

## **PAVEMENT TYPE SELECTION**

### **FDOT RULE MAKING**

#### **2<sup>ND</sup> WORKSHOP – JULY 20, 2010**

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**Comments: July 23, 2010**

#### **I. General Comment**

- It is critical that comments previously submitted by our industry members and recorded on the website be carefully considered when drafting the rules and amending the PTS. In my June 28 comments I made 12 rule proposals, or items to be included in the Rule, that will lead to a balanced PTS manual and create the competition that benefits the taxpayers, the Department and the industries.
- The Rule must make reference to the use of MEPDG or any updated version implemented by the Department for concrete pavement design. It is not expected that another design method will be developed by AASHTO in the foreseeable future.

#### **II. Specific Comments Pertaining to July 20 workshop and Proposed Chapter 4**

##### **1. Item 4.1 –**

The Rule should not limit PTS to new construction and reconstruction but should also include widening and resurfacing projects. Widening projects are planned due to significant increase in traffic volume and weights. Resurfacing projects that fail to carry the predicted total traffic at the year they were deemed deficient should be included in the PTS.

##### **2. Item 4.2 –**

The 10% cost differential that may trigger alternate bids will only be fair when both pavement types have equivalent designs for the planned design year. Asphalt is designed to last until the next resurfacing event, which, on the interstate system, is less than 20 years, while concrete pavements outlast their 20-year design. A thick concrete pavement is over-designed to handle the projected 20-year design traffic and beyond. However, current Department designs have not produced a comparable asphalt layer thickness that

allows for a complete 20-year service life without resurfacing. This is not considered equivalent and will constantly result in skewed PTS and LCCA in favor of asphalt.

**3. Item 4.3.1 –**

- The minimum analysis period should be 40 years. The rule needs to allow flexibility for up to 50-year analysis period. This was the case in the design of I-95 in Brevard County. Many concrete pavements are in their 50 or 60 years of service.
- The discount rate should follow data from the federal Office of management and Budget (OMB).

**4. Item 4.3.2**

- Table 4.1 must revamped and redeveloped based on sound statistical analysis of the Department PMS using three categories of highways/roads, including heavy (interstate), medium (State roads), and low (secondary). The analysis must be based the statistical weighted averages of projects in each category per each district. A standard 14 year resurfacing cycle shall only be used when backed by accurate analysis of PMS data for the appropriate category.
- The Crack and seat and overlay should not be considered in the 30 year rehabilitation of any concrete pavement. Experience of 30-year concrete pavements in Florida does not show any case of crack seat and overlay. This is an outdated requirement that does not reflect realities of good FDOT design today.

**5. Item 4.3.3 -**

- The text of the current PTS manual is often vague and leaves more questions than useful directions to the engineer performing the LCCA and PTS. A clear example of lack of guidance is the statement in the last paragraph “Engineering considerations must be given .....”. Without clear guidance, an engineer may not be able to put a value on design improvements.
- The shoulder should not be a standard part of economic analysis unless dictated by the output of the MEPDG design. MEPDG allows various shoulder options including asphalt and concrete shoulders, as well as widened lane. Each option will result in a different pavement thickness. Once the pavement design is optimized by the MEPDG, the entire design including the shoulder would then be considered. In many cases the shoulder will be the same for both pavement types and does not warrant any economic consideration.

- The procedure to determine the Salvage value for the remaining life shall be based on data obtained from performance of old pavements. The rule shall specify a methodology to determine salvage value using historic records of existing pavement.
- All indirect costs for bid items in resurfacing and rehabilitation projects shall be included in the economic analysis. Also included in the analysis shall be cost of engineering and testing services.
- Delay time and vehicle operating costs and accidents are important. However, the Department should use accurate and reliable data based to properly account for such costs.
- Estimates of items costs must be derived from projects of similar type, size and geographic location. Obtaining cost items for concrete pavements shall also involve contractors.

**6. Item 4.3.4**

The rule must outline a process for soliciting review comments on a PTS, and for resolution of objections from the industry.