



PROJECT DESCRIPTION:

With the recent completion of the region's new state-of-the-art Convention Center and Global Center for Health Innovation, there was a need for a lodging tied into the complex. Cuyahoga County took the roll as developer for a new first-class hotel. The hotel will be located on the historic Mall in downtown Cleveland and have rooms with views of Lake Erie and the Cleveland skyline.

ADDITIONAL PROJECT FACTS:

- 32 story, 600 room hotel, and four story podium totaling 600,000 square feet.
- Over 46,000 square feet of meeting space including Ballrooms and meeting rooms
- Indoor pool and fitness center.
- Top floor SkyBar with terrace and public views of Lake Erie.

The Hilton Cleveland Downtown project provided Cleveland with a first-class, 600 room hotel tied into the Convention Center and Global Center for Health Innovation. Barber & Hoffman, Inc. served as structural Engineering of Record.

Responsibilities included all aspects of the Construction Document production and construction administration. During development of the GMP, multiple foundation systems were evaluated in collaboration with the Construction Manager and Geotechnical Engineer of Record to select the most cost efficient solution. The coordination and communication continued throughout the project allowed an early deep foundation package to be released one month prior to final Design Development documents. The full foundation package was issued one week after the final the Design Development documents.

The project included heavily loaded deep foundations interacting with shallow foundations. The design team took careful consideration of differential movement due to the differing foundation types. Specialized wind tunnel testing was performed to reduce concrete core wall requirements while maintaining occupancy comfort in the harsh winds coming off of Lake Erie.

The hotel tower consists of conventionally reinforced concrete two-way slabs at the lower six levels and post-tensioned concrete slabs above the sixth level. The adjacent podium structure utilizes 120' long-span steel trusses to support ballrooms on two levels. The long-span steel trusses were designed for occupancy comfort due to vibrations of rhythmic dancing.

The tight schedule, driven by an ambitious deadline, posed the most significant challenge. In order to facilitate meeting this schedule, permits were issued in stages. For example, the podium steel permit was issued months prior to the concrete permit. Throughout the project, the design team worked with the demands of completing design, shop drawings review, and construction administration simultaneously.

