future inspection of the bottom of the bridge deck as required by the Washington State Department of Transportation.

- **Geofoam blocks to mitigate settlement.** The bridge corridor is underlain by highly compressible peat layers, which are prone to settlement. To mitigate long-term settlement due to new roadway approaches at each end of the bridge, the design team recommended using geofoam blocks for the roadway subgrade instead of gravel. The geofoam blocks are extremely lightweight but structurally adequate to support the roadway without inducing any long-term settlement along the corridor. Use of geofoam blocks over the traditional gravel materials substantially shortened the construction duration.

**Seismic Resiliency**

The previous bridge lasted more than 80 years, and the city wants the new bridge to serve the public for decades to come, with a minimum 75-year service life. To achieve that goal, the latest technology was used to account for climate change, seismic conditions, and the day-to-day needs of the structure over the long term. Given the earthquake risks at the bridge location, seismic resiliency was an important component of the work. To accommodate seismic design requirements for a 1000-year design seismic event and to reduce the seismic demand on the concrete columns and drilled shafts, the design team used seismic isolation bearings to support the bridge superstructure. Although seismic isolation bearings are typically used on complex structures or seismically vulnerable older bridges, the design team specified them for this structure because they are suited for the presence of liquefiable soil layers, which would cause lateral spreading, and for short column heights that could not withstand the seismic displacement demands. A rubber bearing with a lead core was selected for its cost effectiveness and ease of installation.

**Conclusion**

The team anticipated certain challenges but could not have anticipated the onset of a global pandemic. Despite the initial pandemic shutdown, followed by a lengthy concrete delivery drivers’ strike in the area, the design team was able to revise the construction sequences, and make other changes that enabled the project to meet the original construction completion date of fall 2022.

The City of Kenmore wanted more than just a bridge. They wanted transportation solutions for all modes, and a better overall experience for users of this heavily traveled corridor. The result was a successful project that replaced a vital piece of the city's infrastructure, giving the community an improved experience as they travel through the area. The community and the team were excited to celebrate the bridge's on-time completion at a ribbon-cutting celebration in August 2022.

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