

TESTING CORS SYSTEM FOR CADASTRAL SURVEYING

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CORS surveys with GNSS have been used for a variety of different surveying applications. Surveyors, GIS users, engineers, scientists, and the public at large that collect GNSS data can use CORS data to improve the precision of their positions. CORS enhanced post-processed coordinates approach a few centimeters relative to the Reference System, both horizontally and vertically. A network of Continuously Operating Reference Stations (CORS) that provide Global Navigation Satellite System (GNSS) data consisting of carrier phase and code range measurements in support of three dimensional positioning, meteorology, space weather, and geophysical applications. Its use for cadastral work is becoming commonplace. A case study was conducted to investigate the use of the CORS technique for boundary surveys. For this purpose, measurements were performed in the city of İstanbul, Turkey. Twenty points were selected in both normal and difficult measurement conditions in the project area. The analyses were made in three steps. In the first step, the CORS results obtained on different days were compared with each other; in the second, the total station measurement results were compared with each other; in the third, the CORS measurement results were compared with those of the total station. The results showed differences of up to centimeters between the coordinates derived from the two survey methods in the obstructed areas. We conclude that the CORS technique competes well with the traditional survey methods in terms of accuracy except in obstructed areas.

Keywords CORS ,Boundary ,Cadastral Surveying ,Accuracy