21 NCAC 56 .1607 GLOBAL POSITIONING SYSTEMS SURVEYS

(a) General. Global Navigation Satellite Systems (GNSS) is the generic name of navigation and positioning systems with global coverage that is comprised of GPS (Global Positioning System, United States, originally Navstar), GLONASS (Global Navigation Satellite System, Russia), Galileo (Europe), BDS (BeiDou Navigation Satellite System, China, also known as COMPASS), and any other satellite-based navigation and positioning systems that provide global coverage.

(b) The Professional Land Surveyor in responsible charge of the GPS survey shall certify all prepared documents. When a map or document consists of more than one sheet, only one sheet must contain the certificate and all others must be certified. The certificate or metadata notes shall contain the following information:

(1) Class of GPS survey as defined in the Standards of Practice (or list the sections);
(2) Type of GPS field procedure, such as Static, Kinematic, Pseudo-Kinematic, Real-time Kinematic, Real-time Kinematic networks, and Online Position User Service;
(3) Positional accuracy;
(4) Dates of survey;
(5) What datum and epoch coordinates or geographic positions are based on;
(6) Designation of fixed-control stations and their positional data;
(7) Geoid model used;
(8) Combined grid factor(s); and
(9) Units.

The certificate shall be substantially in the following form:

"I, _____, certify that this map was drawn under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

(1) Class of survey: _____
(2) Positional accuracy: _____
(3) Type of GPS field procedure: _____
(4) Dates of survey: _____
(5) Datum/Epoch: _____
(6) Published/Fixed-control use: _____
(7) Geoid model: _____
(8) Combined grid factor(s): _____
(9) Units: _____"

(c) GPS surveys to provide control networks shall be performed in such a manner that it meets a 95 percent confidence level of the positional accuracy of each point relative to the published positions of the control points used and shall meet the accuracy standards of a Class AA survey as set out in Rule .1603.

(d) GPS surveys performed to provide local horizontal or vertical Grid control on a parcel of land where the boundary or topography of that parcel will be shown relative to NC Grid horizontal or vertical datum shall be performed using techniques that will provide the standards of accuracy for the class of survey being performed while determining the horizontal or vertical positions of objects as set out in Rule .1603 or Rule .1606 as applicable.

(e) Fixed station(s) used for the project shall appear on the map, plat, or report. The minimum data shown for each fixed station shall be station name, horizontal position (northing and easting) or latitude, longitude, elevation (ellipsoid or orthometric), and datum and epoch.

History Note: *Authority G.S. 89C-10; 89C-20;*
Eff. November 2, 1992;
Amended Eff. August 1, 2011; May 1, 2009; August 1, 2002; August 1, 2000;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. April 27, 2019;
Amended Eff. July 1, 2020.