



Ethics for Land Surveyors

2 hours

PDH335

PDH Academy

PO Box 449

Pewaukee, WI 53072

www.pdhacademy.com

pdhacademy@gmail.com

1. **The English word “ethic” comes from the ancient Greek word “ethikos” which means:**
 - a. “Principles”
 - b. “Conduct”
 - c. “Habit” or “Custom”
 - d. “Good Behaviors”
2. **What are ethics?**
 - a. A set of regulations from a licensing board.
 - b. A set of principles that guide conduct.
 - c. A set of principles established by the courts.
 - d. A code of conduct established by professional associations.
3. **Which of the following traits is NOT one of the 6 traits common to professions?**
 - a. The possession of a special set of skills
 - b. A Bachelor’s degree.
 - c. Specialized education and training.
 - d. Loyalty to a professional community and to the profession itself.
4. **What is one link between ethics and professionalism?**
 - a. Professions self-regulate ethical behavior.
 - b. Professions set minimum pricing for services.
 - c. The government defines unethical behavior for professionals.
 - d. Each professional independently decides what is ethical behavior.
5. **Why is the special body of knowledge possessed by a professional dangerous?**
 - a. It can be used to trick regulators and government officials.
 - b. It can be used to negotiate unfair contracts.
 - c. It can be used to overcharge clients and customers.
 - d. It can be used to take advantage of people outside the profession.
6. **A strong code of ethics should help a profession:**
 - a. Self-regulate.
 - b. Prevent the special body of knowledge held by its members from causing fraud.
 - c. Prevent the practice of special skills by its members from causing harm.
 - d. All of the above.
7. **Which of the following is true regarding ethics and the education of land surveyors?**
 - a. Professional ethics aren’t adequately covered in our education as land surveyors.
 - b. There is lots of talk about ethics in the surveying profession, including in our education.
 - c. Surveyors must have multiple courses in ethics in their college education.
 - d. Professional conferences often have discussions on ethics.
8. **Why are professional ethics difficult?**
 - a. Ethical behavior changes based on the jurisdiction.
 - b. Land surveyors are regulated by a licensing board.
 - c. Land surveyors have obligations to multiple parties.
 - d. The standard for ethical behavior changes over time.
9. **What is an area of ethical obligation of a land surveyor to their client?**
 - a. An obligation to provide the lowest price for their surveys.
 - b. An obligation to communicate the risk in the survey.
 - c. An obligation to provide the work product ahead of schedule.
 - d. An obligation to resolve conflicts in the clients favors.
10. **What is an area of ethical obligation of a land surveyor to their employer?**
 - a. An obligation to complete work ahead of schedule.
 - b. An obligation to save their employer as much money as possible on projects.
 - c. An obligation to be honest about their skills and competence.
 - d. An obligation to share confidential information.
11. **A land surveyor’s obligation to the public includes which of the following?**
 - a. To use the newest technology available during boundary surveys.
 - b. To set all missing property corners on a boundary survey.
 - c. To correct major problems found during a boundary survey.
 - d. To mark property boundaries in a way that treats all adjacent owners fairly.
12. **Which of the following describes a role of surveyors involved in the map review process?**
 - a. A surveyor who is preparing the boundary survey map and submitting it for review and filing.
 - b. A surveyor who is reviewing the boundary survey map in accordance with the process defined by law (typically a surveyor who works for a local government agency).
 - c. A surveyor who employs the surveyor filing the map.
 - d. All of the above.

13. What are the three methods of monitoring ethical performance discussed in this course?

- a. Legal requirements, Fines, Peer-regulation.
- b. Self-regulation, Peer-regulation, Government regulation.
- c. Self-regulation, requirements of state law, requirements of the common law.
- d. Government regulation, Fines, Professional societies.

14. When do ethics require the professional land surveyor to say “no”?

- a. When they know the requested action will result in an investigation by the licensing board.
- b. When they know the requested action will harm the public.
- c. When they know the requested action will harm their professional reputation.
- d. When they know the requested action will lead to budget overruns.

15. What should a land surveyor consider before setting a property corner monument.

- a. The view of the land owners and the legal system.
- b. The view of the land owners and the county surveyor.
- c. The view of the county surveyor and the licensing board.
- d. The view of the licensing board and the land title industry.

CONTINUING EDUCATION for Land Surveyors

ETHICS FOR LAND SURVEYORS

PDH Academy Course #PDH318 | 2 CE HOURS

COURSE DESCRIPTION:

Ethics in land surveying are difficult to understand. The right and wrong decisions aren't always distinct. In this course you will get a full introduction to ethics in the profession of land surveying. You'll learn the definition of ethics and the origin of the term. You'll understand the link between ethics and professionalism. You'll find out about the different, and at times conflicting, areas of ethical obligation for land surveyors. You'll also examine areas of ethical concern unique to land surveyors, such as ethics in the map review process and ethical considerations when setting property corner monuments as part of a boundary survey.

COURSE OBJECTIVES:

- Understand the link between ethics and professionalism.
- Identify the 6 areas of ethical obligation for a land surveyor.
- Understand why it is important for licensed land surveyors to say 'no' - even to clients and supervisors.
- Learn how monument placement is viewed by 3 groups - the public, other land surveyors, and the US legal system.

An Introduction To Ethics For Land Surveyors

What are ethics?

Ethics is a term that is difficult to clearly define. Why is this? The meaning of ethics can change based on the circumstances. The term ethics means different things to different people. There is often disagreement over when and how a principle of ethics should be applied.

What is the origin of the word “ethic”? The English word comes from the ancient Greek word “ethikos” which means “habit” or “custom”. In this word root the idea of “a good set of habits or customs” is recognized.

After reviewing several definitions of ethics, of these definitions most share a couple key elements. These include:

- 1) Ethics are a set of principles or rules.
- 2) Ethics guide or govern conduct.
- 3) Ethics define a set of good behaviors and a set of bad behaviors.

Ethics also touch on the subject of benefit and harm. Consider a definition of ethics in the article entitled “Ethics for the Professional Surveyor” by Ed Bristow. (Ed is a lawyer and land surveyor.) Ed described ethics as those guidelines that prevent personal gain when it harms innocent parties (or parties to whom you owe a duty).

Now, create a simple definition of ethics for land surveyors. Based on the 3 elements listed above and with a little help from Ed, here is the definition:

Ethics are a set of principles that guide conduct. Ethics provide guidance by defining a set of bad behaviors and a set of good behaviors. When followed, ethics should help a person avoid harming others because they seek to benefit themselves or others such as clients.

This definition captures all the essential elements. It is a set of rules that governs conduct. It defines acceptable behavior while highlighting the duty to put the interest of others ahead of your own interests.

What is a profession?

There is a close link between ethics and professionalism. Before this link is examined, define a profession. This is a little easier than defining the term “ethics”, but the term “profession” doesn’t always have clear boundaries either.

The origin of the word profession comes from Old English through French and Latin. In French and Latin the word meant “a claim to be skilled” at a particular occupation. In the Old English, the word came to mean the vow one took when entering a life of religious service. Both of these meanings can help explain how the modern English term “profession” is used. In modern English it is used to

describe a person dedicated to learning a special skill or occupation.

The article on professions on Wikipedia helps define the term. It does this by describing 6 traits common to professions. These traits are:

- 1) Work autonomy (or the ability to supervise your own work).
- 2) The possession of a special body of knowledge.
- 3) The possession of a special set of skills.
- 4) Specialized education and training.
- 5) Loyalty to a professional community and to the profession itself.
- 6) The act of self-regulation.

Listed above are the 6 traits common to the word “profession” and some information about the origin of the word “profession” in old languages. Using this knowledge to create an acceptable definition for “profession”, here is the definition:

A profession is an occupation that requires specialized education and training to get a special body of knowledge. Members of a profession apply this special body of knowledge through a special set of skills. Members of a profession are loyal to the profession and self-regulate. This loyalty and self-regulation is often expressed through participation in professional societies or associations.

There is a similarity to medieval craft guilds when this definition of “profession” is considered. Men who practiced a common occupation formed medieval craft guilds. They followed rules of conduct set by the guild. The guild often required its members to perform civic and leadership duties in the community. The guild also restricted the practice of their occupation to men who met certain qualifications. (Professions do this today through government licensing.)

What is the link between ethics and professionalism?

The main link between ethics and professionalism is self-regulation. Professions often desire to self-regulate. They also need to self-regulate from a practical perspective. First, consider why self-regulation by professions is important, then consider what will be the role of ethics in self-regulation.

Professions need to self-regulate for a couple of practical reasons. Both of these reasons were identified in the definition of professions above. The first reason is that professions have a high level of work autonomy. The professional often works independently. They don’t have another person dictating in detail how they perform their work. This results in a lack of oversight by outside parties out of practicality. The second reason is that professions have a specialized body of knowledge. This

body of knowledge can take many years to acquire and master. This makes it difficult for people outside of the profession to regulate it. They lack the specialized body of knowledge. This ignorance can result in attempts at regulation by outsiders causing more harm than benefit.

Professions have a desire to self-regulate, and a practical need for self-regulation. A couple of factors form the basis of this desire to self-regulate. The first factor is the desire of the profession's members to prevent damage to the reputation of the profession as a whole. A good reputation is partly the basis for the special privileges awarded to a profession (both in law and in prices). The second factor is the fear professional members have of outside regulation. Attempts of regulation by outsiders can result in unintended consequences and other harm. It can also infringe on the special privileges awarded to a profession. By self-regulating, professions hope to nullify the need for regulation by people from the outside.

Ethics are a "set of principles that guide conduct". They also "define a set of bad behaviors and a set of good behaviors". Professions use ethics as the foundation for self-regulation. The ethical principles of a profession are like the constitution in a system of government. Many professional societies from around the United States have a code of ethics (or set of ethical principles). Members of the professional society agree to abide by this ethical code. Below is an example of the fundamental principles of the Washington Land Surveyors Association Code of Ethics:

Professional land surveyors uphold and advance the integrity, honor, and dignity of the land surveyors' profession by:

- 1) Using their knowledge and skill for the enhancement of human welfare.
- 2) Being honest and impartial, and serving with fidelity the public, their employers, and their clients.
- 3) Striving to increase the competence and prestige of the land surveyors' profession.
- 4) Supporting the professional and technical societies of their disciplines.

There are a couple of other links between ethics and professionalism. The first relates to the special body of knowledge that professionals have. The second relates to the special set of skills that professionals exercise.

The special body of knowledge possessed by a profession puts them in a position to take advantage of the unwary common person. This is illustrated with a simple example:

A car mechanic has a special body of knowledge about the internal combustion engine and other parts of a modern car. The typical customer of the car mechanic doesn't have this body of knowledge. This allows a car mechanic to overcharge customers for repairs to the car. There are steps the customer can take to avoid this. For example: Obtaining repair estimates from more than one car

mechanic. There are also economic incentives that should influence a car mechanic to avoid this pitfall. If a car mechanic used his special body of knowledge to cheat his customers, his reputation in the community would suffer. He would lose business as a result. Despite these factors working against abuse, the special body of knowledge possessed by a car mechanic puts him in a position to cheat his customers under the right circumstances. The intent of strong ethical principles is to prevent this type of cheating.

The special set of skills possessed by a professional puts them in a position to cause harm to their clients. The cause of this harm could be the professionals outright fraud or a lack of care in their work. Again, consider an example that illustrates this:

A car mechanic could use shoddy replacement parts on a repair job. The mechanic could then charge the customer the price for high-quality parts and pocket the difference. If the shoddy parts the mechanic installed failed while the car was traveling down the highway at high speeds, an accident could occur. The accident could harm the driver and passenger in the car, or passengers in other cars on the highway. A strong code of ethics should prevent this type of fraud.

A car mechanic could fail to properly install a replacement part because of a lack of carefulness. Although not outright fraud, this lack of care could have the same result: A dangerous automobile accident. A strong code of ethics would ensure the mechanic takes steps to avoid these types of problems. These steps could include double checking the work performed with a post-repair checklist.

It should be clear from these examples the two factors mentioned above drive the need for a strong code of ethics in a profession. The first factor is the profession's special body of knowledge. The second factor is the profession's special set of skills.

A strong code of ethics should help a profession:

- 1) Self-regulate.
- 2) Prevent the special body of knowledge held by its members from causing fraud.
- 3) Prevent the practice of special skills by its members from causing harm.

Why is Ethics Hard?

The definition, practice and enforcement of ethical behavior is difficult. Pretending otherwise sets the profession's members up for failure. There are many reasons why the practice of ethical behavior is difficult. Recognizing this as land surveyors is essential and admitting this is hard can start conversations about the best ways to deal with tricky ethical problems. Below are listed the reasons why the practice of ethical behavior is hard. Included are short examples or explanations with each reason. The 3 most important reasons why ethics are hard are at the end of the list.

Reason #1: Professional ethics aren't adequately covered in our education as land surveyors.

There is very little talk about ethics in the surveying profession and this needs to change. This is true in the education of land surveyors. Many surveyors have only a single ethics course in their college education, and they may not learn about ethics at all. The limited discussion of ethics during education leaves many land surveyors completely unprepared for their first major ethical challenge in real life practice.

Practicing land surveyors rarely hear ethics discussed at their professional conferences. If ethics does appear on the conference program, the discussion is usually limited to a short discussion of idealized situations. In these idealized situations, the ethical course of action is always easy and obvious. This isn't what happens in the real world.

Reason #2: Land surveyors downplay the complexity and conflicting interests of ethical challenges.

Many times sitting in a class with discussion about ethics can be disappointing. The instructor often downplays the complexity and conflicting interests of the ethical challenges faced in real life. Ethics isn't always black and white or cut and dry. Imagine, for a few moments, a class on land surveying ethics that examines the following scenario:

A land surveyor has prepared a boundary survey showing the boundary resolution of a client's parcel. The area of the parcel as shown on the survey is just under the amount required to subdivide the parcel. The owner of the company that employs the land surveyor instructs the land surveyor to move one of the parcel boundary lines into the neighboring lot until the parcel exceeds the minimum area requirement.

The above scenario is an over simplified example of an ethical challenge. The right decision in this situation is crystal clear. The act of dishonesty and the innocent party the surveyor will harm if he follows instructions are easily identified. The scenario as described also has a convenient villain. This simple example may have some limited value in demonstrating ethics for the land surveyor. Therefore, a more complex situation would be closer to the reality most land surveyors face.

Many times teachers of land surveying ethics can fall into the trap of self-righteousness. In this trap, land surveyors make it seem like the right decision is always clear. They attribute evil motives to surveyors that don't always act as they would. This arrogance turns off their audience and prevents thoughtful consideration and discussion.

Reason #3: Land surveyors can become trapped in a downward spiral of unethical behavior.

This downward spiral of unethical behavior occurs most in the relationship between an employer and employee. (This can also occur between business partners.) A poor ethical decision by one party (or a perceived offense)

results in retaliation by the other party. This tit-for-tat behavior evolves into a downward spiral of unethical behavior by both parties. Here is an example:

Julian, the owner of a surveying company, suspects Christopher one of his licensed surveyors, is performing small surveys (like elevation certificates) for Julian's clients. He believes Christopher is performing these surveys on the weekend with company equipment for cash payments. When Julian confronts Christopher about the moonlighting, Christopher denies any involvement.

To punish Christopher, Julian cuts his workload and gives Christopher days off each week without pay. This has an immediate impact on Christopher's pay check. Christopher soon takes a surveying job with one of Julian's main competitors. Christopher doesn't give Julian any advance notice before quitting. In addition, he takes a set of survey records from Julian without permission. Julian begins to tell exaggerated stories about Christopher to professional acquaintances. This includes accusations that Christopher stole cash from the petty cash drawer and sold private company records to other surveyors. Christopher then convinces a field crew working for Julian to work for his new employer.

It is easy to see from this example how quickly tit-for-tat retaliation can lead to a spiral of unethical behavior. In the example we considered, it would be especially tragic if Christopher hadn't been moonlighting, or thought he had permission to perform the small surveys because he misunderstood previous conversations with Julian about side work.

Reason #4: Enforcement of ethical behavior is difficult.

The enforcement of ethical behavior by professions can be difficult too. The enforcement of ethical behavior requires the enforcer to have the same special body of knowledge and special set of skills as the profession. If this isn't true, efforts of enforcement can be clumsy and cause more harm than good.

Enforcement of ethical behavior by land surveyors is difficult for other reasons. These reasons include:

- 1) The evaluation of ethical behavior often requires moral judgment. There may not be clear rules that enable consistent moral judgments.
- 2) It is often hard for the enforcer to collect clear evidence about the behavior of the land surveyor accused of bad behavior. The complexity of the situation in which the violation occurred, the number of parties involved, and the amount of time passed since the alleged violation all make it harder to gather good evidence.
- 3) Land surveyors that become aware of unethical behavior by a friend or peer may be reluctant to report the violation to the enforcer.
- 4) A professional's clients aren't expected to be experts. They may remain ignorant and unaware of a professional's unethical behavior.

5) The land surveyor that should be responsible for a violation isn't always clear.

Here is an example that illustrates the difficulty of enforcing ethical behavior:

Mike worked as a land surveyor for Danny, a civil engineer. Danny told Mike to set iron pipe monuments (with Mike's surveyor number) on the parent parcel boundary of a land subdivision. Mike refused to set his monuments because he and Danny hadn't completed a proper boundary survey of the parent parcel. Danny then instructed Mike to set unmarked iron pipes on the parent parcel using the deed dimensions. Mike performed the work because he wasn't setting his own monuments. Danny filed the land subdivision and his client sold the lots. Lot owners constructed using property lines measured from the iron pipes Mike set.

12 years later, Ben, a licensed land surveyor, performs a retracement survey on an adjoining parcel. He discovers the original monuments marking the parent parcel subdivided by Danny and Mike. The original monuments controlling his parcel are several feet from the unmarked iron pipes set by Mike. Mike now owns his own surveying business, and is a good friend of Ben's. Danny has retired, and now lives in an unknown Florida beach community.

What should Ben do about the unethical behavior he has discovered? Who is guiltier of an ethical violation, Mike or Danny? How will a licensing board or professional practices committee of the local surveyors association effectively gather evidence after 12 years and Danny's retirement? How does Ben explain to his client that a mistake by his good friend and another reputable surveyor in the community lead to major encroachments on their property?

Areas of Ethical Obligation For Land Surveyors

The right course of action in a question of professional ethics isn't always clear. One factor that clouds the right course of action is the obligations a professional land surveyor has to multiple parties. These parties include the surveyor's client, employer, employees, business partners, the general public, the surveyor licensing board, and the profession. These parties have different priorities and concerns, which often conflict. For example: The surveyor's employer may be concerned about controlling the labor cost on a project for a client, while the client is concerned about the quality of the survey work product delivered on the project, and the surveyor licensing board is concerned about requirements to file maps in the public record. The surveyor must find a way to properly balance these competing obligations. The surveyor must also learn to tell people "no". It isn't always possible to make all parties interested in his work satisfied. (Saying "no" will be discussed in a future section.) First, is a detailed examination of the different areas of obligation for the land surveyor.

Obligations To Your Client

Perhaps the most important obligation of a land surveyor is the one they owe to their client. This obligation is important for at least two (2) reasons. The first is that this obligation can be legally enforced through the contract for services between the land surveyor and the client. The second is the clear duties society at large easily recognizes the land surveyor owes to the client. (This clear recognition of duties a surveyor owes to his client is one of the justifications for surveying licensing boards.)

The ethical obligations a land surveyor owes to his client includes the following:

- 1) Creation and delivery of a quality survey work product.
- 2) A good faith effort to deliver the survey work products on time.
- 3) A good faith effort to deliver the survey work products for the agreed price.
- 4) A good faith effort to fully execute the agreed upon scope-of-services.
- 5) Clear and regular communication with the client. (This is especially important when encountering unexpected problems that may impact the ability of the surveyor to complete the four items listed above.)
- 6) The application of the land surveyor's expertise to accurately communicate risk when the client is making decisions based on the surveyors work or advice.

Obligations to Your Employer

The second most easily recognized obligation a land surveyor has is the one owed to his employer. (Although this obligation to an employer is easily recognized, it isn't as important as the land surveyor's obligation to the public. This obligation to the public is harder for the common person to understand. We talk more about the land surveyor's obligation to the public below.) Although most surveyors don't have a contract or other legal document outlining their duties to their employer, the legal system in the United States recognizes obligations of employees to their employer. In addition, land surveyors may owe additional duties to their employers because of their status as licensed professionals.

The ethical obligations a land surveyor owes to his employer includes the following:

- 1) The performance of diligent and thorough work.
- 2) Attention to detail.
- 3) Honesty about her skills and competence. (This is especially important when the employer is deciding how to assign tasks or is making decisions about what type of work to pursue.)
- 4) Making a good faith effort to bring assigned projects in on budget and on schedule.

- 5) Communicating potential risks in a project (for the employer and for the client).
- 6) Explaining the requirements of the law (as it relates to land surveying) to a non-surveyor employer.
- 7) Making reasonable efforts to protect the organization's interests. (For example: Not sharing confidential information about the organizations strategy, resources, methods or employees that would result in harm to the organization.)

Obligations to Your Employees

Land surveyors often supervise a number of technical employees. This can include land surveyors in training, drafters, and field crews. A land surveyor that supervises other employees has an extra set of ethical obligations. These obligations primarily deal with the land surveyor's treatment of the people working under his/her direction and care. These obligations are especially important for land surveyors that own or control a business.

The ethical obligations a land surveyor owes to his/her employees include the following:

- 1) Only asking an employee to perform work in an area of competence, and for which they have been adequately trained.
- 2) Providing an appropriate amount of supervision as tasks are performed.
- 3) Providing an appropriate amount of review for survey work products prepared by his/her team.
- 4) Providing fair compensation. (This includes paying prevailing wages and overtime when required. It also includes not abusing salaried team members by asking them to work a large number of hours for which they are not compensated.)
- 5) Making sure team members (especially field crews) have the equipment and training to work safely.
- 6) Making sure team members aren't asked by anyone to be dishonest or perform tasks that are illegal.
- 7) Providing team members with honest assessments about workload, professional development, and opportunities for advancement.
- 8) Providing training and mentoring when requested.

Obligations To Your Business Partners

Land surveyors in both public and private practice regularly engage with business partners. These partners could be fellow surveyors, or they could be other professionals like land attorneys or land title specialists. The land surveyor must consider a special set of ethical obligations when dealing with his business partners.

The ethical obligations a land surveyor owes to their business partners includes the following:

- 1) The provision of a fair contract with reasonable terms. (The land surveyor shouldn't ask a business partner to sign a contract they wouldn't sign themselves.)
- 2) An honest assessment about the obligations, risks and rewards of any business opportunities.
- 3) Fair and appropriate sharing of work to all members of a business team or joint venture.
- 4) Honest ownership of responsibility for problems on a project.
- 5) Prompt payment for work performed.

Obligations To Your Profession

The land surveyor should feel ethical obligations to the profession they claim. The fulfillment of these obligations strengthens the profession from which they benefit, and from which future land surveyors will benefit.

The ethical obligations a land surveyor owes to their profession include the following:

- 1) Avoiding actions or behavior, both inside of business and outside, that would damage the reputation of the profession or destroy the public's trust in the profession.
- 2) Not condoning the illegal or unethical behavior of fellow land surveyors.
- 3) Mentoring and training of future land surveyors.
- 4) Participation in and support of professional associations that often tackle problems impacting land surveyors. (For example: Encouraging preservation of monuments during construction projects.)
- 5) Providing help and support to fellow professionals and their families in a time of hardship or crises.

Obligations to the Public

A land surveyor's obligations to the public are the most important obligations he has. This is especially true because of the special trust our society, our legal system, and other professionals give to land surveyors. It is critical that the land surveyor not put the selfish interests of himself or his employer above the welfare and safety of the public.

The ethical obligations a land surveyor owes to the public include the following:

- 1) A good faith effort to perform his tasks in a diligent and careful manner, in accordance with the principles and methods he/she personally believes are the current best practice. (This requires an effort to be familiar with new technology, new methods of land surveying, and new laws or regulations that impact the profession.
- 2) A good faith effort to mark property boundaries in a manner that treats all owners that share those

boundaries in a fair way.

- 3) A good faith effort to make sure his role in construction projects doesn't compromise safety.

Ethical Considerations For The Boundary Survey Map Review Process

Introduction

In this section of the course ethical considerations for land surveyors during the map review process will be discussed. Provided will be a brief overview of the map review process, identification of the roles of the land surveyors involved in the process, and understanding the ethical considerations for each role.

What Is The Map Review Process?

In most jurisdictions of the United States land surveyors have a requirement to file copies of their boundary surveys with a local government agency. (In some jurisdictions this is only required if the survey hits certain triggers. For example: In California one must file a copy of their boundary survey with the County Surveyor if their parcel was created by deed and hasn't yet been shown on a filed boundary survey map.) Most of these jurisdictions with a map filing requirement have also legislated a process to review the map before it is filed. The intent of the review process is to correct errors and to ensure the map has all of the elements required by the law that requires it to be filed. (For example: In California, boundary survey maps must have a 1 inch margin of whitespace, a north arrow, and a scale. They must also show "data necessary for the intelligent interpretation of the various items and locations of the points, lines, and areas shown, or convenient for the identification of the survey or surveyor". [California Business and Professions Code – Section 8762])

Who Is Involved In The Map Review Process

Several different surveyors can be involved in the map review process. Here are the roles of those surveyors:

- 1) There is a land surveyor who is preparing the boundary survey map and submitting it for review and filing.
- 2) There is a land surveyor (who normally works for a local government agency) that is reviewing the boundary survey map in accordance with the process defined by law.
- 3) There may be a land surveyor who employs the surveyor filing the map.

Ethical Considerations For Each Role In The Map Review Process

What are the ethical considerations for each role in the map review process? Each role has different obligations as defined by the law that sets up the requirement to file the map. Each role also has obligations that derive from mutual professional respect and professional courtesy. Discussed below are the ethical considerations for each role.

Ethical Considerations For The Land Surveyor Who Is Preparing The Boundary Survey Map

What ethical issues should be considered by the land surveyor who is preparing the boundary survey map? These issues fall into two (2) broad categories. The first is related to showing professional respect for the land surveyor reviewing the map. The second is related to an honest portrayal of the actual work performed.

The land surveyor preparing the boundary survey map should show he values the reviewer's time, effort, and technical experience. How can the land surveyor preparing the boundary survey do this?

- 1) The land surveyor preparing the boundary survey should make sure each submittal to the reviewing surveyor is accurate and complete.
- 2) The land surveyor preparing the boundary survey should reply promptly to requests made by the reviewing surveyor.
- 3) If the land surveyor preparing the boundary survey map disagrees with the reviewing surveyor on revisions that need to be made to the map, he should explain his disagreement respectfully and in writing.
- 4) The land surveyor should make reasonable revisions requested by the reviewing land surveyor, even when these aren't directly required by law, when doing so won't present a heavy burden.

The land surveyor preparing the boundary survey map should also make sure her map provides an honest portrayal of the actual work performed. This includes the following:

- 1) Only showing monuments as found if they were actually found during the field survey.
- 2) Only showing "search for nothing" at property corners where a diligent search for evidence of the corner monument was performed. (Details of the type of search and level of effort should also be provided.)
- 3) Clearly showing all evidence discovered during the research or field survey, including evidence that might support a boundary resolution that is different from that ultimately shown on the map.
- 4) Making a clear distinction between hard facts, evidence, and professional opinion.

Ethical Considerations for the Land Surveyor Reviewing The Map

What ethical issues should be considered by the land surveyor reviewing a map submitted for filing by another land surveyor?

The ethical considerations for land surveyors reviewing a map can be grouped into 4 main categories:

- 1) The scope-of-review.
- 2) The effectiveness of the review process.
- 3) The identification and disclosure of potential conflicts.
- 4) The proper supervision of the review process by technical staff.

Each of these four (4) categories will be discussed briefly.

The reviewing surveyor should be careful to ensure the review doesn't exceed the scope allowed by the law. In most jurisdictions, the elements of a boundary survey map subject to review by the government agency are limited by law. (For example: In California the County Surveyor isn't allowed to require the modification of survey methods or judgements made by the filing surveyor during his boundary resolution.) If the reviewing surveyor is going to provide comments on issues outside the legally permitted scope-of-review, they should clearly indicate which review comments are in scope and which are simply suggestions or helpful comments. (One can benefit a great deal from review comments on maps by County Surveyors, and it is good to welcome them to provide feedback on items that are outside the legal scope-of-review.) It is very easy for a reviewing surveyor to exceed the legal limits on the scope of review, especially when he has strong differences of opinion with the land surveyor preparing the map.

The reviewing surveyor should remember the surveyor preparing the map is complying with a government mandate that in most jurisdictions is unfunded. (In other words, the filing surveyor and his client are bearing the cost of the government mandate.) As a result, the reviewing surveyor has an obligation to make the map review process efficient. Too many reviewing surveyors or their government agencies view the map review process as way to fund team members, equipment, or software. This is not allowed by most legislation mandating the public filing of boundary survey maps. In many places, this enabling legislation often places strict limits on the fees that can be charged for review of the map. (For example: In California, the map review fee is limited to \$100 unless a larger fee is approved by local ordinance. Even if a local ordinance authorizes a larger fee, the fee must be fixed and justified by a study of the actual costs of map review.)

How can the reviewing surveyor keep the map review process efficient? This can be done by:

- 1) Providing all of the review comments on the first submittal.

- 2) Ensuring consistency between checks of different submittals of the same map and between checks of different maps.
- 3) Not exceeding the legal scope-of-review.
- 4) Allowing for digital submittals for preliminary copies of the map.
- 5) Promptly and clearly communicating with the surveyor preparing the map.
- 6) Placing guidelines and suggestions for the preparation of maps and a description of the jurisdictions map review process in writing.

The reviewing surveyor should clearly identify and disclose any potential conflicts that can arise during the map review process. This issue of conflicts most frequently arises when a local agency has contracted with a private surveying company to handle map review. This can lead to situations where a reviewing surveyor is asked to review a map prepared by their own company, or to review a map prepared by one of his direct competitors. These conflicts should be identified early in the process and extra care should be used to avoid suspicion of the map review process. Conflicts can also occur with map review performed by a land surveyor primarily employed by a public agency. This can occur when the reviewing surveyor has a property interest in the subject parcel or adjoining parcels shown on a map, or when they have a close relationship with someone that does. It can also occur when the reviewing surveyor has a business relationship with the organization preparing the map or the organization for whom the map is being prepared, or has a close relationship with someone that does. While it is true these conflicts can't always be avoided (the surveying community is often small and tightly knit), extra care is needed in these situations.

The final ethical consideration in which a reviewing land surveyor needs to exercise care is in the supervision of staff. In most jurisdictions the map review process must be supervised by a licensed land surveyor. However, the actual map review is frequently performed by technical team members that support the work of the licensed land surveyor. In this case, the reviewing land surveyor has an obligation to the filing surveyor to ensure consistent, accurate, and legally appropriate comments are provided by his team members. Under no circumstance would he allow a map to be reviewed without some personal involvement on his part.

Ethical Considerations for the Land Surveyor Employing The Surveyor Preparing The Map

What ethical issues should be considered by a land surveyor who employs or supervises other land surveyors that are preparing a boundary survey map to be filed? These issues include the following:

- 1) Making sure the surveyor preparing the boundary survey map has adequate resources. This could include technical support, time, and budget. It is never

ethical to pressure a land surveyor to cut corners on preparation of a map because of budget concerns. Nor is it appropriate to demand a salaried land surveyor to work on a boundary survey map outside of normal working hours because of budget concerns.

- 2) Allowing the land surveyor preparing the boundary survey map a reasonable amount of room in matters of professional judgement, such as the method of boundary resolution. If the supervisor wants to dictate every detail of professional judgement on the map, they should put their own signature and seal on the document. If they don't have a land surveyor license and wants to dictate every detail of professional judgement on the map, they should get one. There needs to be room for some give and take in this aspect, as the employer is likely paying for the professional liability insurance that protects the land surveyor preparing the map.
- 3) Understanding the land surveyor preparing the boundary surveyor map often has little control over the requirement to file the map. This requirement is usually defined in state law and automatically triggered during a land surveyor's work on a project. The filing is usually not voluntary. This issue can be especially sticky when the supervisor of the land surveyor who needs to file the boundary survey map is a non-surveyor.

How Land Surveyors Monitor Ethical Performance

How does society monitor ethical performance of land surveyors? As we mentioned earlier in the course, one primary characteristic of a profession is the desire to self-regulate. Land surveyors have developed a couple of different ways to regulate members of their own profession. But the ethical performance of land surveyors is monitored in other ways. In this section of the course, we will discuss the following methods of monitoring ethical performance by land surveyors:

- 1) Self-regulation.
- 2) Requirements of state law.
- 3) Requirements of the common law (contracts and professional liability).

Self-Regulation of Land Surveyors

How do land surveyors self-regulate? This is primarily accomplished through three vehicles. The first is through professional associations. The second is through professional reputation. The third is through the requirements of state law. All three are effective at monitoring ethical performance for different reasons, and all have their short-comings.

The Enforcing of Ethical Performance By Professional Associations

Most land surveyors voluntarily become members of one or more professional associations. These could be associations at the state or national level, and for private or public sectors. (For example: It is good to be a member of a state association of land surveyors for both the public and private sector. It's also recommended to be a member of a national association of land surveyors in private practice.) These professional associations tend to monitor ethical performance in 4 ways:

- 1) They have a code of ethics or professional behavior that members agree to adhere to.
- 2) They have committees or groups that monitor ethical performance by association members.
- 3) They have a process to discipline or expel members that violate the code of ethics.
- 4) They educate their members on ethics, rules, and regulations that govern their work.

As an example, the local chapter for a state land surveyor association has two committees that deal with ethical issues. The first is the Professional Practices Committee. This committee seeks to educate surveyors who have violated the law or the ethical code of the association. The second is the Monument Preservation Committee. This committee deals specifically with ethical issues related to the intentional or negligent destruction of survey monuments.

As mentioned above, enforcing ethical behavior through professional organizations has its challenges. The primary challenge is that participation in a professional association is voluntary. Land surveyors must willingly agree to be a member of the association, and be bound by its ethical code. There are some land surveyors who have no desire to participate in a professional association. Another major challenge of enforcing ethical behavior through a professional association is the reliance on a volunteer work force. Unlike a state licensing board, which usually has full time paid employees working on enforcement of ethical behavior, professional associations rely on members to donate their time to activities like the business of a professional practices committee. This limits the amount of time that can be spent on ethics monitoring and enforcement. A final challenge with ethical enforcement by professional associations is the "good old boy" effect. This arises when unethical behavior by one member of the professional association is overlooked by other members in charge of monitoring ethical performance because of the friendship or strong relationship between members.

The Enforcing Ethical Performance Through Professional Reputation

Ethical performance is also enforced to a small degree by the desire for a good professional reputation. (This desire is also reflected among members of a professional

association, and plays a role in the associations enforcement of ethical behavior as well.) Most land surveyors are aware of the reputation they have in the community in which they practice. This is the reputation they have with:

- 1) Other land surveyors in their community.
- 2) Other related professionals in their community.
- 3) The general public.

Many times licensed land surveyors have changed their mind about a potentially unethical course of action because of their fear about damage to their professional reputation. The desire for a good reputation isn't just a fear of being caught. The desire for a good reputation can also be a positive motivator.

As with other methods of self-regulation, enforcing ethical behavior through professional reputation has its challenges. The primary challenge with this method of enforcement is the reality that a minority of land surveyors have little concern for their professional reputation, and will practice unethically for a relatively small financial reward.

Enforcing Ethical Performance Through The Requirements of State Law

In most states, ethical performance of land surveyors is required by state law. These requirements can be embodied directly in the code, or can be spelled out in the regulations of a licensing board. The licensing board for land surveyors is also an entity of the state government in most states, and has the ability to enforce rules of ethical behavior through different types of penalties. (For example: In California, state law directly requires the public filing of boundary survey maps. The regulations of the licensing board require the use of a written contract. The licensing board has the ability to enforce its rules through fines and the suspension of a land surveyor's license to practice.)

State law also governs other aspects of a land surveyors work, and these laws touch on matters of ethics. For example: In California state law mandates a process for creating land subdivisions, including what information the land surveyor has to show on the subdivision map and how she is to mark the corners of each lot.

Enforcing Ethical Performance Through The Common Law

Ethical performance by land surveyors is also enforced through the common law, or the courts in our judicial system. The judicial system primarily enforces ethical behavior of land surveyors through the mechanism of professional liability. In the United States a land surveyor can be sued for behavior that is negligent or fraudulent. If found guilty of this behavior, a court can impose

monetary damages that are significant, and in some cases, large enough to bankrupt the land surveying company. The fear of a suit, and the potential for monetary damages that result, act as a constraint on unethical behavior by land surveyors.

A couple of factors limit the effectiveness of the common law as a mechanism to enforce ethical behavior by land surveyors. The first limiting factor is the habit most land surveyors have of purchasing professional liability insurance. Although insurance premiums are based in part on the number of claims against a land surveyor for bad behavior, they eliminate the likelihood of a suit that will wipe out a business. Professional liability insurance also has the negative effect of spreading the cost of claims against unethical land surveyors to the premiums of land surveyors that practice in an ethical manner. This is hard to avoid, as one of the principle purposes of this insurance is to distribute risk among the pool of insured organizations. The second limiting factor is the difficulty in publicizing court judgements against surveyors that make poor professional decisions. Many land surveyors don't read court cases, and many cases are settled out of court after a claim is made, or at the trial court level, where decisions remain unpublished. Even a notorious case against a land surveyor may only be known in a small local area.

FINDING THE COURAGE TO SAY NO

Introduction

In this part of the course a few example scenarios that require a professional land surveyor to say "no" will be discussed. This could be saying "no" to a client or "no" to a supervisor. After looking at the example scenarios answer the question: "Why does saying no as a licensed professional take courage?". In conclusion, there is a short discussion of why finding the courage to say "no" is so important for a professional land surveyor.

First, read and answer these introductory questions:

- 1) How are professional land surveyors different from other workers? How are they different from other non-professional business owners?
- 2) Why is it sometimes necessary to say "no" as a professional land surveying?
- 3) Why do all of our example scenarios deal with boundary surveying?

How are professional land surveyors different from regular workers or non-professional business owners? Previously in the course, it was discussed that land surveyors have special privileges and responsibilities because of their professional status in society. These responsibilities include an obligation to protect the welfare of the public.

That means a land surveyor must consider the needs and concerns of people other than his client or his employer. While a construction laborer may simply do what he is told by his foreman, the land surveyor must consider the potential consequences for each of her decisions and actions.

Why is it sometimes necessary to say “no” as a professional land surveyor? This need arises when an action requested by a client or supervisor clearly results in harm to another party or a violation of the law or principles of ethics. In these situations, the professional land surveyor can’t blindly obey the request without a consideration of how her actions impact others.

Why do all of the example scenarios we discuss below deal with boundary surveying? Although it is true that ethical problems can come up in other types of land surveying, boundary surveying is full of gray areas that provide ample room for the professional land surveyor to bend the rules.

Example Scenarios

Below are four (4) example scenarios that would require a professional land surveyor to say “no” to a client or a supervisor. In the first scenario there is an immediate request to violate the law. In the second scenario there is an immediate request to violate the professional standard of care. In the third scenario there is an immediate request to engage in unethical behavior. In the fourth scenario there is a promise of later compliance with the law.

Example Scenario #1:

Ted works for Black Oak Engineering, a small surveying and engineering company. He receives a request for proposal from a local architect. The architect has been hired by a local school district to design and manage improvements to several campuses in a city where Black Oak Engineering regularly conducts business. The architect has sent a request for proposal to Black Oak Engineering and several other land surveying companies in the area. The RFP asks for complete topographic mapping, including aerial photography and utility research. Along with the complete topographic mapping, the RFP asks for a “record boundary”.

The RFP doesn’t explain what a record boundary is, but Ted knows from previous work with this client that the creation of a “record boundary” does not typically involve the following actions: 1) Interpretation of controlling calls contained in the vesting grant deed. 2) Review of maps and deeds for adjoiner parcels. 3) Chain of title research to establish junior-senior rights. 4) Research of easements, leases, and other encumbrances of record. 5) Identification and location of physical features providing evidence of parcel boundary location, adverse possession, prescriptive use, or properties rights not documented in the public record. Ted knows it can be appropriate to use

a record boundary as a planning tool in some limited circumstances, but is sure from the RFP that the record boundary in this case will be used for full and final design of improvements.

Why does the architect specifically request a “record boundary”? Because she doesn’t want to pay for a proper boundary survey. Is this the type of project that Black Oak Engineering should turn down? Or should Ted take the job because he really needs the work, even though it knows the winning proposer won’t get paid for a proper boundary survey? (The architect doesn’t want to pay for a proper boundary survey, but will no doubt rely on the “record boundary” shown on the topographic mapping provided by the land surveyor for tasks like the location of structures against building setback requirements.)

Example Scenario #2

Bill has always taken a great deal of pride in his work as a boundary surveyor. He has a reputation within his company and among the local surveying community as a professional with an excellent work ethic. Other surveyors are pleased to follow in his footsteps on a parcel boundary retracement. However, the local economy has been ravaged by the housing downturn and economic recession. The company he works for is under intense pressure to compete. Prices are being driven down, and potential clients are demanding more work for less money. In a meeting with the owners of the company, bad news is delivered to Bill. The company can no longer afford Bill’s pursuit of “perfection”. Bill must find a way to lower costs on boundary surveys so the company can be more competitive. If necessary, Bill must reduce the time spent on document research and the time field crews spend searching for property corner monuments. If Bill says “no” to these adjustments, his job and the jobs of his staff will be on the list for elimination if a layoff becomes necessary. His owners plainly tell him they can no longer afford an “idealist”.

What should Bill do? Does he start to cut corners on boundary surveys to save the jobs of this team members? What consequences would these shortcuts have on his reputation, his personal liability, and the liability for his company? What harm could these short cuts cause to his clients?

Example Scenario #3

Maria is approached by her boss with a request to destroy a file related to a boundary survey completed by the company a couple of years before. There is now a lawsuit over improvements built in relation to the lines shown on the boundary survey, and the files contain evidence of the company’s professional negligence. The land surveyor that performed the boundary survey is no longer employed with the company, and Maria’s boss feels this is the most effective way to clean up the mess he left behind. Maria is told to “scrub” both the digital and hard copy files of any field notes, point files, raw data files, exhibits or maps related to the boundary survey.

What should Maria do? She wasn't the land surveyor that performed the survey. There isn't any clear law she can think of that prevents a little house keeping on the project files. She isn't even sure if others will be harmed by the scrubbing her boss has asked for. Those files are the private property of the company, after all.

Example Scenario #4

As a land surveyor working under the direction of engineering staff in the public works department of a local county, Judy has historically identified monuments that may be disturbed as part of road improvement projects conducted or funded by the county. This allows the county to meet the requirements of state law related to monument preservation on construction projects. However, at a recent meeting with managers of the department, Judy was instructed to eliminate the review for surveying monuments within the project site. Management is trying to stretch road improvement dollars, and this review work was one item deemed unnecessary considering the current budget constraints.

Judy is told by the public works director not to worry about monument preservation on upcoming projects. As soon as the county budget is in better shape, he promises to return to all recent projects to reset any damaged or destroyed monuments. However, Judy knows state law doesn't allow for this type of delay, and that restoration of the monuments is difficult if their position isn't collected before construction.

Will Judy comply with the instructions to eliminate monument preservation tasks from County road projects? Does the promise of future compliance by her supervisor relieve her of the immediate obligation she has to comply with the law?

Why Does It Take Courage?

Saying no to your client or supervisor may result in:

- 1) Turning down a prospective project or prospective client.
- 2) Refusing to compromise standards of professional practice to meet budget or schedule pressures within your organization.
- 3) Refusing to neglect your professional duties to the public. (For example: filing a public record of your completed field survey.)

Saying "No" may be one of the hardest professional decisions you will ever make. Most bosses or clients are unhappy with a refusal to perform requested tasks. When the economy is doing poorly, few of us have potential employers beating down our door, or clients flush with cash and project ideas ringing our phone off the hook. To make matters worse, in economic downturns competition for projects and clients is intense. If you aren't willing to say "yes" against your better judgment, another surveyor probably will, and will do the task for less money.

Let's not sugar-coat reality. Saying "no" to your client or your boss can have serious consequences. Taking a stand on your professional ethics by turning down work or refusing to compromise your standards is very serious.

What may be the result? 1) You may lose clients and new projects. Ultimately this could lead to the closure of your business. 2) You could be fired, laid off, have your working hours reduced, or be otherwise punished and marginalized in your organization. 3) You may gain a reputation as someone who isn't "reasonable", "practical", or "in touch with economic realities".

The Bottom Line

Why Do the Right Thing?

Some might wonder why any land surveyor with a house payment or a family to feed would do "the right thing" in the example scenarios we described in this part of the course. "Doesn't everyone need to make a few compromises to stay afloat?" they reason.

This type of reasoning can be deceptive. It can also be pervasive. That doesn't mean there aren't good reasons for saying "no". However, recognizing these reasons and doing the right thing requires that a land surveyor examine the bigger picture, and consider more than his or her own interests.

The reasons to say "no", even when it takes great courage, include the following:

- 1) Saying "yes" can have long-term negative impacts on our profession.
- 2) Compromising on professional standards does not ultimately benefit the organizations we serve.
- 3) Giving into pressure to cut corners does not ultimately serve the best interests of our clients, even if they fail to understand this fact.
- 4) As licensed professionals, we have a duty to protect members of the public.

THE WEIGHT OF MONUMENT PLACEMENT

Introduction

In this final section of the course, consider the placement of property corner monuments by the land surveyor, and the implications of that for other surveyors, the public, and our legal system.

The placement of a property corner monument seems like such a simple act. Depending on the type of land surveying practice you are in, you may not remember the last time you set a property corner monument. Or, if your practice is focused on small property surveys, you may set property corners frequently.

Monument placement is such a common part of the profession that often boundary surveyors fail to think about the weight, or significance of the act. It would benefit to stop and think about how that monument, once in the ground, is viewed by others. That includes how it is viewed by:

1. Non surveyors.
2. Our fellow boundary surveyors.
3. The legal system.

Let's consider how the act of monument placement can be viewed differently by each of the groups listed above.

How Monument Placement Is Viewed By Others: Non-Surveyors

To begin the discussion, consider how the act of monument placement is viewed by others. Focus the most attention in this section of the course on how monument placement is viewed by non-surveyors (especially land owners). Of the three (3) groups that are listed above, this group is the most important when it comes to monument placement. Why?

Most non-surveyors, and certainly most land owners, lack a deep understanding of boundary surveying principles. For example: Most land owners would be confused by multiple monuments set to mark a single corner. They might ask these questions:

1. Why are their multiple monuments?
2. Isn't there only a single corner?
3. Which surveyor's monument is correct?
4. Which surveyor's monument is wrong?

These questions reveal a lack of knowledge about some of the uncertainty and ambiguity in boundary surveying. Is it possible that two (2) boundary surveyors could come up with two (2) different monumented locations for a property corner, and that both locations are reasonable solutions? In many cases, the answer is yes. This uncertainty is very confusing to most non-surveyors.

Here is another example: Most land owners would be confused if property corner monuments placed on the ground didn't closely match the dimensions of their property deed or survey map. Why? Because they have never been taught about things like measurement error, the differing levels of precision based on measurement methods, junior/ senior rights, and the deterioration of boundary evidence over time.

How does this limited knowledge about boundary surveying impact non-surveyors viewpoint of monument placement?

In most cases it results in the land owner viewing the set monument as a sacred marker of the property corner that is beyond dispute.

Think about the profound consequence of the previous statement: Land Surveyors are given a special trust by non-surveyors, who assume, because of their ignorance, that our property corner monuments are always correct.

What will be done with this special trust as boundary surveyors? Is it handled very carefully, and with a sense of respect? Or will it be abused by the carelessness of a retreat from ethical standards of work because of competitive price pressures?

This special significance given to set property corner monuments is the most important element considered in this part of the course. It is something should be considered deeply before monument placement.

How Monument Placement Is Viewed By Others: Fellow Boundary Surveyors

How are the monuments that have been placed at property corners viewed by our fellow boundary surveyors?

They certainly view previously placed monuments from a more nuanced and educated perspective. It is reasonable to conclude that they treat such monuments with a bit more suspicion (and for good reasons). This isn't necessarily because they doubt the desire to do good work, but they understand all the factors (like measurement error) that can result in confusion about the proper location for a property corner.

Despite this more nuanced view, many boundary surveyors will (and should) treat existing property corner monuments with respect and should be hesitant to dispute them with other set monuments. Most land surveyors will try to accept the position of an existing monument if it is reasonable to do so.

What are the implications of this view that many fellow boundary surveyors have of our set property corner monuments? There are two (2) important implications:

- 1) You need to get your monument in the correct location, because future boundary surveyors will be hesitant to correct your mistakes with a new monument.
- 2) If you want your boundary resolution to be more readily accepted by fellow boundary surveyors, back it up with monuments in the ground.

How Monument Placement Is Viewed By Others: The Legal System

In conclusion, consider how property corner monuments are viewed by the United States legal system. Although this is a complex subject, attempt to simplify it to some bare essentials:

- 1) The legal system gives special significance to "original" property corner monuments. This is a critical truth that

every boundary surveyor should be intimately familiar with. It also means boundary surveyors have a special opportunity when they can set original property corner monuments.

- 2) If a court leans heavily on the principles of equity (or fairness) in its decision, a court in the United States legal system may hold a property corner monument that has been long accepted by surrounding land owners and relied upon by them, even if it isn't in the exactly "correct" position calculated by the application of boundary survey principles and mathematics.
- 3) If a court leans heavily on strict adherence to legal principles, and gives equity less weight, a court may overturn a property corner monument that is not in the "correct" position calculated by the application of boundary survey principles and mathematics. This is despite of its acceptance by land owners and boundary surveyors.

Item #2 and Item #3 in the list above are obviously in conflict. There is a balancing act that courts will try to achieve between equity and the strict application of boundary surveying principles. One risk in allowing a boundary dispute to go to court is the unpredictability in how a court will determine this balance. There is variability present in court decisions where property corner monuments are in dispute.

Despite this unpredictability, it is helpful as boundary surveyors to consider how the United States legal system may view the monuments we set.

Conclusion

The way monuments are viewed by others can change significantly based on the background and position of the viewer. The special trust and faith non-surveyors place in monuments should be of utmost concern to surveyors when marking property corners. Also, remember that the boundary surveyors that follow, may be very hesitant to dispute a monument that has been set with a monument of their own. Ultimately, the way the United States legal system views monuments is important, because they have the final word on boundary location and are the highest judge of the correctness of our work.

