



ProNet Practice Notes

A Manual for Project Representatives

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PREFACE

This manual is a migratory document. It has traveled from place to place, and it has enjoyed a history of development and revision since it was first compiled and published by the Design Professionals Management Association (DPMA) with the assistance of Risk Analysis and Research Corporation.

Users of the manual have added their experience and insights to adapt it to accommodate their own, unique requirements for the delivery of construction phase services. You are encouraged to do the same. The narrative is without copyright, so take it as your point of departure for the development of a document designed to meet the unique needs of your own professional practice.

DPMA published its manual with the expectation that improvements would be made and new material would be added over time. *a/e ProNet* thanks DPMA for permission to utilize its earlier publication in this edition to fulfill its original intent. Special thanks are also due to Gerald G. Weisbach, FAIA, for his contributions to the original draft and to George J. Vogler, President of Reserved Resource Insurance of Oklahoma City, Oklahoma, for his invaluable suggestions and extensive assistance in revising and updating the original document.

Two problems emerged during the preparation of the manual. The first relates to the fact that the responsibilities of the Project Architect/Engineer and the Project Representative are frequently assumed by the same person, depending on the policies in effect in a particular firm or on the nature of a specific project. The second has to do with the wide disparity which exists among firms in the level of responsibility assigned to the senior person in the field-the person addressed here as the Project Representative.

Dealing with these problems required that two, somewhat arbitrary assumptions be made. In the first instance, the roles of Project Architect/Engineer and Project Representative were treated separately, since the responsibilities associated with those roles are distinctly different. No distinction was made, however, between the Project Architect/Engineer and the Principal-in-Charge, despite the fact that these roles can be, and in large firms frequently are assumed by different people.

In the second instance, the presence in the field of a mature, responsible individual was assumed, one with either a professional background or extensive experience in construction. It was also assumed that the Project Representative would act in his or her traditional capacity as the communications link between the contractor's supervisor on the job and the Project Architect/Engineer-leaving to the Project Architect/Engineer responsibility for dealing directly with both the contractor and the owner.

These assumptions may have to be kept in mind in using this document as a guide for the development for your own Manual for Project Representative. A number of modifications may be required to reflect the practices actually in effect in your firm. The good news is this: It is easy to get started. The manual is available on disk in common work processing formats. Contact *a/e ProNet* for details.



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There is one other point you may want to keep in mind. It has to do with the standard of care. Manuals, such as this one, can be invaluable quality assurance and communications resources. They help to clarify the expectations of the firm, and they communicate the rich experience of the principals to those who are asked to act on its behalf.

But manuals for practice are also working documents. They require care and feeding to reflect invaluable lessons learned over time. They can only be applied effectively if they are tempered with the professional judgments necessary to respond to the unique conditions surrounding each and every project you undertake. Remember, your obligation as a professional is to practice with reasonable skill and care. Lest you set a more exacting, possibly even unattainable standard, you will want to use this manual in a manner which is consistent with that obligation.

INTRODUCTION

In your role as Project Representative, your professional life is not an easy one. You are at once a member of the project team and an important administrator of its performance. You need to pull with the team for the sake of the project-its success after all, requires a team effort. At the same time, our duty to administer the construction contract and serve as an impartial arbiter of disputes holds you apart. You must live and work with the team and its members, but you can never quite be one of them.

Reconciling these differences has ripped more than a few sublime personalities. Neither going along to get along, on the one hand, nor dictating instructions against rising tide of disgruntled opinion, on the other, will serve a Project Representative well. There is firmer ground. You will want find that ground at the outset and hold on to it through the completion of the work.

A Place to Start

Two words set the standard: Fair and impartial. You can be on the team and independent of it at the same time. You can be effective in both roles, if your character, your actions, and your decisions are consistent with that standard. Depart from it, and the project will suffer.

Each member of the team has a vital contribution to make to a successful outcome: The contractor must provide capable planning and coordination of the work; the owner must make reasonable and prompt decisions as questions and opportunities arise during construction; our task is to administer the construction contract in a fair and impartial manner. As Project Representative, you play a key role in the meeting of our obligations.

Your contributions benefit the project in many ways. You facilitate accurate interpretation of the plans and specifications, and you afford us an opportunity to capitalize on design changes which can save money and enhance both the function and the quality of the work. Your involvement opens channels of communication which allow the design team to become aware of disagreements or misinterpretations the moment they occur. You can help prevent minor problems from growing into major crises by orchestrating timely intervention on our part.

What you need to keep in mind is this: Each member of the construction team looks at the project, and at you, from a very different point of view. The potential for conflict is high. To avoid misunderstandings, you



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need to know what expectations the other members of the team have of you on the job. Only then will you have a sound basis for clear and effective communications.

The Expectations of Others

Experienced owners understand the importance of good construction administration. They know that the quality of the completed project depends on how well the plans and specifications are interpreted. They are sophisticated enough to understand that construction documents are not without errors and omissions, let alone ambiguities. They also understand that most of these problems can be solved during construction but only if there is a close working relationship among all parties. Owners expect the project to be free of the big surprises that cause significant extra costs and long delays. They look to you as a key resource in fulfilling that expectation.

Contractors with a clear understanding of our role in construction know that numerous questions will be raised during the course of the work which are best answered by the design team. They also know that, to bring the project in on time and on budget, coordination with the design team is essential. The contractor expects you to provide for that essential coordination in a competent and timely manner.

There is yet another party interested in your performance during the construction phase-the public. While members of the public have a vital interest in the outcome of most construction projects-the impact of which affect them daily-they have little understanding of the roles and responsibilities of the various performers. Their expectation of you, through your presence on the job-site, is that you will look out for their safety and welfare.

The legal implications of your activities during the construction phase are serious. Your performance as Project Representative is, without doubt, one of the most liability sensitive areas of professional practice. Your tact in providing instructions or interpretations, your ability to adequately document progress and decisions, and your sensitivity to the expectations of the various parties will determine the ultimate quality and success of our projects. We look to you to contribute to that success and, in so doing, to help us solidify our reputation in the community as responsible and respected firm.

PRE-CONSTRUCTION ACTIVITIES

Reference Standards

The position of Project Representative is defined in AIA Document B352, "Duties, Responsibilities and Limitations of authority of the Architect's Project Representative, " a copy of which is included as Exhibit 1(EJCDC Document 1910-1-A, a copy of which is included as Exhibit II). Unless otherwise modified by the General Conditions or Supplementary Condition or by our agreement with the owner, AIA Document E3352 (EJCDC Document 1910-1-A) will govern the scope of your responsibilities on the job-site.

Study these documents carefully. Be especially alert for differences between our responsibilities in the field as set forth in our agreement for professional services and those identified in the construction contract. Refer any discrepancies you discover to the Project Architect/Engineer for clarification.



Project Representative's Orientation

Effective performance in the field requires careful preparation. When possible, this should include your involvement in the design process and in the final stages of work on the contract documents. Take advantage of the opportunity to review the plans and specifications, and be prepared comment on potential construction problems. Your role in this is to bring the benefit of your field experience to bear. Think about what the contractor is going to have to do to get the project built, and be prepared to play the devil's advocate where you believe modification might facilitate your actions in the field.

The earlier you begin to think about the project, the better. Keep this problem-solving principal in mind: Anticipation is mightier than reflex. Sit down with the project documentation and puzzle through the most likely problem areas. Where are the tight spots, and where does the job get tricky? Plan now to avoid conflicts later. Try to identify potential problems so you can think through, in advance, how you might best resolve them if they do arise. Events move too quickly, and there are too many of them, to trust that you can succeed by putting out fires after they flare up.

Picture yourself as a downhill racer running a steep course in your mind many times before you throw yourself into the first gate. Champions make the tightest gate others miss because they anticipate it hundreds of times in their minds. Planning is rehearsing for success. Those who want to succeed owe themselves a fair rehearsal for it.

Conduct a personal inventory. Are you prepared for this particular project? If you are unfamiliar with the project type, applicable codes, or industry standards, bring your inventory up to date. Get a good, solid set of skis under you.

Study the contract documents carefully. Note any discrepancies, conflicts, or questions that arise. Clarify all unresolved issues with the Project Architect/Engineer, and record the decisions. It can add great value to the quality of the documents we produce.

Make a list of the standards refereed to in the specifications. Check with the specifications writer about any you are not familiar with, and obtain copies of standards needed for use in the field.

Prepare a list of long lead time items specified for the job, so you can alert the contractor to the need for timely submission of orders. Prepare a similar list of items to be furnished by the owner. You will want to check to make certain that the contractor has incorporated the delivery of these items into the project schedule and that the owner has been notified of the expected delivery date. Everyone on the job looks foolish if an item with a five month lead time has not yet been ordered two months before it is needed.

Make an independent list of the shop drawings, product data, samples, and mock-ups required by the specifications. Maintain this list as a working document to check the completeness of the contractor's shop drawing schedule and to facilitate oversight and coordination of the submission and review process.

Pre-Bid Conference

This conference, normally attended by the Project Architect/Engineer, the Project Representative, the owner, major subcontractors, and all interested contractors is to answer questions about the project and

the contract documents and to demonstrate a cooperative ambience among potential participants. Your role in this conference is to assist the Project Architect/Engineer in answering questions and interpreting the documents and to reach a better understanding of the owner's expectations. You should fully understand the design concept, scope, and objectives before the conference.

Project Team Meeting

An in-house project review meeting will be held shortly before or immediately after the award of the construction contract to establish responsibilities, lines of communication, and duties of the project personnel. This meeting will involve, as appropriate to the particular project, the owner, Project Architect/Engineer, consultants, specifications writer, job captain, and you as Project Representative. The names, address, and telephone numbers of the owner's representative, consultants, and agencies involved should be recorded for future reference.

- Among items to be discussed are the following:
- Project organization
- Construction budget
- Construction schedule and schedule of construction progress meetings
- Building code and zoning issues
- Procedures and responsibilities for obtaining permits approvals
- Shop drawing submittal requirements and review procedures
- Substitution procedures
- Change order procedures
- Scope of field observation services and procedures governing the services of consultants
- Review and approval of monthly payment requests

Review of Pre-Construction Submittals

After the contract has been awarded, the contractor will submit a list of names and addresses of the subcontractors, material manufacturers, and suppliers proposed for all portions of the work. The owner and Project Architect/Engineer will review and respond to this list. The Project Architect/Engineer will promptly notify the contractor if the owner has a reasonable objection to any subcontractor. In that case, the contractor will be required to submit an acceptable substitute. You should be prepared to remind the contractor of this requirement and follow up with the Project Architect/Engineer if a prompt reply is not received.

In addition, you should monitor and assist in expediting compliance by the contractor with the following submittal requirements:

- Insurance certificates required of the contractor and all subcontractors. The contractor cannot be allowed to start work on the project until insurance coverages have been reviewed and accepted by the owner. Otherwise, there is the danger of a loss which should have been covered, but was not, the inevitable result being a conflict over who was responsible for seeing to it that the coverage was in place.
- Progress schedule (for clarification and review of the contractor's plan for the job).
- Schedules of values (for use in conjunction with the progress schedule in evaluating the contractor's applications for payment).

- Schedule of shop drawing and sample submittals. Compare this schedule against your own to check its completeness.

All of these items are essential to your ability to perform your job well. The requirement that they be submitted is often allowed to pass unattended. We cannot allow this to occur on our projects. If you run into resistance or undue delay, call the problem to the attention of the Project Architect/Engineer.

Pre-Construction Conference

The pre-construction conference may be the most important single event in the construction phase of the work. It sets the tone for everything that follows. Its purpose is three-fold: To review and enhance understanding of the requirements of the construction contract; to establish clear lines of communication among the construction team members; and to introduce the administrative procedures and levels of responsibility which will govern the relationships among the parties during the course of the work. Your role in preparing for this conference is to assist the Project Architect/Engineer in anticipating problems that could arise during construction and in developing methods for resolving them in advance.

Your early preparation for making all the gates, clear to the bottom of the course, will pay off here. If you have not prepared yourself beforehand, you may find control of the project slipping away at the very outset. Contractors aiming for success prepare carefully for this meeting, and so should you.

The pre-construction conference will, depending on the requirements of the project, be attended by the owner, Project Architect/Engineer, consultants, the contractor, major subcontractors, and you. On large projects, others may also attend. Among the issues to be discussed are the following:

- Design concept, scope, and objectives
- Project organization and communications
- Relationships and coordination among the parties
- Pre-construction submittal requirements
- On site access, site management, and security
- Correspondence and record keeping
- Shop drawing submittal requirements and procedures
- Substitution procedures and restrictions
- Change requests and change order procedures
- Testing requirements and reports
- Construction schedule and schedule of progress review meetings. Maintenance and review of field record documents
- Procedures governing the application for and review of progress payments
- Project closeout requirements and procedures

You should plan to take detailed minutes of this meeting and distribute copies to all in attendance.

Testing Conference

A testing consultant will be engaged, usually by the owner, to perform specified tests and inspections. A testing conference will be held before the start of work, attended by the owner, testing consultant,



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contractor, major subcontractors, Project Architect/Engineer, and you. The purpose of the conference is to review the requirements for testing and inspection. The testing consultant will be asked to record the minutes of the conference and issue a conference memorandum to all participants.

THE CONSTRUCTION PHASE OF THE WORK

Project Representative's Role

As Project Representative, you are truly the person in the middle. Although your job is to see that the owner receives the quality of work he or she is paying for, your decisions and instructions have to recognize that the owner's best interests are served on jobs where there is a minimum of delay and crisis.

In practical terms, this means that you need to strike a careful balance between a reasonable level of quality (consistent with the contract requirements) and the need to give the contractor as much latitude as possible in dealing with the problems of completing the work on time and within budget. You can achieve this balance if you are businesslike and cooperative, firm but fair, and impersonal but friendly.

If you were only an evaluator of the contractual quality of the work, your task might not be as difficult as it sometimes is. You are also our five senses on the construction site. You are called upon to interpret plans and specifications, coordinate reviews, approvals, and tests, monitor the progress of construction, and anticipate and resolve problems that threaten the successful outcome of the project. All this has to be accomplished using good judgment, tact, and a certain amount of caution.

You have to recognize when your decisions could have adverse consequences and when to get help from the Project Architect/Engineer or others. At the same time, you have to be careful not to yield to the temptation to specify methods of construction not clearly called for in the construction contract, or to intervene with the contractor's work force when the approach being taken seems unusual or unfamiliar.

Project Communications

Clear and effective communications throughout the course of the work are essential to avoid misunderstandings and unnecessary problems. All you have read to this point about your role as an independent administrator, impartial arbiter, the person in the middle, and our five senses in the field comes into play here.

High standards of fidelity apply to those stationed to see, hear, report to, and speak for others. Such stations are rich with a long history, and they occupy an honored place—from the battlefield to remote way stations of business and ancient empire interests. A great deal is riding on you, personally.

The parable about an African chief and a western traveler urging the benefits of the telephone offers an apt analogy. "Of what use is this telephone you speak of?" the Chief asked. "Well," said the traveler, "Suppose you wanted to know what was going on in the farthest reaches of your kingdom. You could, with the telephone, call in an instant and ask." The Chief replied, "I would not need a telephone for that. I would send my messenger, who would return and tell all." "But," the traveler cautioned, "Here is the advantage: The messenger might be unfaithful, or he could lie to you. With the telephone you could hear



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with your own ears. " At that, the Chief concluded, "I do not need your telephone. The messenger knows that, if he is unfaithful or if he lies, I will have him killed! "

All people place a high value on fidelity. Chiefs and messengers have their understanding and we have our rules. Your communications from the field must be accurate, candid, and complete. They must also be part of an efficient communications network which serves the entire project.

The number of parties involved in the construction process and the need to keep each of them as fully informed as possible complicate the communications problem. One response of the construction industry to this difficulty has been the evolution of traditional lines of communication, based on the working relationships which normally develop during the course of a project.

You are the communications link between what goes on at the construction site and the Project Architect/Engineer. Your point of contact on the job is the contractor's supervisor. It is the Project Architect/Engineer's role to communicate directly with the owner, the contractor, and consultant on the project. It is the contractor's responsibility to coordinate and direct the activities of subcontractors vendors, and suppliers.

These lines of communication need to be clearly understood at the onset of the project and to be honored throughout the job. It is clear, however, that the successful production of the work requires uninterrupted coordination. This, in turn, requires that all parties meet their mutual obligation to assure a continuing flow of information needed by others for effective performance.

Verbal communications which are or could be important to the administration of the contract, for example, should be substantiated by permanent records such as correspondence, minutes of meetings, speed letters, memoranda, and reports. This will not only enhance the likelihood of a common understanding between those directly involved in the discussion, but it will make it possible for others to be informed of the outcome.

You should also be provided with copies of all correspondence received in the office which affects your field work in any way. If you find yourself being inadvertently overlooked in the distribution of information you need, bring the problem to the attention of the Project Architect/Engineer so it can be resolved immediately. You may be a messenger in one communication direction, but you are chief in another. You are entitled to information.

Record Keeping and Reporting

A second response the construction industry has developed to deal with the need for clear and effective communication among the parties has been the standardization of forms and procedures for the keeping of records and the reporting of activity and progress on the job (Exhibit III). Record keeping may seem to be an onerous task, but it is one of your most important functions in the field.

Your records and reports represent a chronological history of the activities which take place during the construction phase of the work; They not only serve as important coordination and information resources during the job, but they can, in the event of a later problem, turn out to be essential legal resources, as well. Memories fade quickly, and your records may one day prove vital to the reconstruction of events



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long past. They can be the only defense we have against an unfounded claim of professional liability, and the effectiveness of our defense can depend heavily on the completeness of the project records you assemble and the reports you prepare.

You should organize a system of daily reports or keep a daily log in a bound book. Your daily reports should include the following information:

- Work hours on the site
- Weather and ground conditions
- List of visitors and their official capacity
- Trades working on job and their locations in the building or on the site
- Observations made of the work, its progress, and its quality (including startup or completion of any discreet unit of work)
- Questions from and answers given to the contractor quantities and quality of materials delivered or stored off-site
- Notable occurrences on the job (including detailed descriptions of any accidents or disputes)
- Records of materials used and work performed in connection with extra work or work which you have reason to believe may result in a claim for extras
- Records of safety inspections performed by others

Weekly and monthly reports should be sent to the Project Architect/Engineer. (In some cases, it maybe necessary to submit your daily reports.) They should call attention to key issues which remain unresolved, and they should summarize such important developments during the reporting period as:

- Major activities, progress, and events which may need to be brought to the attention of others by the Project Architect/Engineer.
- Problems that have come to your attention which have caused or may cause the job either to fall behind schedule, or to be subject to otherwise unexpected increases in cost.
- Accidents and/or injuries sustained on the job-site, including the results of your investigation, photographs, and descriptions provided by eye-witnesses you were able to interview.

You also have the important responsibility of providing feedback to the office quality control program for reference on future projects. Because it is difficult to recall day-to-day problems on a project at completion, the most effective feedback is provided on a weekly basis.

Copies of all reports and correspondence submitted to you by the contractor which are not copied to the Project Architect/Engineer should be forwarded to the Project Architect/Engineer for information. It is particularly important that any job-site injury or any accident report prepared by the contractor be brought to the Project Architect/Engineer's attention immediately. Accidents on the job frequently lead to claims of negligence against us. It may be vital to gather information, take pictures, or respond in some other way before conditions on the job or with the people involved change.

Most projects also require monthly progress photographs during construction. These photographs can serve as an invaluable record of job conditions. They also provide a visual indication of locations, prior to closing in, which can assist the owner in meeting future maintenance needs.

Progress photographs should be delivered to the Project Architect/Engineer in time for transmittal to the owner with the contractor's monthly payment request. Be certain that all progress photographs are marked with the time, date, and location (or other description to clearly identify the subject matter). Little yellow sticky things will not survive the tests of time.

A record keeping system which is consistent with the office system should be established for filing project information on-site. This system normally includes:

- Project directory
- Construction contract documents, complete with all addenda, revisions, and changes
- Correspondence
- Daily report
- Weekly reports
- Separate folder on each subcontractor
- Change request log
- Change orders
- Submittal tracking log (for submittals required to be furnished at the site)
- Shop drawings and product data by specification division
- Samples and color schedules
- Substitutions
- Payment requests
- Register of stored materials
- Progress schedule and schedules of values
- Test and inspection reports
- Conference memoranda
- Punch lists

It is your responsibility to establish your field office in conjunction with that of the contractor. This responsibility includes the following activities:

- Obtain and install necessary furnishings and equipment, and provide for telephone service.
- Establish a mailing address or other means for receiving correspondence, notify all concerned parties of your address and telephone number, and establish contact with the owner's field representative.
- Develop a complete directory of names, addresses, and telephone numbers of all persons and firms involved in the work. This should include emergency telephone numbers for the Project Architect/Engineer, the owner, and the contractor.
- Verify that you have access to a complete set of contract documents and that a complete set of plans and specifications (updated to include all addenda) is available in the field office.
- Verify that you have ready access to a complete set of codes and standards affecting the work.
- Request any unfamiliar manufacturer's literature or instructions referenced in the specifications.
- Make a list of pre-construction requirements which must be met by the contractor, and use the list to monitor compliance. Such a list might include: The availability of permits and approvals; provision for temporary sanitary facilities, utilities, lighting, project identification, barricades, and fences; provision for special control of noise, water, traffic, etc.; provision for protection of trees, plants, and adjacent property; completion of required survey and staking work; and submission of progress schedule, insurance, contractor submittals, and schedule of values documentation.

- Make a visual and photographic survey of any unusual conditions existing on the site prior to the start of construction. These might include existing damage to adjacent structures or the condition of an existing structure before alteration work is initiated.
- Comply with requirements of agencies having jurisdiction over your work, and submit the required reports. Be prepared to remind the contractor of inspections required by public agencies.
- Verify the contractor's notification to adjacent property owners before the beginning of construction, and inform the owners, in writing, of your desire to establish harmonious relations through open communication throughout the project. Be certain, however, also to inform them that you are not available, for legal reasons, to provide consultation on how to protect their property, but would be pleased to provide them with a list of independent consulting engineers.

Job-Site Safety

The General Conditions of the Construction Contract will specify that sole responsibility for safety on the construction site rests with the contractor. This is as it should be, for the contractor has direct control over the construction process. Safety on the job is a serious matter which is best left to those with special training, experience, and the specific contractual obligation to handle it.

Nowhere is the need for caution in this area than more evident than chance encounters with hazardous materials. A variety of substances may be discovered during construction, including asbestos, PCB, and abandoned chemicals of unknown properties. We have no particular expertise in dealing with hazardous substances, and you should not attempt to instruct or assist the contractor in their removal or handling. Instead, follow the procedures established here for reporting observation of an unsafe or potentially hazardous condition. In the usual case, the owner will call in appropriate experts.

You have no responsibility to seek out hazardous conditions, and it is important that you do not voluntarily assume that responsibility. The reason is, if you do, the law in most states will hold that you also assume any resulting liability. For the same reason, you should not attend the contractor's safety meetings, nor should you become involved in review of the contractor's safety program.

This does not mean you should ignore obviously dangerous conditions or clear violations of safety regulations you know to be in effect. It does mean, however, that you have to be very careful in the manner in which you respond.

If you encounter an unsafe condition on the job-site, including the discovery of asbestos or other toxic materials, notify the contractor's supervisor immediately. Explain that you have observed what you believe to be an unsafe condition which may require immediate attention. Do not stop the work or recommend corrective action. Record your notification to the supervisor in your Daily Report, but do not put it in writing to the contractor at this point in time.

If the contractor's supervisor does not take prompt action to correct the hazardous condition, notify the Project Architect/Engineer. He or she will contact the contractor and suggest that corrective action be taken at once. Monitor the situation. If there is still no response, notify the Project Architect/Engineer again. He or she will contact the owner, explain the problem, review the discussion with the contractor, and indicate that no action has been taken. The owner will be advised that a letter is being prepared (Exhibit IV) summarizing the situation and recommending immediate action to see that it is corrected. A copy of the letter will be forwarded to the contractor.



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For your own safety, adhere to the requirements of the contractor's safety program while you are on the site. Wear a hard hat at all times, and advise your visitors to do so, as well. If a visitor refuses, his or her refusal should be recorded in your daily report.

Testing and Inspection

Independent testing, observation of aspects of the work by the field staff of consultants, and tests and inspections required by public agencies normally involve intervention on the job by persons not closely in touch with the actual progress of construction. If their visits to the site are not coordinated, they can miss one-time opportunities to perform functions essential to the project.

Be prepared to remind the contractor of the need to schedule testing and inspections, and to coordinate, through the Project Architect/Engineer, the field observation services to be provided by consultants. Monitor tests, inspections, and consultant activities, and record these events in your Daily Report. Notify the Project Architect/Engineer of any deficiencies you observe in the testing procedures or in the test results. Keep all test results in the file you have established for that purpose, and make certain copies are forwarded to the Project Architect/Engineer.

You may encounter situations in which you believe additional tests are required to protect the owner's interests. If so, do not hesitate to make this recommendation to the Project Architect/Engineer (who may want to discuss it with the owner). Get a decision, and follow through.

Interpretation of Plans and Specifications

Plans and specifications are communications tools through which the design team attempts to convey its intent to the contractor and, through the contractor to the work force. Like all communications tools, they are imperfect. Different people respond to them in different ways. A principal reason for our presence on the job during construction is to improve the likelihood that the contractor's response to the plans and specifications is consistent with the intent of our design. You can do this through your careful observation of the work and accurate interpretation of the contract documents.

Your presence in the field can contribute to a smoothly functioning project, or it can be the source of serious problems. It is important that you do not insist on performance by the contractor which cannot reasonably be inferred from the plans and specifications. It is equally important that you recognize situations in which a change order is the only equitable means for achieving the intended result.

The contractor is likely to initiate requests for interpretation of the contract documents throughout the course of the job. Subcontractors' and suppliers' requests will be transmitted through the contractor. If you know the answer, inform the contractor, and keep a record in your daily report of what was said. If you do not know the answer, or if you have doubts, contact the Project Architect/Engineer for assistance. Document what was said and who said it. Most answers should be obtained within a week or less. If it takes longer, or if you are frequently unable to answer questions on your own, the contractor will soon bypass you and go directly to the Project Architect/Engineer for information.

Requests for information are best controlled by assigning consecutive numbers to them and keying your response to the appropriate number. This provides a convenient way to file materials submitted, reviewed,



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or supplied by you for each request and response. It can also help to avoid misinformation and mislaid requests.

During construction it will become necessary to provide revised drawings, clarification sketches, and supplementary instructions to assist the contractor in the execution of the work. Inform the Project Architect/Engineer of these requirements as they emerge, and agree upon a reasonable completion date commensurate with the contractor's need for maintaining the progress of the work. Then, follow up to make certain that either that the schedule is met, or the contractor is kept fully informed of any delay and the reasons for it. Be extremely sensitive to the contractor's need to avoid delay-it can be costly, and it can result in unnecessary conflicts and claims.

Do not allow communications intended for the purpose of clarifying the contract documents to be construed by the contractor as authorization for changes in the construction contract. If you sense that a clarification or an interpretation is being taken as a change authorization, and if you cannot resolve this matter in the field, notify the Project Architect/Engineer at once.

Non-Compliance

Most of your time on the job will be spent observing the progress of the work for general compliance with the contract documents and consistency with the intent of the design. Consider suggestions or recommendations made by the contractor, and refer them to the Project Architect/Engineer. If you observe work not in compliance, advise the contractor's supervisor (not subcontractors or suppliers) of the deficiencies or deviations you have noted.

Record these problems in your daily report, and follow up to make certain that the work is corrected and is proceeding in accordance with the contract documents. If it is not, notify the Project Architect/Engineer, so that appropriate action can be taken promptly.

Do not stop the work! Stopping the work is an extreme action which can have major consequences in terms of both time and cost. It should be taken only by the owner and only after giving serious consideration to its effects.

Shop Drawings and Samples

The timely submission and prompt processing and review of shop drawings, product data, samples, and other submittals can avoid unnecessary and potentially costly delays in the work. You can contribute to the efficient flow of contractor submittals by monitoring compliance with the submittal schedule and by advising on and expediting the review process.

You should be prepared to receive and log samples required to be furnished at the site and to notify the Project Architect/Engineer of their availability for examination. Keep a record of their acceptance or of any other action taken, and maintain custody of accepted samples at the site.

Shop drawings and product data will be forwarded directly to the Project Architect/Engineer by the contractor. Those required for review will be clearly identified in the specifications. Only those specified



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will be reviewed. Any others which are submitted will be returned to the contractor with the annotation, "Not Required for Review, " and a reference to the appropriate division of the specifications.

The contractor will be required to stamp each shop drawing with a stamp containing information boxes which, when checked off or filled in, will substantiate that he has reviewed and approved the submittal and that, in his opinion, it is complete, accurate, and in compliance with the contract documents. This may require that the contractor correct portions of shop drawings prior to submitting them. Shop drawings which have not been reviewed and approved by the contractor will be returned without review.

The Project Architect/Engineer will review required shop drawings and product data for general conformance with the plans and specifications and consistency with the intent of the design. Upon completion of the review process, they will be returned to the contractor with one of the following a notations "No Exceptions Taken, " "Furnish as Corrected, " "Revise and Resubmit, " or "Rejected. " Where revisions are required, or where shop drawings, products, or samples are rejected, the contractor will be informed of the reason in writing. You should receive copies of all transmittal letters and of all shop drawings and product data submissions to which no exception has been taken.

Partial submissions which cannot be reviewed until complete documentation has been received will be held up until the submission is complete. The same applies where shop drawings for co-related items are required for complete review. In either case, the contractor will be advised of the delay and of the reasons for it, in writing.

You should receive a copy of this correspondence and be prepared to expedite the submission of missing items. No portion of the work requiring a shop drawing, product data, or a sample can be allowed to proceed until the contractor has been notified in writing by the Project Architect/Engineer that no exceptions have been taken to the submission.

In no event may our review of contractor submittals be allowed to be construed as an approval of a change or a modification to the contract documents. Contractor submittals are inappropriate vehicles for initiating change requests, and we cannot permit changes to be originated in this manner. Otherwise, control over the construction documents will begin to pass from the design team's hands. The test of the adequacy of a submittal is whether it complies with the design intent as reflected in the construction documents as they currently exist. Changes and substitutions must originate through the change order or substitution procedures which follow.

Change Orders

Proposed changes may be initiated by the owner, the contractor or the Project Architect/Engineer at any time during construction. Your responsibility is to assist in their timely processing. To do this well, you will need to be thoroughly familiar with the procedures governing changes set forth in the construction contract. It is extremely important that these procedures be followed to the letter.

Although minor changes in the work may be required and authorized by the Project Architect/Engineer as the work progresses, no change involving an adjustment in cost or an extension of time is ordinarily put into effect without the written consent of the contractor and the written authorization of the owner. There is nothing quite so unsettling for us as having to face the owner at the end of a project with a change



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order for a large sum covering a multitude of undocumented decisions made during the course of the work.

Normally, the Project Architect/Engineer will respond to a change proposal by issuing a change request containing a general description of the work and a request that it be priced by the contractor. When the change request is returned, the Project Architect/Engineer will review the contractor's response and make a recommendation to the owner. Engineering consultants may also be called upon to review and comment on the contractor's proposal.

If the owner rejects the proposal the Project Architect/Engineer will notify all parties. If the owner accepts the proposal the Project Architect/Engineer will prepare a change order to which the change request and the contractor's proposal will be attached. The contractor and the owner will be asked sign all copies. The Project Architect/Engineer will send one copy of the executed change order to both the owner and the contractor and one copy will be forwarded to you for updating your set of construction contract documents. A change order may include more than one change request.

Change requests initiated by the contractor can draw heavily on your reserves of fairness and impartiality. Prompt action is vital. Most often the work will have to be performed in any event and delay can only increase tension on the job-site. Valid requests for changes and additional compensation have to be recognized-even those, perhaps especially those, that may derive from errors, omissions, or ambiguities in the plans and specifications. We will rely heavily on your judgment in formulating your response. In the long run, we will serve the owner's interests best if we can solve these inevitable problems early-before they escalate into costly and time-consuming disputes.

When the owner and the contractor cannot agree on the terms of a change order, the contractor may be instructed to proceed with the work, deferring the disputed matters for resolution later. If the work is to proceed on a time and materials basis, the contractor will normally be required prepare daily reports for your review. This circumstance places a premium on your careful observation of the contractor's costs for the work, as price is the usual reason for disagreement.

You should maintain a change request log at the site and use it as a working document. You should also plan to review it at least once each month with the Project Architect/Engineer. Identify any foreseeable adverse consequences of delay in the processing of change orders, and make certain the Project Architect/Engineer is aware of the time constraints under which the contractor is working. Keep your change request log updated and include a copy with your monthly report.

Substitutions

Substitution requests are disruptive. They often require extensive research on the part of the design team to determine whether the substituted item can be expected to perform properly, and they may require major revisions to the plans and specifications. This can divert attention from other activities important to the project, and it can result in unanticipated delays in the work. For these reasons, substitution requests made after the award of the construction contract (or after any permissible period following the award) will only be considered under one or more of the following conditions:

- The substitution will result in significant cost savings or, in the opinion of the Project Architect/Engineer, other important benefits to the owner.
- The specified product is unavailable through no fault of the contractor.
- The manufacturer or fabricator refuses or is unable to certify or guarantee the specified product as required.
- The substitution is essential to comply with final interpretations of code or with insurance requirements.
- Subsequent information discloses the inability of a specified product to perform properly or to fit in the designated space.

These conditions will be emphasized clearly during both the pre-bid and pre-construction conferences, and they will remain in effect throughout the course of construction. Substitution requests which meet one or more of these conditions will be considered, but only if they are submitted in strict accordance with the procedural and technical requirements and time limits set forth in the contract documents.

Substitution requests almost always contain an element of salesmanship. The point, after all, is to produce a favorable decision. Be open minded, but skeptical. Substitutions are more disruptive than they might appear—they can play havoc with a carefully executed design concept. The better you know the project, the more astutely you can evaluate substitution requests. A series of substitutions can threaten project control, so your ability to anticipate must be exercised here.

Before acceptance of a substitution, you will be asked to meet with the Project Architect/Engineer and other appropriate members of the design team to consider its impact on the design and on the construction of the project. If it is acceptable, the Project Architect/Engineer will recommend approval to the owner and prepare a change order incorporating the change.

Construction Progress Meetings

The contractor will arrange and conduct construction progress meetings in accordance with the schedule agreed upon during the pre-construction conference. These meetings will normally be attended by all trades actively involved in the work. You should be present, as well. The owner and Project Architect/Engineer may also elect to attend.

The purpose of these meetings is normally threefold: To identify and resolve problems or conflicts in the conduct of the work; to advise trades of reported non-compliance; and to maintain communications relative to possible modifications to the contract documents.

The contractor should record and issue minutes of the meetings to all participants. The owner, Project Architect/Engineer, and major subcontractors should receive a copy, even if they do not attend.

From time to time, special meetings may be called by the owner, Project Architect/Engineer, or the contractor. If called by the owner or Project Architect/Engineer, you should keep the minutes of the meeting and distribute copies.



Applications for Payment

It is your responsibility to review the contractor's applications for progress payments and to evaluate estimates of completion and claims for reimbursement for stored materials. This is an important responsibility, for the owner will be relying on your recommendations for the release of funds, and he or she will have no desire to make payments before they legitimately come due. At the same time, the contractor will expect your decisions to be reasonable and fair.

Your observation of the actual progress of the work and the accuracy of your records on the delivery of materials, work hours, work force accounts, and trades working on the job will determine your ability to meet these expectations. You should carefully review the contractor's application for payment and compare the data and estimates with your own and with the progress schedule and schedule of values submitted by the contractor prior to the start of construction. (Note that, if either of these documents is not available, review of the contractor's initial application will be delayed until they are submitted. The contractor should be aware of this potential for delay well in advance of his initial payment request.)

Where the contract documents call for reimbursement of the contractor for materials or fabrication costs as they are incurred, a special degree of caution is called for on your part. This is particularly true if the materials are stored in an off-site location under the contractor's control or at a fabricator's facility.

Quantities and the quality of these materials must be verified before you can approve the contractor's payment request. Raw materials stored off-site are vulnerable to diversion, so the contractor may be required to provide for special security, such as bonded warehousing. You will need to check on this. It is also important that you verify with the owner that all such stored materials are adequately secured and adequately insured against loss or damage.

You should meet with the contractor to review the application for payment in draft form approximately three days before it is formally submitted to the Project Architect/Engineer. The purpose is to arrive at an agreement as to the items and dollar amounts for each trade. The owner may elect to have a representative attend these meetings, as well.

Both you and the contractor (and, if in attendance, the owner's representative should initial a copy of the contractor's draft application for payment once the amounts are agreed upon. A copy of the initialed draft should be transmitted by the contractor with the formal application for payment. This will confirm acceptance of the request as submitted.

Our consultants may also have a contractual obligation to review the work in place each month and to approve or certify payment to the contractor as being consistent with the work performed by the appropriate trades. If this is the case, you should see to it that they are requested to participate in the draft review meeting and that they initial the appropriate parts of the cost breakdown.

The Project Architect/Engineer will issue a certificate for payment to the owner confirming that the amount requested in the application for payment is due the contractor. The owner will then issue payment.

Field Record Documents

It is your responsibility to maintain on the site a complete and current set of plans and specifications. These should include: The original contract documents (incorporating all addenda to the bid set); revision and clarification drawings; and any change order which have been issued. It is the contractor's responsibility to maintain, and to see to it that subcontractors maintain, record drawings showing changes in the actual location of the work from that shown in the contract documents.

You should monitor the contractor's compilation of field record documents, encourage that they be kept current, and request that they be submitted for your review at the earliest possible date. Either accept the documents as submitted and forward them to the Project Architect/Engineer, or reject them and return them to the contractor with a written explanation of the changes or corrections you believe to be required. While we are normally under no obligation to the owner to verify the accuracy or the completeness of the field record documents, you cannot ignore information you have reasonable cause to believe is incorrect.

Final Review ("Inspection ")

There are few periods during the construction phase of the work where there is greater likelihood of unnecessary conflict, delay, and frustration than the period involving corrective work which must be performed prior to final acceptance. The contractor has been paid most of the money due and has little interest in the minor problems which remain. The owner, looking for the perfection one expects from a new "product, " wants corrective work done immediately. Your task is to reconcile these conflicting interests and bring the project to a harmonious conclusion. It is in everyone's interest to minimize the problems encountered along the way.

You can contribute to this goal if you see to it throughout the job that unsatisfactory work is corrected as it is discovered and not permitted to end up on the punch list. When the contractor represents that the project has been completed in accordance with the contract documents, your investigation should reveal a minimum of surprises or problems that could have been corrected long before, had they not been overlooked or forgotten.

When you are notified by the contractor that the work is complete, make a thorough review of the project to identify any items of work that remain to be completed prior to the owner's occupancy of the project. Take care to differentiate between those items for which the contractor is responsible and those which reflect damage to previously accepted work caused by an installer of the owner's equipment or furnishings. Advise the Project Architect/Engineer to discuss the repair of any such damage with the owner.

Complete the remaining items in accurate detail on a punch list, and arrange a meeting with the contractor and major subcontractors to go over the list. Be prepared to explain all items and answer any questions that may arise. If necessary, tour the project and point out exactly what you mean, so your requirements and expectations are clearly understood.

If the contractor gives notice that a major subcontractor has completed appropriate punch list items, review that portion of the work. If the items are found to be satisfactorily completed, so advise the



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contractor. When you are notified by the contractor that all items have been completed, review the work. If it is acceptable, advise the contractor and the Project Architect/Engineer accordingly.

The Contractor will then arrange for instruction of the owner's staff in the operation of the building systems. This will include compilation and submission of all outstanding field record documents, operating and maintenance manuals, equipment cuts, guarantees and warranties, maintenance contracts, and any additional instructions for the owner. The contractor will also complete the keying schedule and deliver it to the owner with properly tagged master, submaster, room, and special keys. You should monitor these submittals to ascertain that they are complete.

The contractor will acquaint the owner's engineers and maintenance staff with acceptance tests, guarantees, warranties, and maintenance manuals, and, with the owner, will determine the timing for the transfer of responsibility for heat, utilities, security, and insurance. The contractor will also obtain a certificate of occupancy or similar releases required by local codes or ordinances to permit the owner's occupancy of the project. These requirements must be met before the owner can assume responsibility for the operation of the building.

With completion of the punch list items and instruction of the owner's staff, the contractor will arrange for a tour of the building with the owner, Project Architect/Engineer, and you to confirm that the work is substantially complete and that the building is ready for occupancy. This tour will frequently result in a list of additional items to be completed after occupancy but prior to the final payment.

Following the tour of the structure, the Project Architect/Engineer will issue a "Certificate of Substantial Completion, " which will be signed by the parties confirming their agreement that the project may be occupied for its intended use. Attached to the certificate will be the list of items to be completed or corrected, along with a time schedule, prepared by the contractor and verified or amended by the Project Architect/Engineer.

The owner may then occupy the building (or the designated areas of the building). The guarantee period usually starts as of the date of the "Certificate of Substantial Completion, " unless noted otherwise on the certificate.

Encouraging the contractor to complete the final punch list items and correct the deficiencies which will inevitably be discovered after occupancy can be a task of Sisyphean proportions. Give the contractor a reasonable opportunity to comply with legitimate correction requests, but do not hesitate to recommend that the correction and back charge provisions of the construction contract be implemented, if necessary.

When items of work recorded with the "Certificate of Substantial Completion " have been completed, the contractor will advise the owner and the Project Architect/Engineer that the project is ready for final review ("inspection "). If the review indicates satisfactory completion of the work, the Project Architect/Engineer will issue a final change order adjusting specified allowances. Following acceptance of the final change order, and upon receipt of any required affidavits, releases or waivers of lien, and consent of the surety to final payment, the Project Architect/Engineer will issue a final "Certificate for Payment. "



PROJECT CLOSE-OUT

Transfer of Documents and Records

Upon completion of the project, there remains the important task of assembling complete project records. Frequently, this will require last minute attention to field record documents, records of tests performed by independent laboratories, records of tests performed on installed mechanical and electrical equipment, and records of other tests performed by the contractor upon completion of the work. It may also require the closing out of the reporting system through the preparation of final reports. All project records, when complete, should be transferred to the project Architect/Engineer.

Orderly record keeping throughout the project will be rewarded here. Your close-out should not resemble the shutdown of the embassy in Iran.

Once the transfer of records is made, the field office can be closed. Property of the owner, such as keys, spare parts, surplus material, and so on, should be inventoried and transferred to the owner. You should forward copies of signed receipts for this property to the Project Architect/Engineer. Supplies, office furnishings, and items of equipment belonging to the office should be returned.

Guarantee and Warranty Period

In occupying the building, the owner can be expected to have questions or to discover problems which we may be asked to help resolve. Normally, where the problem can be related to a deficiency in workmanship or equipment, the contractor will be called in by the owner to perform necessary repairs. During the guarantee and warranty period, the contractor will attend to these matters as a part of the guarantee obligation.

Often, however, the cause of the problem is not immediately evident, and there is always the possibility that it could include deficiencies in design. It is also possible that the problem can be attributed to inadvertent actions by the owner, such as failure to implement necessary maintenance activities or failure to operate mechanical or electrical equipment at their intended capacities.

We need to understand these problems, so we can advise the owner on alternative courses of action or review, on the owner's behalf, the guarantee or warranty work performed by the contractor. You may be asked to visit the project from time to time to assess problems and make recommendations or to clarify for the owner the intended methods and procedures for systems operation and maintenance.

These visits should also give you an opportunity to evaluate, first hand, how the project is actually performing against our (or the owner's) expectations of performance. This information may be of great value in terms of our ability to maintain a continuing, close working relationship with the owner.

As the guarantee and warranty period draws to a close, you may also be asked to arrange a guarantee review, with the contractor and a representative of the owner, to determine whether any further work may be necessary under the contractor's guarantee obligation. This may require that you explain any remaining deficiencies in workmanship or equipment, reach agreement on what is to be done, and review



the contractor's work when it is completed. Any agreement for guarantee work by the contractor should be reviewed in detail with the Project Architect/Engineer, so it can be confirmed in writing.

Project Feedback

Each project we undertake offers a unique opportunity to expand our collective experience by drawing important lessons from our work. We can only take advantage of this opportunity if we make a concerted effort to evaluate our performance and analyze the project for feedback which could be important in the future. For us to benefit from the results of these efforts, they need to be recorded in writing.

You can make a key contribution to the strengthening of our professional skills and our experience base by preparing a brief history and analysis of the construction phase of the work. This should include identification of techniques that proved particularly successful in dealing with difficult issues on the job; an analysis of problems, delays, or conflicts that might be encountered (and avoided) in the future; an evaluation of the performance of the contractor and major subcontractors; and a summary of construction-related considerations encountered during the job which could be useful in the preparation of future contract documents.

Here again, the quality of the records you compiled throughout construction can serve you well in meeting an important responsibility. You may also be asked to make a presentation to others on the staff on the results of your evaluation. Having proven, to your credit, to have been a true and reliable representative and messenger, you can expect your conclusions and recommendations to be both welcome and well received.

EXHIBIT I

DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY t' OF THE ARCHITECT'S PROJECT REPRESENTATIVE

AIA DOCUMENT B352

Recommended as an Exhibit When an Architect's Project Representative is Employed

1. GENERAL

1.1 The Architect and the Architect's Project Representative have authority to act on behalf of the Owner only to the extent provided in contractual agreements to which the Architect is a party. The Project Representative shall confer with the Architect at intervals and on occasions appropriate to the stage of construction. The Project Representative shall communicate with the Owner through, or as directed by, the Architect; and shall not communicate with Subcontractors unless authorized by the Contractor and the Architect.

2. DUTIES AND RESPONSIBILITIES

2.1 Observe the progress and quality of the Work as is reasonably necessary at that stage of construction to determine in general that it is proceeding in accordance with the Contract Documents. Notify the



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Architect immediately if, in the Project Representative's opinion, Work does not conform to the Contract Documents or requires special inspection or testing.

2.2 Monitor the construction schedule and report to the Architect conditions which may cause delay in completion.

2.3 Review Contract Documents with the Contractor's superintendent. Obtain necessary interpretations from the Architect and transmit them to the Contractor.

2.4 Consider the Contractor's suggestions and recommendations, evaluate them and submit them, with recommendations, to the Architect for a final decision.

2.5 Attend meetings as directed by the Architect and report to the Architect on the proceedings.

2.6 Observe tests required by the Contract Documents. Record and report to the Architect on test procedures and, where applicable, the results. Verify testing invoices to be paid by the Owner.

2.7 Maintain records at the construction site in an orderly manner. Include correspondence, Contract Documents, Change Orders, Construction Change Authorizations, Architect's Supplemental Instructions, reports of site conferences, Shop Drawings, Product Data, Samples, supplementary drawings, color schedules, requests for payment, and names and addresses of contractors, subcontractors and principal material suppliers.

2.8 Keep a diary or log book recording the Project Representative's time and activities related to the Project, weather conditions, nature *and* location of Work being performed, verbal instructions and interpretations given to the Contractor, and specific observations. Record any occurrence or Work that might result in a claim for a change in Contract Sum or Contract Time. Maintain a list of visitors, their titles, and time and purpose of their visit.

2.9 Assist the Architect in reviewing Shop Drawings, Product Data and Samples. Notify the Architect if any portion of the Work requiring Shop Drawings, Product Data or Samples is commenced before such submittals have been approved by the Architect. Receive and log Samples which are required to be furnished at the site, notify the Architect when they are ready for examination, and record the Architect's approval or other action. Maintain custody of approved Samples.

2.10 Observe the Contractor's Record Drawings at intervals appropriate to the stage of construction and notify the Architect of any apparent failure by the Contractor to maintain up-to-date records.

2.11 Review Applications for Payment submitted by the Contractor and forward them to the Architect with recommendations for disposition.

2.12 Review the list of items to be completed or corrected which is submitted by the Contractor with a request for issuance of a Certificate of Substantial Completion. Inspect the Work and if the list is accurate, forward it to the Architect for final disposition; if not, so advise the Architect, and return the list to the Contractor for correction.



2.13 Review and report to the Architect on conditions of the-ports of the Project being occupied or utilized by the Owner or separate contractors, to minimize the possibility of claims for damages.

2.14 Assist the Architect in final inspection of the Work. Receive from the Contractor and prepare for transmittal to the Owner the documentation the Contractor is required to furnish at the completion of the Work.

3. LIMITATIONS OF AUTHORITY

The Project Representative shall NOT:

3.1 Authorize deviations from the Contract Documents.

3.2 Approve substitute materials or equipment except as authorized in writing by the Architect.

3.3 Personally conduct or participate in tests or third party inspections except as authorized in writing by the Architect.

3.4 Assume any of the responsibilities of the Contractor's superintendent or of Subcontractors.

3.5 Expedite the Work for the Contractor.

3.6 Advise on, or issue directions concerning, aspects of construction means, methods, techniques, sequences or procedures, or safety precautions and programs in connection with the Work.

3.7 Authorize or suggest that the Owner occupy the Project in whole or part.

3.8 Issue a Certificate for Payment or Certificate of Substantial Completion.

3.9 Prepare or certify to the preparation of Record Drawings.

3.10 Reject Work or require special inspection or testing except as authorized in writing by the Architect.

3.11 Order the Contractor to stop the Work or any portion thereof.

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EXHIBIT II

EXHIBIT B TO AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES, dated _____, 19__ (for use with No. 1910-1, 1984 Edition).

A LISTING OF THE DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE.

This is an Exhibit attached to, made a part of and incorporated by reference with the Agreement made on _____, 19__ between _____ (OWNER) and (ENGINEER) providing for professional engineering services.

ENGINEER shall furnish a Resident Project Representative (RPR), assistants and other field staff to assist ENGINEER in observing performance of the work of Contractor.

Through more extensive on-site observations of the work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the work of CONTRACTOR; but, the furnishing of such services will not make ENGINEER responsible for or give ENGINEER control over construction means, methods, techniques, sequences or procedures or for safety precautions or programs, or responsibility for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents and in particular the specific limitations set forth in paragraph 1.6 of the Agreement are applicable.

The duties and responsibilities of the RPR are limited to those of ENGINEER in ENGINEER's agreement with the OWNER and in the construction Contract Documents, and are further limited and described as follows:

A. General

RPR is ENGINEER's agent at the site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the on-site work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

B. Duties and Responsibilities of RPR

1. Schedules: Review the progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.
2. Conferences and Meetings: Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
3. Liaison:



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1. Serve as ENGINEER's liaison with CONTRACTOR, working principally through CONTRACTOR's superintendent and assist in understanding the intent of the Contract Documents; and assist ENGINEER in serving as OWNER's liaison with CONTRACTOR when CONTRACTOR's operations affect OWNER's on-site operations.
2. Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.
4. Shop Drawings and Samples:
 1. Record date of receipt of Shop Drawings and samples.
 2. Receive samples which are furnished at the site by CONTRACTOR, and notify ENGINEER of availability of samples for examination.
 3. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.
5. Review of Work, Rejection of Defective Work, Inspections and Tests:
 1. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.
 2. Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
 3. Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record and report to ENGINEER appropriate details relative to the test procedures and startups.
 4. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.
6. Interpretation of Contract Documents: Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.
7. Modifications: Consider and evaluate CONTRACTOR's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.
8. Records:
 1. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.
 2. Keep a diary or log book, recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER.
 3. Record names, addresses and telephone numbers of all CONTRACTORS, subcontractors and major suppliers of materials and equipment.
9. Reports:

1. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR's compliance with the progress schedule and schedule of Shop Drawing and sample submittals.
2. Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.
3. Draft proposed Change Orders and Work Directive Changes, obtaining backup material from CONTRACTOR and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.
4. Report immediately to ENGINEER and OWNER upon the occurrence of any accident.
10. Payment Requests: Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.
11. Certificates, Maintenance and Operation Manuals: During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for the Work.
12. Completion:
 1. Before ENGINEER issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.
 2. Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR and prepare a final list of items to be completed or corrected.
 3. Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

C. Limitations of Authority

Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by ENGINEER.
2. Shall not exceed limitations of ENGINEER's authority as set forth in the Agreement or the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractors or CONTRACTOR's superintendent.
4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than CONTRACTOR.
7. Shall not authorize OWNER to occupy the Project in whole or in part.
8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by ENGINEER.

EXHIBIT III

Forms Frequently Used in the Construction Phase of the Work

Many people have input into construction phase activities. Good, clear communications benefit all parties by preventing problems which interfere with the work and, later, may cause professional liability claims.

A number of forms have been developed by the American Institute of Architects (AIA), the Engineers' Joint Contract Documents Committee (EJCDC), and by individual firms to help formalize the process of keeping the parties to a project fully informed of developments. The impact of these forms on the job is to facilitate communications. They help to avoid misunderstandings.

Listed below are selected AIA and EJCDC forms relating to the construction phase of the work. Also included, by descriptive title, is a list of in-house forms in common use. You may want to consider these as you develop the documentation section of your own Manual for Project Representatives.

AIA Forms	Description	EJCDC FORMS
G701	Change Order	1910-8-B
G701/CM	Change Order-Construction Management Edition Application and Certificate for Payment Application for Payment Recommendation of Payment	1910-8-E 1910-8-C
G702	Continuation Sheet for G702	
G703	Certificate of Substantial Completion	1910-8-D
G704	Bid Form Notice of Award Notice to Proceed	1910-18 1910-22 1910-23
G705	Certificate of Insurance	
G706	Contractor's Affidavit of Payment of Debts and Claims	
G706A	Contractor's Affidavit of Release of Liens	
G707	Consent of Surety Company to Final Payment	
G707A	Consent of Surety to Reduction in or Partial Release of Retainage	
G709	Proposal Request	
G710	Architect's Supplemental Instructions	
G711	Architect's Field Report	
G712	Shop Drawing and Sample Record	
G713	Construction Change Authorization	
G714	Construction Change Directive	
G722	Project Application and Project Certificate for Payment	



ProNet Practice Notes

G723	Project Application Summary
G804	Register of Bid Document
G805	List of Subcontractors
G807	Project Directory
G809	Project Data

Common In-House Forms

Transmittal

Telephone Conversation Record

Bulletin Record/Proposal Record

Monthly Construction Report

Weekly Construction Report

Daily Construction Report

Daily Force Account

Minor Modification

Field Order

Bulletin

Performance Report

Air Handling Equipment Performance Report

Pump Performance Report

Pressure Test Report

Close-Out, Turn Over Items

Close-Out, Operations, and Maintenance Instructions

Project Analysis



Contractor Rating Sheet

EXHIBIT IV

Sample Letter for Notifying an Owner of an Unsafe Condition

Dear _____:

On (date) the following unsafe condition was noted at the (project identification) job-site: (identify the unsafe condition).

We immediately brought this to the attention of the general contractor, (name of contractor).

To the best of our knowledge this condition has not been corrected. We believe it may represent a serious threat to the health and safety of persons working in that area.

Because safety at the construction site is the contractor's responsibility and is governed by the contractor's agreement with you, we recommend that you require (name of contractor) to correct this unsafe condition immediately.

Please let me know if I can answer any questions you might have concerning this matter.

Yours truly,

Your Name Title

XXX:xxx

cc: (name of contractor)

David W. Lakamp is President of Professional Practice Insurance Brokers, Inc. of Redwood City, California. He has specialized in the delivery of insurance and professional liability loss prevention services to architects and engineers for more than a 15 years. Mr. Lakamp is a graduate of Purdue University, and he holds a Master of Arts degree in Science and Public Policy from the George Washington University.