

A *Very* Basic Introduction to Boundary Law

Jerry Mahun, PLS
jerry.mahun@gmail.com
jerrymahun.com
715-896-3178

Western Regional Survey Conference
Wed 18 Feb 2026

I. Law and Boundaries.....	2
A. Types of Law.....	2
1. Statutory.....	2
2. Common.....	2
B. Statute of Frauds.....	2
C. Boundaries.....	3
1. Boundary Creation.....	3
2. Boundary Re-establishment.....	3
II. Parcel Creation Methods.....	4
A. Parentage.....	4
B. Processes.....	4
1. Simultaneous Creation.....	4
2. Sequential Creation.....	5
3. Combination Creation.....	5
III. Boundary Re-Establishment.....	5
A. Rules of Construction (RoC).....	5
B. Right of Possession: Unwritten Rights.....	7
C. Senior Right: In the Event of an Overlap.....	7
1. Simultaneous.....	8
2. Sequential.....	8
3. Combination.....	11
D. Written Intent.....	12
1. Description.....	12
2. Call for Survey.....	14
3. Monuments and Corners.....	14
4. Measurements.....	16
5. Area/Coordinates.....	17
6. "...more or less".....	18
7. Quasi-Metes and Bounds (QM&B).....	18
IV. Wrapping Up.....	21
V. Discussion Examples.....	21
A. Example 1.....	21
B. Example 2.....	22
C. Example 3.....	22
D. Example 4.....	23

I. Law and Boundaries

A. Types of Law

1. Statutory

In our form of government, the Constitution creates and grants a legislature the power to enact laws. These legislative bodies are at the federal, state, and local levels. The laws they pass are called statutes and are considered written laws as they are codified and recorded. It is the responsibility of society members affected by the laws to know and obey them.

A legislature has the power to create a regulatory or administrative agency and grant it rule making authority. Their scope is narrower than a legislature, generally limited to a certain specialization area. Their rules have the same legal authority as statutes, but yield if in conflict.

2. Common

Common law are rules, beliefs, and principles derived from long continued usage and customs (tradition), or judgments and decrees of judicial tribunals. Court decisions depend on previous similar cases to for common law consistency. An attorney will cite previous cases to support his/her argument. Quantity and quality of evidence plays a large part in determining how common law principles are applied in a particular situation.

As surveyors, we think of evidence in terms of physical, written, or parol to help us re-establish a corner location. Courts have specific Rules of Evidence which are guidelines for admissibility of relevant evidence. These attempt to ensure that only evidence deemed relevant, reliable and appropriate are presented before a court. There are Rules of Evidence at the Federal level and at each State level. Consider these the rules that attorneys must play by.

Why should a surveyor be concerned with the Rules of Evidence? Because if the survey ends up in court, the surveyor's evidence must be presented consistently with the Rules of Evidence in that particular court's jurisdiction. While that is primarily the attorney's responsibility, the surveyor can help by making sure that his/her evidence is complete as required by the Rules. For example surveyors often use parol testimony for corner determination. The surveyor should be aware of the Rules' specific requirements for the type and character of witness and hearsay evidence lest it not be admissible. Surveyors don't need a law degree, but need to understand that they operate within a legal environment.

B. Statute of Frauds

The Statute of Frauds is an English law dating back to 1677 which stated, in part, that in order to be valid some contracts had to be in writing. All terms, conditions, etc, of the sale are reduced to writing so that the original intent is clear to not only the parties involved but anyone else who has reason to know. The document should stand on its own without having to query either side as to what was meant. Neither party could later claim something contrary to the opinion of the other. Other parties should be able to understand the contract terms, even if either of the other original parties is no longer available. Each state has its own version of the SoF.

A deed is a contract for land conveyance as required by the SoF. The description part of a deed defines the physical extents of what the grantor (seller) conveyed to the grantee (buyer). This, along with the interest conveyed, is what is meant when we refer to the *written intentions of the parties* in the context of boundaries.

In general, contracts have specific requirements in order to be valid, the last one being delivery: the contract must be placed in the control of the receiving party. This applies to deeds: the deed is delivered to the grantee (or his/her agent) at which time the conveyance has been completed. The deed does not have to be recorded for the conveyance to be valid, but recording the deed protects the grantee against future fraudulent transfers of the same property.

Recording a deed is known as *constructive notice*:

notice that one exercising ordinary care and diligence as a matter of duty would possess and especially that is imputed by law rather than from fact¹

In English: recording a deed in a public office makes it accessible for anyone to view. If I want to purchase a property, I can go to the register of deeds office and see who the owner of record is and the property description. It also inserts the deed into the chain of title for a property.

C. Boundaries

A boundary is a line at which some degree of ownership or usage rights change. It can be two different owners on both sides of a boundary (two separate parcels) or a change in rights of a single parcel (eg, easement). Either way, the boundary must be created at some point and probably re-established some time later. A third option is a boundary's removal, which generally requires a legal process such as vacations or easement release. Boundary removal is beyond the scope of this presentation.

1. Boundary Creation

Boundary creation is generally controlled by statutory law. Examples

- Subdivisions are regulated by state law. Although their details vary across the country, regulations generally include things like monumentation, mapping requirements, survey standards, etc. States enable local governments to create their own subdivision regulations which are generally more strict based on local needs and may include minimum lot sizes.
- Since its inception, boundaries in the US Public Land Survey (USPLS) were controlled by written Instructions on order of Congress. These described field procedure, monumentation, mapping, etc. Although the government surveys stopped at the Section exterior, rules were provided for local surveyors to systematically create aliquot parts.

A *corner* is a legal entity where a boundary changes direction. Boundary locations are defined by their corners. To maintain boundary stability and integrity:

- Where the boundary corners were originally physically set is where they belong today.
- Once created, a boundary exists in perpetuity unless removed by a legal process.
- Rights between adjoining parcels that share the boundary are established at boundary creation and do not change unless the boundary is legally removed.

2. Boundary Re-establishment

The purpose of a boundary re-establishment is to re-create its original location. A resurvey collects evidence and the surveyor evaluates it to determine original corner locations. When the boundary was created and the quality of evidence affect the location certainty.

¹ FindLaw Legal Dictionary online, <https://dictionary.findlaw.com>

Boundary re-establishment, that is, corner location decisions, is controlled by common law which provides an evidence evaluation framework. As with any court decision, the surveyor's final corner location determination depends on the evidence and how it is evaluated.

There's a distinction between boundary re-establishment and the boundary survey connecting the re-established corners. The former is based on common law, the latter controlled by statutory law or administrative code. For example, Chapter 332-130 WAC defines boundary survey standards and mapping requirements, once the corners locations have been established.

II. Parcel Creation Methods

A. Parentage

A *child parcel* is a smaller part of a *parent parcel*. A child is generally separated from the parent with new boundaries although some may be shared. Multiple children mean multiple boundaries, Figure 1.

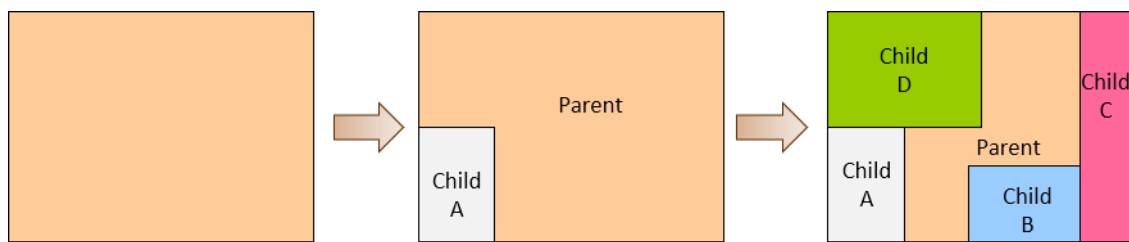


Figure 1: Parent-Children Parcels

How a parcel is created affects its description and relationships with surrounding parcels. A parcel's description implies parcel creation process and original intent. These are sometimes difficult to determine without a title search and field investigation, particularly with descriptions written by non-surveyors. While there are description composition guidelines and requirements (WAC 332-130-040) these are binding only on surveyors. Unfortunately, description composition is not *restricted* to surveyors.

Creation procedure and intent affect how a parcel's boundaries are re-established when they conflict with others. Once a boundary is created, it exists in perpetuity unless removed by a legal process. This is also true for its relationship with other boundaries.

There are three ways to create multiple children from the same parent: Simultaneous, Sequential, and Combination.

B. Processes

1. Simultaneous Creation

New parcels are all created at the same time by the same legal instrument. Newly created boundaries have equal standing with respect to each other- there are no senior-junior rights. Parcel description is typically *lot and block* (subdivision), Figure 2, or *aliquot part* (USPLS), Figure 3.

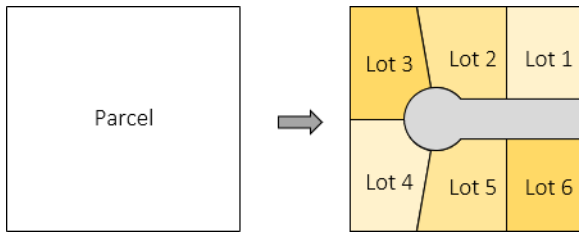


Figure 2 Simultaneous: Plat

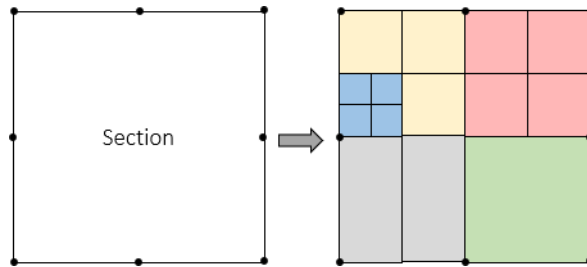


Figure 3 Simultaneous: Aliquot Parts

2. Sequential Creation

New parcels are created independently from the same parent over time. Earlier created boundaries have higher standing (senior) to later created boundaries (junior), Figure 4. Parcel description is typically *metes* (distance and direction), *bounds* (limits; termination), or *metes and bounds* (combination).

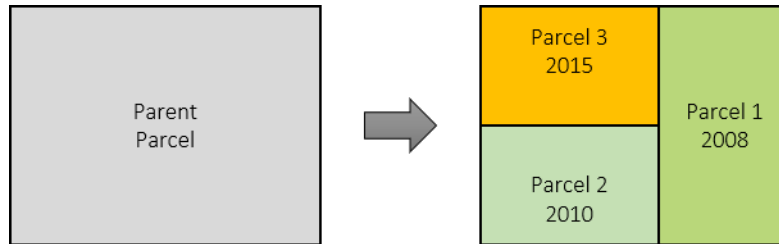


Figure 4 Sequential

3. Combination Creation

New parcels are created by some combination of simultaneous and sequential. The parcel in Figure 5 is part of Lot 4 and part of Lot 5. New boundaries have characteristics of both creation types: all may have equal standing, there may be senior-junior relationships, or a combination. Parcel description is *quasi-metes and bounds* and typically include the word "of" indicating a sequential portion of simultaneous parcel.

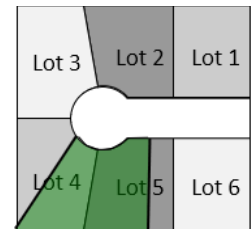


Figure 5 Combination

III. Boundary Re-Establishment

A. Rules of Construction (RoC)

Surveyors walk a fine line when re-establishing boundaries. The surveyor must try to resolve conflicts between written intent and evidence arising from that intent along with surrounding adjoining rights.

At its creation, a boundary's evidence framework was also created. The initial original evidence was the description (written) and, possibly, monumentation (physical). Over time, more evidence is added to the framework as owners act with respect to their boundaries: fences, roads, buildings, etc. At the same time those actions can also destroy or disturb evidence. By the time of resurvey, the surveyor has to collect as much of the relevant remaining evidence and reach a decision based on its evaluation, Figure 6.



Figure 6 Evidence Chain

Evidence will conflict, some will be stronger than others, some may be directly connected to original corner locations, others indirectly. *Collateral evidence* is secondary, often derived from original evidence. It is subordinate to original evidence but can stand in its place if original evidence is not available. Collateral evidence, also known as Indirect evidence, may support or point to original evidence thereby indicating it exists (or at one time did exist). Examples include a deed copy, replacement monument, and fence line.

The certainty of corner location will depend how well all this evidence fits together.

Common law provides a general guide for evidence evaluation. This guide is the *Rules of Construction* (RoC) also referred to as the *Order of Importance of Conflicting Elements*. In order of highest to lowest element they are:

- Right of possession (unwritten rights)
- Senior right (in case of overlap)
- Written intentions of the parties (description)
 - Call for survey
 - Call for monuments; adjoiner
 - Direction/distance
 - Area/Coordinates

We can divide the RoC into two categories.

Matters of Title: In whom ownership is vested based on actions of parties

Matters of Survey: Boundary location based on written and physical evidence of original intent.

While the land surveyor is the boundary expert, it is the court that determines ownership extent when possession and deed lines do not coincide. These generally occur when one party uses another's land without permission (eg, adverse possession) or based on false pretext (eg, equitable estoppel). These actions, with others, are lumped under unwritten rights because they are undocumented and therefore not in public records.

*Title: the means or right by which one owns or possesses property*¹

The court settles the boundary between parties, often using the results of a surveyor's work. These are *Matters of Title*.

¹FindLaw Legal Dictionary

Matters of Survey are those decisions which the surveyor is empowered to make. The surveyor's primary domain in the RoC is Written Intentions. The order within it is based on logic and expected error accumulation (which can lead to conflicting terms):

- a survey creates the boundaries
- monuments are placed to mark the corners
- measurements are made between the monuments
- calculations are made from the measurements

Senior rights can fall in the overlap of surveyor's and court's responsibility. We'll examine that in more depth a bit later.

The RoC is not a strict inflexible list but a guideline. Element priority may change depending on expressed original intent, physical evidence, or parol evidence. For example, area is one of the lowest elements and yields when conflicting with others. But if the grantor conveys the "East 1.0 acres" to the grantee, area becomes the primary element- the intent was to convey a specific amount of land.

Subsequent evidence, which owes its existence to, and is dependent on, original evidence, can modify or reinforce the RoC. For example, in the event a called for monument is lost, the next elements, direction and distance, would define the corner location. If, however, we can show that an improvement was referenced to the original monument and we can locate that improvement today, then direction and distance would yield to the reconstructed corner location if in conflict. This is a common situation with replacement monuments particularly for USPLS corners. A stone monument set to replace a decaying wooden Section corner post has the same authority (control) as the original post. It's essential that a replacement monument be documented so later surveyors understand its authority.

B. Right of Possession: Unwritten Rights

Unwritten rights arise because of owner action or inaction along a boundary causing gain or loss of property rights. Unwritten doctrines include *adverse possession*, *prescription*, *oral agreement*, *equitable estoppel*, and *recognition and acquiescence*. Because it is affected by individual actions and may not conform to deed descriptions, ownership is ultimately determined by a court. There is no constructive notice of an unwritten right because, well, it's unwritten.

A surveyor does not have authority to decide ownership in these cases, at best showing possession and deed line differences on a resurvey map.

How unwritten rights exist if they're unwritten? Though seemingly contradicting the SoF, common law doesn't view unwritten rights as a conveyance but as a clarification of an uncertain boundary. By their actions, owners are stabilizing their boundary location which courts view is their right. It's a bit more complex than that which is why it is a court's responsibility to determine ownership in these situations.

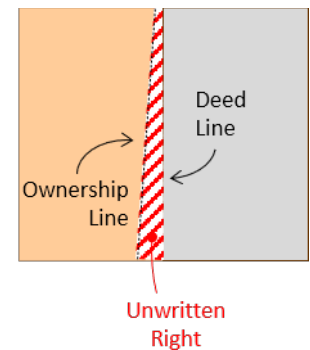


Figure 7 Unwritten Right

C. Senior Right: In the Event of an Overlap

When two or more adjoining child parcels are created from a parent parcel, the possibility exists their common lines will not coincide. Instead, there may be a gap between them or they may overlap. A gap is created when

there is an excess - the grantor did not express all he intended to convey, either on purpose or by accident. An overlap occurs when the grantor conveyed more than is actually present.

Gap or overlap resolution depends on how the child parcels were created and common law of the jurisdiction.

1. Simultaneous

Simultaneously created boundaries have equal standing; any deficiency or excess is distributed among the parcels affected between found or re-established original corners. The distribution is proportional based on parcel dimensions along the line of deficiency or excess, Figure 8.

$$\text{Lot 1: } W = (372.5/375.0) \times 125.0 = 124.2 \text{ ft}$$

$$\text{Lot 2: } W = (372.5/375.0) \times 100.0 = 99.3 \text{ ft}$$

$$\text{Lot 3: } W = (372.5/375.0) \times 150.0 = 149.0 \text{ ft}$$

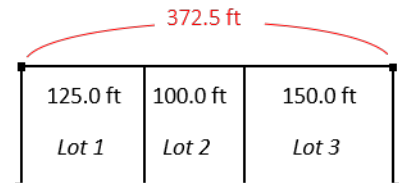


Figure 8 Simultaneous Distribution

The only exception to proportional distribution in the event of a shortage is when one of the parcels affected is land owned by public. The public gets what is dedicated and the deficiency is prorated among the other affected lots.

2. Sequential

When parcels are created chronologically, senior-junior relationships are created. Earlier created boundaries have precedence over later created ones, Figure 9.

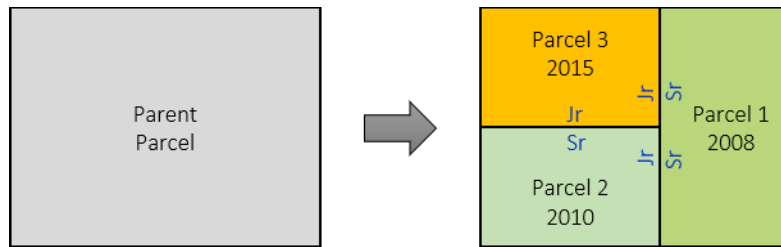


Figure 9 Senior-Junior Creation

The senior-junior relationship is a *boundary* attribute, not an *owner* attribute. Once created the relationship does not change unless the boundary is dissolved by formal legal action. Property transfer does not alter it, nor does further subdivision of adjacent properties.

A child parcel inherits its parent’s senior-junior relationship along a shared boundary, Figure 10.

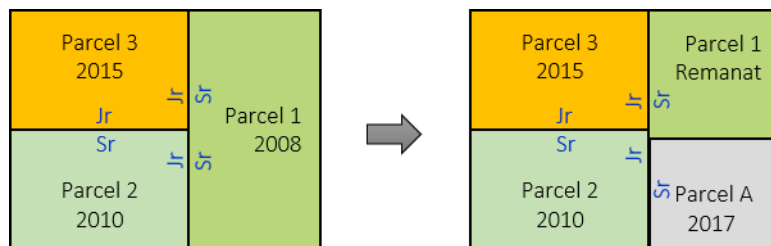


Figure 10 Senior-Junior Inheritance

When lines between adjacent parcels are re-established according to the respective descriptions and acceptable physical evidence:

- The senior parcel is protected in the case of an overlap- the junior parcel yields.
- Strict adherence to description interpretation could mean a gap between the parcels is a remainder of the parent, Figure 11, because it was not included in either description.

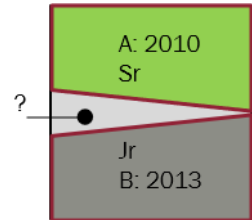


Figure 11: Gap

The latter can be a head-scratcher, particularly if the gap is large and/or its creation ancient. The initial tendency may be to assign it to the senior owner. But is that the case? It depends...

Recall that a deed is a contract for land conveyance and must follow the same rules.

It has long been the policy in Nevada that absent some countervailing reason, contracts will be construed from the written language and enforced as written. Cf. Southern Trust Mort. Co. v. K & B Door Co., 104 Nev. 564, 568, 763 P.2d 353, 355 (1988) (where document is clear on its face, the court will construe it according to its language).

Ellison v. California State Auto. Ass'n, 797 P. 2d 975 - Nev: Supreme Court 1990

Generally, when a contract is clear on its face, it "will be construed from the written language and enforced as written." The court has no authority to alter the terms of an unambiguous contract.

Canfora v. COAST HOTELS AND CASINOS, INC., 121 Nev. Adv. Op. 76 - Nev: Supreme Court 2005

We also would decline to modify the express terms of a written contract agreed to by competent parties.

Willis v. Champlain Cable Corp., 748 P. 2d 621 - Wash: Supreme Court 1988

If we limit ourselves to a strict reading of the descriptions, then a gap was created and not conveyed - it is not assigned to either parcel but is a remainder of the parent parcel.

On page 425 of *Brown's Boundary Control and Legal Principles*, Sixth edition:

When an overlap exists between two parcels, the senior or first owner receives what is coming to him or her and the junior owner has the remainder. Where there is a gap and the two parcels do not meet, neither has title to the surplus, because the original grantor did not sell it. Thus, suppose that an owner sold the west 12 acres and the east 8 acres of a parcel reported to be 20 acres by original government measure. An accurate survey revealed that instead of there being 20 acres as supposed, the said 20 acres was found to be 22 1/2 acres, owing to surplus in the section.

Because the original owner had not sold the 2 1/2 acres, title was vested in him.

Their contention: the gap was a remainder that was never conveyed.

Then again, on page 337 of the same text:

In the event of a gap between a call for an adjoiner (record monument) and a call for artificial monuments, court decisions as to which controls have varied. In Figure 11.3, Brown's parcel is senior and Jones's parcel is described as . . . thence N 89° E a distance of 200.00 feet to an iron pin located in Brown's property line: thence S 1° E 200 feet along Brown's property line to an iron pin located in the northerly side of sixth street; thence . . . " If there is an overlap as shown on the right in Figure 11.3, the area of interference goes to the senior deed (Brown).

However, when a gap exists between parcels, the courts have varied in their decision. If the gap is small, the courts generally give the adjoiner line control; however, if the gap is large, the iron pins generally control on the theory that the gap belongs to the owner of the original parcel from which the two were carved. To avoid liability, whenever a surveyor finds a gap between artificial monuments and an adjoiner, as illustrated above, he or she should disclose the facts on a plat presented to the client or client's attorney. If the state issued two patents and there was a gap between them similar to that shown in Figure 11.3, the gap is a vacancy and belongs to the state (ambiguities in patents are construed in favor of the state) or as provided by state law.

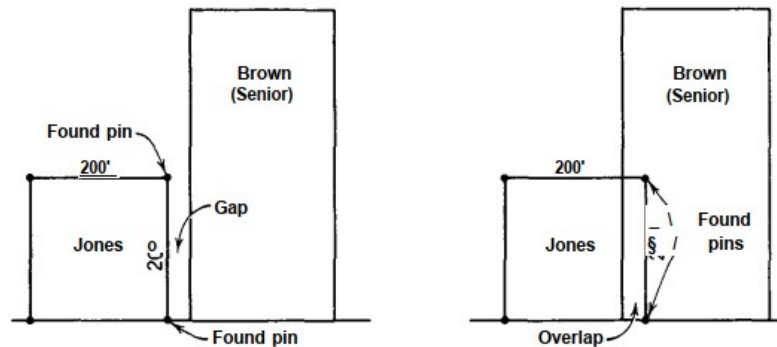


Figure 11.3 Overlaps and gaps.

Figure 12: Illustration from Brown's

Here the authors say if the gap is "small" it belongs to the *junior* parcel since the senior receives what his/her deed calls for and the "obvious" intent of the grantor was to entirely divest him/herself of ownership. However, if the gap is "large" it is a remainder that was not conveyed.

On page 203 of *Illinois Boundary Law*, by Jeff Lucas:

Gaps have the reverse effect. Once the senior is conveyed out, if the grantor then attempts to convey the remainder of the parent tract and inadvertently leaves a gap, the gap goes to the junior. This is especially true when it is clear that the grantor intended to divest himself of the remainder of the original estate. This is also true when long periods of time have elapsed and the gap portion has remained dormant for years, decades or even centuries before being discovered. The difficulties of finding some distant heir (or, more likely, multiple heirs) of the original grantor do not justify the cost and equity will not support such an effort. Unless there is a clear intent on the part of the grantor to retain the gap portion, the courts generally abhor these gaps and will consider them as belonging to the parties who are in possession as opposed to granting a windfall to some distant heir of the original grantor who can't be found.

Without consideration of size, the gap goes to the junior unless it is clear the grantor intended to retain ownership of the gap. Lucas cites two cases, one from West Virginia, another from Ohio, as supportive examples

And in Wisconsin we have *Pavela v. Fliesz*, 133 N.W.2d 244, 26 Wis.2d 710, concerning a gap between a senior parcel and junior one:

The circuit court was of the opinion that it would be equitable to divide the 2.55-foot strip equally between the parties. Such division of land unintentionally omitted from conveyances of adjoining properties is somewhat analogous to the apportionment of discrepancies between the actual measurements of a subdivision and the measurements of the lots therein as shown by the recorded plat... Under the circumstances, we agree that the division made by the circuit court was fair and equitable.

The circuit court decided, and supreme court affirmed, to treat the gap similar to a gap in a subdivision: split it between the senior and junior parcels. The only difference from a sequential situation is that the gap was split in half, rather than proportioned based on parcel sizes.

On top of all that, field investigation may show that one owner or the other has been using the gap and may have developed a valid unwritten claim to it. However, despite Justice Cooley's opinion of the surveyor's quasi-judicial role, that is up to a court to decide.

See? It depends...

An overlap is a Matter of Survey, a gap should be treated as a Matter of Title unless the jurisdictional common law is clear on the situation.

3. Combination

Parcels created through a combination process may or may not have senior-junior relationships. Excess or deficiency is prorated or senior-junior relationships enforced: it depends on how the boundaries were created and descriptions are worded.

For example, consider a Lot, Figure 13, is that sequentially divided into the "West 100.0 ft" then the "East 100.0 ft.", Figure 15.

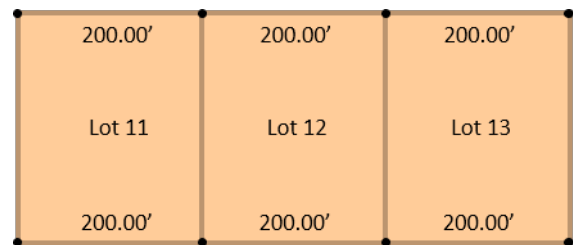


Figure 13: Simultaneously Created Lots

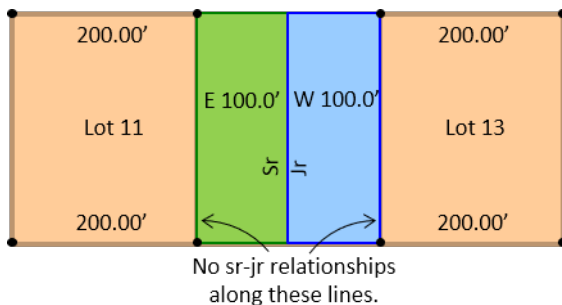


Figure 15: Lot 12 Sequentially Divided

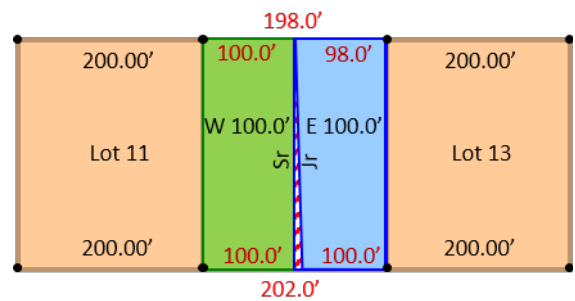


Figure 14: North Deficiency & South Excess

- If the Lot is only 199.0 ft wide at the north and 202.0 ft at the south, the "West 100.0" is senior and receives its full 100.0 ft; the junior parcel gets only 99.0 ft at the north and 100.0 ft along the south; a 2.0 ft gap is created at the south, Figure 14.
- Changing the second description to "Lot 12 except the W 100.0 ft" means it is subject to the deficiency at the north and gains the excess along the south, Figure 16.

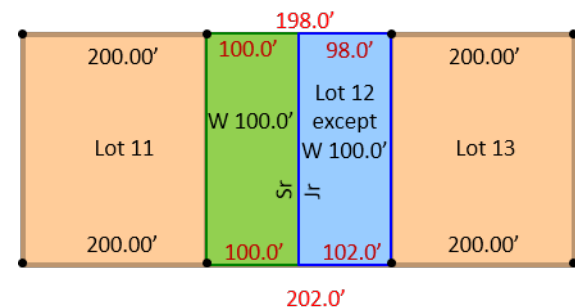


Figure 16: Description By Exception

- Consider: what would change if the "Lot 12 except the W 100.0 ft" was created *before* the "West 100.0 ft"?

Although the intent may have been the same (for the grantor to divest himself entirely) wording change can alter the effect when applied on the ground.

D. Written Intent

1. Description

The description exists because of the SoF and represents original intent. When interpreted, effect has to be given to its terms and boundaries must be re-established within the limits of the description. This means we don't locate a boundary where we *think* the parties intended, but where they *said* they intended- that's why it's in writing.

a. Interpretation

A simultaneously created parcel is described by reference to a map or plat. The plat shows measurement information, monuments, adjacent owners, easements, waterways, etc. Generally, unless there are conflicts in the plat information, intent is clear.

Parcels created in sequence or combination depend on narrative descriptions which may or may not reference a map. These narratives have greater potential for conflicting elements because many:

- Propagate archaic terms and "ancient" measurements due to lack of contemporary resurvey or its use.
"...described as follows: Commencing at a point 20 rods 19 links North of a point that is 26 links East of the East side of the steel tube at the Northeast corner of the wagon bridge, that crosses the Sugar River, on the West side of the Southeast 1/4 of Section 34, thence North from said point 3 rods and 20 links, thence East 0 rods, thence South 3 rods and 20 links, thence West 8 rods to place of beginning,..." (from a deed recorded in 1992)
- Are written by non-surveyors who do not understand terminology or the RoC.
"Commencing at the West 1/4 corner of Section 9; thence N80° 29ft 17in. East, 2781.62 ft; thence S89° 11ft East, 177.84 ft; thence S34° 04ft 40 in East, 123.68 ft to the point of beginning;..." (from a deed recorded in 1996)

Regardless who wrote the description, the surveyor must follow common law principles to interpret and physically establish its boundaries.

b. Controlling and Informative terms

In order for metes and bounds and quasi-metes and bounds descriptions to be truly valid and their corners located, the description of each individual line or course should have some controlling terms. These define the end point and/or path for each property line. All other terms in the same line description are informative, helping to differentiate the controlling element from other elements. If there is no control with a course description, then how can its deed location be ascertained?

How do we determine what the controlling term is? Look for words indicating a condition like "to" or "along."

Example: "...thence North 38 degrees West 139.6 feet **to** an iron stake..."

The course must go to and end at the iron stake (*to*);

Because the monument is a higher RoC element, distance and direction yield if they conflict.

Example: "...thence southwesterly **along** said high water mark **to** an iron stake..."

The course ends at an iron stake (*to*);

But now the course is an irregular path following the waterway (*along*)- the general direction yields to the topographic feature.

Other words indicating controlling terms include (but are not limited to): parallel, perpendicular, continuing, being, at right angle to. These all indicate some originally intended condition. When any of those appear in a description, that puts us on notice that the RoC order may have to be modified.

c. Ambiguities

(1) Extrinsic evidence

Boundary re-establishment is based on collecting, evaluating, and weighing evidence to determine a boundary's most likely original location. In addition to the written description and its original physical monumentation, we have to consider *extrinsic evidence*.

Extrinsic means "outside", so extrinsic evidence is from outside the written description. This can include physical evidence not referenced by the description but which exists because of the description (eg, fences, tree lines, etc) as well as competent parol evidence.

Extrinsic evidence cannot be used to change the terms of the description, which would violate the SoF, only to help explain them.

Example: A description calls for a wooden post, but an iron pipe is found instead. The pipe can be accepted as a replacement if it is correctly placed and documented.

(2) Ambiguity Types

An ambiguity exists when a term can be *reasonably* interpreted in more than one way. Unfortunately, it is easy to introduce ambiguities particularly if the description writer does not understand the RoC, controlling and informative terms, the role of physical evidence, etc. What might make sense to the writer may later be difficult to establish if terms used are unclear or have multiple interpretations. This can be exacerbated if the description was not based on a survey.

There are two kinds of ambiguities: *latent* and *patent*.

(a) Latent

Hidden; in reading the description its terms are clear but an ambiguity arises upon their application. It's not readily apparent from the wording.

Example

"Commencing at a point $84 \frac{1}{4}^{\circ}$ East of the center of Section Seven (7); being station "A" having bearing tree viz; a black oak 14 inches in diameter, South 6° East 57 links distant, (said black oak being North $84 \frac{3}{4}^{\circ}$ East, $24 \frac{7}{25}$ rods of Stephen A. Thayer dwelling house), thence..." (*from a deed recorded in 1999*)

Although the deed was recorded in 1999, the description propagates old measurements and monument calls. Whether the black oak and Thayer's house, or their remains, still exist will not be known until field investigation. If neither can be found then extrinsic evidence is needed to determine their original locations. This clarifies the terms but does not change them.

(b) Patent

Obvious; visible on the face of it; realize there is an ambiguity by inspection. It is apparent from the words in the description that here is a problem.

**Lot 2 CSM 5857 CS 27 Diagonal 307 and 308, R12866 Diagonal, 52-5 Diagonal
26 Diagonal 89 described as Sec. 13-7-6, Part of E 1/2, SW 1/4 and Sec. 24-7-6,
Part of NE 1/4, NW 1/4, 5.751 acres**

(from a deed recorded in 1996)

A patent ambiguity cannot resolve by extrinsic evidence since there is a mistake in the original contract. If possible, the mistake must be determined (in some cases requiring court intervention) and a correction applied. The mistake should be legally documented to include it in the chain of title.

2. Call for Survey

Boundaries that are monumented and surveyed can control only if a conveyance is based on them. An example is the USPLS, of which one premise was “survey before sale.” Most state subdivision statutes require that lots and streets are monumented as part of the approval process. These are typical for simultaneously created properties but may also apply to sequential and combination parcels if the survey is identified in the description.

3. Monuments and Corners**a. Monument, Corner: What’s the Diff?**

A *corner* is a location where a boundary changes direction. It has a position but no physical characteristics. A *monument* is a physical feature used to mark a corner location. It has physical dimensions but the structure itself is subordinate to a corner location. A monument, providing it controls, is a corner surrogate; evidence of the corner.

b. Monument**(1) Control**

A monument must satisfy three requirements to control corner location over lesser RoC elements. It must be:

1. Called in the description
2. Identifiable
3. Undisturbed

A replacement monument can stand for an original one if its lineage is documented. The surveyor must determine from the documentation and any other evidence if the replacement monument is acceptable, Figure 17. If not, lesser RoC elements might control corner location.

A monument meeting those conditions can exert two kinds of control over a property boundary:

- direction *and* termination
- direction *only* when the corner location encroaches on a higher right or claim. Line termination is determined by the higher claim.

The latter is the case with USPLS closing corners which were intended to be placed on Township boundaries.



Figure 17

(2) Accessories

Nearby physical objects to which corners are referenced for their future identification or restoration. Accessories include bearing trees, mounds, pits, ledges, rocks and other features to which distances or directions (or both) from the corner or monument are known. Accessories measured when the monument was set are considered part of the monument.

While commonly used in USPLS surveys, accessories may also appear in a narrative description:

“Commencing at an iron stake 81 feet West of a point on the West side of a highway on Section line between Sections 3 and 4, Township 6 North, Range 10 East, and said point being 237 feet from intersection of West side of highway and high water mark of Lake Waubesa, from which iron stake an ash tree 11 inches in diameter bears North 74 degrees East, magnetic bearing 14 feet and a double ash tree 16 and 8 inches in diameter bears South 58 degrees East, magnetic bearing 39 feet; thence...” (*from a deed recorded in 1997*)

c. Corners

(1) Disposition

Disposition is the certainty of corner location based on available evidence.

• Existent (Found)

The corner position can be identified by verifying the evidence of the monument, or its accessories, by reference to the description that is contained in the field notes and other original documents, or where the point can be located by an acceptable supplemental survey record, physical evidence, testimony, properly referenced replacement monument. Original location is certain.

• Obliterated

One at which there are no remaining traces of the monument, or its accessories, but has sufficient parol or secondary evidence to re-establish the corner location within a reasonable degree of certainty.

• Lost

Corner whose position cannot be determined either from traces of the original marks or from acceptable evidence or testimony that bears on the original position, and whose location can be restored only by reference to one or more interdependent corners.

(2) Common report

Common report is corner location acceptance based on reputation (eg, *common law*). The location must meet three conditions:

- Reasonable location
- Accepted by all owners as the correct location.
- The location cannot be disproved

Surveyors should avoid using this as corner location justification. The first two conditions are heavily influenced by unwritten rights, for which a surveyor has no jurisdiction. Final corner location should be supported by evidence collection and evaluation.

4. Measurements

a. Distance and direction

Where monuments are not called, or are called but lost, the next elements to re-establish corner position are direction and distance. Distance is usually easier to recreate than direction, particularly if a magnetic meridian was used. If two adjacent corners are found, they can be used to determine original direction basis.

While a monument has finite dimensions, depending on how they are made or expressed in the description, measurements can be variable. If a course description is "...thence North, 200 ft;" how close to "North" must it run? Is the distance accurate to 1 ft, 10 ft, or 100 ft?

On the other hand, contemporary descriptions sometimes overstate accuracy: bearings to 0.1 seconds and distances to 0.001 ft. Or sometimes, you have to scratch your head:

"...thence S88°16'52"W, 0.30 feet to the existing east line of Section 1, T5N, R9E; thence S00°18'01"W, 0.01 feet along said east line of Section 1; thence S00°18'01"W, 33.20 feet along said east line;..." (from a deed recorded in 2002)

Try measuring 0.30 ft and 0.01 ft in specific directions. Equipment setup and pointing errors can easily exceed these distances.

b. General directions

General directions do not include a numeric value and end with a *erly* suffix eg, *northerly*, *easterly*, etc. A general direction is an informative term indicating a range of possible directions, Figure 18.

There are eight general directions:

- four centered on the cardinal directions (red)
- four at 45° to cardinal (blue)

Each covers roughly 45°.

A line whose bearing falls between N 22.5° E and N 67.5° E has a northeasterly general direction.

Because it is a range, a general direction requires some form of controlling term to specifically fix direction or path.

Example: "...S10°22'E, 175.0 ft to Mahun River; thence easterly along Mahun River to..."

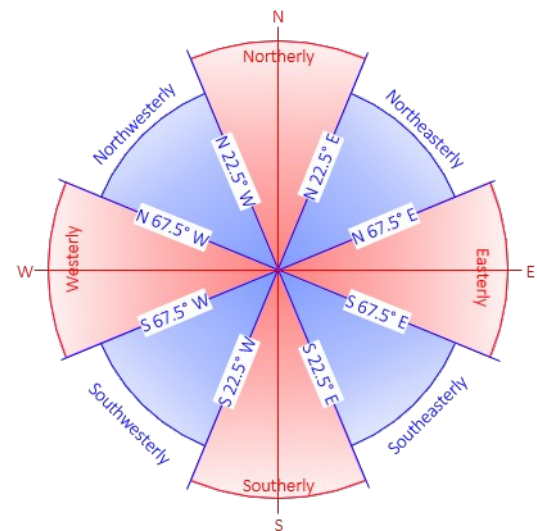


Figure 18

Each general direction range is approximate so these are not strict definitions. But an ambiguity can be created if a general direction call wanders too far out of its range.

c. What's a conflict?

Example:

The last two courses of a description are "... thence S18°20'W, 283.2 ft to a 1/2-inch iron pin; thence 220 ft back to the point of beginning."

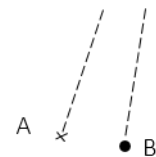


Figure 19

All corners have been recovered with no issues until the last one before the POB, Figure 19.

No monument evidence is found at S18°20'W, 283.2 ft, point A.

A 1/2-inch iron pin, is found at S17°50'10"W, 285.72 ft, point B.

Positions A and B are approximately 3 ft apart.

Distances measured from the POB are 220.5 ft to A and 224.52 ft to B.

Although a found called for monument controls over direction and distance, does point A fit the closing line better than the pin at point B? Can lower elements control over higher ones without extrinsic evidence?

Is the 224.52 ft distance from B to the POB within the uncertainty of the 220 ft description call? How much must course elements differ for them to conflict with each other?

What if the last course description was "thence back to the point of beginning"?

5. Area/Coordinates

a. Area

Generally, area and coordinates are the lowest elements because they are computed from higher ones.

Areas on USPLS plats are *nominal* or *legal* areas. A regular Section is 640 acres, although it can be larger or smaller depending on convergence, survey errors, etc.

Subdivision laws generally require lot areas be included on the plat. Most metes and bounds ad quasi-metes and bound descriptions include an area call in the summation. In these cases, area is usually informative and yields to higher elements, particularly if accompanied with "more or less."

Area is a controlling term if the original intent was to convey a specific amount: "...the Easterly 2 acres" or "...the southeasterly half." The line(s) must be established so as to enclose the intended amount.

A common problem problem with area calls is using multiple units:

"...said parcel containing 53,245 sq ft or 1.2 acres..."

These are incompatible accuracy levels: the nearest square foot is not the same as the nearest tenth of an acre.

b. Coordinates

Although we may be used to collecting coordinates with GPS, these are still derived quantities and yield to higher elements. Can coordinates be controlling terms? Historically that hasn't been the case, but...

"...thence Northerly 487 feet, more or less, to GPS waypoint, Lat. 43.828655, Long.-90.661033; thence Northwesterly 296 feet, more or less, to GPS waypoint, Lat. 43.829424, Long.-90.661390; thence Westerly 298 feet more or less, to GPS waypoint, Lat. 43.829516, Long.-90.662515;..." (from a deed recorded in 2005)

There are no monument calls, distances are informative, so the waypoint coordinates control course directions and terminations. Units are not given on the coordinates, but it appears they are decimal degrees. Are they accurate to 0.000001° (0.0036 seconds)? Which datum and adjustment?

What about using grid coordinates, Figure 20, like State Plane Coordinates (SPC) or Universal Transverse Mercator (UTM)?

While coordinates make computations easier, a fundamental problem with SPC and UTM is that computed distances and directions between corner

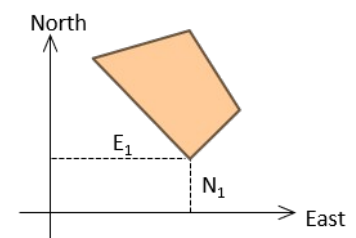


Figure 20: Grid Coordinates

coordinates are not the same as ground measurements between those same corners. These are due to distortions created projecting the Earth's three-dimensional surface into a two-dimensional plane, Figure 21.

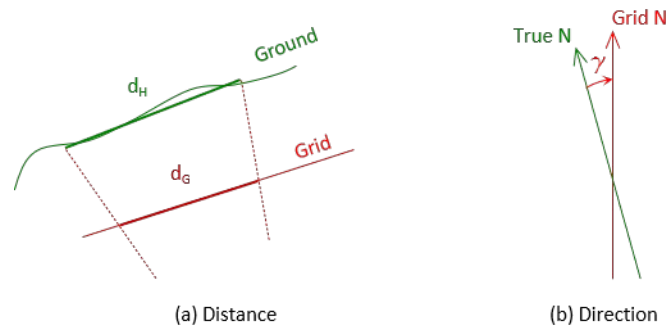


Figure 21: Ground to Grid Distortions

Many States have adopted regional Low Distortion Projections (LDP) which bring the grid closer to ground level. Along with covering smaller areas (e.g., counties), distortions are considerably reduced and in many cases ground and grid measurements can be considered the same. With most LDPs ground and grid differences are around 1/40,000. Will LDP coordinates begin to move up the RoC *Written Intent* ladder? Will we see descriptions written using LDP coordinates exclusively?

6. “...more or less”

more or less (approximately, plus minus, about) is used to indicate a quantity of unknown certainty. The deed element is approximate and informative not controlling.

Approximate elements can help clarify controlling ones. Because water boundaries can move over time, meander corners are used to locate the water at time of survey. On a map the approximate distance between a meander corner and the water boundary is typically shown with a \pm suffix (“25 ft \pm ”). Its equivalent in a description would be “...to a meander corner located 25 ft more or less southeasterly of Moon Lake;...”

Used without a controlling term, “more or less”, “approximately”, and “about” are patent ambiguities.

Example:

“...thence running in an Easterly and Southeasterly direction along the South and Southwesterly line of private road that is used by the grantee herein a distance of about 28 rods; thence...” (from a deed recorded in 2001)

The course does not have a controlling termination point.

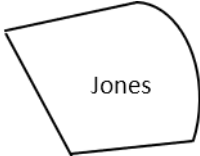
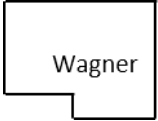
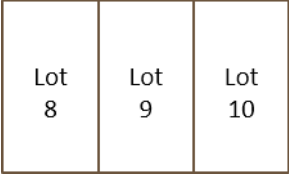
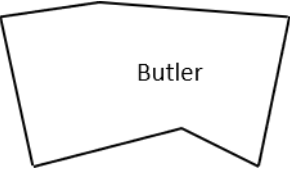
7. Quasi-Metes and Bounds (QM&B)

Combination conveyance qm&b descriptions are among the easiest to write and, at the same time, most likely to cause problems. When a layperson sells part of his property they often resort to a qm&b format because it seems to make sense. Selling the “East 100.0 ft...” then the “West 100.0 ft...” appears straightforward until it's later discovered that parent's actual dimension isn't 200.0 ft. Besides the dimension issue, the configuration of the parent can create ambiguous interpretations.

Because a parcel is constructed of combined simultaneous and sequential operations, resolving its boundaries may include senior-junior rights as well as proration.

Typical qm&b descriptions example and their ambiguities are shown in Table 1.

Table 1: Quasi-Metes and Bounds Examples

Description	Parent Parcel	Ambiguities
“...Easterly 100.0 ft of the Jones land...”	 <p>A diagram of a parcel labeled 'Jones' with an irregular shape, including a curved western boundary.</p>	Where is the west line of the parcel and what is its configuration?
“... southerly 5000 sq ft of Wagner...”	 <p>A diagram of a parcel labeled 'Wagner' with a rectangular shape and a small rectangular notch on the southern side.</p>	What is the configuration and location of the northerly parcel line?
“...northerly half of Lot 9 and 10...”	 <p>A diagram showing three adjacent rectangular lots labeled 'Lot 8', 'Lot 9', and 'Lot 10' from left to right.</p>	Does the parcel contain half of Lot 9 and half of Lot 10 or half of Lot 9 and all of Lot 10?
“...the northwesterly 1/4 acre of Butler...”	 <p>A diagram of a parcel labeled 'Butler' with a trapezoidal shape and a pointed bottom edge.</p>	Where is/are the line(s) of the parcel?

Each description has a controlling term, but is still ambiguous. All are actually determinable using common law principles, but the interpretation may not be what the composer intended. Herein are two problems:

Once included as a deed description, it must be interpreted according to the RoC and common law regardless “what was in the minds of the parties.” Remember *Willis v. Champlain Cable Corp.*, 748 P. 2d 621- Wash: Supreme Court 1988.

Description writers and surveyors don’t always play by the same rules: We have to follow the RoC and common law principles to interpret the description and evidence, but the description writer is not bound by, nor usually even aware of, those same principles.

Consider the parcel in Figure 22. The grantor conveys the “Easterly 100 ft of...”. Lacking physical and parol evidence, how would the westerly line of the conveyance be established?

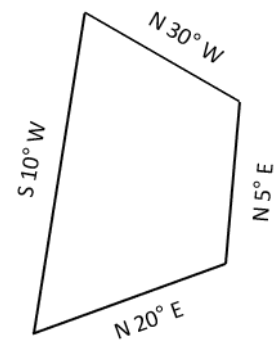


Figure 22: Parent Parcel

There are two characteristics of the line that must be determined: its direction and its placement.

Figure 23 shows reasonable ways the line can be oriented.

Figure 24 shows reasonable ways 100 ft can be measured.

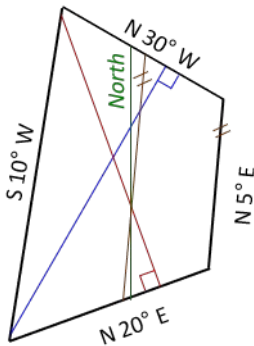


Figure 23: Possible Directions

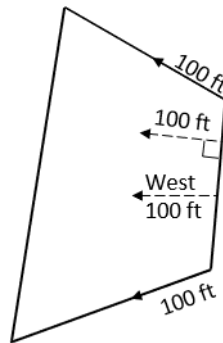


Figure 24: Ways to Measure 100 ft

There are a few basic common law principles that most courts will attempt to apply when there is insufficient extrinsic evidence:

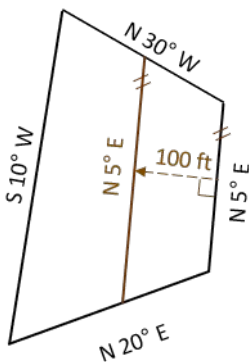


Figure 25: Probable Interpretation

Create a child similar to the parent by creating a parallelogram. That is, the direction of the new boundary is parallel with the referenced parent boundary.

Where multiple interpretations exist, the one most benefiting the grantee, within reason, is used.

When applying the two principles to the description, the westerly line is placed parallel with and 100 ft perpendicular to the easterly line of the parent parcel, Figure 25.

Parallel to create a parent-like child and 100 ft perpendicular to give the grantee the greatest amount of land.. Any other way of laying out 100 ft will result in less area.

As these principles iron-clad? Of course not. Although we attempt to apply them uniformly (as a last resort) there are situations in which the result does not make sense.

The owner of the parcel in Figure 26 conveys the "...Easterly 300 ft of...". How would the westerly line of the child be laid out?

The easterly line of the parent is a 500 ft radius curve. To create a parallel line offset 300 ft means constructing a concentric arc (sharing the same radius point) whose radius is 500-300=200 ft. However, if the arc is extended it does not intersect the parent's boundaries- the parent remainder becomes a landlocked circular island, Figure 27. Although that gives the grantee the greatest benefit, it's not a reasonable interpretation.

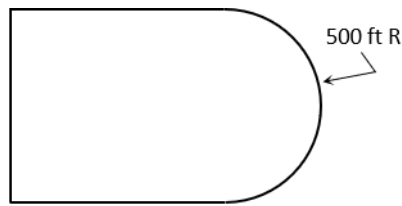


Figure 26: Parent Parcel

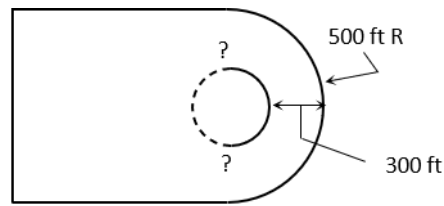


Figure 27: Parallel and Perpendicular?

Easy to write, but without extrinsic evidence, qm&b descriptions can be difficult to interpret.

IV. Wrapping Up

The SoF requires all salient transaction information be written down in a document which can stand on its own. No subsequent action can act to change that written intent although additional extrinsic evidence may be needed for clarification.

New boundaries are created by one of three processes. Which is used affects the type of description and establishes the relationship between adjoiners for all time.

Just about anyone can write a property description and have it included on a deed. It would be best if every property description were composed by someone who understands not only the intent of the parties but also how to word it to minimize future ambiguous interpretations. Basing it on a current survey to better tie in adjoiners and other physical evidence would be even better.

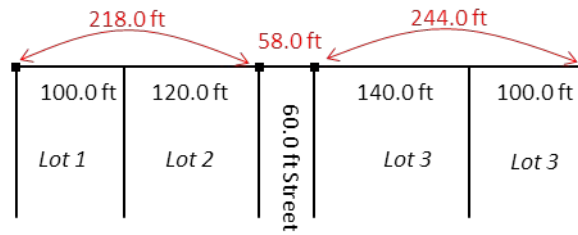
Boundaries cannot be re-established from written documents alone. Nor can they be interpreted without investigating surrounding boundaries. Each boundary affects more than a single owner so misinterpretation affects multiple owners' rights. Having measurement information, distances and directions, in a description allows us to create the boundaries mathematically, whether in mapping software, CAD, or GIS. But those represent only part of the boundary evidence. As we see from the RoC, measurements are "inferior" to other elements when in conflict but that conflict may not be known unless boundaries are compared to adjoiner records and field evidence.

Specific jurisdictional common law interpretations will control over any general ones we discussed or that are presented in textbooks. Although not always obvious, a Land Surveyors should understand whether a boundary situation is a Matter of Survey to a Matter of Title. A legal professional should be consulted if there is any question about a particular issue, especially where unwritten rights and gaps are concerned.

V. Discussion Examples

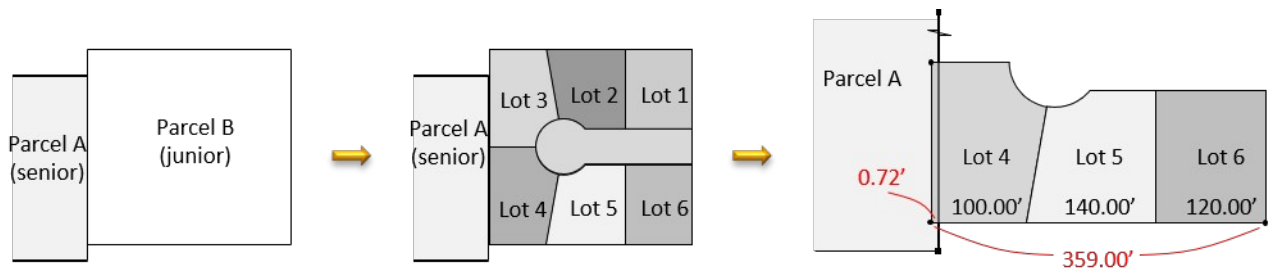
A. Example 1

The lots and street in the diagram below are in the same subdivision. Black numbers are record, red are contemporary measurements between found original corners. Is there any excess or deficiency and if so, how would you deal with it?



B. Example 2

The owner of Parcel B subdivided his property into 6 lots and a dedicated street. On the last diagram black numbers are record, red are contemporary measurements between found original corners. What are the south line lengths of Lots 4-6?

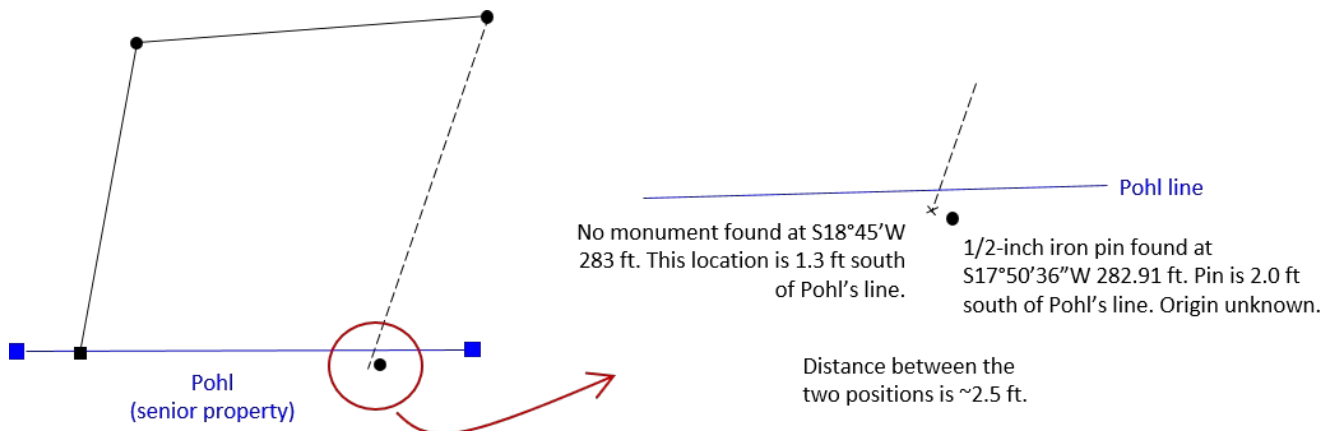


C. Example 3

The description of a property is:

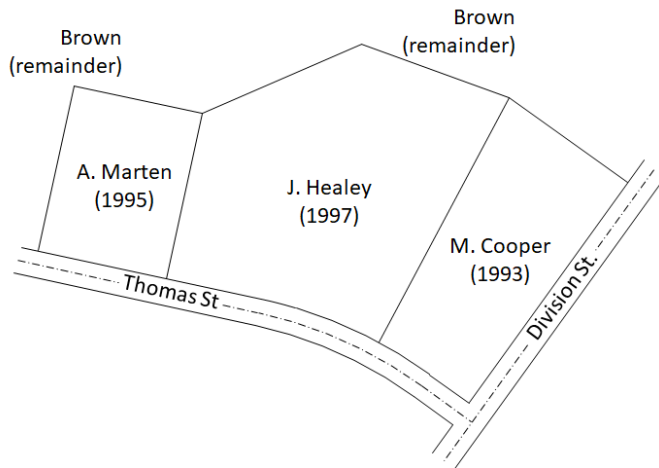
“...Beginning at a 1-inch diameter iron bar in the north line of the Pohl property; thence N10°20'E 241 ft to a 1/2-inch iron pin; thence N85°35'E 267 ft to a 1/2-inch iron pin; thence S18°45'W 283 ft; thence back to the point of beginning”

The surveyor performing the property resurvey uses the found monuments on the first course as her bearing basis and all three elements match satisfactorily on the first two courses. However, the third course presents a dilemma. The magnified diagram below shows the situation with the third course.



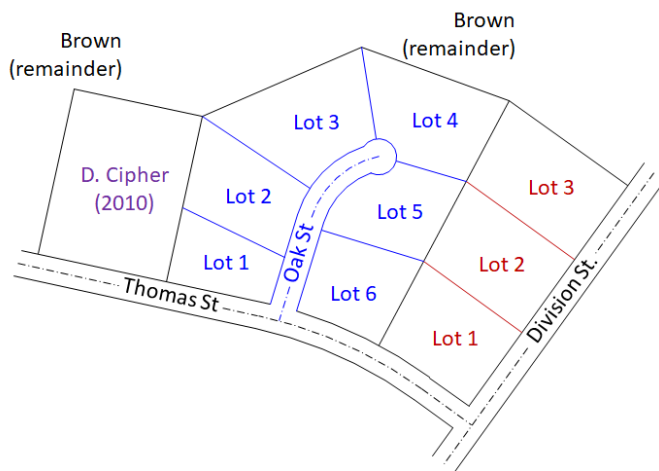
Assuming no other evidence is available and using only the description, how should the surveyor locate the last two courses?

D. Example 4



Brown owned a large rural property at the corner of Thomas and Division Streets, both public roads.

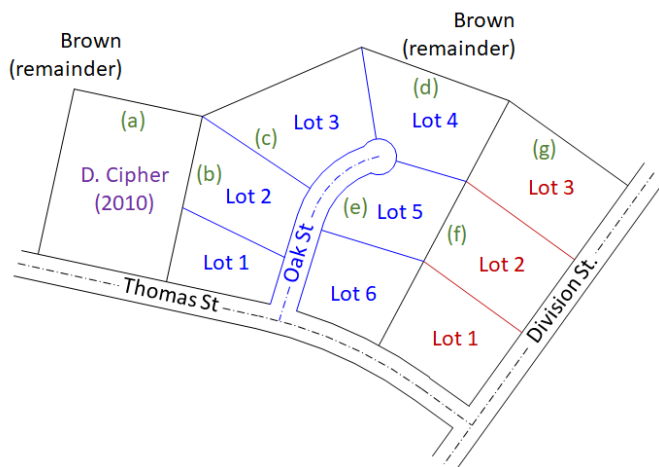
Over time, Brown created and sold off three parcels to Cooper, Marten, and Healey. Creation date for each is shown in parenthesis.



In 2001 Healey subdivided his entire parcel.

In 2007, Cooper subdivided his entire parcel.

In 2010 Marten sold his entire parcel to D. CIPHER.



Which, if either, is the senior property along each of the following labeled lines? Circle your answer.

- | | | |
|-----|--------|--------|
| (a) | Brown | Cipher |
| (b) | Cipher | Lot 2 |
| (c) | Lot 2 | Lot 3 |
| (d) | Brown | Lot 4 |
| (e) | Lot 5 | Oak St |
| (f) | Lot 2 | Lot 5 |