

**Road Weather Management Program  
Best Practices for Road Weather Management**

**PUBLICATIONS LIST**

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**TITLE:**

PREDICTION OF DAILY TEMPERATURE PROFILE IN FLEXIBLE PAVEMENTS

**ABSTRACT:**

The majority of previously published research on pavement temperature prediction has focused on predicting the annual maximum or minimum pavement temperature so as to recommend a suitable asphalt binder performance grade. However, modeling the pavement temperature on a daily or hourly basis has only been recently investigated. To determine the pavement temperature profile, the influence of ambient temperature and seasonal changes must be understood such that the effects of heating and cooling trends within the pavement structure can be quantified. In addition, the influence of different pavement structures on the temperature distribution within the pavement structure must be determined. This paper presents the temperature profile monitoring of flexible pavements on the Virginia Smart Road from March 2000 through May 2001. Developed models to predict the daily maximum and minimum temperature at depths to 0.188m within the pavement structure are presented.

**SOURCE(S):**

Transportation Research Board 81st Annual Meeting, Search TRIS <http://199.79.179.82/sundev/search.cfm>

**Keyword(s):**