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## Designing Buildings for Maintenance Using Property Manager Input

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### Summary

A survey was conducted of the largest 230 property management firms in the U.S. to investigate their current maintenance practices. Among other things, the findings shed light on the severity of the maintenance-related complaints property managers receive from tenants; the extent to which they are involved in the design process of the buildings they subsequently manage; and the frequency with which designers come back to assess their building's performance after the projects are completed. Property managers should be cognizant of building users' concerns and should make designers aware of these concerns too; the performance of buildings is likely to be enhanced if designers and property managers take action in the design and the operation phases respectively, in response to users' concerns.

**Keywords:** Building design, maintenance practices, property management.

### 1. Introduction

All buildings start to deteriorate from the moment they are completed, and at that time begins the need for maintenance. Increasingly building owners are beginning to accept that it is not in their best interest to carry out maintenance in a purely reactive manner, but that it should be planned and managed as efficiently as any other corporate activity. Inevitably this has placed new demands on property managers requiring them to adopt a more systematic approach to their work, and on designers requiring them to design buildings for low maintenance.

In many instances, building owners and users spend billions of unnecessary dollars each year on excessive maintenance and replacement components for their buildings; in other instances, they let buildings deteriorate into a state from which it is very difficult and costly to recover.

Building maintenance is a seriously neglected area of research and study. Few schools of architecture and engineering include it in their curricula and only recently has work commenced



on the research and development of this subject. This study is therefore concerned with maintenance problems that can be avoided through proper design.

## 2. Methodology

A questionnaire was designed to study the maintenance practices of property management firms. It was mailed to the largest 230 property management firms in the U.S. The mailing list of property management firms was obtained from the "Top Property Managers Survey" [1,2] ranking the most active property managers in North America based on total space in their portfolios. The 230 questionnaires were mailed to the top executives (e.g., presidents, chairmen of the board, or CEOs). By the cut-off date, 70 questionnaires were received, constituting a rate of response of 30%.

The questionnaire includes questions regarding the characteristics of the firms and of the buildings they manage, the relationship between property managers, building designers and users, the maintenance organization, the maintenance services provided, and the maintenance-related complaints reported by building users. Only the findings regarding maintenance issues in design are reported in this paper.

## 3. Findings and Conclusion

Property managers reported that the most important problem they face in building operation and maintenance is building design inefficiencies. Contrary to the popular belief that the management of the maintenance of a building begins only after the building is built, the findings indicate that the large majority of property managers are very much involved in one way or another in the design process of the buildings they subsequently manage. On the other hand, only slightly less than half of the property managers indicated that designers come back to assess their buildings' performance after the projects are completed, implying that only about half of the designers are aware of the complaints most commonly cited by building users. Functional design alternatives and choice of building materials and equipment constitute the inputs that most property managers would like to give to the designers in order to minimize anticipated maintenance problems.

It appears that comfort factors constitute the major area of complaint on the part of building users. The performance of buildings is likely to be enhanced if property managers efficiently communicate with building users, are aware of users' concerns and take action to eliminate these concerns. Some of the users' maintenance-related concerns are not likely to develop if property managers are in constant communication with designers during the design phase and after the building has been put in service, and make the designers cognizant of maintenance-related matters.

## 4. References

- [1] Top Property Managers Survey, *National Real Estate Investor*, 1997 Sourcebook Issue, Vol. 38, No. 10, 1997, pp: 110-114.
- [3] *Top Property Managers Survey*, Midwest Real Estate News, Intertec Publishing, Atlanta, GA, 1997.