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| **UTC Project Information** | |
| Project Title | MPC-626 – Effectiveness of Concrete Bridge Deck Sealants |
| University | South Dakota State University |
| Principal Investigator | Rouzbeh Ghabchi, Ph.D., P.E.  Nadim Wehbe, Ph.D., P.E. |
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| Funding Source(s) and Amounts Provided (by each agency or organization) | USDOT, Office of the Assistant Secretary for Research and Technology  $95,221  South Dakota Department of Transportation  $137,099 |
| Total Project Cost | $232,320 |
| Agency ID or Contract Number | 69A3551747108 |
| Start and End Dates | February 19, 2020 to July 31, 2024 |
| Brief Description of Research Project | The South Dakota Department of Transportation (SDDOT) questions if the use of the polymer chip seals is efficient and cost-effective in preventing water and chloride infiltration on bridge decks. Polymer chip seals are commonly used to seal the decks, resulting in improved friction (skid resistance). Since the early 1990s, SDDOT has used polymer chip seals on decks to reduce water permeability and chloride penetrability. This prevents deterioration due to corrosion of the steel reinforcement from chloride ingress in the decks. The seals’ failure on the deck causes rapid degradation that significantly increases maintenance costs to prolong service life of the decks. To determine the effectiveness of deck sealants and their performance on bridge decks in South Dakota, immediate and rigorous laboratory and field testing-based research considering different types of deck sealants must be done. This work will not only help validate the claim for efficiency and cost-effectiveness of the sealants for South Dakota bridge decks, but also provide technical recommendations regarding their practical use. |
| Describe Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here |  |
| Impacts/Benefits of Implementation  (actual, not anticipated) |  |
| Web Links   * Reports * Project Website |  |