

## PROMOTIONS

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**Denise H. Robinson**, Trades Specialist II, promoted to Trades Specialist III at Kershaw Maintenance.

**Travis L. Jenkins**, Trades Specialist II, promoted to Trades Specialist III at Sumter Maintenance.

**Troy J. Harvin**, Trades Specialist II, promoted to Trades Specialist III at Sumter Maintenance.

**Jason Heywood**, Trades Specialist II, promoted to Trades Specialist IV at Aiken Maintenance.

**Donna Frady**, Supply Specialist II, promoted to Admin Specialist II at Spartanburg Maintenance.

**Paul Dickert**, Trades Specialist II, promoted to Trades Specialist III at Richland Maintenance.

**Allen Heyward Sr.**, Trades Specialist II, promoted to Trades Specialist III at Lexington Maintenance.

**Daryl Rowe**, Trades Specialist II, promoted to Trades Specialist III at Lexington Maintenance.

**Lester Fry Jr.**, Trades Specialist II, promoted to Trades Specialist III at Lexington Maintenance.

**Byron Gunter**, Trades Specialist II, promoted to Trades Specialist III at Lexington Maintenance.

**Justin Davis**, Trades Specialist II, promoted to Trades Specialist III at Greenville Maintenance.

**Evangelee Holmes**, Trades Specialist III, promoted to Trades

Specialist IV at Allendale Maintenance.

**Crystal Morrow**, Supply Specialist III, promoted to Admin. Asst. at Calhoun Maintenance.

**Ronald K. Richardson**, Trades Specialist II, promoted to Trades Specialist III at Horry I Maintenance.

**David Walker**, Trades Specialist III, promoted to Trades Specialist IV at District 3 Maintenance Ops.

**Elisabeth D. Bleasdale**, Admin. Asst., promoted to Program Coord. I at Environmental.

**Eric O. Deatherage**, Assistant Geo. Tech., promoted to Associate Geo. Tech. at Lexington Construction.

**David D. Walker**, Assistant Geo. Tech., promoted to Associate Geo. Tech. at Richland Construction.

**Robert Pfaff**, Trades Specialist II, promoted to Trades Specialist III at Richland Maintenance.

**Julie L. Collins**, Admin. Specialist II, promoted to Admin. Asst. at Hampton Maintenance.

**Christopher Wilson**, Trades Specialist II, promoted to Trades Specialist III at Spartanburg Maintenance.

**Robert Redding**, Trades Specialist III, promoted to Trades Specialist IV at Greenville Maintenance.

**Richard Ellis**, Trades Specialist III, promoted to Trades Specialist IV at Spartanburg Maintenance.

**Stephen Smith**, Mechanic I, promoted to Mechanic III at Lexington Maintenance.

**William A. Thomas**, Trades Specialist II, promoted to Trades Specialist III at Greenwood Maintenance.

**Justin B. Dodgen**, Trades Specialist II, promoted to Trades Specialist III at Greenwood Maintenance.

**Brian A. Croft**, Trades Specialist II, promoted to Trades Specialist III at Allendale Maintenance.

**John Webb**, Trades Specialist II, promoted to Trades Specialist III at Greenville Maintenance.

**Daniel Floyd**, Trades Specialist II, promoted to Trades Specialist III at Greenville Maintenance.

**James B. Wollgast**, Mechanic I, promoted to Mechanic III at Richland Maintenance.

**William C. Kaigler**, Trades Specialist II, promoted to Trades Specialist III at Richland Maintenance.

**Joshua Durham**, Trades Specialist II, promoted to Trades Specialist III at Oconee Maintenance.

**Michael Thompson**, Trades Specialist III, promoted to Trades Specialist IV at Greenville Maintenance.

**Gary Hamby**, Trades Specialist II, promoted to Trades Specialist III at Oconee Maintenance.

**Kenneth T. Bethea**, Associate Geo. Tech., promoted to Senior Geo. Tech. at Dillion Construction.

**Dale Massey**, Associate Geo. Tech., promoted to Engr./Engr. Assoc. I. at District 3 Office.

**John M. Hudson**, Assistant Geo. Tech., promoted to Associate Geo. Tech. at Spartanburg Con-

struction.

**Jeremy D. Delaney**, Trades Specialist II, promoted to Associate Geo. Tech. at Spartanburg Maintenance.

**Robert W. Bachelder**, Trades Specialist II, promoted to Incident Responder I at District 3 Office.

**Elisa C. Willis**, Engr./Engr. Assoc. I, promoted to Engr./Engr. Assoc. II at Greenville Maintenance.

**Melanie Mobley**, Engr./Engr. Assoc. II, promoted to Engr./Engr. Assoc. III at District 4 Office.

**Raymond R Schmuck III**, Trades Specialist III, promoted to Trades Specialist IV at Anderson Maintenance.

**Bradley D. Edwards**, Trades Specialist II, promoted to Mechanic III at McCormick Maintenance.

**Jonathan E. Makison**, Trades Specialist II, promoted to Trades Specialist III at Anderson Maintenance.

**Amy T. Cardwell**, Admin. Asst., promoted to OSHA Officer II at Dillion Maintenance.

**James A. Godbold**, Mechanic III, promoted to Trades Specialist V at Marion Maintenance.

**Tracy L. Hebert**, Trades Specialist II, promoted to Trades Specialist III at Cherokee Maintenance.

**David D. Gamble**, Engr./Engr. Assoc. I, promoted to Engr./Engr. Assoc. II at York Maintenance.

**Brent C. Nelson**, Trades Specialist II, promoted to Trades Specialist III at Colleton Maintenance.

**Paul Mattis**, Trades Specialist

II, promoted to Trades Specialist III at Beaufort Maintenance.

**Michael J. Coleman**, Trades Specialist II, promoted to Trades Specialist III at Beaufort Maintenance.

**Marvin Miller**, Mechanic I, promoted to Mechanic III at Beaufort Maintenance.

**Henry E. Bailey Jr.**, Trades Specialist III, promoted to Trades Specialist IV at Berkeley Maintenance.

**Clarence Cummings**, Trades Specialist III, promoted to Trades Specialist IV at Beaufort Maintenance.

**Robert W. Brown**, Trades Specialist II, promoted to Mechanic III at Allendale Maintenance.

**Jonathan R. Vaughn**, Trades Specialist II, promoted to Trades Specialist III at Anderson Maintenance.

**Shannon K. Burnett**, Trades Specialist II, promoted to Trades Specialist III at Newberry Maintenance.

**Joshua K. Rowe**, Associate Geo. Tech., promoted to Associate Geo. Tech. at Newberry Maintenance.

**James N. Jones**, Trades Specialist V, promoted to Communications Mgr. at District 2 Traffic Signals.

**Jeremy Delaney**, Trades Specialist II, promoted to Assistant Geo. Tech. at Spartanburg Maintenance.

**Eric Deatherage**, Associate Geo. Tech., promoted to Senior Geo. Tech. at Lexington Construction B.

## SHM

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the alternative of temporarily repairing the old Great Pee Dee River Bridge. Our return on investment was obviously substantial, which allowed us to redirect savings to critical uses that were not possible if we had to repair the old bridge. In summary, SCDOT has been extremely pleased with the use of SHM technology and intends to aggressively deploy more solutions to better manage our inventory of structurally deficient bridges and to provide performance and preservation monitoring of other high value bridge assets. If we can safely defer only one in three planned repair or replacement actions, we believe our return on investment will be robust, while reducing local funding demand, enhancing safety and lowering system risk.

**Conclusion:** SCDOT is continuing to be a leader nationwide in the deployment of structural health monitoring and feels that this technology provides an excellent cost savings tool to both the public and the Department especially in light of limited funding for bridge infrastructure

needs. This commitment has led us to lead a consortium of states including Utah, Maine and Missouri along with other non-DOT partners in pursuing a TIGER III Grant worth \$9.9 million that would be shared among the participants.

We currently have structural health sensors installed on U.S. 17 southbound over the North Santee River near the Charleston/Georgetown county line and the Ravenel Bridge in Charleston. Although some may ask why install sensors on a relatively new structure such as the Ravenel Bridge, health monitoring is not just for critical condition bridges but also for monitoring the performance of "high value asset" bridges as well. As for the Ravenel Bridge, not only can we monitor the normal operational performance but also the response during a wind or seismic event.

The protocols and calculations for bridge design are there for a defined purpose and as some would say, there is a "method to the madness." However, real world experience has clearly indicated that bridges are not always built exactly according to plans and tend to carry more weight due to actual load distribution. Of course there is always the effect of deterioration and changes in load distribution

over time that must be accounted for and also the behavior and stresses due to thermal forces can be significantly higher than previously understood.

So why install sensors when calculations show the need for a potential load restriction? Sensor technology when correctly deployed may indicate that the strains and therefore the stresses are not as high as calculated on the member(s) in question. If the bridge is critical to the local, regional or even statewide economy just think of the benefits to the public by lowering or possibly eliminating the additional user cost incurred by having to detour. The bridge may also be critical for other reasons such as emergency response or evacuation needs. What about the savings in agency costs by safely delaying a replacement, rehabilitation or repair project or by modifying the extent of the project to save funds? Finally, this type data can assist an agency in bridge management decisions by providing an additional tool for more effective prioritizing of projects, especially with limited funding.

*For additional information on this exciting technology please contact Lee Floyd in the Bridge Maintenance Office.*