

Life-Cycle Determination of Preventative Maintenance Treatments

The primary intent of this research initiative is to determine the life expectancy and associated costs of preventative maintenance treatments currently used in the State of Vermont. This will be completed by evaluating the constructability, performance and cost effectiveness of all treatments encompassed within the study. The treatments will include paver placed surface treatments, micro-surfacing (Type I and II), chip seal, hot-in-place recycling, and standard mill and fill treatments. There are four projects for the 2009 construction season. More projects will be added in following years. A maximum project length will be eleven years.

Preventative maintenance treatments, intended to arrest minor deterioration, retard progressive failures, and reduce the need for corrective maintenance, has the potential to both improve quality and reduce expenditures. The life cycle and associated cost-effectiveness of the treatments may vary significantly based upon the selected treatment, functional classification, traffic demand, condition of the roadway prior to application, constructability and environmental conditions.

The four projects added during the 2009 construction season included three paver placed surface treatments and one microsurfacing type II. All projects were visited prior to construction where pre-construction cracking and distress was documented. During construction each site was visited and all construction techniques were documented. Each site was visited to document final condition after construction was completed. Six projects will be added to the project for the 2010 construction season.