

Case Study: Ten Document Needs for Schedule Litigation Support

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Abstract - This paper will present record keeping documentation of the construction schedule with regard to litigation. A lack of documentation of construction scheduling opens entities to litigation and liabilities regarding scheduling issues. Timely, informative, communicative, and accurate record keeping is not only desirable, but essential to the success of today's construction project [1]. Record keeping and documentation of the construction schedule is often required by law and most contracts [1]. The objective of this paper is to determine a set of ten documents commonly considered the most important for the purpose of preserving entities rights under the contract for the purposes of schedule litigation. The approach used by the author was grounded on gathering information through a survey. The results from the survey support that contractors consider the "original contract" to be the most important of these documents. It is anticipated that the reader of this paper will have a heightened awareness of the ten record keeping and documentation instruments that are considered the most important by the construction industry related to schedule litigation. These ten documents should form the basis of a construction firm's documentation and record keeping system, but are not to be considered the complete system by themselves..

Keywords: Litigation, Scheduling, Liability , Documents, Case Study

INTRODUCTION

Inherent in today's litigious nature of business is the need to document virtually every aspect of ones activities. In delay disputes, the party with the best records has a great advantage [1]. Proper, accurate and consistent documentation during the construction phase could mean economic life or death to one of the contracted parties. Measurements of claims and remedies for breach of the construction contract have generated a sea of reported case decisions from the fifty American jurisdictions [1]. Some consequences are fines to the contractor, possible loss of future work due to extra time spent on remediation activities, and loss of future clientele due to a tarnished reputation, to name but a few.

A construction project is unique in many ways. The project has likely never been built before, nor will it likely ever be built again. The "team" of owner, architect, contractor, and subcontractor may have never worked together before and they may never work together again. However, many of the tasks performed are common to every construction project. Among these common task is the documentation of the construction activities. Personal feelings and bias should be omitted from all documentation [2]. Due to the repetitious nature of much of the documentation done during the construction process, many forms have been created to help facilitate the process of documentation [3].

These forms take the repetitive portions of the process and place them on a standard form to be used over and over. The information required is inserted in blank spaces provided for the user (such as the construction manager, superintendents, etc) [4][5]. Many forms are available from various sources for free or for pay. For instance, the following two professional organizations have forms available: the American Institute of Architects or the Association of General Contractors. Additionally, there are various software vendors selling forms and a rudimentary search on the internet will reveal even more. It is suggested that the forms be examined for relevance prior to use for a specific project and appropriateness to your company.

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Thus, the objective of this paper is to determine which of the many available documents/forms are considered by construction companies the ten most important for the purpose of preserving entities rights during schedule litigation.

PROJECT APPROACH

The research team initiated this project by doing a literature review of the construction documents used in support of schedule litigations. The result of the literature review was not meant to be an exhaustive list of documents, but rather commonly referenced documents in the literature. The list of these documents with a short description is provided in Table 1:

Table 1. Scheduling Documents/Forms

| Document ID | Document Name | Document Description |
|--------------------|--|--|
| 1 | A Filing Record of all the Record Files that are being maintained | An Index, of sorts, of the method used to keep track of the various documents. |
| 2 | Progress photographs | Milestone photographs, photograph each milestone and document the date and time of completion |
| 3 | Progress Reports, weekly, monthly or quarterly | Reporting the progress of the project according to milestones or just the overall completion according to the schedule |
| 4 | Notes of telephone conversations | Any telephone conversations that might be of any importance between two contractors or the owner and a contractor, that might be involving changes |
| 5 | Daily diary or journal entries | Keeping record of what was done and completed in a written form |
| 6 | Notice of claims for delays and/or extra cost by contractor | Perhaps the most critical contract term relating to delay claims is notice of claims. Most contracts contain provisions with a specific deadline for submission of claims. Failure to adhere to the requirements of notice of claims may eliminate your claim before you even raise it. |
| 7 | Requests for information | Information that may be needed by a certain contractor or subcontractor of the project |
| 8 | The original contract document | All pages of the original contract |
| 9 | The issued for construction set | The set of blueprints as agreed upon by the owner and architect as awarded to the contractor during the bid phase |
| 10 | The Instructions to contractor document | Includes any special instructions for the contractor such as protection of existing vegetation and such |
| 11 | Sub-contractor quotes, contracts, purchase orders and correspondence | Self explanatory |
| 12 | Shop drawings, originals, all revisions and re-submissions | A drawing or set of drawings produced by the contractor, supplier, manufacturer, subcontractor, or fabricator. Shop drawings are not produced by architects and engineers under their contract with the owner. The shop drawing is the manufacturers' or the contractor's drawn version of information shown in the construction documents |

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| Document ID | Document Name | Document Description |
|-------------|---|--|
| 13 | Shop drawing transmittals, and transmittals log | A submittal that goes along with the submission of the shop drawings that informs the reader of the importance |
| 14 | Daily time records | Record of time spent on the jobsite daily |
| 15 | Daily production logs | The record of the production that each day on the site provides |
| 16 | Material Delivery and Use Records | Records of the receiving date of materials from suppliers and equipment contractors |
| 17 | Progress Payment Billings under the contract | Interim payment for delivered work in accordance with contract terms generally tied to meeting specified performance milestones |
| 18 | Daily Force Account Records, pricing and billings | A set of records showing how many workmen have worked, their cost and their billing of the work |
| 19 | Contract Milestone Schedule or Master Schedule | Schedule showing major project tasks and their completion date |
| 20 | Task schedules and analyses | analysis of how a task is accomplished, including a detailed description of both manual and mental activities, task and element durations, task frequency, task allocation, task complexity, environmental conditions, necessary clothing and equipment, and any other unique factors involved in or required for one or more people to perform a given task |
| 21 | Productivity Reports/Analyses | Shows the hours that were worked and the percentage that is billable |
| 22 | Minutes of Contractual Meetings | Any meeting notes that are taken during contract meeting |
| 23 | Minutes of Site Coordination Meetings | Notes from the site coordination meetings |

After identifying the list of documents/forms the research team prepared a survey. The survey had two parts: 1- Demographic information and 2- Scheduling related documents. The Scheduling related documents part relied on the documents/forms list discussed above. The complete survey is provided in Appendix A.

Finally, the research team contacted 50 construction firms throughout the continental United States. Each of the firms contacted was chosen based upon the number of years in business. Firms had to be established for at least ten years in order to qualify for this study. To better ensure cooperation with this project, the research team first contacted the company by telephone. The survey was then delivered via the most desirable method of the firm in contact, either email, fax or ground mail. The research team ended the quest of construction firms once ten responses were received. These returned surveys were then compiled and mined for commonalities. The commonalities are reported below.

RESULTS

Out of the fifty construction companies that were initially identified for this project, forty companies were sent the survey. Out of the forty companies that received the survey ten responses were received for a return rate of 25%.

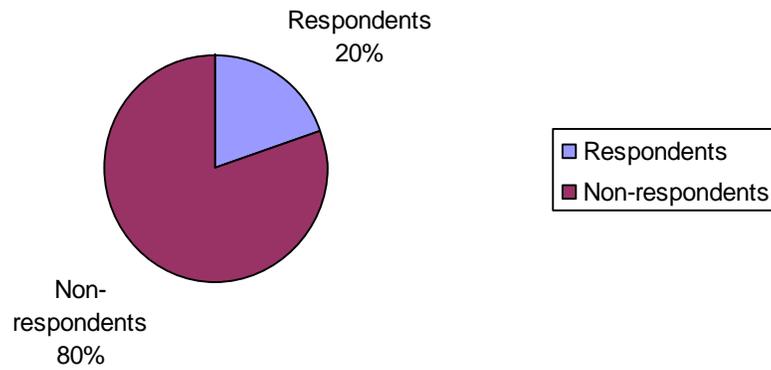


Figure 1. Survey Response Percentage

DEMOGRAPHICS

Seven of the respondents said their main business is residential construction. Three of the respondents said their main business is commercial.

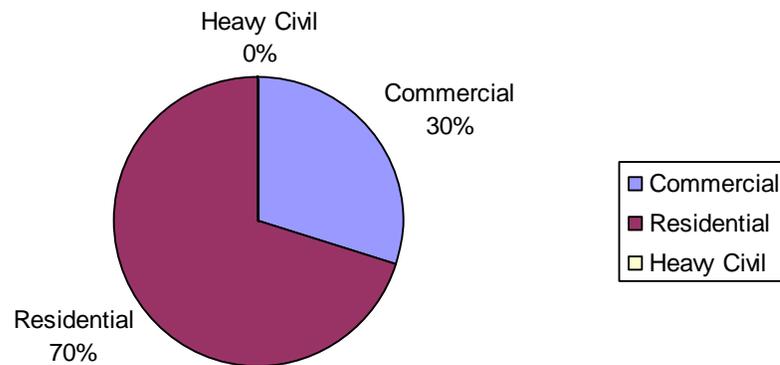
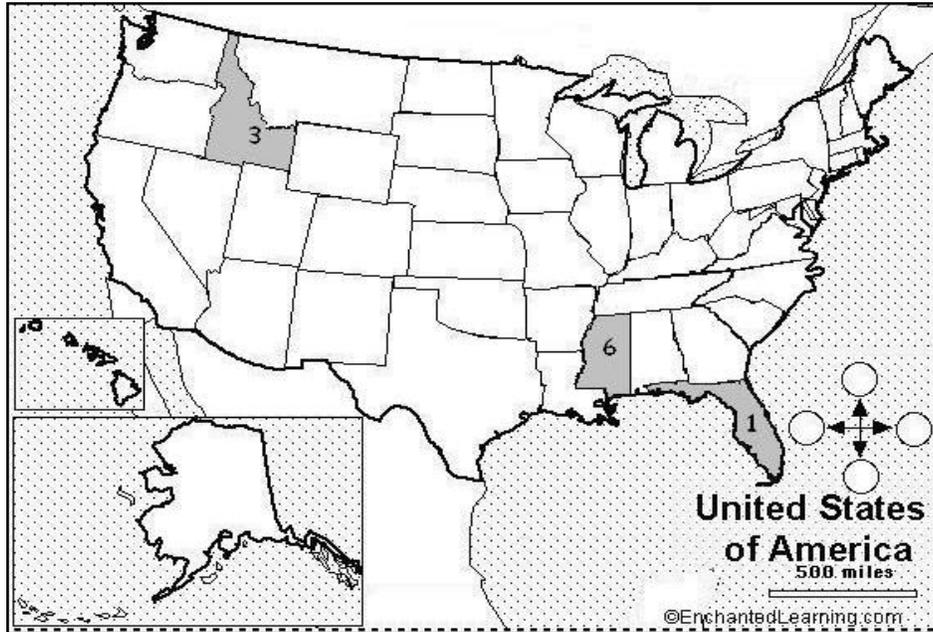


Figure 2. Type of Business

Three of the respondents were from the state of Idaho. Six were from Mississippi and one was from Florida.



The average years in business of all respondents are 22.35 with a maximum of 32 and a minimum of 12 years.

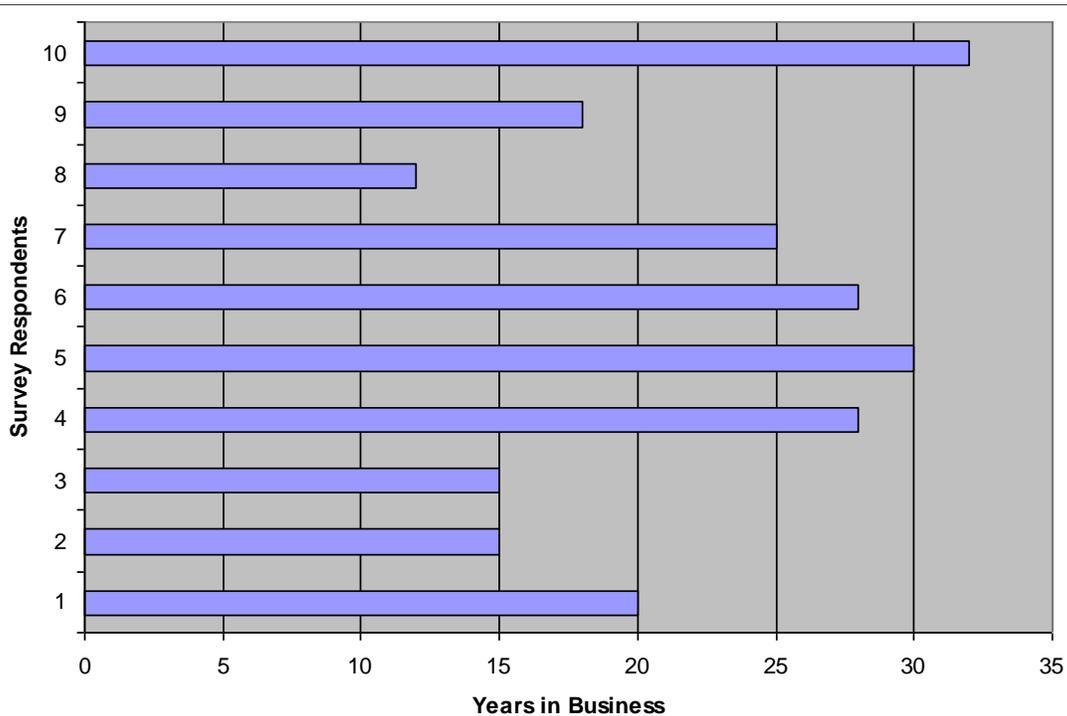


Figure 4. Respondent Years in Business

Seven of the respondents declared that their approximate 2006 revenue was under 5 million dollars, while the other three claimed to make over 21 million dollars in 2006.

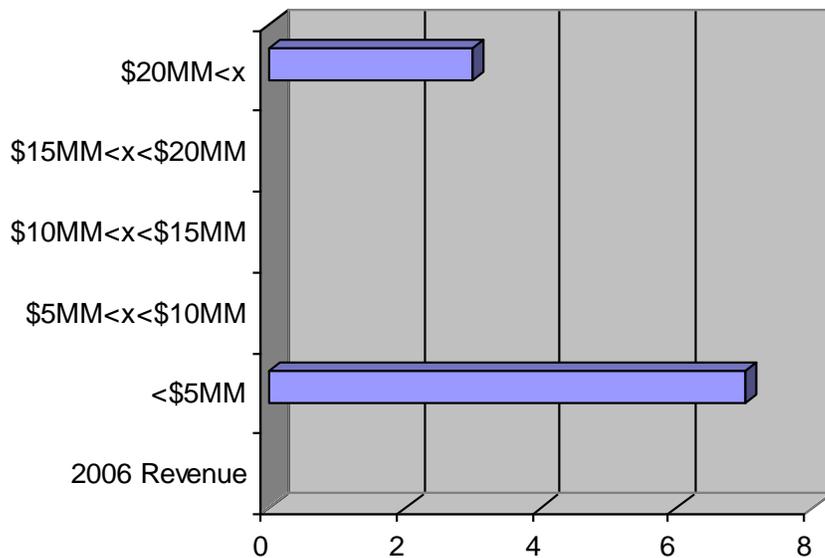


Figure 5. Respondent 2006 Revenue

In order to find the ten most common scheduling documents, the research team first recorded each survey's ratings into an Excel spreadsheet. The team was then able to calculate the average response of each document. After this calculation, the team developed a chart showing the average of each document response, with the highest averages portraying the most important documentation.

The average response for each of the document types is found in Figure 6. From these averages, one may infer which documents were deemed most important.

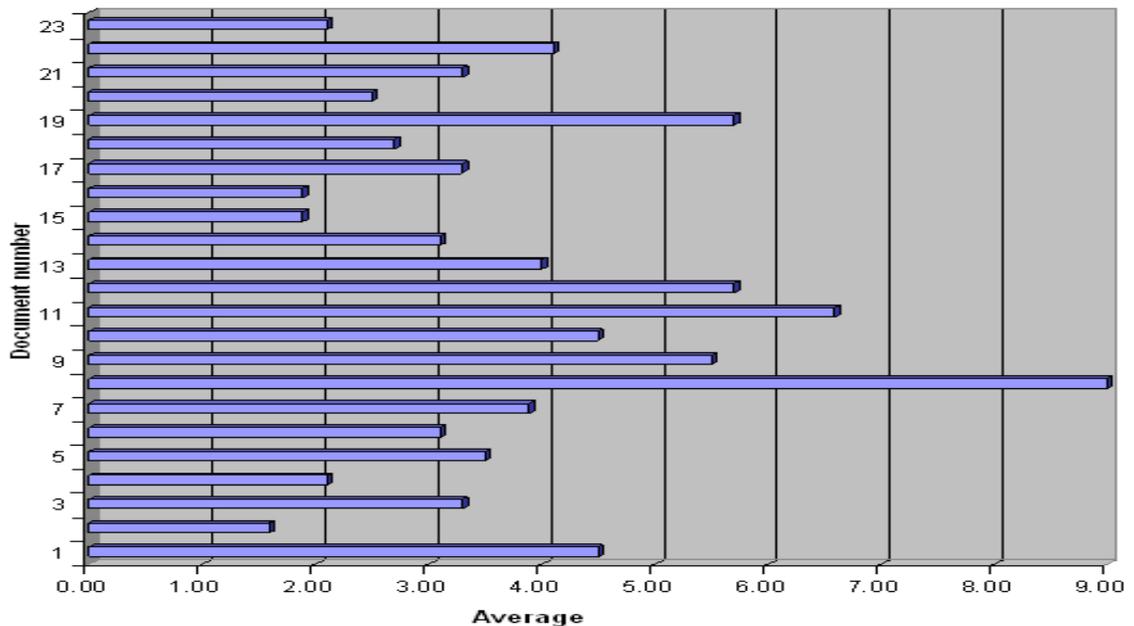


Figure 6. Respondent Document Rating Average

The results of the survey show the following ten documents as being deemed the most important by our survey respondents.

| Document Number | Document Description | Average |
|------------------------|---|----------------|
| 8 | Original Contract Documents | 9 |
| 11 | Contractor Quotes, Contracts, Purchase Orders, and Correspondence | 6.6 |
| 12 | Shop Drawings, Original, Revisions, Resubmissions | 5.7 |
| 19 | Contract Milestone Schedule, or Master Schedule | 5.7 |
| 1 | Filing Record of All Documents being Maintained | 4.5 |
| 10 | Instructions to Contractor | 4.5 |
| 22 | Minutes of Contractual Meetings | 4.1 |
| 13 | Shop Drawing Transmittals, and Transmittal Log | 4 |
| 7 | Request for Information | 3.9 |
| 5 | Daily Diary or Journal Entries | 3.5 |

CONCLUSION

A lack of documentation of construction scheduling opens entities to litigation and liabilities regarding scheduling issues. Timely, informative, communicative and accurate record keeping is not only desirable, but essential to the success of today's construction project [1]. Record keeping and documentation of the construction schedule is often required by law and most contracts. The objective of this paper was to determine a set of ten commonly considered the most important documents for the purpose of preserving entities rights under the contract for the purposes of litigation. We created a survey of common construction documents and delivered these to 50 companies. As expected, 20% returned the surveys. From these returned surveys we determined a list of ten documents deemed most important to construction professionals.

We found our top-ten list included only four of the documents listed by our respondents. These were Documents 8 Original Contract Documents, 10 Instructions to the Contractor, 11 Contractor Quotes, Contracts, Purchase Orders, and Correspondence, and 19 the Contract Milestone Schedule, or Master Schedule. No correlation regarding demographic information collected such as type of business, years in business and revenue could be determined regarding the choices made by the respondents as to which documents were most important.

ACKNOWLEDGEMENT

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Appendix A

**Survey of the Ten Most Important Construction Scheduling Documents
with Regard to Litigation**

Overview: We would like to ask you to fill out this survey. The purpose of this survey is to determine the 10 most important construction scheduling record keeping documents.

Disclosure: Your contact information will not be shared with any one. The information will be grouped to provide statistical information regarding the objective of this study.

Instructions: Please answer the questions below to the best of your abilities.

1- DEMOGRAPHIC

101- Name: _____ 102- Position: _____

103- Company Name: _____

104- Main Business: [] Commercial [] Residential [] Heavy Civil

105- City: _____ 106- State: _____

107- Phone Number: _____ 108- Email: _____

109- Number of Years in Business: _____

110- Approximate 2006 Revenue:

[] Less than \$5 MM [] \$6 MM – 10 MM [] \$11 MM – \$15MM

[] \$16-\$20MM [] \$21 MM or more

2- SCHEDULING RELATED DOCUMENTS

From the following list of 23 common record keeping processes and documentation instruments, rank the 10 you deem most important from 1 to 10 with 10 being the most important.

[] A Filing record of all the documents that are being maintained

[] Progress photographs

[] Progress reports, weekly, monthly or quarterly

[] Notes of telephone conversations

[] Daily diary or journal entries

[] Notice of claims for delay and/or extra cost by contractor

[] Requests for information

[] Original Contract Documents

[] Issued for Construction set, and all subsequent revisions

[] Instructions to contractor

[] Sub-contractor quotes, contracts, purchase orders and correspondence

[] Shop drawings, originals, all revisions and re-submissions

[] Shop drawing transmittals, and transmittals log

[] Daily time records

[] Daily production logs, e.g. concrete pours etc.

- Material Delivery and Use Records, including expediting
- Progress Payment Billings under the contract
- Daily Force Account Records, pricing and billings
- Contract Milestone Schedule or Master Schedule
- Task schedules and analyses
- Productivity Reports/Analyses
- Minutes of Contractual Meetings
- Minutes of Site Coordination Meetings

Comments: _____

