

PERFORMANCE SPECIFICATIONS

EXECUTION AND INSTALLATION OF VOID FORMS

1. Void forms shall be the product of a reputable manufacturer regularly engaged in the commercial production of corrugated paper void form products.
2. Product submittals must be provided by the manufacturer for evidence that products meet the requirements.
3. Void form composition shall be of corrugated paper material with a wax coated exterior and an interior fabrication of a uniform cellular configuration. It shall be composed of components constructed of not more than partially wax-impregnated medium paper, laminated with moisture resistant adhesive. Void form constructed of fully-waxed impregnated paper is not acceptable due to the resistance to moisture deterioration.
4. Void forms must have a designed strength to sustain the dead load of liquid concrete plus normal construction loads until applied loads can be supported by the concrete structure, while maintaining full void depth as indicated on drawings. Jobsite moisture will rapidly reduce the original supporting strength.
5. Void form material shall be designed to lose its strength upon contact with soil moisture beneath structural slabs and grade beams. Adequate environmental moisture must be available and maintained in the voided area to allow void forms to incorporate this moisture after the setting of concrete.
6. Grade beams supported by carton forms, which require soil retention products, shall be formed rather than cast directly against the soil.
7. Prepare ground surface on an even plane with no projections that will point load carton forms.
8. Substrate having capillary breaks may deny the void form an adequate amount of moisture absorption needed to soften. If this condition exists, special handling may be required if the void material must degrade in a specific time period.
9. Upon request, a manufacturer's representative shall be available to attend a pre-construction meeting to discuss proper preparation and void form installation techniques.
10. Install void form system in strict conformance with the manufacturer's recommendations.
11. There should be positive drainage provided away from the structure to prevent accumulation of water near the foundation.
12. Void form products must be kept dry prior to placement of concrete. Protect void forms from rain and on-site seepage. Do not install void forms on a wet sub-grade or during inclement weather.

13. Carton forms should not be plastic wrapped nor placed in poly bags.

14. Void forms having questionable moisture content or obvious structural damage shall be removed and be replaced prior to placement of concrete. The contractor must ensure during concrete placement that the carton forms have not collapsed.

15. Void form must be the same width of the grade beam. Trapezoidal forms may not be used.

16. Install corrugated products that are pre-manufactured, sealed void forms, with curved, radial, **vertically** supported edges adjacent to all drilled piers. This will prevent damage to the interior supporting network caused by field-cutting. If pier intersections at slabs/beams require altering due to awkward field conditions, products manufactured for this specific purpose (with approved submittal) is acceptable for field-cutting or product modification.

17. The upper 2' portion of each drilled pier must be properly formed and contained to the designated diameter. The placement of concrete to the required elevation can be done by hand placement methods.

18. All top surfaces of slab and grade beam void forms must be protected by a layer of ¼" thick protection board in order to distribute point loading, bridge small gaps, and protect void forms from puncture and other damage during construction.

19. Soil Retention products shall be composed of lightweight, plastic materials that are not adversely affected by moisture. They must be flexible, impact resistant and have sufficient strength to resist lateral loads applied by soil.

20. Soil retainers may be installed in straight, clean trenches at sides of void forms prior to concrete placement. The gaps between the trench and retainers must be properly positioned or backfilled prior to the placement of concrete. Do not cast the sides of concrete beams directly against the soil.

21. Concrete grade beams that are wood/metal formed commonly require soil retainers to be vertically positioned a minimum of 6" above the void material and 4"-6" below at both sides. These dimensions may vary on void spaces in excess of 12" inches or engineering requirements. If required, they may be affixed to the concrete beam by adhesive, pin/washer/load, or concrete hard nail/washer @ 18" – 24" O.C.

22. Retainers, (impact-resistant, white (CPPP) polypropylene, or high density, black (HDPE) polyethylene plastic) – allow compaction equipment to operate directly adjacent to wall or slab. Either product is designed to help deter rapid moisture loss around the perimeter of a slab and prevents the migration of backfill material into the voided area. The black retainer (HDPE) should extend at least 2"- 4" above the top of the void form and 3" in a dug groove away from wall when positioned at an angle.