

Setting Your Limits

by Lloyd J. Cook, PLS

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Let's examine the survey process. When someone uses the word "survey," there's a good chance many people think they are referring to an opinion survey. A "property survey," however, is not as familiar a term. This article examines what a property survey is, and the process by which property is surveyed.

Outside the survey or real estate professions, most people never have the need for a survey. Very few surveys are performed simply because "someone wants one." Surveys are performed because the property owner must have one to gain certain information regarding the property. Here are a few scenarios wherein an owner must have a survey: a boundary dispute with another property owner; a desire to change the extents of the property or its usage; or a desire to change the improvements on the property. When the property owner becomes aware

that a survey is needed and makes contact with a licensed land surveyor, he is often surprised to learn that the process is more complicated and costly than expected.

The surveyor's first task in the process is to ask enough of the right questions to help the client to explain how the property is used and what end result information is necessary to complete the survey. The right questions include location of the property, its condition, (hillside, flat, woody, landscaped), what improvements exist on the property, what events led to needing the survey, (buying, building, fencing, financing, boundary dispute and so on), any time schedule affecting the client and/or the property, and if the property has been previously surveyed.

With sufficient basic information the surveyor decides whether the project and its time schedule are feasible and reasonable, and if the client's needs can be met. If so, the surveyor continues the process by gathering further information, i.e., address, legal description and other items necessary to perform preliminary research. This research will enable the surveyor to estimate the fees and write an accurate proposal/contract for the client. As in any business, the client and surveyor must then reach an agreement on the scope of work, a

time schedule and the fee.

The most important step in the survey process is the research of existing records for the client's property and how it directly relates to the cost of the survey. The following should be obtained and examined:

1. A legal description—from a Grant Deed, a preliminary title report or a title policy. When the description is written in "metes and bounds," it may be necessary to also obtain legal descriptions of adjacent properties.
2. Copies of maps filed with the county recorder—tract or parcel map, record of survey maps, etc.
3. Copies of city and/or county surveyor's field notes and or centerline tie notes.
4. Copies of corner records on the property or adjoining properties filed with the county surveyor.
5. Prints of surveys pertaining to the property that were previously conducted by others.
6. Depending on the project location further research at the county tax assessor, Caltrans, the Bureau of Land Management, or State Lands Commission may be necessary.

A field inspection by the office surveyor may be useful at this stage. It can prevent delays for the field personnel by



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detecting problems that need to be resolved before the field survey begins. Examples of these problems include obstructing the line of sight, unusual street repairs, missing control points, etc. The decision to make a site inspection is based on combined information gained from research data and a concern for the clients cost and time schedule.

The surveyor continues the process using the data collected to make an analysis and preliminary calculations. The surveyor can form preliminary conclusions regarding the exact size and shape of the property. Possible problems may be detected at this stage such as gaps or overlaps in the property or adjacent property, difficult terrain, disputes with adjacent landowners, heavy traffic in the surrounding streets (where the field survey usually begins), or lack of control points in the neighborhood (also known as benchmarks or monuments which are necessary to set the initial points of the field survey). A clear picture of the dimensions of the property becomes available if the various pieces of recorded data in the research package are constant. At this point in the process, the procedures for performing the field survey are determined.

Prior to the field investigation, the field crew is briefed regarding the type of survey to perform. The purpose for performing the survey is outlined, any problems uncovered in the research phase are reviewed and a general plan of approach is discussed. Instructions are provided in writing along with a copy of the contract to ensure a clear

understanding of the scope of work.

Arriving onsite, field personnel make a general reconnaissance of the area, noting obstructions to the "line of sight" such as improvements, trees, brush, heat waves, traffic, locked gates, construction activities, difficult terrain and animals. A search is made for monuments described in the research phase, and notations are made regarding their location or absence. Details of various notable findings are also recorded.

All surveys are dependent on other existing points in the area. Over time, these other points such as centerline intersection control monuments are paved over, moved, destroyed by construction and sometimes missing altogether. The survey completed today, in comparison to the survey performed 10 years ago, may be using an entirely different set of control points to establish boundaries, as well as different standards of precision used by the surveyor. Today, electronic measuring equipment is available that provides far greater accuracy with less effort.

Control points are established, if they are missing. A traverse is run, tying all found monuments and other items in one circuit, to check the measurements ("close out"). Careful, extensive field notes are taken regarding items found, measurements taken, out of the ordinary observations and difficulties discovered. Site photographs are often taken to assist the office surveyor in a better understanding of the field observations and conditions.

Field data is brought to the office and the office surveyor. The field procedures are reviewed and the measurements and closures are verified. Field measurements are compared to preliminary calculations. Boundaries of the property are then recalculated using the measured data. Any new problems, or differences between historical points found and current calculated points to be set are determined.

Depending on the severity of the differences between found points and

the calculated position of the boundary, it may be necessary to contact the earlier surveyor whose points differ from the determined position. The other surveyor may have additional information not otherwise available which could influence the process. The surveyor will then use professional judgement to finalize the establishment of the corners.

In the case of unresolvable conflicts, the client is advised in writing. Depending on the circumstances, more field work may be needed to collect additional evidence from the field or to set the final locations of the new monuments. Some highly complex projects require the process of field work and office analysis repeated several times to collect sufficient data and determine an acceptable location. Generally, a survey of a lot created in a recent tract can be completed in one trip alone.

Upon completion of the analysis and calculations, the process continues with the preparation of an appropriate map and/or report as defined by the contract. Appropriate maps range from a simple drawing showing the boundaries of the property and the location of monuments found or set to a very elaborate survey showing encroachments, elevations, improvements, easements, utilities, etc. When required, a record of survey or corner record map is prepared according to state law and filed with the local county surveyor. These maps/reports also clearly indicate any special problems, discrepancies, gaps or overlaps between adjoining properties as well as the method of establishment used by the surveyor.

There are occasions when a surveyor recommends that his client seek the services of a real estate attorney. A surveyor cannot give legal advice unless he is also an attorney. There are some professionals holding both titles.

The process is not finished when the map/report has been delivered to the client, but continues for many years during which the firm stores the data for retrieval if needed later by the original client. 