

2.1. SURVEYING

All surveying of property lines and construction surveying for the locating of construction improvements shall be conducted by a professional licensed surveyor.

2.1.1. HORIZONTAL CONTROL

- A. Ivins City maintains all of its data in the North American Datum of 1983 (NAD83) Utah South Zone State Plane (U.S. Feet) coordinate system, also known as the Grid System. All construction data should be provided to Ivins in this coordinate system.
- B. Appendix G provides the Ivins City Control Record of Survey showing a network of principal monuments through Ivins City with coordinate data in the NAD83 grid system as well as coordinate data for a local Ivins City Ground System.
- C. It is strongly recommended that surveyors and engineers use this Grid System for base mapping on all projects. Surveyors and engineers may use ground distances propagated from the nearest state plane coordinate for the development of construction drawings, if doing so would not create an error greater than 0.1 feet. Prior to developing the construction drawings, the licensed surveyor should submit a request in writing identifying the maximum horizontal error.
- D. Property plats and legal descriptions should use ground distances in accordance with standard practice, however, grid coordinates should be provided for all platted monuments and all principal corners of the subdivision boundary. There should be at least four principal corners in a subdivision plat and possibly more for uniquely shaped subdivisions with the intent of providing state plane data to define the major extents of the subdivision.

2.1.2. VERTICAL CONTROL

- A. All vertical data should be in accordance with the North American Vertical Datum of 1988 (NAVD 88). Surveyors shall not develop a local vertical datum.
- B. Ivins City has 2 foot interval contours accurate to a scale of 1" = 100' developed from aerial photography taken on January 22, 2006 in an electronic format available for use on development for a nominal handling fee.

2.1.3. SURVEY MONUMENTS

- A. Monument classifications shall be as follows:

Class I –When within pavements use ring and lid per APWA Plan No. 274. Outside of paved roadways may use monument cap and base per APWA Std. Plan No. 272.

Class II – Rebar and aluminum cap stamped with PLS number driven flush to pavement surface.

Class III – Regular 8 inch spike or railroad spike with washer stamped with PLS number driven flush to pavement surface.

- B. Monuments shall be set at:
1. All angle points in survey boundary (Class II).
 2. All angle points of tangency and points of curvature on and along survey boundary (Class II).
 3. All street centerline intersections Class I).
 4. At a P.I. outside of right-of-way (Class II).
 5. If the P.I. falls outside the limits of pavement then P.C.'s and P.T.'s shall be monumented with Class I.
 6. If the P.I. falls inside the pavement area then a Class I monument is required and no monumentation required for P.C.'s and P.T.'s.
 7. All intersections of street centerlines at survey boundary (Class II).
 8. Six hundred foot intervals, unless otherwise approved. If line of sight is not obtainable within a six hundred foot interval, then monuments will be required to be closer together unless otherwise approved by the City.
- C. All the above established points which fall within the limits of public or private rights-of-way shall be referenced with four permanently established reference points within a radius of twenty (20) feet to one hundred (100) feet all of which shall be outside the pavement area. The angle from tie to tie shall be as near ninety degrees as possible, radiating from the established intersection points.
- D. A copy of the survey notes documenting the setting of the reference ties shall be kept by the responsible surveyor and a copy shall be delivered to the office of the City Engineer and the County Surveyor's depository.
- E. When a section corner, quarter corner or sixteenth corner falls within a fully improved roadway and must be set, or reset, the responsible surveyor shall contact the County and City Engineer for directions and/or requirements.
- F. All monuments shall have brass marker or aluminum cap in accordance with the standard drawings. The surveyor's registration or license number shall be stamped on the cap.
- G. Monuments must be set prior to the final acceptance of the improvements.
- H. Where hard rock or other physical obstructions are encountered, monument length sufficient to resist removal may vary within reasonable limits.
- I. All monuments shall be set in such a manner that the accuracy of their relative positions is not less than second-order Class II, in accordance with the specifications established by the U.S. Federal Geodetic Control Committee. When monuments are being reset, the initial

order used in the setting shall be used, but in no event shall it be less than second-order Class II.

2.1.4. EASEMENTS

All plats shall show the existing and proposed easements. When easements are to be provided without a plat map, an easement agreement, legal description and exhibit map shall be provided to the City.

2.1.5. PLATS

- A. **Subdivisions:** All subdivision plats shall be in accordance with the City's subdivision ordinance.
- B. **Right-Of-Way Dedication:** All roadways to be dedicated shall have a plat prepared in accordance with the standards for subdivision plats as defined in the City's subdivision ordinance.
- C. **Road Abandonment:** Road abandonment plats shall meet the requirements of Ivins City Form 7045 Petition to vacate a public street or right-of-way.

2.1.6. CONSTRUCTION SURVEYING

All public improvements shall be installed based on construction survey stakes provided by a Utah Professional Licensed Surveyor.

- A. GPS surveying equipment shall not be used to establish the grades for gutters, sewers, storm drains, or waterlines with slopes less than 2%.
- B. Survey stakes for the construction of streets shall be installed at an interval no greater than 100 feet.
- C. Fire hydrants shall not be installed without verifying the finished grade at the exact location of the hydrant to prevent improperly depressed or elevated hydrants.
- D. All curb returns shall be installed based on a radius point provided by the surveyor.

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