OBJECTIVE:

The objective of this study is to evaluate the relative long-term pavement performance of a pavement structure consisting of asphalt containing various light fractions (lighter asphalt oils). The project was initiated in December of 1984 on SR 16 in Clay County. The project consists of eight sections located in the east and westbound traffic lanes. The performance is evaluated in terms of Deflection (Dynaflect Deflection), Ride, Rutting and Cracking.

The sections being evaluated are:

Section 1: Asphalt cement with Typical percentage of Light Fractions.  **Type Plant - Batch**

Section 2: Asphalt cement with Typical percentage of Light Fractions.  **Type Plant – Drum Mix**

Section 3: AC with a high percentage of Light Fractions.  **Type Plant - Batch**

Section 4: AC with a high percentage of Light Fractions.  **Type Plant – Drum Mix**

Section 5: Same AC as used in Section No. 1 after steam distillation to remove Light Fractions.  **Type Plant – Batch**

Section 6: Same AC as used in Section No. 2 after steam distillation to remove Light Fractions.  **Type Plant – Drum Mix**

Section 7: Same AC as used in Section No. 3 after steam distillation to remove Light Fractions.  **Type Plant – Batch**

Section 8: Same AC as used in Section No. 4 after steam distillation to remove Light Fractions.  **Type Plant – Drum Mix**
<table>
<thead>
<tr>
<th>SECTION NUMBER</th>
<th>DESCRIPTION</th>
<th>TYPE PLANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Asphalt cement with Typical percentage of Light fractions.</td>
<td>Batch</td>
</tr>
<tr>
<td>2</td>
<td>Asphalt cement with Typical percentage of Light fractions.</td>
<td>Drum Mix</td>
</tr>
<tr>
<td>3</td>
<td>AC with high percentage of Light fractions.</td>
<td>Batch</td>
</tr>
<tr>
<td>4</td>
<td>AC with high percentage of Light fractions.</td>
<td>Drum Mix</td>
</tr>
<tr>
<td>5</td>
<td>Same AC as used in Section No. 1 after steam distillation to remove Light fractions.</td>
<td>Batch</td>
</tr>
<tr>
<td>6</td>
<td>Same AC as used in Section No. 2 after steam distillation to remove Light fractions.</td>
<td>Drum Mix</td>
</tr>
<tr>
<td>7</td>
<td>Same AC as used in Section No. 3 after steam distillation to remove Light fractions.</td>
<td>Batch</td>
</tr>
<tr>
<td>8</td>
<td>Same AC as used in Section No. 4, after steam distillation to remove Light fractions.</td>
<td>Drum Mix</td>
</tr>
</tbody>
</table>

Figure 1. Field Trial to Evaluate the Effects of Light Fractions in Asphalt on Mix Properties and Pavement Performance
STEAM DISTILLATION

Figure 2. Schematic of Steam Distillation Unit
Pavement Distress Graphs

County: Clay  Section Number: 71050-3512  State Road: 16

Rutting

Rut (in)

Test Date

Ride

Ride (PSI)

Cracking

Cracking (SF/1000 SF)

Test Date