PERFORMANCE GRADE ASPHALT CEMENT

REFERENCE: Work Plan 95-R-16, Report U96-4

HISTORY:

In 1995, three projects were completed using a high stability SHRP Performance Grade 70-28 asphalt cement in hopes of preventing or delaying extensive rutting. The depth of the top course on each of these projects was 40 mm. The projects included:

- Essex Junction, NH 9542(1)S, beginning at MM 1.60 on VT 15 in Essex Junction and extending easterly 1.04 km to MM 2.249. The 1994 ADT was 13550.

- South Burlington, NH 9552(1)S, beginning at MM 0.517 on US 2 in South Burlington and extending easterly 2.85 km to MM 2.289. The 1994 ADT was 25604.

- Middlebury, NH 9545(1)S, beginning at MM 4.264 on US 7 in Middlebury and extending northerly 2.33 km to MM 5.712. The 1994 ADT was 11984.

More detailed information in regard to project location and design can be found in Report U96-4.

SURVEY INFORMATION:

All test sites were surveyed in October of 1996. The results of this survey are presented in the table below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Essex Junction</td>
<td>16 mm</td>
<td>4.5 mm</td>
</tr>
<tr>
<td>South Burlington</td>
<td>22 mm</td>
<td>4.8 mm</td>
</tr>
<tr>
<td>Middlebury</td>
<td>30 mm</td>
<td>2.5 mm</td>
</tr>
</tbody>
</table>

In Middlebury (single lane test sites) ruts were notably deeper in the right wheel path, (averaging 4 mm) than in the left wheel path (averaging 1 mm). Ruts in Essex Junction are following a similar trend with ruts averaging 7 mm in the right-hand, or turning lane, and 2 mm in the left-hand, or travel lane. Ruts on all four Williston Road test sites are forming in a random pattern, averaging 5 mm overall. These results indicate above average rut depths for a first year post-construction survey.

FOLLOW-UP: All three projects will be inspected annually to determine if the high stability binder and mix can better resist rutting.