Construction engineering for major, landmark bridges is a challenging and exciting career that blends the skills of engineering knowledge and construction know-how. Based on over 30 years of experience in the construction engineering and inspection field of bridges, the definition of a successful construction engineer has been formed through observations of the demonstrated skills and responsibilities of a successful construction engineer. There are two distinct contracting relationships for these type of field services in getting bridges built: 1) Working for the bridge owner to ensure that the construction is being achieved in accordance with the design plans and specifications. These services are most commonly achieved in design/bid/build relationships. 2) Working for the bridge contractor to ensure that the construction equipment, operations, casting/erection details, and quality control are focused on achieving the design in the most efficient manner possible. These services are most commonly achieved in design/build relationships.

As a resource for this presentation, FIGG brings major bridge experience in both of these areas, with projects that have received a combined 322 awards for excellence. To illustrate both the construction engineer’s required skills and background as well as the many facets of activities accomplished in the field, there will be several important bridges shared. In working for the bridge owner: The first cable-stayed bridge in the Northeast, the C&D Canal Bridge in Delaware (750 foot main span), and the Smart Road Bridge, in Blacksburg, Virginia (472 foot main span) built in balanced cantilever construction. In working for the bridge contractor: The New I-35W Bridge in Minnesota (504 foot main span), a 10 lane interstate bridge over the great Mississippi River designed and built in 11 months through a harsh winter. This $234 million bridge features high-performance concrete, innovative new products, and environment friendly details. In addition to integrating the design and construction the field quality plan was an important feature in the construction success. The JFK AirTrain in New York with 9 miles of bridge structure is an example for construction engineering operations developed to reduce construction labor and development of erection equipment for versatility and speed of construction.
Finally, it is the construction engineer's communication skills and ability to be flexible in working with all kinds of people that help to get the results that are needed in developing great teams of people focused on common goals. A proactive, schedule driven, results oriented, quality conscience person can find a leadership position in the field of bridge construction engineering with exciting career opportunities to build world-class bridges.