

November 17, 2022

Pella Building Systems, Inc.
906 West 9th
Pella, IA 50219

RE: Mini-storage Foundation – Lee’s Summit, MO

All,

Soils 12” under the slabs and turn downs shall be replaced with fill that meets the criteria of the ASCE 32 for non-frost susceptible layers. Therefore, the shallow foundation design is adequate as per the 2015 International Building Code with reference to the ASCE 32.

From IBC 2015:

1809.5 Frost Protection

Except where otherwise protected from frost, foundations and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

- Extending below the frost line of the locality.
- Constructing in accordance with ASCE 32.
- Erecting on solid rock.

From ASCE 32:

4.1 GENERAL

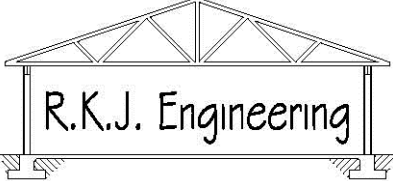
In regions of seasonal ground freezing, shallow foundations not extending below the design frost depth shall be protected against frost heave by one or more of the following methods:

1. use of non-frost-susceptible layers of undisturbed ground or fill materials (Section 4.2);
2. insulation of foundations to mitigate frost penetration and effects of frost heave (Section 4.3); or
3. approved design and details supported by engineering analysis.

4.2 FOUNDATIONS ON NON-FROSTSUSCEPTIBLE GROUND OR FILL MATERIAL

Foundations placed on a layer of well-drained, undisturbed ground or fill material that is not susceptible to frost shall have the thickness of such a layer included in meeting the design frost depth defined in Section 3.2. Undisturbed granular soils or fill material with less than 6% of mass passing a #200 (0.074 mm) mesh sieve in accordance with ASTM D422 and other approved non-frost-susceptible materials shall be considered non-frost-susceptible. Classification of frost susceptibility of soil shall be determined by a soils or geotechnical engineer, unless otherwise approved.

The soils investigation, prepared by Nicholas Gilles, P.E., is attached for reference.

 <p>R.K.J. Engineering</p>	<p>R. Keith Joyce, P.E. 517 Pear Orchard Road Statesboro, GA 30458 (706) 302-2075</p>
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Thank you for allowing R.K.J. Engineering, LLC to be of service. Please call with any questions or comments.

Sincerely,

Richard Joyce

Richard K. Joyce, P.E.

