

October 3, 2007

Longwood Gardens
1001 Longwood Road
Kennett Square, PA 19348

2007-1974-00

Attention: Greg Ehrhardt

Reference: Evaluation of Foundation Bearing Conditions
New "Treehouse" Pin Foundations

Gentlemen:

At your request, Advanced GeoServices was on site earlier today to evaluate the foundation bearing conditions for the new "treehouse" observation platform at Longwood Gardens. This work was performed as detailed in our proposal no. 2007-P-999-G dated September 18, 2007.

We understand that you will use several Pin Foundations® to support this new structure. One test pit was excavated within the proposed structure area to evaluate the soil conditions for foundation support. The observed subsurface profile consist of the following:

0 – 0.5 feet	Topsoil (gray brown organic sandy silt)
0.5 – 4.5 feet	Residual Soil (medium dense moist brown silty fine sand)
4.5 – 6.0 feet	Decomposed Rock (medium dense moist brown fine sand, trace silt, with visible relic rock structure)

No groundwater was encountered in the test pit (depth of excavation = 6 feet).


These observed materials are typical of the weathering profile of the underlying felsic gneiss bedrock. They are stable soils/saprolite that can be easily excavated with conventional earth excavation equipment. Based on our experience within this geologic formation and the observed conditions within the test pit, we recommend using the following soil parameters for foundation design:

Unit weight (γ):	125 pounds per cubic foot
Friction angle (ϕ):	30°
Cohesion (c):	0

If you have any questions regarding this issue, please contact us.

Very truly yours,

ADVANCED GEOSERVICES



Paul F. Marano, P.E.
Senior Project Consultant

PFM:car

