



VirginiaTech

LDDI Bridges

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Maser Consulting Helps Sustain Communications with Wireless Engineering

Due to the wireless industry's continuous growth in demand, carriers are expanding their networks by affixing wireless antennas to a variety of tall structures, including monopoles, buildings, utility towers, steeples, silos, billboards, and water tanks. Architecture/Engineering (A/E) firms, such as Maser Consulting P.A., provide services to these carriers to design the physical installations of their networks.

One of the most challenging aspects of this work is the diversity of engineering services that are required. The A/E project managers need to have working knowledge of the following fields: civil/site, structural, electrical, mechanical, plumbing, geotechnical, environmental, survey and high-definition scanning, planning, construction inspection, and site acquisition/leasing. A single wireless site may require many or all of these disciplines.

Another challenge specific to A/E design is the local site approval process. A/E firms must have expertise in local requirements for town, county, and state regulations for locating new structures within their jurisdictions. There are currently no federal regulations for siting wireless facilities on new properties (raw land site builds). For example, the state of New Jersey has 565

municipalities, each with its own zoning and design requirements for wireless installations.

Site designers face another, more specialized challenge when covering an area that has a large amount of people in a small geographic area and doing so in a short amount of time. Concerts, sporting events, and conventions are some examples of these types of projects. A/E firms design Distributed Antenna Systems (DAS) to adequately cover these events. Maser Consulting was recently tasked with designing a DAS within the Izod Center in East Rutherford, New Jersey for a nationwide wireless carrier in time for it to host America's favorite pro football championship game of the year. Modifications included the addition and/or upgrade of antennas and incorporation of new LTE/4G technology.

The future evolution of this industry is an astounding effort that continues to grow in leaps and bounds in order to meet the demands of the public at large. It is the tireless efforts of the telecommunication professionals continually working in the background that connects this fast-paced industry seamlessly into the hands of the user.

edited by Kelly Shayne Young



The Izod Center in East Rutherford, NJ has its transmitting antennas ready for the biggest professional football championship game of the year.