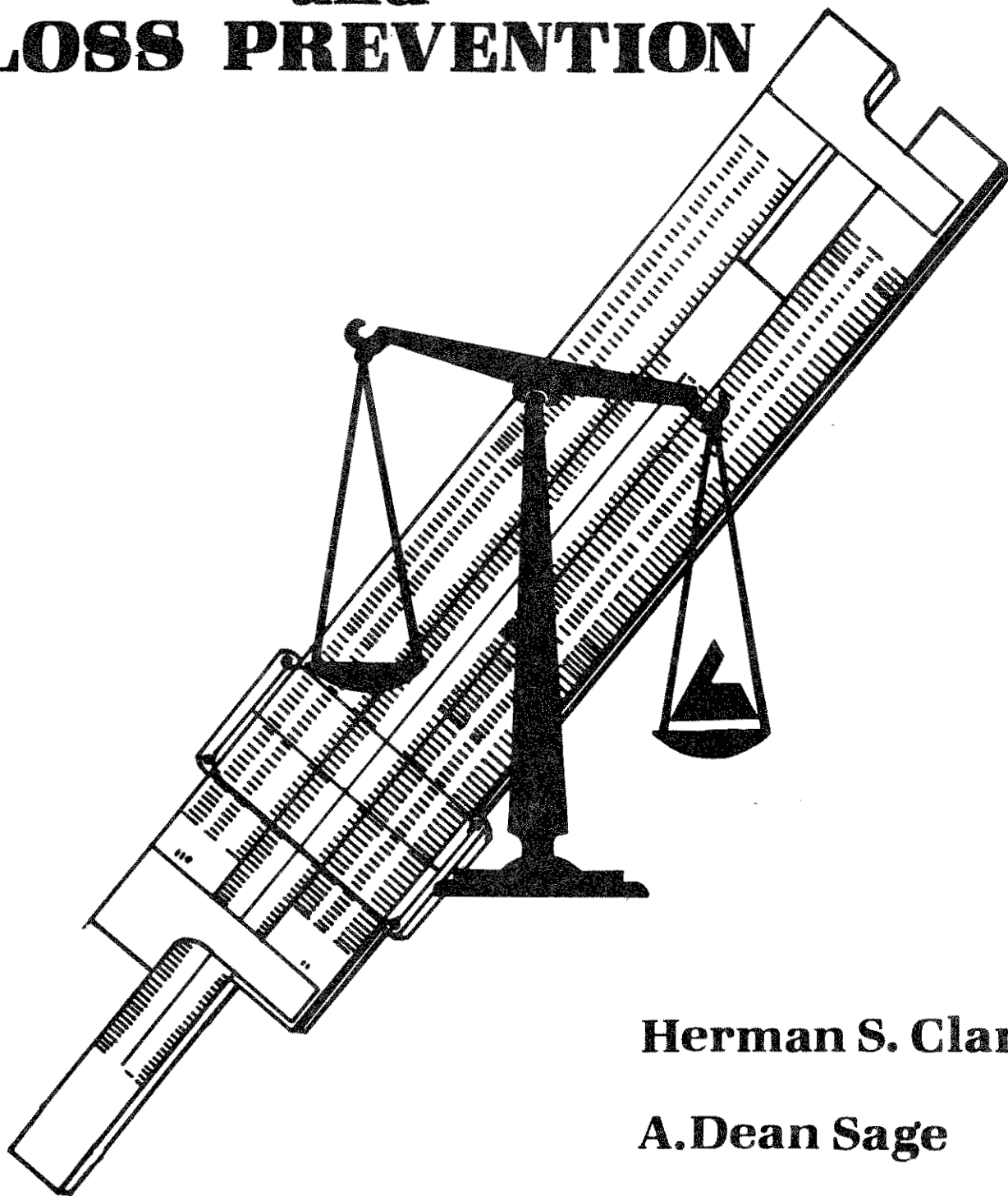


LIABILITY and LOSS PREVENTION



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A. Dean Sage

PREFACE

We wish to pay homage to the various sources for the material contained in this volume. Although we have not specifically given credits to particular language, we wish to recognize that this material was assembled from various sources and our own experiences in professional practice. Without question, the premier sources of data are the Victor O. Schinnerer Company's publication entitled A/E Legal Newsletter and their Guidelines for Professional Practice; the American Institute of Architects' Handbook of Professional Practice; and the Association of Soil and Foundation Engineers' Contract Reference Guide. Other material has been utilized from Federal Publications' A/E Malpractice Seminar, the National Society of Professional Engineers' practice materials, and several other sources too generic to identify.

This task has been a long and arduous one, and we wish to thank Ms. Catherine Smith for the vital assistance that she rendered, and especially the tolerance and patience of Ms. Dell Hawkins and Ms. Betty Brooks in preparing the manuscript.

The material presented in this brief seminar touches on all areas of Professional Liability and Loss Prevention, but obviously it is not exhaustive in treatment due to the constraints of time. It is our hope, however, that it will be sufficient to stimulate each of the participants to become more sensitive to this subject and more committed to the continuing study of it.

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INTRODUCTION

The law is a thread woven throughout the fabric of our lives. The law is civilization! The scales of justice are loaded--man's highest aspirations on one side, his pragmatic needs on the other. We are here today in a course dealing with Liability and Loss Prevention, and it is our intention to dwell upon the pragmatic. We shall seek to accomplish this by relating the law's tools to the key stages of the process, explaining how the prodent application of legal principles can:

- (i) further your objective
- (ii) shield you from harm
- (iii) move your job along, and
- (iv) mainly enhance your possibilities of success

I. ATTITUDE OF THE COURTS TOWARD PROFESSIONAL A/E's

A. BACKGROUND AND BASICS. Your career is framed by a body of law given to you by your predecessors. During your career you should become conversant with laws relating to the building and engineering profession and gain some understanding of legal terms and principles. These principles have evolved from cases previously decided and from local, state, and federal legislation. Since many new laws are continually being passed and new decisions are being handed down by the courts, accepted generalizations concerning your liability change from time to time. Additionally, a particular case may be decided differently from generally similar cases of record due to variation in circumstances and in the facts, in the clearness of the testimony, in the skill of the attorneys, in the intelligence of the juries, in the expertise and experience of judges, and in the existence of different precedents in different jurisdictions. It behooves you to become and remain familiar with the law affecting your profession. It is our intent today to present to you basic principles for recognizing, preventing and defending what has come to be known as malpractice claims. The subject shares characteristics with legal and medical malpractice; however, certain analogies are reserved for the engineering and construction industry.

DEFINITION OF MALPRACTICE

We should begin our journey by having an initial working knowledge of malpractice, a term that has both legal consequences and connotations of moral impropriety. Professional malpractice may occur through a single affirmative act or omission or arise from an entire course of conduct. The legal determination of professional malpractice has little to do with whether a professional is creative or conservative, competent or incompetent, active in community and public affairs, or has made great contributions to the profession.

The legal definition of professional malpractice contains two separate theories of liability. The first is when the professional in question has met the specific obligations contained in his contract. This is called contractual liability. Secondly, is whether the services provided by the professional were performed in a manner consistent with the education, experience and skill expected. This theory refers to professional negligence. For negligence to exist four elements must be proven:

1. Legal duty
2. Breach of that duty
3. Breach must be proximate cause
4. Actual injury or damage

In addition, interwoven into this malpractice theory one must avoid certain emerging tort doctrines of strict liability,

product liability, ultra hazardous activity and some hybrid tort and warranty situations.

B. ROLE OF THE PARTIES. In order to properly understand the evolution of the principles involved in liability, we must begin by identifying the role of the various parties.

OWNER: Generally recognized as that party with an idea and a desire to develop a new facility or expand an existing facility. The owner is responsible for project financing, clear title and/or access to the parcel, timely payments to the parties involved, and generally local government rules. Normally an owner will contract directly with a construction contractor; however, in many instances the general contractor may become a third party beneficiary of the agreement between the owner-architect and/or engineer.

ARCHITECT/ENGINEER: Is generally recognized as that party who traditionally provides and devises plans and writes specifications for building and other works. In the typical project, the professional's duties are derived from provisions of the applicable standard contract forms prepared by the various institutes or, in the case of LAW ENGINEERING, they appear on our standard proposal acceptance sheet or work authorization forms.

CONSULTANTS: Generally recognized as parties possessing specialized expertise that is required for accomplishing the project. LETCo provides many specialized services such as construction materials testing; preparation of geotechnical, hydrological, and geological engineering reports; and offering of selected engineering advice, to name a few.

CONTRACTOR: Is generally recognized as the party who develops or builds the property utilizing either his own forces or the forces and expertise of subcontractors.

SUBCONTRACTOR: Has generally been recognized as the party who is utilized by a contractor to provide specialized expertise and assistance in building the project.

MATERIALMEN/SUPPLIERS: Parties providing supplies and materials for the project.

You should recognize that LAW ENGINEERING'S services span the complete spectrum of the parties. Our clients in the past have included owners, architects, other engineers, contractors and even, in some cases, subcontractors. The modern trend in the architectural and engineering profession is to require the owner to hire directly a soils engineer, a full-time construction inspector, and an independent testing laboratory.

II. STANDARD OF CARE

A. HISTORY. Now that we understand the role of the parties, let's spend a few minutes and trace the history of the evolution of liability and the standard of care expected of you as a professional. Historically, we can trace the responsibility of builders for sound design and construction to ancient times. Because in ancient times distinctions were not made between the professions and building in general, you must understand and realize that the term "builder" that I will be using generally encompasses all of the parties we have previously discussed. Under the Code of Hammurabi, the Babylonian justice for builders was swift and severe. It required the death of "the builder's son for a house being so carelessly built as to cause the death of the owner's son".

Roman and Mosaic law contain the doctrine of "like for like" punishment for injury with an act of the same kind--similar to the Biblical "eye for an eye". The Napoleonic Code provides that:

"If a building, which an architect or other workman has undertaken to make by the job, should fall or ruin either in whole or in part on account of the badness of the workmanship, or even because of the badness of the soil, the architect and undertaker shall bear the loss, if the building falls to ruin in the course of ten years." (Even started our first Statute of Limitations)

B. HOW IT IS DETERMINED: WHAT IS THE STANDARD? While most American jurisdictions have arrived at a definition of the professional standard applicable to architects and engineers in much the same manner, perhaps the clearest and best definition is found in a California case Pakston v. County of Alameda where the court held:

"By undertaking professional service to a client, an architect impliedly represents that he possesses, and it is his duty to possess, that degree of learning and skill ordinarily possessed by architects of good standing, practicing in the same locality. It is his further duty to use the care ordinarily exercised in like cases by reputable members of his profession practicing in the same locality: To use reasonable diligence and his best judgment in the exercise of his skill and the application of his learnings, in an effort to accomplish the purpose for which he is employed."

You should recognize that the standard of care for professionals does not require that you as an engineer be infallible or guarantee or insure the results of your professional efforts. This is the holding in a number of cases. One of the most

eloquent statements of the policy underlying the general principles applicable to the standard of care for architects and engineers is found in the case of City of Mounds View arising out of Minnesota.

"The reason underlying the general rule as it applies both to architects and other vendors of professional services is relatively straightforward. Architects, doctors, engineers, attorneys and others deal in somewhat inexact sciences and are continually called upon to exercise their skilled judgment in order to anticipate and provide for random factors which are incapable of precise measure. The indeterminate nature of these factors makes it impossible for professional service people to gauge them with complete accuracy in every instance. Thus doctors cannot promise every operation will be successful; a lawyer can never be certain that a contract he drafts is without latent ambiguity; and an architect or engineer cannot be certain that design elements will interact with natural forces as anticipated. Because of the inescapable possibility of error which adheres in these services, the law has traditionally required not perfect results but rather the exercise of that skill and judgment which can be reasonably expected from a similarly situated professional..."

I now ask you to turn to the reverse side of LAW ENGINEERING's standard proposal acceptance sheet and read under the article entitled Warranty and Limitation of Liability, the Standard of Care that We Have Chosen to Utilize.

C. TO WHOM IT IS OWED (to be furnished later)

III. HOW DUTIES ARE CREATED. The common-law concept of negligence establishes liability in those situations where one fails to act reasonably toward a person to whom a duty is owed, and that failure is a direct and proximate cause of injury. Often, the question of whether particular conduct was reasonable can be tested by our everyday experience. For example, an individual who runs a red light or leaves a slippery substance in a public hallway has engaged in conduct which common experience indicates is unreasonable. The conduct of an A/E in his professional capacity is usually beyond the common knowledge of most individuals. Therefore, the concept of "standard of care", which has previously been discussed, is applied to A/E's to measure and define the reasonableness or acceptability of their conduct.

It is appropriate to state that there are two types of liability which an A/E may incur in private practice. One is tort liability which arises in the event professionals perform in a negligent manner and cause damages to their client or a third party. The other is contractual liability which will arise in

the event a professional breaches a contractual duty. It is important to understand that contract liability stems from the breach of a promise and tort liability from the violation of a duty imposed by law, the most common example of which is the failure to use due care (negligence). In A/E malpractice cases, the A/E almost always performs services because he has contractually agreed to do so. His duties, therefore, would logically be viewed as emanating from the contract and, generally speaking, they are defined in the contract. The "due care" requirement, however, attaches to the work, not only by virtue of the A/E's contract, but also as a matter of law. It frequently occurs that A/E malpractice cases are grounded both on breach of contract and tort principals. The differences are more theoretical than practical as both areas of the law have principles that normally lead to similar results.

Some jurisdictions attempt to draw distinctions between various degrees of negligence in an effort to establish degrees of culpability which range from ordinary negligence to conduct which approximates an intentional tort. While many commentators feel the exercise is futile, most jurisdictions distinguish between slight negligence, ordinary negligence and gross negligence. Slight negligence has been characterized as the failure to use great care, ordinary negligence as a failure to use ordinary care, and gross negligence to use even slight care. As a practical matter, these distinctions should not change the basic inquiry with respect to the question of negligence: whether an individual exercised reasonable care under given circumstances. Willful misconduct is conduct that is more culpable than negligence, even gross negligence, but falls short of an intentional wrong. Willful misconduct is often referred to as "wanton" or "wreckless", but the term is generally used to denote that the defendant has intentionally accomplished an act in total disregard of a risk known to him or so obvious he must have been aware of it. The importance of willful misconduct by an A/E is that it could conceivably give rise to the application of punitive damages.

A. BY CONTRACT (Material to be furnished at a later date)

B. BY LAW. When the A/E's design or other conduct is in violation of an existent statute, municipal ordinance, or other applicable building code, no expert may be needed to establish a violation of the standard of care. Rather, the violation of a statute or ordinance may be sufficient to invoke the doctrine of negligence per se. That doctrine has been interpreted differently by various jurisdictions, but generally the prerequisites for the application of the doctrine are similar to those provided below. The failure of a person to exercise due care is presumed if:

1. he violated a statute, ordinance or regulation of a public entity;
2. the violation proximately caused death or injury to

a person or property;

3. the death or injury resulted from an occurrence of the nature of which the statute, ordinance or regulation was designed to prevent; and

4. the person suffering the death or the injury to his person or property was one of the class of persons for whose protection the statute, ordinance or regulation was adopted.

If all of the above conditions are met, there is a presumption of negligence which can only be overcome by the presentation of substantial evidence to the effect that the A/E acted reasonably under all the circumstances. In general, some of the statutory law effecting A/E's are as follows:

Federal Law: National Environmental Policy Act, the Federal Water Pollution Control Act, the Clean Air Act, Toxic Substances Control Act, Labor Law, Copyrights and Patents.

State and Local Laws: Zoning and Land Use Controls, Coastal Management, Building Codes, Engineering Licensing Statutes, Selection of Engineers and Contractors for Public Contracts, Public Utility Regulation and Water Resources Law.

The policy behind the above rule is fairly straightforward. Most ordinances, statutes and codes pertaining to design and construction of buildings are passed to develop certain minimum standards of design and construction that will ensure proper performance of the structure and prevent damage or injury to the owner of the building or people who might foreseeably utilize it. Accordingly, when the A/E either by his design or supervision of construction, participates in the construction of a structure which violates a statute, code or ordinance, the doctrine of negligence per se generally applies. Traditionally, the application of strict liability to A/E's has been limited since they offer a service, not a product. There are, however, three categories of strict liability which should be explored, as they represent potential areas of liability for the A/E. Those categories are: Products Liability, Warranty Implications and Ultra-Hazardous Activity.

1. Products Liability. Many states have adopted the rule that a manufacturer is strictly liable for injuries caused by a defective product. The courts have, however, distinguished between products and services.

2. Warranty Applications. The vast majority of jurisdictions have found that professional services are not subject to the doctrine of implied warranty. The rationale for this is similar to that expressed in the products liability cases. As engineers deal with the inexact sciences they must largely depend on their

judgment, and even "the keenest engineering minds can err in their most searching assessments". A/E's, therefore, cannot be required to be infallible, but only to use reasonable care and competence. There are a few jurisdictions which have held that while the design professional is not an insurer of perfect plans, he impliedly warrants that his plans will make the design structure reasonably fit for its intended use. It is important to note, however, that while the court supporting the minority rule discusses the professional's liability in terms of breach of implied warranty, it appears to be applying a negligence standard to the A/E's conduct.

3. Ultra-Hazardous Activities. Sometimes strict liability is imposed on individuals who engage in ultra-hazardous or abnormally dangerous activities. This general theory stems from the "rule" of Tylin v. Fletcher, LR3HL330 (1868) which held that a defendant was liable for damages caused by a thing or activity unduly dangerous and inappropriate to the place where it is maintained. While most states follow this rule to varying degrees, most adopt the second restatement of Torts, Section 520, criteria for establishing what constitutes an ultra-hazardous activity. These considerations include the magnitude of the harm, the likelihood that harm will result, the inability to eliminate the risk of harm, common usage, the appropriateness of the activity to the place where it is carried on, and the value to the community.

C. CONDUCT (material to be furnished later)

D. COMPANY POLICY PERMANENT DIRECTIVE 1 (material to be furnished later)

IV. THE NEED FOR WRITTEN CONTRACTS--Some Troublesome Contract Provisions. A contract is a promise or a set of promises, for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty. The proper function of a well-written and carefully negotiated contract is the recording of a clear understanding between the parties to the agreement, so as to eliminate the need of ever having that agreement resolved or interpreted in a court of law. Increasingly, the courts are finding that A/E's have a duty to others not a party to such agreements. Such a duty has traditionally been extended to the estate of a deceased client, to a new owner of the client's interest, etc. In recent years, the courts have been extending the duty of A/E's to those others who may be seen as having reason to rely upon the A/E's work or judgment. The duty of the A/E has, for example, been extended to the general contractor, to subcontractors, to injured workers, to sureties of the owner or contractor, to subsequent purchasers of the completed project and even to unrelated parties or people in the street. Of continuing concern to the A/E is the interpretation of the courts of the duty or liability which accompanies a contract and is often interpreted dependent upon

what the parties to the contract expect, what responsibilities are assumed and what responsibilities are defined in said agreements.

In the development of contract law, the courts have consistently held that there are certain elements that must be present for a contract to be valid: an offer, an acceptance, consideration, and terms of which are not otherwise against the public policy of the state in which the contract is executed.

An offer means a tender by some person to perform an act in return for some form of consideration. An offer may be unequivocal or it maybe made with reservations; it may be open for various periods of time such as a few minutes, a few hours, days or weeks or even longer. The offer is considered to be outstanding and open until its acceptance, rejection or withdrawal by the person making the offer. Acceptance means to agree to perform an act or to deliver a product or service as set forth in the offer. Consideration is defined as anything of agreed or perceived value which is given by either party to a contract to bind it. The value of the consideration need not be great. Courts rarely intervene in a contract dispute where the major issue is whether the consideration is adequate. This is important to the A/E since they may make an offer, have an acceptance and, thereafter, have a client renege. If they have performed even minor elements of their obligation, there may be consideration sufficient for enforcing the contract, or at least a portion of it, to prevent one party's unjust enrichment at the expense of the other.

A. THE NEED FOR CONTRACTS. The Value of LETCo Form Contracts (to be furnished later)

B. TROUBLESOME PROVISIONS

1. SCOPE OF WORK CLEARLY DEFINED. The services furnished by an engineer will depend on the size and complexity of the work, the tecxhnical staff, and the basis on which the fee is determined. Complete engineering services normally are accomplished in three phases as follows:

- (1) engineering and economic feasibility studies and preliminary report,
- (2) preparation of contract plans and specifications,
- (3) supervision of construction

Of utmost importance in the drawing of contracts for professional services is the definition of the scope of the services to be furnished. The statement should be definite and precise and should establish the limits of the engineer's responsibilities beyond question. To be avoided are such general statements as "the engineer shall do all engineering work and perform all

engineering services required in connection with the construction of the project". Such a requirement may obligate the engineer, at his own expense, to represent the client in lengthy and costly investigations and court procedure if litigation or arbitration proceedings should develop from the work. This may be true even though the dispute might have no direct connection with the services to be provided. The contract should be specific in providing for additional compensation for any services required other than those contemplated by the agreement and on which the original fee was based. If materials engineering or testing services are to be provided, there should at least be a confirming letter sent to the client specifying those services that have been authorized. In the absence of such specifically defined services or confirming letters, it is extremely difficult to later determine what services the client meant to be furnished or what part of the plans or specifications were to be applied.

2. PAYMENT TERMS. It is important that contracts or proposals with clients clearly define when payment for our services is to be made, by whom and whether or not any retainage is to be withheld. Many client-originated purchase orders, subcontracts and other formal types of agreements will provide that we will receive payment within a certain number of days after our client has received payment from their client. An extremely heavy burden on our cash flow and aging of receivables occurs when this type of clause becomes a part of our written agreements. Moreover, our standard contract language provides that payment for services rendered is due and payable within 30 days from the date of our invoice. If payment is not made within the foregoing time limitation, we further provide that such payments will bear interest at the highest legal rate provided by law in the appropriate jurisdiction where the services were performed. Each of us should be aware that the providing of services by our company and getting paid for them is a fundamental basis on which our company continues its ability to provide a competitive service in the communities where we work and to provide stable employment for each of us.

3. INDEMNIFICATION. As the flow of A/E litigation has steadily increased, the law of indemnity has assumed ever greater importance. One of the distinguishing characteristics of A/E litigation is the wide variety and number of parties frequently involved. While resolution of issues concerning what parties a plaintiff may have rights against determines, in the first instance, the direction of, and parties to, the litigation, the question of where liability will ultimately rest is often determined by the law of indemnity. Indemnity may allow a defendant, even where found directly liable to a given plaintiff, to pass on some or all of his liability to his indemnitor.

Normally, a finding that one party is required to indemnify another results in the shifting of the entire loss from the indemnitee (the party to be indemnified) to the indemnitor (the party required to indemnify). Indemnification can be required under an express contractual arrangement between the parties, or

because a "special relationship" exists between the parties, pursuant to a theory of implied contractual indemnity, or pursuant to a theory of equitable indemnity (where, under various circumstances, a loss should more equitably be borne by one party rather than another).

Express contractual indemnification provisions are very common in owner-contractor and contractor-subcontractor agreements. Normally, the contractor (or subcontractor) agrees to indemnify the owner for liability incurred as a result of work which the contractor has agreed to perform. Such agreements are very strictly scrutinized by the courts with respect to the scope of the indemnitor's obligations, and are usually construed strictly against the indemnitee. Where the parties have, by contract, attempted to delineate indemnification obligations, the extent of the right of indemnification is ordinarily determined only from the contractual provisions and loss cannot be shifted thereafter on "equitable" theories. Rossmoor Sanitation, Inc. v. Pylon, Inc., 13 Cal. 3d 688, 119 Cal. Rptr. 449, 532 P.2d 97 (1975).

If an express indemnity provision is found in the contracts involved in a given case, one should first consult his attorney to determine whether an "anti-indemnification" law has been enacted. Some states have found certain indemnification provisions repugnant to their public policy and simply do not enforce them. That is, some states choose not to encourage agreements which allow individuals to minimize or eliminate liability for their own negligence. In those states it is believed more socially desirable to require each person to respond individually for his own active negligence, rather than passing the results on to someone else. Accordingly, some states prohibit and void indemnification provisions which require indemnification of a party for their own sole and active negligence.

Even in states with anti-indemnification statutes, a concurrently negligent indemnitee may be eligible for indemnification where the express agreement unequivocally embraces his own negligence as well as that of the indemnitors. In other words, indemnification may be permitted (if the agreement so provides) where the indemnitee was arguably concurrently negligent, but not allowed where his negligence was the exclusive cause of the injury. John E. Branagh & Sons v. Witcosky, 242 Cal. App. 2d 835, 51 Cal. Rptr. 844 (1966); Indiana State Highway Commission v. Thomas, 346 N.E. 2d 252 (Ind. App. 1976). In those jurisdictions without anti-indemnification statutes, a provision which expressly and unequivocally states that the indemnitee is entitled to indemnification, even for his own negligence, may be enforced. SCM Corp. v. Berkel, Inc. 73 Cal. App. 3d 49, 140 Cal. Rptr. 559 (1977); Ref-chem Corp. v. El Paso Products Co., 506 S.W. 2d 701 (Tex. Civ. App. 1974).

Express indemnity provisions can be worded in any number of ways. Some require indemnification for liability "howsoever caused," "regardless of responsibility for negligence," "which might arise

in connection with the agreed work," or other language that does not specifically refer to the relative negligence of indemnitor and indemnitee. In such circumstances, the agreement is usually interpreted to require indemnification where the indemnitee's negligence was only "passive" as opposed to a third party's or the indemnitor's "active" negligence. Some states, however, will not allow indemnity under a "howsoever caused" provision where the indemnitee has been negligent in any fashion, active or passive.

Still other express provisions provide that the indemnitor is to indemnify the indemnitee for liability "caused by" the indemnitor (e.g., "the indemnitor shall indemnify the indemnitee for all liability arising out of injuries in any way caused by the indemnitor"). Under this kind of provision, any negligence on the part of the indemnitee, active or passive, bars indemnification by the indemnitor regardless of the indemnitor's concurrent negligence in causing the same injury. Essentially, the indemnitor with such a provision will not be held responsible for the indemnitee's negligence of any variety. MacDonald & Kruse, Inc.

The basic similarity between the implied contractual and equitable indemnity theories arises from the fact that losses may be shifted between parties who are not necessarily in privity of contract, where there is a discernible difference in the quality of the parties' involvement in the causation of damage. That is, these indemnity theories shift a loss from one party who may have been "secondarily" or "passively" negligent, to another "primarily" or "actively" negligent party. "Secondary" or "passive" negligence is often found in a party's failure to inspect, observe, or correct a dangerous condition or defect; it also characterizes the imposition of a vicarious liability, where a party is held liable based on their status as the employer or principal of another party.

"Primary" or "active" negligence is attributable to the morally culpable party, whose active behavior actually created a dangerous condition or defect. In those states recognizing equitable indemnity, the courts will--in fairness--pass on liability to the party who should "equitably" pay--the actively negligent party. Some states, however, thoroughly reject the equitable indemnity and active/passive theories. Pachowitz v. Milwaukee and Suburban Transport Corp. 56 Wis. 2d 383, 202 N.W. 2d 268 (1972).

As can be seen from the brief references above, the field of indemnity is of tremendous significance in A/E litigation. Further, each jurisdiction has its own very distinct body of law which applies. While a general understanding of indemnity is beneficial, particular attention must be paid to the law of your jurisdiction.

4. WARRANTY. A warranty may be viewed as a promise to achieve a certain result rather than a promise to perform certain services. As stated earlier, your duty is generally construed as requiring the performance of services with due care, rather than the warranty of results. You are, however, certainly capable of warranting a result contractually. This results from use of language in the contract agreement that refers to the achieving of, or inspiring of, or being responsible for certain results, or simply that states that certain results will be obtained. We encounter this type of clause quite often in purchase order forms that are issued by large manufacturers for procurement of "widgets". You should learn to recognize contract language that is related to the procurement of goods which is governed by the Uniform Commercial Code such as warranty of merchantability and warranty of fitness for a particular purpose. Anytime you encounter language of this nature it should immediately run up red flags for you to discuss the matter with someone knowledgeable of those type clauses. Otherwise, you may be liable for problems that occur even without negligence. In this event, your professional liability insurance would probably not apply to a loss. The need to avoid warranties is, therefore, obvious. For these reasons, phrases such as you will "insure that" or "assure that" or "see to it that" or "be responsible for the sufficiency of" must be avoided.

A Texas Appeals Court ruled that in the absence of any special contractual warranties or guarantees from an architect or engineer to his client, an A/E will normally not be subject to any implied warranty that drawings (and other work products) are free from defects or that he has an implied duty to prepare documents that will result in a building suitable for the purposes for which it will be used. Instead an architect/engineer will be held only to a standard of reasonable care.

5. SAFETY. You in your work as engineers perform tasks that involve job site visits before, during and after construction has occurred. During these visits it is only proper that you be responsible for the safety of yourself and other LETCo personnel. However, it is incumbent upon you to recognize that once construction starts, control of the job site historically goes to the general contractor. As a consequence, the contractor should be the party responsible for safety in, on, or about the job site. Should you encounter a clause that requires that you be responsible for job site safety with the attendant right to stop the work, you should recognize that the clause imposes upon you a duty to stop the work should safety hazards be observed. You should make every effort to avoid responsibility for methods of performance of construction work, superintendancy, sequencing of construction, or safety in, on or about the job site. Should you not make clear through your contracts that you are not responsible for the above you are merely subjecting yourself as targets by third party injured workers for law suits. You may even run into clauses such as the following where the client proposed that "the engineers shall be

responsible for any losses or injuries which occur at the job site due to unsafe conditions which result from the plans and specifications provided by the engineer." This is a typical clause you should avoid at all costs. Nevertheless, in the event that you become aware of a job site safety problem, you should direct that problem to the attention of the owner or his representative so that action can be taken to cure or correct the problem.

6. INSPECTIONS/SUPERVISION/DIRECTION. Use of the term "inspection" is inappropriate in describing field observation services performed by you as an engineer. Through court definition, it has become a common expectation that an inspector will uncover violations of law, errors, etc., and therefore, if no negative findings are made after an inspection, it is usually assumed that everything is as it should be. This reasoning is sometimes extended to apply to professional engineers, and it may be interpreted in such a way as to make you liable for any error which could have been detected by an inspection but which was not.

Observations are not intended to relieve the contractor of his responsibilities to complete the job in accordance with the plans and specifications. Neither is the engineer, by virtue of his observations, assuming any responsibility for the methods or procedures used by the contractor. It is not appropriate to use the term "inspection" in connection with one of your field representatives. Should you encounter a client that requires the use of the word "inspection", it is suggested that you utilize the clause contained in the Association of Soil and Foundation Engineers Contract Reference Guide, which in general states that inspection shall consist of visual observations for substantial compliance with the contract documents.

7. ARBITRATION. Recently I read an article in a professional magazine entitled, "Arbitration--Winning the Legal Rat Race". The article expounded on the virtues of arbitration, stating that a dispute can proceed to a conclusion through arbitration much more quickly than through litigation. The parties do not have to contend with the clogged civil court calendar in many areas, and the process itself is more streamlined, often dispensing with many of the procedural niceties of motions, hearings, and general maneuvering conducted both before and after trial. In most cases, the decision by the arbitrator is final, the loser has no appeal, and the winner is entitled to immediate payment.

The article went on to say that because arbitration is quicker than litigation, it is generally cheaper as well because it eliminates much of the initial pre-trial maneuvering, and saves lawyers' time, and consequently the client's money. Even more is saved by virtue of the elimination of the appeal process.

Additionally, the article offered that since the parties have some say in choosing their arbitrator, arbitration affords a much greater opportunity than court in having the matter heard by someone with a knowledge of construction and engineering.

Arbitration has been promoted for a number of years by a number of professional organizations as the preferable alternative to the cost and frustration of litigation. Binding arbitration is called for in some standard forms of agreement, including client forms as well as those drafted by some of the professional organizations such as AIA and NSPE. Although when utilized under proper circumstances I endorse incorporation of a properly drafted arbitration clause in a contract, it is my belief that it is unwise to agree to binding arbitration as a sole and exclusive remedy for your liability. Several serious drawbacks occur.

(1) Most arbitration clauses that I have encountered do not automatically provide for adequate discovery proceedings. This means that you may have to defend against allegations of wrongdoing without effective information with which to prepare a defense. Again, with a properly drafted arbitration clause this can be cured.

(2) Arbitration usually does not permit an automatic appeal process. The issues upon which appeal may be granted are very limited. Improper decisions of law or erroneous determinations of fact are not appealable unless they may be proven to reflect bias prejudice on the part of the arbitrator (a tough burden to prove). Therefore, an unfairly or poorly arrived at determination may be final and binding.

(3) Qualifications of the arbitrator sometimes create a problem. Will the person be knowledgeable about the particular problem or the performance standard of the professions involved? There are arbitrators who have a history of being one-sided in disputes. Many do not have the time or energy to devote to questions at issue; they may be precipitous in their decisions. Obviously, this is a subjective problem, but it is a serious one. There is a known temptation on the part of arbitrators to spread the risk (practice in the legal industry known as "spreading the baby"). This appears to be an effort to make everybody partly responsible for what went on.

(4) Lastly, the decision of an arbitrator does not have the same force and effect as that of a judge in a court of law. What we mean by this is that even if you have won and have incurred all the expense and the loss of time from participation in arbitration proceeding you may still have to initiate a separate legal action to enforce the arbitrator's award.

Notwithstanding the fact that it is my belief that properly drafted arbitration clauses can implement a proper disputes settlement mechanism, it is my belief that you should make every effort during negotiation of the contract to avoid language calling for "binding arbitration". You can do this by simply striking the arbitration provision in its entirety, outlining the foregoing reasons. You will encounter some cases--especially in certain government projects including some state projects--where arbitration is required through the various laws enacted by the state or federal legislatures. In some cases, deletion of the clause is not possible. Should you encounter this problem, it is suggested that you attempt to change the imperative language "shall be referred to arbitration" to the permissive "may be referred to arbitration by mutual consent". Such language will allow the examination of a dispute before agreeing to arbitration and does not preclude the initiation of a legal action.

8. CERTIFICATIONS. Like warranties or guarantees, certifications require that an engineer attest in writing that something is so. Usually, you are asked to sign a certificate because someone else is attempting to shift a burden of responsibility from himself to you. Except in very rare circumstances, these certificates should not be signed. An unfortunate circumstance has evolved from the risk-shifting syndrome, namely to require engineers to certify about conditions of the job site and the work they perform. Such certifications by professional people expose them to contractual liability that would not be theirs under common law. By signing a certificate or certification document, you are promising contractually that something is or will be so. It may take the form of a certificate concerning subsurface conditions, the capability of a building site to sustain a particular load, the percentage of density achieved by soil compaction, or other conditions about the job or work performed.

You should be especially alert to words like "certify" and "certification" and to documents that include similar words. Anytime you execute a certification document you subject yourself to dangerous legal exposure. Along with an assumption of liability, you may very well negate the effect of any professional liability insurance that may be in effect.

Should you encounter a certification or certification statement, you should attempt to negotiate a change to a declaration or statement that says you have performed to the best of your ability and in accordance with generally accepted practices within your community. By utilization of the foregoing language you will mitigate the impact of any such statement and subject yourself to the normal standard of care that the courts have construed.

9. ERRORS and OMISSIONS INSURANCE (to be furnished later)

V. LIABILITY CLAIMS

A. CLAIM DEFINED (material to be furnished later)

B. INITIATING, ENCOURAGING & MAINTAINING COMMUNICATIONS. Malpractice claims often stem from a failure to keep in close communication with the client. The following practical principals are helpful in keeping the client informed:

1. Explain to your client that your business is the rendering of opinions based on professional education and experience, compensated by an hourly fee.
2. Do not promise, represent, guarantee or predict to your client any specific result.
3. Before performing any services, advise your client of the amount of your fees or the basis of computing your fees.
4. Continuously inform your client of what has transpired by periodic status reports.
5. If there are long periods of delay, explain to your client the reason for inactivity.
6. At a minimum, send copies of reports and self-explanatory letters.
7. Return all client telephone calls on the same day.
8. Do not withhold from your client any serious problems that develop.
9. Advise your clients of all risks that may be involved and document with letters.
10. Do not take any material action that may in any way prejudice your client's position.

Last, confirm all oral instructions or important conversations with your client by letter.

C. PRESERVING THE RECORD (material to be provided later)

1. TIMELY INVESTIGATION

2. DOCUMENTATION. The trial of a malpractice case may not occur for many years after the design and construction are completed. Full documentation of all decisions is essential to building a successful defense. The most effective way to institutionalize the documenting of decisions is by the creation of preprinted forms which each staff member automatically fills out and includes in the design and construction file. At the minimum, an accurate record should be kept of all telephone

conversations relating to the project and extensive written or dictated notes should be taken of all field visits, owner/client meetings, bid conferences, and other activities. Whenever possible, the A/E's notes should be incorporated into a timely letter to the client, to verify the points discussed and decisions reached.

3. STATING THE FACTS -- NOT OPINION (to be furnished later)

D. RECORDS ARE DISCOVERABLE -- BE OBJECTIVE. How would you like to be brought into court, put on the witness stand and interrogated about issues on which other parties have failing memories. It is my opinion that not many of us would like to say "No" to the question, "Did you put it in writing?", or to other questions that evolve from answers such as, "I know we followed that procedure because we always do", or "The matter was discussed many times", or "Surely I don't have to do my work thinking always about the possibility of being sued." Unfortunately you do, and not only that, you may be sued not only on account of an actual breach of duty, but also because you were merely a party to something that went wrong.

Without question you should reduce all agreements for performance services to writing, and state with particularity the scope of services, payment terms, responsibility of the parties, etc.

Documentation is a particularly important method of establishing safeguards against later claims in litigation. A specific example is a maintenance of a complete log of project events. The following check list contains some items which have been frequently omitted when preparing project files.

- Memoranda of informal conferences and telephone conversations.

- Documentation of the owner's authorization to enter into the contract with the professional.

- Copies of owner-furnished data, such as the program expected, survey, soil reports, any legal matters, and so forth.

- Documentation of key project decisions and the owner's responsibility thereto.

- Copies of all contracts entered into by the professional and his client, where the client is the owner or another professional.

When preparing project documentation there are certain cautions which should be observed because, in the event of a lawsuit, project records and files are subject to discovery (review by other parties and opponents in the legal action). Therefore, it is just as important to avoid recording some things as it is to

preserve others. The following lists some of the circumstances in which the written record can be detrimental:

Avoid all references to personalities.

Document the performance of others stating objective facts. Do not use statements which tend to debase another person. For example, use "The contractor failed to install _____ as required by _____ of the specifications", rather than "The contractor is doing a lousy job."

When investigating an injury to persons or damage to property, record only what has been actually observed, and the names and addresses of witnesses to the event. Do not record opinions or conclusions as to the cause of the incident or how it could have been avoided.

Communications with third parties should be limited to and in accordance with the requirements of the contract. Do not volunteer or perform gratuitous services, especially after you suspect a problem exists.

When recording the minutes of project meetings, state clearly which party is responsible for each of the matters discussed. By way of example, if the subject of safety should come up at any project meeting be sure that the minutes reflect the fact that it is not the engineers' responsibility to take actions relating to safety.

Proper documentation and recording of the facts can be your first line of defense in any legal action. That documentation could effectively mitigate or eliminate any action that the opposing party would be planning to take. The savings in time, money and effort to prepare records properly in the first place will far outweigh the time, money and effort required to establish and to achieve a successful defense of a legal action in the absence of good records.

E. DANGER OF SUPERLATIVES (See Exhibit "C", Pages 36 & 37)

F. SPECIFICATIONS, DRAWINGS, & REPORT WRITING

1. SPECIFICATIONS. Probably the best way to initiate a description to specifications and drawings would be to state that the specifications describe what is to be furnished and how it is to be installed, whereas the drawings depict graphically where it should be placed. Or, in other words, specifications are made up of words and may be defined as "a description of the quality of materials and equipment to be used in the project and their application or installation".

Specifications in general fall into six categories. The six types are: the performance specification, where the results of the product, rather than a product itself, are specified; the description specification, as the name implies, is a description of a product; the brand name specification, where the product is specified by the name given by the manufacturer or by the manufacturer's name and model number; the closed specification, which may consist of a single product or multiple products and will generally be construed as applying brand name specifications; open specification, where a specifier allows all manufacturers whose products meet the performance or description to be utilized; the reference specification, where the item desired is referred to by a number corresponding to a number in a published specification. Thus, an engineer may create specifications under any of the above referenced or he may utilize a combination of those methods.

You as engineers are assumed to be skilled in your fields. However, your technical knowledge is of little value if you are unable to communicate that knowledge effectively to contractors, owners, and most importantly to a judge or jury, should that be required.

A technique of specification writing depends upon the application of a few basic principles of English grammar, word usage and composition that I'm sure all of you learned in school. It is mandatory that if you are preparing specifications you be precise in wording and punctuation and, in that respect, specification writing is quite similar to legal work. Remember, the word "specification" contains the word "specific". In other words, be specific. Throughout your engineering career you will find that many types of literature that you will prepare, such as company descriptive, marketing, and/or publicity materials, need not be so precise, but in specifications a misplaced comma can result in a lawsuit. Thus, unless you prepare specifications in a clear, concise, properly written way, the careful work so laboriously designed and applied to the project may be entirely forgotten when a misunderstanding arises. If you prepare specifications, I'm sure you will recognize that you have little defense, if what you write can logically be construed to mean something other than what was intended. In general, a court will look into what was the intent of the parties. However, in specifications writing the intent of the parties means little, if anything, to the court. A contractor bidding on a set of specifications has nothing to do with the choice of words and how to take what was written and determine the meaning. As a result, any reasonable interpretation of the specifications proposed by a contractor would be supported by the courts. There is an axiom in the law that in case of ambiguity, the courts do not interpret the meaning in favor of the party who wrote the ambiguous statement. Few owners will forgive you for careless work when it cost them monies. Therefore, remember your motto in specification writing: "Be Specific".

A few basic guidelines that might assist you should you be preparing specifications:

Attempt to utilize words that can be construed under their plain meaning.

Avoid certain words such as "all", "and", "any", "and/or", "either" or "both", "smooth" and "straight". Such words either defy definition by being too general or demand perfect results. You will find that contractors are expected to produce a product that is substantially in compliance with contract documents--not a perfect product. Another general rule of thumb is that you should address matters that the owner will do as "the owner will". You should utilize the obligatory verb in contractor actions as "the contractor shall".

Once you embark upon preparing specifications, make certain that you utilize the same verb tense throughout the specification document.

Strive to utilize the same style format throughout the specification. Do not change from narrative to imperative, and vice versa, or attempt to utilize an eloquent and impressive style. Specifications should be stated simply!

2. DRAWINGS. Through the evolution of time, engineers have learned the value of a drawing for depicting what they had in mind so that others could look at it and create what the drawing showed. I'm of the opinion that drawings or plans were made before the construction of the beautiful buildings in the Valley of the Nile, the pyramids, the tombs, the temples of the Pharaohs, and other ancient structures of early eras. The early history of the Mediterranean area discloses that building plans were in use at that time.

Drawings should be clear and concise, and should properly depict graphically the engineering requirements to accomplish construction of the project.

3. REPORT WRITING. LETCo has developed a word processing applicator's guide for preparation of proposals in the geotechnical arena. Hopefully, similar documents will be prepared in the future for utilization in various other disciplines where we practice. Until further guidance is provided, you should bear in mind that, in order to be specific, the proposal should contain not less than the following information:

Purpose clearly defined by referencing all important data.

Information provided by the owner and/or client such as testing requirements, old location maps, and any other

pertinent data.

Another area, if you were in the testing arena, would be to define clearly how tests are run. This appears to be an area of contention, and you should be very specific as to the procedures and methods utilized to perform tests.

Most importantly, prior to releasing a report, verify the services you agreed to perform by comparing the report and the proposal to the client.

G. THE DEMISE OF PRIVACY OF CONTRACT AS A DEFENSE. In order to set the stage for you to properly understand what we are talking about when we discuss privacy of contract let me address some historical situations and indicate over the years how this legal principle has changed.

Winterbottom v. Wright

An English contractor had a contract with the postmaster general to provide stage coaches and maintain them in repair for the purpose of carrying the royal mail. A defective stage coach broke down, upset, and injured the driver. The court of the exchequer denied the driver any right to recover from the contractor since there was no "privacy of contract" between the driver and the contractor. The agreement was between the contractor and the postmaster general. If any contract had existed between driver and the contractor it would not have had a contractual tie to the postmaster general.

MacPherson v. Buick Motor Company

This is an American case that arose in 1916. An undertaker, Bill C. MacPherson, was injured in an accident resulting from disintegration and collapse of a wooden wheel on his Buick automobile (hearse) while traveling at a speed of eight miles per hour. MacPherson had purchased the car from a Schenectady retail dealer and had driven it less than five hundred miles.

The defective wheel had been purchased from the Imperial Wheel Company by the Buick Motor Company. Evidence introduced at the trial showed that Buick could have discovered the defect by an inspection before they sold the car to the Schenectady dealer. This inspection never took place.

MacPherson took action directly against the Buick Motor Company. A lot of plaintiffs in early American jurisdictions attempted this practice in order to get to a more solvent defendant or a defendant that in the eyes of the law falls under the theory "deep pocket". Buick Motor Company claimed that there was no privacy of contract between MacPherson and Buick. Justice Cardozo, a famous New York judge sitting on the New York Court of Appeals, judged Buick liable.

The "MacPherson Doctrine" was widely accepted in the courts throughout the nation. While this case was limited to a product that could produce bodily harm, if the construction was defective, other decisions broadened the scope.

Today you can be sued in almost any American court that has appropriate jurisdiction over you whether you have a contract relationship with the party or not. Over the years this doctrine has essentially been applied to engineers who historically have had contracts with an owner. In view of this fact, almost any party involved in the roles we discussed earlier, may initiate a legal action against you for your acts or your failure to act. What we're trying to convey to you is that privity of contract is no longer a satisfactory defense, and action can be taken directly against any negligent party.

It is generally held today that engineering professionals owe a duty of reasonable care (and, therefore, may be liable for negligence) to all those who might reasonably be foreseen to suffer damages as a result of their negligence. A group of "reasonably foreseeable" plaintiffs has been found to include workmen, the public, remote owners, sureties--practically anyone.

H. STRICT LIABILITY. In recent years, and as an outgrowth of product liability decisions, plaintiffs' lawyers have sought to apply the principle of strict liability to the work product of the design professional. The basic theory advanced for this application has been that the design professional, by his undertaking, impliedly warrants that the fruits of his endeavor will be reasonably suitable for the purposes and uses intended. At first glance, this argument seems valid and reasonable. However, application of strict liability to the engineering professional overlooks a very basic distinction between performance of services and the mass production of "widgets". Recently the California courts addressed this issue in a case involving an engineer who had been retained to conduct a feasibility study, and thereafter had designed a floating dock in Santa Barbara, California. The owner of the project alleged that the professional was negligent in conduct of his feasibility study and in the design of the dock facility. As an additional claim the owner alleged that the professional had impliedly warranted the use and serviceability of the facility. The plaintiff's attorney, at the end of the presentation of the evidence, attempted to get the court to give the jury an instruction that stated that the facility was reasonably suited for the purpose for which it was ordinarily used. The court rejected this argument and the jury returned a verdict in favor of the engineer. The Appellate Court of California affirmed the decision and reiterated the rule laid down in an earlier California case. "Those who sell their services for the guidance of others in their economic, financial and personal affairs are not liable in the absence of negligence or intentional misconduct."

THE GOVERNMENT ARENA

By no means will this be a treatise on the government contracting arena. It is intended to give you a few very basic rules. I'm sure you've heard the old axiom, "The king can do no wrong." You must recognize that a private citizen cannot sue his government without the consent of that government. The government is a sovereign. Therefore, in general, suits against the government are not possible. This basic policy has been modified over the years by various acts of Congress such as the Tucker Act, and by such court cases as the Scanwell Decision that arose in 1970 out of the District Court of Washington. There, a contractor was held to have standing to sue the government on a contract action. Should you propose to do government work, you should remember that the bulk of it is done under a contracting method called "negotiated procurements". Under this method, the government issues a Request for Proposals, receives proposals, and conducts an evaluation. A successful offeror is selected for negotiations, and at some point in time a contract is entered into. After that your basic dealings are with a contracting officer. You should recognize that many laws impact doing business with the government in the area of labor, such as the Davis Bacon Act, Contract Work Hour Standards Act, and the Eight Hour Work Day Act; in the area of contracting, the Walsh-Healey Act and the Copeland "Anti-Kickback" Act; and lastly (but not by any means least) various civil rights acts. A general rule that you should observe in proposing on government negotiated contracts is to recognize that, should the Request for Proposals contain the following language, the government is asking for a firm bid:

"All offerors are advised of the possibility that award of contract for proposals submitted may be made without further discussion with responding organizations and, hence, that proposals should be submitted initially on the most favorable terms, from a price and technical standpoint, which each offeror can submit to the Government."

This means the government can make awards without any further action or negotiation. Therefore, your initial offer to the government should be your best, inasmuch as you may unilaterally create a contract.

Another government rule that you should be aware of is that LAW ENGINEERING, as a whole, is subject to debarment should we violate those federal laws, especially those in the labor area.

A. OSHA. The Occupational Safety and Health Act (OSHA) was signed into law on December 29, 1970. Some people claim the act was necessary because individual states were unable to enforce rigid safety laws for fear that the industry might leave the state. Others claimed it was another grab for power from the states by the federal government. Who is right is not important. The fact is that OSHA has established certain standards that no

engineer can afford to ignore.

The regulation is an absolute mess. Part 1926 of Chapter 27 of the Rules and Regulations is divided into 24 subparts some of which are divided into ten or more sub-subparts, which in turn may be divided into as many as twelve sub-sub-subparts. A typical section within the regulation states that "two inch by four inch lumbers be used for side and middle rails of double cleated ladders up to twelve feet in length." The law is so complex that private companies have been organized to provide technical assistance in complying with the law.

Additionally, many court challenges have occurred over the years with reference to OSHA. A rather noteworthy case that grew out of Atlanta went right for the jugular and challenged the very heart and existence of OSHA by addressing the constitutionality of the act itself. Sadly, the challenge was lost in our Supreme Court.

B. ENERGY RELATED: RCRA. The problems the United States is facing in hazardous waste management are clearly one of the most serious environmental issues on the horizon. We are in the embryo stages of determining the full extent of dangers associated with existing hazardous waste sites. By the government estimate, there are 30,000 to 50,000 hazardous waste sites currently in existence, and 1,200 to 2,000 of these present imminent hazards to public health or the environment.

Congress, in 1976, enacted the Resource Conservation and Recovery Act (RCRA). That act vested in EPA the authority to develop a nationwide regulatory program which would provide a comprehensive so-called "cradle to grave" regulation of hazardous waste. Simply put, this program applies to those who generate, transport, treat, store or dispose of hazardous waste. This program is currently in effect.

Associated with this act are a host of legal, political, social and economic issues which remain to be addressed. A major issue facing regulators and the public in general will be to find acceptable disposal sites in the face of increasing public opposition.

Many of the principal disposal techniques being employed for the disposal of hazardous waste include the areas in which we provide consultation: secure landfilling, land farming, and deep-well injection.