



26' GROWING DOME ANCHORING THE DOME

It is preferred to anchor the foundation wall to the foundation and the dome structure to the foundation wall after the structure is complete to allow the structure to be properly aligned. Once all nuts with hubs have been properly aligned and securely tightened, it is necessary to permanently anchor the Growing Dome® structure and the wall. Begin with anchoring the foundation wall to the foundation.

ANCHORING FOUNDATION WALL TO THE FOUNDATION

GRAVEL RING FOUNDATION

Using a 1/2" drill bit or wood bit, drill holes in the bottom plate, approximately 3" in from the end studs and approximately 2" from the outside edge of the bottom plate. This allows room behind the rebar for the 2" rigid foam insulation. Angle them outwards, away from you, and to the side at a slight angle, so that the sledgehammer clears the top plate while pounding the rebar. See "Anchoring Wall to Gravel Ring Foundation" Video 5-V2. And "Anchoring the Dome to Gravel Ring Foundation" Diagram 5-D1. After the holes are drilled in all the wall sections (including both sides of the doorway section), insert a 24" piece of rebar and hammer in at an angle so that about 1" to 2" remains showing. Continue around the entire circumference of the dome with 2 per wall section. Once completed, continue to "Anchoring Dome Structure to the Foundation Wall" on Page 2 of this Step.

CONCRETE PIERS FOUNDATION

A 1/2" by 7" expanding anchor bolt will be used to anchor the wall to the concrete piers. The ideal location for the bolts would be 2" from the outside edge of the wall plate and 2" from the inside wall stud. See "Anchoring Wall to Concrete Piers Foundation" Video 5-V3 and "Anchoring Dome to Concrete Piers Foundation" Diagram 5-D2. Also see "Concrete Pier Anchoring Detail" Diagram 5-D3 for hole layout. It is however more critical to ensure that the bolt is not near the edge of the concrete pier if there were layout problems. There should be a minimum of 2-1/2" from the edge of the concrete pier to the hole for the anchor bolts, even if the hole needs to move closer to the inside wall studs. Begin by drilling a 1/2" hole through the bottom wall plate with a wood bit. Continue to drill into the concrete pier with a hammer drill and masonry bit another 4". It is helpful to wrap tape around the masonry bit at 4" so you know when you've reached the required depth. (Make sure to use ear and eye protection when using the hammer drill.) Also be sure to "blow out" the hole prior to inserting the anchor bolt. An air compressor works best. Insert the anchor bolt with a washer and nut, with the nut level with the top of the anchor bolt so that when hammering the bolt into the drilled hole, the screw threads are not damaged. Hammer the anchor bolt in and tighten. Continue around the entire circumference of the dome with 2 per wall section. Once completed, continue to "Anchoring Dome Structure to the Foundation Wall" on Page 2 of this Step.

ICF FOUNDATION USING WOOD FOUNDATION WALL (Provided with Kit)

If the ICF ends at grade level and the Growing Spaces provided wood foundation wall is used, you will anchor through the pressure treated bottom plate of the wall into the ICF using 1/2" by 7" expanding anchor bolts. The ideal location would be 2" from the outside edge of the wall plate and 4" from the end wall stud. See "Anchoring Dome to ICF Foundation" Diagram 5-D4. Also see "ICF Anchoring Detail" Diagram 5-D5 for hole layout. Begin by drilling a 1/2" hole through the bottom wall plate with a wood bit. Continue to drill into the concrete with a hammer drill and masonry bit another 4". It is helpful to wrap tape around the masonry bit at 4" so you know when you've reached the required depth. (Make sure to use ear and eye protection when using the hammer drill.) Also be sure to "blow out" the hole prior to inserting the anchor bolt. An air compressor works best. Insert the anchor bolt with a washer and nut, with the nut level with the top of the anchor bolt so that when hammering the bolt into the drilled hole, the screw threads are not damaged. Hammer the anchor bolt in and tighten. Continue around the entire circumference of the dome with 2 per wall section. Once completed, continue to "Anchoring Dome Structure to the Foundation Wall" on Page 2 of this Step.

ICF FOUNDATION WITH ICF/CONCRETE FOUNDATION WALL

Not applicable as the foundation wall is already anchored to the foundation. Continue to “Anchoring Dome Structure to the Foundation Wall” as shown below.

ANCHORING DOME STRUCTURE TO THE FOUNDATION WALL

GRAVEL RING / CONCRETE PIERS / ICF/CONCRETE FOUNDATIONS – ALL USING WOOD FOUNDATION WALL Provided with Kit

All three foundations above use the same process to permanently anchor the Base struts of the dome structure to the foundation wall top plate. See “Anchoring Dome Structure to Foundation Wall” Video 5-V1 which shows this process. Remove one of the 3” temporary deck screw and drill through that hole using a 3/8” drill bit or wood bit through both the base strut and the top plate. Insert a 3/8” x 3-1/2” carriage bolt and use a hammer to sink it into the wood. Place a washer onto the end of the bolt (inside the wall cavity), attach a nut, and tighten with a ratchet. Continue until all the Base struts of the dome structure have been permanently anchored to the wall sections with carriage bolts, two per wall section.

ICF FOUNDATION USING ICF/CONCRETE FOUNDATION WALL

If you have utilized an ICF/Concrete foundation which includes an ICF/Concrete foundation wall or other solid material foundation wall like concrete or block, you were required to install an option referred to as an ICF/Concrete Wall Package prior to installing the dome structure, which would have been erected on top of the sill plates of the package.

With this option, 1/2” by 8-1/2” expanding anchor bolts will be used to anchor the dome structure to the ICF/concrete foundation wall. You will anchor through the base strut and the pressure treated sill plate into the ICF/concrete. There should be 2 anchors per wall section. Remove one of the temporary 3” deck screws. With a wood bit, drill a 1/2” hole down to the concrete wall foundation. Then continue drilling with a hammer drill and masonry bit into the concrete approximately 4”. It is helpful to wrap tape around the masonry bit at 4” so you know when you’ve reached the required depth. Also be sure to “blow out” the hole prior to inserting the anchor bolt. Insert the anchor bolt with a washer and nut (with the nut level with the top of the anchor bolt so that when hammering the bolt into the drilled hole, the screw threads are not damaged). Hammer the anchor bolt in and tighten. See “Anchoring Detail to ICF/Concrete Wall” Diagram 5-D6 for a visual of this.