

HR-182 Evaluation Of Cover Aggregate Stripping Characteristics

Key Words: Aggregate, Seal coats

ABSTRACT

The purpose of Research Project HR-182 was to identify those aggregate types which would perform satisfactorily as seal coat aggregates.

Aggregates were chosen from across the State to represent the various types normally encountered and were used with two different types of binder bitumens. A water spray treatment was also included to simulate the effects of rainfall. The evaluation was based upon aggregate retention.

Due to the influence of unexpected variables upon the field samples, the laboratory data are reliable for only the most general observations. Namely, that gravels as a group appear to be retained better than carbonates and rain-fall shortly after seal coat placement can affect aggregate retention. The subsequent field observations and analysis of skid resistance data permit the following conclusions

1. Aggregate retention is influenced by lithologic type with the gravels, quartzite, haydite, dolomites, and medium grained limestones performing best.
2. Aggregate retention is not influenced by binder bitumen type.
3. Friction values of seal coats are influ-enced by aggregate retention and/or lithologic type.

The following recommendations have been determined:

The aggregate used for cover aggregate/seal coat projects should be Type 4 or better skid resistance as identified in Iowa DOT Materials Instructional Memorandum T-203. This will result in maximizing the possibility of good aggregate retention and skid resistance.