

Abstract

Fly ash was used in this evaluation study to replace 15% of the cement in Class C-3 concrete paving mixes. One Class "C" ash from Iowa approved sources was examined in each mix. Substitution rate was based on 1 to 1 basis, for each pound of cement removed 1.0 pound of ash was added.

The freeze/thaw durability of the concrete studied was not adversely affected by the presence of fly ash. This study reveals that the durability of the concrete test specimens made with Class II durability aggregates was slightly increased in all cases by the substitution of cement with 15% Class "C" fly ash.

In all cases durability factors either remained the same or slightly improved except for one case where the durability factor decreased from 36 to 34. The expansion decreased in all cases.