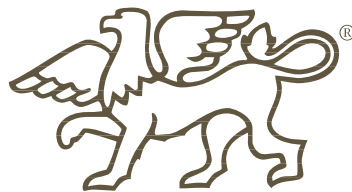


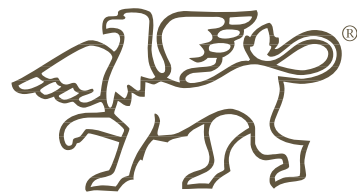
Ten Commandments of Loss Prevention



RAMCO
INSURANCE SERVICES

A Subsidiary of HCC Insurance Holdings, Inc.

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FORWARD

RA&MCO Insurance Services, one of the nation's leading insurers of design and construction, is pleased to provide this concise and authoritative monograph on Loss Prevention. It is authored by one of America's foremost legal experts in this field, Gunther O. Carrle, Esq. We are both pleased and honored to be able to present Mr. Carrle's valuable work for your reference and we recommend it as a valuable tool for use in reducing exposure to liability claims and legal actions. These "verities" are universally applicable to business and professional practices of professionals engaged in design and construction and we encourage you to become familiar with them and to apply them. It is a suitable foundation for day-to-day reference as well as for staff training.

Please bear in mind that many claims, unlike death and taxes, are not inevitable and the best one is the one that you avoid.

RA&MCO Insurance Services

The Concept of “Loss Prevention”

A “Loss Prevention” program is intended to:

- Identify risks
- Allocate risks to the party best able to handle the risk
- Manage those risks which cannot be transferred.

It is a crucial part of every design professional firm’s project administration. It not only minimizes the administrative and financial costs of claims and disputes by assuring that all participants to the construction process are aware of their obligations and rights, it enhances their ability to produce a successful project.

Knowledge of the law and a consideration of the legal consequences of rendering professional services on a project is as important as understanding the engineering and architectural principles that underlie the professional services rendered. No matter how competent the professional is in his discipline, the likelihood that a project will be unsuccessful is increased if the legal aspects of rendering professional

services are ignored. Understanding and applying the “rules” determines whether your project will be a successful business venture.

A sound “Loss Prevention” program contains four elements:

- Preparation of an Agreement for Services which accurately reflects the client’s and your understanding of the scope of your services, the limitations on your obligations and the interplay between you and the other members of the construction process - contractors, consultants, design/build contractors.
- Performance of the Agreement so as to minimize the potential for dispute.
- Recognition and resolution of potential problems when they arise, before they develop into a dispute.
- Proper documentation of the significant events during the project so that, when problems arise, they can be resolved as quickly and as cheaply as possible.

The First Commandment: “Define Your Scope of Services”

Draft a detailed scope of services which avoids ambiguity and creates a definite and clearly understood allocation of obligations in order to avoid a dispute. A scope of services that merely attempts to avoid obligations without defining what is to be done is more likely to create a dispute than to avoid it.

The scope of services should be drafted with third-parties in mind. In many cases third-parties (and not the parties to the contract) will review and interpret the contract. Specificity is necessary to minimize the likelihood that third-parties can expand your duties by reference to custom and practice. In particular, address typical problem areas - shop drawings, design/build, cost estimates, hazardous substances, certifications, site visits and ownership of documents.

The following questions should be asked when reviewing the intended scope of services:

- Are all services that you intend to render clearly set forth in the scope of services and do you intend to render all services set forth in the scope of services?
- Does the scope of services address areas that are new to you?
- Has enough time and money been allocated to a particular task? Shop drawing review and site visits are usually undervalued in relation to the potential for liability.
- Have you defined the circumstances under which you are entitled to additional compensation?
- Are the terms consistent with the terms of any specifications or product references that are incorporated by reference? Frequently, industry specifications and standards are incorporated by reference without a full understanding of what is contained in the most current edition. Particularly, with regard to an A/E’s obligation to conduct reviews and issue approvals, the incorporation of a third-party standard can dramatically alter the A/E’s obligations. Concern in this area can be addressed with a provision that provides: “Nothing contained in any standard specification, manual or code shall operate to alter, modify or expand the duties and responsibilities of the Owner, Contractor or Engineer or any of their consultants, agents or employees from those set forth in the contract documents.”
- Are the terms consistent with the terms of other documents-construction contract, specifications including general conditions?

The Second Commandment: Do Not Become the Insurer or Guarantor of the Success of the Project.

As a design professional, you agree to perform your services in a non-negligent manner. The standard by which your performance is judged is typically defined as “the reasonable and prudent (architect or engineer) exercising usual and customary professional skill and care.” Avoid contract language which either: raises that standard of performance or makes you a guarantor of performance.

- Frequently owners, particularly governmental entities, will ask you to perform “in the best and most acceptable manner” or “in accordance with the highest professional skill and care.” This language increases the likelihood that a deviation on your part will be

the basis for liability.

- Frequently owners will ask you to warrant a certain aspect of your services; i.e. compliance with codes and regulations, absence of hazardous substances, that the design can be used for a stated purpose. This language makes you strictly liable for a deviation. Thus, if you warrant compliance with the code and there is a deviation from the code, you are liable even if the omission was one which a “reasonably prudent engineer would also have made.”

The Third Commandment: Foresee the Foreseeable - Identify those Areas of the Contract that Traditionally have been a Source of Liability for A/E's and Address them in the Negotiations and/or the Language of the Contract.

S hop drawing review:

- The purpose of your review should be clearly stated. Generally, it is limited to a review for general conformance with design concept and with the information contained in the contract documents. You are not reviewing for: means and methods of construction, safety, dimensions, methods of installation, etc. Your shop drawing stamp should clearly set forth the purpose of, and limitations on, your review as contained in your Agreement. The shop drawing stamp cannot modify your contractual obligations.
- You should specify which shop drawings are to be submitted and immediately return shop drawings that do not require your review immediately.
- Require the contractor to review and approve shop drawings first and do not review shop drawings which have not been reviewed by him first.

- Maintain a log of when shop drawings were received, what action was taken and when they were returned.
- Document all of your shop drawing comments.
- Require that the contractor notify you of changes.
- Your contract should state that you will not review a manufacturer's shop drawings prepared in response to a performance specification for a determination that the system will perform properly.

Ownership of documents:

- You should retain ownership.
- Do not permit your documents to be used for completion of the project, for additions thereto or for other projects without permission of the A/E and with additional compensation.

- The alternative is to require that your seal and title block be removed and the documents redrawn and reviewed by a design professional.

Construction cost:

- Detailed cost estimates vs. preliminary estimate of construction cost.
- Preliminary cost estimates should allow for contingencies and escalating labor and material costs.
- If detailed cost estimates are required, the owner should retain the cost estimator.

“As-built” or record drawings:

- You should be entitled to rely on data supplied by contractors without independent verification subject only to your obligation to note obvious discrepancies of which you have actual knowledge and, possibly, your obligation to detect errors which a reasonably prudent (architect or engineer) exercising usual and customary professional skill and care would have detected.

Structural details:

- If the structural details (in particular connections) raise questions of means and methods, the contract should limit your responsibility for means and methods to that aspect.

Geotechnical consultants:

- Should be retained by the owner.
- You should be entitled to rely on their conclusions without independent verification.
- They should be required to make specific design recommendations, not merely present raw data.

Owner and vendor supplied data:

- You should be entitled to rely on such data without independent verification subject to the same limitations as in “as-built” drawings.

Design/build consultants:

- You should not be responsible for code compliance of design/build work.
- You should not be responsible for the adequacy of the design/build systems.
- Your obligation to coordinate should be limited to providing the design/build contractor with the design criteria to be used by you that impacts on his aspect of the project, i.e. the architect can provide a space layout and wall section to the HVAC contractor; in turn, you should receive HVAC criteria that impacts on your aspect of the project, i.e. architect receives size and location of ducts from HVAC contractor.

- You should not be responsible for delays caused by the design/build contractor.

- Under certain circumstances, anti-indemnification statutes preclude them.

Indemnification Agreements:

- Determine that your insurance provides coverage for indemnification agreements.
- Only agree to indemnify against losses TO THE EXTENT THAT THEY ARISE DIRECTLY AS THE RESULT OF YOUR PROFESSIONAL NEGLIGENCE IN THE PERFORMANCE OF SERVICES UNDER THIS AGREEMENT.
- Specifically define who is to be indemnified - limit it to Owner, employees and agents.
- Get a mutual indemnification where possible.

Limitation of liability clauses:

- Limit liability to your fee, to available insurance, to a fixed amount or exclude damages resulting from loss of profits and loss of use.
- The limitation must be rationally related to the services rendered.
- There should be a preamble that sets forth a basis for the clause such as.
 - “Insurance is not available for the risk”
 - “The fee is small in relation to the risk.”

The Fourth Commandment: Make Certain That Your Subconsultants Must Live by the Same Rules That You Do.

Your agreement with your subconsultants should be discussed contemporaneously with the prime agreement and its terms should be consistent. Be particularly aware of clauses:

- Waivers of Liens
- Ownership of Documents
- Mandatory Arbitration
- Obligations to give certifications
- Duties and Responsibilities for site visits.

The Fifth Commandment: Be Wary of the Scope of Your Duties During Site Visits.

The design professional's presence on the site, typically: to review the progress of the job; to review general compliance of the work with plans and specifications; and to respond to specific inquiries, creates two potential areas of liability. One such area is the A/E's failure to detect deviations from the plans and specifications. The second area is the failure to detect unsafe conditions that cause injury to a third-party.

Safety

- Construction observers are generally not responsible for injuries to third-parties resulting from the contractor's operations. Under certain circumstances they can be liable for the failure to direct the correction of unsafe conditions.
- To minimize your potential liability:
 - Specifically disavow any right to control the work, stop the job, supervise or coordinate subcontractors, direct the contractor's means, methods, techniques, sequences or procedures of construction, and safety precautions and programs.
 - Go to the job site with a

specific purpose, not just to wander around.

- Don't attend meetings that do not impact on your scope of services - i.e. do not attend safety meetings.
- Visit only those portions of the site at which work you must observe is taking place.
- Issue a memorandum of your comments regarding the quality of the work.
- Avoid preprinted "inspection" forms that may have a reference to safety.

The Design Professionals Dilemma - Ignore an Unsafe Condition or Report it.

- The courts of most jurisdictions generally do not hold a design professional liable for construction site injuries that relate to the contractor's operations merely because the design professional made periodic visits to the site, ABSENT CONDUCT WHICH EVIDENCES THE ASSUMPTION OF SAFETY RELATED DUTIES.

- Frequently, however, courts will find that a design professional bears at least some responsibility for a construction phase injury because his conduct at the site is inconsistent with the position that he has no duties with regard to safety.
- Many courts have also held that, as a professional, an architect or engineer cannot ignore an unsafe condition of which he has knowledge and which poses a risk to third-parties.
- The best compromise is to advise the owner or construction superintendent of an observed unsafe condition in writing. The writing should not address the manner of correction. The writing should emphasize that the A/E does not have, and is not undertaking any duties with regard to safety or safety inspections. Rather, in the course of his visit to the site to check on the progress of the work and the compliance of the work with the plans, a particular condition was observed.

As a project manager you may have more responsibilities for safety. The owner may want you to affirmatively monitor the contractor's safety programs and/or conduct loss control surveys. This should be avoided. If the owner desires such services, they should be contracted for separately, directly by the owner, with a

Safety Engineer. If some additional involvement with safety is required, the services should be limited to the following:

- Requiring contractors to submit safety programs - do not review them for adequacy.
- Requiring contractors to conduct "tool box" meetings.
- Report any conditions, actually observed and actually known to be unsafe, to the general contractor's superintendent.

Your review of the work for compliance with the plans and specifications should be limited to:

- GENERAL compliance
- With plans and specifications prepared BY YOU and with YOUR design concept.
- To determine if the work WHEN COMPLETED will be in accordance with the plans and specifications.
- Avoid language which obligates you to assure compliance with the "requirements of the contract of construction" since these typically include references to safety.
- Avoid definitions in the contract documents which include temporary structures as Work.

The Sixth Commandment: Never Begin Services Until the Agreement is Completed.

All too often the parties begin to discuss the terms of the agreement just before services are to begin. It is much more difficult after the work has started to negotiate the terms of the agreement.

Frequently, where there has been no dispute during performance, many of the typical safeguards are ignored. Remember your agreement can come back to haunt you many years after the project is completed.

The Seventh Commandment: After Making a Contract, Adhere to Its Terms and Modify It Only by Written Amendment.

The contract should not be ignored after the project starts. If your “agreed upon” performance is substantially inconsistent with the terms of the agreement, you may not have an agreement to rely upon later. Don’t fall victim to the famous last words - “Our lawyer made us put it in the agreement, but we can work something out.” or “Our lawyer said we can’t agree to do it in the contract, but don’t worry, it’s something we always do.”

Architect’s Consent to Assignment of Contract as Collateral, Waiver of Liens, to ensure that they do not alter, expand or modify the terms and conditions of your contract.

- Avoid agreements that require you to protect someone else’s interests or to notify them of changes in the project or other events relating to your relationship with the client.

Review all documents that you are requested to execute, Architect’s Consent to Assignment of Contract,

The Eighth Commandment: Treat Certifications Like a Bad Neighbor.

Are you required by your Agreement to give the certification requested? If not, try to avoid it.

Does the certification attempt to expand your services beyond those contained in your agreement for services?

Certifications should always be based on “your knowledge, information and belief”; particularly if they involve matters outside of your total control - compliance of construction with plans and specifications; contractor’s entitlement to payment; absence of hazardous materials.

Certifications should always be based on your professional judgment - they should not be language of warranty or guaranty. Even where you have control over the subject matter, i.e. compliance of plans with codes, your statement of compliance should be in terms of “a reasonable and prudent (architect or engineer) rendering services of the type set forth in the agreement exercising usual and customary professional skill and care.” Guarantees and warranties are generally not insurable.

Certifications should be accurate and reasonable. Limiting the certification to “your knowledge, information and belief” and to your “professional judgment exercised as reasonable and prudent

(architect or engineer) using usual and customary professional skill and care” is not always enough if the subject matter of the certification is outside of your expertise or is overly broad. For example, compliance with “all” codes, statutes and regulations, etc. is not reasonable. You are not likely to be fully aware of all of them, they may not all apply to your services, they may be contradictory. Another example is the absence of hazardous substances at the site (asbestos, urea formaldehyde, pcb’s) or the absence of hazardous substances in the building materials incorporated.

Are you improperly assuming a governmental function? Building code officials may require certification that the structure complies with the building code. It is their duty to make this determination and an effort should be made to avoid this type of certification.

Is your compensation adequate for the risk and for the level of services required?

If possible, the form of certification should be developed during the negotiations for the contract and attached as an exhibit. This is particularly useful with lender certifications.

The Ninth Commandment: If You Can't Prove It, It Doesn't Exist.

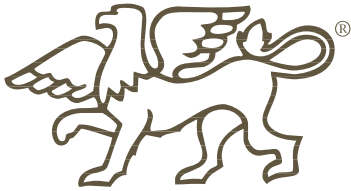
Documentation of events, directives received, information distributed to others is crucial. Memories fade even when there is an incentive to remember accurately. In the absence of confirming

memoranda your “adversary’s” recollection will, not surprisingly, be quite favorable to his own interest. “Put it in writing and keep the other side honest.”

The Tenth Commandment: It's Easier to Avoid a Lawsuit Than It Is to Win One. Remember the Eight Ways to Avoid Litigation.

- Stockpile your ammunition.
- Respect the fact that what you say is what you get.
- Develop a healthy pessimism.
- Get to know the danger signals.
- Develop preventative forms and procedures.
- Get your lawyer involved before things get out of hand.
- Don't get boxed in by your emotions.
- Educate your subordinate.

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