

# BASALT FIBER COMPOSITE REINFORCEMENT FOR CONCRETE

This Innovations Deserving Exploratory Analysis (IDEA) project focused on an evaluation of the feasibility of using composite rebar in concrete reinforcement based on studies of the properties of basalt fiber and reinforced composite. The progress report focuses on the technical characteristics of basalt-fiber composite/concrete. Basalt fibers exhibit a high level of mechanical characteristics (tensile strength, modulus) and chemical stability in cement media. An evaluation of the mechanical characteristics of basalt-fiber composites is provided. The technical characteristics of basalt fiber reinforced concrete are considered and suitable basalt fibers for fiber-reinforced concrete applications are defined.

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- **Supplemental Notes:**

- This NCHRP-IDEA investigation was conducted by Research & Technology, Inc., Madison, Wisconsin. The original project title was Advanced Concept Concrete Using Basalt Fiber Composite Reinforcement. Distribution, posting, or copying of this PDF is strictly prohibited without written permission of the Transportation Research Board of the National Academy of Sciences. Unless otherwise indicated, all materials in this PDF are copyrighted by the National Academy of Sciences. Copyright © National Academy of Sciences. All rights reserved

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