



# The Ten Most Frequent Mistakes in Design Documentation

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## The Ten Most Frequent Mistakes in Design Documentation

International Hotel/Motel & Restaurant Show

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# **The Ten Most Frequent Mistakes in Design Documentation**

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## Moderator

**John R. Hardy, President/CEO, The John Hardy Group**

## Panelists

**Roger Hill, Chairman/CEO, Gettys**

**Martin Stringfellow, Principal, Martin B. Stringfellow Company**

**Bob Harnach, President, Richmond Textiles**

**Robert MacKenzie, formerly Senior Vice President,  
Cornerstone Real Estate Advisers**

# The Ten Most Frequent Mistakes in Design Documentation



## Design

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1. In renovation projects, inaccurate existing condition drawings
2. Missed, distorted or misinterpreted drawing information
3. Furnishings that do not meet accessibility codes and guidelines
4. Redundancy
5. Quantities of materials are not adjusted when the design affects pattern repeat
6. Lack of compliance with brand standards
7. Inset rug/flooring conflicts
8. Incorrect dimensions
9. Improper CAD layer Management
10. Missing and/or irrelevant information in general construction



## Design Documentation Solutions

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### 1. In renovation projects, inaccurate existing condition drawings

**Solution:** Retain professional surveyors who utilize advanced imaging and measuring technology for best accuracy.

### 2. Lack of compliance with brand standards

**Solution:** Institute policy for mandatory review of brand standards at project outset and at quality control review points.

### 3. Furnishings that do not meet accessibility codes and guidelines

**Solution:** Develop checklist for designers; add prompts in specification templates to alert designer/author to confirm compliance; best solution is universal design: furnishings in all rooms, not just those designated as accessible, are designed to meet accessibility requirements. Same universal design approach can be applied to architecture.



## Design Documentation Solutions

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4. **Redundancy - information that is not fully modified, leads to conflicts**

**Solution:** Choose the single most appropriate location to provide information and say it once. More advanced: employ parametric change CAD technology (in theory, any change to any part of your building design or documentation is automatically reflected everywhere else).

5. **Quantities of materials are not adjusted when the design affects pattern repeat**

**Solution:** No easy fail-safe solution. Requires diligence by designer to follow through on changes.

6. **Missed, distorted or misinterpreted drawing information**

**Solution:** When sharing files electronically with Consultants, always send hard copy that takes precedence over electronic file.



## Design Documentation Solutions

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### 7. Inset rug/flooring conflicts

**Solution:** Drawings should indicate opening dimensions as "HOLD". Dimensions of rug on specification should be the same as those on the drawing and also qualified by "DIMENSIONS ARE APPROXIMATE. VERIFY EXACT DIMENSIONS WITH ARCHITECTURAL DRAWINGS". This approach helps to initiate rug fabrication early but is not perfect - the purchasing agent will need to track down a current copy of the architectural drawings and the opening has the potential for being constructed incorrectly. The preferred approach would be to state in the rug specification that "DIMENSIONS ARE APPROXIMATE. VERIFY EXACT SIZE OF OPENING IN FIELD". The problem with this is that the flooring may be one of the last things to be installed and a hand-tufted rug could take 16 weeks to fabricate and ship, plus shop drawing processing time, thus possibly extending delivery well into the opening of the facility. In this case, an additional specification for readily available temporary carpet should be produced together with the rug specification.



## Design Documentation Solutions

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### 8. Incorrect dimensions

**Solution:** Dimension only those things that really matter; do not repeat dimensions either within a drawing or between drawings; in general, do not close dimension strings - in a string of dimensions, leave tolerance by omitting the dimension for a non-critical space or assembly; specific dimensions are not always the best choice - notes like "ALIGN" and "4 EQUAL SPACES" are often more appropriate.

### 9. Improper CAD layer management

**Solution:** Unfortunately, no magic CAD tool or keystroke exists to track down these errant bits of information automatically. Drawings must be plotted and double-checked by the CAD operator to make sure information is in its proper location. A secondary check should be performed by the project supervisor.



## Design Documentation Solutions

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- 10. Missing and/or irrelevant information in general construction**  
**Solution:** This is usually the result of using a spec from a previous job. Always start with a fresh base spec and edit it to meet the unique circumstances of the project at hand.



## Procurement

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1. Underestimating the complexity of the task
2. Giving inexperienced people senior design responsibility
3. Issuing "Final FF&E specification document with incomplete TBS or TBD
4. Design without regard to client budget
5. Design changes being made directly with the manufacturers after orders are issued
6. Customizing every FF&E element
7. Specifying items without regard to project schedules
8. Lack of complete or accurate information on spec sheet
9. Lack of understanding of various levels of quality in manufacturing
10. Proper time allocated in schedule for custom manufactured items



# Procurement Documentation Solutions

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### 1. Underestimating the complexity of the task

**Solution:** Analyze the Client Request for Proposal more carefully; understand the demands of the Client, and what it takes to successfully complete the job before quoting a fee.

### 2. Giving inexperienced people senior design responsibility

**Solution:** Use a "Principal in Charge" approach and let inexperienced people successfully complete several projects under the coaching of a senior person before assigning them senior responsibility.

### 3. Issuing "Final FF&E specification document with incomplete TBS or TBD

**Solution:** Establish a realistic deadline for completing documents.



## Procurement Documentation Solutions

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### 4. Design without regard to client budget

**Solution:** Create a preliminary line-item cost estimate of the proposed design prior to the design presentation to avoid surprises later.

### 5. Design changes being made directly with the manufacturers after orders are issued

**Solution:** The design process should be completed either prior to issuing specifications or document to all parties any revisions made subsequent to the final specification.

### 6. Customizing every FF&E element

**Solution:** Consider specifying in-line product or possibly minor modifications to an in-line product.



## Procurement Documentation Solutions

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- 7. Specifying items without regard to project schedules**  
**Solution:** Question specific lead times with the manufacturer's reps prior to specifying items.
- 8. Lack of complete or accurate information on spec sheet**  
**Solution:** Use a specification form which addresses all pertinent areas and **double check** for missing or inaccurate information prior to releasing final specifications.
- 9. Lack of understanding of various levels of quality in manufacturing**  
**Solution:** Provide more specific information regarding custom items (i.e., cushion construction--percentage of foam/down/feather vs. poly foam cushion).



## Procurement Documentation Solutions

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- 10. Proper time allocated in schedule for custom manufactured items**  
**Solution:** There should be a line-item on the project schedule for designer approvals and a procedure/report in place for tracking these approvals.

# The Ten Most Frequent Mistakes in Design Documentation



## Vendor

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1. Missing or no documentation of the design objective
2. Not providing a visual of the design objective
3. Not producing the physical Model Room
4. Not providing completely defined time requirements
5. Not providing large specification samples of fabric and color
6. Lack of properly and accurately defined specification fabric
7. Not signing and returning the Order Acknowledgement
8. Allowing adequate time to produce a complete custom product
9. Selecting residential designs and constructions without providing budget parameters and adequate time to source/produce samples
10. Lack of timely shipping documentation



## Vendor Documentation Solutions

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- 1. Missing or no documentation of the design objective**  
**Solution:** Provide a paragraph of the overall design goals and specific requirements detailing purpose, lighting environment and performance characteristics for each item. Communicate budget ranges in the sourcing of all goods.
  
- 2. Not providing a visual of the design objective**  
**Solution:** Include a clearly labeled digital image of the color board so that the relationship of multiple items may be discerned.



## Vendor Documentation Solutions

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### 3. Not producing the physical Model Room

**Solution:** Provide in the budget for the time and dollars for the model room. Custom model room yardages require the same amount of time as full production yardages. Custom printed product requires artwork and separations before the model room yardage can be produced. High quality digital renderings will be satisfactory substitutes for evaluating the color and placement relationships. However, only the physical room model will prove the space relationships.

### 4. Not providing completely defined time requirements

**Solution:** During the quotation process, provide the vendor with a defined expected date. With the knowledge, the vendor should provide alternative products in order to meet the timeline.



## Vendor Documentation Solutions

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5. **Not providing large specification samples of fabric and color**

**Solution:** The larger the better or at least three samples of each item. Postage size samples do not allow the vendor to distribute to multiple sources, if needed.

6. **Lack of properly and accurately defined specification fabric**

**Solution:** The specification and sample must define the purpose, performance, and lighting criteria required. All samples should be clearly labeled “Front” and “Top”. Too often a swatch is reversed/rotated on the specification sheet.

7. **Not signing and returning the Order Acknowledgement**

**Solution:** The purchase order and the vendor’s order acknowledgement **must** agree. Each document represents their respective understandings. Redraft until there is full agreement.



## Vendor Documentation Solutions

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### 8. Inadequate time to produce a complete custom product

**Solution:** Timelines need to provide for the excess time to reach approval of the custom item prior to production. Modifying running line products may be accomplished more quickly. Re-coloring of existing designs can be done in the same timeframe as normal product lines. Produce tests and model room quantities.

### 9. Selecting residential designs and constructions without providing budget parameters and adequate time to source/produce samples

**Solution:** High priced samples will generate high priced quotations unless the expectations (budget) are communicated. Transfer all requirements and expectations along with clearly defined samples.



## Vendor Documentation Solutions

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### 10. Lack of a color standard

**Solution:** Color is a difficult verbal discussion. Communicate color through the use of a physical color sample and under **identical** lighting situations.



## Project Management

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1. Inadequate, incomplete, untimely or inconsistent communications among key decision makers in all its forms
2. Incomplete or inadequate scope, budget and schedule definition, coordination and integration
3. Lack of understanding of the process
4. Inexperienced key team members
5. RFP's, proposals, responsibility matrices and contracts not being complete, coordinated or integrated
6. Unrealistic expectations by team members
7. Lack of change management controls
8. Inadequate or incomplete due diligence
9. Lack of standardization
10. No documentation at all



## Project Management Documentation Solutions

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- 1. Inadequate, incomplete, untimely or inconsistent communications among key decision makers in all its forms**

**Solution:**

- a) Establish who are the key decision makers**
- b) Establish copy lists for all communication distribution**
- c) Establish who is responsible for coordinating all key meetings, conference calls, etc.**
- d) Have regularly scheduled meetings and conference calls to keep the decision making process organized.**

- 2. Incomplete or inadequate scope, budget and schedule definition, coordination and integration**

**Solution:**

- a) Take the time to document the scope as clearly as possible before doing anything else. If it is not correct, nothing else will be.**
- b) Make sure scope, budget, schedule and quality levels are in agreement & understood by all major parties.**



## Project Management Documentation Solutions

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### 3. Lack of understanding of the process

**Solution:** Have a clear, understandable process.

### 4. Inexperienced key team members

**Solution:**

- a) Be honest with yourself about what individual team members are capable of producing.
- b) Monitor all team members activities as closely as possible.
- c) Review documentation carefully & frequently.

### 5. RFP's, proposals, responsibility matrices and contracts not being complete, coordinated or integrated

**Solution:**

- a) Be thorough & complete in establishing everyone's scope of work.
- b) Be sure all contracts & agreements reflect what needs to be done and that there are adequate fees to support it.
- c) Utilize responsibility matrices to organize entire team effort in detail.



## Project Management Documentation Solutions

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### 6. Unrealistic expectations by team members

- Solution:**
- a) Tell people what they need to hear early. Not what they want to hear.
  - b) Deliver bad news as early as possible.
  - c) If you are uncomfortable about something, you are probably doing something wrong. Deal with it.
  - d) Problems only get worse, if you procrastinate about resolving it.

### 7. Lack of change management controls

- Solution:**
- a) Document all changes to key parties regularly.
  - b) Don't ignore the impact of changes.
  - c) Try to organize early to minimize more change.
  - d) Take the time to thoroughly think through the impact of a change.



## Project Management Documentation Solutions

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### 8. Inadequate or incomplete due diligence

Solution: a) You can not do enough due diligence.

b) Look behind, above, below and around all issues.

c) Use destructive testing whenever possible.

### 9. Lack of standardization

Solution: Standardize everything possible.

### 10. No documentation at all

Solution: a) Look for some form of documentation and cover it somehow.

b) Utilize competent professionals who understand how to document.

# The Ten Most Frequent Mistakes in Design Documentation



## Owner / Investor

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1. Not taking the time to pick a strong project manager
2. Lack of thorough due diligence
3. Not picking your team carefully and charging them with full responsibility
4. Not Scheduling early, often and realistically
5. Not following the process in design
6. Not understanding who is in charge
7. Starting construction without buildable documents
8. Keeping control of that RFI, ASI, CO, and CCD process
9. Doing a project without a model room
10. Incomplete close out of a project



## Owner/Investor Documentation Solutions

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### 1. Not taking the time to pick a strong project manager

**Solution:** a) Select your project manager carefully, and give the manager sufficient authority to manage the team.

b) Pick the person and pick the team.

c) Your manager has to be able to see your view point, and to manage up and manage down. Constructive control of Owners and asset managers is as important as managing the design team and contractors

d) Recognize the need to delegate and manage the manager rather than doing it yourself.

e) Realize you need a development team; look for bench strength in all aspects of management. E.g. due diligence and scope, design management, documents review, scheduling, accounting, records and document processing, on site management, installations, and operational coordination and start up.



## Owner/Investor Documentation Solutions

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### 2. Lack of thorough due diligence

**Solution:** a) Develop your budget with sufficient line item detail.

Hint: Use a detailed item list and eliminate rather than add items.

- b) Start with area by area scoping and keep the scoping document current. Detail the FF&E and construction costs from the scoping.
- c) Allocate budgets by areas to establish and maintain priorities. And enforce designing to budget within each area.
- d) Never rely on totally on plans confirm actual room counts, dimensions and areas early on.



## Owner/Investor Documentation Solutions

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### 3. Not picking your team carefully and charging them with full responsibility

- Solution:**
- a) Choose your architect and designer based on the ability to manage the process and provide excellent documents, rather than simply design acumen
  - b) Develop a responsibility matrix, a “differentiation document” very early on.
  - c) Make an appropriate decision as to the project lead designer, Place the Interior Designer under the Architect when appropriate.



## Owner/Investor Documentation Solutions

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### 4. Not Scheduling early, often and realistically

**Solution:** a) Force a realistic schedule during the underwriting process. Successful projects start with good design which requires a well orchestrated process and sufficient time.

b) Be realistic in integrating permitting and external reviews and approvals into the schedule.

c) Be realistic about displacement, productivity and operational constraints in construction planning.

d) Management of the schedule is as important through the design process as in the construction process.

e) Update, distribute and manage task list regularly.

f) Be sure scheduling is actually implemented, updated, and fully detailed on both a trade and area by area basis.

e) Be sure the FF&E, startup, and operational components are fully integrated



## Owner/Investor Documentation Solutions

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### 5. Not following the process in design

- Solution:**
- a) Lock in the overall scoping in the schematic process. And lock in the detail in the design document phase.
  - b) Recognize the time to stop changes. “We’ll get that right on the next project”
  - c) There’s no substituted for frequent face to face meetings of the design team through the design development process.
  - d) Provide enough time for development of details, documents and schedules.
  - e) Coordinate and negotiate flag design requirements from the beginning.



## Owner/Investor Documentation Solutions

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### 6. Not understanding who is in charge

- Solution:**
- a) Clearly define, and redefine the break between architectural and design responsibilities in design, and redefine as necessary through the process.
  - b) Clearly assign responsibilities for finish, door and other schedules between the Architect and Interior designer.
  - c) Use specialty consultants, waterproofing, elevator, lighting, etc early in the process rather than as reviewers.

### 7. Starting construction without buildable documents

- Solution:**
- a) Provide sufficient time for plan review and peer review. Be sure details are sufficient and referenced correctly.
  - b) Actually review the specifications, and be sure they coordinate with the plans, and are specific to the current job.
  - c) Look for errors of omission. What's missing that will cost us changes later?



# Owner/Investor Documentation Solutions

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### 8. Keeping control of that RFI, ASI, CO, and CCD process

- Solutions:**
- a) Provide realistic construction documentation control into the General Conditions, provide suitable systems and enforce review and approval cycle compliance from the onset.
  - b) Force submittal and shop drawings to be completed early in the construction process. Encourage participation of subs in a coordinated common review process.
  - c) Keep logs, notices, insurance documents, permits and other records current and Force compliance with.
  - d) Keep active lien and change order logs from all subs as well as the GC. Don't trust the GC to monitor.



## Owner/Investor Documentation Solutions

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### 9. Doing a project without a model room

**Solution:** New construction or redevelopment the model room process pays off consistently, especially in term of minimizing construction change.

### 10. Incomplete close out of a project

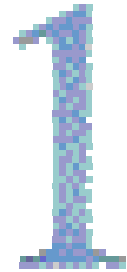
**Solution:**

- a) Schedule punch process and flow realistically. Make subs fully accountable for post punch rework by other trades.
- b) Be sure that testing and balancing are fully accomplished and that MEP has to be accountable for system functionality.
- c) Be sure As Builts, operating manuals, warranties and spares are all provided. Video tape all training. Be sure to get all spares as and attic stock as mandated in the specs.



## Our Conclusion

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1. Inadequate, incomplete, untimely or inconsistent communications among key decision makers in all its forms
2. Not fully underestimating the complexity of the task
3. Giving inexperienced people senior design responsibility
4. Lack of compliance with brand standards
5. No documentation of the design objective
6. Incomplete or inadequate scope, budget and schedule definition, coordination and integration
7. Lack of thorough due diligence
8. Not providing a visual of the design objective
9. Not taking the time to pick a strong project manager
10. In renovation projects, inaccurate existing condition drawings

# The Ten Most Frequent Mistakes in Design Documentation



## Contact Information

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John R. Hardy  
President/CEO  
The John Hardy Group  
5180 Roswell Road  
The Centre Building  
Atlanta, Georgia 30342  
404-256-8800  
[www.jhgi.com](http://www.jhgi.com)  
mail@jhgi.com

Roger G. Hill  
Chairman/CEO  
Gettys  
One East Erie Street  
Suite 400  
Chicago, Illinois 60611  
312-836-1111  
[www.gettys.com](http://www.gettys.com)  
roger@gettys.com

Martin B. Stringfellow  
Principal  
Martin B. Stringfellow Company  
2737 Mapleton Ave.  
Suite 300  
Boulder, Colorado 80304  
303-449-2347  
[www.mbsco.com](http://www.mbsco.com)  
martin@mbsco.com

Robert D. Harnach  
President  
Richmond Textiles  
900 North Franklin Street  
Suite 200  
Chicago, Illinois 60610  
[www.richmondtextiles.com](http://www.richmondtextiles.com)  
bobh@richmondtextiles.com

Robert MacKenzie  
223 Plains Rd.  
Haddam, Connecticut 06438  
860-345-8549  
rcmackenzie@comcast.net

You can find this handout at  
The JHG website  
[www.jhgi.com](http://www.jhgi.com)



**SOLUTIONS**  
**Relative to Frequent Mistakes in Design Documentation**

**International Hotel/Motel & Restaurant Show**  
**November 9, 2003**

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Mobil Travel Guide  
AAA Diamond Ratings



<http://epdweb.engr.wisc.edu/onsite/courses/bsc04.lasso>

### **Why This Course**

This practical course is your opportunity to learn fundamental quality control measures to avoid costly change orders and deficiencies in construction documents. This course examines in detail critical areas where change orders, increased costs, and discrepancies occur in the contract documents during design and contract document development phases of building projects.

Recent surveys of owners indicate that the quality of working drawings and specifications in construction continues to decline. Simultaneously, there is a rapid increase in the number of construction change orders. The correlation between quality of construction documents and changes is substantiated by recent claims. Trends in claims highlight the critical need for the construction industry to focus on measures and actions required to decrease costs, increase quality and decrease claims of the constructed product.

### **What You Will Learn**

By participating in this course, you will learn how to...

- Conduct a graphics review for potential change orders
- Integrate a checking process into production
- Identify deficiencies in contract documents
- Find opportunities for substitutions
- Identify areas for increased claims
- Identify potential job delays
- Apply techniques to improve the project quality
- Apply effective cost-control measures
- Develop quality assurance programs

### **Who Should Participate**

This course will benefit owners and facility managers in public and private sectors, contractor representatives, design professionals, architects, engineers, and planners responsible for developing and reviewing contract documents.

### **For Additional Information About this On-site Course**

**Contact Program Director Jeffery Lackney, Ph.D., AIA**  
**800-462-0876**

Department of Engineering Professional Development  
University of Wisconsin–Madison

<http://houston.bizjournals.com/houston/stories/2003/06/23/focus13.html>

## **Architects take steps to resolve crises of quality and coordination**

Ray Leiker

In Texas, professional liability took center stage when hundreds of doctors converged in Austin to lobby for relief from medical malpractice liability costs. Although architects haven't walked off their jobs or marched in protest, design professionals also face surging professional liability claims and rising insurance rates.

It is an unfortunate reality that claims increase in a cost-conscious environment where speed is at a premium and economic pressures can force clients and firms to rely too heavily on inexperienced employees.

Architects can't change the larger economic forces that push clients to demand error-free performance on a fast-track schedule. However, architects can and are starting to enforce quality control measures to provide some protection for both their firms and their clients.

### **Improve coordination**

A major cause of frustration and dissatisfaction is a breakdown of coordination between the various parties involved in the design of a construction project. The architect can design it and the construction firm can build it, but will it cost what the client expected? If a problem develops along the way, is there room in the fees to correct it?

One system that has proved successful in coordinating activity between all the different parties -- the structural and mechanical engineers, the architects and the plumbing and electrical disciplines -- is RediCheck.

RediCheck is an interdisciplinary coordination system that originally was developed by the U.S. Navy, and Texas A&M University requires the use of it on all of its contracts. Ray Bailey Architects Inc. found that adoption of the system eliminated roughly 90 percent of the problems caused by incongruities and inconsistencies in its projects.

However, architecture, like any other professional service, is as much art as science. And like medicine, architecture is a practice built on probabilities, not total certainty. When a patient goes to a doctor for treatment, the doctor performs a procedure or prescribes medication knowing there's a probability that 99 times out of 100 patients will respond well and get better. Because each person is unique, a doctor and patient can never have 100 percent certainty of the outcome.

When an architect designs a building, typically that building has never been created before. And it will be on a site that has never had a building exactly like it. Architects, like doctors, work according to the probabilities. In the best case, an architect balances lofty design ideals with common-sense approaches to create a building that works.

### **Quality controls**

A cynic's definition of experience is: "The ability to recognize a stupid mistake when you've made it for the second time."

An architect's clients, like a physician's patients, have a low tolerance for errors. While it is not a

foolproof system, they are more assured of receiving the best treatments or designs when they retain highly qualified, experienced professionals. Experience imparts wisdom that comes from touching the hot burner and learning where not to place a hand. Time and repetition increase the ability to see slight variations that can change outcomes. Unfortunately, economic and scheduling pressures too often result in younger people being stretched further. Unless the architecture firm is willing to make a big commitment of its senior people's time to mentor and check younger people's work, mistakes are inevitable.

The field of architecture has a huge job of knowledge transfer to accomplish. Professional education must extend to the immediate practical issues that affect the success of each design project: learning how doors, windows, millwork and roofs actually function. Junior members of a design team need to understand how their segment of the design, however small, interrelates with the total project.

### **Resist 'fail fast'**

Architects also have to guard against mindsets that may be appropriate for other industries but are unhealthy in the design and construction field. Enthusiasm for the high-tech model of "fail fast" has been applied liberally to other industries. It does not fit architecture.

Getting a product out the door fast, bugs and all, and patching it later may be the right approach for a software package. But a breakdown of quality in architecture and construction costs too much money and time. Architects must remain equally focused on delivering quality in design, producing coordinated and constructible documents, on time and on budget.

### **Clarify documents**

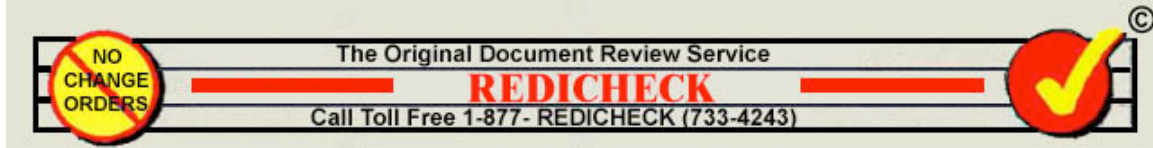
A final area that can be a fertile breeding ground for misunderstanding and dissatisfaction is the contract documents. While the brocaded language of most contracts seems to obscure rather than clarify it, a contract's purpose is to achieve communication and understanding between parties of their respective responsibilities.

Architectural contracts should document all of the above, including the successful communication of what is needed and how to construct the building. Too often, lack of experience, knowledge and time results in contract documents that fail to meet these objectives.

However, firms that invest the time and resources to mentor younger professionals, and implement thorough document coordination and review will save time and money while avoiding many liability pitfalls.

Advances of all kinds, in medicine, science, education and every type of business, usually arise out of frustration, challenge and discord. Solving the "quality problem" in architecture is the natural next step in the evolution of the profession.

*RAY LEIKER, AIA, is a principal and vice president with Ray Bailey Architects Inc.*



<http://www.redicheck-review.com/pages/services.htm>

### **REDICHECK Review Services**

REDICHECK Associates provide you with a complete set of plans and specifications thoroughly marked and highlighted to indicate all the items which have been reviewed and cross-checked. Errors, omissions, and discrepancies are noted in red for easy identification.

You are provided with a comprehensive written report summarizing the significant discrepancies noted. This provides you with tangible evidence of a thorough and detailed review. The reviewed documents, together with the report, give you the assurance that a comprehensive effort has been made to identify potential items which could add unnecessary costs, delays, and conflict to your project. We can provide a personal debrief to your staff and design team.

In addition to providing an initial third party review, some clients rely on our services to back-check that the discrepancies have been properly addressed by the design firm. We can quickly review the corrected documents to ensure all of the review comments have been thoroughly addressed.

### **REDICHECK Workshops**

We also provide design quality assurance seminars. REDICHECK seminars have been warmly received by thousands of professionals throughout the world. The one day seminars explain how interdisciplinary coordination reviews can raise the quality of construction design documents and how you can incorporate the process into your organization.

Learn practical tips on how to avoid unnecessary change orders.

Learn how to perform an effective interdisciplinary coordination review for your projects.

Experience a hands-on review of an actual set of construction documents.

Learn valuable concepts to instantly improve the quality of your design documents.

### **REDICHECK Interdisciplinary Coordination Book**

This book offers a systematic approach to one of the design profession's most serious problems, a lack of coordination between disciplines. In the United States available at \$22.50 + shipping and handling. Call (770) 631-4430

## **Additional Reading Materials:**

### AIA's Architect's Handbook of Professional Practice

A number of books provide practical guidance. In ***Time-Saving Techniques for Architectural Construction Drawings*** (Van Nostrand Reinhold, 1993), Fred Nashed, AIA, begins by examining the process of planning construction documentation and offering office standards for drawings.

Osamu A. Wakita and Richard A. Linde, ***The Professional Practice of Architectural Working Drawings*** (John Wiley & Sons, 2<sup>nd</sup> ed., 1994); Thomas Berg, ***Architectural Contract Document Production*** (McGraw-Hill, 1992); Ralph W. Lieging, ***Architectural Working Drawings*** (John Wiley & Sons, rd ed., 1990); and William P. Spence, ***Architectural Working Drawings: Residential and Commercial Buildings*** (John Wiley & Sons, 1992) also survey the subject. ***Production Systems for Architects and Designers*** by Fred Stitt (Van Nostrand Reinhold, 1993) summarizes production shortcuts for design and working drawings.

Harold J. Rosen, PE, and Tom Heineman, AIA, in ***Construction Specifications Writing: Principles and Procedures*** (John Wiley & sons, 3<sup>rd</sup> ed., 1990) provide a comprehensive view of principles and practices of specifications writing. William T. Lohmann, AIA, FCSI, provides a systematic approach to the review of project documents, from outline specification through the complete project manual, in ***Construction Specifications: Managing the Review Process*** (Butterworth Architecture, 1992).

The Construction Specifications Institute (CSI) offers a number of programs and publications focusing on the need for precise communication among all members for the building team. Its ***Manual of Practice*** and ***MasterFormat*** publications outline a universal language that have become industry standards for organizing project manuals and writing specifications. CSI also offers master guide specifications, a certification program, and a monthly magazine, ***Construction Specifier***. Contact SCI at (703) 684.0300.

AIA Master Systems offers MASTERSPEC and a number of other products to help architects plan drawings and specifications. The backgrounder on page 741 describes current (1993) versions, but this is a fast-moving field. Call (800) 424-5080 for up-to-date information on products, applications, prices, and ordering.

Technical guidance and standards for drawing, detailing, and documentation are available in many sources. The bible is ***Architectural Graphic Standards*** (John Wiley & Sons, 9<sup>th</sup> ed., 1994), John Ray Hoke, Jr., FAIA, editor. Containing more than 10,000 detail drawings, AGS is a comprehensive, single-volume reference on building designs, standards and practices, materials and assemblies, details, and specifications for all types of construction projects. This publication anchors a family of reference tools that includes ***Architectural Graphic Standards for Construction Details, Residential and Light Construction from Architectural Graphic Standards***, and ***Traditional Details for Building Restoration, Renovation, & Rehabilitation***, all from the same publisher. Call the AIA Bookstore at (800) 365-ARCH.

You can do a self-assessment audit to evaluate your knowledge of successful practice approaches in contract documents. The audit includes a self-assessment questionnaire, results report, and customized resource list. To participate in the AIA Self Assessment Audit Program, call (800) 365-ARCH.

### **Also:**

***Contractor's Guide To Change Orders*** is written from the contractor's point of view and discusses how to maximize profits by uncovering hidden costs in construction documents. Publisher: BNI , 598 pages, ISBN-0130124168



[http://www.mobiltravelguide.com/index.jsp?menu=rating\\_criteria](http://www.mobiltravelguide.com/index.jsp?menu=rating_criteria)

Since its founding in 1958, Mobil Travel Guide has served as an advocate for travelers seeking knowledge about places to visit, hotels to stay, and restaurants to dine in. Based on an objective process, we make recommendations to our customers that, we believe, will enhance the quality and value of their domestic travel experience. Most hoteliers, restaurateurs, and industry observers favorably regard the rigor of our inspection program, and understand both the prestige and benefits attendant with receiving a Mobil Travel Guide Star Rating.

Mobil Travel Guide relies on a process in rating each establishment that includes: (1) Unannounced facility inspections, (2) Incognito service evaluations for Mobil Four- and Five Star level properties, (3) Unsolicited comments from customers, and (4) Senior management oversight. The process is designed to ensure fairness, objectivity, consistency and comparability of data. For each property, hundreds of attributes (cleanliness, physical facilities, employee attitude, courtesy, etc.) are measured and evaluated to produce a mathematically-derived score which is then blended with the other elements to form an overall score. These quantifiable scores allow comparative analysis among properties and form the base that Mobil Travel Guide uses to assign its Mobil One- to Five- Star rating.

It is a process that focuses largely on guest experience, expectations, and consistency of service delivery; not merely physical facilities and amenities. It is fundamentally a relative rating system that rewards those properties that continually strive for, and achieve excellence each year. Indeed, it is the very best properties that are consistently "raising the bar" for those that wish to compete with them. These are properties that are proactively responding to consumer's needs, and continue to do so even in today's uncertain times.

The Mobil Five-Star Award indicates that a property is one of the very best in the country and consistently provides gracious and courteous service, superlative quality in its facility, and a unique ambiance that is all its own. The hotels and restaurants at the Five-Star level are consistently and proactively responding to consumer's needs, and they continue their commitment to excellence, doing so with grace and perseverance.

Also highly regarded is the Mobil Four-Star Award, which honors properties for outstanding achievement in overall facility and for providing very strong service levels in all areas. These award winners provide a distinctive experience for the ever-demanding and sophisticated consumer.

At the Mobil One- through Three-Star level similar processes take place in determining a rating, excluding the incognito inspection. Extensive in-house research is constantly underway to determine new additions to our lists. Consumer feedback is consistently monitored and contributes to the final assessment of a rating. Most importantly, a member of our Inspection Team makes an annual visit to each hotel and restaurant to conduct an inspection that consists of a detailed checklist including over 175 relevant facts pertaining to the property's facility and services.

The Mobil Three-Star Award recognizes an excellent property that provides full services and amenities. This category ranges from exceptional hotels with limited services to elegant restaurants with less-formal atmosphere.

The Mobil Two-Star Awards provide consumers with a clean and comfortable establishment but also with expanded amenities or distinctive environment. A Two-Star property is an excellent place to stay or dine.

The Mobil One-Star Award provides a recommendation to a property that is limited in its amenities and services provided, however is focused on providing a value experience while meeting travelers' expectations. The property can be expected to be clean, comfortable, and convenient and has met Mobil Travel Guide standards and expectations at the One-Star level.

The proprietary Quality Assurance standards created by Mobil Travel Guide were developed with consumer expectations in mind. Our ratings are based on their expectations, not editorial preferences. Mobil Travel Guide Star Ratings are not a popularity contest but a consistent definition of what is expected at each level. Our ratings are maintained with the utmost in integrity and objectivity. The star-rating system of hotels and restaurants was devised to help the consumer ultimately make a more informed decision. With consumers' busy lives and little time to plan travel, it is our goal to simplify the decision-making process and provide reliable recommendations about where to allocate valuable time and dollars. The rating system is the oldest inspection program in North America and we are committed to providing this invaluable service well into the future. Ultimately at the Mobil Travel Guide, our mission is to identify the best and brightest stars across North America.



[http://www.ouraaa.com/news/news/diamond/rating\\_lodging3.html](http://www.ouraaa.com/news/news/diamond/rating_lodging3.html)

### **The Diamond Rating Criteria**

AAA Diamond Ratings represent a combination of the overall quality, the range of facilities, and the level of services offered by a property. These widely recognized and trusted symbols help AAA/CAA members choose lodgings that will meet their needs and expectations.

AAA Tourism Editors are responsible for determining a property's diamond rating based on established standards. These criteria are established with input from our trained professionals, AAA/CAA members, as well as various lodging industry professionals.

AAA's Diamond rating criteria are broad guidelines to designate what is typically found at each rating level. The size, age, and overall appeal of an establishment are considered, as well as regional architectural style and design. Diamonds are assigned based on the overall guest impression rather than on individual criteria. Therefore, meeting all of the criteria in certain categories or failing to meet a few criteria will not necessarily affect the diamond rating.

The final factor in determining the diamond rating for a property is professional judgment. This is a very important part of the rating assessment. Tourism Editor expertise is based upon ongoing training and experience in conducting more than 850 evaluations a year.

### **What the Diamond Ratings Mean**

#### **One Diamond:**

These establishments typically appeal to the budget-minded traveler. They provide essential, no-frills accommodations. They meet the basic requirements pertaining to comfort, cleanliness, and hospitality.

#### **Two Diamond:**

These establishments appeal to the traveler seeking more than the basic accommodations. There are modest enhancements to the overall physical attributes, design elements, and amenities of the facility typically at a moderate price.

#### **Three Diamond:**

These establishments appeal to the traveler with comprehensive needs. Properties are multifaceted with a distinguished style, including marked upgrades in the quality of physical attributes, amenities, and level of comfort provided.

#### **Four Diamond:**

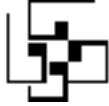
These establishments are upscale in all areas. Accommodations are progressively more refined and stylish. The physical attributes reflect an obvious enhanced level of quality throughout. The fundamental hallmarks at this level include an extensive array of amenities combined with a high degree of hospitality, service, and attention to detail.

**Five Diamond:**

These establishments reflect the characteristics of the ultimate in luxury and sophistication. Accommodations are first class. The physical attributes are extraordinary in every manner. The fundamental hallmarks at this level are to meticulously serve and exceed all guest expectations while maintaining an impeccable standard of excellence. Many personalized services and amenities enhance an unmatched level of comfort.

Additional info on website:

The Diamond Rating Criteria  
Four and Five Diamond Service Expectations  
Additional Information



THE . GETTYS GROUP . INC.

One East Erie Street  
Suite 400  
Chicago, IL 60611

t: 312.836.1111  
f: 312.836.1133

Moderator

**John R. Hardy, President/CEO, The John Hardy Group**

Panelists

**Roger Hill, Chairman/CEO, Gettys**

**Martin Stringfellow, Principal, Martin B. Stringfellow Company**

**Bob Harnach, President, Richmond Textiles**

**Robert MacKenzie, formerly Senior Vice President,  
Cornerstone Real Estate Advisers**