GeoTech Foundation Company - West®
214 SE Walnut Street • Hillsboro, Oregon 97123
Phone: 503-640-1340 • Fax: 503-648-6706

PROJECT DESCRIPTION

PROJECT: Grain Storage Silo

LOCATION: Tremonton, Utah

DESIGN TEAM:

Architect:	Professional Design Group
Owner:	The Malt-O-Meal Company
Geotechnical Engineer:	AGRA Earth & Environmental

CONTRACTOR: Big-D Construction Corp.

DESCRIPTION:

- Raw material and product bin farm
- 60’ x 73’ concrete mat foundation supporting 2750 psf
- Compressible clay formation

The geotechnical investigation revealed that a 15’ thick layer of compressible clay occurred immediately beneath the bottom of the proposed mat foundation. The criterion for post-construction settlement of the mat was ½“.

Analyses by AGRA Earth & Environmental indicated three options for foundation support: (1) overexcavate the clay layer and replace it with structural fill; (2) utilize deep pile or caisson foundations; and (3) reinforce the clay layer in-place with Rammed Aggregate Pier® (RAP) elements. The Geopier® System was selected on the basis of cost and on-site construction time.

To avoid delays to other portions of the overall plant development, construction time for the bin foundation system was critical. Within 3 weeks after being selected for the work, a stamped Geopier design had been submitted for permitting, approval was obtained, and on-site construction of the Geopier system had begun. At the end of 5 working days on-site, the clay layer had been suitably reinforced with a total of 99 RAP elements with 30” diameters.

REFERENCES:

Steve Noakes, Senior Project Manager
Professional Design Group
Northfield, MN 55057

William Gordon, P.E.
AGRA Earth & Environmental
(801) 266-0720

Brent Clark, Senior Project Manager
Big-D Construction Corp.
(801) 392-3200

Nick Villalobos
Big-D Construction Corp.
(801) 392-3200