

# ARTICLE 1000

## MINIMUM SURVEY STANDARDS

### SEC. 1000.1 GENERAL REQUIREMENTS

This article is provided to establish minimum standards for surveying work performed for the development of subdivisions within the jurisdiction of the Planning Commission. This article shall apply to all developments requiring the submittal of a preliminary or final plat to the Planning Commission or Planning Department for review and approval. All boundary surveys performed for the purpose of subdividing properties within the jurisdiction of the city shall conform to the "Arkansas Minimum Standards for Property Boundary Surveys and Plats," except where the standards contained within this chapter exceed those established by the state.

### SEC. 1000.2 HORIZONTAL CONTROL STANDARDS

- A. Horizontal Datum.** The horizontal datum for all survey work performed shall be the Arkansas State Plane Coordinate System – north zone – NAD 83. All horizontal control work shall commence and end at a Bentonville GPS Monument Network monument or Bentonville GPS Monument Network first generation monument.
- B. Accuracy Standard.** Horizontal positions for all Bentonville GPS Monument Network monuments shall be determined to an accuracy standard equal to Urban Type A classification as defined by the Arkansas Minimum Standards for Property Boundary Surveys and Plats. All field techniques and procedures shall be compatible with the equipment utilized to insure that a true urban type A accuracy level is achieved.
- C. Data Control Form.** Position and reference information shall be provided on a standard data control form for a minimum of two (2) Bentonville GPS Monument Network monuments which shall be inter-visible with each other and submitted with the final plat. Forms may be obtained from the City of Bentonville Planning Department. These monuments will be included in the Bentonville GPS Monument Network if, after their review by

the City, they are determined to be suitable for inclusion into the network.

- D. Interior Corners.** All interior corners of the subdivision (lot corners, street center line control points, etc.) shall be established and monumented to meet the minimum accuracy standards established by the Arkansas Minimum Standards for Property Boundary Surveys and Plats.

### SEC. 1000.3 VERTICAL CONTROL STANDARDS

- A. Vertical Datum.** The vertical datum for all survey work performed shall be the National Geodetic Vertical Datum 1988 Adjustment (NGVD88). All vertical control work shall commence and end at Bentonville GPS Monument Network monument or Bentonville GPS Monument Network first generation monument.
- B. Accuracy Standard.** Elevations for all concrete monuments shall be determined to an accuracy standard equal to third order classification as defined by the Federal Geodetic Control Committee. All field techniques and procedures shall be compatible with the equipment utilized to insure that a true third order accuracy level is achieved.

### SEC. 1000.4 MONUMENTATION

- A. Monument Construction.** Bentonville GPS Monument Network monuments may be cast in place or prefabricated and shall be of similar construction described as follows:
  - 1. A minimum six-inch (6") diameter steel reinforced concrete post set flush with ground. The concrete shall be 3,000-psi minimum compressive strength premix concrete.
  - 2. Monument shall be a minimum of thirty-six (36) inches in depth.
  - 3. Steel reinforcement shall consist of a minimum of two (2) thirty-four-inch (34")

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long one-half-inch (1/2") diameter steel bars. Bars shall be driven a minimum of six (6) inches into undisturbed soil.

4. A brass or aluminum survey cap (including a permanent magnet), a minimum of two (2) inches in diameter, shall be cast or grouted into the top of the concrete post. The following information shall be stamped into the survey cap:
  - (a) A stamped "." to mark the precise location of point being monumented.
  - (b) Registration number of the surveyor in charge.
  - (c) Monument number as assigned by the City.

**B. Lot and Boundary Corner Monuments.** All lot corners and boundary corners other than those described in Sec. 1000.4(A) shall be monumented according to the specifications outlined with the "Arkansas Minimum Standards for Property Surveys and Plats" and any amendment made thereto.