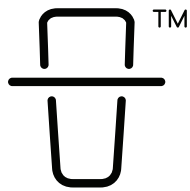




SiloTM by EarthBin

SLEEVE INSTALLATION GUIDE



SiloTM by EarthBin

INSTALLATION CONSIDERATIONS

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING THE INSTALLATION.

PLEASE CONTACT EARTHBIN PRODUCTS AT 1-844-213-2467 (BINS) IF YOU HAVE ANY QUESTIONS.

- Note that illustrations are not to scale
- Compliance to local bylaw ordinances are the responsibility of the owner
- Compliance to local regulations for excavation embankment requirements
- Compliance to local municipal building department requirements
- Locates to be verified prior to excavation

Safety Warnings

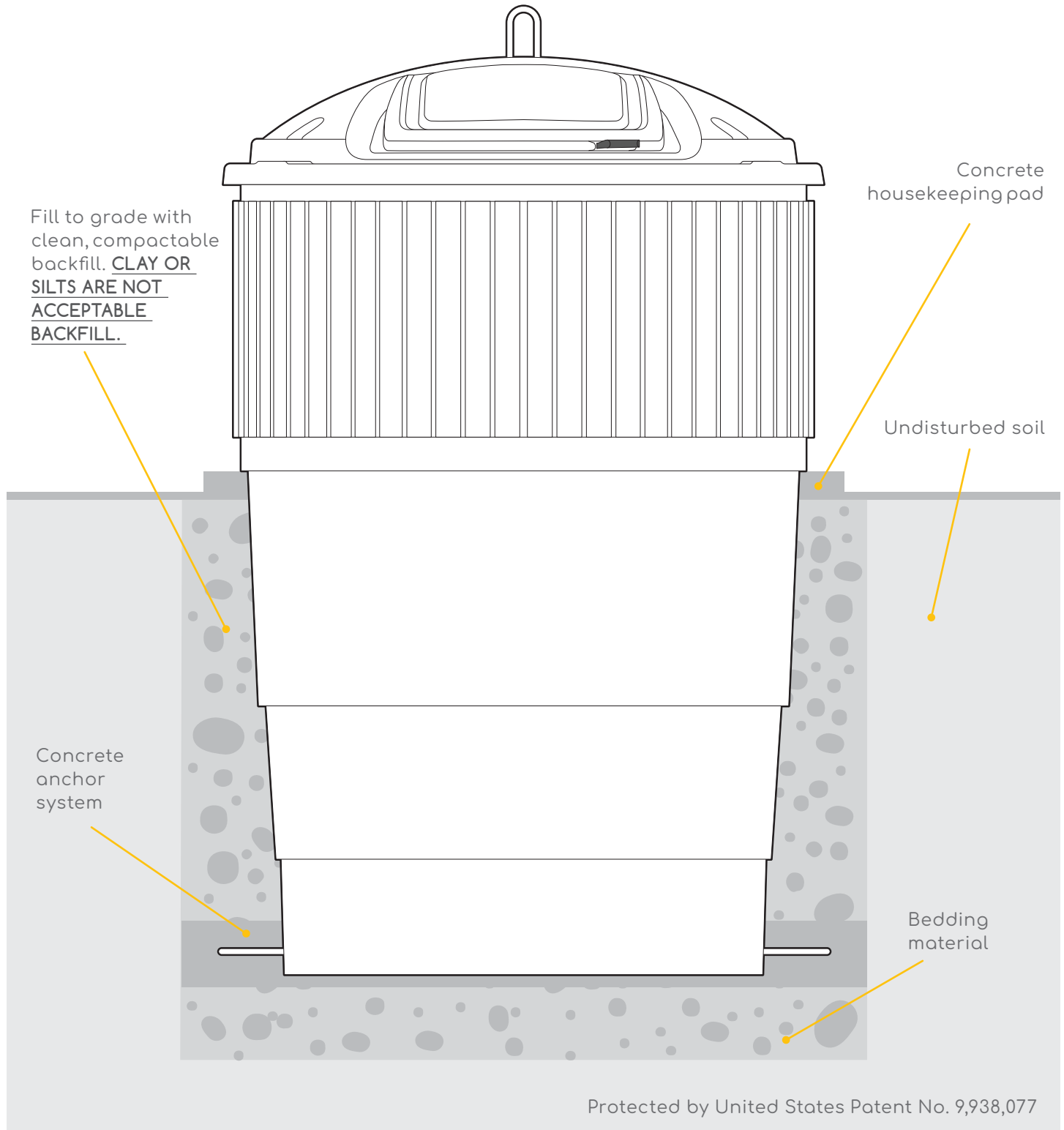
A **WARNING** statement in this manual designates a situation that may cause bodily harm and/or equipment damage.

A **CAUTION** statement in this manual indicates a situation that could potentially cause equipment damage or failure. Follow proper safety procedures as described.

FAILURE TO COMPLY WITH INSTALLATION INSTRUCTIONS WILL VOID WARRANTY.



TYPICAL INGROUND SECTION VIEW

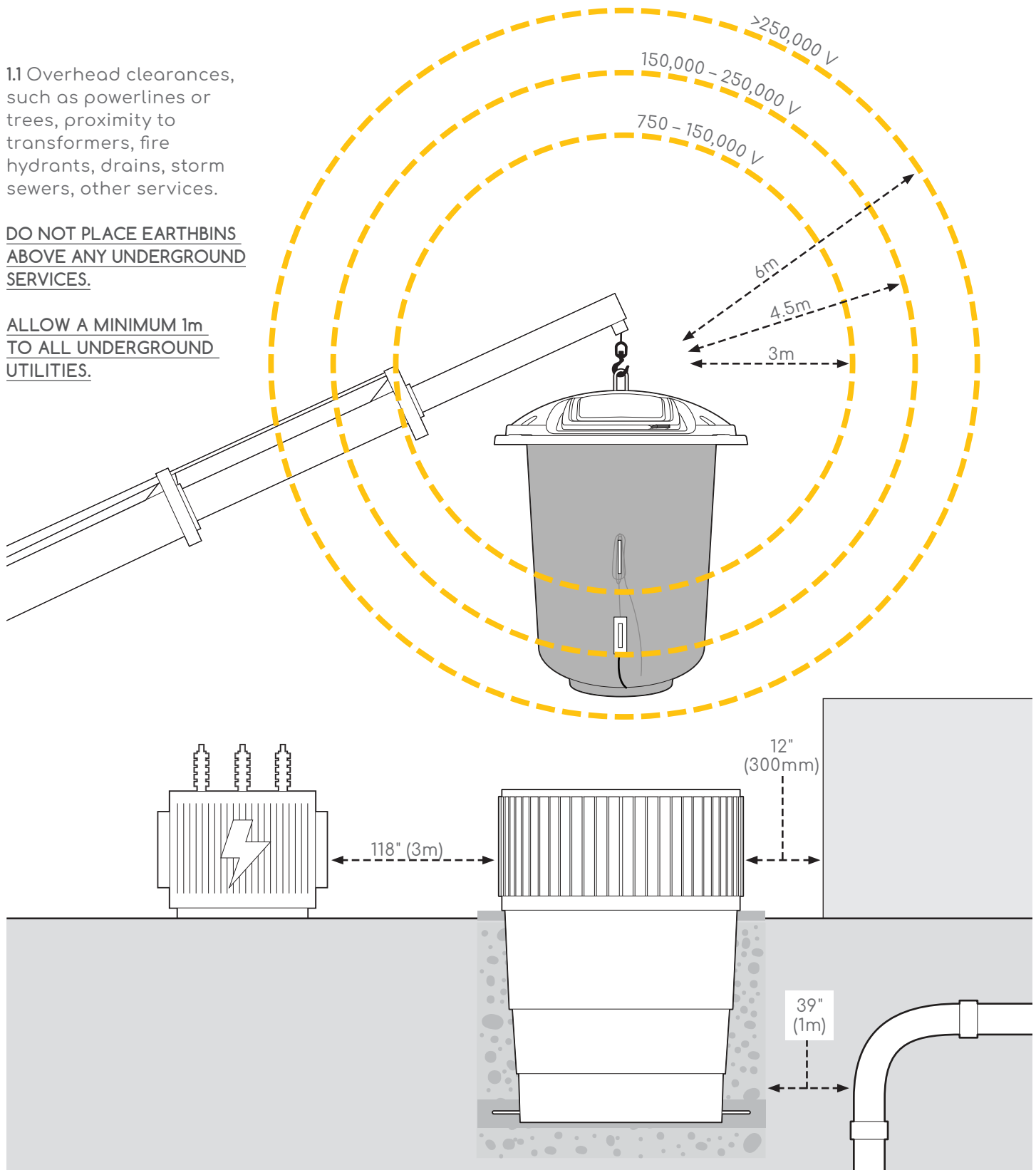


STEP 1 – SITE CONSIDERATIONS

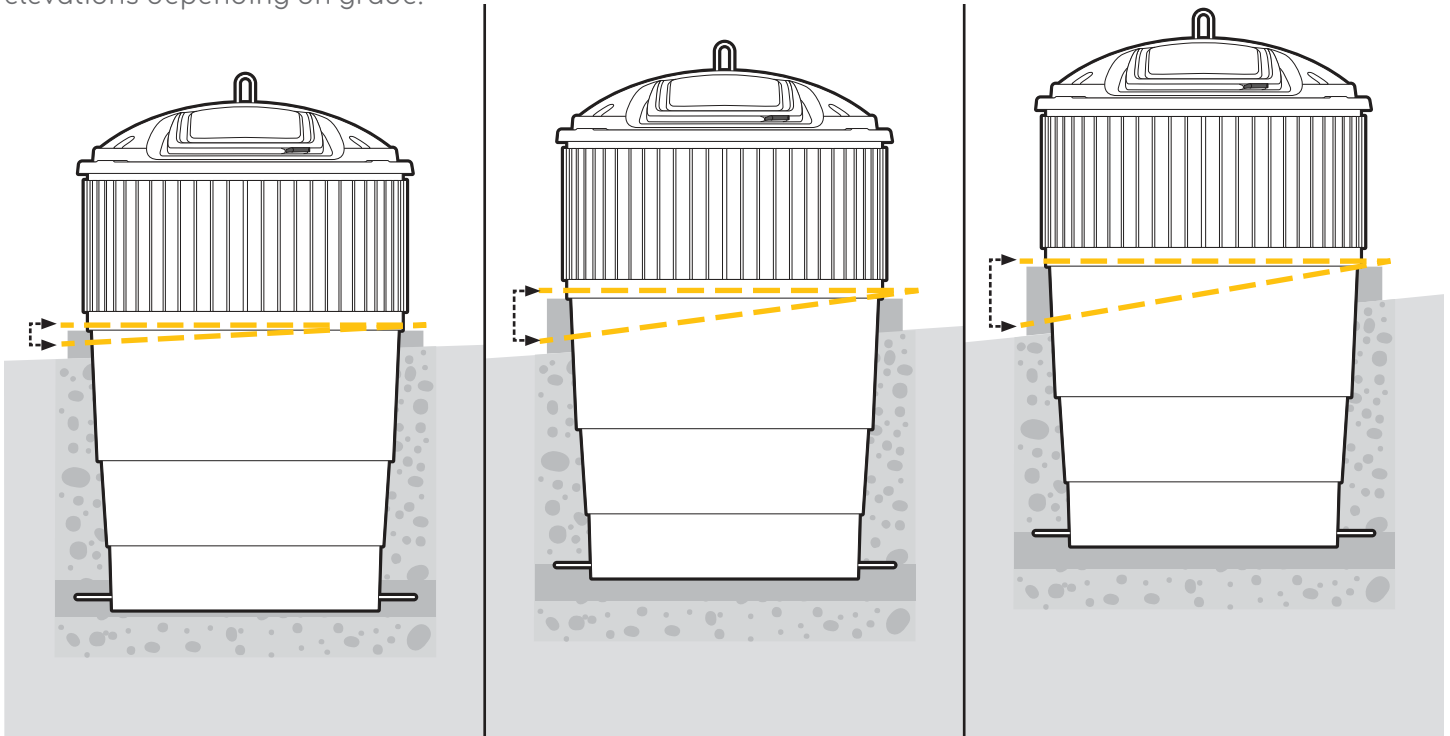
1.1 Overhead clearances, such as powerlines or trees, proximity to transformers, fire hydrants, drains, storm sewers, other services.

DO NOT PLACE EARTHBINS ABOVE ANY UNDERGROUND SERVICES.

ALLOW A MINIMUM 1m TO ALL UNDERGROUND UTILITIES.



1.2 Place EarthBinSilo at different elevations depending on grade.

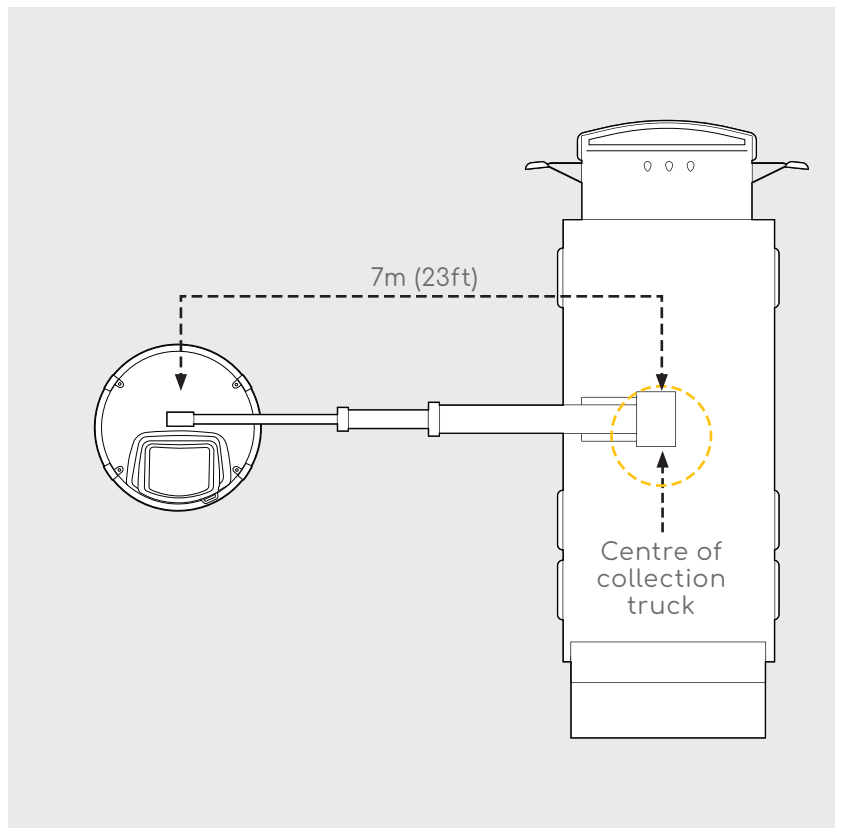


1.3 The centre of the container must be located no more than 7m (23ft) from the centre of the collection truck. Consult with service company.

1.4 If EarthBins installed adjacent parking areas or driveways, install Bollards in appropriate locations (see Appendix for details).

Other considerations:

- Consult Geotechnical reports if available.
- High ground water height — contact EarthBin Products at 1-844-213-BINS(2467).
- Bore holes may be required to determine bedrock depth.
- Contact EarthBin Products at 1-844-213-BINS(2467) if installing above an underground parking garage.

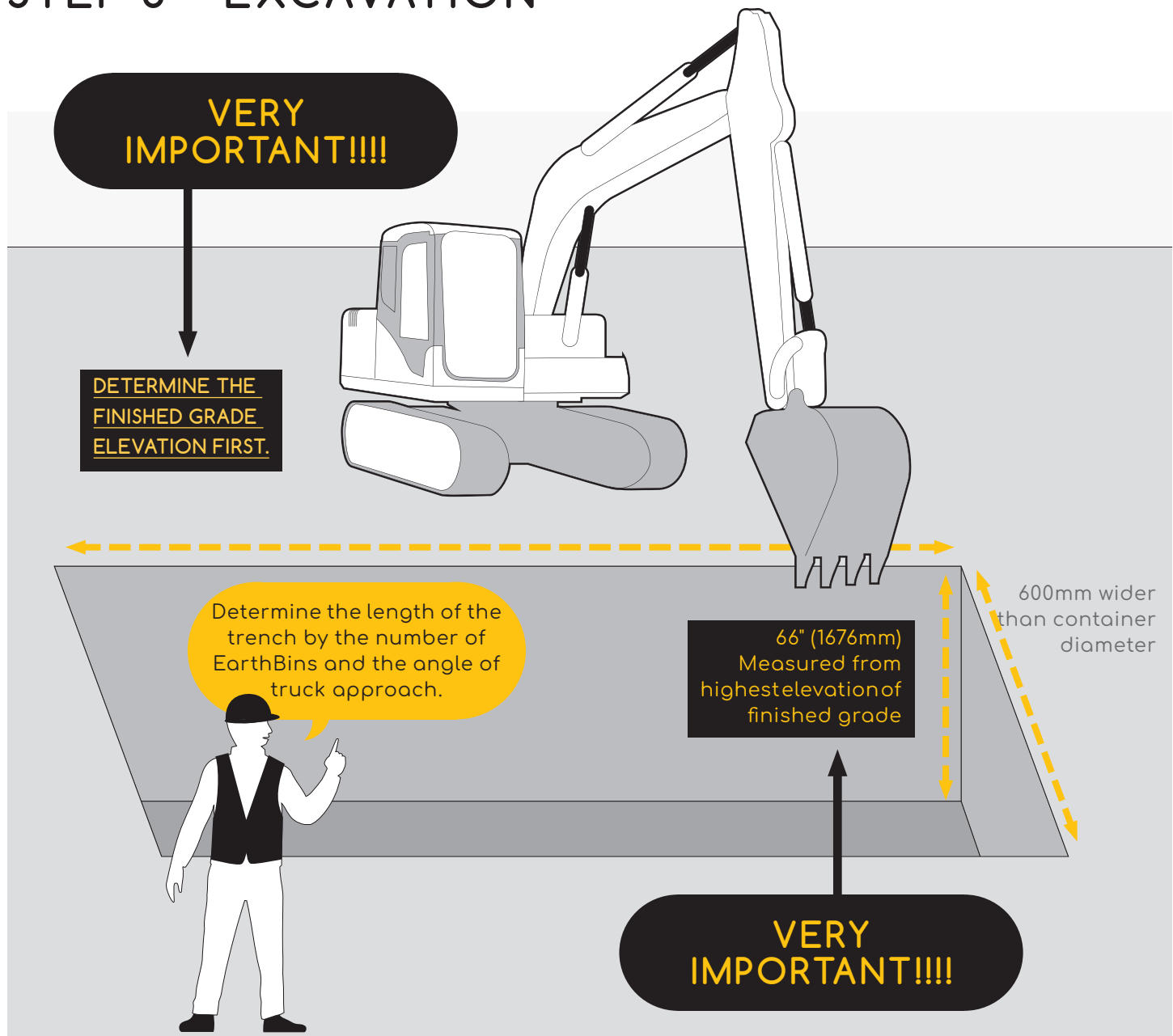


STEP 2 – SITE PREPARATION

SITE MUST BE CLEAR FROM ALL OBSTRUCTIONS, BOTH ABOVE GRADE AND BELOW GRADE. OWNER RESPONSIBLE TO REMOVE ANY OBSTRUCTIONS – DUMPSTERS, FENCING, ETC.

If required, cut & remove concrete or asphalt.

STEP 3 – EXCAVATION

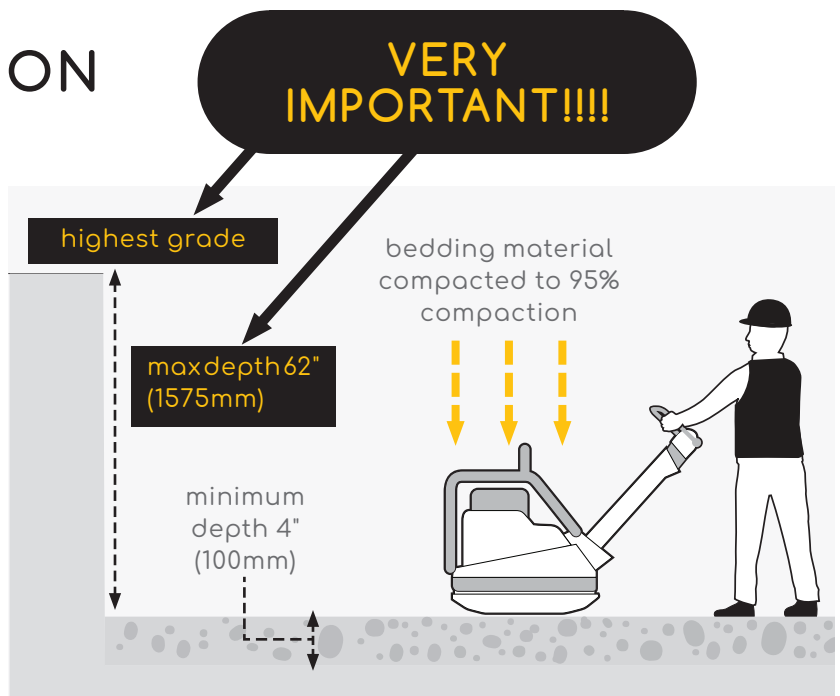


STEP 4 – INSTALLATION

STEP 4.1 – INSTALL BASE

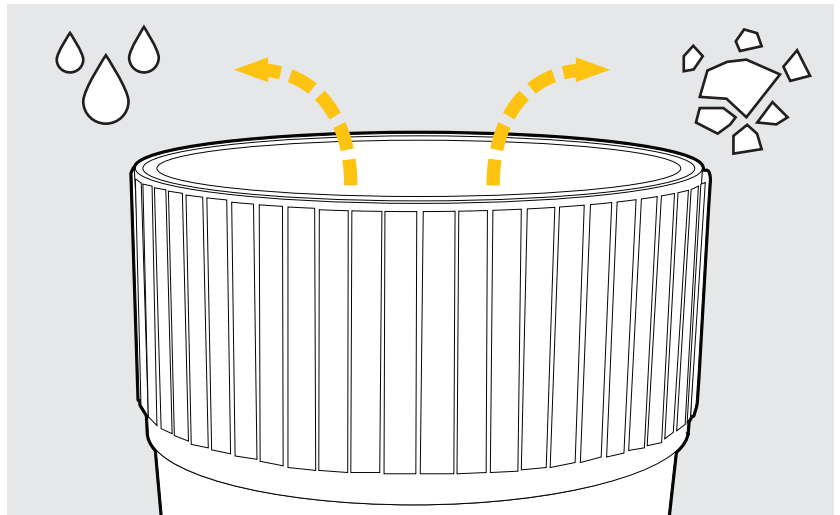
4.1.1 Place bedding material, such as gravel, into bottom of trench. Compact to 95% compaction & level.

MEASURE ELEVATION TO ENSURE THAT FINISHED GRADE WILL SLOPE AWAY FROM THE GROUND SLEEVE.



STEP 4.2 – INSTALL & POSITION GROUND SLEEVE LINER

4.2.1 Ensure that liner is emptied of water and any debris.



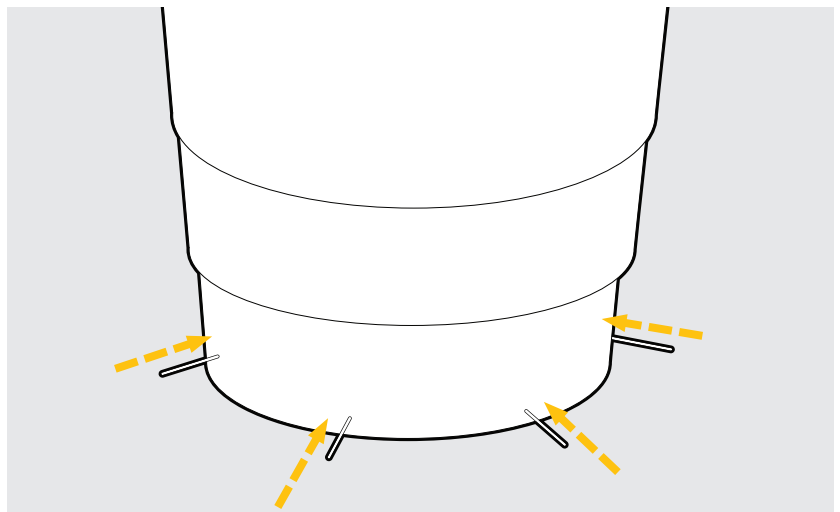
4.2.2 Install 12" (300mm) long 15M rebar (uncoated) into openings in perimeter of bottom of ground sleeve liner.

CAUTION: DO NOT DRILL HOLES IN PLASTIC OR ENLARGE EXISTING HOLES AS THIS WILL VOID WARRANTY.

LIFTING INSTRUCTIONS

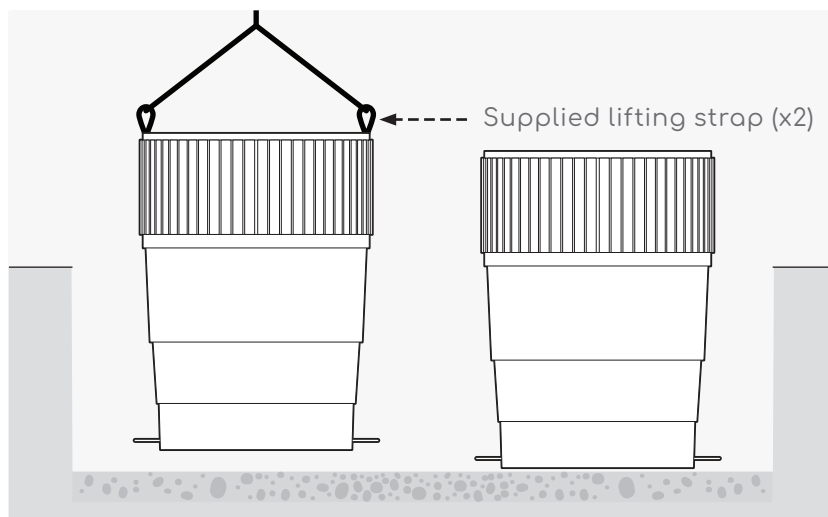
Lift the ground sleeve liner with methods as shown below 4.2.3

CAUTION: FAILURE TO FOLLOW LIFTING INSTRUCTIONS COMPLETELY WILL VOID WARRANTY.



4.2.3 Hoist liner into trench using the supplied lifting straps. Using a minimum 1.5m long tether.

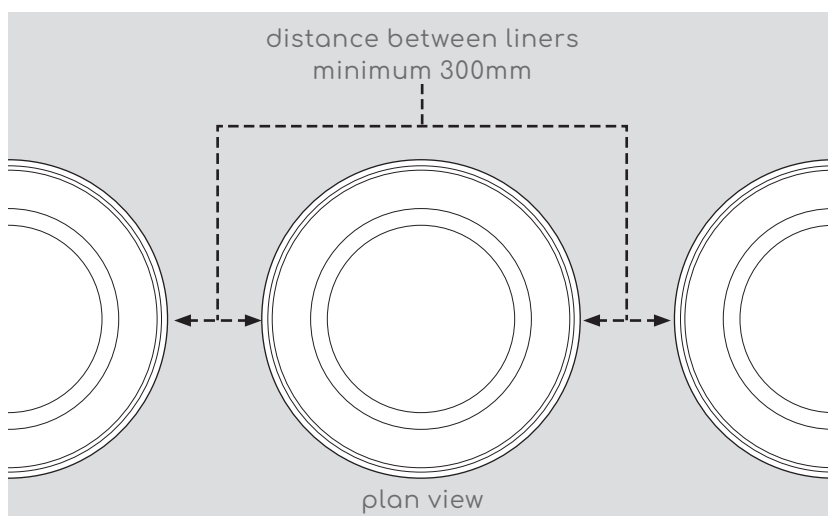
IMPORTANT: DISCARD LIFTING STRAPS AFTER INSTALLATION.



4.2.4 Centre liners in trench.

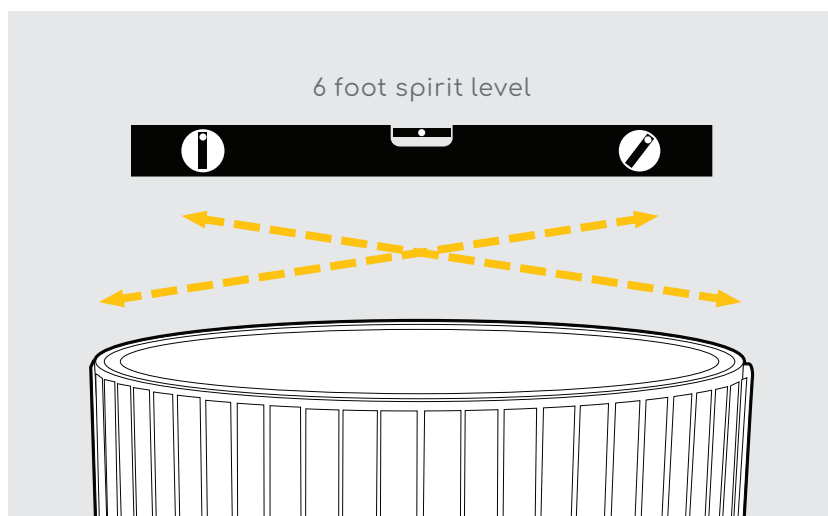
NOTE: If installing more than two units ensure that centres are inline.

IMPORTANT: SET DISTANCE BETWEEN LINERS MINIMUM 300mm (12in).



4.2.5 Level the liners in the trench. Use shims as required. Ensure that the signage faces the user approach.

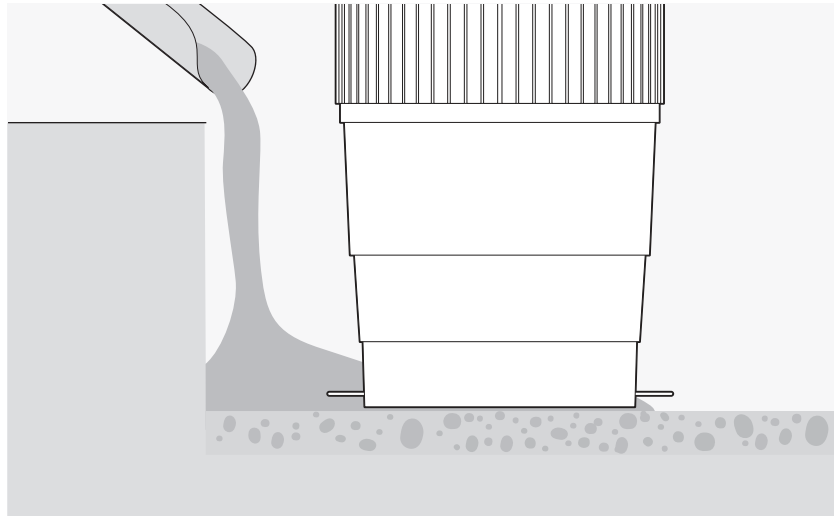
Measure the top of the container to ensure that it is round within 12mm (0.5in).



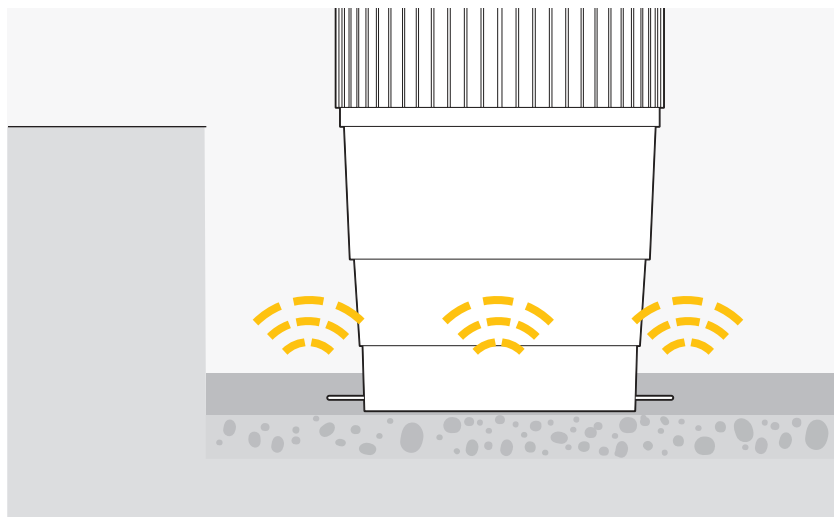
STEP 4.3 – INSTALL CONCRETE BALLAST

Pour approx. 1 cubic metre (1.5 cubic yds) of minimum 20MPa (2900psi) concrete per ground sleeve liner.

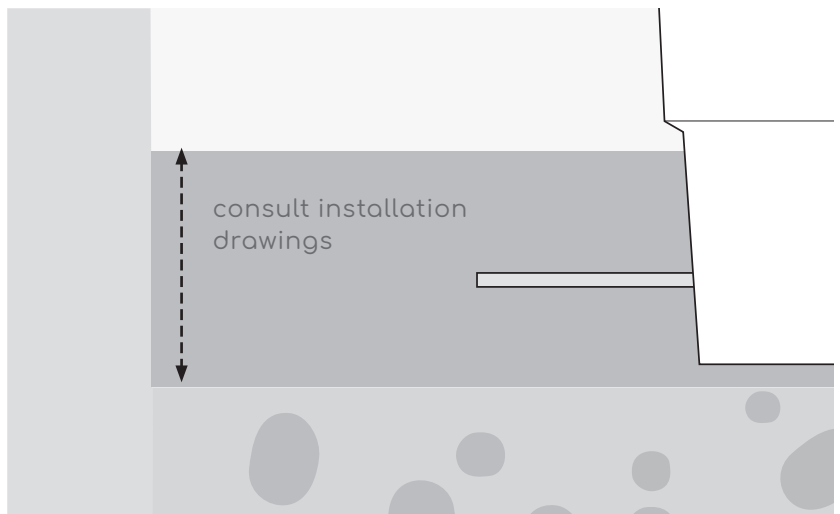
4.3.1 When pouring concrete, start by pouring directly on top of anchor pins (rebar) first to ensure that the sleeve does not move.



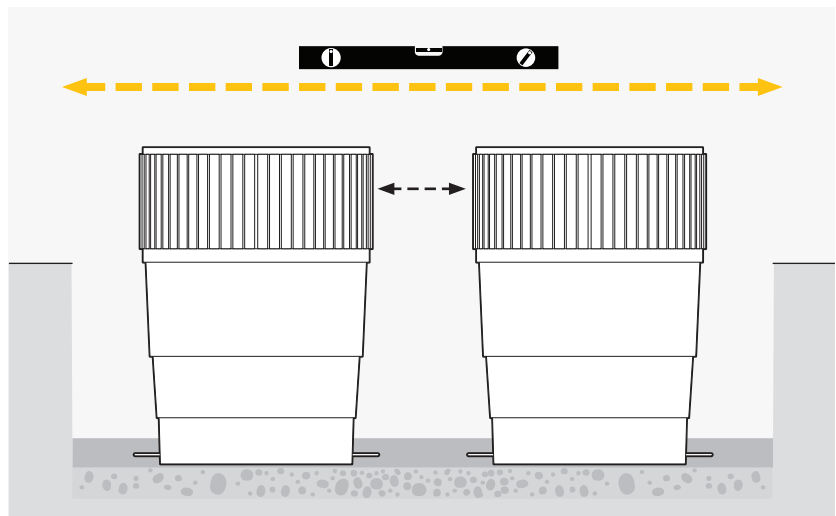
4.3.2 Vibrate concrete to ensure rebar is embedded into concrete and that there are no voids.



4.3.3 Ensure that concrete covers 4" (100mm) above the rebar.



4.3.4 Check levelness and position of the liners once again (See steps 4.2.4 and 4.2.5) before concrete has set.



STEP 4.4 – BACKFILL

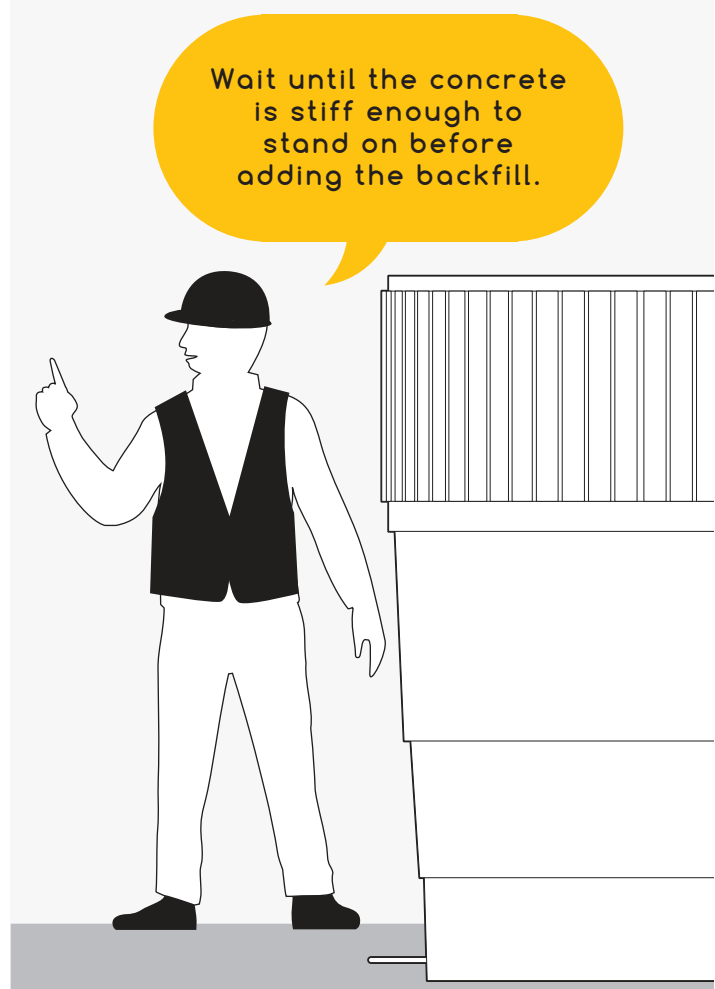
Proper backfill is necessary to the long term stability of any underground structure. There are several ways to backfill that will result in a reliable installation. **NO SHARP OBJECTS, ROOTS** or rocks larger than 4" (100mm) diameter in contact with ground sleeve liner.

The recommended method of backfilling above the concrete ballast and up to grade is to use Class 1 or Class 2 backfill materials as defined in ASTM 2321. Class 1A and Class 1B are recommended where frost heave is possible. Class 1B is a better choice when there could be a high and fluctuating water table or if the native soil is sand. Backfill must be compacted in lifts not to exceed 12" (300mm) to a density of 90%.

NON-COMPACTABLE CLAYS AND SILTS ARE NOT SUITABLE AS BACKFILL MATERIAL.

Flowable fill, for example low slump concrete is another option. This is a good option when there is very little space to assure proper backfilling and compaction with dry materials. Note that flowable fills should not be dropped with more than 4' (120 cm) between the discharge nozzle and the bottom of the pit.

4.4.1 Backfill once concrete is stiff enough to walk on.

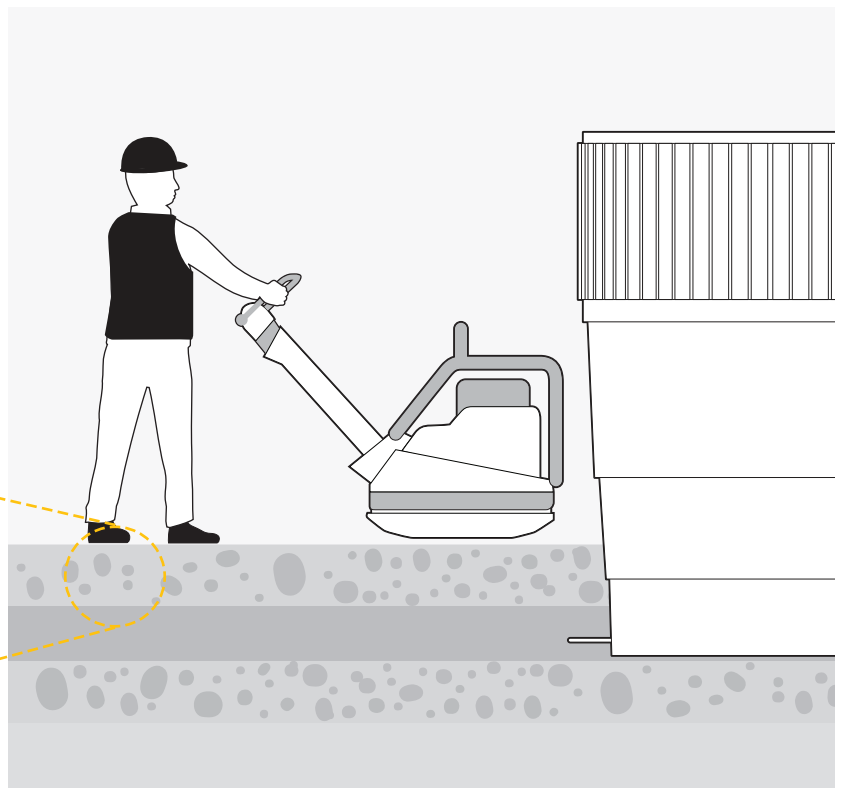
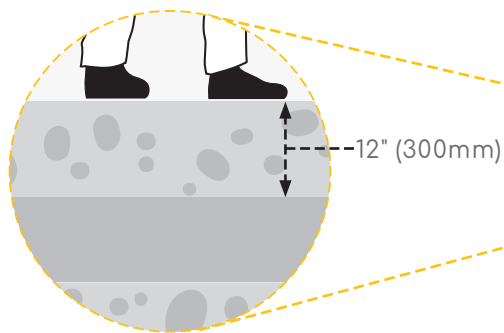


4.4.2 Backfill around the ground sleeve, packing in 12" (300mm) lifts to 95% compaction ratio.

CAUTION – DO NOT OPERATE COMPACTOR TOO CLOSE TO THE PLASTIC SLEEVE AS IT COULD CAUSE DISTORTION.

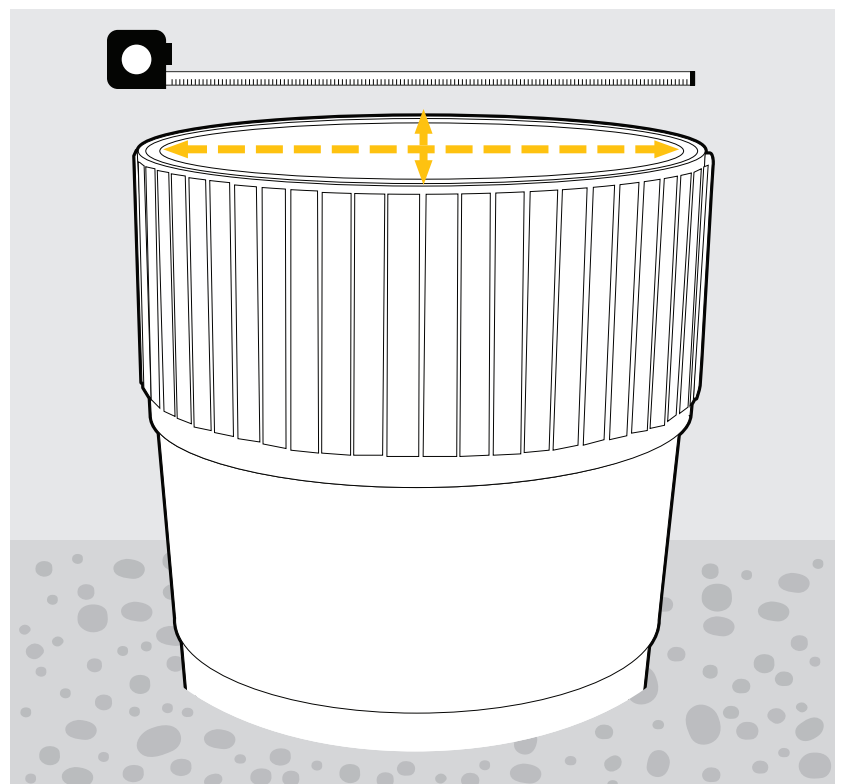
USE LIGHTWEIGHT EQUIPMENT (90kg MAX).

ENSURE THAT NO DEBRIS OR BACKFILL MATERIAL FALLS INTO THE GROUND SLEEVE LINER.

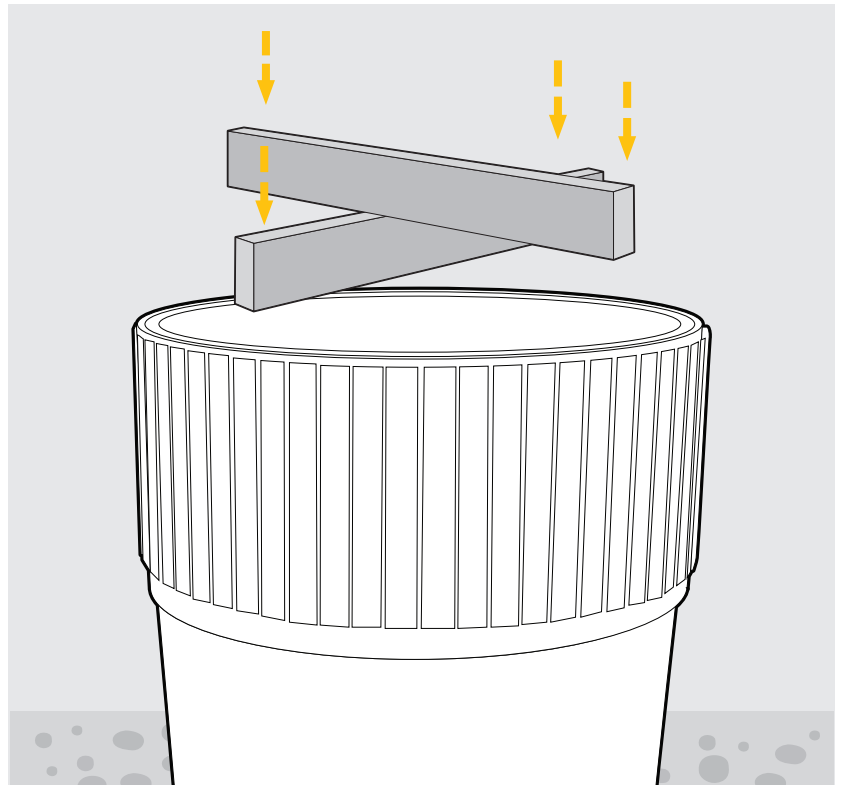


4.4.3 Fill trench to a depth of 24" (600mm) and measure roundness of liner at rim.

Measurement in 2 directions must differ by less than 0.5" (12mm).

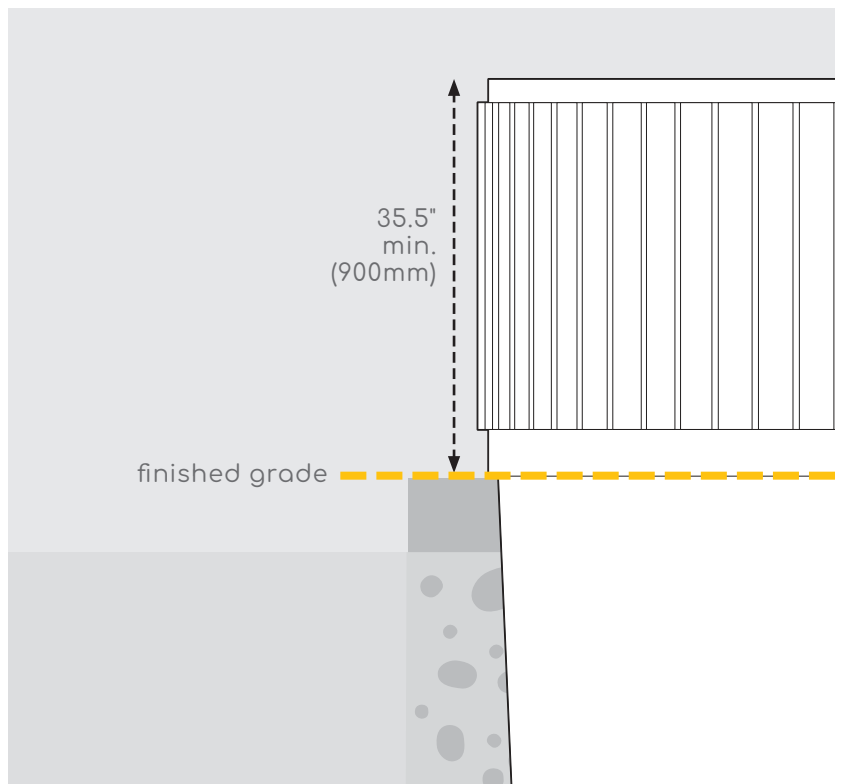


4.4.4 If necessary, cut 2"x4" lumber to appropriate length and insert in a cross pattern flush with top rim to maintain roundness while continuing to backfill.



4.4.5 Continue filling, packing and measuring roundness until trench is filled to grade to allow for concrete housekeeping pad.

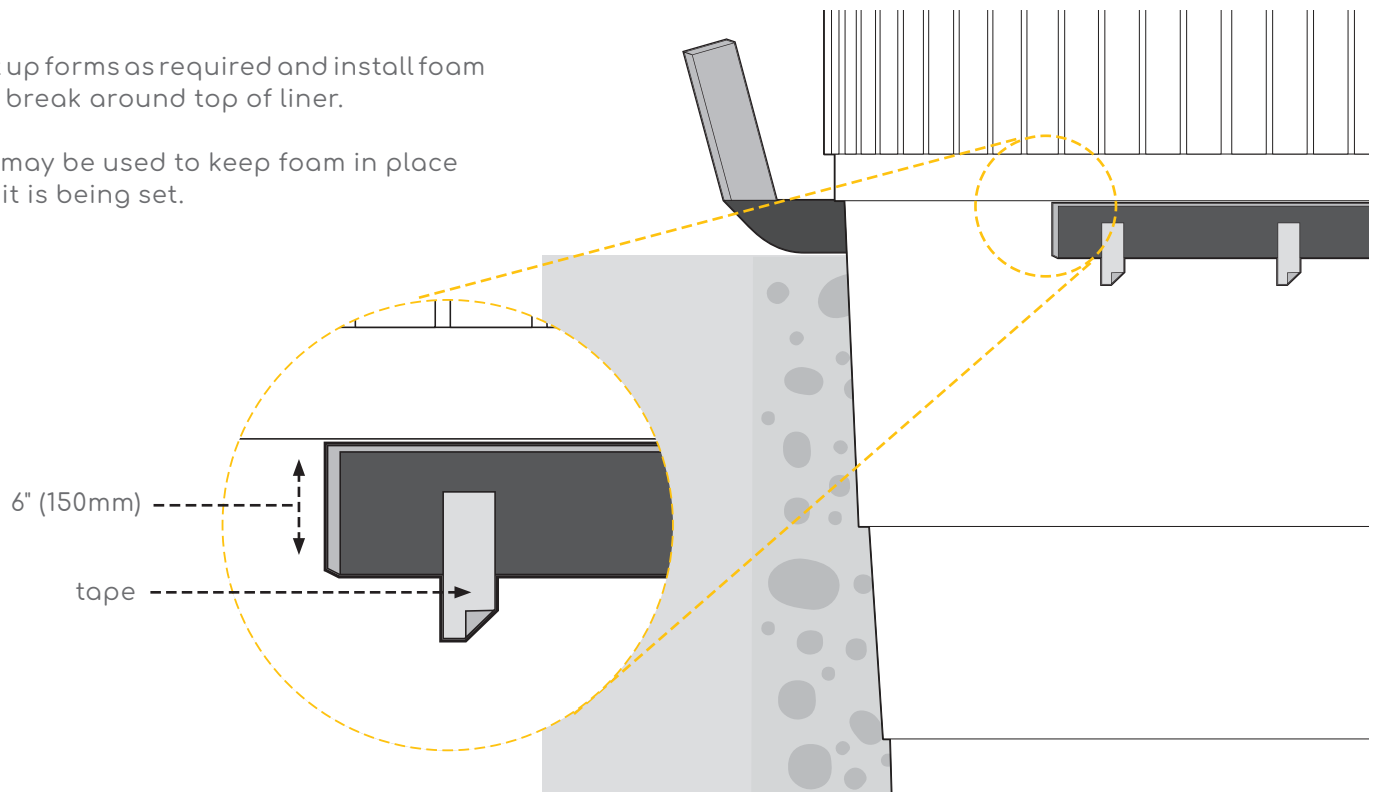
CAUTION: DISTANCE FROM TOP OF GROUND SLEEVE LINER NOT TO BE LESS THAN 900mm (35.5").



STEP 5 – FINISHING

5.1 Set up forms as required and install foam bond break around top of liner.

Tape may be used to keep foam in place while it is being set.

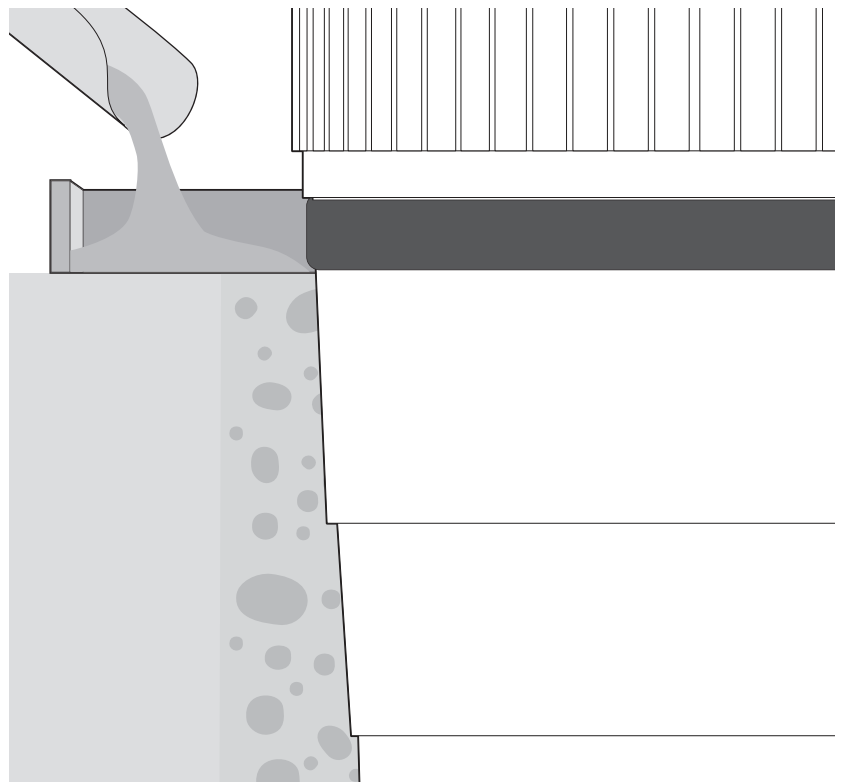


5.2 Pour 32 MPa (3600 psi) slab as specified with a broom finish.

6" (150mm) minimum pad shown in illustrations; however, pad thickness to be determined by the contractor or engineer.

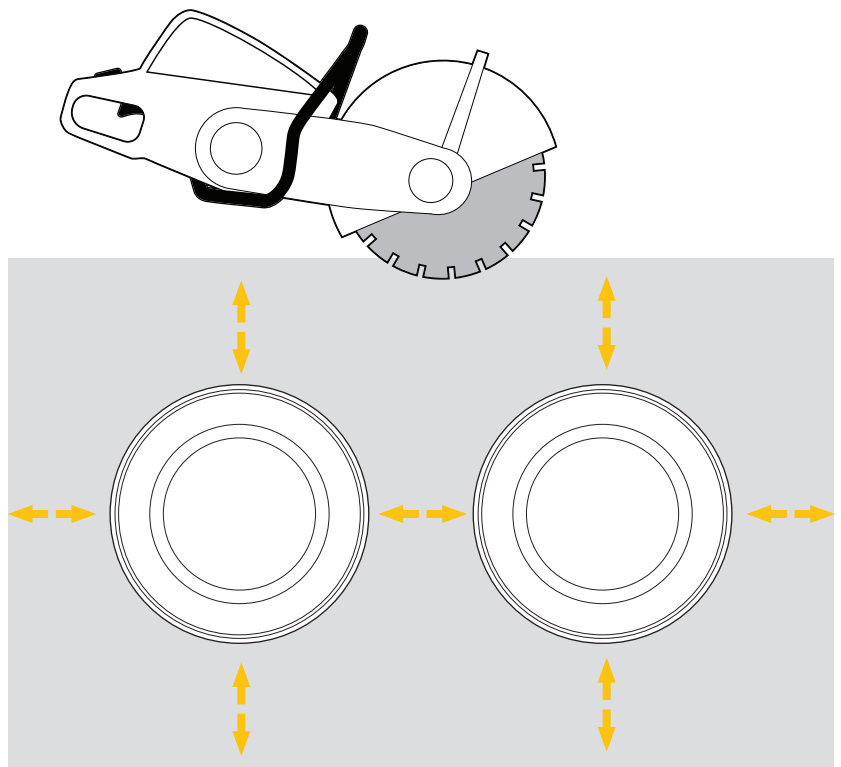
CAUTION: ENSURE THAT THERE IS A MINIMUM OF 2-4% GRADE AWAY FROM LINER.

ILLUSTRATION SHOWS ONE POSSIBLE CONFIGURATION BUT MAY ALSO BE POURED FLUSH DEPENDING ON FINISHED GRADE.



5.3 Remove forms after concrete has set and sawcut as required.

Reference sawcut pattern shown, but final sawcut pattern to be determined by contractor on site.



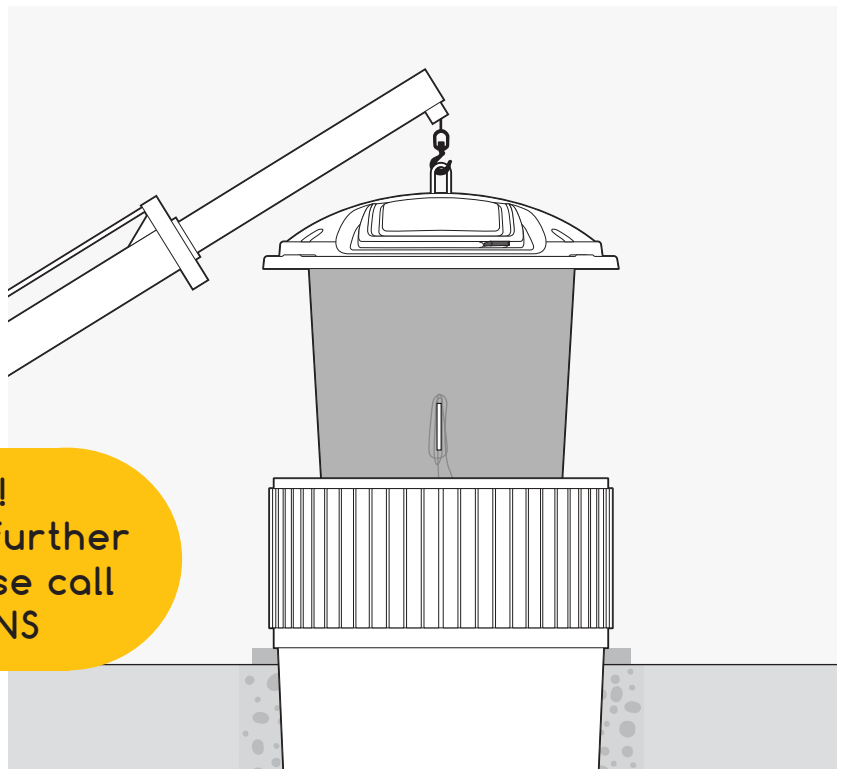
5.4 Insert lid assembly into the correct container

CAUTION: CUT STRAPS TO ALLOW BAG TO DROP.

ENSURE THAT BAG IS CLOSED AND THAT ROPE IS TIGHT.

ENSURE THAT ROPE IS SECURED INTO CLEAT ON BAG.

REMOVE AND RECYCLE PLASTIC PROTECTIVE FILM.

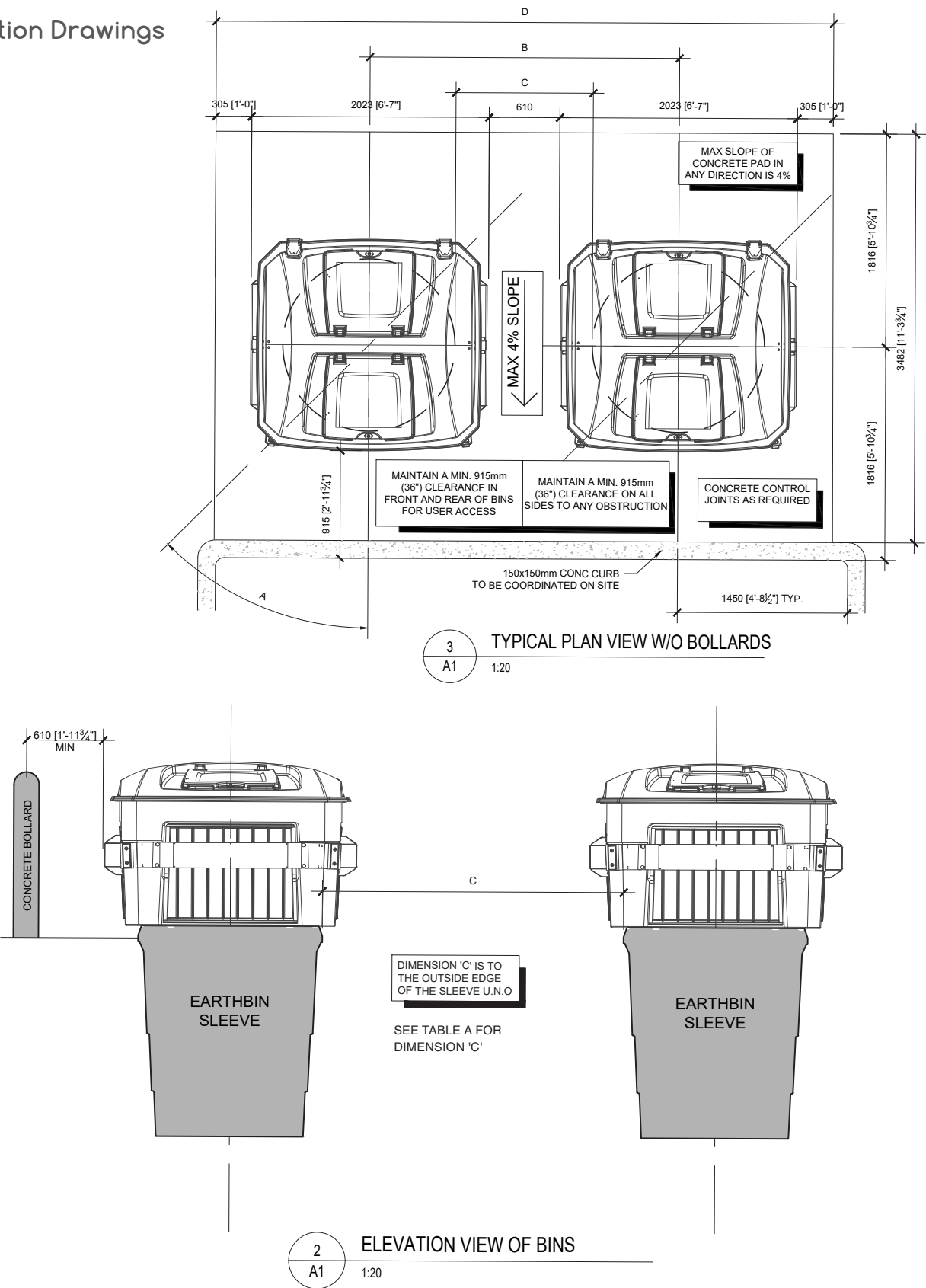


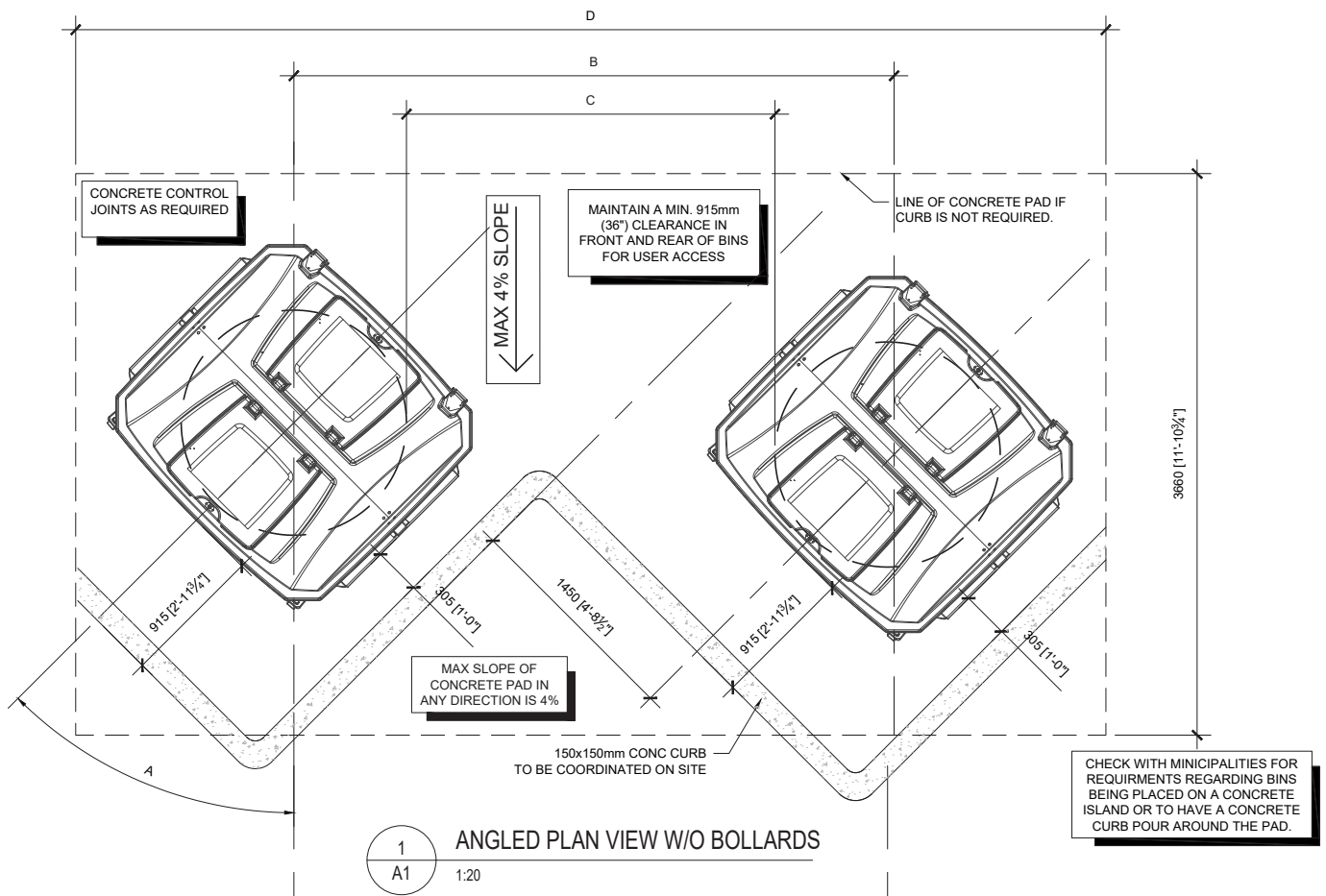
Great Job!
If you have any further
questions, please call
1-844-213-BINS



APPENDIX

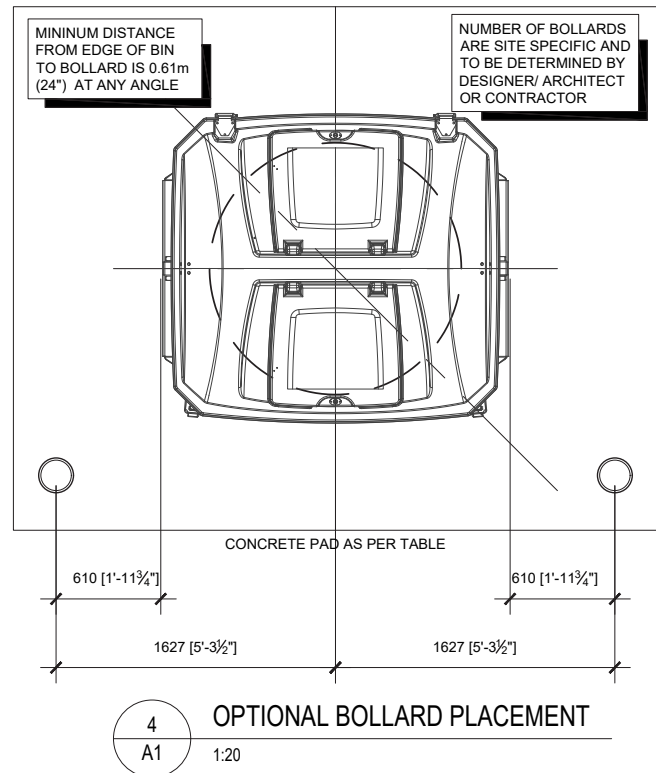
Installation Drawings

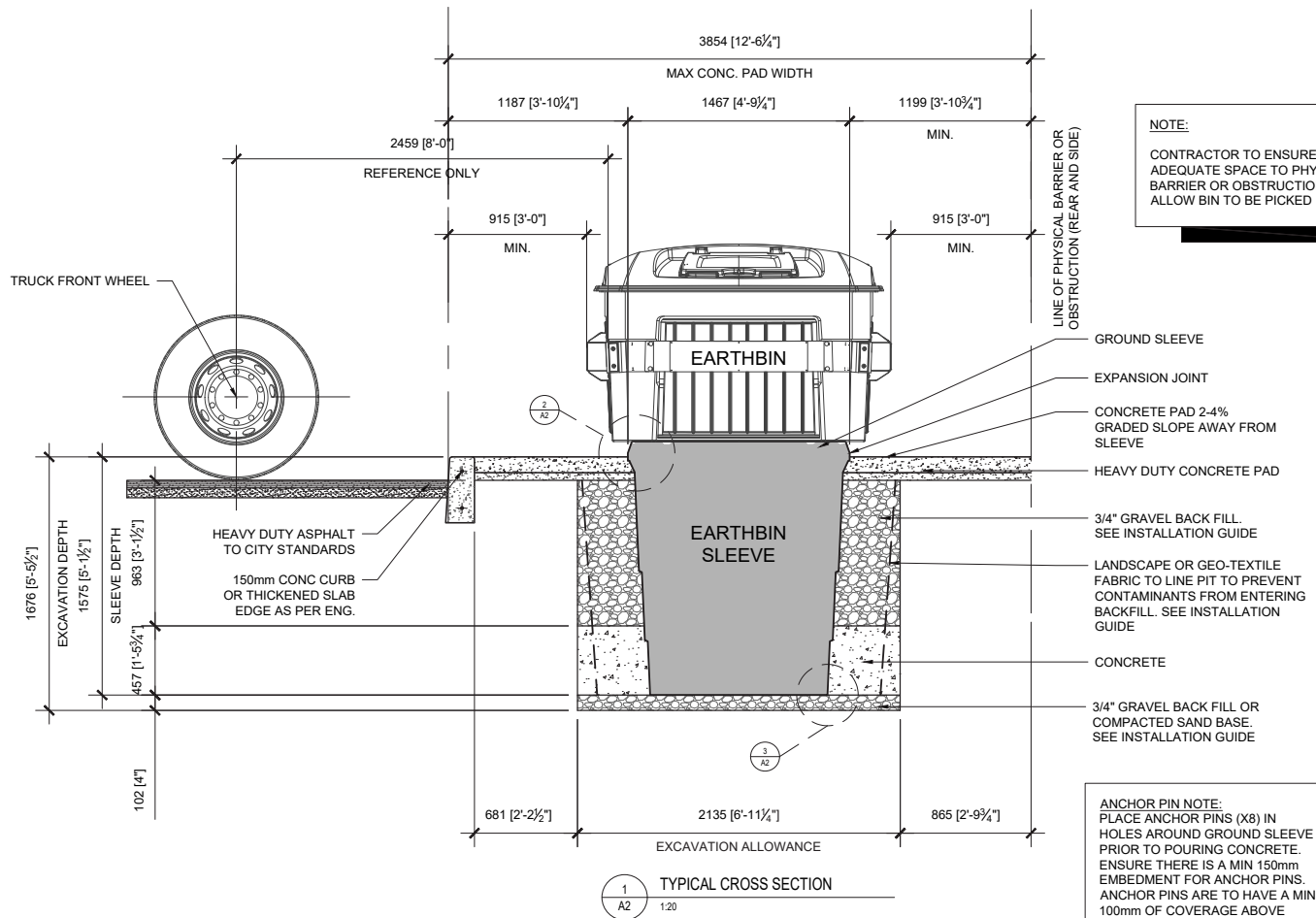




MINIMUM DIMENSIONS BETWEEN BINS

A	B	C	D
0°	2640 [104"]	1170 [46"]	5485 [216"]
15°	2745 [108"]	1270 [50"]	5790 [228"]
30°	3050 [120"]	1575 [62"]	6170 [243"]
45°	3860 [152"]	2390 [94"]	6425 [253"]

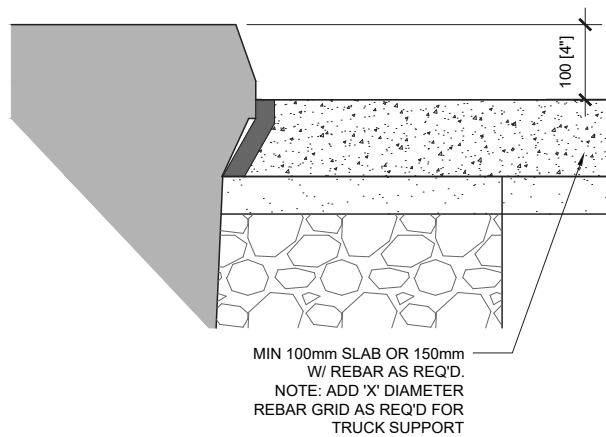
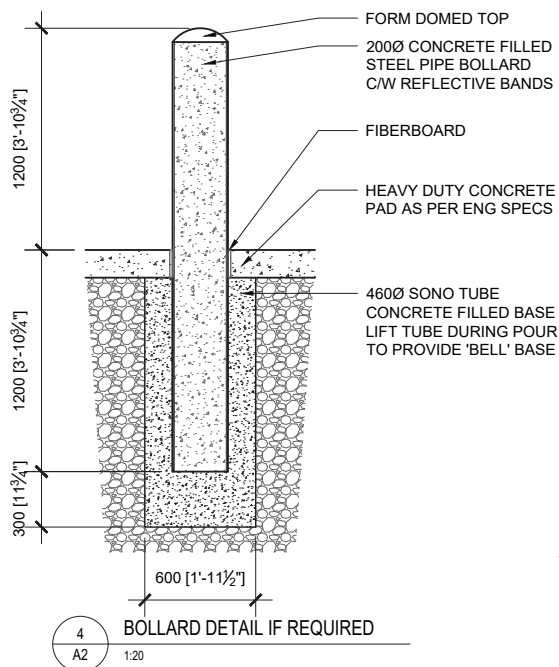




NOTE:

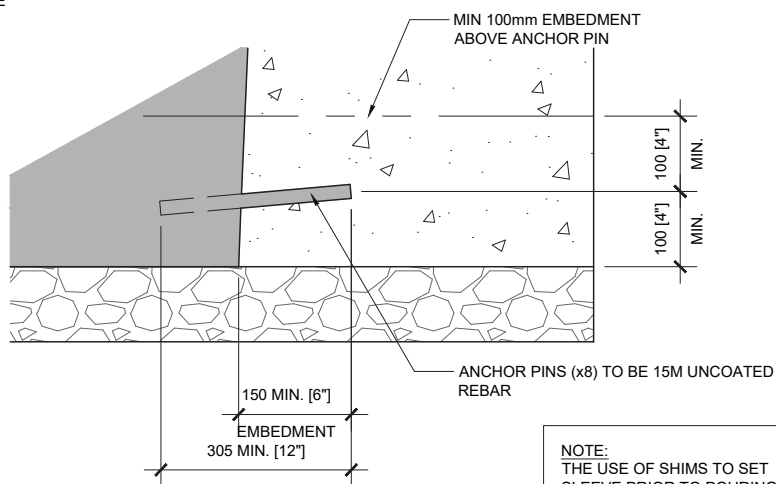
CONTRACTOR TO ENSURE ADEQUATE SPACE TO PHYSICAL BARRIER OR OBSTRUCTION TO ALLOW BIN TO BE PICKED UP.

ANCHOR PIN NOTE:
PLACE ANCHOR PINS (X8) IN HOLES AROUND GROUND SLEEVE PRIOR TO POURING CONCRETE. ENSURE THERE IS A MIN 150mm EMBEDMENT FOR ANCHOR PINS. ANCHOR PINS ARE TO HAVE A MIN 100mm OF COVERAGE ABOVE AND BELOW.



2
A2
1:5

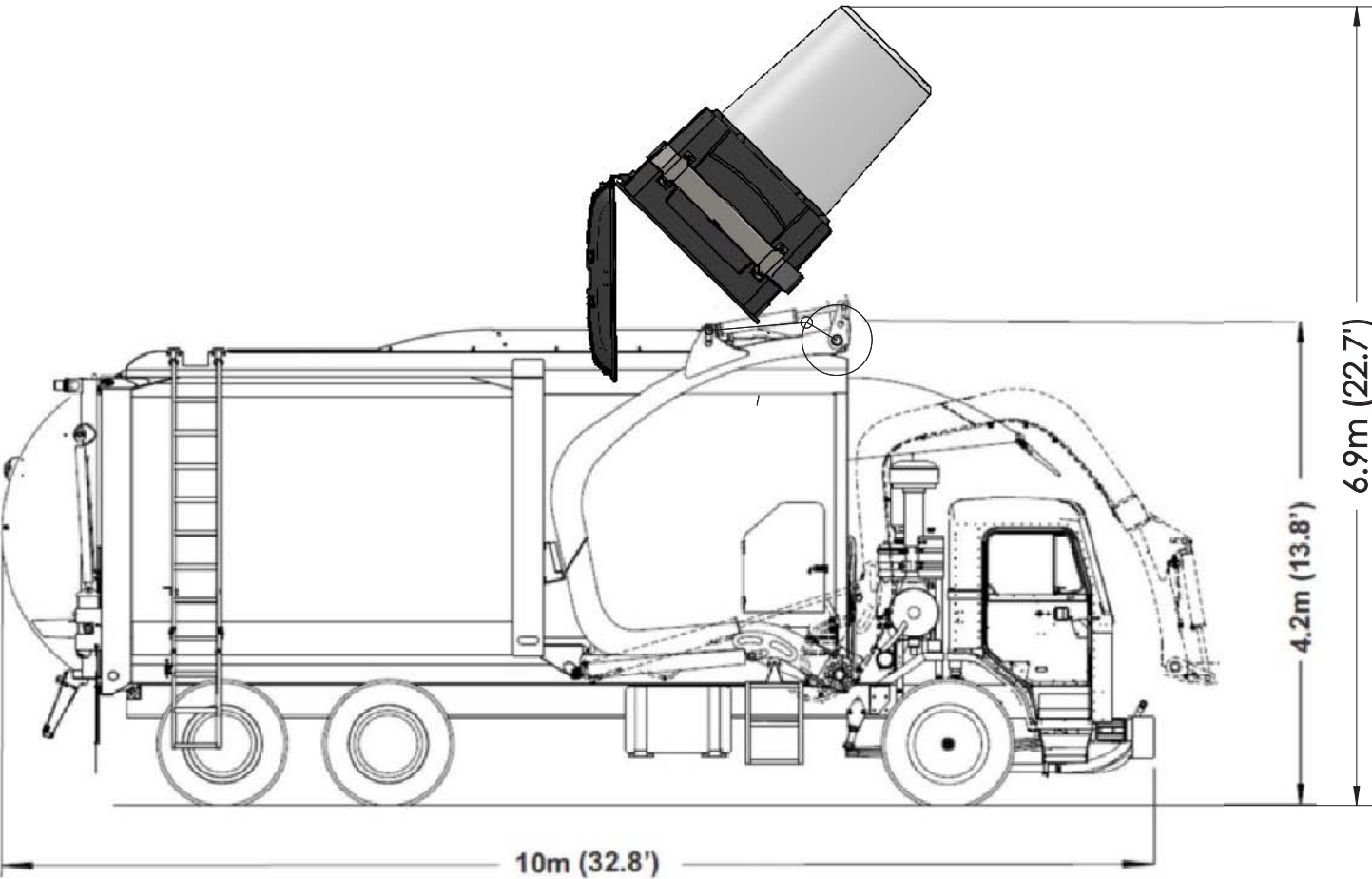
SLEEVE DETAIL A

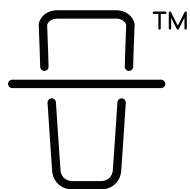


3
A2
1:5

SLEEVE DETAIL B

FRONT LOADING COLLECTION TRUCK





Silo™ by EarthBin



EarthBin®

If you have to see, smell, or even think about garbage on your property, you don't have a waste management system. You have a waste problem. Find out what the industry's most innovative thinkers have designed to solve it.

1-844-213-BINS (2467)

www.earthbin.com