



**GEOTECH FOUNDATION COMPANY - WEST®**  
214 SE WALNUT STREET • HILLSBORO, OREGON 97123  
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## PROJECT DESCRIPTION

**PROJECT:** Safeway  
**LOCATION:** Madras, Oregon  
**DESIGN TEAM:** *Architect:* Mulvanney Architects: Portland, Oregon  
*Structural Engineer:* Froelich Consulting Engineers, Inc.: Tigard, Oregon  
*Geotechnical Engineer:* David J. Newton Associates, Inc.: Portland, Oregon  
**CONTRACTOR:** James E. John Construction Co., Inc.: Vancouver, Washington  
**OWNER:** Safeway, Inc.



### DESCRIPTION:

- Single story 55,255 square-foot retail structure
- Wall loads up to 3.5 kips per foot
- Foundation loads up to 70 kips
- Undocumented fill overlying bedrock

The site, which was on a slope, consisted of up to 19 feet of undocumented fill overlying very dense Fresh Deschutes Formation Tuff.

The geotechnical report recommended excavating up to 15 feet and replacing up to 9 feet of engineered structural fill. The Geopier® System was selected as a Value Engineering alternative.

A total of 196 Rammed Aggregate Pier® (RAP) elements were installed in only 3 working days on-site.

**REFERENCES:** Jim Aarhus, Project Manager  
James E. Johnson Construction Co., Inc.  
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