

## **Claim Reduction Strategies in Condominium Construction**

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### **Abstract**

Growth in the condo construction market has resulted in a substantial number of claims logged by end users due to lack of performance in the constructed facility. The objective of this study was to identify claim-reduction strategies in condo construction projects. The focus of the study was on condominium projects that have comparable gross square footage and initial contract cost. All the projects included within the study were executed by large contractors whose annual turnover exceeded 10 million dollars. Results from this study indicated that claims can be substantially reduced in condominium projects through better management and control of waterproofing and interior finish installation. Lessons learned from this study would be particularly beneficial to large general contractors engaged in condominium construction projects.

### **Keywords**

Condominium, Claims, Dispute avoidance, Risk management

### **1. Introduction**

The number of condominium high-rise projects has grown rapidly and shows little to no signs of stopping. This growth has resulted in substantial losses to the construction industry due to claims and increased close out costs. This study has identified the primary cause of claims in condominium construction and risk reduction strategies that are successful in reducing these claims. Improved risk management plans for waterproofing and interior finish installation can reduce the number of claims in condominium construction projects.

Risk management is the process of identifying potential risk, determining the significance, and developing a plan to avoid, mitigate, monitor, and manage risk (Shang *et al.*, 2005). Risk management is practiced within each industry and while the methods are similar the potential risks vary. Prior to accepting a project, a risk assessment should be performed to identify the potential risk of that project (Whitcotton, 1992). The construction industry utilizes typical risk management strategies that include relational contracting and risk response methods (Baker *et al.*, 1997). By creating management plans prior to job start-up that identify and create strategies for managing these areas, the number of claims can be reduced.

This study found after analyzing survey results that projects utilizing interior installation management plans and waterproofing installation plans resulted in zero claims; while those that did not utilize these claim reduction strategies had claims. Results from this study indicate that claims can be substantially reduced in condo projects through better management and control of waterproofing installation and interior finish installation management. This study shows effective methods of managing this risk which have not been previously identified. This paper expands upon others work in that it identifies the primary

causes of claims in this type of work. It also identifies methods for reducing claims and punch list items. Lessons learned from this study would be particularly beneficial to large general contractors engaged in condominium construction projects.

## **2. Background**

Others have identified means of reducing risk, by elimination, transfer, retention, and reduction, but they do not identify areas, such as waterproofing or interior finishes, that generate create claims and items on punch lists (Baker *et al.*, 1999). Danny J. White Cotton's paper, "Reducing Construction Risk through Project Controls", identifies several methods of reducing risk, but does not include waterproofing or interior finishes as possible areas of risk (Whitecotton ,1992). Surveys have shown that these two areas are the primary cause of the items generated on the punch list and claims. Scott Baker in "Risk Response Techniques Employed Currently for Major Projects" identifies that risk reduction strategies are the most common method of reducing risk; however, he does not indicate if the strategies were successful or unsuccessful in reducing claims (Baker *et al.*, 1999). Similarly, the relationship between risk factors, risk, and their consequences have been analyzed but the effectiveness of strategies in reducing punch list items and claims are not identified by J. H. M Tah (Tah, 2000). The strategies identified in this study have been effective in eliminating and reducing claims.

Contractual controls have also been identified in Rahman's article "Joint Risk Management through Transactionally Efficient Relational Contracting" which shows that the appropriate contract and documents for projects and a relationship between the parties is key to a project's success, but he only identifies contractual methods of improving the chance of project success (Rahman, 2002). This study shows that risk management plans for waterproofing and interior finishes contribute to project success.

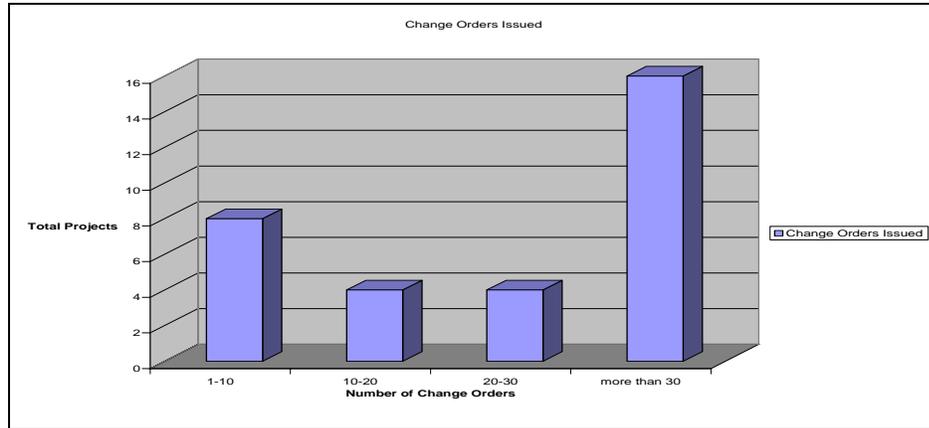
## **3. Research Method**

This study has been conducted by identifying previous work that establishes risk methods which are effective in reducing claims and that no specific means has been previously identified in other works. This study utilized journals, scholarly articles, experts in the field, and surveys. My research methods have documented areas that generated punch list items and claims and methods by which to mitigate these areas of risk.

The survey; which can be seen in Appendix A, was distributed by e-mail to project managers and superintendents within the construction industry. The data was received anonymously through [www.surveymonkey.com](http://www.surveymonkey.com). I distributed 200 survey requests and received 30 responses. The survey participants were asked to identify methods of risk management and CSI divisions that generated punch list items and claims. The results have been analyzed by comparing the total number of claims and items on the punch-list that resulted when the strategies identified were used during the construction of similar condominium projects.

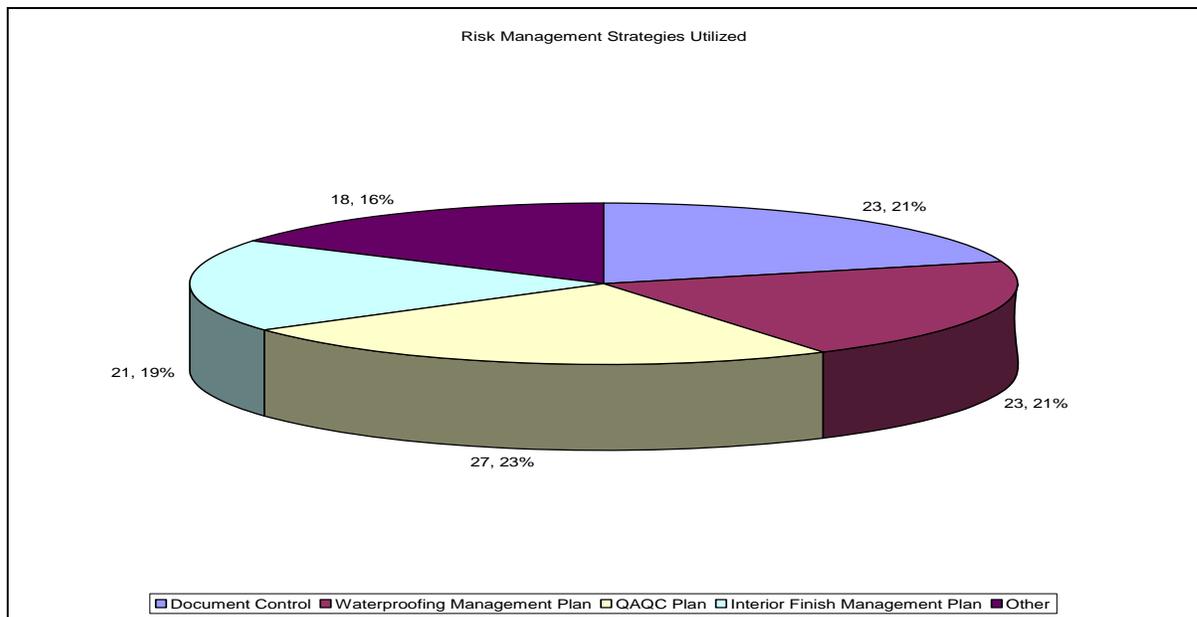
Throughout this study certain assumptions were made and have been maintained throughout the research gathering phase of this study. It has been assumed that all projects have followed the claim reduction strategies identified equally. It is also assumed that the contracts provided the same degree of protection for the owner and contractor. The survey identified that the projects initial cost and size are similar.

## 4. Results



**Figure 1: Change Orders Issued in Condominium Projects**

Through analyzing data received from the surveys, it has been determined that construction claims and punch list items are generated primarily due to interior finishes and perceived quality of work for condominium construction projects. Of the thirty-two projects examined, eighteen projects resulted in claims caused by interior finishes, mold or water proofing installation. Fifty percent of the projects examined had thirty or more change orders during the project's completion, this can be seen in Figure 1. Twenty three percent of the projects utilized waterproofing management plans, and eighteen percent of the projects surveyed utilized interior management plans. This can be seen in Figure 2. When the survey participants were asked to evaluate the effectiveness of the interiors management plan forty percent found the method effective, while twenty percent did not find the strategy to be effective. Forty percent of the participants did not utilize this method. The waterproofing management plans were found to be effective by forty-five percent of the participants while the remaining participants specified that this method was not used. The survey participants identified document control as eighty-five percent effective in mitigating risk; while seventeen percent identified it as ineffective.



**Figure 2: Risk Management Strategies Utilized**

## 5. Conclusion

The condominium market has grown exponentially over the past 10 years. This type of project typically leads to an increased number of claims, punch-list items, and change orders. The construction industry has identified risk management techniques but has not identified effectiveness of these strategies and applied them to specific markets. This study has identified through research, surveys, and interviews that waterproofing and interior finish installation has created the largest number of claims and punch – list items. This study has also shown that management plans for waterproofing, interior installation, and document control are the most effective means of reducing claims and punch list items. This study has expanded upon previous works by proving that these methods are effective methods of reducing and managing risk in the condominium construction market.

## 6. References

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## Appendix A

### Survey:

The purpose of this survey is to identify preventive measures to avoid claims in condo construction projects. The information will be used for statistical purposes only and will not be distributed to anyone other than those involved with this study. All names and company names will be kept anonymous.

For a condominium high-rise project that you have knowledge of please answer all questions to the best of your knowledge.

1. Years of Experience in the construction industry: \_\_\_\_\_
2. GSF of Building: \_\_\_\_\_
3. Initial Contract Amount: \_\_\_\_\_
4. Total number of change orders: \_\_\_\_\_
5. Final Contract Amount: \_\_\_\_\_
6. Risk Management Strategies Utilized During Construction (check all that apply):
  - a) Document Control
  - b) Waterproofing Management Plan
  - c) QAQC Plan
  - d) Safety Control Plan
  - e) Interior Finish Control Plan
  - f) None
  - g) Other (please specify): \_\_\_\_\_
7. Please rank the effectiveness of preventing risk for each of the above methods from (1) not effective, (2) somewhat ineffective, (3) no impact, (4) somewhat effective, (5) effective, or (6) not applicable.
  - a) Document Control
  - b) Waterproofing Management Plan
  - c) QAQC Plan
  - d) Safety Control Plan
  - e) Interior Finish Control Plan
  - f) None
  - g) Other (please specify): \_\_\_\_\_
8. Were there any claims, lawsuits, or compromises made during or at completion of the project? If so what was the total amount of damages awarded?  
\_\_\_\_\_
9. Please identify the cause of the dispute:
  - a) Mold
  - b) Perceived Quality of Work
  - c) Water Infiltration
  - d) Safety Related Claim
  - e) Other (please specify): \_\_\_\_\_
10. Which areas/CSI Divisions generated a higher volume of items on the punch list?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. What preventive measure would you suggest for future project of similar nature?

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12. Why are condominium projects more risky than other projects of similar size for instance office buildings, etc.?

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