

VALPARAISO UNIVERSITY

Valparaiso University is located in far northern Indiana, and the campus is in the center of the Lake Michigan Snow Belt. The area received substantial amounts of snow and experiences winter temperatures that often fall below 0 Degrees F. Freeze-thaw, substantial exposure to road salt and high summer temperatures make the area a hostile environment for asphalt roads.

In 2006, The University reconstructed a large portion of the campus roadway system, including parking lots and the main transportation route around campus. In addition to handling daily commuter traffic, the roadwork was designed with a major campus expansion program in mind. That construction included a large number of construction vehicles and the transport of major pieces of equipment, including a 140,000 lb. generator.



CAMPUS ACCESS ROAD, 2017

Road construction was designed with several objectives in mind:

- Capacity to carry Interstate-level vehicle loads



ACCESS ROAD SURFACE CONDITION, 2017

- Low life-cycle costs
- Use of sustainable materials
- Aesthetic appearance

Under the direction of Fred Plant, Valparaiso University selected crumb rubber modified asphalt produced through the plant mix process. This product is now called Elastiko^R ECR (Engineered Crumb Rubber). Chemically treated crumb rubber (from waste auto tires) was added to aggregate and binder during hot mix production. The recycled rubber was fed in at a rate equal to 10% of the virgin binder content of the dense-graded mix. As a result of the rubber addition, the binder PG rating was increased from 64, -22 to over 76, -22, providing excellent resistance to both cracking and rutting. During application, this CRM asphalt did not exhibit any of the stickiness typically found with other rubber addition processes. The hot mix product was placed and compacted with ease. After thirteen years of service, the paved surfaces are free of any material cracking and potholes.