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ERRATA

“Relating Ride Quality and Structural Adequacy for Pavement Rehabilitation/Design Decisions”

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Dear Customer:

An editorial correction was made to this report after the report was originally published. The following table shows the modification that was made to this report.

| Location | Correction |
|----------|---|
| Page ‘a’ | Replace Forward page with attached copy |

FOREWORD

As the highway community transitions to a performance-based approach to managing investments in pavement infrastructure, it is vitally important that potential performance measures and inter-relationships among performance measures be thoroughly examined to assess their applicability to the challenges of managing for performance. Ride quality and structural adequacy are two key pavement performance indicators. The relationship (or lack of relationship) between the two has been a topic of frequent and continuing discussion in the pavement community for many years. Data collected through the Federal Highway Administration's Long-Term Pavement Performance (LTPP) program has created an unprecedented opportunity to examine whether there is, in fact, a meaningful and consistent relationship between ride quality and structural adequacy, and to model that relationship if it exists. There would be substantial economic and engineering benefits to the pavement engineering community if such a relationship could be identified and definitively modeled. Likewise, if no such relationship exists, the pavement engineering community could focus on proper modeling of each of the individual indicators separately in order to improve network level decision making. This study was intended to develop and document a mechanism to include both ride quality and structural adequacy values within the context of current network-level pavement management systems for highway agency implementation to ensure smooth, structurally adequate pavements. To accomplish the objective, two major activities were carried out: (1) a literature search to gather, review, and synthesize available information on relating ride quality and structural adequacy and (2) a review and assessment of data from the LTPP program to determine if such a relationship exists. LTPP data was chosen for its quality, comprehensive coverage, and robust suite of supporting information necessary to conduct a national study. This report details the study methodology and findings including presentation of a conclusion to the question – are ride and structural adequacy related?

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