S A A C E

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INTRODUCTION

The South African Association of Consulting Engineers' (SAACE) *Peer Reviewer's Manual* provides guidelines that peer reviewers shall adhere to during organisational peer reviews (OPR). Updated in 1997, the *Manual* was published by ACEC's Peer Review Committee. ACEC staff and liaison members from AIA, ASFE, DPIC Companies and RA&MCO Insurance Services and adapted by SAACE and Glenrand P.I. Insurance Managers to suit South African circumstances. In addition, the *Manual* represents input from individual peer reviewers, ACEC's Certification Task Force, ACEC's Quality Management, Professional Development/Human Resources, Management Practices, and International Affairs Steering Committees. These guidelines shall be followed to the extent that they are appropriate for each site visit.

You are a qualified reviewer by virtue of experience, professional credentials, management expertise, and peer review training. In addition, your firm must be a peer reviewed firm. *Reviewer Qualifications* are described in *Appendix A.* The Programme's management believes that training and refresher courses help you develop and strengthen your skills as a reviewer. These training and refresher courses are essential to maintaining a quality programme.

The Programme hopes you find this manual useful. At the heart of the manual are seven sets of interrogatories for reviewers to use as they explore the business practices of the firm. Although no two firms are alike, it is the Programme's intention that the interrogatories offer the reviewer a set of questions from which he or she can select to address the unique circumstances of the firm being reviewed. *Appendix B - Peer Review Process* identifies the steps in a review and the supporting information available in this manual to provide the reviewer additional resources with which to tackle the review.

As the Peer Review Programme continues to evolve, your input as a reviewer is important in helping identify new questions, procedures, and approaches to complete a review. Future revisions to the peer review process and to the manual will be distributed among reviewers and incorporated in future reviewer training sessions, as they are made.

Your service to fellow professionals in the peer review process will be of significant value to them, you and the design industry.

SCOPE OF PEER REVIEW

A peer review covers the following areas:

> General Management
> Human Resources and Professional Development
> Project Management
> Quality Management
> Computer Systems Management
> Financial Management
> Business Development

The *firm* decides if the review team should emphasise any of these areas over the others.

- The purpose of a peer review is to give the firm a means to improve its professional practice. A peer review does this by identifying the firm's objectives, policies, and procedures and then examining how these policies and procedures are implemented.

- A peer review is based on the *firm's standards of practice.* The review team attempts to examine how well the office is working based on the policies the firm has established for its practice.

  The review team does not evaluate the firm against national or regional standards. If the review team makes reference to other firms, other policies, or results of surveys, such references are only for the firm's general information.

- A peer review is *voluntary.* The firm asks for a review and voluntarily gives the reviewers access to those materials that allow the team to successfully complete the review.

- A peer review is *confidential.* Members of the review team must send the firm signed statements of nondisclosure before they arrive at the site. All material provided to them and all discussions are covered by this statement of nondisclosure. After the review, all materials provided to the reviewers are returned or destroyed.

  The review team also maintains confidentiality with respect to the sources of various information reported. The review team's notes regarding the review are destroyed.

- The firm has the option to withhold from the review team any information that is sensitive from the firm's standpoint or that of its clients.

- The review team's report to the management leadership of the firm during the exit conference at the end of the site visit is oral. The strengths and issues identified during a review should not provide recommendations nor identify specific individuals. This enhances the confidentiality of the review. The firm may, if the reviewers agree, make an audio or audiovisual tape of the exit conference.

- A peer review focuses on practices and procedures. The review team looks for a sense of logic and orderliness in the designer's approach to a project. They do not check for the correctness of calculations, etc. Similarly, the review team examines deliverable documents only from the standpoint of apparent conformance with the firm's policies on work planning, production, and quality management and not for compliance with the firm's contracts with clients.

- A peer review is cost effective, because the time the review team spends at the site is short, and the team does not prepare a written report.

- Peer review is designed to help reduce the firm's liability exposure, not create liability problems.

- The *firm* judges the value of the review team's comments and uses them as the firm wishes.

- Finally, a peer review can be a good marketing tool. SAACE liaison committees should inform clients about peer reviews and the benefits a peer review brings to a firm's clients. In addition to having their firm listed as a peer reviewed firm in SAACE's Directory and other promotional materials, firms are encouraged to complete the *News Release Form, Appendix 0,* and fax it to the programme administrator. Once approved, the form will be prepared on SAACE's stationery and returned to the firm for its distribution to clients and industry publications.

  Firms are also encouraged to provide a testimonial on their evaluation form *(Post-Review Questionnaire for Head of Firm - Appendix M)* and to write promotional articles about their experience. (Please obtain SAACE's administrative approval before publication.) Several firms have highlighted their peer review in brochures and pamphlets.

ISSUES FOR DESIGN FIRMS

The checklists provided are meant to be suggestive rather than definitive. Not all the issues are relevant to all firms, and some firms may want to ask the reviewer to emphasise some issues over others. The reviewer can use this section as a checklist in preparing for the review.

GENERAL MANAGEMENT

The word "management" implies a *purpose,* a plan to achieve that purpose, an effort to control operations in pursuit of the plan, and an organisational arrangement of people to facilitate this control. If a firm being reviewed has a written plan or not, the plan has a purpose. A plan may be informal in the way it states the elements of management and communicates them to employees. Where a firm does not have a written plan, the firm should advise the reviewing team in advance how it perceives and communicates its plan.

1. **Purposes, Goals, and Long-range Plans**

   ❏ Is the firm clear about its purposes, professional goals, and objectives? Does the firm have a Mission or Vision Statement?
   ❏ Is there a plan for ownership and management transition?
   ❏ Is the firm's long-range plan for development, management transition, and ownership transition formulated and understood?
   ❏ Are short-range objectives regularly established?
   ❏ Whether they are short-range or long-range, are the firm's objectives written and accessible to all employees?
   ❏ Are there policies for the development of new principals within the firm?

2. **Organisational Structure**

   ❏ Is there a well-understood organisational structure?
   ❏ Does each member of the staff understand his or her job?
   ❏ Are communications among management personnel adequate?
   ❏ Are communications between management and staff personnel adequate?
   ❏ Are management plans for operations outside the office (field and branch locations) adequate?
   ❏ Does the firm have an Office Procedures Manual?

3. **Facilities and Equipment**

   ❏ Are necessary office and field equipment available and well maintained?
   ❏ Does office space appear neat and organised? Is it ergonomically correct?
   ❏ Does office space contribute to the firm's public image?
   ❏ Does the firm have adequate technical literature?
   ❏ What is the prevailing attitude by management toward upgrading facilities or equipment?
   ❏ Does the firm maintain a central filing facility, with technical literature and documents arranged for retrieval?
   ❏ Does the firm have established links with outside libraries and technical information resources?
   ❏ Does the firm have a records management plan, with policies for destruction or storage of electronic data, and film?

4. **Loss Prevention**

❏ Does the firm have a standard contract or general conditions for engagement of its services?
❏ Does the firm have a risk management policy? Loss prevention training?
❏ Have loss prevention procedures been implemented in contracting and in the conduct of design, reporting, and construction phase services?
❏ Does the firm carry adequate professional liability insurance?
❏ Does the firm require proof of insurance from subconsultants?
❏ Are personnel familiar with loss prevention procedures as well as relevant literature, cassette tapes, standard documents, etc.
❏ Is work done by the firm contractually authorised?
❏ How does the firm measure compliance with loss prevention procedures?

5. Previous Peer Reviews

❏ Did the firm go through a previous peer review? If so, did the firm benefit from the process?
❏ What would the firm like this peer review to accomplish that the previous peer review did not?

Human Resources and Professional Development

The management of human resources is a vital component of a successful design firm. Human Resources management is concerned with four issues:

- Administration

- Recruitment Processes

- Career Development

- Retention Programmes

Small firms' policies may be informal and based on close personal working conditions. In larger firms, acquiring, developing, and maintaining a human resources programme requires a certain amount of deliberate and structured effort. It is important that the team review the firm's policies with the "company culture" in mind.

1. **Administration**

- ❏ Does the firm maintain a current Policies and Procedures Manual (Employee Manual)?
- ❏ Are there confidential files for individual personnel records, reflecting salary history, special accomplishments, and registration? Are personnel files current? Are there standards for the set-up and maintenance of these files? Is file access controlled and defined? Are records of former employees effectively handled?
- ❏ Does the firm have policies that fulfil state statutes? Are they available to all employees in written form? Are they followed?
- ❏ Does the firm continually communicate its Union obligations and policies to its managers and employees?
- ❏ Has the firm developed and implemented explicit policies prohibiting discrimination and harassment in the workplace?
- ❏ Does the firm have a policy for grievance procedures?
- ❏ Does the firm maintain a bulletin board with required state regulations posted?
- ❏ Does the firm have an emergency preparedness plan?
- ❏ Are there established procedures for responding to inquiries about past employees? Does the firm need special provisions relating to personnel records, such as security clearances? Are all such special requirements met?
- ❏ Does the firm have a policy on moonlighting by employees?
- ❏ Does each employee know his or her job description?
- ❏ What is the firm's turnover rate?
- ❏ Are there policies and procedures for periodic evaluations of performance and to discuss planned advancement of professional, technical, and support personnel?
- ❏ Do individuals receive written records of performance evaluation discussions, conclusions, or recommendations?
- ❏ Are interviews a two-way discussion of appropriate topics?
- ❏ Do people co-operate as a team? Do both individuals and managers attempt to implement proposed courses of action defined at performance evaluations? What contacts do employees have with their office manager, division or department head, or discipline leader?
- ❏ What elements of communication give staff members the greatest satisfaction, and what causes the greatest frustration?

2. **Recruiting**

❏ Does the firm have a standard policy for methods of recruiting new employees? Is the policy written? Has it been reviewed for compliance with all applicable regulations? Are recently hired employees asked for suggestions to improve the process?

❏ Does the firm have a policy for hiring or promoting from within before advertising outside? Are openings announced to employees? Do employees understand the policy and procedures?

❏ Does the firm have a policy for handling resumes, responding to unsolicited applications, and filing data from potential employees? Does the firm have procedures for reviewing resumes, interviewing, and negotiating with prospective employees?

❏ Are registrations and degrees verified? Are references checked?

❏ Are new employees given orientation? Are there written descriptions of benefits and a list of people to contact for assistance in different areas? Are new employees given formal introductions to the firm's organisational structure, and the firm's plans for further orientation? Do new employees "sign off" upon receipt of the Policies and Procedures Manual as having read and understood it?

3. **Career Development**

❏ Does the staff perceive the firm's management as being committed to individual professional and career development?

❏ Is career development regularly discussed with employees? By whom? With what follow-up? Do supervisors perceive career development of their subordinates as part of their job? Do department, discipline, and individual goals and concerns receive appropriately balanced consideration?

❏ Does the firm have a policy on assigning individuals to projects of various types, consistent with established career goals and policies of the organisation? Are past staff assignments and present workloads of individuals documented and available for review?

❏ Are individuals ever assigned to projects "over their heads" without adequate technical assistance? Do employees feel that they get adequate direction and assistance from their project supervisors?

❏ Is the office staffed with competent individuals to lead persons with less experience to their career goals?

❏ Does the staff use on-the-job construction phase experience to impart practicality to younger design professionals? Are younger design professionals encouraged to acquire field experience?

❏ Is there satisfaction with career path progress among employees at all positions?

❏ Is advancement reasonably rapid?

❏ Are policies concerning promotion to responsible positions, including ownership, understood and followed?

❏ Does the firm encourage design personnel with the potential to become registered to do so? Does the firm recognise the attainment of registration or certification in an appropriate way?

❏ Does the firm encourage certification by technicians? Is certification, or the capability of becoming certified, a recognised factor in hiring new technicians, or in promoting existing staff?

❏ Does the firm encourage continuing education, conferences, workshops, seminars, on-the-job training, and self-study to develop employees' skills and knowledge in needed areas and for maintenance of professional memberships?

❏ Does the firm encourage interaction among technical disciplines to develop a better understanding and respect for other technical disciplines?

❏ Does the firm encourage participation in professional and technical societies and committees? Are design professionals encouraged to serve on committees and

develop technical presentations? Do annual goals of the firm include personnel involvement in and contribution to these societies?

❏ Does the firm encourage development of writing and speaking skills?

❏ Does the firm practice sharing of new technical information, regulations, and guidance documents? Is there a sharing of project experience among the appropriate staff? Are key design professionals designated to advise the rest of the firm on developments in various disciplines and narrow specialities? Are in-house technical presentations held, or are other oral or written communications used to spread information?

4.   **Retention Programmes**

Caution.   Do not discuss actual salaries and benefits or recommend what a firm should do.

❏ Does the firm have a retention programme that includes good compensation, benefits, awards programmes, reward and recognition programmes, an ownership transition process, etc.?

❏ Are salaries reviewed on a regular basis?

❏ Does the firm maintain a salary schedule for various positions?

❏ What is the perception among employees concerning salary administration?

❏ Do employees understand their benefits package? Does the firm periodically issue a written individual report on the value of the benefits? Is more information readily available if requested? Is assistance available for making insurance claims or in connection with other benefits?

PROJECT MANAGEMENT

Peer review is applicable to technical activities regardless of the specific services to be accomplished. Project management issues in a peer review include clarity of project's scope, thoroughness of work planning, project team structure, communications, effective expediting, policies for formal checking and correcting of designs and plans, consistency in design practice, documentation, maintenance of records, co-ordination of construction phase services, project close-out activities, etc.

Activities that precede project production often slide into the production phase without a distinct break. Contract negotiation and project planning can be continuous or simultaneous. A peer review thus treats the project execution phase as having "soft edges."

All field services (data gathering as well as services during construction) are considered part of project management for peer review purposes.

As projects become larger or more complex, more people are involved. Project management, communications, documentation, and teamwork then assume greater importance. This leads to a more specific structuring of a project team and of the firm itself.

The degree to which these facets of practice are formalised varies, often depending on the size of the firm, whether the firm's practice is mostly as a prime designer or as an interprofessional consultant, and whether the firm engages in normal design and construction phase services or mostly renders only general consultation.

All firms, however, can be expected to have addressed certain managerial issues and to have established policies to cover them. In their most basic form, some of the policies may be oral or even unspoken; on a tightly knit team, they may be disseminated simply by example. Regardless, the policies exist, and since individuals or small groups can develop bad habits as well as good ones, a review of these general principles is in order.

1. Negotiating and Contracting

Caution: It is important to determine that the firm's contracts are consistent with its policy. Do not recommend specific language that should or should not be in the firm's documents.

❏ Are contracts straightforward and easily understood without requiring legal interpretation?

❏ Are the firm's standard contract forms developed for various common types of projects? Are they used regularly?

❏ If the firm does not have its own standard contract forms, is it using industry recognised and tested standard forms and agreements?

❏ Are proposals, contracts, purchase orders, etc. that are prepared by the client specifically reviewed for words or phases that unfairly allocate liability contrary to the policy of the firm or to the terms of its professional liability insurance (e.g. hold harmless clauses, termination clauses, warranty, limitation of liability, dispute resolution, etc.)?

❏ Do contract scopes of services fairly represent what the firm is capable of providing?

2. **Project Planning and Management**

❏   Does the firm have a policy that the client's programme is to be outlined in writing, establishing design parameters, the schedule, and budgetary limitations?
❏   Are project work plans and schedules reviewed by a senior person?
❏   Does the firm require that all schedule, cost, and work changes be documented and co-ordinated with the client for his or her approval?
❏   Does the firm assign personnel to a project who are experienced and qualified in the area required?
❏   Are the assigned personnel's previous time commitments considered in assigning a project?
❏   Does the firm require that key project staff be properly briefed on overall scope?
❏   When a client establishes CADD standards, different than the firm's office standards, does the PM communicate the client's requirements?
❏   Are project plans and schedules used throughout projects to manage effort, personnel, schedules, and budget?
❏   Are work segments or phases regularly completed both on time and within budget?

3. **Design Standards**

❏   Does the firm promote the development and use of up-to-date standard design techniques?
❏   Does the firm use standard details?
❏   Are standard graphical practices well understood?
❏   Does the firm have a set of standard specifications?
❏   Is the use of these standards encouraged by a workable filing and retrieval system?
❏   Does the firm have a set of standard forms and procedures that field personnel use for gathering data and for services during construction?
❏   Does the firm maintain records of construction costs or otherwise have a standard method of estimating project costs applicable to its field of practice? Is it used?

4. **Project Quality Procedures**

❏   Does the firm have a generic and project-specific quality management plan?
❏   Does the firm have a method to check formally that all concepts, technical calculations, report drafts, analyses, drawings, etc., conform with the firm's standards at appropriate milestones?
❏   Are copies of all engineering computations and drawings initialled by both the registered designer and the checker?
❏   Are documents kept in the project file?
❏   Are checks made that the client's and the firm's standards have been used to the maximum extent applicable?
❏   Is there adequate documentation of applicable governmental regulations, building codes, deed restrictions, and other jurisdictional constraints?
❏   Do the final deliverables, plus any key intermediate documents, receive an independent quality assurance review from someone other than the design professional on the project team?
❏   Do these quality assurance procedures include verification that back-checking was done to make sure that the quality management corrections were completed?
❏   Are oral presentations planned and checked as thoroughly as written or graphic deliverables?

5. **Project Communication and Records**

- ❏ Does the firm emphasise the importance of accurate and well-documented communication?
- ❏ Does the firm have and use standard procedures for recording informal communications (telephone conversations, memos, meeting notes etc.)?
- ❏ Does the firm require a project manual be prepared and used for projects above a given size?
- ❏ Does the firm have a policy requiring written approval by the client at the end of each phase of the project? Is this done?
- ❏ Does the firm have a policy for filing all project material?
- ❏ Are in-progress and final documents kept readily available in standard locations and storage formats?
- ❏ Does the firm have and use a policy with respect to project files progressing through "active," "dormant," and "archival" categories and how long to keep each type of file?

6. **Construction Cost Estimating**

- ❏ Does the firm maintain information on unit construction cost for the regions in which it works? Is it updated regularly?
- ❏ Does the firm have and use a regular procedure for determining the probable cost of construction?
- ❏ Is there a requirement that probable costs be refined and revised at key project milestones? Can this progression be tracked?
- ❏ Are proper disclaimers or qualifications attached to statements of probable cost issued to clients?

7. **Construction Phase Services**

- ❏ Does the firm encourage (insist) that construction observation be included in its contract and scope of work to the extent possible?
- ❏ Does the firm have standard written procedures for tender document distribution, agenda, pre-tender conferences, questions during the tender period, and tender opening, all appropriate to the firm's practice?
- ❏ Does the firm emphasise communications during the construction period, including written minutes of monthly or other construction meetings?
- ❏ Does the firm have standard forms for site visits and observations, daily logs, daily/weekly summaries, etc.?
- ❏ Does the firm have policies for the frequency of various tests to be made during construction and, if appropriate, standard forms for tests and reports?
- ❏ Does the firm emphasise that construction phase communications must conform to the contractual obligations/responsibilities for the project, and do senior personnel review communications by others to reinforce that emphasis?
- ❏ Are change orders and minor modifications to the contract documents required to be properly documented, distributed, and kept current?
- ❏ Are there clear lines of responsibility and authority for the field personnel, including communications with the client and the contractor? Are they followed?
- ❏ Are communications with the client and the contractor required to be frequent and open during the construction phase? Are they?
- ❏ Does the firm have a standard practice for handling shop drawings or other submittals? Are procedures for accepting, reviewing, stamping, and returning shop drawings and other submittals clear? Are they followed and well documented?
- ❏ Does the firm have a standard written policy of maintaining full documentation -written and photographic - of actual construction?
- ❏ Does the firm normally prepare record drawings of construction incorporating field changes or modifications? Are they called "record drawings"?
- ❏ Are disclaimers used as to accuracy, completeness, and sources of information?

❏ Does the firm have a standard policy of maintaining record drawings of actual construction on a long-term basis?

8. Project Close-out

❏ Does the firm have a standard policy of a close-out conference or communication with the client?
❏ Is the client asked to "sign-off" on the project or the report?
❏ Is a call on the client done later to gauge satisfaction and to smooth any rough edges?
❏ Do staff members evaluate projects at their conclusion?
❏ Does the firm have a standard policy concerning what materials are to be retained, for how long, and where at the close-out of a project?

QUALITY MANAGEMENT

While quality very likely permeates all aspects of a successful business, this section deals with Quality Management as a distinct dimension of an organisation.

Quality Management has come to mean a proactive approach that a firm utilises to identify and address critical business issues to promote common firm objectives, customer satisfaction, quality assurance, efficient operations, continuous improvement, and financial health. There is no doubt that the future of a firm's competitive position and even its survival will depend on the firm's ability to manage quality. The challenge to a firm is to achieve and sustain a quality environment. To do so, firms can take a number of paths, among them:

- ❏ SAACE Organisational Peer Review
- ❏ ISO 9000 or other quality management standards
- ❏ First or second party audit
- ❏ Third party certification

Quality organisations can be described by the degree with which they address five quality traits:

1. **Leadership** (Constancy of Purpose, Strong Values, Empowerment)

   - ❏ Does the firm have a Mission, Vision, and Statement of Values?
   - ❏ How much are senior executives committed to the implementation of quality operating systems?
   - ❏ Are those in responsible positions empowered to be creative and improve quality?
   - ❏ What attention is paid to developing leadership skills for principals and senior management staff?

2. **Teamwork**

   - ❏ Are there trusting relationships among senior executives? Do they co-operate or compete?
   - ❏ How is senior management involved in team problem solving?
   - ❏ Is there a sense that energies are directed toward common goals?
   - ❏ Do team members have fun with their efforts? Do they disband after accomplishing objectives?
   - ❏ Does the accountability structure (evaluation systems, monitoring systems) encourage teamwork?
   - ❏ How well developed is the concept of partnering?

3. **Effective Communication**

   - ❏ Do team members trust, share, listen, respect, and communicate?
   - ❏ Is valid information to make sound decisions available, and are the decisions shared?
   - ❏ When managers take information from leaders and replay it to the staff, do they support their leaders?
   - ❏ When managers receive feedback from the staff, do they pass it back up the line?
   - ❏ Are meetings effective, whereby agendas and objectives are set, timing respected, and everyone attending participates and contributes?
   - ❏ Does the firm understand and use problem-solving tools (i.e., brainstorming, work process flow diagramming, matrix diagramming, affinity diagramming, cause and effect)?

4. **Continuous, Measurable Improvements**

- ❏ Is the firm's culture such that improvement is continuously sought?
- ❏ How often and how well are employees surveyed relative to the firm's organisation, leadership, and performance?
- ❏ How does the firm verify and document that the designs meet customer requirements?
- ❏ How does the firm measure non-conformance? How does the firm handle corrective action?
- ❏ How does the firm measure improvement initiatives?
- ❏ How does management assure that all personnel know how and to whom quality problems should be reported? What is the reporting procedure?
- ❏ Is the concept "getting to the root cause" of the issue understood?
- ❏ What types of "lessons learned" systems are in place?

5. **Customer Service**

- ❏ Does the staff recognise that the customer may be the client, the public, the "person I hand my work to" or "the person who signs my check"? i.e. Everyone has customers.
- ❏ Does the firm survey its customers, external and internal? How are surveys done?
- ❏ Has the firm established its customer service objectives?
- ❏ Does the firm have an established procedure to deal with complaints, and does the firm follow through to ensure that the problems have been resolved to customer's satisfaction?
- ❏ How are action items implemented and evaluated?

COMPUTER SYSTEMS MANAGEMENT

Computer systems have had a profound effect on the ways modern-day design consulting firms prepare and deliver their products and services. These systems have changed the way we design, produce drawings, conduct research, prepare documents, and communicate internally within the firms and externally with our clients. Indeed this has been an era of unbridled change and could usher even newer and more innovative systems in the years to come. The challenge for the design industry is to manage today's computer systems of CADD**,** MIS, e-mail, fax, etc. and also to prepare for the more sophisticated systems that are bound to develop.

(Objective: To train Peer Reviewers so that they can understand the vital issues surrounding computer system management and therefore have the capability to "single out" computer issues that need special attention in the peer review process.)

1. **Policy Development**

   ❏ Does the firm have clearly defined goals and objectives for developing a computer systems policy?
   ❏ Does the firm have any written policy for its computer systems, such as allowable software, corporate monitoring rights, maintenance procedures, insurance coverage, and security?
   ❏ Does the firm have a planning process which continually identifies computer system updates and the necessary investments?
   ❏ Is there a policy for managing the data that has been and will be produced by computers?
   ❏ Is there a policy which establishes or controls the communication culture of the firm?
   ❏ Is there a policy for electronic data files being given to a contractor during a project (i.e. data files for bidding purposes; using the data for as constructed drawings)?

2. **Software Licenses**

   ❏ Do employees understand that unauthorised software copying is a violation of the firm's agreement with the software provider and is a felony?
   ❏ Does management maintain proof of purchase for all software purchases it makes?
   ❏ Does management have a system of random audits of computers to assure itself that no pirated software exists in the firm?
   ❏ Are the firm's original copies of all software locked in a secure and protected environment?

3. **Computer Systems Manager**

   ❏ Is there an employee of the firm who is designated as the systems manager?
   ❏ Does the systems manager have a written job description or some directive that states his or her corporate authority or responsibility?
   ❏ Does the systems manager participate in long range systems planning (automation needs, financing, impact, product review, vendor research)?
   ❏ Does the systems manager run "anti-virus" programmes and perform software audits on a regular basis? Does someone else?

4. **Hardware Systems**

   ❏ Do the firm's computers have easy to use operating systems?
   ❏ Do the users have adequate computer systems for their work assignments?
   ❏ Are there several different computer systems within the firm and, if so, are they integrated to accelerate productivity or do they impede it?
   ❏ Has the firm evaluated the lease vs. purchase option for their computers?

❏ Are production unit managers consulted in decisions concerning the assignment of computer resources to their personnel?

5. Data Management

❏ Does the firm have a system of adequate backup (every day, off-site storage, assigned person, rotated backup media)?
❏ What responsibilities does the firm have for archiving client data? Is the storage facility secured and controlled?
❏ What does the firm's insurance policy say about liability with regard to CADD files?
❏ Does the firm maintain a CADD library for the internal users?
❏ Does the firm have contract language in place to manage the liability risk associated with the delivery of electronic files to clients?

6. Other Computer Issues

❏ Are the firm's employees properly trained in appropriate computer functions?
❏ If the firm has e-mail, is there a policy governing such use?
❏ Does the firm allow employees to bring their own computers to work for company work or private use? If so, are there policies regarding use, maintenance, and insurance?
❏ If the firm has on-line service advertising (Home Page), is the material consistent with good marketing policies?
❏ Does the firm provide in-house or contracted support services for core software?
❏ Does upper management promote and encourage the use of computer systems throughout the firm?

Financial Management

Review of the accounting and financial aspects of the firm should focus on the specific means used to manage its finances, not on the firm's financial condition or fee structure. Reviewers must not give specific financial advice. The questions listed below have been found to be valuable indicators of the need for and general direction of corrective measures. They concern practices that are deemed important, whether the accounting and management information system is manual or wholly computerised.

All of the questions apply to "Home Office" operations while some of the questions also apply to a "Branch Office." Those questions which also apply to a branch office are indicated with an asterisk (*)

Caution: *Do not recommend specific profit levels, overhead rates, etc.*

1. **Measures of Financial Performance**

   - ❏ Is there a logical and easy way to follow an audit trail, providing for cross checking and verification of all financial records?
   - ❏ Are accounting methods effective (cash or accrual basis), with financial reports generated often enough and in a timely manner?
   - ❏ Are business ratios determined and used in financial management?

2. **Overhead Control and Audits**

   - ❏ Is a detailed chart of overhead accounts used?
   - ❏ Is a standard chart of accounts used?
   - * ❏ According to the firm's policy, are direct expenses due to travelling, printing, transport, and computing charged to projects or to overhead?
   - * ❏ Are overhead accounts and total overhead routinely budgeted, monitored, and projected?
   - ❏ If the firm uses its overhead ratio in negotiating government fees, are allowable and unallowable overhead expenses separated?
   - ❏ Is the accounting staff adequately familiar with government audit procedures and regulations?

3. **Billing Procedures**

   - * ❏ Are invoices to clients prepared in an orderly, consistent, and timely manner?
   - * ❏ Are the invoices checked for accuracy and suitability prior to being sent to the client?
   - * ❏ Do accounts conform to agreement conditions?
   - * ❏ Are the additional risks inherent in specific or unique segments of the business factored into charge rates and profit margins?
   - ❏ Are the direct costs and additional overhead costs inherent in the specific or unique segments of the business factored into charge rates?
   - ❏ Are write-offs, write-ups, and works in progress being handled in a manner appropriate to the firm in a systematic and consistent manner?
   - * ❏ Are accounts receivable monitored and aged, with overdue accounts receivable pursued with the desired level of aggressiveness (e.g. frequent calls, adding monthly interest charges to overdue accounts)?

4. **Management of Expenses, Cash, and Security**

* ❑ Are expense account forms, policies, and procedures written and available to all pertinent employees?
* ❑ Are expense account forms easy to use and monitor?
  ❑ Are expense account forms regularly reviewed by a manager?
* ❑ Are operating budgets monitored monthly?
  ❑ Is a capital budget prepared?
  ❑ Is the capital budget followed?
  ❑ Are cash flow analyses prepared routinely for top management?
  ❑ Are financial records stored in a secure location?
  ❑ Are duplicate copies of the most important records stored off-site?
  ❑ Are there routine backups of financial computer records?

5. **Project Financial Control**

❑ Does the firm have a project control/job cost system to match project size and level of project involvement?
❑ Does the system have budgets as well as cost?
❑ Does the system reflect subcontracts?
❑ Does the system require a forecast-to-complete?
❑ Are final job cost reports reviewed by senior management?
❑ Is there a job cost history file for future use?

6. **Sub-Contractor Considerations**

❑ Are project financial records, account procedures, and payment provisions covered by written agreement with sub-contractors and subconsultants?
❑ Are there provisions for periodic review of sub-contractor and subconsultant project financial records?
❑ Are there provisions committing sub-contractors to active participation in client audits?
❑ Are single person sub-contractors reviewed for sub-contractor/employee status?

BUSINESS DEVELOPMENT

An effective business development programme is required for the survival of every firm. New commissions must be forthcoming at a reasonably steady rate and on terms that will provide the firm with financial stability. At the same time, overly zealous promotion can disrupt other aspects of a firm's practice.

Business development activities range from general maintenance of relationships with existing clients to a formal marketing system. A firm's promotional material may be minimal, or it may include a complete catalogue of publications for all occasions.

A review of a firm's business development activities looks at the process from the early planning, to the first call or brochure, to the firm's selection for a project and subsequent follow-up activities at the completion of the project. Many firms need a structured programme for business development, perhaps reaching beyond the individual efforts of the partners or officers of the firm. As duties are delegated, policies and practices must be defined more formally.

Larger firms, with branch offices and offering full multidisciplinary services, may organise their marketing operations into independent departments. Such a department can be fully equipped with sophisticated data processing equipment.

Some basic, general policies and practices are normally applicable to all professional practice firms, regardless of size, type of practice, geographic location, and discipline. The formality of documentation and the details of the policies, however, can vary with these differences.

Caution: Competitors must not participate in unethical activities and should not allow the appearance of such to exist.

1. **Organisation for Business Development**

    ❏   Does the firm have a clear marketing philosophy and policies on subjects such as maintenance of relationships with present clients, formal calls, preparation of technical papers, delivery of lectures, participation in professional societies, and participation in design awards competitions?
    ❏   Is there a specific person who is responsible for planning and implementing the firm's development activities?
    ❏   Does the firm have a written policy concerning the responsibilities of all management and other employees in a public relations programme?
    ❏   Are relationships between business development (marketing/sales) personnel and technical (operations) staff clearly defined?

2. **Definition of the Firm's Practice**

    ❏   Does the firm have a well-defined market based on its physical and technical capabilities?
    ❏   Does the firm restrict its practice to the areas in which it is technically competent?
    ❏   Does the firm actively try to identify new opportunities? How?

3. **Development of Potential Projects**

    ❏   Does the firm have a well-defined procedure for evaluating potential projects and clients before making decisions to pursue?
    ❏   Do employees engaged in the preparation of proposals receive any training in the legal importance of the various elements contained in request for proposals, proposals and other business development documents?
    ❏   Does the firm have a policy for developing leads about potential projects? Is the policy followed?

❏ Are the firm's employees encouraged to participate actively in seeking new sources of work?

❏ If the firm responds to requests for proposals that include price as a criterion for selection, does the firm have guidelines for defining the precise scope of services? Are the guidelines followed?

❏ Does the firm check potential clients for financial responsibility and integrity or for a propensity for litigation?

❏ Are tentative staffing work plans, schedules, and budgets considered and discussed before submitting proposals?

❏ Do the scope-of-work provisions of proposals fairly represent the firm's capabilities?

❏ Are the project scope of work provisions clearly written to delineate what the firm will do and will not do in order to minimise risk?

❏ Does the firm maintain a readily retrievable file with automatic review/follow-up dates for all outstanding prospective work?

❏ Does the firm prepare annual budgets for general marketing and stick to those budgets?

❏ Are budgets assigned for the proposal-writing phase?

❏ Do the principals make personal contact with the proposed client?

❏ Does the firm have past proposals on file for retrieval and reuse?

❏ Are proposals used, where necessary, to educate the prospective client with respect to a more appropriate technical approach or the applicable limits of the science or technology involved, or merely to sell the job?

❏ Does the firm have a clear, well-defined policy on the acceptance of liability in its priced proposals?

❏ Does the firm have a clear procedure for addressing, in every priced proposal, the legal and contractual terms and conditions under which the firm is willing to provide the proposed services? Does this procedure address the issues related to warranty, limitation of liability, indemnification, dispute resolution, and period of validity of the priced proposal? Is this procedure followed?

4.   **Qualification Material**

❏ Do the firm's marketing and proposal materials reasonably represent its capabilities?

❏ Do these materials avoid misrepresentations that could mislead a client as to the results achievable with the firm's services?

❏ Are the firm's marketing materials subjected to any legal or administrative review, including risk management matters, prior to distribution outside the firm?

❏ Does the firm maintain CV's of management and design personnel with descriptions of background, experience, role within the company, and typical projects completed?

❏ Do CV's and project descriptions seem to be accurate, attractive, and consistent as to style and format?

❏ Does the firm have a logo or standard type style, and are all external publications, stationery, calling cards, reports, specifications, and proposal covers carefully co-ordinated to present a uniform image of the firm?

❏ Does the firm maintain a file of photographic slides, poster boards, and other materials on projects for presenting individual and firm qualifications?

❏ Is the firm's participation in professional organisations and civic activities included in qualification submittals when applicable?

❏ Are automated office procedures used fully in preparing or customising qualification material to include client and project history databases?

❏ Does the firm have a procedure for preparing a project description and securing the client's approval before release as marketing material?

❏ Does the firm participate in awards programmes?

❏ Does the firm encourage its staff to prepare professional papers?

- ❏ Does the firm publish a regular Newsletter to inform Clients about its latest projects, and to serve as marketing material? Are their project managers invited to contribute articles to this? Do they in fact do this?
- ❏ Does the firm have procedures and methods to get the press to publish its achievements?
- ❏ Does the firm encourage its professionals to participate in SAACE and to attend branch meetings?

APPENDIX A - PEER REVIEW PROGRAMME REVIEWER QUALIFICATIONS

◆ Reviewer must have at least 15 years experience with a design firm and at least 5 years experience in corporate/firm management.

◆ Candidates for reviewer must be recommended by the CEO or Managing Partner of the candidates firm.

◆ Reviewer must be active in the design profession. Active is defined as working a minimum of 1 000 hours per year.

◆ Retired reviewers and reviewers transferring to a public sector position remain qualified up to three years from the date of retirement or transfer.

◆ Reviewer must be trained under an SAACE programme to be on the active reviewer list. Training should include at least an 5 hour session provided by an authorised programme of SAACE. (Reviewer will be required to take a refresher course every 5 years.)

◆ The reviewer's firm is expected to be peer reviewed. It is only fair that if you are a reviewer your firm also be reviewed.

The Peer Review Committee may accept and rule on appeals to the Reviewer Qualifications Policy. It may grant exceptions which are considered to be in the best interest of the Peer Review Programme.

Prior to the Review

Scheduling a Review

Once a firm completes and submits an *OPR Request Form* and the processing fee, the programme administrator will initiate the process for selecting and scheduling a review team. The criteria used to shape a review (the number of reviewers and the length of review) and select a team has been refined over many years and about a thousand reviews in the USA and fifty in the RSA. The programme administrator sends the firm a list of team co-ordinators (or leaders), from which it is asked to select one for its review. In some cases, the firm may request that the programme administrator make the selection. The administrator contacts the chosen team co-ordinator with the information needed to schedule the review. Using a list of reviewers who match the firm's preferred criteria and range of review dates, the team co-ordinator schedules the review. The firm has final approval of all reviewers.

Review Team Co-ordinator

The review team co-ordinator is responsible for implementing the tasks listed in *Checklist of Review Team Co-ordinator's Responsibilities, Appendix D.*

Nondisclosure Statements

After selection and notification by the programme administrator, each reviewer immediately sends a completed *Statement of Nondisclosure, Appendix E,* to the firm head, the review team co-ordinator, and the programme administrator.

Advance Material for the Review Team

The review team co-ordinator immediately contacts the head of the firm to discuss the materials requested in the *Advance Material for the Review Team, Appendix F,* and to assist the head of the firm in determining which documents are necessary or appropriate to the review.

Each reviewer examines and becomes familiar with the materials sent by the head of the firm during the 30 days prior to the review, noting reactions, comments, suggestions, inconsistencies and other matters for follow-up. Each reviewer notifies the review team co-ordinator if any clarification is needed.

During the On-site Review

Pre-Review Meeting

The night before the review the reviewers meet to compare notes on the advance information, to prioritise subjects to be addressed, to identify additional materials needed during the review, and to discuss their approach to the review. The *Checklist of Reviewers' Areas of Interest, Appendix G*, can be used as a guide in establishing reviewers' responsibilities.

Initial Meeting with Head of the Firm

Prior to the review, normally the evening before the on-site visit, the review team meets with the head of the firm and key staff selected by him or her to discuss any general questions suggested by the *Checklist of Items To Be Reviewed with the Head of the Firm, Appendix H,* and more specifically, any questions generated by examination of the advance material. The review team co-ordinator takes this opportunity to outline the review schedule and notify the head of the firm of any additional materials the review team will need. (See *Appendix C* for sample schedules.)

Review of Policies

The objective of the review is to determine the existence of firm or company policies or procedures, the extent to which they are understood by all personnel, and the degree to which they are being implemented.

The seven primary subject areas to be reviewed are described later in this manual The head of the firm should be asked whether any of the seven management areas should be emphasised over the others and if there are areas that should not be addressed.

Review of Records

Because the time available will limit the number of project files that can be reviewed, the review team should clearly identify, insofar as possible, the materials needed and convey these needs to the head of the firm during the initial meeting.

Reviewers should recognise that firms vary in their approach to keeping records and that some firms are more informal than others regarding documentation of their work. However, it must also be recognised that good practice requires not only good decision making but also proper documentation of the reasons for the decisions and records of their implementation. Review of documents is a primary element of the review, equal in importance to policy review and interviews an appropriate amount of time should be allowed to complete this segment of the review.

Employee Interviews

Interviews serve many purposes. They can confirm or reverse opinions derived from the advance material: they can reveal the degree to which the firm's policies are understood and practised below the management level; they should provide insight into morale, job satisfaction, and perception of personnel policies; and they provide an opportunity to follow up on issues raised in the *Advance Questionnaire - Appendix I.* If it is not possible to interview the entire staff, a representative cross section should be interviewed, particularly those individuals whose questionnaire responses suggest a need for further discussion.

Wherever possible, questions should probe to discover additional useful information. Typically a question about policy could be followed by a question as to whether that policy is actually followed. That in turn could lead to other questions: "Why not?" "What policy is really followed?" "Why?" and so on.

The questions listed in *Typical Questions for Interviews, Appendix J*, should be used as guidelines to assure consistency of information. At the same time, the reviewer's judgement will dictate when all interviewees need not be asked all questions.

Exit Conference

The final on-site step of the review is the exit conference, during which the review team makes its oral report to the head of the firm and whomever else he or she may invite. Written reports of the exit conference are not permitted. However, the head of the firm or others can take notes. Or, if all reviewers agree, the firm can have the exit conference recorded on audio or audiovisual tape.

To prepare for the report, the reviewers organise notes made during the review, citing points that are particularly favourable as well as those needing improvement.

There is no single *right* way to conduct an exit conference. In every one, participants must adhere to the principles of a organisational peer review discussed on pages 2 and 3. Beyond those, the way reviewers conduct a conference will be basically determined by:

- The size of firm and number of people at the exit conference.
- The breadth, depth, and sensitivity of your findings.
- The psychology of your audience.
- The reviewers' own styles.

For example, many reviewers find it convenient to use the seven management areas and their associated subcategories as a *checklist* for the exit conference. The advantage of this approach is that the reviewers can easily organise their findings in a prearranged manner, and they can be sure that nothing important is left out of the report. A disadvantage has been that there is a natural tendency to "say something" under each category, even if the review resulted in no substantial findings in that area. It is not necessary to comment on each peer review management category.

Other reviewers have found it convenient to organise their presentation according to the organisation of the firm itself. This can be of particular advantage in larger firms.

Whether a review team uses one of these systems or develops its own, here are some suggestions:

- Discuss all findings with your review team ahead of time, and agree on an organisation for them.
- Prioritise the review team's findings in terms of costs and benefits to the firm being reviewed, so that the firm's principals receive the full value of the review team's experience.
- Agree on who in the review team will present which findings.
- Consider the extent of the findings, estimate the amount of feedback or questioning to be expected from the audience, and allocate adequate time for the exit conference.

Most importantly, the review team should be flexible during the presentation. If the firm's principals focus strongly on a particular issue and want to understand it thoroughly, give them the time and attention they need - even if that issue is not *the review team's* top priority.

The review team co-ordinator should preface the report by referring to the principles and scope of an organisational peer review on pages 2 and 3 as a reminder of what a review is and what it is not. During the report the reviewers should objectively convey their findings and at the same time, observe confidentiality.

All materials should be returned or destroyed at the completion of the review. Reviewers' notes on the review should also be destroyed at this time.

Attention to the issues addressed in the peer review is up to the firm to initiate. On completion of the review, the review team should offer to be available for consultation on a mutually agreeable basis as the firm implements the findings. The review team also can suggest helpful hints - for example, publications and follow-up procedures.

After the Review

Review Evaluation

The review team co-ordinator should conclude the OPR process by completing the *Review Team Co-ordinator Post-Review Questionnaire, Appendix K,* and forwarding it to the programme administrator within two weeks of the review.

The programme administrator will send the head of the firm a *Post-Review Questionnaire for Head of Firm, Appendix M*, requesting feedback on how the Organisational Peer Review went from the firm's perspective. Firms are encouraged to return the questionnaire within two weeks.

Reimbursement

The programme administrator cannot reimburse a reviewer's expenses without a fully documented expense form. Reviewers are advised to carry this form with them to the review and complete as much of it as possible before returning to their office. This will help speed up the submission of the form to SAACE. *All reviewers must file the Peer Reviewer Reimbursement Request, Appendix L, with the peer review administrator within two weeks after the review.*

Firm Follow-up

As discussed during the exit conference, the review team should offer to maintain contact with the head of the firm as the firm implements the review team's findings.

APPENDIX C - SAMPLE SCHEDULE FOR PEER REVIEW

Thirty Days Before Peer Review

Head of firm mails advance information on firm to review team members and informs all staff of peer review. In addition, he or she may show peer review video to staff.

Team leader discusses with the review team methodology to be used or questionnaire tabulation and review of advance materials.

Preceding Evening

Review team meets with the head of the firm and key staff to discuss assignments and tentative agenda for the peer review. The review team co-ordinator describes objectives and procedures of peer review. The head of the firm describes history of firm, services, policies and procedures, problems, etc. Key staff describe their responsibilities. Discussion is encouraged.

Review team members meet to compare notes on the advance information, to prioritise subjects to be addressed, to identify additional materials needed during the review, and to discuss their approach to the review.

Caution: A specific schedule should he developed for each firm to best meet its needs.

One-day Review Example

7:30 a.m.	Review team is given a tour of the office facilities and arranges personnel interviews.
8:00 - 11:30a.m.	Review team conducts personnel interviews.
11:30 – 12:30p.m.	Review team checks office procedures and reviews typical project files, plans, and specifications.
12:30 - 1:00 p.m.	Review team holds working lunch to review results thus far.
1:00 - 2:00p.m.	Review team reviews items covering office procedures, etc.
2:00 - 3:00 p.m.	Review team develops report for head of firm.
3:00 - 5:00 p.m.	Review team conducts exit conference with the head of the firm and others selected by him or her.

Two- or Three-day Review Example

Day One

8:00 - 8:30 a.m.	Review team is given a tour of office facilities.
8:30 – noon	Review team begins one-on-one interviews with key staff, managers, supervisors, designers, drafters, and clerical staff.
Noon -1:00 p.m.	Review team lunches together and discusses preliminary observations.
1:00 - 5:00p.m.	Review team continues interviews, with reviews of documents as appropriate.
6:00 - 8:00 p.m.	Review team members exchange information, note areas of additional information needed, and plan the following day. Preliminary conclusions are discussed.

Day Two

8:30a.m. -noon	Review team continues with interviews, review of project files, proposals, manuals, etc.
Noon -1:00 p.m.	Review team holds working lunch to compile notes and discuss observations.

If a Two-day Review

Day Two (continued)

1:00 - 2:00 p.m.	Review team organises its conclusions and prepares for exit conference.
2:00 - 5:00 p.m.	Review team holds exit conference with the head of the firm and others selected by him or her.

If a Three-day Review

Day Two (continued)

1:00 - 5:00 p.m.	Review team continues with interviews and reviews.
6:00 - 8:00 p.m.	Review team members exchange information, plan activities of next day, and discuss preliminary conclusions.

Day Three

8:30- 11:00a.m.   Review team concludes interviews and reviews.

11:00- 1:00p.m.   Review team holds working lunch to compile information for exit
                            conference.

1:00 - 5:00 p.m.   Review team holds exit conference with the head of the firm and
                            others selected by him or her.

APPENDIX D - CHECKLIST OF REVIEW TEAM CO-ORDINATOR'S RESPONSIBILITIES

The responsibilities of the review team co-ordinator are as follows:

Team selection

☐ With assistance of the peer review administrator and the consent of the firm's CEO, the co-ordinator selects the review team and the review date.

Prior to visit

☐ Contact the head of the firm and confirm the date and place of the peer review as arranged by the peer review administrator and the local arrangements that may be made by the head of the firm. Confirm in writing arrangements agreed to with copies to all concerned, including the peer review administrator.

☐ Review advance material furnished by the firm for completeness and request clarification where required.

☐ Communicate with other review team members to confirm that they have sent the *Statement of Nondisclosure by Peer Reviewers, Appendix E*, to the head of the firm and have received advance material from the firm. Guide review team members in the careful study of that material and the tabulation of advance questionnaire data. Ask review team members to fill out the *Checklist of Reviewers' Areas of Interest - Appendix G*. Ensure that reviewers allow ample time for the exit conference prior to leaving the firm's office.

☐ Ask the head of the firm to designate a senior staff member to act as liaison to provide administrative assistance to the review team during the visit. Advise the head of the firm to have his or her staff available on the day(s) of the review.

☐ Establish and distribute a preliminary schedule/agenda for the visit. (See *Appendix C*.)

At start of visit

☐ Meet with review team members before the visit to discuss the review schedule and to assign responsibilities. Discuss materials submitted by the firm. Instruct the review team concerning working papers, use of checklists, and documentation.

During visit

☐ Meet with head of the firm to discuss general procedures, schedules, and special arrangements for the review.

☐ Ascertain that all items and staff to be reviewed are available. For this purpose, use *Checklist of Items To Be Reviewed with the Head of the Firm, Appendix H.*

☐ Periodically check the progress of review team members and answer questions that may be raised. Reschedule activities as required.

☐ Develop a list of items to be discussed during the exit conference with the head of the firm. Be attentive to items that may require special care.

At completion of visit

☐ Hold an exit conference with the head of the firm and others as requested to communicate peer review findings.

☐ Return all papers and documents provided by the firm (except the *Advance Questionnaire, Appendix*), and destroy the review team's work papers.

☐ Request that the head of the firm inform staff of the review findings, and submit the *Post-Review Questionnaire for Head of Firm - Appendix M*.

Following visit

☐ Complete *Review Team Co-ordinator Post-Review Questionnaire - Appendix K,* and send to peer review administrator.

☐ Prepare itemised invoice of personal expenses using *Appendix L,* and submit to the peer review administrator for reimbursement. *Remind review team members to submit their expenses to the peer review administrator within two weeks so that close-out billing can be accomplished.*

☐ Return or destroy all remaining documents and work papers.

☐ Co-operate with peer review administrator in critiques of the peer review process.

Appendix E - Statement of Nondisclosure by Peer Reviewers

The undersigned peer reviewer recognises that as part of the activities related to the Peer Review Programme, certain confidential and/or proprietary information will be disclosed and/or obtained concerning the firm of

_____

The undersigned agrees not to copy, disseminate, and/or disclose such information in whole or in part to anyone other than the members of the review team without the prior written consent of the above named firm, and that all documents will be returned to the firm or destroyed and the review team's notes will be destroyed at the end of the peer review.

By: _____

_____
Name (typed or printed)

Date: _____

Distribution of this form

One signed copy to the head of the firm to be reviewed
One signed copy to the review team co-ordinator
One signed copy to the peer review administrator

APPENDIX F - ADVANCE MATERIAL FOR THE REVIEW TEAM

Ideally, the review team has *30* days to review some information about the firm to be reviewed. Some larger firms have several volumes of policy manuals standardised forms, etc., that can be provided to the review team in advance. Smaller or less formal firms may have virtually nothing in writing. The latter firms can be asked to help the review team prepare by 1) providing whatever documentation is available and 2) sending descriptive notes on the firm's goals and its approaches to various management areas.

All documents must be returned to the firm or destroyed at the end of the review.

- Advance Questionnaires *(Appendix* I - these must be destroyed at the end of the review.)

- Statement of purpose, goals and objectives of the firm

- Organisation chart giving names and positions of all personnel

- Resumes and job descriptions of appropriate personnel

- Descriptions of ownership of the firm and corporate type (partnership, company, close corporation, etc.)

- Employee handbook or method of disseminating personnel and office policies

- Brochure materials commonly provided to clients or prospective clients describing the services of the firm

- Quality management procedures

- Accounting procedures

- Firm's policy on contract review and signing authority

- Firm's medical monitoring programme

- Firm's health and safety manual

APPENDIX G - CHECKLIST OF REVIEWERS' AREAS OF INTEREST

To: Peer Review Team Co-ordinator

Re: Peer review at _____

        Organising for the review of the seven areas of interest

From _____

                        (reviewer's name)

Date _____

There is often the question of how best to organise a review team to cover the seven areas of interest that make up a peer review. One way is to give primary responsibility for each area to one person and let the others follow-up less intensely. Even if the review team chooses not to specialise that much, each reviewer has individual strengths that should be maximised.

With this in mind, each reviewer is asked to indicate what areas of professional practice the reviewer is most comfortable handling, absolutely does not want to handle, etc. Each reviewer should mark his or her preferences on the chart below. Any other comments, suggestions, preferences etc, would also be most welcome.

Return this form to the review team co-ordinator by (date - two weeks from receipt)

	I prefer to do it	I don't mind doing it	I prefer not to do it
General Management	❑	❑	❑
Human Resources and Professional Development	❑	❑	❑
Project Management	❑	❑	❑
Quality Management	❑	❑	❑
Computer Systems Management	❑	❑	❑
Financial Management	❑	❑	❑
Business Development	❑	❑	❑

Other wants, don't wants, or ideas:

_____

_____

Please attach a brief biographical sketch or resume if available.

Appendix H - Checklist of Items To Be Reviewed with the Head of The Firm

The initial interview with the head of the firm will vary, according to the size and organisation of the firm. If the head of the firm is a sole practitioner, the list and depth of discussion should be adapted to the circumstances. In general, the Introductory discussion here is always appropriate, and the other sections will vary in importance from firm to firm. If the firm is large, this initial interview will set the agenda for items to be discussed in detail with the appropriate staff. The following list is not in order of priority but should be used as a guideline to generate discussion.

Introductory

1.   Are there any changes from the advance material?

2.   Why did you elect to have a peer review? What benefits do you expect from the review?

3.   What findings do you expect?

4.   Would you like us to put special emphasis on any subject or management area?

5.   Is there any management area you want us to minimise in our review?

General Management

1.   Does the firm do strategic planning? How often? Who is included? How is the result of the planning communicated to people?

2.   What are the firm's goals and objectives? Are they written? Are they shared with staff? How are the goals monitored?

3.   How do you spend your time (percentages for marketing, administration, technical, outside organisations, etc)?

4.   How do you manage those who report to you? How often do you meet with them?

5.   How open is information? Do people feel informed about important things? Are salaries broadly known?

6.   Are communications as good as they should be? How should they be improved?

7.   How did the present owners get to be owners? Are there new owners on the horizon? Do they know it? What is being done to keep and develop these people?

8.   Do you have a buy-sell agreement? Is it funded?

9.   Have you done any planning for your retirement?

10.   Is there a board of directors? Who are they? Do they function in a meaningful manner?

Human Resources and Professional Development

1.   Describe your in-house training programmes. What kind? (Technical, marketing, loss prevention, etc.) How often? Do people attend training seminars, etc, away from the office? Who decides who is allowed to attend?

2.   Is participation in technical and professional societies and committees encouraged?

3.   Discuss the firm's organisational chart and how it relates to responsibilities.

4. Do you think job descriptions are appropriate? If so, when were job descriptions developed? Are they accurate? Did employees have input? Do you have a job description?

5. Do you have performance reviews? How often? Who is present at a review?

6. How are raises determined? How often do they occur? Who has input?

7. Do you have a hazard communication plan and an emergency preparedness plan?

8. Has your firm had any harassment issues? How do you handle such issues?

9. Is there a formal procedure set up for employees' grievances?

10. Are personnel files kept in a confidential manner?

11. How are company policies communicated to employees?

12. Do you have a career ladder system? Incentive compensation plan?

Project Management

1. Describe your project management system. How often are reports generated? Is the system being used as effectively as you would like? What would improve it?

2. Who negotiates contracts? Are project managers consulted before a project proposal is submitted?

3. Does the firm use standard contracts? On every project?

4. Is the scope of work well defined for every project and the contract consistent with the required work effort?

5. How are problems on projects handled? When do you get involved?

Quality Management

1. Does the firm have a <u>formal</u> quality management programme in place? If no, go to question 9.

2. Describe your quality management system. How long has it been in place? Is it working?

3. How is leadership developed in this firm?

4. What type of team do you think you have and how is teamwork encouraged?

5. Do you feel you have an effective communication programme both within the organisation and with clients?

6. Who is responsible for quality in the firm? How do you measure quality improvements?

7. How do you measure client satisfaction?

8. Have you considered preparing for ISO 9000 or other forms of certification?

If a <u>formal</u> quality management programme is not in place:

9. How does this firm determine the quality of its products and services? Who determines that level?

10. Are you satisfied that your level of quality services is on par with similar firms? How do you determine that?

11. Do you conduct client surveys?

12. Do you have an internal review process?

13. How do you communicate with the staff and with the clients?

Computer Systems Management

1. What type of computer system does this firm have?

2. Is there a specific person who manages the computer system?

3. Are you in compliance with software licensing agreements?

4. Do you have a computer training programme for both professional and support staff?

5. Does the firm have e-mail, voice mail, Internet connection, web page, etc? Who manages this part of your operation?

Financial Management

I. Are books kept using cash basis or accrual basis methods?

2. How often are financial statements issued? How much do you review these statements? Are financial ratios reviewed regularly?

3. Who is responsible for collections? Are collections adequate? How many days of receivables?

4. Do you prepare capital budgets? What is included?

Business Development

1. What is your marketing structure? Is the firm proactive or reactive?

2. Are marketing activities monitored, or do some opportunities "fall through the cracks"?

3. What is your hit rate?

4. When did you last consider pursuing work in a new area?

5. If you have branch offices, do they have their own business development plans?

APPENDIX I - ADVANCE QUESTIONNAIRE

Name   _____

Title   _____

Department   _____

Office   _____

Length of Service _____

You have been selected to participate in the preparation for the upcoming peer review of our firm. Please complete this questionnaire and mail it directly to the reviewers listed at the bottom of the next page. Use additional sheets if needed.

Your comments will be held in strict confidence. Please answer the questions from your perspective and use complete candour. This will result in a more effective and beneficial review.

1.   What are the top three priorities in the firm? List the highest priority first.

_____

_____

_____

2.   What are the three major strengths of the firm?

_____

_____

_____

3.   What are the three major weaknesses of the firm?

_____

_____

_____

4.   How could these weaknesses be reduced?

_____

_____

_____

5.   How could profitability be increased?

_____

_____

_____

6.   Is quality of design at the level it should be? _____

        Is quality of service at the level it should be? _____

7. Do you feel informed about important issues?

    ❏ Always   ❏ Most Times   ❏ Sometimes   ❏ Seldom

8. Are policies of the firm clear?

    ❏ Always   ❏ Most Times   ❏ Sometimes   ❏ Seldom

9. Teamwork in the firm is:

    ❏ Excellent   ❏ Good   ❏ Average   ❏ Fair   ❏ Poor

10. Morale in the firm is:

    ❏ Excellent   ❏ Good   ❏ Average   ❏ Fair   ❏ Poor

11. To whom do you report? _____

12. Do you have a written job description? Yes _____ No _____ If you do, is it truly reflective of your job responsibilities? Yes _____ No _____ If no, why not?_____

13. If you are registered, which fields apply?

    ❏ Professional Engineer   ❏ Engineering in Training   ❏ Engineering Technician
    ❏ Technologist
    ❏ Other _____

14. Other comments:

_____

_____

_____

Thank you for your help. Please send this form directly to the reviewers below.

Name:	Name:
Firm:	Firm:
Address:	Address:
Name:	Name:
Firm:	Firm:
Address:	Address:

APPENDIX J - TYPICAL QUESTIONS FOR INTERVIEWS

Always start by explaining that peer review is a voluntary programme and the most progressive companies are usually the ones that opt to have their firms reviewed. Inform them that all answers will be held in the strictest confidence. The firm will be told about the trend of comments but not the source. Typical questions can include:

1.   Do you know why we are here?

2.   Describe your educational background and experience and your position in the firm.

3.   To whom do you report? Are you responsible to only one person?

4.   Do you have a job description, and does it describe you job?

5.   What do you like best about the work you do? What do you like least?

6.   Describe training opportunities here. When did you last attend a session?

7.   How is this firm as a place to work? What do you like most about working here? What do you like least?

8.   What are the top three priorities in the firm?

9.   Who are the top five people in the firm who make it happen here?

10.   How could profitability be improved?

11.   How good is communication around here? How does it happen?

12.   How clear are policies of the firm to you?

13.   How often are performance reviews supposed to happen? Do they? Describe your last review.

14.   If something happened to the head of the firm, who would run the firm?

15.   What change would you make if you could make any change you wanted?

16.   Are you compensated fairly?

17.   How is morale in the firm? How is teamwork?

18.   Is quality produced here? How could it be improved?

19.   Do you feel informed about important issues? …….. about other things?

20.   What are your career objectives? Can they be met here? Are people given enough opportunity for advancement?

21.   Are you familiar with the firm's loss-prevention procedures? Have you seen any relevant literature, etc.?

22.   Is there anything else you'd like to tell me?

APPENDIX **K** - **R**EVIEW **T**EAM **C**O-ORDINATOR **P**OST-**R**EVIEW **Q**UESTIONNAIRE

Name of reviewed firm _____

Review team co-ordinator _____

Date(s) of review _____

1. Did you feel adequately prepared for this review? _____

2. Were there any unusual circumstances you have not encountered before?

   _____

   _____

   _____

3. What were the more important issues raised during this review?

   _____

   _____

   _____

4. Please rank each of your review team members' performance on a scale of I (poor) to 5 (excellent).

Name	Rank	Recommend to be a Team Leader

5. Any suggestions for future training sessions?

   _____

   _____

   _____

6. Any suggestions to improve the Peer Review Programme?

   _____

   _____

   _____

Have you completed your Peer Reviewer Reimbursement Request yet? Remember it must be sent in within two weeks of the review. Please mail this form to:

Peer Review Administrator
South African Association of Consulting Engineers
P O Box 68482
Bryanston, 2021

APPENDIX L - PEER REVIEWER REIMBURSEMENT REQUEST

Reimbursement requests must be submitted to SAACE no later than two weeks after review. Timely submission is crucial to insure reimbursement of reviewers and settlement with the firm.

Name of Reviewer   _____

Reviewed Firm   _____

Review Date(s)   _____

- **Itemisation of Expenditures**

Travel to/from city (air, rail, etc.)   R _____

Motor car kilometres @ current SAACE rate   _____

Hotel   _____

Meals   _____

Other (specify)_____   _____

_____   _____

_____   _____

TOTAL   R _____

- Receipts must be attached. *All* expenses must be itemised and documented for audit purposes.

Name   _____

Firm name   _____

Address   _____

     _____

     _____

Honorarium payable to: ❏ Firm   ❏ Self   Expenses payable to: ❏ Firm   ❏ Self

Signature: _____

Date _____

Please send completed form with documentation attached to:

     Peer Review Administrator
     South African Association of Consulting Engineers
     P O Box 68482
     Bryanston, 2021

APPENDIX M - POST-REVIEW QUESTIONNAIRE FOR HEAD OF FIRM

Firm Name _____

Name of Respondent _____   Date _____

Date(s) of Review _____

The Peer Review Programme

Please check the appropriate boxes for the following questions	No Impact 1	Little Impact 2	Some Impact 3	Strong Impact 4
1. How could you rate the overall peer review experience? - from *your personal* standpoint				
- from *the firm's* standpoint				

2.   Please explain the impact the OPR will have on you and your firm: _____

_____

_____

3.   How many firms will you personally recommend peer review to?

           2   4   6   more

4.   When do you think would be appropriate for your firm's next peer review? _____ years.
And if applicable, your branch office's? _____

5.   Was the peer review schedule followed as expected?   YES   NO

Was it: too short   about the right length   too long

What suggestions do you have? _____

_____

6.   Did the assembly of advance information for the review:

a.   include the proper documents? _____

b.   benefit your firm?   YES   NO   Why? _____

_____

7.	Please add any comments or suggestions concerning the Peer Review Programme and your firm's experience.

_____

_____

_____

_____

The Peer Review Findings (This information will be used only for statistical purposes to improve the programme.)

What were the most significant findings in each of the following areas?	Did you expect this?	Do you agree?
General Management _____ _____ _____		
Human Resources and Professional Development _____ _____ _____		
Project Management _____ _____ _____		
Quality Management _____ _____ _____		
Computer Systems Management _____ _____ _____		
Financial Management _____ _____ _____		
Business Development _____ _____ _____		

Testimonials about your firm's peer review for programme marketing: _____

_____

_____

_____

The Reviewers (This information is for the Peer Review Committee only.)

Ask your staff to assist you with evaluations of any reviewers with whom you had only minimal contact	*Please answer using the following numerical rating* 1 Poor 5 Excellent			
Fill in the names of the reviewers	Team Leader Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4
Did you request this reviewer?				
How prepared was the reviewer? (i.e. did the reviewer read the advance material, have an understanding of what you wanted out of this review, etc.?)				
How diplomatic was the reviewer? (i.e. was the interaction with staff comfortable, did the reviewer handle sensitive issues delicately yet to the point, etc.?)				
How appropriately did the reviewer follow procedures?				
Please rate interviewing skills (asked relevant questions, was a good listener, got the correct information within the time constraints of the review process).				
Please rate reporting skills (communicated clearly, fielded questions well, answered questions to the best of his/her knowledge).				
Do you recommend this reviewer to another firm? (yes or no)				
Do you recommend this person be a Team Leader? (yes or no)				

Do you object to sharing this questionnaire with the reviewers? (yes or no) _____

Other comments _____

_____

_____

Thank you for your time. Please mail this questionnaire to:

Peer Review Administrator
South African Association of Consulting Engineers
P O Box 68482
Bryanston, 2021

Appendix N offers the reviewer a format to summarise key reflections on the firm's management practices for discussion at the exit interview. Reviewers should exercise good judgement when characterising the reviewed firm's strengths and issues on this form, given it can be open to later interpretation without the reviewer's presence to elaborate on its meaning.

General Management	
Strengths	**Issues**

Human Resources & Professional Development

Strengths	Issues

Project Management

Strengths	Issues

Quality Management

Strengths	Issues

Computer Systems Management

Strengths	Issues

Financial Management	
Strengths	**Issues**

Business Management	
Strengths	**Issues**

Appendix O - News Release Form and Sample Final News Release Form

FORM:

LOCAL ENGINEERING FIRM PUSHED "QUALITY" ENVELOPE

RANDBURG - (date) - _____which designed

<div align="center">FIRM NAME AS IT WILL APPEAR IN RELEASE</div>

_____

RECENT LOCAL PROJECT - *OPTIONAL*: INCLUDE DATE OF COMPLETION, CLIENT. HOW THIS PROJECT IMPROVES LIFE IN YOUR COMMUNITY ETC

_____ has undergone a review of its business

practices in an effort to improve the firm's excellence in the field of Professional Design.

Called an "Organisational Peer Review" the voluntary study was conducted under the auspices of

the South African Association of Consulting Engineers and involved a _____ day-long

<div align="center">NUMBER OF DAYS</div>

review of _____'s operations and procedures

<div align="center">FIRM NAME AS IT WILL APPEAR IN RELEASE</div>

by a trained team of design professionals. The peer review serves both to identify problem areas

and to reinforce effective business practices.

_____

<div align="center">USE THIS SPACE TO GIVE AN ACTUAL QUOTE FROM A FIRM PRINCIPAL. INCLUDE PRINCIPAL'S NAME AND TITLE.</div>

_____

<div align="center">ATTACH SECOND PAGE IF NECESSARY</div>

_____

_____

_____

Since 1987 many Consulting Engineering firms have been peer reviewed through a programme overseen by SAACE's Peer Review Committee. SAACE is supported by its professional indemnity insurance scheme managers, offering this voluntary service for firm's committed to quality.

FAX TO: SAACE
(011) 463-7383
Attn: Peer Review Administrator

MAIL TO: SAACE
P O Box 68482
Bryanston
2021
Attn: Peer Review Administrator

SAMPLE:

Contact: Graham Pirie or
                   Tony Bradley
                   (011) 463-2022

LOCAL ENGINEERING FIRM PUSHED "OUALITY" ENVELOPE

RANDBURG - 15 January 1997 - XYZ Associates, which designed Springbok Sports Stadium, has undergone a review of its business practices in an effort to improve the firm's excellence in the field of Professional Design.

Called an "Organisational Peer Review", the voluntary study was conducted under the auspices of the South African Association of Consulting Engineers and involved a one and a half day-long review of XYZ Associates' operations and procedures by a trained team of design professionals. The peer review serves both to identify problem areas and to reinforce effective business practices.

According to Dennis Smith, Senior Partner with XYZ Associates, "Not only were we very positively reassured of our high standards of practice, our staff became enthused with a renewed sense of pride. We have very good people here doing international calibre work."

Many consulting engineering firms have been peer reviewed through SAACE's programme, dating back to 1987. SAACE's Peer Review Committee is joined by the Association's professional liability insurance scheme managers in offering this voluntary service for firms committed to quality.

The South African Association of Consulting Engineers (SAACE) is an organisation of engineers engaged in the independent practice of consulting engineering. SAACE has more than 390 member firms employing more than 10 000 professional engineers, surveyors, scientists, technicians and support staff involved in many different engineering disciplines who design over R10 billion in construction projects annually. More than 75 percent of these firms are small businesses with fewer than 25 employees each.

QUALITY MANAGEMENT