ABSTRACT

This presentation examines survey monuments in the context of our legal system. It begins by establishing fundamental terminology and concepts that have been misunderstood or misapplied by surveyors. The relationship between monuments and land title is discussed. The different ways in which the law views monuments are examined along with appropriate application of the rules. Throughout the presentation references and illustrations are used to help participants better understand the material and principles discussed.

The importance of monuments cannot be over emphasized in boundary surveying. Boundary monuments have been recognized as essential to an orderly society for millennia. Roman civilization felt so strongly on the subject that they had a god-of-boundaries, Terminus. Judeo-Christian society likewise holds boundaries, and the monuments that mark them, in high esteem. "Cursed be he who removeth his neighbor's landmark" (Deuteronomy 27:17). Monuments are the actual link between Record-Legal-Title and the land itself. "Every conveyance of land must start from evidence that proves the position of at least two monuments somehow related to the written record". The use of monuments in land surveying requires a thorough understanding of the legal principles by which they, and other evidence, are evaluated.

Analysis of record and field data pertaining to boundary determinations involves the use of many "terms of art", i.e. words and phrases that have meanings other than their common usage. Experience has shown that many disagreements between individuals, professional and otherwise, originate from a difference in the meaning of the terms used to convey basic facts and concepts. A mutual acceptance of the terminology used can facilitate the discussion and reduce the incidence of these disagreements. Since "...most of the laws pertaining to procedures used in locating land boundaries are common law derived from court opinions expressed in boundary litigation...", terminology throughout this discussion will use those meanings adopted or defined by our legal system. For that purpose, the following list is offered as a beginning:
Corner - "A point on a land boundary at which lines meet\(^3\), i.e. an angle point in the perimeter of a parcel.

Monument - A structure intended to mark the location of a corner; a permanent object natural or artificial which is a landmark established to indicate a boundary\(^4\).

Accessory - A nearby physical object to which a corner (sic-monument) is referenced for its future identification or restoration\(^5\). Accessories are natural or artificial witness/reference monuments and other objects that are related to a corner/monument by direction and or distance. They constitute a part of the corner monument itself. Examples of accessories include sub-monuments, straddlers, swing-ties, leads-and-tacks, and chisel crosses, as well as memorials.

Memorial - A durable article deposited in the ground at the position of a corner (sic-monument) to perpetuate that position...usually...at the base of the monument\(^6\). Memorials are a form of accessory that often provide the best available evidence of the original location of a corner monument. Examples of memorials include broken glass, charcoal, scraps of iron, bottles and previous monuments.

Evidence - Testimony, writings, material objects, or other things presented to the senses that are offered to prove the existence or non-existence of a fact\(^7\).

Proof - The establishment by evidence, in the mind of the trier of facts (judge/jury), of a requisite degree of belief concerning a particular fact\(^8\). In civil trials, such as boundary litigation, the degree of belief required is by a "preponderance of the evidence" as contrasted with "to a moral certainty", which is required in criminal trials.

Presumption - By rule of law, an assumption of a fact made from another fact or group of facts found or otherwise established in an action (trial)\(^9\). Presumptions are not evidence, but in the absence of evidence to the contrary they can serve as an alternative to evidence. Although some presumptions are conclusive (usually statutory in origin), most are rebuttable.

When a parcel of land is first created as a separate entity, the parties to the transaction establish the boundaries by their mutual agreement. In modern times this is accomplished by a deed but historically the custom of livery and seisen was used to transfer "title". In either case,
if the parties define the corners as being at locations occupied by monuments they (the parties) have provided definite means by which their true intentions can be determined. The common vernacular and many of the standard texts of our profession refer to such structures as "Original Monuments", but from this point forward we will refer to them as Corner Monuments.

A well known rule of thumb in surveying is that Corner Monuments have no error of position if: (1) They are called for (directly or impliedly) in the written description; (2) They are identifiable as the called for monuments; and (3) They are undisturbed. It is important to remember that monuments, in and of themselves, have no significance. Monuments gain significance by the authority of the parties to a conveyance, e.g. their agreement to be bound by the monuments' locations. All property owners are bound by the acts of their predecessors in title. If the predecessor has granted away a portion of his/her property rights to a third party, a successor in interest cannot deny such rights or claim them as their own. So too is a successor in interest limited by his/her predecessors' pronouncement regarding boundaries and Corner Monuments.

But what if the parties agreed to be bound by monuments that were to be set at a later date? There is no statute or common law that prohibits the parties from doing so. Modern subdivision practice often includes "post monumentation". Developers frequently sell lots to different builders prior to completion of the public improvements and the establishment of final survey monuments. So too, buyers and sellers sometimes agree to have a "subsequent" survey - usually under conditions where an "immediate" survey is not readily available. Would not the monuments, in either case, be the best available evidence of the true intention of the parties? Thus it can be seen that for Corner Monuments (a.k.a. Original Monuments) to control over other terms of the deed (metes, area, etc.) they do not, necessarily, need to exist on the date of conveyance - they only need to be called for in the deed.

The authority of the land owner(s) to agree to be bound by boundary monumentation extends to others in the chain-of-title. When adjoining owners agree to establish, on the ground, a boundary that may differ from the Record Legal Title, the law, under the proper circumstances, supports their decision. So, when coterminous owners, through a Parol Agreement, monument ("fence"), a mutually acceptable line intended to...
resolve their "unknown" boundary, they have substituted the marked line for the described line called for in their deeds. And their successors in interest are bound by that decision, even though the agreement is not in writing\textsuperscript{12}.

While in recent years the scope of the use of Parol Agreements has been restricted by some state courts\textsuperscript{13} and legislatures, the use of Lot Line Adjustments has been created to meet the need. The most significant difference between the two processes being that the latter has a "paper trail", e.g. the Record Legal Title is updated - usually through the exchange of Quitclaim Deeds. But the authority of the coterminous landowners is the same, as is the effect on their successors in interest.

Perhaps the extreme application of the concept lies in the acceptance of a monument as representing the location of a corner through the rule of Common Report. When the established Corner Monument has been destroyed (or is otherwise unrecoverable) and the public (landowners, surveyors, etc.) have for many years accepted and used a monument which cannot be proven wrong it will be accepted as the true Corner Monument\textsuperscript{14}. The rule of Common Report has been applied to boundary corners not lines. That does not say that a boundary line could not be defined by two corners each accepted through Common Report. Moreover, the Federal Rules of Evidence, and most state counterparts, provide an exception to the Hearsay Rule in allowing proof of boundaries by "reputation in a community"\textsuperscript{15}.

When recorded documents indicate that a survey was previously conducted, the monuments established fall into one of three categories: existing, obliterated or lost. "Existing" means that the corner monument, or some part of it (a fragment, witness, accessory, memorial, etc.), has been recovered and the original location can therefore be fixed with a high degree of confidence. "Obliterated" means that the corner monument and its appurtenant parts have been destroyed (or are otherwise unrecoverable) but that the original location can be fixed by the use of other reliable (collateral) evidence. This includes situations where a documented "paper trail" shows that a current monument replaced the previous, original monument. "Lost" means that the corner monument and its parts cannot be recovered AND there is insufficient collateral evidence to fix the original location. Courts do not like to find that a monument is "lost" and will go a long way in accepting evidence as sufficient to avoid such a conclusion.
The type of evidence that is admissible to reestablish the location of a record, unrecovered corner monument depends upon the distinction between and within these categories. Generally, an existing corner monument should be replaced by first using fragments of the monument itself, next by its memorials, and finally by its accessories, all of which constitute direct evidence of the original location. The reasoning behind this order rests on the likelihood of error produced by the usage. Lacking direct evidence, the position of an obliterated corner monument should be fixed by the use of collateral evidence of its original location. As used herein, collateral evidence means indirect or circumstantial evidence that individually or collectively tends to show the appropriateness of the location being asserted. Examples of collateral evidence used to establish the original position of a corner monument include: junior surveys, adjacent improvements and even hearsay testimony. Collateral evidence is irrelevant and immaterial in restoring an existing corner monument (whether indicating the same or a different location) and would therefore be excluded. A lost corner monument is one where the original position is not determinable by the use of direct or collateral evidence. A corner should not be considered lost until all means of fixing its position have been exhausted. Lost corner monument positions are restored through the use of proportionate measurement that places the new monument at a location most harmonious with surrounding monuments rather than where the original monument was placed. Because of this difference the term "replaced by proportionate measurement" is a legal fiction, and it is the "method of last resort".

In the eyes of the law, surveyors are held in high esteem. Being given an exclusive franchise and regulated by the state, surveyors are quasi-public officials whom the law presumes to have faithfully executed their duties. The surveyor is presumed to have properly and correctly marked the boundary. As a result, monuments of record are presumed to exist. Moreover, evidence of a previous survey raises a presumption that monuments were established. Therefore before a surveyor would be authorized to establish a new monument at a location "occupied" by a record monument he/she would first need to overcome the legal presumption that it is still present. It is the obligation of the surveyor to search for those corners and monuments called for directly or indirectly in the record, and then to report on the evidence found pertaining to them. When, following a good and diligent search, no evidence of the record monument is recovered a simple statement of
that fact (such as "sfnf" indicating: searched for, not found) ought to be sufficient. Obviously, all evidence discovered in the course of the survey must be shown on the plat.

The record pertaining to the description and/or the location of monuments rarely matches, in its entirety, the evidence found in the field. Allowance must always be made for the ravages of time and human error. A length of iron pipe manufactured and sold as "3/4 inch", which is its inside diameter, has a 1 inch outside diameter. Surveyors who are not dendrologists sometimes misdescribe tree species. Between two measurements of the distance and direction of a line there is virtually always some difference. The question that naturally arises is: How close is "close enough"? Unfortunately there is no absolute answer, despite some of us having been trained that "if it fits under my hat, it's good enough". These are matters of professional judgement, and the surveyor would be well advised to err on the side of caution. That is, if the difference between record and recovered causes some concern, he/she should seek out corroborative (collateral) evidence before accepting or rejecting recovered monuments as those called for in the record.

It is not uncommon to find a monument in the field other than as described in the deed or on a subdivision/parcel map. The goal of a retracement survey is to identify the location of the original parcel boundaries and corners; monuments are merely tools assisting that goal. If an acceptable record shows that the recovered monument is a direct perpetuation of the called for corner monument, the found monument should be accorded the same dignity as the original. Examples of an "acceptable record" include public records such as plats of (subsequent) Subdivisions and Parcel Maps, Records-of-Survey and Corner Records. Internal records of public agencies (County Surveyors, City Engineers, etc.) are considered quasi-public records and generally have nearly the same credibility as public records. The internal records of public utilities are often considered quasi-public records as well although their credibility may not be as great as those of a public agency. Even the field notes of a private surveyor may be an "acceptable record" although the credibility of private records is generally less than (quasi)public records. In the latter case, the surveyor is well advised to seek supportive evidence before relying upon such private records.
Historically, landowners subdivided their property at will, often with no record other than deeds to the "parts". Today most jurisdictions regulate and control "subdivisions" but only some of them apply the same standards to "minor divisions" of land, such as the sale of an individual parcel. When a parcel description calls for a plat there arises a presumption that a survey was conducted (and therefore, monuments were established\(^\text{23}\)). It should be noted that in some jurisdictions Records-of-Survey have been used as a means of perpetuating the information, making the research easier and more reliable. In most jurisdictions, however, the records of such land divisions are often sparse and not always in the possession of public agencies. Again, private records should be validated before they are relied upon. If the surveyor discovers monuments of the same description at various locations throughout the land division they could be accepted as the \textit{best available evidence of the intention of the parties} to the initial conveyances and accord them the status of corner monuments\(^\text{14}\). But, when the recovered monumentation varies in description (indicating numerous, different surveys) acceptance of the marked locations as the true corners depends upon an individual analysis of the evidence and procedures used to establish each one.

Notwithstanding the above, non-record monuments should not be accepted as marking a corner without corroboration. The collateral evidence which a surveyor could use in such cases includes: street improvements made at a time when the original survey control was likely to have existed and therefore have been used\(^\text{25}\); lines of occupation, such as fences\(^\text{17}\); buildings; and railroad tracks. Absent a preponderance of evidence that a non-record monument marks a corner it should not be used to determine a boundary\(^\text{26}\). Once the rights of a grantee have vested, a subsequent survey cannot divest those rights by delineating the "correct" line\(^\text{27}\).

In most surveys the record and field evidence gathered contains conflicts. The resolution of these conflicts is at the heart of the professional practice of land surveying. Most of us have agonized in these situations over the process of weighing the evidence collected and forming a professional opinion. And, we have worried about whether or not we were going beyond the scope of our authority as surveyors in the process. These concerns are not necessary.

What boundaries are is a question of law; where they are located is a question of fact\(^\text{28}\). "Unless the original corner monument is found, the question of its position is one of fact (not law) and needs to be shown
by a preponderance of the evidence..."29. From this, it should be clear that the surveyor must, ultimately, accept some evidence (or afford it more weight) and reject other evidence (or afford it less weight) in the process of forming a professional opinion. "When one grouping of a set of facts conforms more closely than any other combination of conditions set forth in the record (and the original survey), you then have the most reasonable solution that is probably available. This is the Theory of Major Probability30". The reason that monuments are generally preferred over other forms of evidence (such as bearing and distance) is because the parties are less likely to err in their use, but monuments do not have an "inflexible priority"31.

So, what happens when original monuments are in conflict with each other? Where the other terms of the deed indicate that a monument does not correctly express the intention of the parties, the reason for the principle ceases32. Possibly the most common occurrence of this situation is in modern subdivisions where monumentation of both centerline and front lot corners (the Right of Way lines) are called for on the plat. Certainly, this type of conflict can and does occur elsewhere, and the conflicting monuments need not have been established in the same survey. When the call for monuments is inconsistent with the call for other monuments and it appears from the evidence that they were inadvertently inserted they will be rejected as false and repugnant33. In should be borne in mind that a monument may be rejected as controlling one line while it is accepted as controlling another, intersecting, line. Perhaps the best known example of this is the control afforded "closing corners" in U.S. Public Lands surveys.

That which separates the professional boundary surveyor from the technologist is this: The former relies upon all available evidence, giving the greatest credence to that which most likely expresses the intention of the parties on the date the parcel was first conveyed; while the latter relies primarily or exclusively upon measurement. The goal of retracement surveys, and the duty which the law imposes upon us, is to prove the location of boundaries and corners. To this end the original corner monuments, or the places that they occupied, are our first resort. But the legal principles that are part of the art of surveying are not formulas (like the physical sciences) into which data is inserted wherein precise, consistent answers are obtained. One surveyor may give more or less weight to some of the evidence than another. It is precisely because of this complex balancing of the facts, and the
differences that can thereby be produced, that surveying is a PROFESSION. It is the rendering of an OPINION, based upon our knowledge, training and experience, which sets us apart from the trades. Adding to our knowledge, training and experience is the lifelong endeavor of a PRACTICING SURVEYOR.

REFERENCES


3. (G4S) Glossaries for Surveyors, collected by Roy Minnick; published by Landmark Enterprises, Rancho Cordova, Ca.

4. Whitcomb v. Milwaukie, 61 OR 292, 121 P 432
   Delphcy v. Savage, 227 MD 373, 177 A2 249 (1961)

5. G4S

6. G4S


10. Gordon v. Booker, 97 C 586 (1892)
11. **Lerned v. Morrill**, 2 NH 197 (1820);  
**Makepeace v. Bancroft**, 12 MA 469 (1815)

12. **Missouri v. Iowa**, 6 How.(US) 660  
**Kellogg v. Smith**, 7 Cush.(MA) 382 (1851)  
**Moody v. Nichols**, 16 ME 23 (1839)


14. **Boardman v. Reed**, 31 US 328 (1832);  
**Crandall v. Mary**, 67 OR 18 (1913)

**Cockrell v. Works**, 94 SW2 784;  
18 US Code 803(20)

16. **Ulman v. Clark**, 100 F 180

**Diehl v. Zanger**, 39 MI 601  
**Andrews v. Pitts**, 126 MD 328, 95 A 203

18. **11 Corpus Juris Secundum - Boundaries § 13b**


20. **Chandler v. Hibberd**, 165 CA App.2 39, 332 P 2 133


22. **Garrett v. Cook**, 89 CA 2 98, 200 P 2 21

23. **McDaniel v. Mace**, 47 IO 509
24. BC&LP
25. Orena v. Santa Barbara, 91 C 621
26. Pallas v. Daily, 100 NW₂ 197 (NE - 1960)
27. Williams v. Barnett, 135 CA App.₂ 607, 287 P₂ 789
28. Whittelsey v. Kellogg, 28 MO 404 (1859)
29. E&P
31. Cates v. Reynolds, 143 TN 677, 228 SW 695 (1920)
32. White v. Luning, 93 US 514, 23 L. Ed. 938
   Green v. Horn, 207 NY 489, 101 NE 430
33. Carter v. Bank of America, 69 CA₂ 112, 158 P₂ 423

BIOPGRAPHIC NOTES

Chuck Karayan began surveying 42 years ago. Since then his career in public and private practice has taken him from the deserts of southern Arizona to the forests of northwestern Washington. He is currently licensed in Oregon and California and a Contributing Writer for "The American Surveyor" magazine.

Mr. Karayan is the Chief of Training in the Office of Geometronics for the California Department of Transportation. Previously he has served as County Surveyor in Clark County, Washington; Survey Operations Manager for Marx & Chase, Gresham, Oregon; Regional Property Engineer of the Southern Pacific Railroad, Los Angeles, California; and directed the Land Surveyor's Training Center in Phoenix, Arizona.
Chuck recently founded GEOLEX Consulting Services where he will direct his full-time efforts upon retirement later this year. Academically trained as a Geographer, Mr. Karayan attended the University of San Fernando Valley, College of Law. For over 25 years his career has focused on boundary and land title matters as a manager and expert witness. In addition to authoring texts and professional papers, he has been active in formal and continuing education of surveyors, realtors and attorneys since 1978.

CONTACT INFORMATION

Chuck Karayan, L.S.
GEOLEX Consulting
P.O. Box 160192
Sacramento, CA 95816