Municipal Institute of Information Technology

Department of Background Information and Mapping – Area of Urban Habitat

Mapping Service

MUNICIPAL TOPOGRAPHIC NETWORK

The Municipal Topographic Network of the city of Barcelona (hereafter, XTM) is a reference-point topographic network covering the entire territory of the municipality. Based on the Utilitarian Network provided by the Cartographic Institute of Catalonia (ICC), it is part of the Integrated Geodetic Positioning System of Catalonia. It serves as a basis for the topographical work carried out within the municipality of Barcelona. It is the property of Barcelona City Council, which is responsible for producing, measuring and maintaining it, for its own use and for use by citizens.

The points are marked on granite kerbstones secured with geopoint-type bolts that are at least 7.50 cm long (with the holes drilled in advance) and epoxy resin, with washers bearing the name of Barcelona City Council. There are currently one thousand or so points distributed around the city.

Each point uses UTM coordinates on the ETRS89 and ED510 A reference systems, with sea level referenced according to the EGM08D595 geoid model.

The X, Y, Z coordinates are computed from GPS observables. The position tolerance in X, Y does not exceed 3 cm.