

Fractional and Anomalous Sections

Missouri Society of Professional Surveyors

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Fractional and Anomalous Sections

Missouri Revised Statutes

60.301. Definitions. — Whenever the following words and terms are used in this chapter they shall have the following meaning unless the context clearly indicates that a different meaning is intended:

Fractional is not defined by the Missouri Statutes

Anomalous is not defined by the Missouri Statutes

Fractional and Anomalous Sections

Definition of *anomaly*

- 1:** something different, abnormal, peculiar, or not easily classified : something anomalous
- 2:** deviation from the common rule : Irregularity

Fractional and Anomalous Sections

Missouri Revised Statutes

Lost corners reestablishment — rules. — The following rules for the reestablishment of lost corners shall be applied only when it is determined that the corner is lost: (The rules utilize proportional measurement which harmonizes surveying practice with legal and equitable considerations. This plan of relocating a lost corner is always employed unless it can be shown that the corner so located is in substantial disagreement with the general scheme of the original government survey as monumented. In such cases the surveyor shall use procedures that produce results consistent with the original survey of that township.)

Fractional and Anomalous Sections

Missouri Revised Statutes

60.315. Lost corners reestablishment — rules. —

(10) Where a line has been terminated with a measurement in one direction only, a lost corner shall be reestablished by record bearing and distance, counting from the nearest regular corner, the latter having been duly identified or reestablished.

Fractional and Anomalous Sections

Missouri Revised Statutes

60.331. Quarter-sections, how established. — In subdividing a section into quarter-sections, the land surveyor shall run straight lines from the established quarter-section corners to the opposite quarter-section corners. The point of intersection of the lines thus run will be the corner common to the several quarter-sections, or the legal center of the section.

Fractional and Anomalous Sections

Missouri Revised Statutes

60.341. Fractional sections, how established. — In subdividing a fractional section or quarter-section, the land surveyor will run his lines from properly established quarter-section or quarter-quarter-section corners, as the case may be, with courses governed by the conditions represented upon the official government plat, to the lake, watercourse, grant boundary, state line or other irregular boundary which renders such land fractional.

Fractional and Anomalous Sections

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Subdivision of Fractional Sections by Survey

3-118. By law a fractional section is (1) a section containing outlying areas protracted as surveyed, or (2) an invaded section in which at least one quarter-section corner has not been or cannot be fixed. The method of subdivision by survey is outlined in 43 U.S.C. 752(2)(cl. 3) and 753(cls. 2 and 4). By rule the procedure for subdivision of the fractional section is to be as nearly as possible in conformity with the official survey.

Fractional and Anomalous Sections

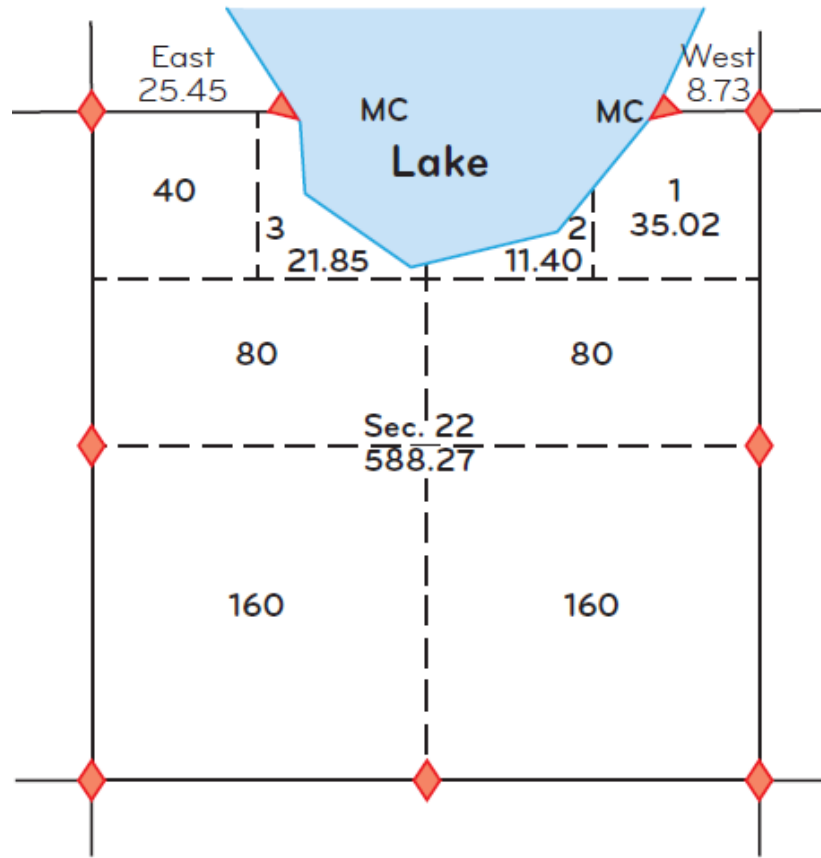
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Subdivision of Fractional Sections by Survey

3-119. The law presumes that a corner has not been fixed when: (1) the section line on each side of the corner position has not been actually run (figure 3-44) or, (2) the section line has been actually run but at least one corner on either side, on the section line at issue, has not been monumented (figure 3-45). The rule presumes that a section line has been actually run when a bearing and distance of the line is returned in the official survey record.

Fractional and Anomalous Sections

Figure 3-44



Fractional and Anomalous Sections

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Subdivision of Fractional Sections by Survey

3-122. The basic principles outlined generally give satisfactory results except in special cases. The rules cannot be elaborated to rectify conditions that are at gross variance with the representations of the official survey record.

Fractional and Anomalous Sections

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Subdivision of Fractional Sections by Survey

3-122.

Examples of special cases that may warrant modification of the basic subdivision-of-section methods are situations where (1) the prescribed method does not result in lines and corners that represent the conditions on the official plat; or (2) a good faith rule occupation (section 6-35) has been established in reliance on a subdivision- of-section method reasonably consistent with the controlling survey plat(s). In such cases a corresponding modified plan of subdivision of section is proper.

Fractional and Anomalous Sections

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Good Faith Location Rule

6-35. It may be held generally that the claimant, entryman, or owner of lands has located his or her lands by the good faith location rule if such care was used in determining the boundaries as might be expected by the exercise of ordinary intelligence under existing conditions. A good faith location is a satisfactory location of a claim or of a local point.

Fractional and Anomalous Sections

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Good Faith Location Rule

6-35.

It is one in which it is evident that the claimant's interpretation of the record of the original survey as related to the nearest corners existing at the time the lands were located is indicative of such a degree of care and diligence upon their part, or that of their surveyor, in the ascertainment of their boundaries as might be expected for that time and place. This is referred to as the good faith location rule.

Fractional and Anomalous Sections

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Subdivision of Fractional Quarter-Sections by Survey

3-123. By law, for subdivision purposes, a fractional quarter-section is within (1) a section containing outlying areas protracted as surveyed, or (2) an invaded section in which at least one quarter-quarter-section corner of the quarter-section has not been or cannot be fixed.

Fractional and Anomalous Sections

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Subdivision of Fractional Quarter-Sections by Survey

3-124. The subdivision-of-section lines of fractional quarter-sections shall be ascertained by running from properly established quarter-quarter or sixteenth-section corners with courses governed by the conditions represented upon the official plat. This can generally be accomplished by running due north and south, or east and west lines, as the case may be, to the watercourse, reservation line, or other external boundary of such fractional quarter-section.

Fractional and Anomalous Sections

Manual of Surveying Instructions 2009

Subdivision of Fractional Quarter-Sections by Survey

3-124.

In running the center lines through fractional quarter-sections it is necessary to adopt mean courses, as ascertained from opposite corresponding section and subdivision-of-section lines, or run parallel to a boundary of the section or quarter-section, as conditions require.

Fractional and Anomalous Sections

Figure 3-46

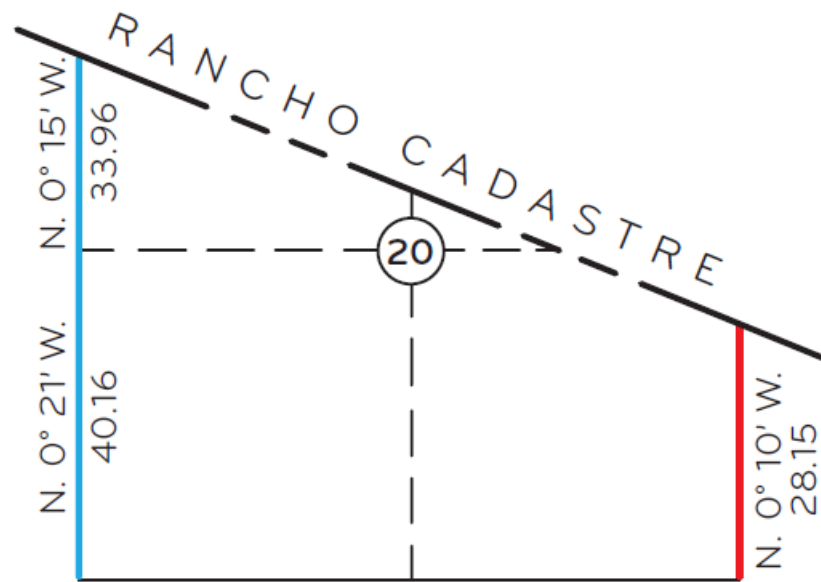
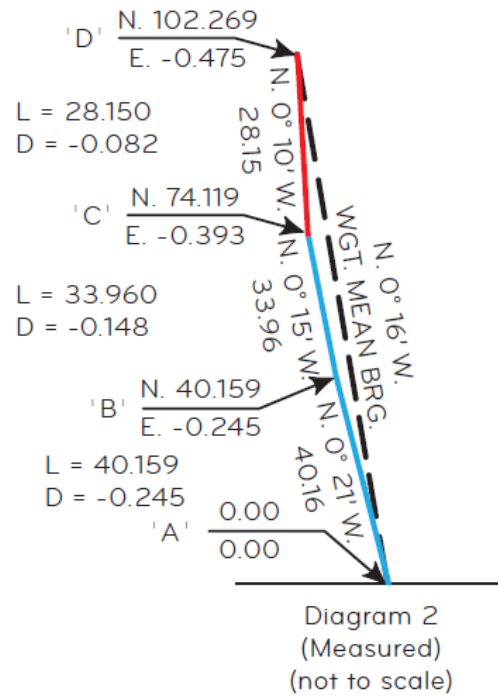


Diagram 1
(Measured)
(not to scale)

Fractional and Anomalous Sections

Figure 3-46



Fractional and Anomalous Sections

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Subdivision of Fractional Quarter-Sections by Survey

Figure 3-46, Traverse Method:

- 1) Traverse from A to B to C to D . (See diagram 2.)
- 2) Inverse from A to D .
- 3) The bearing A – D is N. 0° 16' W. = the weighted mean bearing.

Fractional and Anomalous Sections

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Subdivision of Fractional Quarter-Sections by Survey

Figure 3-46, Proportion Method:

- 1) The $\frac{1}{4}$ sec. cor. of secs. 19 and 20 was recovered. First compute the inverse for the sec. line: N. $0^{\circ}18' 12''$ W. 74.12
- 2) Compute the difference in bearings between the east and the west section lines: N. $0^{\circ} 18' 12''$ W. – N. $0^{\circ} 10' 0''$ W. = $8' 12''$
= 492"
- 3) Compute the sum of the lengths of the east and the west section lines: $28.15 + 74.12 = 102.27$

Fractional and Anomalous Sections

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Subdivision of Fractional Quarter-Sections by Survey

Figure 3-46 (continued)

Mathematically, the weighted mean bearing will be closer to the bearing of the longer line than of the shorter line, therefore, the computed correction using the shorter line is applied to the bearing of the longer line.

Fractional and Anomalous Sections

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Subdivision of Fractional Quarter-Sections by Survey

Figure 3-46 (continued)

- 4) Compute the correction factor $| K |$. Use the shorter (east) line: $28.15 / 102.27 = 0.2753 = K$
- 5) Compute the correction to the bearing of the west line: $492'' \times 0.2753 = 135.45'' = 2' 15''$
- 6) Compute the weighted mean bearing by, in this case, subtracting the correction from the bearing of the longer line: $N. 0^\circ 18' 12'' W. - 0^\circ 02' 15'' = N. 0^\circ 16' W. =$ the weighted mean bearing.

Fractional and Anomalous Sections

Figure 3-46

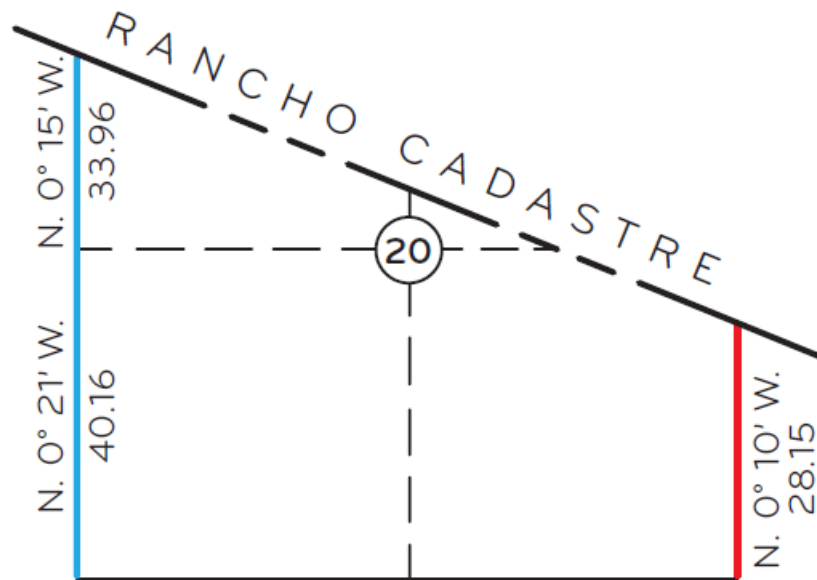


Diagram 1
(Measured)
(not to scale)

Fractional and Anomalous Sections

