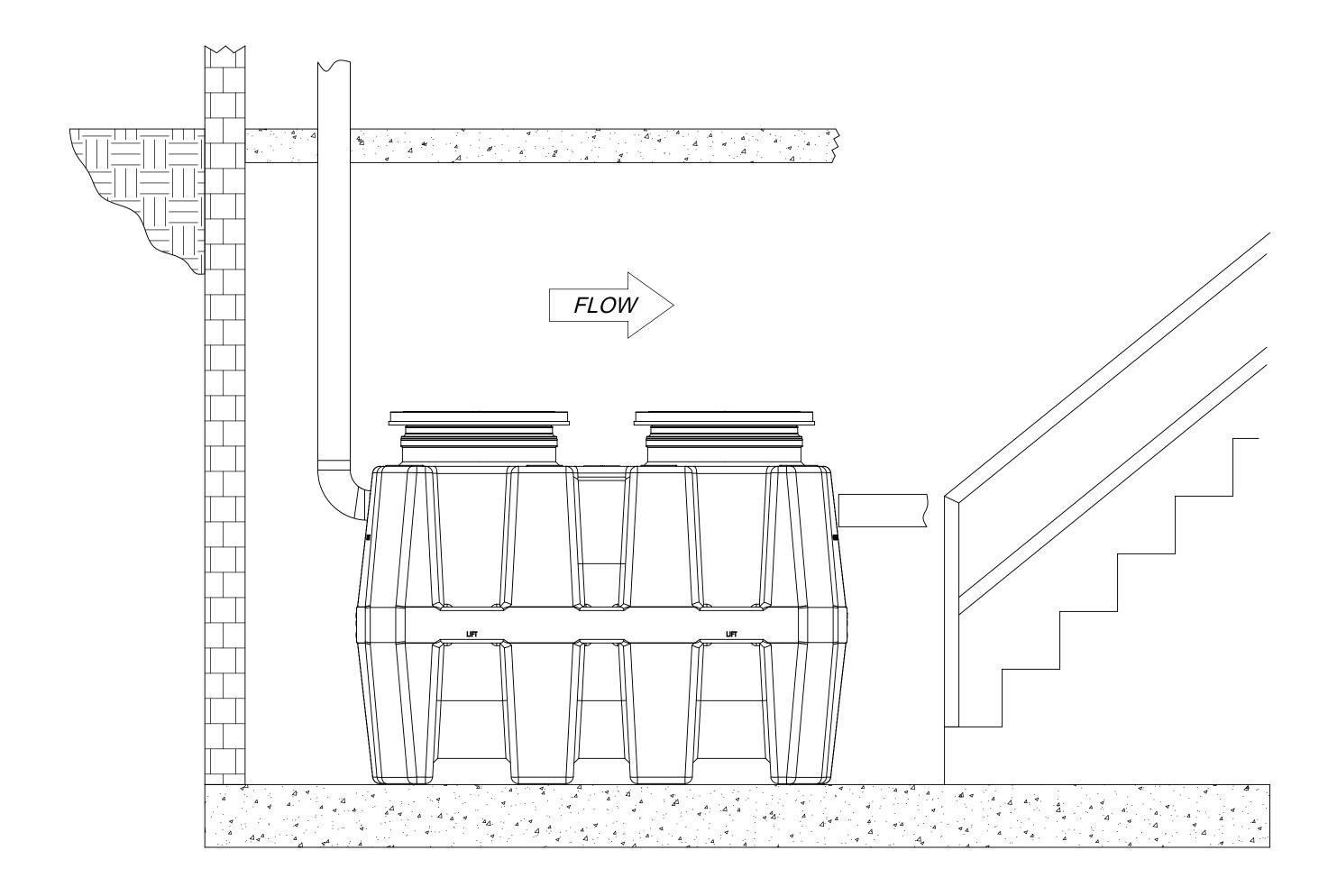
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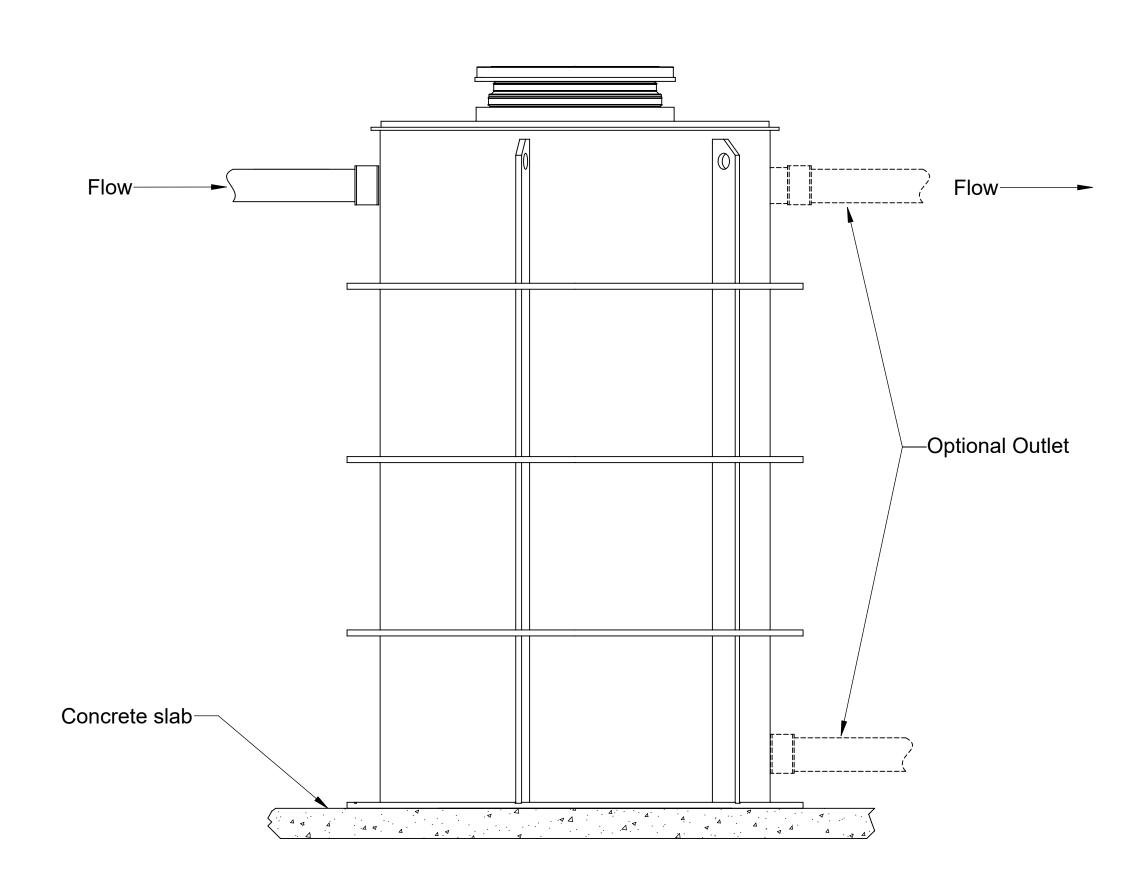
INTERIOR ABOVE GRADE INSTALLATION INSTRUCTIONS (BB-275, BB-500)



ON-THE-FLOOR DETAIL (BB-275 SHOWN)

CONNECTIONS

1. Connect waste piping to the unit.



ON-THE-FLOOR DETAIL (BB-500 SHOWN)

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INTERIOR OR EXTERIOR BELOW GRADE INSTALLATION INSTRUCTIONS (BB-275)

Concrete Pad must extend 18" outside the unit footprint Rebar Concrete Pad must extend 18" outside the unit footprint -BB-275 Shown Top View 2 1/2" Min. — -Rebar Finished Grade

CONCRETE SLAB DETAIL FOR TRAFFIC LOADING (INTERIOR OR EXTERIOR) (BB-275 Shown)

Elevation View

BELOW GRADE INSTALLATION INSTRUCTIONS

EXCAVATION

- 1. Width and length of excavation shall be minimum 12" greater than the tank on all sides.
- Depth of excavation shall be 6" deeper than tank bottom.
- 3. Set the tank in well-packed crushed aggregate material approximately 3/4" size rock, or sand, with no fines.
- 4. Anchor kit is recommended for installations in high water table conditions to prevent float out. To be determined by specifying engineer. If necessary, order optional "Anchor Kit" (see detail right).

BACKFILLING & FINISHED CONCRETE SLAB

- Preparation of sub grade per geotech recommendations.
- Stabilize and compact sub grade to 95% proctor.
- Fill tank with water before backfilling to prevent float out during piping installation.
- Before backfilling and pouring of slab secure cover(s) and riser(s) (if necessary) to the unit(s)
- 5. Backfill using crushed aggregate material approximately 3/4" size rock, or sand, with no fines.
- 6. Place 6" aggregate base under slab. Aggregate should be 3/4" size rock, or sand, with no fines.
 7. Thickness of concrete around cover to be determined by specifying engineer. If traffic
- loading is required the concrete slab dimensions shown are for guideline purposes only.
- Concrete to be 28 day compressive strength to 4000 PSI.
- 9. NO. 4 rebar (\bigcirc 1/2") grade 60 steel per ASTM A615: connected with tie wire.
- 10. Rebar to be 2 1/2" from edge of concrete.
- 11. Rebar spacing 12" grid. 4" spacing around access openings. 12. All pipe penetrations to be sleeved or have slip connections.

CONNECTIONS

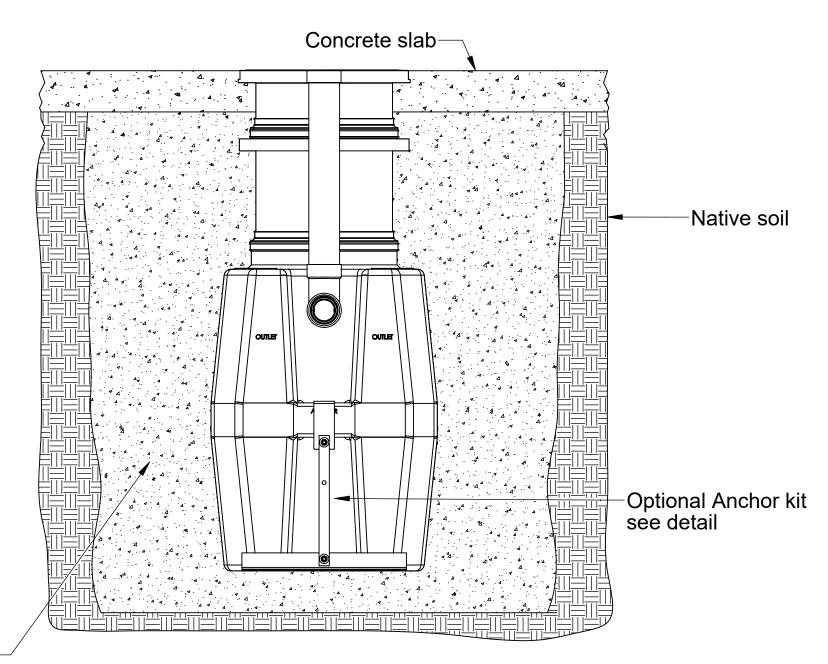
1. Connect waste piping to the unit.

Clean out to grade Clean out to grade -Risers to grade on inlet pipe of each on outlet pipe of each unit (by others) unit (by others) Flow-2-Way cleanout tee (by others) 2-Way cleanout tee (by others) -Optional Outlet Optional Anchor kit Optional Anchor kit see detailsee detail Crushed aggregate **SIDE VIEW DETAIL**

For unit details see specification sheet for selected unit (Connecting pipe and fittings by others)

NOTES:

Striem Decontamination tanks are not to be installed in any other manner except as shown. Consult local codes for separate trapping requirements, cleanout locations and additional installation instructions



EXCAVATION AND BACKFILL DETAIL (INTERIOR OR EXTERIOR)

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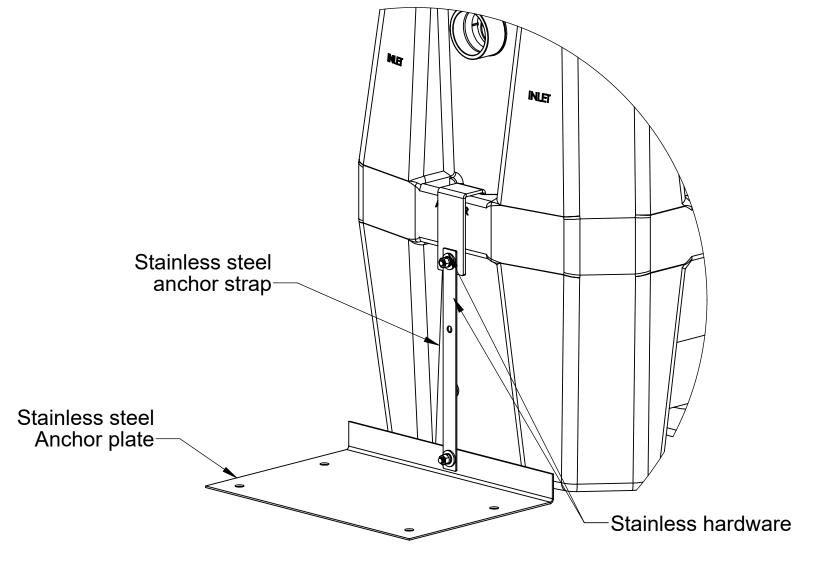
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ANCHOR KIT INSTALLATION DETAIL



Anchor Kit Installation Steps

- 1. Slide "Anchor Strap" over tie down point on end wall and bolt together using provided hardware.
- 2. Bolt "Anchor Strap" to "Anchor Plate" using provided hardware
- 3. Hold down force achieved by backfill weight acting on Anchor Plate.
- 4. Anchor Plate may be bolted to concrete slab, if required, by using holes provided in Anchor Plate.

INTERIOR OR EXTERIOR BELOW GRADE INSTALLATION INSTRUCTIONS (BB-500)

BELOW GRADE INSTALLATION INSTRUCTIONS

EXCAVATION

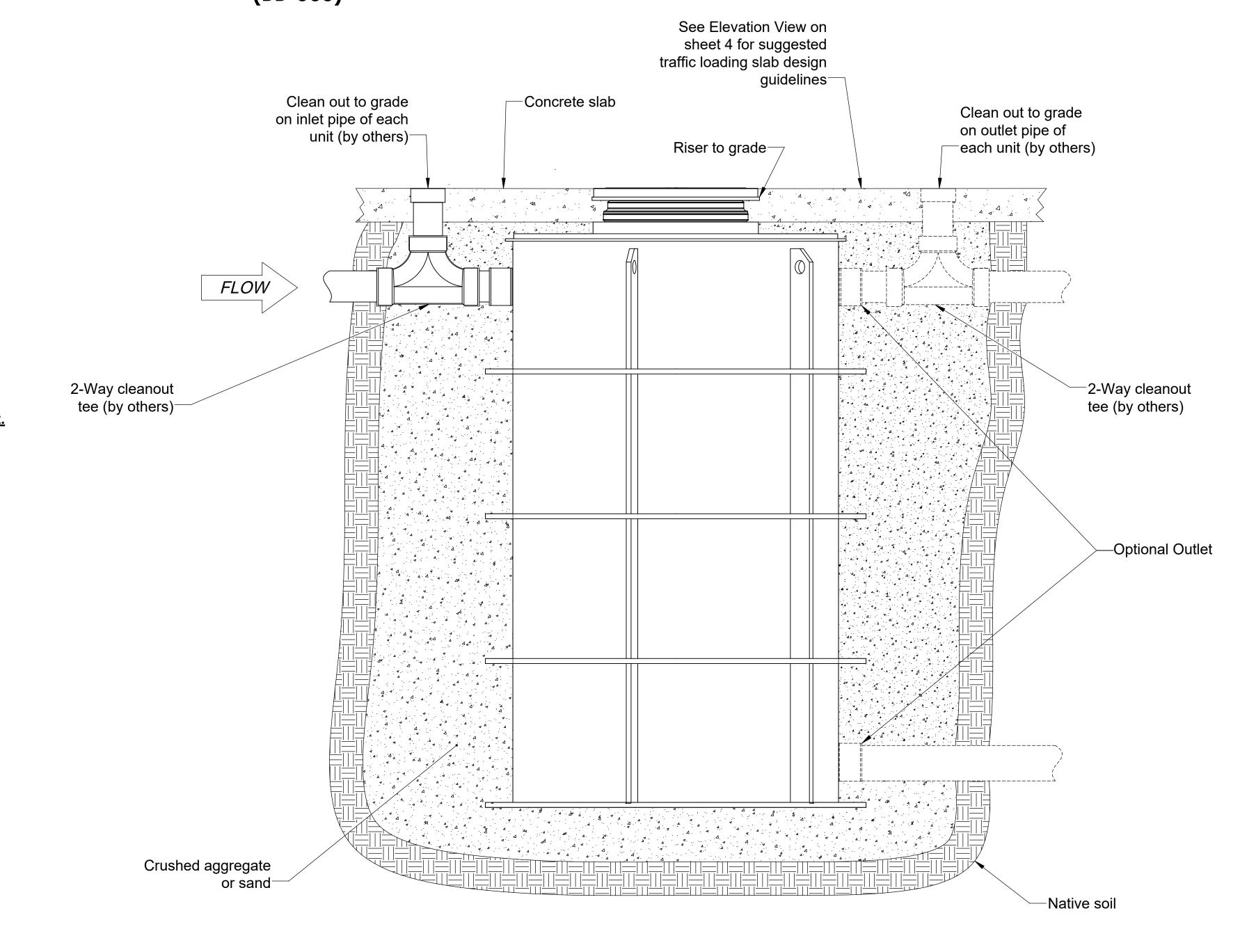
- 1. Width and length of excavation shall be minimum 12" greater than the tank on all sides.
- Depth of excavation shall be 6" deeper than tank bottom.
 Set the tank in well-packed crushed aggregate material approximately 3/4" size rock, or sand, with no fines.

INSTALLATION

- 1. Inspect unit(s) for defects and make sure it meets specifier requirements. Make sure no damage has been done to tank(s) or fittings during transportation.
- 2. Install tank(s) as close to fixture(s) as possible, making sure there is enough room above and around tank(s) for proper cleaning and maintenance.
- 3. Tank(s) must be fully supported either by a concrete pad or compacted sand bed free of stone and strong enough to hold the unit weight and water capacity.
- 4. Connect Inlet, Outlet, and Vent connections. Polyethylene tanks are supplied with polyethylene connections only. All tank(s) must be independently supported to avoid stress on fitting connections.
- 5. If multiple fixtures are being serviced, it is recommended that each fixture should be individually trapped and vented according to specifier requirements and state and/or local codes.
- 6. After piping in installed, inspect all pipe joints to ensure there are no leaks.
- 7. If required to conduct a pressure test on pipes, use an expandable test plug. Do not pressure test unit.

BACKFILLING & FINISHED CONCRETE SLAB

- Preparation of sub grade per geotech recommendations.
- Stabilize and compact sub grade to 95% proctor.
- Fill tank(s) with water before backfilling to prevent float out during piping installation.
- Before backfilling and pouring of slab secure cover(s) and riser/s (if necessary) to the unit(s)
- 5. Backfill using crushed aggregate material approximately 3/4" size rock, or sand, with no fines.
- Place 6" aggregate base under slab. Aggregate should be 3/4" size rock, or sand, with no fines.
- 7. Thickness of concrete around cover to be determined by specifying engineer. If traffic loading is required the concrete slab dimensions shown are for guideline purposes only.
- 8. Concrete to be 28 day compressive strength to 4000 PSI.
 9. NO. 4 rebar (∅ 1/2") grade 60 steel per ASTM A615: connected with tie wire.
- 10. Rebar to be 2-1/2" from edge of concrete.
- 11. Rebar spacing 12" grid. 4" spacing around access openings.
- 12. All pipe penetrations to be sleeved or have slip connections.



SIDE VIEW DETAIL

For unit details see specification sheet for selected unit (Connecting pipe and fittings by others)

DESCRIPTION:

BIO BASIN SERIES INSTALLATION, OPERATION AND MAINTENANCE GUIDE

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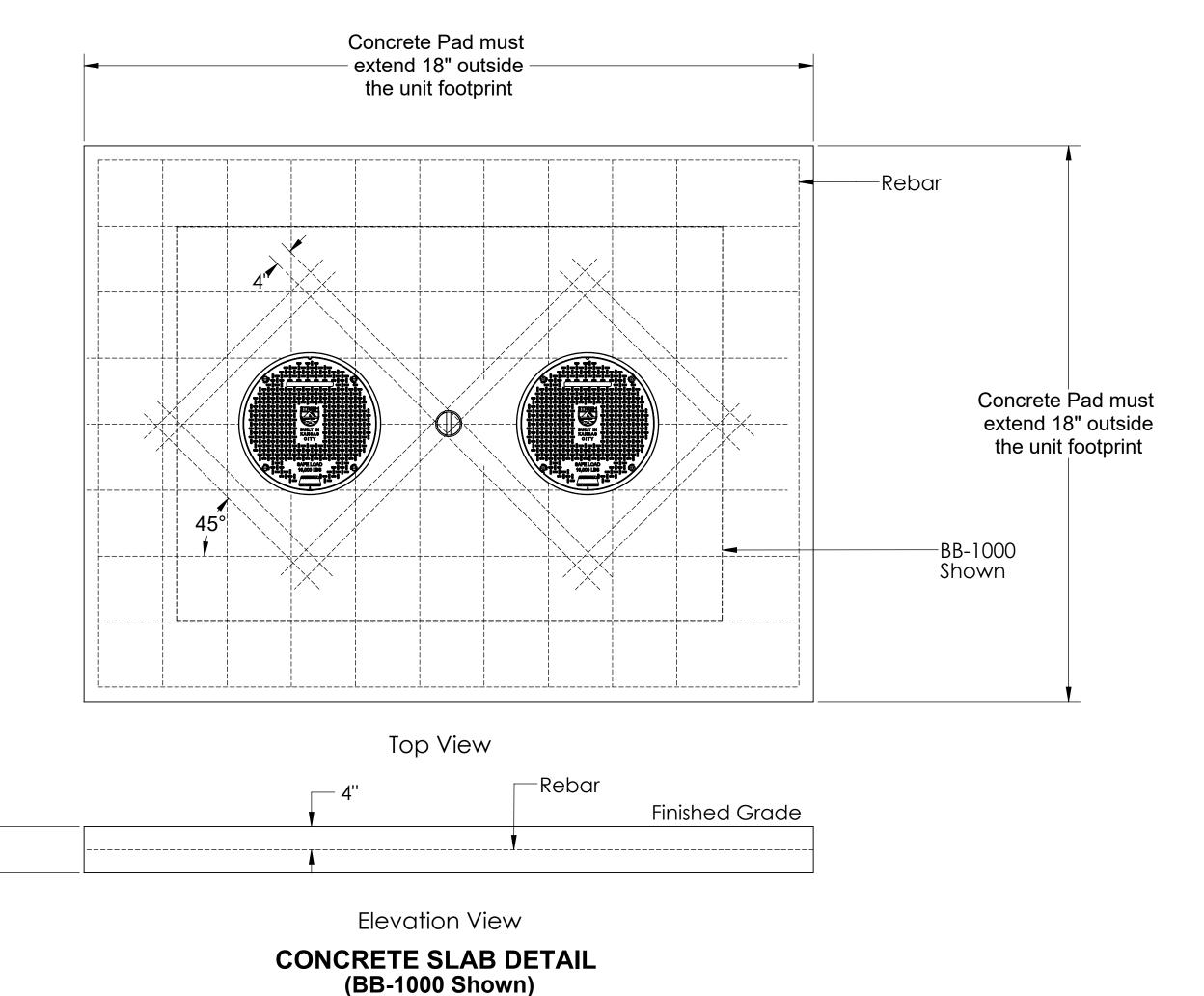
Striem 3100 Brinkerhoff



NOTES:

-Finished Grade INTERIOR OR EXTERIOR BELOW GRADE INSTALLATION INSTRUCTIONS (BB-750, BB-1000, BB-1500) -Riser to finished grade Crushed gravel or sand -Native soil Deadman for high water table Corrosion resistant installation to be 12" wide x 12" tall turnbuckle each and the as long as the tank typical anchor point both sides (by others) (included with HDK-1 if purchased) Compacted sand/gravel support base 12" min.

EXCAVATION AND BACKFILL DETAIL



EXCAVATION

- Surrounding soil must be undisturbed soil or well compacted engineering fill.
 Measure the width and length of the tank and excavate a hole that that is a minimum of 18" greater than the tank on all sides.
- 3. Depth of excavation shall be 12" deeper than tank bottom.
- 4. After the excavation is complete create a well compacted support layer of sand/gravel mixture so that ground supporting tank is a minimum of 12" above native soil.

Unit Installation

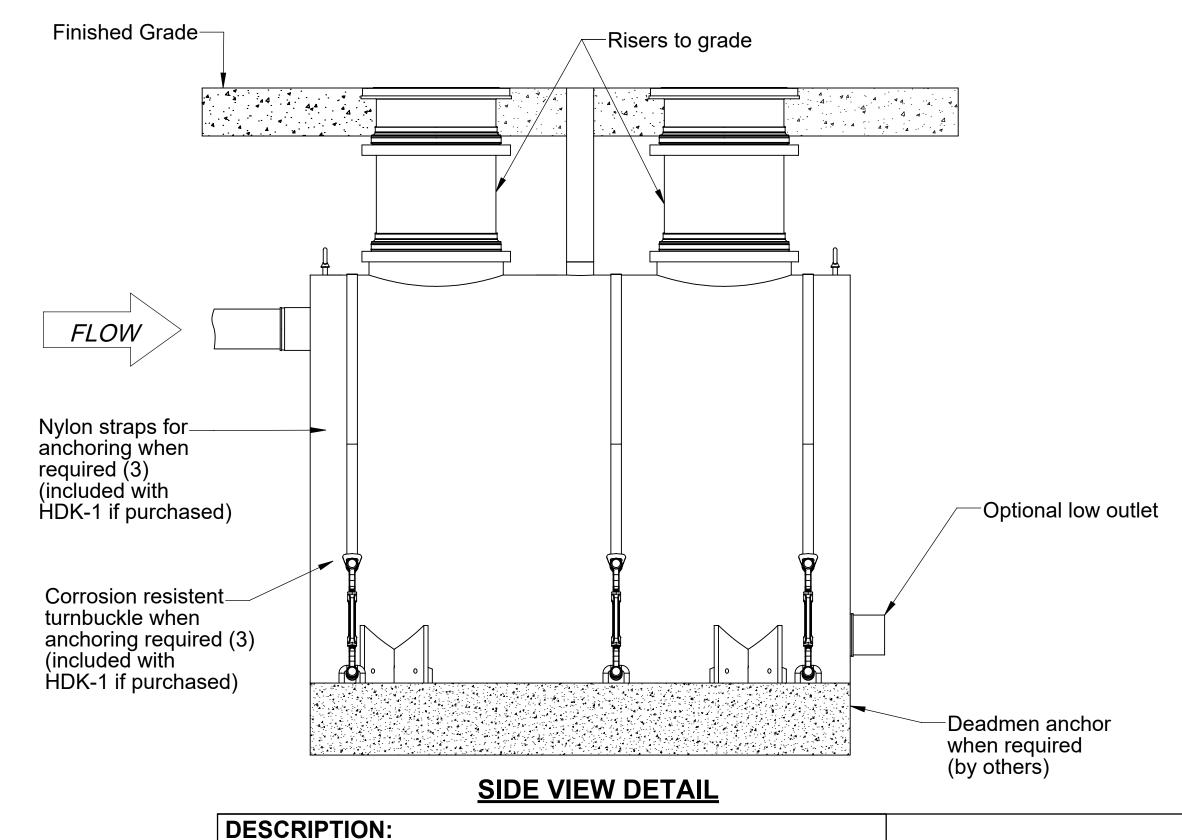
- 1. Lower and center the unit into hole using lifting lugs or straps around unit. Do not use chains or accessways to move the unit.
- 2. Ensure the cover tops are level with finished grade.
- 3. All pipe penetrations to be sleeved or have slip connections..
- 4. Fill unit with water before backfilling to stablize unit and prevent float out during backfilling

BACKFILLING & FINISHED CONCRETE SLAB

- Before backfilling and pouring of slab secure covers and risers (if necessary) to the unit.
 Backfill evenly all around tank using crushed aggregate material approximately 3/4" size rock, or sand, with no fines.
- 3. When backfilling, ensure backfill is worked under the unit using a probe to ensure the unit is fully supported.
- 4. Place 6" aggregate base under slab. Aggregate should be 3/4" size rock, or sand, with no fines.
 5. Thickness of concrete around cover to be determined by specifying engineer. If traffic loading is
- required the concrete slab dimensions shown are for guideline purposes only.
- 6. Concrete to be 28 day compressive strength to 4000 PSI.
 7. NO. 4 rebar (∅ 1/2") grade 60 steel per ASTM A615: connected with tie wire.
- 8. Rebar to be 2-1/2" from edge of concrete.
- 9. Rebar spacing 12" grid. 4" spacing around access openings.

Deadmen Anchoring

- 1. Deadmen should be constructed according to the American Concrete Institute (ACI) code.
- Deadmen should be 12" wide x 12" tall and equal to the length of the entire unit.
 Deadmen should have 3 anchor points with turnbuckles and shall be corrosion resistant and rated for a minimum load capacity of 10,000 lbs.
- 4. Lay the deadmen parallel with the unit and ensure that it is outside the shadow of the tank.
- 5. Connect nylon strapping to each anchor point. Nylon straps must have a minimum load capacity of 10,000 lbs.



BIO BASIN INSTALLATION, OPERATION, AND MAINTENANCE GUIDE

ECO:

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depth above native soil

Tools included (with base bio basin unit(s))

- 7/16" Nut driver tool/bit
- Silver permanent marker

Tools Needed:

Tape measure

• Regular or cordless drill with 1/2" chuck

Tools needed if Riser(s) require cutting:

- Jigsaw or
- Cordless circular saw or
- Reciprocating saw

Riser Assembly Instructions/Steps:

- 1. If unit is to be installed on grade (on-the-floor), there is no need for any adjustments. Unit is ready to be put into service.
- 2. If unit is to be buried: Once unit is set so that the pipe connections line up with jobsite piping, measure total riser height needed from top of cover to finished grade. Make sure you include any future tile work, etc. that may be installed in your finished grade measurements. See figure 1
- 3. Select according risers needed based off Table 1.
- 4. If risers are needed, remove covers from adapters and remove adapters from main unit by loosening upper clamp with included nut driver bit (lower band is factory set do not adjust or remove). On the floor near the unit, insert adaptor into first riser until it stops. If needed, insert bottom of first riser into top of second riser until it stops. You may need to tighten upper clamps during this step to keep risers from shifting. Adapter and riser(s) should sit level with each other. Removal of cover during this process will ease assembly.
- 5. From the top of the adapter, measure your needed total riser height downward to the sidewall of the riser. Then, add <u>6</u>". For example, if you need a 15-1/2" extension, you would measure down from the top of the adapter 21-1/2" (15-1/2" + 6" = 21-1/2"). See Figure 1
- 6. Refer to Table1 to determine if, and where, any cuts need to be made. If a cut needs to be made, make a circular line around the sidewall of the riser with the included silver marker at your riser height +dimension from step 5. Using a jigsaw, circular saw or reciprocating saw, cut along your line. Discard/recycle the cutoff scrap.
- 7. Whether the riser needs to be cut or not, make another mark with the silver marker on the sidewall of the riser a distance of <u>4 INCHES</u> above the edge just cut. If you did not make a cut (meaning your riser height <u>+ dimension from step 5</u> line was beyond the bottom edge of your riser), still mark the sidewall of the riser 4 INCHES above where your riser height <u>+ dimension</u> from step 5 line would have been. DO NOT cut this new line. Once the riser is installed into the main unit, this new line will end up at the top of the gasket and will aid in re-assembly. See Figure 3.
- 8. IMPORTANT: Before the next step: Refer to sheet 1 of the installation instructions for leak/water testing procedures.
- 9. Take riser(s) and adapters apart to reduce the weight during installation. Wipe all sidewalls and inside of gasket with a damp cloth to remove jobsite dust/debris. Install components into the main unit starting from the lowest (cut) riser and working your way toward the finished floor level. Upper clamps at each gasket need to be loosened or removed to aid in assembly. Once riser(s)/adapter is inserted into gasket, upper clamp can be tightened
- 10. Verify that the bottom of the lowest riser is protruding at least 2-1/2" but no more than 4" into the main unit from the top of the gasket. Your mark from step 7 should be at the top edge of the gasket on the main unit. If measurements were made correctly, this should happen automatically. See figure 4.
- 11. If tilting of the adapter is required to be flush with finished grade, it must be done AFTER all clamps have been tightened with riser(s)/adaptor in a vertical and level position. Tilting is achieved by using the flexibility of the gasket. If tilting is done before clamps are tightened, a perfect gasket seal may be compromised. Striem recommends tilting only the adapter versus the entire riser assembly to make sure your riser height is maintained.
- 12. Tighten all clamps to a minimum of 5 and a maximum of 8 ft lbs. of torque. Use the same torque as you would tighten a rubber no-hub coupling.
- 13. The adapter must be adjusted upward to achieve certain extension heights. See Table 1
- 14. If jobsite riser height conditions change after the above steps have been completed, there may still be room for vertical adjustment in both directions. As long as minimum and maximum overlaps are maintained (see Figure 4), the adapters/risers can be adjusted/cut as many times as necessary. Please follow these steps from the beginning to ensure the proper overlaps are maintained.

Call Striem with questions or suggestions @ 1-913-222-1500 Customer Service Hours: 8AM-5 PM CST

TeleGlide Riser (24 Series) Installation Guidelines (BB-275, BB-500, BB-750, BB-1000, BB-1500)

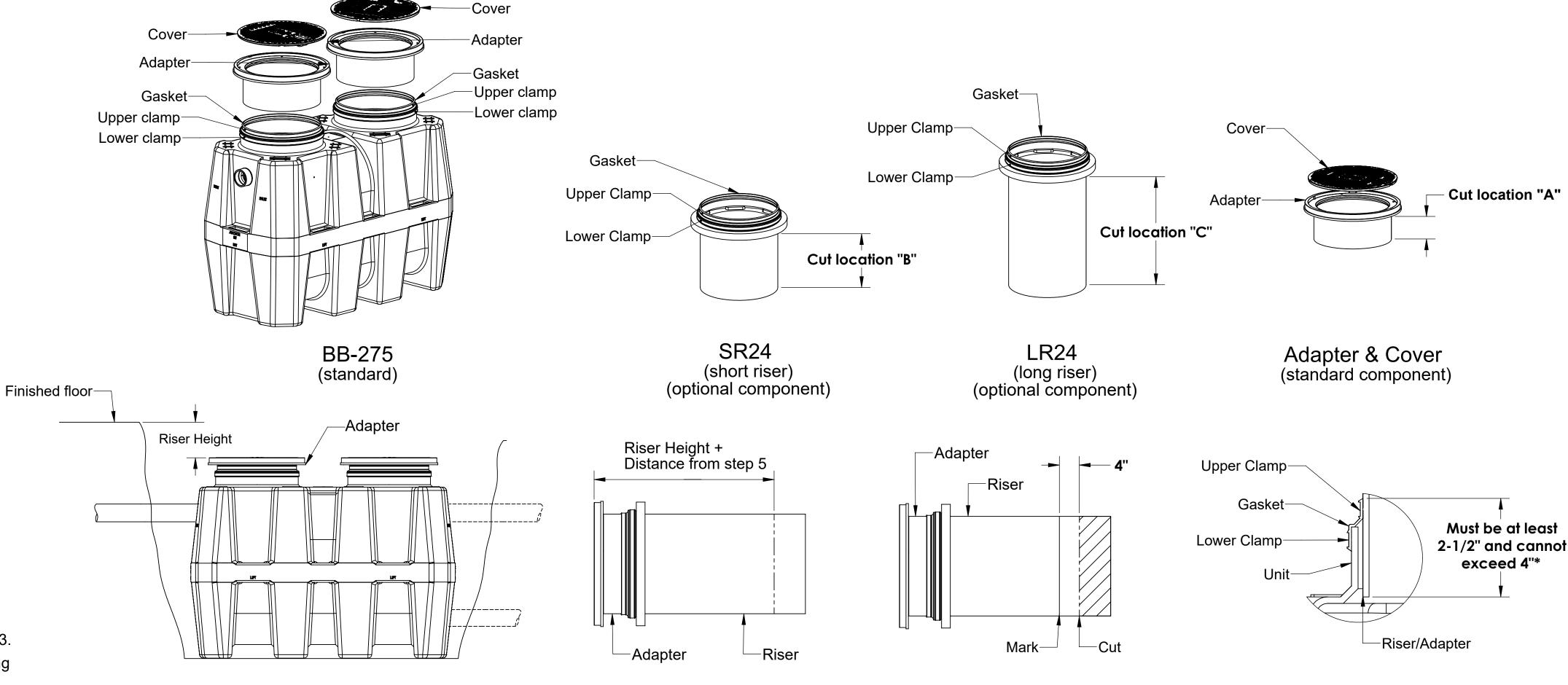


Figure 2

Table 1				
Riser Height Needed	Riser P/N Needed	Riser Qty. Needed		Cut Location(s)
		BB-500	BB-275, BB-750, BB-1000, BB-1500	(See figures above)
0" to 6"	None	0	0	None
>6" to 8-1/4"	SR24	1	2	a,b
>8-1/4" to 19-3/4"	SR24	1	2	b
>19-3/4" to 24"	SR24	1	2	None ¹
>24" to 35"	LR24	1	2	С
>35" to 39"	LR24	1	2	None ²
>39" to 43"	SR24	2	4	b
>43" to 51-1/2"	SR24	1	2	С
	LR24	1	2	
>51-1/2" to 58"	SR24	1	2	None ³
	LR24	1	2	
>58" to 66-1/2"	LR24	2	4	С
>66-1/2" to 72"	LR24	2	4	None⁴

Figure 1

- 1. Adjust adapter upwards to reach 22" to 24" 2. Adjust adapter upwards to reach 37" to 39"
- 3. Adjust adapter upwards to reach 56" to 58"
- 4. Adjust adapter upwards to reach 70" to 72"

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Figure 3



Figure 4

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Kansas City, KS 66115

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NOTES:

Striem Decontamination tanks are not to be installed in any other manner except as shown. Consult local codes for separate trapping requirements, cleanout locations and additional installation instructions.