

Guidelines for Reworked Asphalt Concrete

January 21, 2011

This process consists of the reworking the top one to two inches of existing asphalt pavement using at the contractor's option either milling and plant produced hot-mix asphalt or the hot-in-place recycling process.

Candidate Projects

A reworked asphalt concrete binder course should only be used on Traffic Level A or B projects (less than 3 million ESALs; approximately 1000 or less current two-way trucks per day) or as an interim project, without regard to traffic level, where the integrity of the existing pavement needs to be maintained until a scheduled reconstruction/widening project can be let. Use on any other projects will require Chief Engineer approval.

Pavement Evaluation

This process should be used only on pavements that exhibit minor surface distresses such as cracking, and raveling. It should not be used on pavements showing structural failure. Deep structural cracking will not be fixed by the process and would reflect quickly through the new surface.

Evaluation of the existing pavement should be performed by the District Materials Office to determine that no structural, moisture, or soil problems exist in the recommended depth of reworked pavement structure, and delineate the changes in pavement composition throughout the project limit.

Pavement Design

The typical rework treatment of the existing asphalt pavement will range from one (1") to two (2") inches in depth. A three (3") minimum pavement thickness of existing pavement is required for these processes to be successful. The depth of reworking is to be shown in the plans.

When used on the appropriate pavement, the reworked asphalt process can be considered a functional overlay as outlined in section 6.8.4 of the Flexible Pavement Design Manual and no structural calculations are necessary. The need for a friction course should be determined according to chapter 4 of the Flexible Pavement Design Manual (FDOT document #625-010-002) and paid for with a separate pay item. If additional milling is needed to maintain grade, this should be noted in the plans and the cost included in the Reworked Asphalt item.

If the existing structural capacity needs strengthening beyond that provided by the friction course layer, a determination of the required strengthening thickness must be undertaken using conventional pavement design methods.

Warranty

A three (3) year bonded warranty is included in the specification. The amount of the bond is to cover the full replacement of the reworked layer, plus any friction course, with similar thickness of Type SP asphalt and friction course, if applicable.

By special provision specification:

324-8 Basis of Payment.

324-8.1 General: The quantity of the binder course layer shall be paid for at the contract unit price per square yard, completed and accepted. Such price and payment shall be full compensation for performing all work, and shall include the cost of all materials, including the cost of any milling, liquid asphalt, asphalt recycling agent, virgin aggregate, asphalt mixture and warranty maintenance bond.

324-8.2 Payment Items: Payment shall be made under:

Item No. 324-1 Reworked Asphalt Concrete – per square yard.

RECOMMENDED REFERENCE MATERIALS

Special Provision Specification Section 324: REWORKED ASPHALT CONCRETE

BASIC ASPHALT RECYCLING MANUAL by Asphalt Recycling and Reclaiming Association (ARRA)