Construction on a new high-speed rail (HSR) system in California began in 2015, marking the beginning of the first true HSR system in the US. Although estimates of the size and composition of the workforce necessary to plan, design, construct, operate and maintain the new system have been offered, the California High-Speed Rail Authority (CHSRA) is just beginning to specify and implement the training programs that will be involved in the planning, design, construction, operations, maintenance, and long-term security of the system. For the Authority (as well as the US), creating and preparing the necessary workforce represents a nearly unprecedented challenge and encompasses multiple regions throughout California. The initial construction of the state-wide system has begun in arguably the most economically challenged part of California — in the Central Valley. Unemployment, particularly among trades people, continues to be stubbornly high, even as the economy improves elsewhere. The Authority has already begun to address that challenge by partnering with faculty from the California State University, Bakersfield in the development and provision of trade re-training programs aimed at familiarizing construction workers from all disciplines (plumbers, laborers, electricians, and others) with the requirements of high-speed rail development and construction. This paper will a) outline the projected training needs of the California system; b) identify, describe and evaluate a current training effort, employed by the CSU-Bakersfield initiative; and c) provide data about current training activity outcomes and their implications for the future training, including consideration of how the competency of the future workforce will be maintained.