61G17-6.003 Minimum Technical Standards for Surveys (Field and Office).

(1) In order for a map, sketch, or plat of a survey to be acceptable in terms of this rule, it must be full and complete and shall be certified by the surveyor in responsible charge as meeting these minimum technical standards set forth by the Florida Board of Professional Land Surveyors in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.07, Florida Statutes.

(2) All measurements made in the field must be in accordance with the United States standard, using either feet or metric, and made with a transit and steel tape, or other devices with an equivalent or higher degree of accuracy. Records of these measurements shall be maintained. With the exception of geodetic surveys, all measurements shall refer to either the horizontal or vertical plane. All computed data or plotted improvements must be supported by accurate field measurements unless clearly stated otherwise.

(3) All survey drawings must bear the name, street and mailing address of the firm issuing the drawing, along with the name and registration number of the surveyor in responsible charge. A surveyor practicing independent of any firm must have his or her name, street and mailing address on each drawing. All survey drawings must reflect the date of the field survey and also for any revisions thereto. Either the survey drawing or the copies of the survey drawing must have the signature of the surveyor in responsible charge, and all copies issued must have a raised embossed seal.

(4) A reference to all bearings shown must be clearly stated, i.e., whether to "True North"; "Grid North as established by the NOS"; "Assumed North based on a bearing for a well defined line, such as the center line of a road or right of way, etc."; "a Deed Call for a particular line"; or "the bearing of a particular line shown upon a plat." References to Magnetic North should be avoided except in the cases where a comparison is necessitated by a Deed Call. In all cases, the bearings used shall be referenced to some well-established line.

(5) A designated "north arrow" and scale and/or bar or graphic scale of the map shall be prominently shown upon the drawing.

(6) The survey drawing must be in complete accord with the real property description shown thereon or attached thereto; any discrepancies between the survey drawing and the description must be shown upon the drawing.

(a) Where evidence of inconsistencies is found, such as: overlapping descriptions, hiatuses; excess or deficiency; conflicting boundary lines or monuments; or where any doubt as to the location on the ground of survey lines or property rights exists, the nature of the inconsistencies should be shown upon the drawing.

(b) When a new parcel is being created, reference will be made on the survey drawing and in the description to the closest government corner, land line, recorded plat, or other fixed and recorded corner.

(7) All changes in direction, including curves, shall be shown on the survey drawing by angles, bearings or azimuths, and will be in the same form as the description, or other recorded document referenced on the drawing. Curved lines with true curves shall show the radii, arc distances and central angles, or radii, chord distances and chord bearings. Where curved lines are not mathematically definable, that fact must be noted upon the drawing with sufficient measurements shown upon the drawing to position the line. When intersecting lines are non-radial to a curve, sufficient angular data shall be shown to relate the line to the curve.

(8) Surveys of all or part of a lot(s) which is part of a recorded subdivision shall show the following upon the drawing:

(a) The lot(s) and block numbers or other designations, including those of adjoining lots.

(b) A comparison between recorded directions and distances with field measured directions and distances.

(c) A comparison between the recorded directions and distances with field measured directions and distances to the nearest street centerline, right of way intersection or other identifiable reference points where the block lines are straight.

(d) A comparison between the recorded directions and distances or computed directions and distances based upon the recorded data with field measured directions and distances to an identifiable reference point where the block lines are curved.

(e) Where a difference is found between the comparison of recorded directions and distances with field measured directions and distances to an identifiable reference point, then a similar comparison must be shown between the recorded directions and distances with field measured directions and distances to an identifiable reference point in the opposite direction.

(f) Any excluded portion of a lot(s) and the dimensions thereof.

(9) Surveys of parcels described by metes and bounds shall show the following upon the drawing:

(a) The relationship of the parcel(s) to at least one established identifiable real property corner;

(b) All information called for in the property description, such as point of commencement, course bearings and distances, and point of beginning;

(c) A comparison between recorded directions and distances and field measured directions and distances when they vary. This comparison shall include not only the boundary but all courses called for in the property description beginning with the point of commencement;

(d) The most current abutting recorded instrument or recorded plat either known by the surveyor or furnished to the surveyor;

(e) The dimensioned remainder of a metes and bounds parent tract when surveying a fraction thereof.

(10) All recorded public and private rights of way shown on applicable recorded plats adjoining or across the land being surveyed shall be located and shown upon the drawing. Easements shown on applicable record plats or open and notorious evidence of easements or rights of way on or across the land being surveyed shall be located and shown upon the drawing. If streets or street rights of way abutting the land surveyed are not physically open, a note to this effect shall be shown upon the drawing. If location of easements or rights of way of record, other than those on record plats, is required, this information must be furnished to the surveyor.

(11) Open and notorious evidence of boundary lines, such as fences, walls, buildings, monuments or otherwise, shall be shown upon the drawing, together with dimensions sufficient to show their relationship to the boundary line(s).

(12) All visible encroachments onto or from adjoining property or abutting streets must be indicated, with the extent of such encroachment shown or noted upon the drawing. In all cases where foundations may encroach and are beneath the surface, failure to determine their location shall be noted upon the drawing.

(13) Location of fixed improvements pertinent to the survey shall be shown upon the drawing in reference to the boundaries, either directly or by offset lines. If fixed improvements are not located or do not exist, a note to this effect shall be shown upon the drawing. Pertinent improvements are improvements made for the enjoyment of the property being surveyed and shall include docks, boathouses, and similar improvements.

(14) Cemeteries and burial grounds located within the premises shall be located and shown upon the drawing if open and notorious, or if knowledge of their existence and location is furnished to the land surveyor.

(15) The surveyor shall make a determination of the correct position of the boundary of the real property and shall set monuments, as defined herein, unless monuments already exist at such corners. All monuments, found or placed, must be described on the survey drawing. When the property corner cannot be set, a witness monument shall be placed with data given to show its location upon the ground in relation to the boundary lines or corner. The corner descriptions shall state the size, material, and cap identification of the monument as well as whether the monument was found or set. The distance along boundaries between monuments shall not exceed fourteen hundred feet. When a parcel has a natural and/or an artificial feature such as a roadway, river, lake, beach, marsh, stream or other irregular boundary as one or more of its boundaries, then a monumented meander or survey line shall be established either directly along

or near the feature. Dimensions shall be shown between the meander or survey line and the boundary line sufficient to show the relationship between the two.

(16) Every boundary monument or witness monument set shall:

(a) Be composed of a durable material;

(b) Have a minimal length of 18 inches;

(c) Have a minimum cross-section area of material of 0.2 square inches;

(d) Be identified with durable marker or cap bearing either the Florida registration number of the land surveyor in responsible charge, the certificate of authorization number of the survey firm; or name of the survey firm; the number will be preceded by LS or LB as applicable;

(e) Be detectable with conventional instruments for finding ferrous or magnetic objects.

When a case arises due to physical obstructions so that neither a boundary monument nor a witness monument can practicably be set in accordance with (a)—(e), then alternative monumentation which is durable and identifiable shall be established for this particular situation.

(17) The bearings and distances shown on the map, sketch or plat of survey shall be substantiated by field measurements. The accuracy of the field measurements shall be premised upon the type of survey and the current or expected use of the land. The accuracy of the measurements shall be statistically verified by the results of a closed traverse. The relative error of closure permissible may be no greater than the following:

Commercial/ High Risk	Linear:	1 foot in 10,000 feet;
	Angular:	15 seconds times the square root of the number of angles;
Suburban:	Linear:	1 foot in 7,500 feet;
	Angular:	20 seconds times the square root of the number of angles;
Rural:	Linear:	1 foot in 5,000 feet;
	Angular:	30 seconds times the square root of the number of angles.

The requirement for the linear closure shall be met after angular balance. Side ties from a traverse point on the closed traverse to locate or set monuments that are not points on the closed traverse shall be substantiated by measurements from a second traverse point or by a redundancy of measurements from a traverse control point.

(18) ABBREVIATIONS:

(a) Abbreviations generally used by the public or in proper names that do not relate to matters of survey are excluded from the legend requirement.

(b) Acceptable abbreviations on the face of maps, plats, or survey drawings are:

N = North
S = South
E = East
W = West

or any combination such as NE, SW, etc.

° = Degrees
′ = Minutes when used in a bearing
″ = Seconds when used in a bearing
′ = Feet when used in a distance
″ = Inches when used in a distance
AC = Acres
± = More or less (or Plus or Minus)

(c) Any other abbreviations relating to survey matters must be clearly shown within a legend or notes appearing on the face of the drawing.

Specific Authority 472.027 FS. Law Implemented 472.027 FS. History—New 9-1-81, Amended 7-29-85, Formerly 21HH-6.03, Amended 12-18-88, 11-27-89, 5-26-91, Formerly 21HH-6.003.