26’ GROWING DOME SITE PREPARATION

SITE PREPARATION FOR YOUR GROWING DOME

Begin preparing your site by marking a circle about 3 feet larger than the Growing Dome® size (29’ diameter for the 26’ Growing Dome). Put in a center rebar stake (part of the Owner Supplied List items). From the center stake, mark the radius string of half the diameter of the area you need to clear, about 14’ 6” for a 26’ Growing Dome, and mark the circumference with stakes. This area will need to be cleared of turf, big rocks, brush, roots, anything that will interfere with creating a hospitable wholesome site for your dome.

It is strongly advised to remove all perennial weeds before grading, as removing them later is a proverbial pain. Many dome owners have regretted omitting this step. Also, remove creeping weeds with underground rhizomes to a distance of 2 to 3 feet away from the dome, as they can creep under the wall and right through the insulation! Helpful Hint: If time permits, cover the area with black or clear plastic for 1 to 2 months prior to beginning. This will help to kill the weeds in this area without using dangerous chemicals.

A sloping site will need to be leveled within 2”. Exactly level is preferable. Most owners choose to excavate the high side in combination with building up the low side, often using a retaining wall made of landscape timbers or rocks. It is highly recommended that dirt added to areas where the dome walls will sit, will need to be compacted with a borrowed or rented mechanical compactor as it is important that the wall be built on firm ground. This will prevent the dirt from settling over the years and the dome structure becoming unstable. At this time also make sure your site has adequate drainage around the dome. It is preferable to have the site slightly raised, but if there are areas where water can collect, consider adding drainage ditches or a french drain.

*It is important at this time to have the site within two inches of **LEVEL** (NOT JUST FLAT) and this needs to be verified with an accurate measuring instrument such as a transit, laser or builder’s level, or a 4’ level attached to a straight piece of wood the length of the dome radius.*

IMPORTANT NOTE:

There are 4 aspects of the Growing Dome installation that are critical to all the Growing Dome components fitting together accurately, especially the glazing triangles on the struts. They are: (1) level site, (2) roundness of the foundation wall, (3) alignment of Growing Dome structure on the foundation wall, and (4) hub alignment. Each specific consideration is covered in its appropriate section and is boxed for emphasis. ***Please pay special attention to all of them.***

KIT ARRIVAL

Your Growing Dome kit will be delivered by Growing Spaces® truck or shipped in a crate with extra lumber on a pallet. Before signing for the delivery, make sure there is no major damage to the crate or lumber. Take pictures if you see any damage. Then go through the kit to make sure all the components were shipped and arrived undamaged. There is a comprehensive Parts List included in the crate.

The kit essentially consists of the following:

- Foundation wall units with connecting hardware
- Structural units for dome with connecting hardware
- Dome outer covering (glazing & tape)
- Insulated entry door and door framing
- North wall reflectix insulation panels
- Vents (opening windows) with automatic openers
- Undersoil ventilation fan, solar panel, and box
- Solar powered, thermostatically controlled cooling fan
- Hardware plus liner for making above ground pond
- Shade cloth, hooks, and rope
- Drip edge flashing

The parts you provide are bulky and expensive to ship. Gravel and rebar stakes should be on site before layout of the dome begins. Other items are detailed on the Owners Supplied List which is found on the page specific to the foundation you have chosen and are as follows:

Rebar stakes & gravel (for gravel ring & concrete pier foundations), soil, sand, and cement
Foundation wall insulation (and optional perimeter undersoil insulation)
Above ground pond sheet metal & support lumber
Ducts for undersoil ventilation system (not needed until after beds are built)
Enthusiasm & commitment

CAUTION!
Gloves should be worn when handling glazing and metal pieces.

When removing components of your Growing Dome kit, make sure the glazing pieces are stored up off the ground, on pallets or strips of wood, with the tubes running parallel to the ground. The static electricity of the panels will “suck” dust into the tubes. Also, make sure to cover the glazing pieces so they are not exposed to the sun, as sun exposure will make it difficult to remove the protective film.

The lumber should also be protected from the elements (rain). Store it inside or cover it with a tarp. Take care that it is not exposed to extreme heat.

INSTALLATION PREPARATION

The last thing to do prior to laying out and installing your dome is to print out and assemble the paper model. See “3D Paper Model” Diagram 1-D1. This will help in orienting your dome on the site and will give you an idea of the structure, optional locations of door and vents, north wall insulation, and show positions of struts and polycarbonate panels prior to laying out your dome. Simply follow the instructions on the first sheet of the dome model document. Your dome model is a guide showing how your finished dome will look. It is a good idea to have the model on site to refer to while assembling your dome so you can show your crew where you have chosen to locate the door and vents. We also provide a 2D aerial view of the Growing Dome for reference. See “Dome Structure Aerial View” Diagram 1-D2. It is also a good idea to have your crew watch the videos and become acquainted with the basics of dome building. If a Growing Spaces crew is involved with installing your dome, it is not necessary to assemble the dome model, as they will assist with the optional decisions. However, if you’ve hired a supervisor only and you’re providing the crew, you’ll need to put one together for your crew. Besides the advantages outlined above, it’s fun to assemble and gives you an idea of the geometry of the dome structure.

When considering the location of your door, know that the door will go in a pentagon section of which there are 5 in a 26’ Growing Dome. Two of these pentagon sections are in the north wall insulation area where the above ground pond goes and are therefore not available for choice. That leaves three possibilities, one facing east, one west, and one facing south. First consideration would be the easiest and most convenient access to enter your dome. Next, know that if you choose the south facing pentagon, the door will create some shade inside the dome in the winter when the sun is low in the horizon. If winter sun access is limited, east or west facing pentagons might be a better choice. If, on the other hand, your western summer sun is intense with no trees on that side to filter the sun, placing the door in the west facing pentagon will create more shade keeping your dome cooler.

When considering the locations of the two upper “A” vents, it is recommended that the hinge sides of the vents face the prevailing winds. Positioned this way causes the winds to “push down” on the vents, which is preferable to the winds catching the vents “like a sail” and ripping them off. When considering the locations of the two lower “E” vents, the ideal is to create as much cross ventilation as possible. They are placed in “E” triangles of which there are 4 options, not including the “E” triangle in the north wall insulation area. It is recommended to place them opposite each other with one facing the prevailing wind. This way increases the air circulation in the dome.

Your site is now **LEVEL** (not just flat) and is free of turf and potential weed problems. You have assembled the paper Growing Dome model and have decided the best locations for the vents and the door. You have purchased the required items on the Owner Supplied List. You have gone through the Interactive Manual and watched the Installation Videos and read all the Written Instructions from the first step to the last. You are now ready to “get your hands dirty” and start the actual installation!