

MEMORANDUM

TO: Grace Merkes, Assembly President
Members, Kenai Peninsula Borough Assembly

THRU: John J. Williams, Kenai Peninsula Borough Mayor

FROM: Gary Davis, Road Service Area Director

DATE: March 20, 2008

SUBJECT: Addressing Expressed Public Concerns Regarding **Ordinance 2008-05, (Substitute) Amending KPB Chapter 14.06, Road Standards -**

This memorandum addresses concerns expressed to the Road Service Area regarding the proposed changes to the roads standards. These issues apply equally to the original ordinance as well as the substitute.

1. Increasing the amount of gravel required on a typical Category I road from 18 to 24 inches and requiring a Type II six inch cap on both Category I and II roads.

Increasing the required amount of gravel from 18 to 24 inches total for typical Category I roads will increase the elevation of the roads. This creates a better ditch and therefore improved drainage. One of the biggest problems encountered on borough roads is the ponding of water, which is a problem that maintenance generally cannot fix. All other typical road categories currently require a minimum 24 inch gravel base. The RSA believes that increasing the base and road elevation on Category I roads from 18 to 24 inches in line with the other categories of roads will reduce ponding on Category I roads and improve passage and maintenance costs on borough roads.

The ordinance proposes a 6 inch cap of Type II material on Category I and II roads. Previously the Category I and II roads have only been required to contain Type I, or pit run gravel, which is primarily rocks up to 4 inches in diameter. The Type II cap is composed of smaller material, no larger than 2 inch diameter, with increased amounts of sands and fines (silts and clays). The blended composition of Type II material generally reduces surface defects such as potholes, ruts, dust, surface softening, and corrugation. The Type II cap also reduces the dragging of cobbles and rutting with maintenance grading as well as improving the effectiveness of dust control measures.

Some developers argue that better maintenance could reduce the need for increased gravel and better materials, the RSA's maintenance practices are constrained by budgetary considerations. The RSA can generally only afford to pay its maintenance contractors to make two passes on a road when grading instead of four, which would improve gravel retention. The RSA is increasing the requirements for gravel on Category I roads and requiring a better cap on Category I and II roads to match its known maintenance limitations and improve the travel experience for borough taxpayers.

2. Engineering requirements

The standards proposed in Ordinance 2008-05 are required for maintenance certification. Once a road is certified, the RSA becomes responsible for future maintenance and repair as well as potential liability. The RSA has a strong incentive to ensure the roads it certifies for maintenance are safe, well built, and will not require expensive repairs or unusually excessive maintenance costs. For these reasons the RSA requires engineering in areas where past experience has identified common problems. Wetlands often present drainage issues, glaciations in the winter, and roads sinking into the ground. These issues pose significant hazards for road users. Wetlands also often require permitting from state and federal agencies complicating the design and structure of the road. While these agencies have concerns regarding water flow, siltation, and habitat, the RSA's primary focus is on safe good roads that will not present problems in the future. Therefore, state and federal agency requirements will not always address the needs of the RSA when it comes to road construction in wetlands. It is important, however, for the RSA to be assured that the roads it becomes responsible for are correctly permitted, and use of an engineer generally adds some comfort in this regard. Such construction also requires subsurface geotechnical analysis and hydrological analysis. Engineering is also

required for bridges and high embankments. The Borough becomes responsible for these structures and road features that have higher failure rates and present potential for more serious injury. For the RSA to become responsible for a bridge used by the public that it did not build, it generally needs to rely on an engineered design, and the same applies to an unusually high or steep embankment. These high embankments and bridges also often have issues with water, erosion, and drainage, which are detrimental to gravel roads.

There may be situations where the wetlands are small enough, or a particular contractor has special expertise, that engineering is not reasonable or necessary. In these situations the RSA has an exception process where the maintenance applicant can appear before the board and request an exception from the standards such as an engineering requirement contained in KPB Chapter 14.06. This exception process is laid out in the Ordinance in KPB 14.06.230.

3. Financial Guarantee

The ordinance's financial guarantee requirement is designed to provide incentive for road builders to come back and fix any road problems that develop within a year. The RSA is only asking for surety in the amount of 10 percent of the construction costs and provides numerous ways in which the applicant can provide the same. While this amount is certainly not enough to fix major road problems, it is intended to be enough to motivate a developer to fix the problems on their own and not overly burdensome to a small developer at the same time. The financial guarantee ensures that the developer will make good on their warranty. The RSA has explored numerous options and has concluded that this method is the most straightforward, least burdensome method to ensure that good roads are built in the public's rights-of-way.