## Construction Survey Column Stakeout for a High-rise Building

## Planning

## Scenario/Location:

An area in Camden, NJ was taken for government use, and 360 Surveying Co. was tasked to provide the layout for construction crews to build a high-rise building on site.

## Project:

- A construction stakeout was carried out on a lot 1200 ft by 1200 ft for a high-rise structure.
- The vertical columns are located on a 200 ft grid with a $95 \%$ accuracy of $\pm 0.1 \mathrm{ft}$.

Google Earth pins were placed at the four corners of the extent of the project area.


Project Site Boundary In Google Earth

AutoCAD Civil 3D was employed to set the 200ft grid lines within the property boundary shown in Figure 2.

- The red dots are the locations of the building columns.
- The red lines make up the property boundary
- The white lines in figure 2 are string lines in figure 5


Figure 2:
Steel Column Locations in Project Site Using a National Geodetic Survey Map

## Implementation

Tools Used:


[^0]After conducting a boundary survey to locate the property, batter boards were laid out to provide intersecting lines for the construction crews to place steel for columns.


Figure 5:
gatter Board Setup for Foundation Layout
To check the distances to the columns which have been laid out by construction crews, an instrument operator located the column areas and check and see if they meet design criterion.


Figure 6:
Total Station Set up For Building Column Layout

References:
Figure 3:https://pbs.twimg.com/media/CtCUOsjXgAAe9OH.jpg
Figure 4:http://construction.trimble.com/sites/defaultffiles/inline-images/productbody-
Figure 5:hhttps://naturarallivingschool.files.wordpress.com/2012/10/spuaring-building lines-with-batter-boards.jpg
Figure 6: http://www.millteksurveys.ca/wp-content/uploads/2016/11/11.jpg


[^0]:    Total Station with Instrument Operator

