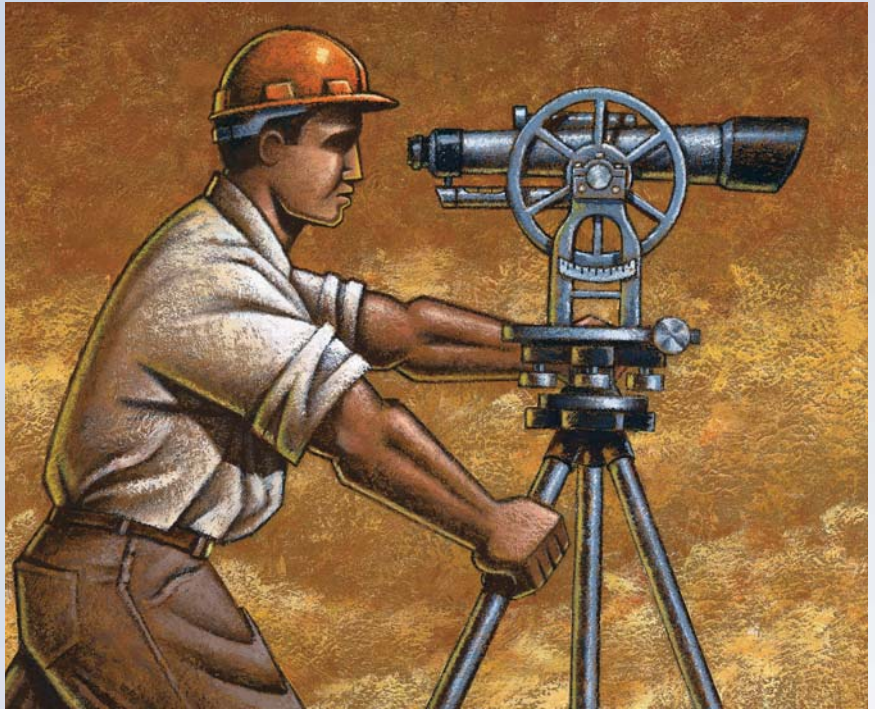


What to Look for When Examining a Survey Map

By R. Lee Hixson



Most people are aware of the existence of malpractice in the legal and medical professions, and they have at least some clue about what steps can be taken to avoid becoming a victim of lawyers or doctors who do not follow accepted practice. But what about surveyors? Are lawyers working with survey maps even remotely aware of what constitutes surveying malpractice? When unfolding a map for the first time, do most lawyers have any idea what to look for to determine whether the boundary resolution shown on the map is a good one? Is it possible for a nonsurveyor to spot a weak boundary on a map?

The answer to the last question is “yes” and the purpose of this article is, first of all, to alert lawyers to the possibility that some maps are deficient and, second, to give them some guidance in differentiating between a map with a good boundary and one with a weak or poorly resolved boundary.

Boundaries are the single most important facet of any map produced by a surveyor. Most maps, if not all, show a boundary. Conditions vary from state to state, but, of the large variety of maps that surveyors prepare, virtually all contain the boundary lines of the parcel in question and the boundary lines relate to all the other data on the map. The boundary defines the relationship of the subject parcel to the adjoining parcels. The boundary purports to represent the limits of the vesting deed of the subject parcel. Even with topographic surveys (which contain a wealth of information about utilities, terrain features, structures, and easements), none of the data shown on the map makes any

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sense without that crucial spatial relationship to a boundary.

And yet most state laws do not even begin to spell out the ingredients of a properly resolved boundary. California law, for example, sums up the entire matter in 19 words. In discussing the technical requirements of a survey map, the statute states that the survey shall show “[t]he relationship to those portions of adjacent tracts, streets, or senior conveyances which have common lines with the survey.” Cal. Bus. & Prof. Code § 8764.

It is, of course, impossible to condense the entire accumulated wisdom of boundary law and precedent into a single sentence. All the good intentions of those who wrote the law aside, it is simple human nature that, if the law does not lay out the principles to be followed, then a great deal can be saved by choosing the path of least resistance. Many surveyors—even county and city surveyors—have reported that the only requirement for “treating adjoining deeds” is that the book and page references be noted on the map. But to conduct a thorough study of the deeds for the subject parcel and each adjoining parcel to make sure that there are no conflicts between any of them takes many hours, sometimes days, and clearly would result in a much larger bill for the client.

Definition of a Boundary Resolution

The resolution of a boundary refers to the entire process of analyzing all available, pertinent information about the location of the boundary of a given subject parcel *in its relationship to the boundaries of the parcels (and/or rights-of-way) that surround it*, with an eye to determining whether inconsistencies or incompatibilities exist between any of those boundaries.

A parcel is rarely, if ever, an island unto itself. Its existence and location are integrally related to the parcels that surround it. “Resolving” a boundary necessitates a consideration of the parcels and rights of way that border it on every side. A good

map will present the evidence and analysis relied on to conclude where these boundaries lie.

What to Look For

Some surveyors might be lazy, or cheap, or ignorant, or perhaps even fraudulent. Given surveyors' varying competence, and given that some state laws do little to enforce a standard of competence, what can individuals in the allied professions do when examining a map to get a better idea of how good the boundary is? What follows are suggested guidelines. Remember that surveying is, indeed, a highly complicated art and science and that this short article cannot do justice to its many subtleties. Nevertheless, some general principles should be kept in mind when examining a map.

Most nonsurveyors do not know what questions to ask when they look at a map. If the surveyor who prepared the map is available, ask him or her to describe the evidence used to place the boundary of the subject parcel where it is located on the map.

Every angle point—or every beginning and ending point of a particular line—should be justified on the map. The map reader should realize that the surveyor should have a reason for the location of every angle point and every end point of a line or curve. Some surveyors are more conscientious than others as to how clearly they display this data, but the data should be there in some form. If the map cannot be adequately interpreted by itself, then ask the surveyor to explain the rationale behind his or her resolution.

Usually, the best justification for locating a line will be that the surveyor found a good monument in the field that marks one or both ends of the line (or curve) in question. If a map symbol indicates a "found monument" at each end of a line, then that means the surveyor has decided those monuments are good and will control the position and length of the line. These monuments can serve this purpose because they have a good pedigree (for example, they have been accepted by many surveyors on prior recorded maps) or because the surveyor found a deed that

specifically mentions the existence of the monuments. Other justifications can be used for accepting a monument, but the point is that it was found in the field and, in the surveyor's professional judgment, it should be used to control the position of the line.

The more found monuments there are at the angle points of the parcel boundary, the more solid is the resolution of the map. But that is not always the case. What controls a boundary if there are no found monuments anywhere around the boundary?

A line can be located for other very good reasons. It might be because a remote monument was found down the street, and the surveyor held a record distance from that monument to locate a point on the subject parcel boundary. This justification is an acceptable alternative for setting the position of a line and includes two elements: (1) a monument was found and (2) a record distance was used to measure from that monument to the point that the surveyor needed to locate. These are good reasons for making a decision about locating a particular line or angle point.

But what about that "record distance" mentioned above? How would the map reader know that the surveyor had used a record distance to locate a point on the subject parcel boundary? A typical way would be to show the record distance inside parentheses, with a number or letter behind it, like this: "(135.34')R3." The "R3" refers to a record reference. A table of "Record References" will appear somewhere on the map, and the surveyor is calling attention to the third reference in the list. The table entry for R3 might be the book and page of a recorded deed. It might be a previously recorded map of some type. Thus, what the surveyor is saying is: "I found the distance of 135.34 feet mentioned in a deed and determined that this distance should be held in order to arrive at the position of



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one of the angle points in the boundary of the subject parcel."

Such language is drafting shorthand used by surveyors. Drafting styles vary around the country, and there are many other ways of indicating that the surveyor has "used" (relied on) a record distance to control a point or line.

Another possibility is to add an explanatory note. Suppose that some monuments were found and used to establish the right of way line along a street. Then, coming off of this line, the map shows one of the side lines of the subject parcel. Questions arise: What angle is formed between this side line and the right of way line? Why does the side line have the bearing (the angle) that it does? Sometimes surveyors will draw an arc between the two lines, then add a note stating: "Record angle held, per R2." This indicates that, because a monument was not found at the back end of the side line, the surveyor determined that the next best justification for establishing the bearing of the side line was to "hold" a record angle between the two lines according to some other recorded document or map.

Sometimes a note will be so long and complex as to deserve a special statement off to the side of the map. A surveyor may have gone through a lengthy analysis of a line or point and needed to summarize his or her thinking by describing in some detail how that part of the boundary was

resolved. Such a summary is always a good sign, because it shows that the surveyor takes the resolution of the boundary seriously and wants to make sure that anyone examining the map can understand that resolution.

The bottom line is that, no matter which method is used, the map reader should be able to decipher the rationale behind each and every decision made in the location of a line, curve, or point. The more explanatory data on the map, the better the map, and the more defensible its resolution.

If a map reader is examining a map and cannot tell why a line is located where it is, there is nothing wrong in calling the surveyor to ask for an explanation. It may be uncommon, but it should be no less acceptable than if a patient were to ask his or her doctor to explain exactly why a certain prescription was given or why a test was ordered. If the lawyer is using a map that has important implications for a project or a case, he or she can, and should, ask to meet with the surveyor to secure a complete breakdown of the reasoning that went into the boundary shown on the map.

Look at it this way: a boundary has to be built on a strong foundation, and ultimately that foundation is based on the monuments that were located in the field. The perfect situation would be for a monument to be found at each angle point going around the boundary. But if only some (or even none) were found along the boundary, then remote monuments come into play and the boundary can be built from them. As the web of parcel lines is constructed from the remote monuments, the surveyor calculates the way back to the subject parcel and eventually is able to position the boundary from them. But each step along the way needs to be justified, and if that justification is not obvious on the map, asking the surveyor to explain things makes sense.

Alternatively, seek a second opinion. As with a doctor's diagnosis, a map depicts the professional opinion of a particular surveyor on where a parcel lies relative to the parcels surrounding it and relative to the monuments located in the field. Many times this author has

been brought a map and asked to analyze it and explain what the surveyor did. It is not that hard for an experienced surveyor to study the information on a map and then to describe what it tells about how the other surveyor resolved the boundaries it shows. Summarizing the strengths and weaknesses of the map is also possible.

The best maps are those that faithfully present a summary of the evidence found and all the key decisions that link the subject parcel boundary to that evidence. Because the record of those decisions is often lacking on maps with which they work, lawyers are forced to question the quality of the map's resolution. Is it because the surveyor, for whatever reason, elected to simplify and therefore did not add enough notes to explain the resolution to the reader? Or is it because the surveyor is doing shoddy work and hiding behind the brevity of the law, thus producing a map with little or no justification for the decisions it represents?

Conclusion

Ideally, a map should show the basis for the surveyor's determination of the boundaries. The basis, however, is not always evident from looking at the map. Because the law does not require the surveyor to show a complete resolution on his or her map, how is the map reader to know that the map is accurate? The answer is that one cannot know the answer. And this realization is what prompts the recommendation that the map reader go beyond merely trusting that a surveyor does competent

work. If a map appears to be lacking in documentation or analysis, the lawyer should contact the surveyor who prepared it and ask him or her to fill in the blanks. And depending on the circumstances, consider obtaining a second opinion from another surveyor. ■



LOST ACRES

By Robert Graves

*These acres, always again lost
By every new ordnance-survey
And searched for at exhausting cost
Of time and thought, are still away.*

*They have their paper-substitute –
Intercalation of an inch
At the so-many-thousandth foot –
And no one parish feels the pinch.*

*But lost they are, despite all care,
And perhaps likely to be bound
Together in a piece somewhere,
A plot of undiscovered ground.*

*Invisible, they have the spite
To swerve the tautest measuring-chain
And the exact theodolite
Perched every side of them in vain.*

*Yet, be assured, we have no need
To plot these acres of the mind
With prehistoric fern and reed
And monsters such as heroes find.*

*Maybe they have their flowers, their birds,
Their trees behind the phantom fence,
But of a substance without words:
To walk there would be loss of sense.*

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