



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Transportation and Public Facilities

OFFICE OF THE COMMISSIONER

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April 27, 2026

The Honorable Jesse Bjorkman
Chair, Senate Transportation Committee
Alaska State Capitol, Room 427
Juneau, AK, 99801

Dear Chair Bjorkman,

Thank you for the opportunity to follow up on questions raised during the Senate Transportation Committee hearing on April 14, 2026.

Pavement Performance and Use of Hard Aggregate (Sen. Kiehl)

Senator Kiehl requested a more detailed technical explanation of how hard aggregate contributes to pavement performance, particularly in terms of wear resistance versus structural capacity.

The use of hard aggregate in asphalt mixtures primarily improves surface durability and resistance to wear, rather than contributing significantly to the structural strength of the pavement section. Hard aggregate materials are more resistant to abrasion and polishing, which helps maintain surface texture and reduces rutting under repeated traffic loading, particularly on high-volume roadways.

For this reason, the Department of Transportation and Public Facilities' (DOT&PF) specifications require the use of hard aggregate on roadways with traffic volumes exceeding approximately 5,000 average annual daily traffic (AADT) per lane. In these applications, hard aggregate is typically combined with polymer-modified asphalt binder to further enhance resistance to deformation and improve overall pavement performance.

While the structural capacity of a roadway is largely governed by the pavement thickness, base layers, and subgrade conditions, the asphalt surface mix particularly when incorporating hard aggregate plays a critical role in protecting that structure by resisting surface distress. Monitoring of roadways constructed with hard aggregate indicates a measurable increase in service life, generally in the range of three to five years, depending on traffic volumes and environmental conditions.

Chair Bjorkman
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In Alaska, where freeze-thaw cycles, studded tire wear, and variable subgrade conditions create additional stress on pavement systems, the use of hard aggregate is an important tool for improving surface longevity and maintaining performance over time.

DOT&PF appreciates the committee's engagement on transportation system durability and efficiency. Please let us know if additional information would be helpful.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ryan Anderson".

Ryan Anderson P.E.
Commissioner

cc: Andy Mills, Legislative Liaison, DOT&PF
Jordan Shilling, Legislative Director, Office of the Governor