

**CASE STUDY**

# SOMA Hotel

San Francisco, California

## HISTORY

San Francisco's Mission Bay District has a long and storied past. As early as the mid-1800s, the 500-acre salt marsh and lagoon was used to deposit refuse from building projects and became a dumping ground for debris from the devastating earthquake of 1906.

However, this infill stabilized the marsh and made it a useful piece of land for shipbuilding, butchery, and shellfish fishing and production. Railroad development in the area then brought more shipyards, warehouses, a sugar refinery, and canneries.

The Mission Bay District is now an upscale neighborhood, home to luxury condominiums, biotech research and development, and hospitals.

## PROBLEM

Years of using the area as a landfill has made construction there a challenge. Underground obstructions are a part of every project, and usually need to be excavated and removed to continue the building process. In addition, now that the Mission Bay District has been heavily built-up, footprints are small and the area is congested, which also proves challenging.

## SOLUTION

The SOMA Hotel project is a 9-story, luxury hotel, that sits atop a lot, measuring approximately 100 x 180 feet. Foundation Constructors, Inc. (FCI) was awarded the foundation portion of the project. FCI has worked with Nucor Skyline in the past, and chose them for their expertise in steel beam foundations.

Nucor Skyline supplied 2,500 tons of Grade 50 HP 14x73 up to 80 feet in length and HP 14x117



*Nucor Skyline is always there for me on all my steel projects. They partner with me and care about my needs. For this project, they delivered to my yard, instead of the site, as there wasn't any room for laydown. Nucor Skyline is always my FIRST and usually my last call, when looking for steel products for my job sites.*

– Darren Riddle, Project Manager, Foundation Constructors, Inc.

CASE STUDY

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up to 75 feet in length. FCI was working with difficult conditions, having to install the H-piles through the debris from the 1906 earthquake, as well the bay mud material, to a final varying elevation of bedrock. Before production even began, FCI drove indicator piles to test the conditions, tip elevations, and pile lengths across the site.

The Nucor Skyline H-piles were produced in three sections to reach design depth, with the top 45 feet of the third section of each pile coated with Amerlock 400 to preserve the life of the pile. Nucor Skyline worked closely with FCI to deliver piles to their yard in Oakley, CA, as there was no room for a lay down at the job site.

Using a Manitowoc 4000 with 32-inch fixed leads and a D70 hammer for driving the three-sectioned H-piles, FCI reached design depth of between 215 and 230 feet. The area that is home to the project has strict noise enforcement, so the piles were installed between 8 am and 5 pm, with no work on weekends or extended hours.

The footprint of the site was within one foot of existing structures, making diligence a priority when installing the piles. Several piles along the outer edge of the site were installed with the vibratory hammer within inches of the next building.

The pile driving was completed on time and to full satisfaction of the property owner.



### PROJECT PARTNERS

Owner

SOMA Hotel, LLC – San Francisco, CA

General Contractor

Hathaway Dinwiddie – San Francisco, CA

Driving Contractor

Foundation Constructors, Inc. – Oakley, CA

Engineer

Langan and Associates – Parsippany, NJ

### PRODUCT

H-Piles: HP 14x73 up to 80 feet and HP 14x117 up to 75 feet (2,500 tons)

### PROJECT TIMEFRAME

April 2018 to March 2019

