

## STUDY OF THE ACCURACY DETERMINATION OF THE ELEVATIONS OF THE LINEAR STRUCTURE USING DIFFERENT GEODETIC INSTRUMENTS

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It is noted that as long as SNIP 3.06.03-85. automobile roads, revized edition – the set of rules SP 78.13330.2012, was brought into action, the requirements to the accuracy of reference marks on the linear constructions were significantly increased. In order to ensure the fulfillment of these increased requirements in building automobile roads (as linear constructions) it was proposed to use more high-accuracy geodetic devices instead of traditionally used type – H 10 level units. The article considers the study of accuracy determination of reference marks of the road cover based on the result of measurement with type TRIMBLE M3 total station (rms error of measuring angles is 5"), type H-3 optical level and type TRIMBLE DINI 0.7 digital level. The article gives the calculation of statistical characteristics and parameters of deviations distribution of relative heights of road cover received on results of measurements by an electronic total station and a level H-3 from values of the results received at measurement by a digital level and accepted for initial data. The article states the possibility of using an electronic total station type TRIMBLE M3 in the construction and operation of roads as linear structures, to ensure increased requirements for their high-altitude position in the joint venture.

**Key words:** position of structures, construction, linear structures, acceptable deviations, geodesic devices, accuracy study, determination of reference marks.

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