BROWN’S BOUNDARY CONTROL
AND LEGAL PRINCIPLES
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Sixth Edition

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Based on the Original Ideas and Concepts Created by
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PREFACE TO THE SIXTH EDITION

In recent months we have become aware of some writers who are attacking our philosophy and teachings as being outdated and not in keeping with modern surveying. In the nearly 20 years we have been writing this book, we have not waivered from our beliefs and teachings, that “Surveyors should practice surveying, as defined by the law, and not law, as practiced by attorneys.”

It has now been five years since the last edition of Boundary Control and Legal Principles was published. In the intervening years we have become a little older, gained more experience, hopefully have gained more wisdom, had some medical problems, won a few boundary cases, and lost a few boundary cases, have become frustrated and dumbfounded as to some judicial decisions rendered by the courts, yet in this time thousands of original monuments have disappeared and thousands of new monuments have been created, probably to place burdens on the surveyors and courts in the future.

In this new edition we have hopes that new surveying students and past graduates, as well as those many surveyors who get up every morning, put on their field boots, and then go to the field to look for evidence of boundaries that may have been created years ago or who will create new boundaries to be recovered in the future, will find this book a companion to be used, with confidence.

This book is dedicated to those new surveyors who will attempt to “follow the footsteps” of many unknown surveyors who have left this world and have taken worlds of information with them, never to be recovered.

May, 2008
Walt Robillard, Atlanta, GA
Don Wilson, Newfields, NH
BROWN’S BOUNDARY CONTROL
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CHAPTER 1

HISTORY AND CONCEPT OF BOUNDARIES

1.1 INTRODUCTION

The history and location of boundaries are steeped in the history of the world from prerecorded times to today. These boundaries are a result of actions and law. Boundaries can be related to the areas of history, politics, surveying, and law. Both boundaries of an international nature as well as between individuals have caused problems to have been fought, are being fought, and will be fought, in the future over the location of boundaries between nations, states, and individual parcels of land within “Happy Acres” subdivision.

Wars have been fought on both an international basis and in local neighborhoods, and people have been killed over boundary disputes of an inconsequential nature that have ranged from hundreds of miles to a fraction of a foot or meter. Boundaries are personal in nature, and people have been and will continue to be protective over the misidentification or misalignment of a known or perceived boundary infringement. The surveyor may become the common denominator in a boundary problem, from preparing an erroneous map showing the boundary between two or more nations to the erroneous depiction of a single line between two landowners.

In the primeval forest, particularly in the plant kingdom, there are no known boundaries between living things. Although some horticulturists dispute the fact, we accept the fact that plants do not create boundaries to separate themselves. Animals—especially humans—create boundaries. Although we like to think that only humans create and appreciate boundaries, it has been recorded in nature that most mammals, some reptiles, and a few fish create, identify, mark, and defend boundaries.

In this book we discuss the creation, identification, description, and recovery of boundaries among people. We do not include the recovery and interpretation of the
evidence of once-created boundaries but examine how boundaries are created, how they are described, and the technical legal and ethical ramifications of such boundar-
ies that separate rights, both real and perceived, in real property.

Some boundaries are created in a random manner, whereas others are created according to preconceived plans, identified by any manner of a written description(s) and then litigated according to common law, case law, or statute law. Although it is not our intent in this book to dwell on the creation of boundaries by the lower forms of animal life, their actions in creating boundaries should be examined, because certain principles are similar.

Field examinations and studies by naturalists have revealed that most animals really don’t create boundaries per se, but it has been identified that they usually create the terminal points (corners) and then identify the boundaries between these points. Although lower forms of animals may create boundaries that may not be of a permanent nature, humans usually create boundaries in several ways. For the sake of simplicity, these may be placed in the following categories:

1. By action. Physical acts create a line and points on the ground. This is fol-
lowed by placing actual monuments at the corner points and identifying these points (corners) and line objects. The lines and objects are then described and may be identified on plats or in field notes.

2. By writings. The written word becomes the method of creation when a person describes corners and/or lines in a deed and then conveys to these described lines, prior to the completion of a survey.

3. By law. Ancient common and modern statutes are relied on to create, modify, and relocate many modern boundaries.

The following principles are introduced in this chapter and discussed in detail in later chapters:

PRINCIPLE 1. Boundaries enjoy a long history in both mythology and Judaic–
Christian history.

PRINCIPLE 2. A surveyor creates land boundaries. These created lines, which are separate and distinct from property lines, which are determined by legal principles and law.

PRINCIPLE 3. A described closed boundary identifies a claim of right to any prop-
erty interest for which any person can make a claim of possession through a claim of title. These boundaries may be either macro or micro in nature.

PRINCIPLE 4. A person or landowner can legally convey only the quality and quantity of interest to which he or she has title.

PRINCIPLE 5. In most instances there are no federal laws describing real property rights.

PRINCIPLE 6. Real property rights are determined according to the laws in effect in the particular locale where the land is located. English common law is the predominant law, and it is described as the lex loci.
PRINCIPLE 7. Once boundary lines are created, the lines may, by law or by the actions of landowners who have vested rights, be changed.

PRINCIPLE 8. Law does not provide for two original descriptions of the same parcel.

PRINCIPLE 9. Multiple boundary descriptions may exist for the same parcel, but only one is controlling.

PRINCIPLE 10. There can be only one original boundary survey and description, all subsequent ones are retracements.

1.2 SIGNIFICANCE OF BOUNDARIES

The description of property by surveys and landmarks and by reference to boundaries is very ancient. Basically, property interests are separated by boundaries. From pre-Colonial times in the United States, many wars, both local and regional, have been fought, and people have been killed as a result of disputed boundaries. This problem was probably inherited from the European continent when we adopted English common law as the basis of our common law.

In Great Britain and in Europe, territorial boundaries have, for the most part, generally been stable because the lines were etched in antiquity. Once parish boundaries were established in England, many during Roman times, they formed invisible webs or lines around families and bound them into communities, and ultimately separated communities from one another. This historical background was inherited in the United States, and these distinctions exist today as a result of this historical influence.

Stories abound in both the United States and Great Britain in which boundaries have affected people’s lives. Individuals and groups go to extremes over boundaries, for a boundary can determine such political ramifications as citizenship and jurisdiction in legal matters. A tale related from Colonial times tells of the decision of surveyors who were engaged to run the boundary line between Kentucky and Tennessee to place a jog in the line when a landowner placed a jug of rum near his property and told the surveyors that it was theirs if they found it to be in Kentucky. It was. Naturally, the line has a jog in it. One of the authors of this book, Walt Robillard, remembers that when he was a young boy growing up near the Canadian border, his grandfather would take him to a tavern that straddled the U.S.–Canadian border. On the U.S. side of the bar, the serving of drinks stopped at midnight and was “never on Sunday” but continued on the Canadian side. At the stroke of midnight and on Sundays, all drinks were served on the Canadian side. The people would move physically from the United States into Canada.

In 1870 the Reverend Francis Kilvert, an Anglican priest in Wales, related how one of his parishioners occupied a house that straddled the border in Wales on the edge of Brilly Parish. It was suggested that it would be more desirable for the parishioner to give birth to her child in his parish. The line between the parishes was witnessed by a notch on the chimney. To ensure that the child would be born in the proper parish, the midwife had the mother give birth standing up in a corner on the proper side of the parish line.
People take boundaries seriously. Yet what they really are saying is, “I want the rights that I am entitled to in this property” or “I want those rights in that parcel of land.” Boundaries do not determine rights in land, but boundaries identify the limits of any rights a person or group of people may have created or identified and now claim.

1.3 BOUNDARY REFERENCES

**Principle 1.** Boundaries enjoy a long history in both mythology and Judaic–Christian history.

Over the years, historic English language developed certain terms that depict and/or identify boundary problems. Until the advent of published maps, boundary identification and the resulting problems and discrepancies were passed from generation to generation by word of mouth.

It was not until mapping became a part of everyday living that boundaries were identified to a degree of certainty that they no longer relied on the spoken word. In all probability, many of the boundaries on modern maps were placed there based on the testimony of people who identified them. There are many place names that indicate evidence of boundaries. In England the Old English term *maere* translates to *boundary*. An examination of modern British Ordnance Survey maps indicate such names as Merebrook and Merebeck, indicating that certain streams were boundaries.

Once a boundary or boundaries were established and identified, they would be of no value if society could not assure them a degree of certainty. Once again the gods and society were called on for guidance and help. The ancient Greeks assured that boundaries would be sacrosanct. They “appointed” the goddess Terminus to be the protector of these boundaries. This system was inherited by the Normans and Saxons in England in two ways: first, by the manner in which boundary stones were originally marked, and second, by the practice of *beating the bounds*.

The historic practice of Beating the Bounds was composed of the ritual of selecting children of the locality, usually boys, and then, accompanied by a member of the town, a clergyman, and the parties to the land transfer, this group would walk, or perambulate, the boundaries, and at each corner one of the boys would be suspended by his feet and his head would strike the monument. Then in the event of a future dispute, the boy would go to the corner and point out its location.

For centuries, surveyors have marked boundary stones (corners) by cutting crosses into rock monuments (see Figure 1.1). This practice was probably brought to America by early English surveyors, who used the same practice in England. An examination of early survey and mapping practices indicates that early English surveyors would cut a cross into the monument as protection or to indicate the bounds of a religious holding. They then indicated these beacons (monuments) on maps in the form of crosses (see Figure 1.2). In all probability, these crosses were cut into the stone and then shown on maps in hopes that the Christian God would protect them as Terminus protected Greek boundary stones had done.
Figure 1.1 Boundary stone marked with a +; of medieval origin. (Courtesy of Prof. Angus Winchester.)

Figure 1.2 1675 Map of Exmoor Forest, Devon. Note crosses at some corners. ( Courtesy of Public Records Office, London.)
1.4 TERMINUS: THE GOD (OR GODDESS) OF BOUNDARIES

Terminus was designated by the ancient Romans as the god of boundaries. Some believe that this god evolved from the ancient Greek goddess Terminus. Today, surveyors, real estate attorneys, and judges who must make legal determination on land matters should consult the wisdom of this ancient god(dess). There are numerous references in the Old and New Testaments concerning boundary stones, markers, landmarks, and boundaries. Ovid, the Roman poet, wrote: “O Terminus, whether thou art a stone or a stump buried in the field, thou hast been deified from days of yore . . . thou dost set bounds to peoples and cities and vast kingdoms; without thee every field would be a root of wrangling. Thou courtest no favour, thou art bribed by no gold; the lands entrusted to thee thou dost guard in loyal good faith.”

To show faith in such a god and with the hopes that a favorable response from the god would bring peace to a community and stability to its boundaries, a festival was held in Terminalia on February 23. During this annual festival, landowners would meet at their common boundary stones. Each would place a garland of flowers and the ceremony would culminate with a minor feast of cakes and honey and the toasting with wine. Then an animal, usually a pig or a lamb, would be sacrificed and the bones and blood deposited near the site.

Titus Livy wrote in his History of Rome that the Romans showed such favor to Terminus that at Rome’s founding a temple was erected to Terminus on one of the seven hills, and his domain was never questioned. To show that all of the gods of Rome looked to Terminus, Livy wrote: “The gods are said to have exerted their power to show the magnitude of this mighty empire . . . . The fact that the seat of Terminus was not moved, and that of all the gods he alone was not called away from that place consecrated to him, meant that the whole kingdom would be firm and steadfast.”

1.5 DISPUTES AND BOUNDARIES

Principle 2. A surveyor creates land boundaries. These created lines, which are separate and distinct from property lines, are determined by legal principles and law.

Disputes as to boundary location and/or boundary line identification predate recorded history. Until the development of modern maps at scales that permit adequate and positive identification of boundaries, individuals and communities depended on the spoken word to “seal” the location of boundaries and possession to maintain them. One historical method that was practiced, and in some areas is still practiced, is beating the bounds. This practice was possibly a vestigial reminder of what was a quasi-religious practice first used to identify parish boundaries between religious orders (see Figure 1.3). Today, this historical practice is still referred to as beating the bounds and is still practiced on a very limited scale in a few states.

Disputes over boundaries were frequent between communities and between church lands. This ancient ritual was usually carried out during Rogation Week,
the period between the fifth Sunday after Easter and Ascension Sunday. On the day selected, the parson, the constable of the townships, and the steward of the court (clerk) of the manors, accompanied by townspeople, both young and old, would take ample supplies of food and drink and would perambulate (walk) the boundaries to be identified. It was in this manner that they sealed in the memories of the townspeople boundaries that had never been reduced to writing or placed on a map. To make the occasion more memorable, young boys were selected and given a memorable experience at each of the beacons (corner monuments). Trials over disputed boundaries and depositions in many shire (county) courts have left us with excellent accounts of some of the rituals that helped the young people remember the disputed boundaries. Some are related in the following experiences.

In 1687, an elderly William Gregory testified in a boundary dispute of a line in Exmore (Somerset) how, as a child of seven in 1601, he assisted in a perambulation of Exford Parish. As the group passed one of the boundary stones, one of the older gentlemen called to the boy, “William, put your finger on the meerestone, for it is soe hot it would scald him.” William related “that in doing so he layd hold on my hand and did wring one of my fingers sorely so that for the present it did greive me very much.” William then remembered the person stating: “Remember that this is a boundary stone and it is a boundary to the parish of Exford.”

Not to be outdone, in 1635, Robert Fidler testified in the matter of a boundary dispute that as a boy he “had his eares pulled and was set on his head upon a mearestone neere to a newe ditch of Ormisirke Moore and had his head knocked to the said stone to the end to make him better remember that the same stone was a boundary stone.”

The ritual of perambulation or beating the bounds can still be found in some communities. Although historical, it still has sound legal purposes and principles. During
Colonial times, it was required that adjoining landowners walk and inspect their common boundaries yearly. The law also provided a penalty for those who failed to comply. More recently, at least in New England, municipalities are required to inspect and renew their bounds periodically. This remains the law in several states, although most do not carry out the “letter of the law.” Some towns still undertake this job faithfully by surveying and marking their boundaries, and with new technology they are placing coordinates and global positioning system (GPS) values on monuments and corners. This ancient practice ensures landowners and others of the “true and correct” bounds and helps relieve surveyors of possible future surveying costs that are necessary to determine such lines when they are coincident with private boundaries. Yet, disputes still arise when surveyors apply modern technology to ancient boundary descriptions.

An examination of many early English maps and names reveals that some disputes were centuries old when William the Conqueror arrived to turn the Anglo-Saxon world into turmoil. A selection of some of the names on present-day maps in the United Kingdom are as follows:

- *calenge* (Middle English): challenge, dispute
- *ceast* (Old English): strife, contention
- *erioch* (Gaelic): boundary
- *devise* (Old French): division, boundary
- *flit* (Old English): strife, dispute
- *fyn* (Welsh): end, boundary
- *grima* (Old Norse): marker boundary blaze on a tree
- *ra’* (Old Norse): landmark boundary, settlement on a boundary
- *skial* (Old Danish): boundary, boundary creek
- *terfyn* (Welsh): boundary
- *threap* (Old English): dispute

Few of these names were adopted in the United States or carried into our American language when English common law was accepted, but we have developed our own words to describe the problems that result from boundaries.

The historical result of this ancient practice is that today in England the number of land surveyors who practice land boundary surveys on boundary disputes is probably less than 100 for the entire country.

1.6 ROLE OF THE SURVEYOR IN BOUNDARIES

**Principle 3.** A described closed boundary identifies a claim of right to any property interest for which any person can make a claim of possession through a claim of title. These boundaries may be either macro or micro in nature.
The surveyor should be able to make a distinction between the types or classes of boundaries that may be encountered. There are boundaries—and then there are boundaries. One will find both macro and micro boundaries. Macro boundaries range from international boundaries between nations and between subdivisions of nations, and a micro boundary is a boundary on a local level, such as a boundary between land grants and possibly between individual parcels of land. Surveyors can become involved with boundaries in two separate and distinct ways: those that represent major proportions or areas, macro boundaries, and others that are smaller and parochial in nature, micro boundaries (Section 3.2). Few surveyors have to make distinctions creating or retracing macro boundaries, but most surveyors are intimately involved with micro boundaries. Few retracing surveyors are asked to create or retrace international boundaries, state boundaries, or country boundaries, yet many of the boundaries created and retracted will be of small parcels of a single lot or subdivision. Seldom will a surveyor be asked to retrace an international boundary, much less a boundary between two states or even a county boundary in dispute. A list of possible distinctions between such macro boundaries and micro boundaries is identified in Section 3.2.

The methodology of creating macro and micro boundaries may be similar, yet the application of law may be entirely different in its application in retracing these boundaries. The surveyor creates these invisible boundaries, which are a product of work predicated on instruments used and the capabilities of the surveyor and methods employed.

Usually the original surveyor creates the boundaries of land parcels through actions and/or words and according to the law. Once an original boundary is created and described, that description remains in effect forever, legally. According to federal statutes as well as common/case law, those lines remain fixed in perpetuity, from the time when the first property rights are conveyed in reliance on the lines and corners described. Subsequently the same surveyor or other surveyor or surveyors are the individuals who retrace the boundaries originally created and who may create new evidence for future surveyors to search for.

The first belief that any surveyor should have when entering the area of boundaries is that any boundary dispute can be resolved with the help of knowledgeable experts and with reasonable people as clients. The only problem one may encounter is that some disputes may take longer to resolve than others. One person stated that it required the death of the original parties to solve the boundary dispute. Some disputes may be prolonged for generations, even to the point that they become identified on maps and become sealed in history. It is at this point in time that the origins of disputes become lost in history.

In examining British Ordnance Survey maps, one can see such names as Threapwood and Threapmuir. One can find Threapwood in Wales near Wrexham, a tract of disputed land that belonged to no county, parish, or township. The residents were found to be paying no taxes and subject to no local courts. It was the true no-man’s-land. The boundaries had been disputed for centuries and no county had ever gained authority over the people and the land. Similar situations exist in all U.S. states, in both public land surveys and in state-surveyed areas. As recently as 1994, surveyors
in Louisiana discovered a “lost” strip of land between two federal townships, and in 2002, two parishes were disputing their common boundary. Many other macro boundaries are being disputed between countries and counties. Also the states of Connecticut and Rhode Island are disputing a common boundary that was created in the 1700s. Recently what should have been a simple described line between the states of Georgia and South Carolina was settled by the United States Supreme Court when it determined the original definitive boundary, namely the center of the river, with all of the islands belonging to Georgia, had been changed by estoppel. The most recent boundary problem faced by Georgia is the north boundary with the state of Tennessee. The original charter calls for the “parallel 35 degrees.” In 1811 the creating surveyor told the commissioners that his equipment could only obtain a precision of plus or minus one mile. The line was run and monumented. Recent precise measurements place the run boundary one mile south of the parallel. Now Georgia, facing a serious water shortage, wants to change the boundary one mile north so that it hits the Tennessee River which would give them the ability to extract water from the river.

In a major dispute between England and Scotland, the dispute over the Threpe-lands was settled in 1552 by digging a ditch and giving half to each of the disputing parties. The ditch, called Scots Dyke, is still in existence. Here in the United States we do not have that flexibility.

The British left us with a legacy of boundary disputes but also with one of attempting to make permanent those important boundary markers that identify land boundaries. A reference to today’s Ordnance Survey maps will indicate such boundary landmarks as the Navelin Stone, which was established in 1200. This stone, also called the Avellan Stone, is identified in the charter established in 1210 depicting the boundaries of Cumberland in England (see Figures 1.4 and 1.5)

![The Navelin Stone](image-url)
In other early attempts to resolve boundary disputes by legislative and legal means, the English tried to rely on boundaries identified by the centerlines of roads. To aid in maintenance and care, local governments were given authority to modify boundaries and to give each governmental unit half the length of the road and responsibility for its entire care. The philosophy adopted was that all stones and markers placed along boundaries give tangible substance to those boundaries. In many instances, when the boundary stones were erected, proper names were given. Today one can find such names as Kingstone, Earlestone, Sir Steven’s Stone, Sargeant’s Stone, and Attorney’s Stone, all recording a long-forgotten history.

It must be remembered that even though boundary stones were very important, they did not eliminate other forms of boundaries, including natural boundaries. Such boundaries, or natural objects, are discussed to some extent in subsequent chapters because many judges, attorneys, and surveyors misunderstand their significance as controlling elements in boundaries.

Clients should expect surveyors to be expert measurers and collectors of data and evidence of boundaries. The work is not necessarily limited to land boundaries but could include boundaries above and below the surface of the Earth. In the event of a dispute, the surveyor’s purpose becomes that of presenting these measurements, and the evidence recovered, to the court and jury for their deliberation and consideration. Hence, their skills and knowledge of the science of these measurements should be positive and should never be deficient.

Surveyors are the nexus to boundaries in that they create them, they may describe them, and then they may be asked to retrace them or relocate them. The time frame between all of these phases may be hundreds of years.

Figure 1.5 The Navelin Stone depicted on a boundary map drawn in 1750, 500 years later. (Courtesy of Prof. Angus Winchester.)
Surveyors create evidence and describe the evidence created in their own words; then they recover the evidence so as to have juries interpret it; and finally, to have courts apply the proper laws of evidence, they apply meaning to, and determine the intent of, legal documents that land surveyors and attorneys use to describe and locate land and boundaries of rights and interests which we describe generally as land ownership.

In this book it is assumed that surveyors possess the mechanical measurement skills that are necessary and essential to create and to locate boundaries correctly. Yet in today’s modern technological world, new areas are evolving in which the student must become familiar: for example, geographic information systems (GISs), global positioning systems (GPSs), and many other areas of pseudo-measurements that some wish to substitute for measurements. To understand boundaries fully, the student must first understand that measurements, actions, and words are the foundation for boundaries.

Measurements that create boundaries, measurements that are used as evidence of boundaries, and the words used to describe boundaries are all important elements and become controlling elements for the surveyor. The person who specializes in boundaries should realize that a dual responsibility is placed on surveyors.

First, a boundary between two individuals (estates) could not exist without being created. The boundary created can not only describe a parcel of land but can also be used to describe multiple interests within a boundary of the same parcel of land. Second, the boundary created must be relocated and identified at some time. In this phase the surveyor will be required to take the description and, using the words, locate it on the ground. This may require the surveyor to disagree with his or her peers as to what the words actually mean or what the evidence indicates. It is in this phase that disputes seem to arise, for no two persons see evidence in the same light.

Unlike other countries, surveyors in the United States do not have the authority to locate legal boundaries that are binding on all the parties involved. Their responsibilities lie in the area of interpreting legal descriptions and then placing these descriptions on the ground by conducting surveys to recover evidence of prior work or surveys. In addition to locating these title boundaries, surveyors may be called on to:

1. Locate the limits of possession.
2. Locate the limits of the claim of ownership, either under color of title or not under color of title.
3. Locate improvements on property.
4. Locate and describe rights and interests in land.

1.7 WHAT IS BEING CREATED? WHAT IS BEING LOCATED?

*Principle 4.* A person or landowner can legally convey only the quality and quantity of interest to he or she has title.
The surveyor who creates a boundary line creates nothing but an invisible line that is only described by numbers, yet any line cannot exist without its end points, the corners; in order to have a definite line the line must have a corner at each end of the boundary line. This principle was first identified by William Leybourn in his historic survey book *The Compleat Surveyor*. In chapter 1, page 3, Leybourn described a line as being “created by moving out of a point from one place to another, . . . so a line is thereby created, whether straight or crooked. And of the three kinds of *Magnitudes* in *Geometry*, viz. Length, Breadth, and Thickness, a *Line* is the first, consisting of *Length* only, and therefore the *Line* A B, is capable of division in *Length* only. . . .”

The surveyor who creates boundaries locates or creates nothing more than invisible lines and corner points that exist as legal fictions between property rights. Boundary lines without any other support have only legal dimensions; they have no physical dimensions until fences are constructed on the invisible lines and these fences are called for and identified in documents that are in the chain of title, or trees are marked and identified in field notes as *line tree* or *tree on line* and then that tree or trees become a reference indicating what it was that the creating surveyor intended. A boundary exists because the law permits it to exist, yet one cannot feel it, touch it, or see it; it is not manifested in any way by a dimension of width, only length. Yet once it becomes created, it has legal authority. One neighbor cannot cross over a neighbor’s invisible boundary without being in trespass, and possibly being responsible for damages.

Regardless of the position of the surveyor, the responsibility that is assumed is that of creating or identifying rights and interests in land. Rights and ownership are related and are often confused, but they are not the same. The ownership of a land parcel carries with it responsibilities and liabilities, whereas rights will give a person, whether or not a landowner, certain legal rights that can be addressed in the courts.

Usually, to have a boundary created, that boundary must have terminal points, or *corners*. Each boundary line is controlled on each end by a corner, which may or may not be monumented. But in the event that the controlling corners are unmonumented, those corners have the same legal dignity as monumented corners.

In most instances, once a boundary is created, usually there is no need to resurvey that originally created boundary as long as the land is in the original ownership. Boundaries are usually retraced in the event that the parcel is sold or a dispute arises when an adjoining boundary line is ascertained. As such, a new survey will identify the existing conditions of the boundary lines at the time of the recent conveyance but written in terms of the original description. Such a survey should identify the condition of the original corner monuments and should also redefine the definition of the courses (bearings and distances) in more modern terms. This is defined as a retracement. The practicing surveyor must be able to make the distinction between original surveys and retracements. Being able to make the distinction is an absolute must for the land surveyor.

### 1.8 ORIGINAL WRITTEN TITLE

The concept of title to land is unique to English law. The migration of Europeans to the New World caused a basic conflict between the Native American and the
European concept, primarily English concept of land ownership and its use. Native Americans had no known concept of written title. Although tribes did recognize areas of specific claim or use, they held the belief that no individual or individuals could own land. Individuals only had the right to use land, and land was composed of certain rights of usage.

The English brought with them the concept of written title. Title as we know it was unknown to Native Americans. Possession was paramount. Today, we assume that most boundaries are defined in some sort of title document: a deed or a will, for example. Yet this is not entirely true. The law provides for and permits boundaries by several other means. These are discussed later in the book.

For a very simple explanation of land title, which is separate and distinct from a land description, it usually is a written document or legal instrument, by which one can claim ownership to a separate and distinct identifiable parcel of land or property.

As the courts have recognized it, title may be considered as originating from varied sources. Some of these are as follows: (1) conquest, (2) royal grants from a foreign power, (3) grants of original crown lands from one of the original states or from another state, (4) grants or patents from the U.S. government from land considered originally as being in the public domain, and (5) lands in the form of newly created lands.

To claim lawful possession, one must have a claim of ownership, which usually is exhibited as a document purporting to give ownership. Regardless of how title to a person’s property originated, potential problems might be uncovered by the surveyor that could cause problems in the location or relocation of boundaries. Several of the 13 original states not only granted lands within their original boundaries, but also granted, with or without authority, lands outside these boundaries, usually under the terms of their original grants as they interpreted them. This situation happened between Tennessee and North Carolina; Virginia and West Virginia; Connecticut and Massachusetts; Virginia and Ohio; and New Hampshire, New York, Georgia, South Carolina, and Vermont.

In any particular case the surveyor or attorney must consider if the question is one of title—who owns it and how much—or a question of boundary—what and where the boundary is. This permits a court to determine that a person owns or who has better title to a parcel of land but it could be unsurveyable or unlocatable.

1.9 RIGHTS AND INTERESTS IN LAND

Rights and ownership are related but are not the same. When a person owns a parcel, usually that person has the right to timber, water, minerals, and possession. Each right may be described, identified, and conveyed, and the owner may convey all of the rights, yet retain the right to pay taxes.

The original surveyor creates the boundaries between individual rights, and once these rights are created and the original owner relies on these boundaries, no one, other than those who are beneficiaries, can change these boundaries. To understand
what is being created, the surveyor, the attorney, the real estate agent, and especially the courts must understand the distinction between title, property, and rights or interest.

*Title* is the means or vehicle by which one acquires an estate. *Rights*, such as the right to take minerals, are attributes that a person may hold by being a landowner. A person holding a lien on land may have an interest but not a title, depending on the respective state where the property is situated. *Interest* and *title* are not synonymous.

*Property* may be considered as corporeal, meaning some right that describes a tangible element: a house, trees, a fence. The primary function of the surveyor has been in regard to rights, and interest in land has been to define these elements. The title to property is the exclusive domain of attorneys. However, as surveyors’ responsibilities, identity, and capabilities have been changed and redefined by the courts, in many jurisdictions the surveyor is no longer prohibited from giving an opinion about who holds the title to a piece of real property.

Whatever rights or interests a person may have in land today are controlled and regulated by the laws of the state in which the land is located. The federal government has control over the public domain, Native American lands, lands involved in bankruptcy, state boundaries, navigation, lands seaward of state boundaries, and air rights crossing state boundaries (violations of air quality). Although no “law school” list of specific rights that attach to a person’s land exists, certain “common law” rights are recognized:

1. The right to dispose of property, not inconsistent with the law.
2. The right to have land free from interference.
3. The right to support of property, both subjacent and laterally.
4. The right to use waters that flow through or on property.
5. The right to any waters that flow through or touch property.
6. The right to all space above and below surface boundary lines.
7. The right to possess the property.
8. The right to convey or gift the property to second parties.

As stated, land is composed of assorted rights, both corporeal and incorporeal, that are held together by ownership or title. These rights were identified very early in English law. Jurists first identifying the *bundle of rights* as extending from the center of the Earth to the accolades in the heavens. Some of these rights included, but were not limited to, timber rights; air rights; mineral rights; the right of possession; water rights; and the right of ingress, egress, and regress. These rights can become confusing and conflicting, as in Alaska, where Congress granted surface rights to one group of individuals and the subsurface rights to a second group.

Each right may be independent of the exterior boundaries of the parcel and may have boundary lines that are separate, distinct, and independent of the exterior boundaries of the parent parcel. In this situation a landowner may ultimately convey numerous rights, and the surveyor may ultimately survey numerous boundaries.
within the parent parcel. This bundle of rights has been described as numerous straws, held together by the belt of land ownership, each right with its boundary identified by its name and having its own separate description, boundaries, and rights to the holder. Under this concept, separate owners can each hold one or more of the straws in the bundle, and as such, each owner would have a vested interest in the entire parcel. A surveyor may be asked to determine the source of a nuisance that violates a right, or he or she may be the cause of a nuisance in the form of trespass by the surveyor or his or her assistants.

Basic U.S. real property law has its foundation in English land law, originating in feudalism. After A.D. 1066, all lands under English rule were considered as if owned in total by the reigning king, William I. William made conditional land grants to his followers, to specific English barons, and to certain individuals who submitted to his control. The grantees became holders of the land, or tenants. Because all grants were made in return for services by the tenant, the terms of the holdings under which each tenant held were free or unfree tenure.

Free tenure was divided into (1) military or knight service, wherein each knight was required to give a number of days each year in defense of the king; (2) spiritual or Frankalmoigne tenure, which required prayers or spiritual duties for the king; (3) socage tenure, which consisted of nonmilitary duties such as providing the king with crops or cattle; and (4) serjeanty, wherein personal services were provided to the king. Once each person provided the identified and specific tenure, his or her remaining time was his or her own, and the person could use the property freely in any manner so chosen. These four forms of tenure later became known as freeholds or freehold estates.

Serfs held their land under unfree tenure, in that they were bound to the land and could not use any of it for their own purposes. The main point in the feudal system is that the person who held tenure was also in possession or seisin of the property. Upon the collapse of the feudal system, only socage remained, from which we retain freehold estates.

Under early common law, the people who possessed seisin in reality owned a collection of rights incident to the land. The tenant holder’s rights became known as his estate. Estates differed primarily in the length of time in which they might exist. In modern legal and technical senses, an estate is the degree, quality, extent, and nature of the interest that a person has in real property. Some find the term estate confusing in that it may define the corpus (body; either real or personal property or both), as in “all of my estate,” or the rem (thing), as in “fee simple estate.” An estate may be either absolute or conditional. In most instances, fee simple connotes absolute. Today, all estates are classified as freehold or non-freehold (less than freehold). Freehold estates are divided into fee simple, fee tail, and life estates.

A fee simple estate is the highest and greatest estate in land that one can obtain. Those who possess a fee simple or fee simple absolute estate are, for all purposes, the owners of the land. The words fee simple absolute in reality are not a single term; each distinct word carries a meaning that explains the entire term. Fee denotes that the estate is one that can be inherited or devised by a will or other documents. Simple denotes that the estate is not a fee tail estate, wherein the estate must be inherited
by a specific person. Absolute means that there are no conditions or limitations so far as time is concerned on the estate, and this estate may continue forever (not like a fee or an estate that may be determinable upon the happening of an event), either precedent or subsequent.

Fee tail or estate tail is an early English type of estate, which in all probability was borrowed from the Romans. It is a true freehold estate limited by the grantor to the heirs of the grantee’s body or to a special class of people, either male or female (e.g., the eldest, the youngest, or other). If the conditions are breached (no male or female heirs are produced by the grantee), the estate reverts to the grantor or his heirs at law or the sovereign. In the United States, individual states have determined that this type of estate was never adopted as part of English common law, that a conditional fee was present, and that upon the birth of a child it was converted to a fee simple estate, or that statutes eliminated the estate and any reference to fee tail connotes fee simple absolute.

A life estate is considered a freehold estate because it can be conveyed to a third party, yet its duration is measured by some life. In essence the life estate lasts only for the life of some person. An ordinary life estate is normally worded “to Jones for life and then to Brown in fee simple.” An estate per autre vie has a measured life other than that of the holder of the estate and may be worded “to Jones for the life of Brown and then to Smith in fee simple.” This estate and the right of legal possession terminates with the death of Brown.

Life estates may be created by expressed provisions or words in a will or deed or by contract between heirs or parties in interest. If a question exists as to the creation of a life estate, the courts will look at the precise words used. Terminology such as “to Mary Jones as long as she remains single” has been interpreted as creating both a life estate in Mary Jones and a fee simple estate. A person who receives a gift of “rents and profits for his life” or “the right to occupy the land as long as he may live” has been construed to receive a life estate. A life estate may also be created by an operation of law wherein a surviving spouse is granted dower (for a widow) or a curtesy (for a widower). The law varies from state to state and the prevailing statutes must be consulted.

The holder of a life estate has the right of possession, as with all freehold estates, but not all the rights of a fee simple absolute holder. He or she may not commit waste of the estate by reducing the value of the estate or by making unreasonable use of the estate proper (e.g., cutting timber, destruction or removal of minerals or structures, or improper placement of improvements). The holder of the life estate is obligated to pay taxes, to make all necessary repairs, and in some instances to provide the necessary insurance to protect the property.

A life tenant may convey any and all interests possessed but cannot encumber the property beyond the life conveyance terms. All conveyances purporting to convey any part of the remainder estate, without the prior approval of the remainderman, are void.

In Pennsylvania some land was sold with quitrent; that is, the purchaser had to pay the seller a regular quitrent (a payment in money at specified intervals: theoretically, forever). This right was voided by the courts.

Whenever an estate is in question, the court attempts to convey a perfect estate or as large an estate as possible. Although the final decision is a legal one, it is
important that surveyors or other people who research land records have knowledge of possible legal implications. In areas where surveyors commonly research legal records needed to conduct a survey, they should be able to recognize wording that could affect the interests of their client. If a researcher neglects to call attention to a possible problem and the client suffers damages, the researcher could be held liable and responsible.

1.10 ROLE OF THE COURT

All aspects of real property rights are protected by the Fifth Amendment of the U.S. Constitution. The Constitution does not address real property rights as such except in the instance of the annexation of property for the public good. Thus for any real property issues associated with the federal government the law of the respective states in which the land is located applies, lex loci.

Since the titles to land in the United States originated from various foreign sources, and the Constitution recognized all prior valid rights in land, approximately 20 states are legally recognized as *metes and bounds states*, basing their real property and survey system on English common law, and that law applies in situations regarding land title and boundaries. In states that base their titles and surveys on the public land survey system that originated under several public land laws, those laws apply under which the lands were surveyed and patented.

The role of the court in title and/or boundary questions is much different from that of the surveyor or the attorney. The surveyor’s responsibility is to collect evidence of past boundaries described in documents, to collect evidence of possession and use, and to create new evidence to be left for future surveyors to recover. In questions of title or boundaries the surveyor can then be called on to testify and to give opinions to help the court or the jury to understand complicated areas. Usually, an expert is not required if the facts are within the capabilities of the jury to understand. Surveyors should not be considered as advocates for a particular client or position.

Attorneys, on the other hand, are the means by which legal questions are presented to the courts. They are advocates, espousing the position of their clients, right or wrong. At times it may seem that surveyors are advocates, but one must differentiate between honest differences of opinion between surveyors and the advocacy of a surveyor.

The courts are present to apply the various laws, both statute and common, to the facts presented. If there is a question as to the facts, it is in the province of the jury to decide what facts to believe and to apply. In most states:

| What boundaries are is a question of law; and where boundaries are is a question of fact. |

Yet in actual practice the surveyor may encounter numerous attorneys and judges who do not understand this principle and maxim.