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James A. Mendoza Epperson* (epperson@uta.edu), Department of Mathematics, Box 19408, The University of Texas at Arlington, Arlington, TX 76019. *Engaging Preservice and Inservice Secondary Mathematics Teachers in Backmapping Essential Understandings in Calculus to School Algebra.*

Preservice and inservice secondary mathematics teachers often do not have adequate experiences in their undergraduate studies or professional development to make explicit connections between foundational conceptual and procedural knowledge needed for success in calculus and the mathematics taught in school algebra. They also encounter few opportunities to explore the problem solving strides that students must make to be successful in calculus. In this talk, we highlight tasks from a specialized undergraduate mathematics course for preservice secondary mathematics teachers and a graduate course for inservice secondary mathematics teachers that focus on uncovering meaningful connections to school mathematics. We also discuss ways to bridge connections and promote mathematical practices that enable preservice and inservice secondary mathematics teachers to reflect on the essential meanings in calculus that can be backmapped to topics in school algebra. (Received September 16, 2014)