

UNIVERSITY OF HAWAII LIBRARY
A BUSINESS MANAGEMENT MANUAL FOR
SMALL ARCHITECTURAL FIRMS IN HONOLULU, HAWAII

A THESIS SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARCHITECTURE

MAY 1983

by

Brian Toshio Takahashi

Thesis Committee:

Gordon D.C. Tyau

Elmer Botsai

Joseph V. Miccio

We certify that we have read this thesis and that in our opinion it is satisfactory in scope and quality as a thesis for the degree of Masters of Architecture.

THESIS COMMITTEE:

John D. Ryan
Chairman

Joseph V. Meece

[Signature]

TABLE OF CONTENTS

	<u>PAGE</u>
LIST OF ILLUSTRATIONS.	v
CHAPTER I. PROPOSAL	1
Intreudction and Background.	1
Business Management.	6
Components of General Business Management.	7
Hypothesis and Purpose of the Thesis	11
Definition of a Small Architectural Firm	12
CHAPTER II. METHODOLOGY.	14
Objectives	14
Basis of the Methodology	14
Components of the Methodology.	15
CHAPTER III. FINDINGS	14
Overall Business Management Findings	20
Financial Management Findings.	21
Marketing Management Findings.	26
Personnel Management Findings.	31
CHAPTER IV. EVALUATIONS.	36
Introduction	36
Financial Management Evaluation Summary.	40
Marketing Management Evaluation Summary.	42
Personnel Management Evaluation Summary.	49
CHAPTER V. RECOMMENDATIONS AND CONCLUSIONS.	46
Introduction	46
Financial Management Recommendations	47
Marketing Management Recommendations	47
Personnel Management Recommendations	68
Conclusions.	74

CHAPTER VI.	APPENDICES	76
	Appendix A: List of Categories.	76
	Appendix B: Findings Chart.	80
	Appendix C: Findings Chart Summary Type I .	104
	Appendix D: Findings Chart Summary Type II.	115
	Appendix E: Evaluation Charts Type I & II .	120
	Appendix F: Survey Findings and Survey Trend Analysis Chart.	139
CHAPTER VII.	FOOTNOTES.	156
CHAPTER VII.	BIBLIOGRAPHY	159

LIST OF ILLUSTRATIONS

<u>FIGURE</u>		<u>PAGE</u>
A	Business Management Chart by Mattox, R.F.	9
B	Business Management Chart by Class and Koehler. . .	10
C	Business Management Chart by Coxé, W.	10
D	Thesis Business Management Chart.	10
E	Thesis Methodology Chart.	21
F	Thesis Evaluation Chart	39
G	Flowchart of the Accounting System.	51
H	Cost Accounting Flowchart	52
I	Sample Balance Sheet.	57
J	Sample Income Statement	58
K	Sample Cash Flow Worksheet.	60
L	Client Records.	67

CHAPTER I

PROPOSAL

A. INTRODUCTION AND BACKGROUND

Contemporary architectural practice presents a change from the traditional role of the architect as a master builder. The traditional role of master builder has evolved into the new role of the accountable architect. The contemporary architect is held accountable for the projects; economical budget, liabilities of a proper design, legal implications of practice and many more business demands and responsibilities. Henry G. Metzger states, "But times have changed, the days of King Tut and Louis the XIV are no more, and there are few developers in this day and age who can tell an architect, 'damn the expense! Build me a monument!'"¹ The AIA Handbook of Professional Practice states, "The traditional role of architecture has changed much since World War II. Earlier, in an age of simpler technology, a gentler legal climate and a less critical concern for getting the most value for each expended dollar, the architect in private practice was able to adequately cover most of the bases. No more."² Small architectural firm management will need to respond effectively to these demands in order to survive in today's market.

A small architectural firm can be typically organized into two distinct management areas: "Project Services Management" and "Business Management". Project services management concerns the professional technical competence of the architect to design and coordinate the architectural solution to be economically feasible, functional, attractive, and appropriate for the needs of the client. Project management also involves the scheduling and production planning to provide a high level of quality and timely service for the client. Robert F. Mattox states, "Project services performed by the firm include all operations which produce professional services for clients. Project management requires directing the flow of work in a manner that applies human and material resources effectively."³

Business management seeks to provide an efficient, effective, pleasant, professional, and profitable business environment for the architect to work in. Business management includes personnel management, financial management, and marketing management, in its efforts to "plan, organize, staff, lead, and control"⁴ the firm. Henry G. Metzger states, "The contemporary commercial architect must be part CPA, part leading guru, part efficiency expert and an effective salesman, in addition to his normal design functions."⁵ Each management area is crucial for the success of the firm and in actuality they interrelate in the operation of the architectural firm. Robert F. Mattox states, "The concern of general management is that the firm's efforts are integrated, balanced and directed towards achieving goals. Marketing, project services, and general business cannot operate independently."⁶ Sound

business management may actually enhance the quality of the design that a small architectural firm can do. Weld Coxe states, "The business of architectural and engineering practice is design. The role of management in architectural and engineering practice is to provide an environment in which design can flourish."⁷ Usually an architect is well trained in project management where most of the technical expertise in architecture is obtained. However, an architect is not trained proportionately as well in business management. Robert Allen Class, AIA, states, "It has been said that lack of objective business planning is a major problem of many architects and that we as architects must earn the right to survive. Merely producing a good design is not sufficient reason to merit this right. The profession's stature is at stake if it does not have competence in areas of all services offered. Proficiency is needed both as professional designers and as professional managers."⁸ The focus of this thesis is upon the architectural business management of a firm, where the architect usually is least prepared.

Architects have traditionally struggled in acquiring the business expertise necessary for the economic survival of their firms. Most of the firms that I have been employed by have had the principals of the firm operating the firm according to their field experience in other firms and according to their personal assumptions of how the business should be managed. This results in a costly 'trial and error' method of management and limits the potential profitability of a firm. Consider the firm which inadvertently follows a past management assumption, the assumption may provide satisfactory results but may not maximize the

potential result possible. This could be caused by many circumstances; the market situation is constantly changing, the economic position of the firm may have changed, and the personalities involved with the decisions are not easily predictable. The dependence upon past field experience and the deficiency in creative business management is the dilemma of the small architectural firm. There are several reasons why the architects of small firms are typically deficient in business management. First, the small firm's principal is usually too busy with project management and the daily operations of the firm to have enough time to thoroughly manage the business aspects of a firm. Secondly, because the principal of the firm may lack a business management background, the principal may be unaware of possible management techniques available to maximize the potential profitability of the firm. Third, the principal of the firm may not be interested in business management and may avoid and/or minimize the actual importance of sound business management. Finally, most architectural schools do not educate architectural students in the business management of architectural firms. This potentially becomes a serious issue because a technically competent architect but poorly trained business professional will definitely have serious difficulty in managing the business aspects of an architectural firm.

Most of my architectural education concentrated on the basic requirements needed to be a competent project manager and designer. Most of my exposure to architectural business management has been through an apprenticeship with several actively practicing firms in Honolulu. Acquiring architectural technical expertise and drafting dexterity has

been a priority of my apprenticeship. Generally, the business management aspects of a firm were either not revealed to me or were not available for study. There are several basic reasons for why this situation exists. First, my main desire was to gain enough experience to pass the state's architectural licensing examinations which emphasize the minimum technical expertise required to be licensed architect. Secondly, I was recruited for my technical skills of design and drafting ability, my priority was to excel in those areas. The aspect of architectural business management was never discussed and there really was no opportunity to participate in the business management of the firm. The principals of the firm are usually too busy with the daily management of a firm's operational details. As the economic pressure of deadlines increase and the competitive demands placed on a firm's survival increase, there will be increasingly less time to educate the staff of the business management of the firm. If my architectural business management deficiency is not unique to most intern architects, then many of us will have serious difficulty in pursuing a private practice and adequately managing an architectural firm. AIA president Randall Vosbeck addressed a recent AIA convention and challenged his members, "Too many of our members are woefully ignorant of sound business managing practices"⁹

B. BUSINESS MANAGEMENT

General architectural business management is typically divided into basic managerial functional areas. General small business management research divides it into planning, organizing, staffing, leading and controlling. General architectural business management practically restates these functions in a slightly different manner, but they appear to be the same functional categories. The first category planning, involves the conscious predetermination of what the goals and objectives of a company are and what methods and strategies are needed to accomplish them. Harold Koontz states, "Planning is deciding in advance what to do, how to do it, when to do it, and who is to do it. Planning bridges the gap from where we are to where we want to go."¹⁰ Organization involves the manipulation of the office structure and personnel to coincide with the goals and objectives of the firm. Staffing concerns the recruiting and staffing ability to meet the needs of the achievement of the goals of the company. Leading involves the innovation and ingenuity of management to creatively inspire the achievement of the goals of the company. Control involves the evaluation and adjustment of on-going strategies to achieve the goals of the firm. These functions combined provide a basic managerial process which forms an overall framework for the management of the firm. R. Alec Mackenzie defines management, "Management - achieving objectives through others."¹¹

C. COMPONENTS OF GENERAL BUSINESS MANAGEMENT

General small business management findings basically develop four main components of management: 1) Financial Management; 2) Personnel Management; 3) Marketing Management; and, 4) Production Management. These categories reflect broad management areas and are typical managerial areas of concern for most businesses. Architectural business management basically encompasses the same areas of concern as general small business management with the exception that these areas are articulated to be applied in different forms. Small business management seeks commonality and standardization of techniques but architectural business management resources make an attempt to be different from each other. One possible explanation for this is the creative desire of the architect to be unique and different in most of his work and I suppose business management is another area where that is being applied. This can be demonstrated by the following examples of architectural business management. In figure A, Robert F. Mattox, AIA, perceives marketing management as a separate managerial area from the general business management of the architectural firm. In figure B, Robert Allen Class, AIA, Robert E. Koehler, Hon. AIA, portrays the business management of an architectural firm as an equal component to management tools, project delivery, design delivery, production tools, and project management. In figure C, Weld Coxe portrays the business management of an architectural firm in broad terms as equal parts to discipline(s) and technology(ies). Coxe states, "The theoretical complete design firm will have a renaissance balance of discipline talent, technological expertise, and management attention."¹² This thesis generally follows with the

agreement in the topics of general business management with the topics of architectural business management and will categorize the managerial issues into three basic categories: 1) Financial Management, 2) Marketing Management, and 3) Personnel Management. Figure D illustrates the division of the architectural business management as applied in this thesis.

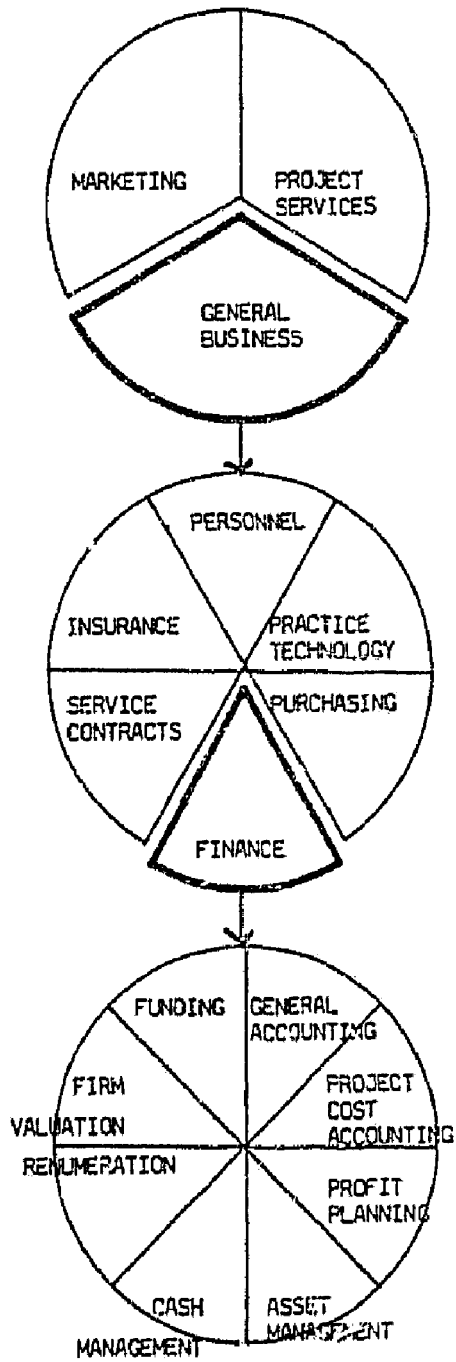


FIGURE A: Source: Robert F. Mactox, AIA, "Financial Management for Architects", Washington D.C., AIA, c. 1980, p.2

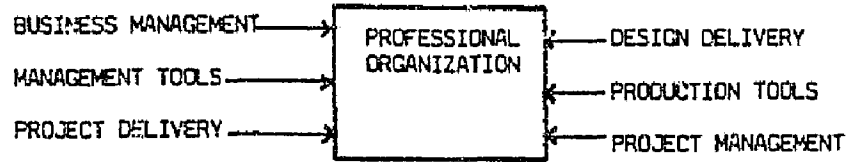


FIGURE B: Source: Robert Alan Class, AIA, Robert E. Koehler, Hon. AIA, "Current Techniques of Architectural Practice", AIA and Architectural Record Books, Washington D.C., p.1, C. 1976

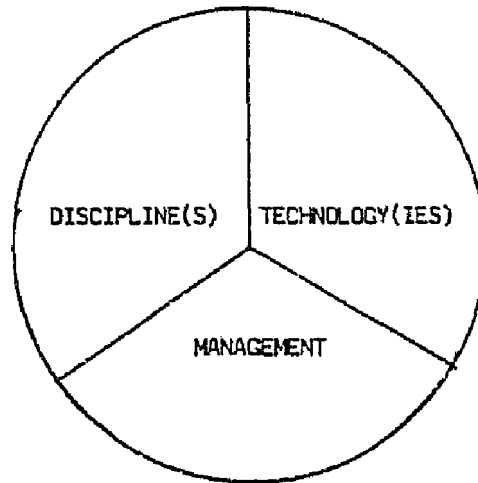


FIGURE C: Source: Weld Coxe, "Managing Architectural and Engineering Practice", New York, John Wiley and Sons., c.1980, p.151

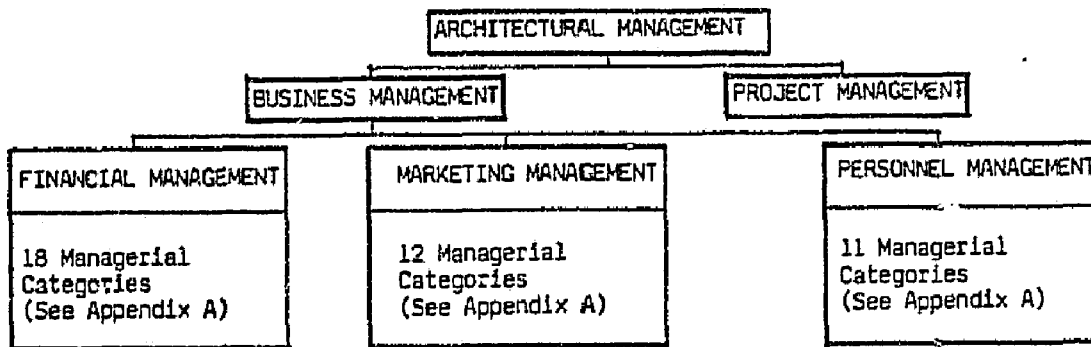


FIGURE D: THESIS APPROACH TO ARCHITECTURAL BUSINESS MANAGEMENT

D. HYPOTHESIS AND PURPOSE OF THE THESIS

Hypothesis:

My basic hypothesis is that there are certain basic elements or principles of sound architectural business management that are fundamental to the success of all small architectural firms in Honolulu and that these basic elements can be identified, described and utilized.

Purpose of the Thesis:

The Purpose of this thesis is to identify those basic elements of sound small architectural business management and to organize these elements into a general business management manual. The intent of this manual is to provide a document which can be used by the small firm utilizing those basic management elements fundamental for a successful business.

E. DEFINITION OF A SMALL ARCHITECTURAL FIRM

For the purposes of this thesis a small architectural firm is characterized by the following:

- 1) Roughly composed of 1 or 2 licensed architect/principals, possibly a sole practitioner or up to 5 professional technical staff members, and a couple of service support staff members. Paul E. Pritzker states, "My definition of a small firm is one with less than 10."¹³ Another definition from the Small Office Task Force Committee, "A quick review indicated the defined small office, 7 or less, represents 90% of the offices in some areas and averages about 80% over the state."¹⁴
- 2) The firm is managed by one or both of the principals whose responsibility also include project management as well as the business management of the firm.
- 3) The principal usually manages a project from the initial procuring of the job to the final phases of construction management. Rosslyn F. Foote states, "You'll find yourself jumping from function to function, which can be exciting or frustrating, depending upon your point of view. But in the end, if you are really independent, you'll find that

nothing's more satisfying than being able to look back on a project with the knowledge that you and you alone were responsible for its success."¹⁵

CHAPTER II
METHODOLOGY

A. OBJECTIVES

1. An objective of the methodology is that it identify a list of sound architectural business management techniques and procedures that could be applied to most small architectural firms in Honolulu, Hawaii.
2. These techniques and procedures must enhance the successful business operation of the small architectural firms in which they are applied to.
3. These techniques and procedures must be flexible enough to allow the modification or adoption of them by the small architectural firms and still be of value for successful business management.

B. BASIS OF THE METHODOLOGY

1. The basis of the methodology assumes that small architectural practice is a professional business and a building design profession and that there are basic common elements for most small architectural practices to operate successfully.
2. That the business management of a small architectural firm is a vital part of the successful operation of a firm.

3. That these common elements could provide the basis for a manual on small architectural business management.

C. COMPONENTS OF THE METHODOLOGY: (See Methodology Chart)

1. The first stage was to conduct a general research study of general small business management, general architectural business management, and interview several local architects at random on the business management of small architectural firms. This research was conducted to define a thesis proposal and devise a methodology to achieve that proposal. Combined with the research was the insight provided by my personal professional field experience and current masters of architecture education. Basic business managerial categories were determined to encompass the foundation for sound business management techniques and procedures. (See Appendix A).
2. The second stage was to develop a survey based upon the basic managerial categories to find the actual relevance of these issues for current practicing small architectural firms in Honolulu, HI. Specific research on these categories were in two areas: 1) small business management, 2) architectural business management. Specifically the research in small business management involved an investigation in management handbooks, readings and journals. Architectural business management was

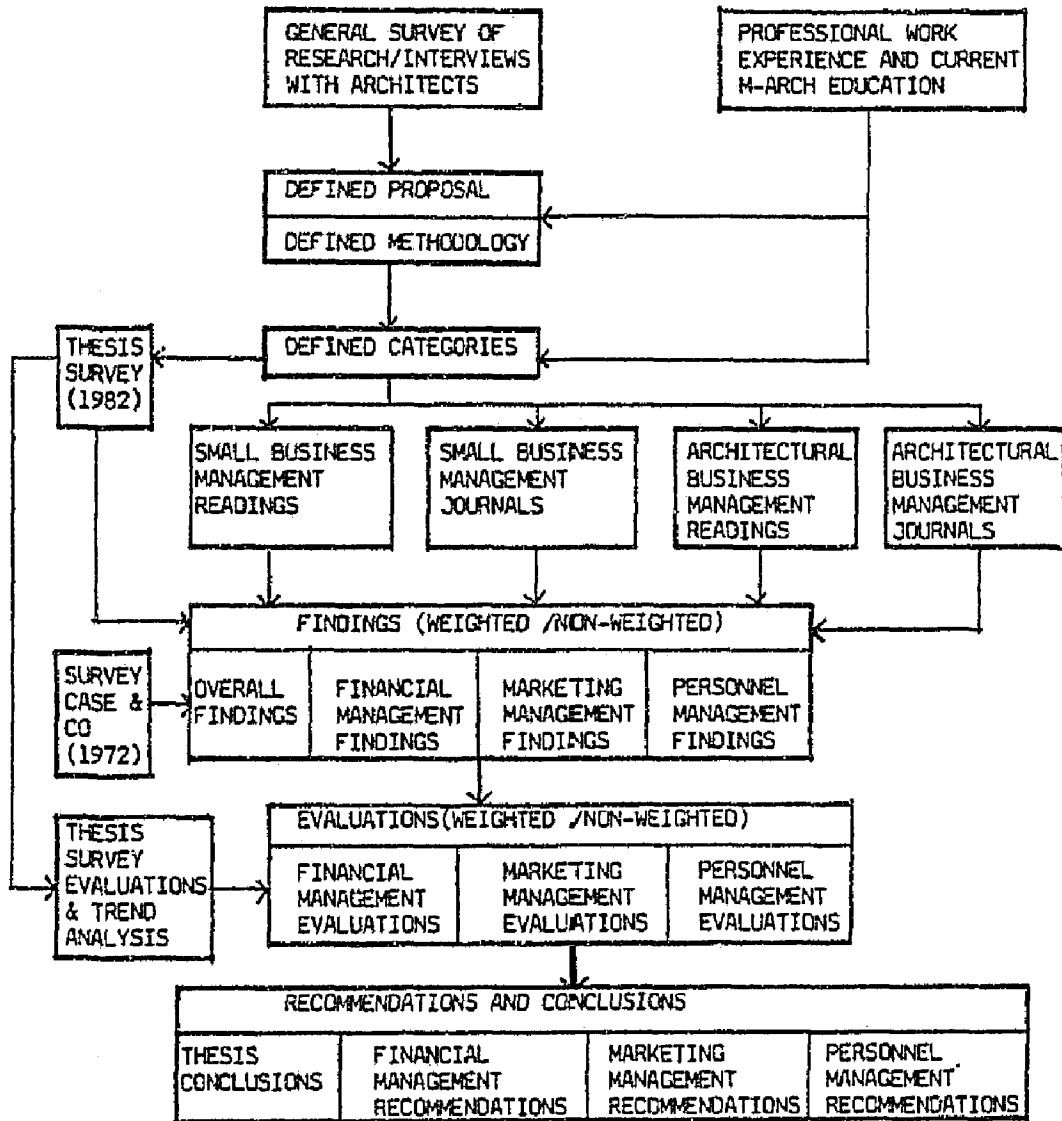


FIGURE E: THESIS METHODOLOGY CHART

researched similarly in handbooks, readings and journals. The research findings are presented in a findings chart, separated by categories and divided into three basic general managerial areas: 1) financial management, 2) marketing management, 3) personnel management. The primary sources were listed in each area and a response to each of the managerial categories was made. The response was determined using three characteristics: 0 equals not mentioned or disagree, 1 equals mentioned, 2 equals mentioned with emphasis. In this response system the findings were summarized two ways: 1) weighted response scoring the actual value totals, 2) non-weighted response totaling merely the number of times mentioned and not distinguishing between mentioned or mentioned with emphasis. The two methods of summary were to eliminate the possibility of personal bias interfering with the data findings. Included in the findings were the findings of "The Economics of Architectural Practice in Hawaii" by Case and Co. (1972) and the findings of the survey of this thesis (1982). In the findings summary chart type I, the actual totals of responses for each category were determined and the relative percentage of the response to the total number of research entries were also determined. The findings summary chart type II, determined the total weighted values of the responses per category and a total average of the responses to the total number of research entries. The findings are presented in four main areas: 1) Overall business management, 2) Financial management, 3) Marketing management, 4) Personnel management.

3. The third stage was to evaluate the findings for each particular category. The evaluation charts compare the weighted responses to the non-weighted responses and determines those business management categories most often mentioned by all of the research. There are two types of evaluation charts presented. Evaluation chart type I corresponds to the findings summary chart type I, both total their responses according to non-weighted responses. No difference is measured except the number of times mentioned. The emphasized managerial categories for each business management area were determined by selecting the five highest totals of the business management categories. Evaluation chart type II corresponds to the findings summary chart type II, both total the weighted responses of each managerial category. The distinction was made between the mentioned responses and the responses that were mentioned with emphasis. The mentioned with emphasis was calculated with a value of 2 points and the mentioned was given 1 point per category per primary source. The emphasized managerial categories for each business management area were determined by selecting the five highest total score values of responses for the managerial categories. The five highest managerial categories of evaluation chart type I were compared with the five highest managerial categories from evaluation chart type II for financial management, marketing management, and personnel management. Included in the evaluation of the managerial categories is the thesis survey evaluations to contribute further relevance to the particular issues of each category.

4. The fourth stage was to determine what possible recommendations and conclusions could be ascertained from the evaluation of the research. The recommendations were separated into four main areas: 1) Financial Management Recommendations, 2) Marketing Management Recommendations, 3) Personnel Management Recommendations, 4) Thesis Conclusions. The conclusions of this thesis discusses an overview of the entire process of the thesis, the problems, and success of the research.

CHAPTER III

FINDINGS

A. Overall Business Management Findings (See Appendices B, C, D, and F)

1. The readings on small business management were general information sources and not exclusively directed at the specific details of a small architectural practice. The material and information provided basically a broad coverage of management areas of concern for most small businesses and with exception provided detailed coverage of certain aspects of management for general small businesses.
2. There was a scarcity of architectural business management sources in readings and journals.
3. The information from the architectural business management sources was generally stylized to be unique in its presentation of architectural business management. The information was the same as the information provided by small business management sources but, the presentation of the material was different in each case. The difference has no effect on the content of the findings, and was merely presented differently.
4. The readings on architectural business management were general information books and did not address specific details of architectural business management.

B. Financial Management Findings: (See Appendices B, C, D, and F)

1. Small business management readings generally emphasizes categories: 1, 9, 12, 14 and 15.

1) A fundamentally sound accounting system is needed for sound financial management.

9) Financial statements should be used to maximize financial management effectiveness.

12) Financial ratios can be used as an effective means of evaluating a company's financial performance.

14) Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.

15) A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.

2. Architectural business management readings generally emphasizes categories: 1, 8, 9, 15, and 6.

1) A fundamentally sound accounting system is needed for sound financial management.

- 8) The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
 - 9) Financial statements should be used to maximize financial management effectiveness.
 - 15) A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.
 - 16) The costs should be allocated to their respective jobs for the identification of approximate costs for the firm to improve the financial management of a firm.
3. Small business management journals generally emphasizes categories: 8, 9, 10, 14, and 15.

- 8) The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
- 9) Financial statements should be used to maximize financial management effectiveness.
- 10) Strategic planning can be used to enhance the business management of a small architectural firm.

- 14) Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.
 - 15) A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.
4. Architectural business management journals generally emphasizes categories: 8, 9, 10, 14, and 18.
- 8) The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
 - 9) Financial statements should be used to maximize financial management effectiveness.
 - 10) Strategic planning can be used to enhance the business management of a small architectural firm.
 - 14) Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.
 - 18) Computer applications for business management is increasingly becoming a necessary tool for architectural business management.

5. The survey, "The Economics of Architectural Practice in Hawaii" by Case and Co. (1972) generally emphasizes categories: 9, 15, 16, and 17.

9) Financial statements should be used to maximize financial management effectiveness.

15) A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.

16) The costs should be allocated to their respective jobs for the identification of approximate costs for the firm to improve the financial management of a firm.

17) Sound time management is needed, time card management and the breakdown of time into specific phases and tasks.

6. The survey of this thesis generally indicated an emphasis on categories: 1, 2, 3, 7, 8, 9, and 14.

1) A fundamentally sound accounting system is needed for sound financial management.

2) The accounting system should be a cash system.

3) The accounting system should be an accrual system.

- 7) The accounting system should be understood and managed by the principal of the firm.
 - 8) The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
 - 9) Financial statements should be used to maximize financial management effectiveness.
 - 14) Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.
7. The general emphasis of all research emphasizes categories: 1, 8, 9, 12, 14, and 15.
- 1) A fundamentally sound accounting system is needed for sound financial management.
 - 8) The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
 - 9) Financial statements should be used to maximize financial management effectiveness.

14) Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.

15) A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.

8. Architectural business management sources disagree over the scope and complexity of the financial management system. In contrast, most of the small business management sources were in general agreement over the scope and complexity of the financial management system.

C. Marketing Management Findings: (See Appendices B, C, D and F)

1. Small business management readings generally emphasize categories: 19, 20, 21, 24 and 25.

19) The identifying of a firm's strengths and weaknesses in a profile will help the firm to assess its potential markets and aid in its managerial planning.

20) The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.

- 21) The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.
 - 24) The development of the marketing strategies should enable the firm to put their marketing plans into action.
 - 25) The marketing media and marketing techniques should enhance the accomplishment of the marketing plans.
2. Architectural business management readings generally emphasize categories: 19, 20, 27, 30 and 31.
- 19) The identifying of a firm's strengths and weaknesses in a profile will help the firm to assess its potential markets and aid in its managerial planning.
 - 20) The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.
 - 27) The use of brochures is a marketing technique appropriate for small architectural firms.
 - 30) The use of high identity exposure and a strong public relations program is an appropriate marketing technique for a small architectural firm.

- 31) The maximization of interviews, client presentations, and interview strategies is appropriate for a small architectural firm.
3. Small business management journals generally emphasize categories: 19, 20 and 23.
- 19) The identifying of a firm's strengths and weaknesses in a profile will help the firm to assess its potential markets and aid in its managerial planning.
- 20) The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.
- 23) The marketing plan should be scheduled, have a timetable of accomplishment for its goals, and a reasonable budget.
4. Architectural business management journals generally emphasize categories: 25, 26, 27, 29 and 30.
- 25) The marketing media and marketing techniques should enhance the accomplishment of the marketing plan.
- 26) The direct-mail marketing technique is an appropriate technique for a small architectural firm.

- 27) The use of brochures is a marketing technique appropriate for small architectural firms.
- 29) The maintenance of clients, the cultivation of referral business, and the development of personal contacts is an appropriate marketing technique for a small architectural firm.
- 30) The use of high identity exposure and a strong public relations program is an appropriate marketing technique for a small architectural firm.
5. The survey, "The Economics of Architectural Practice in Hawaii" by Case and Co. (1972) generally had no emphasis in this area of management.
6. The survey of this thesis indicated an emphasis in categories 20 and 29.
- 20) The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.
- 29) The maintenance of clients, the cultivation of referral business, and the development of personal contacts is an appropriate marketing technique for a small architectural firm.

7. The general emphasis of all categories: 19, 20, 21, 24 and 25.

19) The identifying of a firm's strengths and weaknesses in a profile will help the firm to assess its potential markets and aid in its managerial planning.

20) The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.

21) The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.

24) The development of the marketing strategies should enable the firm to put their marketing plans into action.

25) The marketing media and marketing techniques should enhance the accomplishment of the marketing plans.

8. There was a scarcity of information for marketing management from the small business management journals.

9. The architectural business management journals had an emphasis on the marketing management of architectural firms.

D. Personnel Management Findings: (See Appendices B, C, D and F)

1. Small business management readings generally emphasize categories: 32, 33, 36, 39 and 40.

32) The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.

33) The organization of the firm, the chain of command, and the lines of communication should be clearly established and maintained.

36) The management of recruiting and termination of employees is essential for the success of the personnel management of the small architectural firm.

39) Benefits, salaries, promotions, demotions, and employee performance incentives should be clearly defined and a vital part of personnel management.

40) The development and training of employees is necessary for a strong personnel management program.

2. Architectural business management readings generally emphasize categories: 32, 34, 35, 39 and 40.

32) The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.

34) The use of personnel manuals, job descriptions, and an organization chart will enhance the understanding of a firm's organization and personnel responsibilities.

35) The delegation of control and decision making is essential for the efficient and profitable operation of a small architectural firm.

39) Benefits, salaries, promotions, demotions, employee performance incentives should be clearly defined and a vital part of personnel management.

40) The development and training of employees is necessary for a strong personnel management program.

3. Small business management journals generally emphasizes categories: 32, 34, 35, 39, 40, and 41.

32) The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.

34) The use of personnel manuals, job descriptions, and an organization chart will enhance the understanding of a firm's organization and personnel responsibilities.

35) The delegation of control and decision making is essential for the efficient and profitable operation of a small architectural firm.

39) Benefits, salaries, promotions, demotions, employee performance incentives should be clearly defined and a vital part of personnel management.

40) The development and training of employees is necessary for a strong personnel management program.

41) The proper assignment of tasks to appropriate abilities will enhance the efficiency and productivity of a firm.

4. Architectural business management journals generally emphasizes categories 32 and 36. Generally there was little emphasis in this management area by the architectural business management journals.

32) The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.

- 36) The management of recruiting and terminations of employees is essential for the success of the personnel management of the small architectural firm.
5. The survey, "The Economics of Architectural Practice in Hawaii" by Case and Co. (1972), had little emphasis in this area of management.
6. The survey of this thesis indicates a general emphasis in categories: 32, 36, 37, and 39.
- 32) The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.
- 36) The management of recruiting and terminations of employees is essential for the success of the personnel management of the small architectural firm.
- 37) The management of employee evaluations is a necessary part of personnel management.
- 39) Benefits, salaries, promotions, demotions, employee performance incentives should be clearly defined and a vital part of personnel management.

7. The general emphasis of all research emphasizes categories: 32, 33, 36, 39, and 40.

32) The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.

33) The organization of the firm, the chain of command, and the lines of communication should be clearly established and maintained.

36) The management of recruiting and terminations of employees is essential for the success of the personnel management of the small architectural firm.

39) Benefits, salaries, promotions, demotions, employee performance incentives should be clearly defined and a vital part of personnel management.

40) The development and training of employees is necessary for a strong personnel management program.

CHAPTER IV

EVALUATION

A. INTRODUCTION

The findings of all of the research and surveys were evaluated by two techniques. The first technique made no distinction between the categories that were mentioned with emphasis and those that were merely mentioned. It statistically totaled the overall number of mentioned categories and provided an average score per category. The categories were then ranked from the highest mentioned to the lowest mentioned to establish a priority among the issues being evaluated. (See Appendix E: Evaluation Chart Type I) The second technique used the assignment of values to distinguish the difference between the category merely mentioned and the category that was mentioned with emphasis. The assignment of a higher weighted value of two points was given to the categories that were mentioned with emphasis, the categories that were merely mentioned were assigned a value of one point, and the categories that were either not mentioned or disagreed with the category were given no points at all. The weighted categories were totaled per category and ranked similarly to the first evaluation technique, from the highest overall mentioned category to the lowest mentioned overall category. (See Appendix E: Evaluation Chart Type II) The overall findings of the survey of the thesis was evaluated for possible trends in the response patterns in a survey trend analysis chart and was incorporated into the evaluations. (See Appendix F: Survey Findings and Survey Trend Analysis

Chart) Both evaluation techniques were compared to observe any change or deviation in the ranking of the categories and to remove the possibility of bias influencing the results of the evaluations. The results of this comparison determined no significant change in the overall ranking of the categories and confirmed the validity of the results. See Figure F: Thesis Evaluation Chart for a diagramtic flow chart displaying the evaluation process of this thesis.

The sequential order required in the financial organization of the firm's business management must take precedence over the ranking precedence provided in the results of the evaluations. For example, financial statements depend upon the establishment of a sound accounting system and cannot precede the establishment of an accounting system. This shifting of sequence, however, does not preclude its overall importance to the small architectural firm. The top five mentioned categories per managerial area do not change, merely their relative order of presentation changes. When there is no sequence necessary or implied for the implementation of the management technique discussed in the category, then the precedence of the evaluation follows the overall established ranking derived from the results of the evaluation process. For example, break-even analysis precedes computer applications because of the relative ranking precedence in the evaluations and not because it is sequentially required prior to the implementation of computer applications.

The following evaluation summaries express the results of the evaluation process of this thesis. For a detailed description of the evaluation of the findings see Appendix E. Evaluation Charts Type I and Type II and the detailed description which follow the charts.

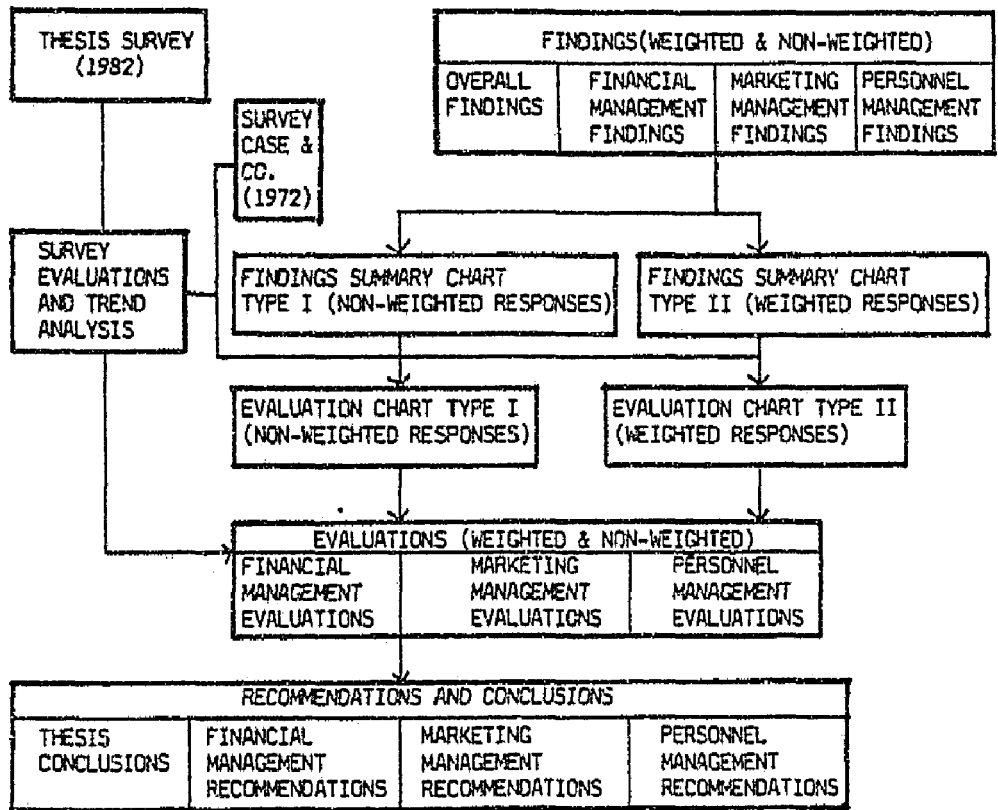


FIGURE F: THESIS EVALUATION CHART

B. EVALUATION SUMMARY FINANCIAL MANAGEMENT

The following five items express the key concerns for financial management of small architectural firm's in Honolulu, Hawaii.

1. A fundamentally sound accounting system is needed for sound financial management.
2. A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a firm.
3. The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
4. Financial statements should be used to maximize the financial management effectiveness.
5. Cash flow analysis should be used; the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.

The following items express financial management techniques which should enhance the financial management of a small architectural firm, but are not as crucial as the previously mentioned issues. They should be incorporated at the discretion of the principal of the firm.

1. Financial ratios can be used as an effective means of evaluating a company's performance.
2. Profit planning can be used to maximize the effectiveness of financial management.
3. Costs should be allocated to their respective jobs for the identification of approximate costs for the firm to improve the financial management of the firm.
4. Strategic Planning can be used to enhance the business management of a small architectural firm.
5. Break-even analysis can be used to enhance the financial management of a firm.
6. Computer applications for business management is increasingly becoming a necessary tool for architectural business management.
7. Sound time management, time care management, and the breakdown of time into specific phases and tasks is needed.

C. EVALUATION SUMMARY MARKETING MANAGEMENT

For marketing management, the following five items express the key concerns for small architectural firms in Honolulu, Hawaii.

1. The formulation and articulation of the goals of the firm should be done to help develop the marketing plan and aid in the business management of the firm.
2. The identifying of a firm's strengths and weaknesses in a profile will help assess its potential markets and aid in the business management of the firm.
3. The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.
4. The development of marketing strategies should enable the firm to put their marketing plans into action.
5. The marketing media and marketing techniques should enhance the accomplishment of the marketing plan.

The following items express marketing management techniques which should enhance the marketing management of a firm but are not as crucial for management as the previously mentioned issues. These management techniques should be implemented at the discretion of the principal of the firm.

1. The use of high identity exposure and a strong public relations program is an appropriate marketing technique for a small architectural firm.
2. The use of brochures is an appropriate marketing technique for a small architectural firm.
3. The maintenance of clients, the cultivation of referral business, and the development of personal contacts is an appropriate marketing technique for a small architectural firm.
4. The direct-mail marketing technique is an appropriate technique for a small architectural firm.
5. The maximization of interviews, client presentations, and interview strategies is appropriate for a small architectural firm.
6. The organization of the marketing plan is essential for its success. The use of various marketing organizational forms help organize the plan: Marketing matrix, phone-call forms, and client-records.

D. EVALUATION SUMMARY PERSONNEL MANAGEMENT

The following five items express the key concerns for personnel management of small architectural firms in Honolulu, Hawaii.

1. The organization of the firm, chain of command, and the lines of communication should be clearly established and maintained.
2. The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.
3. The management of recruiting and terminations of employees is essential for the success of personnel management.
4. Benefits, salaries, promotions, demotions, employee performance incentives should be clearly defined and be a vital part of personnel management.
5. The development and training of employees is necessary for a strong personnel management program.

The following items express personnel management techniques which should enhance the personnel management of a small architectural firm, but are not as crucial as the previously mentioned issues. They should be incorporated at the discretion of the principal of the firm.

1. The proper assignment of tasks to appropriate abilities will enhance the efficiency and productivity of a firm.
2. The management of employee evaluations is a necessary part of personnel management.
3. The delegation of control and decision making is essential for the efficient and profitable operation of a small architectural firm.
4. The use of personnel manuals, job descriptions, and an organization chart will enhance the understanding of a firm's organization and personnel responsibilities.
5. The use of employee logs or journals will enhance the evaluation of employees.

CHAPTER V
RECOMMENDATIONS AND CONCLUSIONS

A. INTRODUCTION

The business management of the small architectural firm is divided into financial management, marketing management, and personnel management. A priority is established in the order of recommendations to provide a reasonable and appropriate implementation sequence for the development of sound business management for small architectural firms. Initially, the small architectural firm should implement both financial management and marketing management in unison. Since most of the small firms do not have a full time staff, personnel management recommendations are to be implemented last, preceded by the other two managerial areas. The recommendations in the following section thus takes into account the sequence of when they should be implemented into a new system and provides an explanation of the importance for each recommendation.

B. FINANCIAL MANAGEMENT AND MARKETING MANAGEMENT RECOMMENDATIONS

1. Initially, the small architectural firm in Honolulu must establish and articulate the goals of the firm to every member of the firm. The specific goals of the firm address the purpose of the firm, its philosophy of operation, and where the direction of the practice should be. The principal(s) of the firm must assume the responsibility for the direction and achievement of these goals. The goals should be realistic and feasible. They should be divided into short-term and long-term goals with an appropriate timetable of completion. The development of goals requires the development of plans and strategies which outline the sequence of events for the achievement of these goals. These goals should be communicated and understood by the entire firm to provide for a unified team approach for the achievement of these goals. The firm should also provide a mechanism to monitor the achievement of the goals and evaluate any corrective actions for deviations from the goals. The primary importance of goal setting is that it provides the purpose and direction for all other management techniques and procedures. Goal setting provides the essential guidance for the business management of the firm and without it the firm is set adrift, the management in chaos not knowing what the firm should be achieving and without a purpose for existence.

2. The small architectural firm must identify its strengths and weaknesses in a profile which will help assess its potential markets and aid in its managerial planning. The assessment of the firm's strengths must inventory the personnel talent, experience, and marketable architectural skills. The inventory should also include the intangible aspects of the firm's image and appeal for the potential job markets. The profile needs to consider the tangible assets and impact of the firm's present clientele, firm location, and production facilities. The assessment of the firm's weaknesses evaluates the potential areas in the firm where the firm could be improved. This reviews the physical and intangible inventory of the firm and develops suggestions of where the firm's potential strength may still be unexploited. For example, a staff member's extensive experience in government jobs may be unknown to the firm or overlooked. The firm realizing this may be able to market their services for government work with that person becoming a key member of the marketing team. The importance of the profile is that it identifies the firm's present position and allows the principal of the firm to be aware of potential areas of growth for the firm. It also establishes a realistic base for the business planning to expand from and to achieve the goals of the firm.

3. The small architectural firm must establish a sound accounting system for the financial management of the firm. The accounting system should be a comprehensive system which provides managerial information for the financial management of the firm. The accounting system must transcend the mere bookkeeping functions and manipulates the relevant financial data to meet the business management concerns for the small architectural firm. Initially, the small firm must seek out an accounting consultant or firm who is able to provide professional insight and creatively contribute to the development of a sound accounting system. The accounting system should be custom tailored for the needs of the small architectural firm. The AIA Handbook states, "The architect, unless specially trained in such matters, should retain an accountant to aid in developing a financial management system tied to the firm's accounting and management information requirements."¹⁶ The criteria for the accounting system can be simply stated in three main points. First, the firm should maintain an accounting system that is sophisticated enough to provide accurate records for further derivation of management information. Second, maintain an accounting system with enough flexibility to allow for the adjustments due to the modifications of the firm's financial strategies and goals. Have the accounting system fit the needs of the firm instead of the accounting system dictating the firm's needs. Third, the small firm must attain an accounting

system with enough simplicity to provide an ease of understanding and use by the architect-manager. Moustafa H. Abdelsamad, DBA, and John B. Sperry, Ph.D., DPA, have stated the accounting system requirements in practical terms. "The first requirement in establishing an accounting system is KISP: 'Keep it simple please.' Complex accounting systems are costly, time consuming and counter productive."¹⁷ The accounting system that fulfills the criteria stated is a double entry, cash and accrual accounting system. The double entry system provides the accuracy of double checking entries and the separation of transaction information to fit into the financial statements. See Figure G and Figure H for typical examples of accounting systems. These diagrams also depict the flow of financial information through the system. The cash system allows for maximum tax advantage accounting because the income is measured by the total amount of received receipts and not the money tied up into accounts receivable. This allows for a lower income level that could be reported for a particular period of time. Accrual accounting in contrast matches the income with the related expenses for a particular period of time. Therefore, the income recorded includes the accounts receivable and all of the income the firm has not yet received but billed to clients. Therefore, the income for each accounting period reflects the actual performance of the firm for that specific time period. Accrual accounting is best for the needs of management to evaluate the performance of the firm.

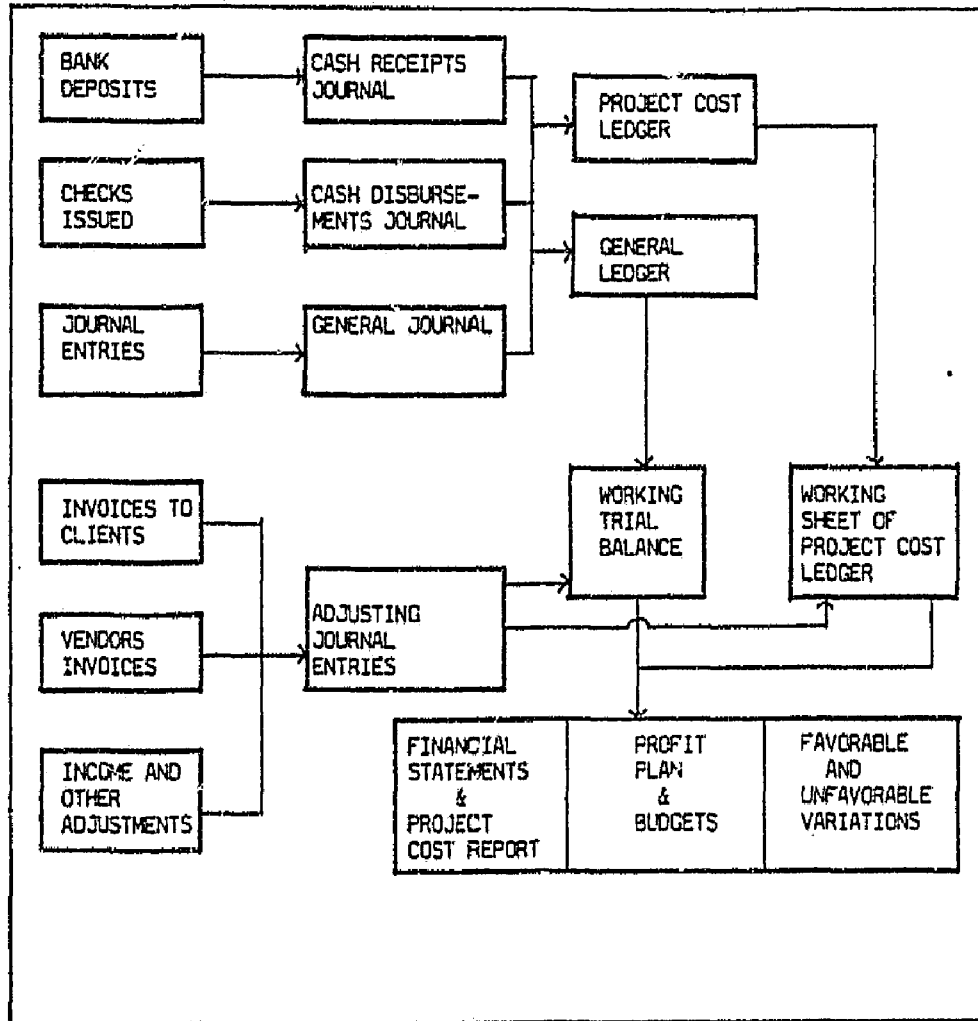


FIGURE G: FLOW CHART OF THE ACCOUNTING SYSTEM
 Source: Milton Zipper, CPA, "Encyclopedia of Accounting Systems". Englewood Cliffs, N.J.: Prentice Hall, c. 1976, p. 116.

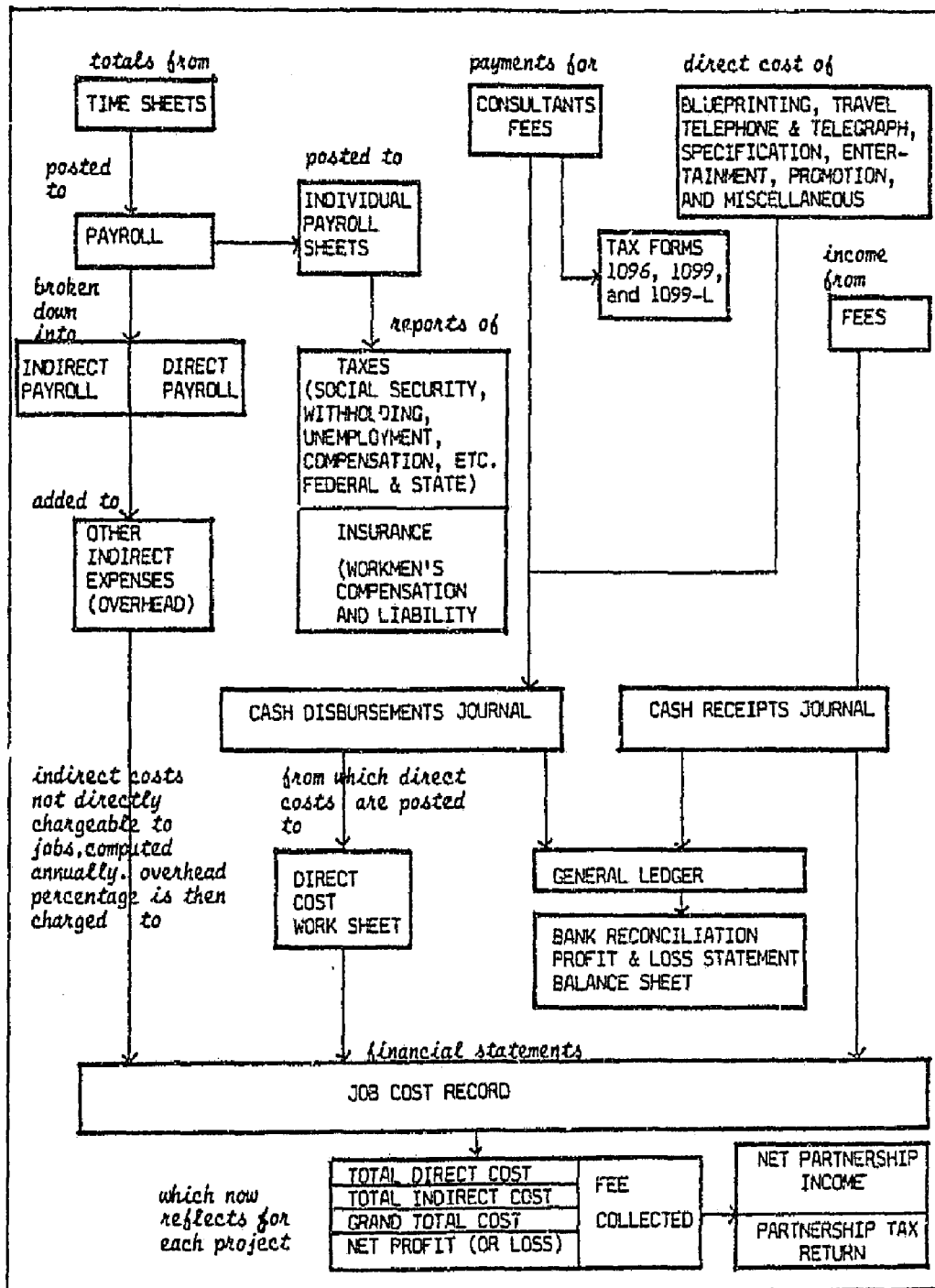


FIGURE H: COST ACCOUNTING FLOW CHART

Source: Architectural Engineering Department of the Pennsylvania State University. "Emerging Techniques of Architectural Practice". Washington D.C.: AIA Publication, c. 1968 p. 73.

4. A small architectural firm must have strong cost controls and maintain timely accurate record keeping to enhance the financial management of the firm. Cost controls for the firm relies upon accurate and diligent bookkeeping of costs of the firm and enables the firm to develop strategies for the reduction of those costs. The use of separate journals for the recording of costs and income is recommended. For example, the small firm should maintain a cash receipts journal, a cash disbursements journal, and a general journal to record the cash transactions and maintain a tight control over the costs. The use of sound record keeping benefits the firm's accounting system and streamlines the flow of information to the financial statements. The cost control effort will reduce the amount of wasted effort and materials and produce a high attention to quality control. The savings by the overall staff effort to conserve cost may substantially reduce the overhead and increase the profits for the firm. The accurate cost records will help to justify to the client the costs to the firm for a particular project and increase the credibility of the fee being based upon actual costs for the firm and not an estimate.

5. The small architectural firm must find a creative and professional accounting firm to fulfill the financial management needs in accounting for the firm. The recruitment and selection of an outside accounting firm is crucial for the success of the

accounting system. The firm selected should have a basic understanding of the financial needs of an architectural practice and be familiar with the dynamics of professional practice in Honolulu, Hawaii. The accounting firm should be able to contribute creative solutions for the accounting tasks needed by the small architectural firm. The accountant should work with the architect to help direct the accounting and not dictate the financial direction of the accounting. The principal of the firm must be prudently careful against a must be actively involved in the management of the accounting system from its inception through its maintenance. The outside accounting firm without the guidance from the principal of the firm is unable to provide appropriate accounting information for the financial statements and for the financial management of the firm. The type of accounting information required depends upon the financial management strategy being deployed by the firm. For example, if the strategy of the firm was to realize the least amount of profit shown in the statements for the minimalization of taxes, the accounting information would be directed to achieving the minimalization of taxes. But, if the firm wanted to display a profit because of the expectation for a need to procure a business loan, the accounting would be motivated to reflect the highest possible profits in the statements, and reflect the assets of the firm without the depreciated costs. Therefore, without the guidance of the

principal of the firm the accountant may be confused as to the direction of the financial strategy the firm is using. The architect must understand the fundamental mechanics of the accounting system in order to achieve a meaningful rapport with the accountant. The ability of the architect to interpret any deviation from the financial accounting needs of the firm depends upon the understanding of the fundamentals of accounting information. If the principal of the firm doesn't know the basics of accounting the firm will be controlled by the accounting, instead of the firm controlling the accounting.

6. Small architectural firms should use financial statements to increase the effectiveness of their financial management. Financial statements rely upon the accurate and comprehensive information provided by a sound accounting system. A double entry accounting system should fulfill the informational needs of the financial statements. Financial statements are indicators of a firm's financial performance. Small Business Reporter states, "These statements are concise reports designed to summarize financial activities for specific periods. They are so rich with information for profitable business management that owners cannot dismiss the subject to someone else."¹⁸ Financial statements provide accurate financial information which helps the firm to acquire business loans, impress prospective clients, impress investors, and ease the financial

management of the firm. Lawrence A. Klatt writes, "Banks and other creditors want to evaluate the credit of the firm; investors desire information on the status of their interests; and government is interested in taxing the income of the firm."¹⁹ Typical financial statements include the balance sheet and the income statement. The small architectural firm should prepare and maintain these statements generally on a monthly basis. The Balance Sheet is a financial statement which describes the status of the assets, liabilities, and the owner's equity (net worth) of a firm at a particular point in time. The Balance Sheet is usually prepared on a monthly basis or by the business quarterly-tax periods. The frequency of the preparation of the balance sheet depends upon the urgency of management to evaluate the financial performance of the firm. See Figure I; Sample Balance Sheet which display the composition of a typical statement. The Income Statement is another measurement of a firm's financial performance. It reflects the profit or loss condition of a firm at a particular period of time. The difference between the revenues realized and their related expenses, equals the net income for that period. See Figure J: Sample Income Statement which displays the composition of this statement.

GUISEPPE ARCHITECTS AND ASSOCIATES

BALANCE SHEET

Year Ending December 31st, 1982

ASSETS:	<u>1982</u>	<u>1981</u>
1. <u>Current Assets</u>		
2. Cash	\$ 5,000	\$ 4,000
3. Costs and estimated earnings in excess of billings on uncompleted contracts.	3,000	2,000
4. Accounts Receivable	30,000	28,000
5. Prepaid Expenses	<u>600</u>	<u>500</u>
6. Total Current Assets	38,600	34,500
7. <u>Property and Equipment</u>		
8. Equipment and Furniture	3,500	3,100
9. Leasehold Improvements	<u>4,000</u>	<u>2,000</u>
10. Total	7,500	5,100
11. Accumulated Depreciation	<u>5,000</u>	<u>3,500</u>
12. Net Property & Equipment	2,500	1,600
13. <u>Other Assets</u> -Rent Deposit	<u>400</u>	<u>400</u>
14. Total Assets	<u>\$41,500</u>	<u>\$36,500</u>
<u>LIABILITIES AND PRINCIPAL'S CAPITAL</u>		
15. <u>Current Liabilities</u>		
16. Bank Note Payable	3,000	2,000
17. Accounts Payable & Accrued Expenses	6,500	4,000
18. Payroll Taxes	400	300
19. Billings in excess of costs and estimated earnings on uncompleted projects.	<u>2,500</u>	<u>5,000</u>
21. Total Current Liabilities	12,400	11,300
22. <u>Principal's Capital</u>	<u>29,100</u>	<u>25,200</u>
23. Total Liabilities and Principal's Capital	<u>\$41,500</u>	<u>\$36,500</u>

FIGURE 1: SAMPLE BALANCE SHEET

GIUSSEPPE ARCHITECTS AND ASSOCIATES

INCOME STATEMENT

Year Ending December 31st, 1982

REVENUES:	<u>1982</u>	<u>1981</u>
1. <u>Gross Fees</u>	\$150,000	\$120,000
2. <u>Consultants</u>	<u>[30,000]</u>	<u>[25,000]</u>
3. <u>Net Fees</u>	120,000	105,000
OPERATING EXPENSES:		
4. <u>Direct Costs</u>		
5. Staff salaries and Benefits	40,000	30,000
6. Other Direct Costs	3,000	1,500
7. Principal's Salary	<u>24,000</u>	<u>20,000</u>
8. Total Direct Costs	67,000	51,500
9. <u>Indirect Costs</u>	<u>25,000</u>	<u>23,000</u>
10. Total Operating Expenses	92,000	74,500
11. Net Operating Income	28,000	30,500
OTHER REVENUES & EXPENSES:		
12. <u>Other Income</u>		
13. Miscellaneous	350	400
14. Interest Income	<u>[300]</u>	<u>[200]</u>
15. Subtotal	50	200
16. Net Income (after principal's salary)	28,050	30,700
17. Principal's Salary	<u>22,000</u>	<u>20,000</u>
Total Net Income	50,050	50,700

FIGURE J : SAMPLE INCOME STATEMENT

7. A small architectural firm must use cash flow analysis to help the firm forecast the financial needs of the company. Cash flow analysis requires the estimation of the firm's projected income and expected expenses for the next six months to a year. The projection of income and expenses must be as accurate and as realistic as possible. The cash flow analysis should allow the firm to anticipate periods when the gross receipts do not cover the firm's operating expenses and to anticipate when there will be surplus cash. See Figure K: Sample Cash Flow Projection Worksheet which displays how the cash flow can be monitored monthly. Another modification to the worksheet if desired is to have another column each month. One column for an estimate and the other column for the actual amount to compare the projections to the actual amounts to enable the projections to be more accurate in the future. When the cash flow is at a shortage situation several alternatives are available for the small firm. First, the use of reserve funds to offset the shortage periods when cash flow is below operating expenses. Usually this relies on the draw from a savings account that has held contingency funds for the business. Second, the obtainment of a business loan to cover the shortage of income. Depending upon the projected duration of the shortage, the cash reserves may be depleted and so requiring the firm to seek additional financing through a business loan. It may be advantageous for the firm with a cash reserve to seek a loan and pay it back

<u>GIUSEPPE ARCHITECTS AND ASSOCIATES</u>						
SIX MONTH CASH FLOW WORKSHEET (1983)						
	January	February	March	April	May	June
1. Net Receipts	8,500	6,000	7,500	6,500	10,000	9,000
2. Cash from Investments	1,500	1,500	1,500	1,500	1,500	1,500
3. Other cash receipts	300	300	300	--	--	--
4. <u>Total Cash Receipts</u>	10,300	7,800	9,300	8,000	11,500	10,500
5. Cash Disbursements						
6. Personnel	6,500	6,800	6,000	6,250	6,500	6,800
7. Expenses	3,000	3,200	2,500	2,600	3,000	3,500
8. <u>Total Cash Disbursements</u>	9,500	10,000	8,500	8,850	9,500	10,300
9. Net Cash Inflow or (Outflow)	800	(2,200)	800	(850)	2,000	200
10. Cash on Hand and in Bank (Beginning of month)	1,000	--	--	400		1,550
11. Cash Balance or Shortage	1,800	(400)	400	(450)	1,550	1,750

FIGURE K: SAMPLE CASH FLOW PROJECTION WORKSHEET

diligently. It will meet the needs of the cash shortage and establish sound credit for the firm in the future. The importance of properly managed financial statements plays a major role in the attainment of the loans. Third, lay-off of personnel to reduce the shortage of cash may be necessary if the shortage is not expected to change for a significant period of time. The loss to the firm is two-fold: 1) The firm loses the investment in the employee, the training and experience. 2) The firm loses a potential valuable employee whose services may not be easily replaced. Fourth, the temporary reduction of salaries could be done to accommodate the cash shortage. This is particularly done by one-man operations who can afford the drop in income. The measure is effective for short-term reduction in costs and merely delays the payment of the full employee compensation until the temporary shortage is remedied. Fifth, is the temporary loaning out of personnel to other architectural offices in a drafting pool. The firm retains the employee and loans the employee out at a higher wage. The firm receives a profit in the loaning of the employee and shares part of the profit with the employee for the inconvenience. This reduces part of the cash shortage and provides additional income as well. The danger is the demotivation of the employee and the potential of losing the employee to another firm. The employee if retained, may gain beneficial knowledge from the experience of working in the other firm. When there is a surplus of income

the firm has several alternatives. One is to establish a reserve cash savings account for contingency business funding. Another is to invest the surplus cash to receive a higher income on the cash savings. The principal of the firm must have a contingency fund along with the invested money to have a liquid cash contingency reserve for financial emergencies. Or the firm could provide for employee bonuses, since their effort has yielded a profit for the firm. The income would be taxable to the firm anyway and the employee gain additional income while the firm reduces its tax liability. Strict billing procedures will enhance the cash flow of the firm and reduce the impact of the shortages. Some billing techniques are: 1) Develop the contractual agreement with clients to have monthly billings to compensate for the work performed during the month on the project. It benefits the firm in two basic ways: 1) The firm maintains a steady flow of monthly income. 2) The firm maintains a control over the delinquent payment of funds from the client and can stop work on a project prior to the expenditure of enormous manhours at cost to the office. For example, if the payments were received every three months the stop work would be three month's cost in manhours and materials to the firm instead of one month's cost. 2) Strict billing procedures should be maintained, bill monthly and have the cost of interest be calculated into delinquent payments. Consistent policy with delinquent accounts should defer the reputation of

being negligent on collections. Incentives for timely payment of billings for clients could be used. If paid early, the savings from the cost of financing the firm could be transferred to the client reducing his overall billing. This should encourage the prompt payment of billings and maintain a level of professionalism.

8. The small architectural firm must develop a sound marketing plan to aid the firm in the accomplishment of its goals. The architectural marketing plan consists of a firm establishing realistic goals and objectives; developing strategies and measures of performance; and a timetable of the accomplishment of the plan. The small firm with its limited resources cannot afford to waste time and effort on dead-end marketing plans. The marketing effort needs to be directed to the production of a cost effective plan. Aubrey Wilson states, "Planning of course is only one activity involved in running a business, but it is a key element. The plan itself and the process of planning gives direction, cohesion, and thrust to the enterprise. They provide an improved focus on objectives and targets and perhaps of equal importance, they stimulate heightened motivation to accomplishment."²⁰ Marketing research is needed to help develop the realistic marketing goals. The maximization of the marketing plan is provided when the plan is based upon a realistic interpretation of the existing markets and their potential development. For example, a firm would be wasting

effort to plan to capture a market which is declining and expends its effort more prudently in a rising market where opportunities are more available.

9. The small architectural firm must develop marketing strategies to enable the firm to put the marketing plans into action. The small architectural firm generally follows the strategy of a 'market nicher', seeking out markets which the large firms have ignored or not yet discovered. Philip Kotler describes the characteristics of an ideal market niche: "1) The niche is of sufficient size and purchasing power be profitable. 2) The niche has growth potential. 3) The niche has been passed or neglected by major competitors. 4) The firm has superior competencies to serve the niche effectively. 5) The firm can defend its position against attacking major because of the good will it has built up."²¹ The small architectural firm generally has a marketable edge in small scale architectural jobs. The large firms cannot justify the low revenues from the smaller jobs because of their high operating costs and the small firms can devote more attention to the clients in smaller projects. The small firm's advantage also is in the lower overhead and lower operating costs. Caution is needed in the selection of a marketing strategy. The marketing strategy needs to be compatible with the abilities and inclinations of the firm. William B. Foxhall states, "Professionals are selling a service, not an encyclopedia or vacuum cleaner. Each firm has to be extremely creative in developing that approach which is

exactly right for it, because a successful professional business development program is one that is molded to the unique personality of the firm."²² the strategies of the marketing plan requires the budgeting of the firm's resources. The budget is to be consistent with the overall determined expenditure projected for the marketing effort. For a one to eight person firm Stephen A. Klimet, AIA, states "(Growth-oriented firm or firm with a low work back log): 7-12 percent of the gross income covers the marketing effort. 75-90 percent of this covers salaries, and the balance goes for such expenses as travel, dues, typesetting, printing, limited outside photography consultants. Some 25 percent of marketing budget allocated to production of commercial materials, 75 percent to direct marketing. (Stable firm or firm with high work backlog) 4-6 percent of gross income for marketing effort."²³

10. The small architectural firm must select the appropriate marketing media and marketing techniques to enhance the accomplishment of the marketing plans. There are various marketing tools available for the architect. The choice of media reflects the best method to influence a prospective client's decision making process. The media also reflects the image and quality of the firm. The American Institute of Architects have placed certain professional ethical limits for advertising and the use of the media which are reasonable and should be complied with. The results of this thesis indicates a strong preference for personal contacts as the most used

marketing technique. A small architectural firm in Honolulu should prudently enhance this technique with supplemental techniques to enhance the effectiveness of personal contacts. Some of the available techniques are: 1) High identity exposure to create more client contacts. 2) Client maintenance techniques to reinforce the referral for more business. Includes follow-up phone calls and personal visits to establish complete client satisfaction. 3) Become publically involved in community associations and affairs. Especially those which incur high visibility for your participation. 4) Maintain a high standard of quality and deliver to the client the best product the firm can offer. There is no substitution for a reputation of excellence. 5) The maintenance of client records which records all of the marketing effort expended on a client and the record of the special characteristics of each clients job to be used as a reference for the firm. See Figure L: Client Records, it relates the total marketing effort by each project. It gives an idea of how many potentially good leads are in progress and what stage the marketing program is in.

CLIENT RECORDS:			
Prospective client: Mango Development Corp.		Date: December 1982	
President: Geoffrey Mango Jr.			
Type of Project	Description/Scope	Last Action Taken	Next Action Taken
Possible housing/residential development.	TMK # 9:14:03 30 units on 20 acre site. In speculation phase conditioned on sale of property to Mango Corp.	12/8 Referral Lunch meeting discussion of possible ideas for development of property.	12/10 Lunch meeting and client presentation/brochure on past housing projects.

FIGURE L: CLIENT RECORDS

Source: AIA, "Marketing Architectural Services". American Institute of Architects. Washington D.C., 1980, p. 11.

C. PERSONNEL MANAGEMENT RECOMMENDATIONS:

1. The principal of the small architectural firm is responsible for the leadership of the firm. The role of leader is necessary for the inspiration and motivation of the personnel to accomplish the business goals of the firm. The relative level of performance is enhanced through an inspiring leader who commits the firm and the principal's performance to a high standard of quality. The personal goals of the principal should align with the overall business goals of the firm. This will provide for a harmony of purpose by the administration of the firm's goals. The principal should assume personal responsibility for the attainment of success for the firm and not place the reason for failure in other reasons. The commitment to the achievement of the business goals is important for the overall morale of the firm and will inspire the commitment from the employees of the firm. The principal's role of leadership organizes the firm and should creatively approach the problems which occur for the business management of the firm. W.C.H. Prentice states, "A leaders job is to provide that recognition of roles and functions within a group that will permit each member to satisfy and fulfill some major motive or interest."²⁴
2. The organization of the small architectural firm, the chain of command, and the lines of communication should be clearly established and maintained. The distribution of authority and the responsibilities for each member of the firm would be

clearly defined to ease the anxiety of ambiguity of authority. In most small firms the principal of the firm controls every aspect of the firm's operations and makes most of the major management decisions about the firm. The establishment of a good rapport between members of the firm is necessary for a harmonious work environment and the opportunity for the principal to receive feedback on how the firm's operations may be improved. The encouragement of employee contribution for the development of the firm's efficiency can be substantially increased by providing the channels where feedback can be obtained. This can be introduced by allowing for informal meetings where the firm's problems could be discussed. The complete organization of the firm and the defining of responsibilities will also ease in the administration of projects in the firm. The better organized the firm, the better the overall efficiency and morale of the office.

3. The management of recruiting and terminations of employees is essential for the success of the personnel management of the small architectural firm. The recruitment of employees for the small firm should be done with caution. Alternative methods of meeting the man-power needs should be investigated. For example, instead of a full-time employee a firm may seek for a part-time worker to fill the temporary demand. The firm may also get a loaned employee from another firm and avoid the cost of benefits and a permanent position. The firm could also seek a person to be on a hired consultant basis and pay on an hourly

basis for their services provided. The small architectural firm should carefully screen the employee to ascertain the potential employee's personal professional goals and to check them against the goals of the firm. The potential employees professional goals should match the firm's goals. For example, if the employee was seeking a position which provides experience in planning and urban design and the company's goal was to drop out of that market, the goals are in obvious conflict. If the potential employee was hired there may be eventual dissent and frustration over the stagnation of the employees personal goals. The potential employee should also be researched in the contact of previous employers and references to confirm their overall impressions with your firm's impressions of the applicant. The compatability of the potential employee with the firm is paramount for the success of the firm. If the new employee causes disharmony in the firm it complicates the achievement of the overall high performance of the business. Terminations should be dealt with consistently and fairly. The employee if found not to be compatable through a 3 month probationary employment period should be terminated promptly and professionally without malice. The reason for the termination should be clearly defined and the situation drastic enough to demand a termination. The employee to be terminated has either developed personal goals contradictory to the goals of the firm, perpetrated poor performance continually and the possibility of retraining is not feasible at that time.

4. The small architectural firm must clearly define benefits, salaries, promotions, demotions, and employee performance incentives. The administration of employee incentives should be consistently applied and clearly defined. The principal of the firm should be actively involved in the administration of the incentives and in the evaluation of employee performance. The small architectural firm could choose from several types of employee performance incentives. The use of bonuses to inspire the employees to perform at a high level of efficiency in order for the higher realization of profit for a project not on an hourly contract. The profit is then shared with the employees at a proportionate rate to the relative level of contribution by each employee. The use of verbal commendation and written acknowledgement of the contribution of the employees who worked on a particular project can be done. Through an informal meeting or through any recognition given in the written publication of a project they were involved with in the office that was of exceptional merit. The use of verbal commendation should be handled judiciously, in order to have the commendation have more meaning than just protocol. The promotion of employees in title and responsibility provides for a strong incentive and promotes the delegation of tasks in the office. In this method the employee gains self-esteem and the office gains confidence in the development of more responsible personnel. The title promotion without any significant change in authority tends to reduce morale and reduce the credibility of the promotion. The costs to the firm needs to be measured as

the promotions often incur a higher operating cost for the firm, which must be compensated by the current and future income of the firm. The increase of employee benefits is also a significant incentive for good performance. The qualification of employment for a significant period of time may provide for pension or profit sharing plans for each employee who qualifies. Small Business Reporter states, "Small companies sometimes institute profit-sharing or stock ownership plans, which give employees rewards over and above their normal compensation. Such plans make long-time employees who identify closely with the company and its goals partners in the business."²⁵

5. The training and continued development of the employees must be a vital part of the personnel management of the small architectural firm. The small architectural firms must encourage the professional development of the employees. Several methods are available: 1) The small architectural firm could pay for a percentage or all of the fees for seminars and continuing education classes which enhance the further training of the employees. The firm could pay for in part or whole the membership of the employees with the AIA or any other professional society which encourages professionalism of the employees through fellowship with other professionals. The firm could set aside lunch meetings where discussion between junior members of the firm and the principal of the firm could take place. This could encourage a strong rapport between the

principal and the employees and provide for the employee's insight into the business management of the firm. The development of employees benefits the firm in several ways. The firm increases its personnel talent and experience through the continued training. It increases the personnel inventory of marketable skills. The development of the employees provide higher morale for the firm through the continued personal satisfaction of professional development. The genuine interest by management for the employees may also generate a sympathetic interest by the employee for the welfare of the firm, and develop more team spirit.

D. CONCLUSIONS

1. If the small architectural firms in Honolulu, Hawaii incorporate these recommendations provided by this thesis, they will be utilizing those basic elements fundamental for a successful business in Honolulu, Hawaii. The dynamics of architectural practice in Honolulu will require the modification and sophistication of the basic management techniques provided to evolve and grow with the practice of architecture in Honolulu over time.
2. The scarcity of architectural business management information noted in the research could be attributed to several possible reasons. First, the architects in practice may not be inclined to appreciate the importance of business management. Architects were not trained in their educational background to appreciate business management, instead the focus was on design and technical competence. Most of their business education presently consists of field experience. Field experience could be an advantage given the business experience of daily practice situations, but it could also perpetuate poor management practices. This is the danger of a reliance of management purely on field experience. As conditions change and management techniques do not adapt, they rapidly become ineffective and costly techniques. Perhaps part of the solution is to reinforce and train architectural students in the fundamentals of architectural business management in addition to design and

technical competency. For existing firms, the continued business management education should be encouraged and be part of the educational credit system that may be made mandatory for architects to renew their licensed status. Second, the professional competition between firms could have encouraged firms not to share their business management techniques for fear of losing their competitive edge in the job market. Possibly the solution is to have the architectural professional societies encourage the dissemination of business management information for the overall benefit of the profession at a greater extent than present levels. The sharing of techniques could provide an invaluable business information data bank which could provide pertinent business information for architectural practice in Hawaii. Finally, the scarcity of business information could be attributed to a scarcity of architectural business management experts available to produce business management information. The continuing education in business management for architects could be encouraged, the development of business management college night courses specifically addressing architectural business management could be developed. The strengthening of business management education in the architectural curriculum for architecture students could be developed to increase the overall level of business awareness in the profession.

APPENDIX A: LIST OF CATEGORIES

APPENDIX A: LIST OF CATEGORIES

FINANCIAL MANAGEMENT:

CATEGORIES:	DESCRIPTION:
1.	A fundamentally sound accounting system is needed for sound financial management.
2.	The accounting system should be a cash system.
3.	The accounting system should be an accrual system.
4.	The accounting system should utilize both an accrual and cash system of accounting.
5.	The accounting system should be a single entry system of accounting.
6.	The accounting system should be a double entry system of accounting.
7.	The accounting system should be understood and managed by the principal of the firm.
8.	The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
9.	Financial statements should be used to maximize financial management effectiveness.
10.	Strategic planning can be used to enhance the business management of a small architectural firm.
11.	Profit planning can be used to maximize the effectiveness of financial management.
12.	Financial ratios can be used as an effective means of evaluating a company's financial performance.
13.	Break-even analysis can be used to enhance the financial management of a firm.
14.	Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.
15.	A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.
16.	The costs should be allocated to their respective jobs for the identification of approximate costs for the firm to improve the financial management of the firm.
17.	Sound time management is needed, time card management and the breakdown of time into specific phases and tasks.
18.	Computer applications for business management is increasingly becoming a necessary tool for architectural business management.

LIST OF CATEGORIES:

MARKETING MANAGEMENT:

CATEGORIES:	DESCRIPTION:
19.	The identifying of a firm's strengths and weaknesses in a profile will help the firm assess its potential markets and aid in its managerial planning.
20.	The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.
21.	The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.
22.	The organization of the marketing plan is essential for its success. The use of various marketing organizational forms help organize the plan: marketing matrix, phone-call forms, and client records.
23.	The marketing plan should be scheduled, have a timetable of accomplishment for its goals, and a reasonable budget.
24.	The development of marketing strategies should enable the firm to put their marketing plans into action.
25.	The marketing media and marketing techniques should enhance the accomplishment of the marketing plans.
26.	The direct-mail marketing technique is an appropriate technique for a small architectural firm.
27.	The use of brochures is a marketing technique appropriate for small architectural firms.
28.	The hiring of marketing consultants and bird-dogging is an appropriate technique for a small architectural firm.
29.	The maintenance of clients, the cultivation of referral business, and the development of personal contacts is an appropriate marketing technique for a small architectural firm.
30.	The use of high identity exposure and a strong public relations program is an appropriate marketing technique for a small architectural firm.
31.	The maximization of interviews, client presentations, and interview strategies is appropriate for a small architectural firm.

LIST OF CATEGORIES:

PERSONNEL MANAGEMENT:

CATEGORIES:	DESCRIPTION:
32.	The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.
33.	The organization of the firm, the chain of command, and the lines of communication should be clearly established and maintained.
34.	The use of personnel manuals, job descriptions, and an organization chart will enhance the understanding of a firm's organization and personnel responsibilities.
35.	The delegation of control and decision making is essential for the efficient and profitable operation of a small architectural firm.
36.	The management of recruiting and terminations of employees is essential for the success of personnel management of the small architectural firm.
37.	The management of employee evaluations is a necessary part of personnel management.
38.	The utilization of employee logs or journals will enhance the evaluation of employees.
39.	Benefits, salaries, promotion, demotions, employee performance incentives should be clearly defined and a vital part of personnel management.
40.	The development and training of employees is necessary for a strong personnel management program.
41.	The proper assignment of tasks to appropriate abilities will enhance the efficiency and productivity of a firm.

APPENDIX B: FINDINGS CHARTS

FINDINGS CHART:

KEY:

0 = Not mentioned/ disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES:	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Klatt, Lawrence A., "Small Business Manage- ment: Essentials of Entrepreneurship."	2					1	2	1	2	2	2	2	2	2	2	2		
2. Kelly, Pearce, Clement, "How to Organize and Operate a Small Business"	2	1		2		1	2		2	2	2	2	2	2	2	2	2	
3. Osgood, William R., "Basics of Successful Business Planning"								2	2	2	2	2	2					
4. Lin, Robin, "Scientific Management of Small Business"										2		2						
5. Steinhoff, Dan, "Small Business Manage- ment Fundamentals."	2					2	2				2	2	2					
6. Day, William H., "Maximizing Small Business Profits with Precision Management"	2	1			2		2		2	1	1	2	1	1				
7. Burstiner, Irving, "The Small Business Handbook"	2					1	2		1	2		1	1					
8. Wortman, Leon A., "Successful Small Business Management"	1				1	1	2				2	2	1	2	1	1		
9. Petrov., John V., "Small Business Management"	2				1	2	1				2	2		2				
10. Cohn, Theodore, "Survival and Growth: Management Strategies For the Small Firm."	2					2		1	1	1			2	2				1

FINDINGS CHART:

KEY:

0 = Not mentioned/disagree

1 = mentioned

2 = mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES	FINANCIAL MANAGEMENT (cont.)																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
11. Becker, Benjamin, "The Family Owned Business"	2			2		2	2	1	2		2	2		1	2	1		
12. Steinmetz, Lawrence L. "Managing the Small Business"	2					2			2		2	2	2	2	2	1		
13. Friday, Bill, "Successful Manage- ment for the 1 to 10 Employee Business"	2						2	2	2		2		2					
14. Tate, Curtis E., "The Complete Guide to Your Own Business"	2					1	1	1	2	2	1	2	2	2	1		2	
15. Lock, Dennis "Guide to Management Techniques"												2			2			
16. Koontz, Harold, "Management"	1						1	1		2								
17. Tate, Curtis E., "Successful Small Business Management"	2						1	1	2	2	2	2	2	1	2	1		
18. Broom, Halsey, "Small Business Management"	2	1	2			2	2	2	2	1	1	1	1	1	1			
19. Pescov, Jerome K., "Encyclopedia of Accounting Systems"	2	2	1	2		2	2	2	2		2	1		1	2	1	2	
20. Kotler, Philip, "Marketing Management: Analysis, Planning, and Control"										2								
21. May, Mueller, Williams "A New Introduction to Financial Account- ing."	2	2	2	2		2	1	2	2			2		2	2			1

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
22. Sloma, Richard, "No-Nonsense Management: A General Manager's Primer" N.Y., MacMillan, c.1977																		
23. Stewart, Nathaniel, "Strategies of Managing for Results" London, Pitman, c.1967																		
24. Townsend, Robert, "Up the Organization" N.Y. Knopf, c.1970							1											1
25. Rubey, Logan, "The Engineer and Professional Management" Columbia, Missouri, Artcraft Press, c.1963	2					2	2	2	2			2	2			2		
26. Hayes, Baker, "Simplified Accounting for Non-Accountants" N.Y., John Wiley and Sons, c. 1980	2	2				2	1	2	2		2	2		1	2			
27. Dixon, Robert, "The Executives Accounting Primer" N.Y., MacGraw Hill, c.1971	2	1				2		2	2		2		2	2	2		2	
28. Hayes, Baker, "Accounting for Small Manufacturers" N.Y., John Wiley and Sons, c. 1980	2					1		1	2		2		1	2	2			
29. Brannen, William M. "Successful Marketing for Your Small Business" N.J., Englewood Cliffs, Prentice Hall Inc., c. 1978																		

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/ Disagree
- 1 = Mentioned
- 2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES:	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
30. Baker, Alton W., "Personnel Management in Small Plants" Columbus, Bureau of Business Research, College of Commerce and Administration, Ohio State University, c. 1955																		
31. Rimler, Humphreys, "Small Business: Developing the Winning Management Team." N.Y., AMACOM, c. 1980.										2								
32. Klatt, Murdick, Schuster, "Human Resources Management", Homewood Ill., Richard D. Irwin Inc.																		
33. Killian, Ray A., "Managers Must Lead" N.Y., AMACOM, c.1979																		
34. Roxe, Linda A., "Personnel Management for the Smaller Company", N.Y., AMACOM, c. 1979																	2	
35. Strauss, Sayles, "Personnel: The Problems of Management" N.J., Englewood Cliffs, Prentice Hall Inc., c. 1972																		
36. McDonald, James O., "Management without Tears: A Guide to Coping with Everyday Organizational Problems" Chicago, Ill., Crain Books, c. 1981																		1

FINDINGS CHART

KEY:

0 = Not Mentioned/ Disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES:	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
37. Dible, Donald M., "Up Your Own Organization", Reston, Virginia, Reston Publishing Co., c. 1974								2	2			1		2				
38. Barndt, Carvey, "Essentials of Operations Manage- ment", N.J., Englewood Cliffs, Prentice Hall Inc., c. 1982										2			2				2	
39. Bank of America, "Small Business Reporter", San Francisco, CA, Bank of America c. 1982	2							2	2			2	2	2	2			

FINDINGS CHART:

KEY:

0 = Not mentioned/disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES	MARKETING MANAGEMENT												
	19	20	21	22	23	24	25	26	27	28	29	30	31
1 Klatt, Lawrence A.	1	1	1			2	2	1					1
2 Kelly Pierce, Clement							1						
3 Osgood, William H.	2	2	2			2	2						
4 Lin, Robin,	2	2											
5 Steinhoff, Dan		2					1						
6 Ray, William H.,	1	2	1				1						
7 Burstiner, Irving,	1	2	1										
8 Wortman, Leon A.	1	2	1										
9 Petrov , John V.,	2	2	2			2	2						
10 Cohn, Theodore,	2	2					1						
11 Becker, Benjamin,	2	2	1					1					
12 Steinmetz, Lawrence,	2	2	1				1	1					
13 Friday, Bill,		2						2					
14 Tate, Curtis E.,	2	2	2			2	2	2					
15 Lock, Dennis,	2	2	2			2	2	2					
16 Koontz, Harold,	1	1	1			1	1	1					
17 Tate, Curtis E.,	2	2	2			2	2	2					
18 Broom, Halsey,	2	1	1				1	1					
19 Pascoe, Jerome K.			1										
20 Kotler, Philip	2	2	2	2	2	2	2	2	2				
21 Kay, Mueller, Williams,													
22. Sloma, Richard,													
23. Stewart, Nathaniel,													

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES	MARKETING MANAGEMENT:												
	19	20	21	22	23	24	25	26	27	28	29	30	31
24. Townsend, Robert	2	2	2										
25. Rubey, Logan		2						2				1	
26. Hayes, Baker	2	2	1										
27. Dixon, Robert													
28. Hayes, Baker													
29. Brannen, William H.	1	2	1	2		2	2	1	1	1	1	1	
30. Baker, Alton W.													
31. Rimler, Humphreys		2											
32. Klatt, Murdick, Schuster													
33. Killian, Ray A.,													2
34. Rixe, Linda A.													
35. Strauss, Sayles													
36. McDonald, James O.													
37. Dible, Donald M.	2	1	1		1	2	1	1					
38. Brandt, Carvey	1												
39. Bank of America	1	1	1	1	1		2	2					

FINDINGS CHART:

KEY:

C = Not Mentioned/disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES	PERSONNEL MANAGEMENT:									
	32	33	34	35	36	37	38	39	40	41
1 Klatt, Lawrence A.	2	1	1		1			1	1	
2 Kelly, Pierce, Clement	2	2		2	2				2	2
3 Osgood, William H.		2			2					
4 Lim, Robin	2									
5 Steinhoff, Dan	2	2	1	1	1				1	1
6 Day, William H.	2				2	1	1	2	2	
7 Burstiner, Irving	2	1	2		2				2	2
8 Wortman, Leon	1				2	1		1	1	
9 Petrov, John V.,	2	1		1	1	1	2	2	2	2
10 Cohn, Theodore	2	1		2	1	1	1	1	1	1
11 Becker, Benjamin,	2	1		1	1			1	1	1
12 Steinmetz, Lawrence	2	1	2	1	2	1	1	1	2	
13 Friday, Bill	2			1	2	1		2	2	2
14 Tate, Curtis E.	2	2	2	2	2	2	2	1	1	2
15 Lock, Dennis	2	2	2	2	2	2	2	2	2	2
16 Koontz, Harold	2	2	2	2	2	2	2	2	2	2
17 Tate, Curtis E.	1	1		1	2			2	2	2
18 Broom, Halsey	2	2			2	1		2	2	1
19 Pescow, Jerome K.					1					1
20 Kotler, Philip										
21 May, Mueller, Williams										
22 Slona Richard	2	1		2	2	2		2	2	2
23 Stewart, Nathaniel	2	2		2	2	1		2	2	2

Findings Chart

KEY:

0 = Not Mentioned/ Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES	PERSONNEL MANAGEMENT:										
	32	33	34	35	36	37	38	39	40	41	
24. Townsend, Robert	2	2	2	2	2			2	2	2	
25. Rubey, Logan	2	2	2		2	2		2	2		
26. Hayes, Baker		2									
27. Dixon Robert											
28. Hayes, Baker											
29. Brannen, William H.											
30. Baker, Alton W.	1	2	2	1	2	2	2	2	2	1	
31. Rimler, Humphreys	2	2		2	2	2			2		
32. Klatt, Murdick, Schuster	2	2	1	1	2	2		2	2	1	
33. Killian, Ray A.,	2	2		2		2	1	2	2	2	
34. Rixe, Linda A.	1	2		1	2	1		2	2	1	
35. Strauss, Sayles	2	2		2	2	2		2	2	1	
36. McDonald, James O.	2			2	2	2		2	2		
37. Dible, Donald M.	2	1			1						
38. Brandt, Carvey						1		1	1		
39. Bank of America	2	2	2	2	2		1	2	2	1	

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/disagree
- 1 = Mentioned
- 2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Hunt, William Dudley, "Comprehensive Architectural Services: General Principles and Practice."										1	1							
2. McLaughlin, Robert William, "Architect: Creating Man's Environment"							1											
3. Coxe, Weld, "Marketing Architectural and Engineering Services"																		
4. Piper, Robert J., "Opportunities in an Architectural Career"																	1	
5. Glass, Koehler, "Current Techniques in Architectural Practice"	2	1	1	1		2	2	2	2	2	2			1	1	2	2	2
6. Guidelines Publications, "Architectural Management"														2	2	2	2	
7. Guidelines Publications, "Architectural Promotion"																		
8. Jones, Gerre L., "How to Market Professional Design Services."																		
9. Rossman, Wendell E., "The Effective Architect"															2	2	2	
10. Jones, Gerre L., "Public Relations for the Design Professional"																		
11. Foote, Rosalyn F., "Running an Office for Fun and Profit"	2	2	2	2	2		2	2	2		2			2	2	2	2	
12. The American Institute of Architects, "The AIA Handbook Handbook of Professional Practice"	2	1	1	2				2	2						2			1
13. Coxe, Weld, "Managing Architectural and Engineering Practice"	2			2		2	2	1	2		2			2	1			2

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
14. Foxhall, William B. <u>"Techniques of Successful Practice: For Architects and Engineers"</u>	1					1		2	2		2			2	2			2
15. Cooper, David G., <u>"Architectural and Engineering Salesmanship"</u>																		
16. AIA., <u>"Compensation Guidelines for Architectural and Engineering Services"</u>															1	2	1	1
17. Mattox, Robert F., <u>"Financial Management for Architects"</u>	2	1	1	2		2	2	1	2	1	2	2	1			2	2	
18. AIA, Case and Company, <u>"Profit Planning in Architectural Practice"</u>											2					2	2	
19. AIA, <u>"Emerging Techniques of Architectural Practice"</u>	1	1		1				2	1				1					2
20. AIA, <u>"Personnel Practices Handbook"</u>																2		
21. AIA, <u>"Standardized Accounting for Architects"</u>	2			2		2	2	2	2			2		1	2	2	2	

FINDINGS CHART:

KEY:
 0 = Not Mentioned/ disagree
 1 = Mentioned
 2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:	MARKETING MANAGEMENT												
	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Hunt, Dudley William	1	1											
2. McLaughlin, Robert William								1			1	1	1
3. Cox, Weld	1	2	2		1	2	2	2	2	2	2	2	2
4. Piper, Robert J.,													
5. Class, Koehler,	2	2	1				1		2		2	2	1
6. Guidelines Publication		1											
7. Guidelines Publication							1	2	2		2	2	1
8. Jones, Gerre L.	2	2	2	2	1	2		2	2	2	2	2	2
9. Rossman, Wendell E.									2			2	2
10. Jones, Gerre L.	2	2					2					2	2
11. Foote, Rosslyn F.,	2	2					1		2		2	1	
12. AIA	2	2	2	2	2	2	2	1	2	2	2	2	2
13. Cox, Weld	2	2	2	2	2	2	1						
14. Foxhall, William B.	2	2	2	1		1					1	1	1
15. Cooper, David G.	1			2		1	2		2		2	2	2
16. AIA													
17. Mattox, Robert F.	1	2											
18. AIA, Case and Company													
19. AIA	1	1								1	1		
20. AIA	2												
21. AIA													

FINDINGS CHECK:

KEY:

- 0 = Not Mentioned/ Disagree
- 1 = Mentioned
- 2 = Mentioned with emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:	PERSONNEL MANAGEMENT:									
	32	33	34	35	36	37	38	39	40	41
1. Hunt, Dudley William	/	/	/			/		/	/	/
2. McLaughlin, Robert William										
3. Cox, Weld,	/	/								/
4. Piper, Robert J.	/	/		/						/
5. Glass, Koehler	2	2	2	1	2	1		1	1	2
6. Guidelines Publication	2	2		2		2	1	1	1	
7. Guidelines Publication										
8. Jones, Gerre L.										
9. Rosman, Wendell E.										
10. Jones, Gerre L.										
11. Foote, Roslyn F.,	2				2	1		2	2	
12. AIA,	2	2	2		2			2	2	2
13. Cox, Weld	2	1	2		2			2	2	2
14. Foxhall, William B.	2	1			2	1			2	2
15. Cooper, David G.										
16. AIA.										
17. Mattox, Robert F.		/								
18. AIA, Case and Company										
19. AIA	/		/		/			/	/	
20. AIA	/	/	2		2	2	2	2	2	1
21. AIA										

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. " <u>Internal Control for Small Businesses</u> ", Grollman, W.K., and Colby, R.W., The Journal of Accountancy, 146:64-70'78.	1							1						1	1			
2. " <u>Management Information for the Small Business</u> " Fuller, D., Accountancy, 89:58-9, Ap'78								1	2					2				
3. " <u>Planning in the Medium Size Company</u> ", Lierheller, C.A., Managerial Planning, 28:16-19, Ja'80										2	2							
4. " <u>How to Set Up an Accounting System for Small Business</u> ", Abdelsamad, M.H., and Sperry, J.B., Management World, 6:3-6, O'77	2	2		2		2	2	2						2				
5. " <u>Preventive Management in the Smaller Firm</u> ", Kagerer, R.L., Supervisory Management, 24:38-41, S'79																		
6. " <u>Management Strategies for Small Companies</u> " Woodward, H.N., Harvard Business Review, 54:113-21, Ja'76									2				1	2	2			
7. " <u>Performance Measures for Small Business</u> ", Edmunds, S.W., Harvard Business Review, 57:172-4, Ja'79											2			2				

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. "Internal Control for Small Businesses", Grollman, W.K., and Colby, R.W., The Journal of Accountancy, 146:64-70'78.	1						1							1	1			
2. "Management Information for the Small Business" Fuller, O., Accountancy, 89:58-9, Ap'78							1	2						2				
3. "Planning in the Medium Size Company", Lierheller, C.A., Managerial Planning, 28:16-19, Ja'80										2	2							
4. "How to Set Up an Accounting System for Small Business", Abdelsamad, M.H., and Sperry, J.B., Management World, 6:3-6, 0'77	2	2		2		2	2	2						2				
5. "Preventive Management in the Smaller Firm", Kagerer, R.L., Supervisory Management, 24:38-41, S'79																		
6. "Management Strategies for Small Companies" Woodward, H.N., Harvard Business Review, 54:113-21, Ja'76									2				1	2	2			
7. "Performance Measures for Small Business", Edmunds, S.W., Harvard Business Review, 57:172-4, Ja'79												2			2			

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
8. "How to Make Strategic Planning Work for Small Businesses" Naor, J., SAM Advanced Management Journal, J45:35-9, Winter '80										2								
9. "Why Small Businesses Fail" Abdelsamad, M.H. and Kindling, A.T., SAM Advanced Management Journal, 43:24-32, Spring '78	2																	
10. "Large-Firm Forecasting Techniques Can Improve Small Business Decision Making" Timmins, S.A., and Fraker, M.C., and Brown, J., Journal of Small Business Management, 17:14-18, J1 '79									2			1						
11. "Forecasting and Small Business: Study of the Strategic Planning Process", Robinson, R., Journal of Small Business Management, 17:19-27, J1 '79									2									
12. "The Management Process in 3-D" Mackenzie, A.R., Harvard Business Review, 47:80-87, Nov.-Dec. 1969									1									
13. "Project Management for an Architectural Firm" Wilson, T.M., and Stone, D.R., Management Accounting, 62:23-8, Oct '80									2		1					1		

FINDINGS CHART:

KEY:
 0 = Not Mentioned/Disagree
 1 = Mentioned
 2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
14. " <u>Controlling the Cost of Architectural Services</u> ", Metzger, H.G. Industrial Development, 149:19-20, Jl/Ag'80							1											
15. " <u>Small Company Grows with Cost Management</u> " Bennet, K.W., Iron Age, 216:30 S'22'75															2	2		2
16. " <u>Managing Financial Statements-Image and Effect</u> " Harvard Business Review, 59: 180-2, Mr-Ap'81							2	2	2									
17. " <u>The Cash Breakeven Point as a Tool for Small Business Analysis</u> " Belt, B., Journal of Small Business Management, 16: 27-34, Ap'78													2					
18. " <u>An Input-Output Approach to Practical Small Business Planning</u> " Auken, P.M. and Ireland, R.D., 18:44-50, Ja'80										2								
19. " <u>Financial Ratio Analysis for the Small Business</u> " Patrone, F.L., and duBois, D., 19:35-60, Ja'81												2						
20. " <u>The Ten Commandments of Small Business Computerization</u> " 19:61-67, Ap'81																		2

FINDINGS CHART:

KEY:
 0 = Not Mentioned/ Disagree
 1 = Mentioned
 2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
21. "Important Contingencies in Small Firm Planning" Robinson, B.R., and Littlejohn, W.F., 19:45- '48, July '81										2								

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS	MARKETING MANAGEMENT												
	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Grollman, W.K. , and Colby, R.W.													
2. Fuller, D.													
3. Lierheller, C.A.													
4. Abdelsamad, M.H., and Sperry, J.B.													
5. Kagerer, R.L.													
6. Woodward, H.N.													
7. Edmunds, S.W.													
8. Naor, J.		2	2										
9. Abdelsamad, M.H., and Kindling, A.T.		2											
10. Timmins, S.A., Fraker M.C., and Brown, J.													
11. Robinson, R.													
12. Mackenzie, A.R.,		1	1		1								
13. Wilson, T.M., and Stone, D.R.													
14. Metzger, H.G.													
15. Bennet, K.W.													
16. Stancill, J.M.													
17. Belt, B.													
18. Auken, P.M. and Ireland, R.D.													
19. Patrone, F.L. and duBois, D.													
20. Greenwood, F.													
21. Robinson, B.R., and Littlejohn, W.F.													

FINDINGS CHART:

KEY:

0 = Not mentioned/disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS:	PERSONNEL MANAGEMENT:									
	32	33	34	35	36	37	38	39	40	41
1. Grollman, W.K. and Colby, R.W.	2									
2. Fuller, D.										
3. Lierheller, C.A.										
4. Abdelsamad, M.H. and Sperry, J.B.										
5. Kagerer, R.L.	2	2			2		2	2	2	
6. Woodward, H.N.										
7. Edmunds, S.W.										
8. Naor J.										
9. Abdelsamad, M.H., and Kindling, A.T.	2		2					2		
10. Timmins, S.A., Fraker, M.C., and Brown, J.	1									
11. Robinson, R.										
12. Mackenzie, A.R.	1	1	1	1	1			1	1	1
13. Wilson, T.M., and Stone, D.R.										
14. Metzger, H.G.	1									
15. Bennet, K.W.										
16. Stancill, J.H.										
17. Belt, B.										
18. Auken, P.M. and Ireland, R.D.										
19. Patrone, F.L. and duBois, D.										
20. Greenwood, F.										
21. Robinson, B.R. and Littlejohn, W.F.										

FINDINGS CHART:

KEY:

0 = Not mentioned/disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. "Architects Brochures", Johnson, D.A., AIA Journal, p.50, May 1975																		
2. "Advertising, How To", Edelson, A.H., AIA Journal, p.54, Dec. 1978																		
3. "Getting the Most Out of an Office Brochure", Ludwig, M.E., AIA Journal, P.82, May 1977.																		
4. "Managing your Marketing Communications Program", Architectural Record, P. 77-9, May 1977																		
5. "Computer-Based Financial Management", Harper, G.N., AIA Journal, Dec. 1972																		2
6. "A User's View of Computer- Based Financial Management" Piven, P., AIA Journal, J1'75																		2
7. "The Architect as Businessman: Moving Beyond the Crisis of Confidence" LePatner, B.B., Architectural Record, p.63-6 Apr 1982									1					1				
8. "Marketing: Winning Proposals for Commercial Work and Any Other Type as Well", Burden, C., Architectural Record, P.45-7 Oct. '82																		
9. "Management: How to Run a Ten- Person Firm.. Advice From Two Giants Who Used To", Meathe, P., and Heery, G. Architectural Record, p.41-43, Aug. '82									1						2			
10. "SMPS Annual Award Winners Show the State of Art in Market- ing" Smith, H.L., P.29-31, Nov. '82																		

FINDINGS CHART:

KEY:

0 = Not Mentioned/Disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	FINANCIAL MANAGEMENT:																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
11. "Management Strategies for Survival in Today's Difficult Economy" Hoyt, C.K., Architectural Record, p.29-33, June '82																		
12. "Management: Strategies for Survival" Hoyt, C.K., Architectural Record, p.43-5, Feb. '83									1	2				2				2
13. "Marketing: What are the Agressive Firms Going to get their Share of the Design Work?", Burden, E. p.47-9, Feb. '83																		2

FINDINGS CHART:

KEY:

0 = Not Mentioned/Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS:	MARKETING MANAGEMENT:												
	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Johnson, D.A.									2				
2. Edelson, A.H.		2			2		2						
3. Ludwig, M.E.									2				
4. Klimet, S.A.													
5. Harper, G.N.													
6. Piven, P.													
7. LePatner, B.B.	1												
8. Burden, E.			1			1					2	2	
9. Meathe, P. and Heery, G.	1								1			1	
10. Smith, H.L.							2	2	2		1		
11. Hoyt, C.K.	1									1		2	
12. Hoyt, C.K.													
13. Burden, E.							1	2	2	1	2	2	1

FINDINGS CHART:

KEY:

- 0 = Not Mentioned/Disagree
- 1 = Mentioned
- 2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	PERSONNEL MANAGEMENT:									
	32	33	34	35	36	37	38	39	40	41
1. Johnson, D.A.										
2. Edelson, A.H.										
3. Ludwig, M.E.										
4. Klimet, S.A.										
5. Harper, G.N.										
6. Piven, P.										
7. LePatner, B.B.	1									
8. Burden, E.										
9. Meathe, P. and Heery, G.	2				2					
10. Smith, H.L.										
11. Hoyt, C.K.	2									
12. Hoyt, C.K.										
13. Burden, E.										

APPENDIX C: FINDINGS SUMMARY CHARTS TYPE I

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not Mentioned/Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:

FINANCIAL MANAGEMENT: CATEGORY	0	%	1	%	2	%	1 or 2	%
1.	13	.63	2	.09	6	.29	8	.37
2.	16	.76	4	.19	1	.05	5	.24
3.	17	.81	3	.14		.05	4	.19
4.	14	.66	2	.10	5	.24	7	.34
5.	19	.90		0	2	.10	2	.10
6.	16	.76	1	.05	4	.19	5	.24
7.	16	.76		0	5	.24	5	.24
8.	12	.58	3	.14	6	.28	9	.42
9.	13	.63	1	.05	7	.33	8	.37
10.	18	.85	2	.10	1	.05	3	.15
11.	14	.67	1	.05	6	.28	7	.33
12.	19	.90		0	2	.10	2	.10
13.	20	.95	1	.05		0	1	.05
14.	14	.67	3	.14	4	.19	7	.33
15.	12	.58	3	.14	6	.28	9	.42
16.	12	.58			9	.42	9	.42
17.	14	.67		0	7	.33	7	.33
18.	14	.67	3	.14	4	.19	7	.33

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY

0 = Not Mentioned/Disagree

1 = Mentioned

2 = Mentioned with emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:								
MARKETING MANAGEMENT: CATEGORY	0	%	1	%	2	%	1 or 2	%
19.	8	.38	6	.28	7	.32	13	.62
20.	9	.43	3	.14	9	.43	12	.57
21.	15	.71	1	.05	5	.24	6	.29
22.	16	.76	1	.05	4	.19	5	.24
23.	17	.81	2	.10	2	.10	4	.19
24.	15	.71	2	.10	4	.19	6	.29
25.	13	.62	4	.19	4	.19	9	.39
26.	16	.76	2	.10	3	.14	5	.24
27.	13	.62	2	.10	8	.37	9	.39
28.	17	.81	1	.05	2	.10	4	.19
29.	11	.52	3	.14	7	.33	10	.48
30.	10	.48	3	.14	3	.14	11	.52
31.	11	.52	2	.10	6	.29	10	.48

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not mentioned

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES:

FINANCIAL MANAGEMENT: CATEGORY	0	%	1	%	2	%	1 or 2	%
1.	18	.46	1	.03	20	.51	21	.54
2.	32	.82	4	.10	3	.08	7	.18
3.	36	.92	1	.03	2	.05	3	.08
4.	36	.92	0	0	5	.08	3	.08
5.	33	.97	1	.03	1	.03	1	.03
6.	25	.64	3	.13	9	.23	14	.36
7.	22	.56	3	.12	9	.23	17	.44
8.	22	.56	8	.21	9	.23	17	.44
9.	15	.46	1	.03	20	.51	21	.54
10.	29	.74	2	.05	3	.08	10	.26
11.	24	.62	4	.10	11	.28	15	.38
12.	17	.44	5	.12	17	.44	22	.56
13.	23	.49	2	.05	14	.36	16	.41
14.	18	.46	3	.13	13	.33	21	.54
15.	20	.52	4	.10	15	.38	19	.48
16.	23	.72	6	.15	5	.12	11	.27
17.	33	.85	1	.03	5	.12	6	.15
18.	33	.85	4	.10	2	.05	6	.15

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not mentioned

1 = Mentioned

2 = Mentioned with emphasis

MARKETING MANAGEMENT:

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES:								
CATEGORY	0	%	1	%	2	%	1 or 2	%
19.	17	.44	8	.20	14	.36	21	.56
20.	15	.37	4	.10	20	.53	24	.63
21.	19	.49	13	.33	7	.18	20	.51
22.	36	.93	1	.03	2	.06	3	.07
23.	29	.75	3	.07	7	.18	10	.25
24.	23	.59	7	.18	9	.23	16	.41
25.	26	.67	6	.15	7	.18	13	.32
26.	34	.87	2	.06	3	.07	5	.13
27.	37	.94	1	.03	1	.03	2	.06
28.	33	.97	1	.03	-	-	1	.03
29.	33	.97	1	.03	-	-	1	.03
30.	35	.90	3	.07	1	.03	4	.10
31.	39	.95	-	-	-	-	-	-

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not Mentioned/ Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT SOURCES:								
PERSONNEL MANAGEMENT: CATEGORY:	0	%	1	%	2	%	1 or 2	%
32.	9	.23	4	.10	26	.67	30	.77
33.	12	.31	9	.23	13	.46	27	.69
34.	27	.69	3	.08	9	.23	12	.31
35.	16	.41	10	.26	13	.33	23	.59
36.	9	.23	7	.18	23	.59	30	.77
37.	13	.46	10	.26	1	.03	21	.54
38.	21	.74	5	.13	5	.13	0	.00
39.	14	.36	7	.18	18	.46	23	.59
40.	11	.28	7	.18	22	.56	29	.74
41.	17	.44	10	.26	12	.31	22	.56
PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT SOURCES:								
PERSONNEL MANAGEMENT: CATEGORY:	0	%	1	%	2	%	1 or 2	%
32.	10	.46	5	.24	6	.29	11	.52
33.	11	.52	7	.33	3	.14	10	.48
34.	15	.71	2	.10	4	.19	6	.29
35.	18	.86	2	.10	1	.05	3	.14
36.	14	.67	1	.05	6	.29	7	.33
37.	15	.71	4	.19	2	.10	6	.29
38.	19	.90	1	.05	1	.05	2	.10
39.	13	.62	4	.19	4	.19	8	.39
40.	12	.57	4	.19	5	.24	9	.43
41.	13	.62	4	.19	4	.19	8	.39

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not Mentioned

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS

FINANCIAL MANAGEMENT: CATEGORY:	0	%	1	%	2	%	1 or 2	%
1.	18	.86	1	.05	2	.09	3	.14
2.	20	.95	-	-	1	.05	1	.05
3.	21	1.00	-	-	-	-	-	-
4.	20	.95	-	-	1	.05	1	.05
5.	21	1.00	-	-	-	-	-	-
6.	21	1.00	-	-	-	-	-	-
7.	18	.86	1	.05	2	.09	3	.14
8.	17	.81	2	.09	2	.09	4	.19
9.	17	.81	-	-	4	.19	4	.19
10.	14	.67	1	.05	6	.28	7	.33
11.	18	.86	1	.05	2	.09	3	.14
12.	20	.95	-	-	1	.05	-	.05
13.	18	.86	2	.09	1	.05	3	.14
14.	17	.81	1	.05	3	.14	4	.19
15.	17	.81	2	.09	2	.09	4	.19
16.	20	.95	-	-	1	.05	1	.05
17.	21	1.00	-	-	-	-	-	-
18.	20	.95	-	-	1	.05	1	.05

FINDINGS SUMMARY CHART TYPE I : NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not Mentioned/Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS:

MARKETING MANAGEMENT: CATEGORIES:	0	%	1	%	2	%	1 or 2	%
19.	18	.86	1	.05	2	.09	3	.14
20.	19	.91	1	.05	1	.05	2	.09
21.	21	1.00						-
22.	21	1.00						-
23.	20	.95	1	.05			1	.05
24.	21	1.00						-
25.	21	1.00						-
26.	21	1.00						-
27.	21	1.00						-
28.	21	1.00						-
29.	21	1.00						-
30.	21	1.00						-
31.	21	1.00						-

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not mentioned/Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS:

FINANCIAL MANAGEMENT: CATEGORY:	0	%	1	%	2	%	1 or 2	%
1.	13	1.00	-					
2.	13	1.00	.					
3.	13	1.00						
4.	13	1.00						
5.	13	1.00						
6.	13	1.00						
7.	13	1.00						
8.	12	.92	1	.08	-	-	1	.13
9.	11	.85	2	.15	-	-	2	.15
10.	12	.92	-	-	1	.08	1	.08
11.	13							
12.	13							
13.	13							
14.	10	.77	1	.08	2	.15	3	.23
15.	13							
16.	13							
17.	13							
18.	9	.69	-	-	4	.31	4	.31

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not Mentioned/Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS

MARKETING MANAGEMENT:								
CATEGORIES:	0	%	1	%	2	%	1 or 2	%
19.	10	.77	3	.23	-		5	.23
20.	12	.92	-		1	.08	1	.08
21.	12	.92	1	.08	-		1	.08
22.			-		-		-	
23.	12	.92	-		1	.08	1	.08
24.	12	.92	1	.08	-		1	.08
25.	10	.77	1	.08	2	.15	3	.23
26.	11	.85	-		2	.15	2	.15
27.	6	.46	1	.08	4	.31	5	.36
28.	11	.85	2		-		2	.15
29.	10	.77	1		2	.15	3	.23
30.	10	.77	1		2	.15	3	.23
31.	11	.85	1	.08	1	.08	2	.15

FINDINGS SUMMARY CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

KEY:

0 = Not Mentioned/ Disagree

1 = Mentioned

2 = Mentioned with Emphasis

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS:

PERSONNEL MANAGEMENT:								
CATEGORIES	0	%	1	%	2	%	1 or 2	%
32.	15	.71	3	.14	3	.14	6	.29
33.	20	.95	1	.05	-	-	1	.05
34.	19	.91	1	.05	1	.05	2	.09
35.	19	.91	1	.05	1	.05	2	.09
36.	20	.05	1	.05			1	.05
37.	20	.95	-	-	1	.05	1	.05
38.	21	1.00			-	-	-	-
39.	19	.91	1	.05	1	.05	2	.09
40.	18	.86	1	.05	2	.09	3	.14
41.	19	.91	1	.05	1	.05	2	.09

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS:

PERSONNEL MANAGEMENT:								
CATEGORIES:	0	%	1	%	2	%	1 or 2	%
32.	10	.77	1	.08	2	.15	3	.23
33.	13							
34.	13							
35.	13							
36.	12	-	-	-	1	.08	1	.08
37.	13							
38.	13							
39.	13							
40.	13							
41.	13							

APPENDIX D: FINDINGS SUMMARY CHARTS TYPE II

FINDINGS SUMMARY CHART TYPE II: WEIGHTED RESPONSE (1 + 2)

ARCHITECTURAL BUSINESS MANAGEMENT READINGS (Total of 21 Entries)

FINANCIAL MANAGEMENT

CATEGORIES (1 + 2) AVERAGE (Total Score/Total Entries)

1.	14	.67
2.	6	.28
3.	5	.24
4.	12	.57
5.	4	.19
6.	9	.42
7.	10	.48
8.	15	.71
9.	15	.71
10.	4	.19
11.	13	.62
12.	4	.19
13.	1	.05
14.	11	.52
15.	15	.71
16.	18	.86
17.	14	.67
18.	11	.52

MARKETING MANAGEMENT

CATEGORIES (1 + 2) AVERAGE

19.	20	.95
20.	21	1.00
21.	11	.52
22.	9	.42
23.	6	.28
24.	10	.48
25.	12	.57
26.	8	.38
27.	16	.76
28.	7	.33
29.	17	.81
30.	19	.90
31.	16	.76

PERSONNEL MANAGEMENT

CATEGORIES (1 + 2) AVERAGE

32.	17	.81
33.	13	.62
34.	10	.48
35.	4	.19
36.	13	.62
37.	8	.38
38.	3	.14
39.	12	.57
40.	14	.67
41.	12	.57

FINDINGS SUMMARY CHART TYPE II: WEIGHTED RESPONSE(1 + 2)

PRIMARY SMALL BUSINESS MANAGEMENT READINGS
(Total of 39 entries)

FINANCIAL MANAGEMENT
CATEGORIES (1 + 2) AVERAGE(Total Score/Total Entries)

1.	41	1.05
2.	10	.26
3.	5	.13
4.	6	.15
5.	2	.05
6.	23	.59
7.	26	.67
8.	26	.67
9.	41	1.05
10.	18	.46
11.	26	.67
12.	39	1.00
13.	30	.77
14.	34	.87
15.	34	.87
16.	16	.41
17.	11	.28
18.	8	.20

MARKETING MANAGEMENT
CATEGORIES (1 + 2) AVERAGE

19.	36	.92
20.	44	1.13
21.	27	.69
22.	5	.13
23.	17	.44
24.	25	.64
25.	20	.51
26.	8	.20
27.	3	.08
28.	1	.03
29.	1	.03
30.	5	.13
31.	-	-

PERSONNEL MANAGEMENT
CATEGORIES (1 + 2) AVERAGE

32.	56	1.44
33.	45	1.15
34.	21	.69
35.	36	.92
36.	53	1.35
37.	32	.82
38.	15	.38
39.	43	1.10
40.	51	1.31
41.	34	.87

FINDINGS SUMMARY CHART TYPE II: WEIGHTED RESPONSE(1 + 2)

PRIMARY SMALL BUSINESS MANAGEMENT JOURNALS
(Total of 21 entries)

FINANCIAL MANAGEMENT
CATEGORIES: (1 + 2) AVERAGE(Total score/Total Entries)

1.	5	.24
2.	2	.09
3.	-	-
4.	2	.09
5.	-	-
6.	-	-
7.	5	.24
8.	6	.29
9.	8	.38
10.	13	.62
11.	3	.14
12.	2	.09
13.	4	.19
14.	7	.33
15.	6	.29
16.	2	.09
17.	-	-
18.	2	.09

MARKETING MANAGEMENT
CATEGORIES: (1 + 2) AVERAGE

19.	5	.24
20.	3	.14
21.	-	-
22.	-	-
23.	1	.05
24.	-	-
25.	-	-
26.	-	-
27.	-	-
28.	-	-
29.	-	-
30.	-	-
31.	-	-

PERSONNEL MANAGEMENT
CATEGORIES (1 + 2) AVERAGE

32.	9	.43
33.	1	.05
34.	3	.14
35.	3	.14
36.	2	.09
37.	3	.14
38.	-	-
39.	3	.14
40.	5	.24
41.	3	.14

FINDINGS SUMMARY CHART TYPE II: WEIGHTED RESPONSE(1 + 2)

PRIMARY ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS
(Total of 13 entries)

FINANCIAL MANAGEMENT:
CATEGORIES (1 + 2) AVERAGE(Total Score/Total Entries)

1.	-	-
2.	-	-
3.	-	-
4.	-	-
5.	-	-
6.	-	-
7.	-	-
8.	1	.08
9.	2	.15
10.	2	.15
11.	-	-
12.	-	-
13.	-	-
14.	5	.38
15.	-	-
16.	-	-
17.	-	-
18.	8	.61

MARKETING MANAGEMENT
CATEGORIES (1 + 2) AVERAGE

19.	3	.23
20.	2	.15
21.	1	.08
22.	-	-
23.	2	.15
24.	1	.08
25.	5	.38
26.	4	.31
27.	9	.69
28.	2	.15
29.	5	.38
30.	5	.38
31.	3	.23

PERSONNEL MANAGEMENT
CATEGORIES (1 + 2) AVERAGE

32.	5	.38
33.	-	-
34.	-	-
35.	-	-
36.	2	.15
37.	-	-
38.	-	-
39.	-	-
40.	-	-
41.	-	-

APPENDIX E: EVALUATION CHARTS TYPE I & TYPE II

EVALUATION CHART TYPE I: NON-WEIGHTED RESPONSE(1 or 2)

FINANCIAL MANAGEMENT:

KEY:

T = Total number of responses

% = Percentage of total entries

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SMALL BUSINESS MANAGEMENT READINGS	T	7	5	5	1	14	17	17	21	10	15	22	16	23	19	11	6	6
	%	54	38	38	8	26	14	14	54	26	28	26	51	54	45	27	15	15
ARCHITECTURAL BUSINESS MANAGEMENT READINGS	T	8	4	7	2	5	9	8	3	7	2	1	7	9	9	7	7	
	%	37	19	34	10	24	42	37	13	33	10	5	33	42	42	35	33	
SMALL BUSINESS MANAGEMENT JOURNALS	T	3	1	1	1	3	4	1	7	3	1	3	4	4	1	1	1	
	%	14	5	5	5	14	19	19	33	14	5	14	19	19	5	5	5	
ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	T	-	-	-	-	-	1	2	1	-	-	-	3	-	-	-	4	
	%	-	-	-	-	-	5	15	8	-	-	-	33	-	-	-	3	
TOTAL NUMBER OF RESPONSES		22	13	11	3	19	28	20	23	21	25	25	20	25	22	21	13	15

EVALUATION CHART TYPE II: WEIGHTED RESPONSES(1 + 2)

FINANCIAL MANAGEMENT

KEY:

T = Total score of responses

A = Average score of category

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
SMALL BUSINESS MANAGEMENT READINGS	T	41	10	5	6	2	23	26	26	41	18	26	29	30	24	24	16	11	8
	A	.05	.26	.15	.15	.05	.57	.67	.67	1.05	.46	.61	1.46	.77	.67	.67	.41	.25	.20
ARCHITECTURAL BUSINESS MANAGEMENT READINGS	T	14	6	5	12	4	9	10	15	15	4	13	4	1	11	15	12	4	1
	A	.16	.20	.54	.57	.19	.42	.42	.71	.71	.19	.62	.19	.05	.62	.71	.30	.67	.62
SMALL BUSINESS MANAGEMENT JOURNALS	T	5	2	2	2	2	5	6	8	13	3	2	4	7	6	2	2	2	
	A	.24	.07	-.09	-.09	-.09	.28	.29	.29	.62	.19	.09	.19	.35	.3	.09	-.09	-.09	
ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	T	-	-	-	-	-	-	1	2	2	-	-	-	5	-	-	-	2	
	A	-	-	-	-	-	-	.08	.15	.15	-	-	-	.38	-	-	-	.61	
SURVEY" ECONOMICS OF ARCHITECTURAL PRACTICE IN HAWAII" BY CASE AND CO.(1972)	T									1						2	2	1	
THESIS SURVEY(1982)	T	2	2	2				2	2	2					2				
TOTAL SCORE OF RESPONSES		64	20	12	10	6	35	43	50	64	37	42	45	35	51	37	35	26	21

EVALUATION CHART TYPE I: NON-WEIGHTED RESPONSES(1 or 2)

MARKETING MANAGEMENT:

KEY:

T = Total number of responses

% = Percentage of total entries

			1	2	3	11	7	5	4	10	8	12	9	6	10
			19	20	21	22	23	24	25	26	27	28	29	30	31
SMALL BUSINESS MANAGEMENT READINGS	T	22	29	20	3	10	16	13	5	2	11	9	-	-	-
	%	56	69	51	7	25	41	38	18	6	33	23	10	-	-
ARCHITECTURAL BUSINESS MANAGEMENT READINGS	T	13	12	6	5	4	6	8	5	8	4	10	11	10	-
	%	62	57	29	24	19	29	38	24	38	19	48	52	48	-
SMALL BUSINESS MANAGEMENT JOURNALS	T	3	2	-	-	1	-	-	-	-	-	-	-	-	-
	%	14	9	-	-	5	-	-	-	-	-	-	-	-	-
ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	T	3	1	1	-	1	1	3	2	5	2	3	2	2	-
	%	23	8	8	-	8	8	23	15	38	15	23	23	15	-
TOTAL NUMBER OF RESPONSES		41	51	27	8	16	20	24	12	15	7	14	18	12	-

EVALUATION CHART TYPE II: WEIGHTED RESPONSES(1 + 2)

MARKETING MANAGEMENT:

KEY:

T = Total score of responses

A = Average score of category

			2	1	3	12	8	5	-	0	7	13	4	5	11
			19	20	21	22	23	24	25	26	27	28	29	30	31
SMALL BUSINESS MANAGEMENT READINGS	T	36	44	27	5	17	25	20	8	3	1	1	5	-	-
	A	.92	1.15	.69	.13	.44	.64	.51	.20	.08	.02	.02	.02	.15	-
ARCHITECTURAL BUSINESS MANAGEMENT READINGS	T	20	21	11	9	6	10	12	8	16	7	17	19	16	-
	A	.95	1.00	.52	.42	.28	.46	.57	.28	.76	.33	.31	.70	.76	-
SMALL BUSINESS MANAGEMENT JOURNALS	T	5	3	-	-	1	-	-	-	-	-	-	-	-	-
	A	.24	.14	-	-	.05	-	-	-	-	-	-	-	-	-
ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	T	3	2	1	-	2	1	5	4	9	2	5	5	2	-
	A	.23	.15	.08	-	.15	.08	.33	.31	.69	.15	.23	.23	.23	-
SURVEY "ECONOMICS OF ARCHITECTURAL PRACTICE IN HAWAII" BY CASE AND CO. (1972)	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-
THESIS SURVEY (1982)	T	-	-	2	-	-	-	-	-	-	-	2	-	-	-
TOTAL SCORE OF RESPONSES		64	72	39	14	26	35	37	20	28	16	23	29	19	-

EVALUATION CHART TYPE I: NON-WEIGHTED RESPONSES(1 or 2)

PERSONNEL MANAGEMENT:

KEY:

T = Total number of responses

% = Percentage of total entries

		1 4 9 6 3 8 10 5 2 7									
		32	33	34	35	36	37	38	39	40	41
SMALL BUSINESS MANAGEMENT READINGS	T	20	27	12	23	20	21	10	25	29	22
	%	77	69	31	59	77	59	26	69	74	56
ARCHITECTURAL BUSINESS MANAGEMENT READINGS	T	11	10	6	3	7	6	2	8	9	8
	%	52	48	29	14	35	27	10	38	43	38
SMALL BUSINESS MANAGEMENT JOURNALS	T	6	1	2	2	1	1	-	2	3	2
	%	29	5	9	9	5	5	-	9	14	9
ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	T	3	-	-	-	1	-	-	-	-	-
	%	23	-	-	-	8	-	-	-	-	-
TOTAL NUMBER OF RESPONSES		50	38	20	35	31	28	12	35	41	32

EVALUATION CHART TYPE II: WEIGHTED RESPONSES(1 + 2) ↑ ↑

PERSONNEL MANAGEMENT:

KEY:

T = Total score of responses

A = Average score of category

		1 5 0 2 2 7 10 4 3 6									
		32	33	34	35	36	37	38	39	40	41
SMALL BUSINESS MANAGEMENT READINGS	T	50	45	21	20	53	32	15	43	51	34
	A	1.44	1.15	.61	.72	1.35	.82	.38	1.10	1.31	.87
ARCHITECTURAL BUSINESS MANAGEMENT READINGS	T	17	13	10	4	13	8	3	12	14	12
	A	.81	.62	.48	.19	.62	.38	.14	.57	.67	.57
SMALL BUSINESS MANAGEMENT JOURNALS	T	9	1	3	3	2	3	-	5	5	3
	A	.43	.05	.14	.14	.09	.14	-	.14	.24	.14
ARCHITECTURAL BUSINESS MANAGEMENT JOURNALS	T	5	-	-	-	2	-	-	-	-	-
	A	.38	-	-	-	.13	-	-	-	-	-
SURVEY "THE ECONOMICS OF ARCHITECTURAL PRACTICE IN HAWAII BY CASE AND CO. (1972)	T	-	-	-	-	-	-	-	-	-	-
THESIS SURVEY(1982)	T	2	-	-	-	2	2	-	2	-	-
TOTAL SCORE OF RESPONSES:		89	59	34	43	72	45	18	60	70	49

↑ ↑ ↑ ↑ ↑

A. OVERALL BUSINESS MANAGEMENT EVALUATION (See Appendices E and F)

1. The five highest total non-weighted response categories for financial management evaluation chart type I are categories: 1,8,9,14, and 15. This corresponds to the highest total weighted response categories for financial management evaluation chart type II which are: 1,8,9,14, and 15. This indicates that there was no change in the highest five categories with the comparison of the weighted and non-weighted response categories.
 1. A fundamentally sound accounting system is needed for sound financial management.
 8. The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
 9. Financial statements should be used to maximize financial management effectiveness.
 14. Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.
 15. A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.

2. The five highest total non-weighted response categories for marketing management evaluation chart type I are categories: 19,20,21,24, and 25. This corresponds to the highest total weighted response categories for marketing management evaluation chart type II which are: 19,20,21,24, and 25. This indicates that there was no change in the five highest categories with the comparison of the weighted and non-weighted response categories.
 19. The identifying of a firm's strengths and weaknesses in a profile will help the firm assess its potential markets and aid in managerial planning.
 20. The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.
 21. The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.
 24. The development of marketing strategies should enable the firm to put their marketing strategies into action.
 25. The marketing media and marketing techniques should enhance the accomplishment of the marketing plans.

3. The five highest total non-weighted response categories for personnel management evaluation chart type I are categories: 32,33,36,39 and 40. This corresponds to the highest total weighted response categories for personnel management evaluation chart type II which are: 32,33,36,39, and 40. This indicates that there was no change in the five highest categories with the comparison of the weighted and non-weighted response categories.

A. OVERALL BUSINESS MANAGEMENT EVALUATION (See Appendices E and F)

1. The five highest total non-weighted response categories for financial management evaluation chart type I are categories: 1,8,9,14, and 15. This corresponds to the highest total weighted response categories for financial management evaluation chart type II which are: 1,8,9,14, and 15. This indicates that there was no change in the highest five categories with the comparison of the weighted and non-weighted response categories.
 1. A fundamentally sound accounting system is needed for sound financial management.
 8. The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
 9. Financial statements should be used to maximize financial management effectiveness.
 14. Cash flow analysis should be used, the control of bad-debt accounts, and strict billing procedures will enhance the financial performance of a company.
 15. A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.

2. The five highest total non-weighted response categories for marketing management evaluation chart type I are categories: 19,20,21,24, and 25. This corresponds to the highest total weighted response categories for marketing management evaluation chart type II which are: 19,20,21,24, and 25. This indicates that there was no change in the five highest categories with the comparison of the weighted and non-weighted response categories.
 19. The identifying of a firm's strengths and weaknesses in a profile will help the firm assess its potential markets and aid in managerial planning.
 20. The formulation and articulation of the goals of the firm should be done to help develop a marketing plan and aid in the business management of a firm.
 21. The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.
 24. The development of marketing strategies should enable the firm to put their marketing strategies into action.
 25. The marketing media and marketing techniques should enhance the accomplishment of the marketing plans.

3. The five highest total non-weighted response categories for personnel management evaluation chart type I are categories: 32,33,36,39 and 40. This corresponds to the highest total weighted response categories for personnel management evaluation chart type II which are: 32,33,36,39, and 40. This indicates that there was no change in the five highest categories with the comparison of the weighted and non-weighted response categories.

32. The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.
 33. The organization of the firm, the chain of command, and the lines of communication should be clearly established and maintained.
 36. The management of recruiting and terminations of employees is essential for the success of personnel management of the small architectural firm.
 39. Benefits, compensation salaries, promotion, demotions, employee performance incentives should be clearly defined and a vital part of personnel management.
 40. The development and training of employees is necessary for a strong personnel management program.
-
4. There was a scarcity of architectural business management information in comparison to small business management information which more than doubled the amount of business entries.
 5. The survey "The Economics of Architectural Practice in Hawaii" by Case and Co. (1972) was focused primarily on the financial management aspects of architectural practice in Hawaii and surveyed large, medium, and small sized firms. Marketing management and personnel management was not addressed in this survey and so reflected no-response in the findings in these two managerial areas.
 6. The findings in small business management journals indicated a general emphasis on financial and personnel management. In contrast architectural business management journals indicated a general emphasis in marketing management and was almost absent of information in financial and personnel management.
 7. Small business management readings generally were more explicit in the business management procedures and techniques than the architectural business management readings.

B. FINANCIAL MANAGEMENT EVALUATION: (See Appendices E and F)

1. Category 1: A fundamentally sound accounting system is needed for sound financial management.
 - a. Financial management evaluation chart type I, category 1 totalled 32 points and was the highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 1 totalled 62 points and was the second highest mentioned overall category.
 - c. The research in architectural business management generally disagree on what constitutes a sound accounting system. Some sources feel that the system should be a minimal system using a checkbook style of accounting and others maintain that a more comprehensive system is needed.
 - d. The sources in small business management generally agree that a sound accounting system is more comprehensive than mere bookkeeping functions. Accounting is distinctly defined as a managerial information science.
 - e. The survey of this thesis indicated that 90% of the current practicing small architectural firms in Honolulu have an accounting system for the management of their firms.

2. Category 2: The accounting system should be a cash system.
 - a. Financial management evaluation chart type I, category 2 totalled 13 points and was the ninth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 2 totalled 20 points and was the fifteenth highest mentioned overall category.
 - c. The survey of this thesis indicated that 78% of practicing small architectural firms have a cash system of accounting.

3. Category 3: The accounting system should be an accrual system.
 - a. Financial management evaluation chart type I, category 3 totalled 7 points and was the eleventh highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 2 totalled 12 points and was the sixteenth highest mentioned overall category.
 - c. The survey of this thesis indicated that 12% of the current practicing small architectural firms in Honolulu have an accrual system of accounting.

4. Category 4: The accounting system should utilize both an accrual and cash system of accounting.
 - a. Financial management evaluation chart type I, category 4 totalled 11 points and was the tenth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 4 totalled 10 points and was the seventeenth highest mentioned overall category.
 - c. The survey of this thesis indicated that none of the current practicing small architectural firms in Honolulu utilize both systems.

5. Category 5: The accounting system should be a single entry system of accounting.
 - a. Financial management evaluation chart type I, category 5 totalled 3 points and was the twelfth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 5 totalled 6 points and was the eighteenth highest mentioned overall category.
 - c. The survey of this thesis indicated that 57% of the current practicing small architectural firms in Honolulu have a single entry system of accounting.

6. Category 6: The accounting system should be a double entry system of accounting.
 - a. Financial management evaluation chart type I, category 6 totalled 19 points and was the seventh highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 6 totalled 32 points and was the twelfth highest mentioned overall category.
 - c. The survey of this thesis indicated that 25% of the current practicing small architectural firms in Honolulu have a double entry system of accounting.

7. Category 7: The accounting system should be understood and managed by the principal of the firm.
 - a. Financial management evaluation chart type I, category 7 totalled 25 points and was the fourth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 7 totalled 43 points and was the seventh highest mentioned overall category.
 - c. The survey of this thesis indicated that 59% of the current practicing small architectural firms in Honolulu have the principals managing the accounting for their firms. That 69% of the current practicing architects understand the mechanics of their accounting system.

- d. 81% of those principals who do not understand the mechanics of their accounting system have someone else besides the principal do the accounting for the firm.
 - e. 8(50%) of the 16 principals who do not understand has an outside accounting firm do the accounting for the firm.
 - f. 8(50%) of the 16 principals who do not understand has an outside accounting firm manage the accounting system for firm.
8. Category 8: The accounting system should be managed by an outside accounting firm and reported to the principal of the firm.
- a. Financial management evaluation chart type I, category 8 totalled 30 points and was the third highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 8 totalled 50 points and was the fifth highest mentioned overall category.
 - c. The survey of this thesis indicated that 49% of the practicing small architectural firms in Honolulu have an outside accounting firm do their accounting. 39% of the architectural firms have the outside accounting firm manage the accounting for the firm. That 35% of the small architectural firms have the principal doing the accounting work himself.
9. Category 9: Financial statements should be used to maximize financial management effectiveness.
- a. Financial management evaluation chart type I, category 9 totalled 35 points and was the fifth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 9 totalled 69 points and was the highest mentioned overall category.
 - c. The survey of this thesis indicated that 76% of the current practicing small architectural firms in Honolulu prepare and use financial statements. The architectural firms generally prepare these statements annually and consider them of somewhat importance.
10. Category 10: Strategic planning can be used to enhance the business management of a small architectural firm.
- a. Financial management evaluation chart type I, category 10 totalled 21 points and was the fifth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 10 totalled 37 points and was the tenth highest mentioned overall category.
 - c. The survey of this thesis indicated that 31% of the current practicing small architectural firms in Honolulu use strategic and profit forecast planning. 59% of the firms forecast what their financial performance will be in the future and that they primarily forecast for the next year.

11. Category 11: Profit planning can be used to maximize the effectiveness of financial management.
 - a. Financial management evaluation chart type I, category 11 totalled 25 points and was tied for fourth highest mentioned overall category with categories 7 and 12.
 - b. Financial management evaluation chart type II, category 11 totalled 42 points and was the eighth highest mentioned overall category.
 - c. The survey of this thesis indicated that 31% of the existing small firms in Honolulu use profit forecasting and strategic planning.

12. Category 12: Financial ratios can be used as an effective means of evaluating a company's performance.
 - a. Financial management evaluation chart type I, category 12 totalled 25 points and was tied for the fourth highest overall category with categories 7 and 11.
 - b. Financial management evaluation chart type II, category 12 totalled 45 points and was the sixth highest overall category.
 - c. The survey of this thesis indicated that 6% of the existing small architectural firms use financial ratios to measure their firms financial performance.

13. Category 13: Break-even analysis can be used to enhance the financial management of a firm.
 - a. Financial management evaluation chart type I, category 13 totalled 20 points and was the sixth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 13 totalled 35 points and was the sixth highest overall category.
 - c. There was a disagreement between the sources in architectural business management and small business management on the effectiveness of breakeven analysis. The advantages of using break-even analysis were: 1) the determination of fixed and variable costs 2) the determination of a breakeven point when the total income matches the total fixed and variable costs. 3) the ability to represent the information in a graphical format to ease its interpretation 4) application of the analysis could allow the firm to profit plan based upon a target volume of income needed. The disadvantages were outlined as: 1) That breakeven analysis doesn't readily apply to professional service firms. That the type of product in a typical analysis remains fairly consistent, but in small architectural practice there is a wide variation of design products, multiple contractual agreements and volatile construction costs. 2) That breakeven analysis assumes fixed costs to remain constant. That architecture

tends to be a multi-disciplined practice including planning interiors, and architecture with each discipline having a variety of costs depending upon the type of project. Therefore the standard method of costing doesn't always apply. 3) that break-even analysis is erroneous as costs change and the long-range projections based upon a cost which is lower than the actual cost to the firm. This tends to often mislead management into believing a certain volume of income is adequate for a reasonable profit, when actually it is not.

14. Category 14: Cash flow analysis should be used, the control of bad-debt accounts, and the strict billing procedures will enhance the financial performance of a firm.
 - a. Financial management evaluation chart type I, category 14 totalled 35 points and was the highest overall mentioned category.
 - b. Financial management evaluation chart type II, category 14 totalled 59 points and was the third highest overall mentioned category.
 - c. The survey of this thesis indicated that 44% of the small architectural firms borrow from the bank when cash -flow is below operating costs. 40% rely on various reserve cash and strengthened marketing techniques. 50% of the architectural firms generally wait 1 month to receive their payment from their clients. 49% of the firms did not have a profit plan program. That indicates that the small practices either doesn't manage the profits they gain or they generally don't have enough profits to manage.

15. Category 15: A fundamentally sound cost control and timely accurate record keeping will enhance the financial management of a company.
 - a. Financial management evaluation chart type I, category 15 totalled 32 points and was the second highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 15 totalled 57 points and was the fourth highest mentioned overall category.
 - c. The survey of this thesis indicates that 62% of the existing small architectural firm's principals spend more than 40 hours a week on office work. That 31% of the principals spend more than 50 hours a week on office work. 48% of the firms do not breakdown the actual operating cost of the firm per project in the office. 19% of the firms do not breakdown their time cards into specific phases and tasks. The indication is that there exists cost-control deficiencies in the existing small architectural firms.

16. Category 16: The costs should be allocated to their respective jobs for the identification of approximate costs for the firm to improve the financial management of the firm.
 - a. Financial management evaluation chart type I, category 16 totalled 21 points and was tied for the fifth highest mentioned category with category 10.
 - b. Financial management evaluation chart type II, category 16 totalled 38 points and was the ninth highest mentioned overall category.
 - c. The survey of this thesis indicated that 48% of the firms do not breakdown the actual costs for the office per project in the office. The actual costs could be calculated into a multiple of direct expense as 24(83%) or the 29(56%) of the firms that use a multiple use a 2.5 ratio. A majority of the firms determine a relative overhead and fee structure that is used as a multiple for most of their work.
17. Category 17: Sound time management is needed, time card management and the breakdown of time into specific phases and tasks.
 - a. Financial management evaluation chart type I, category 17 totalled 13 points and was the ninth highest mentioned overall category.
 - b. Financial management evaluation chart type II, category 17 totalled 26 points and was the fourteenth highest mentioned overall category.
 - c. The survey of this thesis indicated that 78% of the firms use a time card system to manage time. That 76% of the firms use a time card system that breaksdown their time into phases and tasks. A majority of the small architectural firms utilize sound time management.
18. Category 18: Computer applications for business management is increasingly becoming a necessary tool for architectural business management.
 - a. Financial management evaluation chart type I, category 18 totalled 18 points and was the eighth highest mentioned overall category.
 - b. Financial management evaluation chart type I, category 18 totalled 29 points and was the thirteenth highest mentioned overall category.
 - c. The findings of the survey of this thesis indicated that only 23% of the existing small architectural firms use a micro-computer or word processor. 52% of the firms feel that it is not needed or too expensive for their use. 21% of the firms who do not have a computer feel they will purchase one in the near future. 37% felt that it increases productivity and efficiency in the office. 27% felt that the computer/word processor released more principal time. That 83% of the firms that did use a computer felt that it was good or excellent for the business management of their firm.

C. MARKETING MANAGEMENT EVALUATION: (See Appendices E and F)

1. Category 19: The identifying of a firm's strengths and weaknesses in a profile will help the firm assess its potential markets and aid in its managerial planning.
 - a. Marketing management evaluation chart type I, category 19 totalled 41 points and was the highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 19 totalled 64 points and was the second highest mentioned overall category.
 - c. The survey of this thesis indicated that 45% of the existing small architectural firms do all scales of projects from small to large. 17% of the firms generally do small scale projects exclusively. 14% of the firms generally do medium scale projects and 8% of the firms predominately do large scale projects. 83% of the firms do not use a managerial feedback system for evaluating their firm's performance. Most of the firms thus don't assess their strengths and weakness rather they assess what type of markets they seek.

2. Category 20: The formulation and articulation of the goals of the firm should be done to aid in the firm accomplishing its goals.
 - a. Marketing management evaluation chart type I, category 20 totalled 39 points and was the second highest mentioned overall category.
 - b. Marketing management evaluation chat type II, category 20 totalled 72 points and was the highest mentioned overall category.
 - c. The survey of this thesis indicated that 57% of the small architectural firms have goals for the business management of their firm. That 38% of the firms do not have goals for the management of their firms. Most of the firms set and revise goals annually and that the goals for the firm are primarily communicated only to the principal of the firm.

3. Category 21: The development of a sound marketing plan should be done to aid the firm in accomplishing its goals.
 - a. Marketing management evaluation chart type I, category 21 totalled 27points and was the third highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 21 totalled 39 points and was the third highest overall mentioned category.
 - c. The survey of this thesis indicated that 29% of the firms have a marketing plan and that 69% of the firms do not have a marketing plan. Thus a majority of the firms do not have a formal marketing plan.

4. Category 22: The organization of the marketing plan is essential for its success. The use of various marketing organizational forms help organize the plan: marketing matrix, phone-call forms, and client records.
 - a. Marketing management evaluation chart type I, category 22 totalled 8 points and was the eighth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 22 totalled 14 points and was the twelfth highest mentioned overall category.
 - c. The survey of this thesis indicated that 4% of the existing small architectural firms use a marketing matrix to organize their plan .

5. Category 23: The marketing plan should be scheduled, have a timetable of accomplishment for its goals and have a reasonable budget.
 - a. Marketing management evaluation chart type I, category 23 totalled 16 points and was the seventh highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 23 totalled 26 points and was the eighth highest mentioned overall category.
 - c. The survey of this thesis indicated that 71% of the firms do not have a formal marketing plan therefore they generally don't schedule and budget marketing.

6. Category 24: The development of marketing strategies should enable the firm to put their marketing plans into action.
 - a. Marketing management evaluation chart type I, category 24 totalled 23 points and was the fifth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 24 totalled 36 points and was the fifth highest mentioned overall category.

7. Category 25: The marketing media and marketing techniques should enhance the accomplishment of the marketing plans.
 - a. Marketing management evaluation chart type I, category 25 totalled 24 points and was the fourth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 25 totalled 37 points and was the fourth highest mentioned overall category.

8. Category 26: The direct mail marketing technique is an appropriate technique for a small architectural firm.
 - a. Marketing management evaluation chart type I, category 26 totalled 12 points and was the tenth highest mentioned overall category.

- b. marketing management evaluation chart type II, category 26 totalled 20 points and was the tenth highest mentioned overall category
 - c. The survey of this thesis indicated that 4% of the existing small architectural firms use the direct mail marketing technique.
- 9. Category 27: The use of brochures is a marketing technique appropriate for small architectural firms.
 - a. Marketing management evaluation chart type I, category 27 totalled 15 points and was the eighth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 27 totalled 28 points and was the seventh highest mentioned overall category.
 - c. The survey of this thesis indicated that 10% of the small architectural firms use brochures as a marketing technique.
- 10. Category 28: The hiring of marketing consultants and bird-dogging is an appropriate technique for a small architectural firm.
 - a. Marketing management evaluation chart type I, category 28 totalled 7 points and was the twelfth highest mentioned overall category
 - b. Marketing management evaluation chart type II, category 28 totalled 10 points and was the thirteenth highest mentioned overall category.
 - c. The survey of this thesis indicated that 10% of the existing small architectural firms use bird-dogging as a technique for marketing.
- 11. Category 29: The maintenance of clients, the cultivation of referral business and the development of personal contacts is an appropriate marketing technique for a small architectural firm.
 - a. Marketing management evaluation chart type I, category 29 totalled 14 points and was the ninth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 29 totalled 23 points and was the ninth highest mentioned overall category.
 - c. The survey of this thesis indicated that 71% of the small architectural firms use personal contacts as their primary marketing technique. This appears to be the predominant marketing technique for Honolulu.

12. Category 30: The use of high identity exposure and a strong public relations program is an appropriate marketing technique for a small architectural firm.
- a. Marketing management evaluation chart type I, category 30 totalled 18 points and was the sixth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 30 totalled 29 points and was the sixth highest mentioned overall category.
 - c. The survey of this thesis indicated that 10% of the small architectural firms use high exposure and high public visibility.
13. Category 31: The maximization of interviews, client presentations, and interview strategies is appropriate for a small architectural firm.
- a. Marketing management evaluation chart type I, category 31 totalled 12 points and was the twelfth highest mentioned overall category.
 - b. Marketing management evaluation chart type II, category 31 totalled 19 points and was the eleventh highest mentioned overall category.

D. PERSONNEL MANAGEMENT EVALUATION: (See Appendices E and F)

1. Category 32: The principal's role in providing leadership for the firm is vital for the success of the firm and its personnel management.
 - a. Personnel management evaluation chart type I, category 32 totalled 50 points and was the highest mentioned overall category.
 - b. personnel management evaluation chart type II, category 32 totalled 89 points and was the highest mentioned overall category.
 - c. The survey of this thesis indicated that 94% of the small architectural firms have the principal making all of the major decisions for the firm exclusively. This suggests that most of the small firms have an autocratic leadership and chain of command.

2. Category 33: The organization of the firm, the chain of command and the lines of communication should be clearly established and maintained.
 - a. Personnel management evaluation chart type I, category 33 totalled 38 points and was the fourth highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 33 totalled 59 points and was the fifth highest mentioned overall category.
 - c. The survey of this thesis indicated an autocratic leadership and chain of command which simply organizes the firm around the principal of the firm.

3. Category 34: The use of personnel manuals, job descriptions, and organization chart will enhance the understanding of a firm's organization and personnel responsibilities.
 - a. Personnel management evaluation chart type I, category 34 totalled 20 points and was the ninth highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 34 totalled 34 points and was the ninth highest mentioned overall category.

4. Category 35: The delegation of control and decision making is essential for the efficient and profitable operation of a small architectural firm.
 - a. Personnel management evaluation chart type I, category 35 totalled 35 points and was the sixth highest mentioned overall category .
 - b. Personnel management evaluation chart type II, category 35 totalled 43 points and was the eighth highest overall mentioned category.
 - c. The survey of this thesis indicated that 40% of the tasks delegated in the office is delegated to the most experienced worker. 29% of the firms delegate the task to whomever is available for work.

5. Category 36: The management of recruiting and terminations of employees is essential for the success of personnel management of the small architectural firm.
 - a. Personnel management evaluation chart type I, category 36 totalled 39 points and was the third highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 36 totalled 72 points and was the second highest mentioned overall category.
 - c. The survey of this thesis indicated that 69% of the small architectural firms consider compatibility of prospective employee with the firms goals. 44% of the small architectural firms have individual employee evaluations to ascertain employee performance.

6. Category 37: The management of employee evaluations is a necessary part of personnel management.
 - a. Personnel management evaluation chart type I, category 37 totalled 28 points and was the eighth highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 37 totalled 45 points and was the seventh highest mentioned overall category.
 - c. The survey of this thesis indicated that 44% of the small firms have individual employee evaluations with the principal usually being the only one involved with the evaluations. 14 firms have their evaluations held on an annual basis and 11 have their evaluations done on a six month basis. Therefore 48% of the firms have their evaluations held on a annually or bi-annual basis.

7. Category 38: The utilization of employee logs or journals will enhance the evaluation of employees.
 - a. Personnel management evaluation chart type I, category 38 totalled 12 points and was the tenth highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 38 totalled 18 points and was the tenth highest mentioned overall category.

8. Category 39: Benefits, compensation salaries, promotion , demotions, employee performance incentives should be clearly defined and a vital part of personnel management.
 - a. Personnel management evaluation chart type I, category 39 totalled 35 points and was the fifth highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 39 totalled 60 points and was the fourth highest mentioned overall category.

- c. The survey of this thesis indicated that 54% of the small architectural firms have employee incentives and recognize the employees contribution to the firm. 27% of the small architectural firms do not have incentives and do not recognize the employees contribution to the firm. 75% of the firms that have incentive programs use bonus salary as a primary incentive. 61% of those firms also use promotion and pay-raise as an incentive for employees. 46% of the small firms use profit sharing as an incentive.
9. Category 40: The development and training of employees is necessary for a strong personnel management program.
- a. Personnel management evaluation chart type I, category 40 totalled 41 points and was the second highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 40 totalled 70 points and was the third highest mentioned overall category.
10. Category 41: The proper assignment of tasks to appropriate abilities will enhance the efficiency and productivity of a firm.
- a. Personnel management evaluation chart type I, category 41 totalled 32 points and was the seventh highest mentioned overall category.
 - b. Personnel management evaluation chart type II, category 41 totalled 49 points and was the sixth highest mentioned overall category.
 - c. The survey of this thesis indicated that 29% of the small architectural firms delegate the tasks to whomever is available and 41% delegate the tasks according to who is the most experienced.

APPENDIX F: SURVEY FINDINGS AND
SURVEY TREND ANALYSIS CHART

CHAPTER FIVE: SUMMARY OF SURVEY FINDINGS

The survey was conducted to determine the relevant issues of small architectural business management for active practicing small architectural firms in Honolulu. Using a list provided by the Hawaii Society American Institute of Architects (HSAIA) which listed the HSAIA membership by architectural firms and augmented by my personal professional experience, ninety-five (95) architectural firms were selected to participate in the survey. Forty-seven (47) of the ninety-five (95) firms selected responded to the survey, three (3) returned undeliverable, and two (2) firms declined to participate in the survey. The firms were selected according to the number of principals listed per firm on the HSAIA roster. The firms with one or two principals listed were selected to participate in the survey. Another criteria for the selection was the number of professional staff members, preferably firms that were in the range of 1-5 professional staff members were selected from the HSAIA membership roster by firms.

Question 1a: Do you consider your firm size?

a. small (46) b. medium (4) c. large (0)

Question 1b. How many principals are there in the firm?

a. 1 (34) b. 2 (13) c. 3-4 (4) d. 5 and above (0)

Question 1c. How many professional staff members are there in the firm?

a. 1-5 (46) b. 6-10 (1) c. 11-20 (0) d. 21 and above (1) e. none (3)

Question 1d. How many service support staff members are there in the firm?

a. 1 (24) b. 2 (11) c. 3-4 (4) d. 5 and above (2) e. none (7)

Questions 1a-1d were attempting to determine what general characteristics of firm size are common for most small architectural firms and what general staff composition is characteristic of a small architectural firm. 46 (49%) of the firms surveyed considered themselves small. 47 (92%) of the firms had 1 or 2 principals. 46 (96%) of the firms had 1-5 professional staff members. 35 (64%) of the firms had 2 or less service support staff members. Therefore most of the small firms have a total staff of 9 or less including principals.

Question 2a. How was your firm formed?

- a. spontaneous decision (19) b. some investigation before (16)
c. thorough investigation before (14)
d. other _____ (7)

*evolution
*necessity
*after 10yrs. professional experience
*continuation of previous partnership
*assumed practice
*partnership with father

Question 2b. How much architectural business management background did you have before becoming principal of a firm for the first time?

- a. none (9) b. minimal (19) c. satisfactory (19) d. extensive (4)

Question 2c. What type of architectural business background did you have before becoming principal of a firm for the first time.

- a. field experience (31) b. college business education (3)
c. both (16) d. other _____ (4)

*business seminars
*self-taught
*V.P. of another firm
*none

Questions 2a-2c were attempting to determine the general trend of how architectural firms are formed and what kind of business management background the principals of the firm had when they were formed. 13 (25%) firms were formed by spontaneous decision, 16 (31%) of the firms had some investigation before, and 14 (27%) of the firms were thoroughly investigated before.

28 (55%) of the firms principals had none or minimal architectural business management background. 23 (45%) of the principals had satisfactory to extensive business management background. 31 (61%) of the principals architectural business background was based in field experience. 12 (63%) of the 19 architects with satisfactory experience prior to becoming principal of their firm had field experience as their business management background.

Question 3a. Does your firm have an accounting system?

- a. yes (46) b. no (5)

Question 3b. If yes what type of system?

- a. cash system (40) b. accrual system (6)

Question 3c. If yes, what is the system?

- a. single entry system (29) b. double entry system (15)

Questions 3a-3c. were attempting to determine what kind of accounting system is currently the most common among the survey sample. 46 (90%) of the firms have an accounting system. 40 (79%) of the firms have their system on a cash basis. 29 (57%) of the firms have a single entry system. 26 (51%) of those firms with a cash system have also a single entry system.

Question 4a. Who does the accounting for the firm?

- a. outside accounting firm (25)
- b. secretary (11)
- c. principal himself (18)
- d. in-house clerk (2)
- e. other _____ (2)

*wife
*in-house accountant

Question 4b. Who manages the accounting system and reviews the accounting ?

- a. outside accounting firm (20)
- b. secretary (5)
- c. principal himself (30)
- d. in-house clerk (2)
- e. other *wife _____ (1)

Question 4c. Does the principal of the firm completely understand the mechanics of the accounting system?

- a. yes (32)
- b. no (16)

Questions 4a-4c were attempting to identify the role of the principal in the management of the accounting system. 25 (49%) of the firms have an outside accounting firm do their accounting. 18 (37%) of the firms have the principal personally doing the accounting for the firm. 30 (59%) of the firms have the principal managing the accounting system. 20 (39%) of the firms have the outside accounting firm manage the accounting system. 32 (63%) of the principals thoroughly understand the mechanics of the accounting system and 16 (30%) of the principals don't understand. 13 (25%) of those who don't understand the mechanics of the accounting system (16 total) has someone else besides the principal do the accounting for the firm. 10 (62%) of the 16 who don't understand have someone else manage the accounting system instead of the principal. The 16 who don't understand predominately have outside accounting firms handle the accounting for the firm. 8 (50%) have the outside accounting firm do their accounting and 8 (50%) have the outside accounting firm manage the accounting system for the firm.

Question 5a. Does your firm prepare and use financial statements?

a. yes (39) b. no (12) c. other *taxes only (1)

Question 5b. If yes, How often are they done?

a. annually (24) b. quarterly (4) c. bi-monthly (0)
d. monthly (5) e. weekly (0) f. other _____ (5)

* as needed
* when needed
* as required
* every 10 mo.
* bi-annually

Question 5c. If yes, how important are they for your architectural business management?

a. very (15) b. somewhat (20) c. not important (7)

Question 5d. If yes, what type of financial statements are done?

a. income tax forms (11) b. income statement (5)
c. balance sheet (7) d. statement of financial position (5)
e. all of the above (17) f. other _____ (0)

Questions 5a-5d were attempting to determine the role of the financial statements in the management of the firm and the frequency of their application. 39 (76%) of the firms prepare and use financial statements. 24 (62%) of the 39 firms prepare their statements on an annual basis. 20 (51%) of the 39 firms who use the financial statements find them somewhat important, and 15 (38%) of the 39 firms find them very important. 17 (44%) of the 39 prepare all of the statements listed and 12 (28%) of the firms prepare income tax forms only. A given assumption is that all of the firms are required by law to prepare income tax forms, what is being identified is how many of these firms consider these income tax forms as primary financial statements.

Question 6a. Does your firm use strategic and profit forecast planning for the management of its resources?

a. yes (14) b. no (25)

Question 6b. If yes, how often is it done?

a. Annually (9) b. quarterly (9) c. monthly (1) d. other (1)
varies between bank C.

Question 6c. Do you forecast where the firm will be financially in the future?

a. yes (30) b. no (19)

Question 6d. If yes, how far do you forecast?

- a. next year (24) b. next 2 yrs. (4) c. next 3 yrs. (1)
d. next 5 yrs. (8) e. next 10 yrs. (1) f. Other _____ (3)
* 2 months
* 6 months
* 1 year

Questions 6a-6d were to determine the use and frequency of planning and forecasting for the management of the firms. 16 (31%) of the firms use strategic planning or profit forecasting and 35 (69%) of the firms do use strategic planning or profit forecasting. 9 (50%) of those who do plan of the 16 (31%) plan on an annual basis. 30 (59%) of the firms financially forecast the performance of the firm in the future. 24 (80%) of the firms that forecast, forecast for the next year of operations.

Question 7a. Does your firm have a marketing plan?

- a. yes (15) b. no (36)

Question 7b. Who is involved in marketing activities?

- a. principal (36) b. staff (1) c. both (3) d. other _____ (2)

Question 7c. How much principal time is spent on marketing activities on an average?

- a. less than 20% (30) b. 20-30% (7) c. 40-50% (5) d. other _____ (3)
* none
* 5%

Question 7d. How much staff time is spent on marketing activities on an average?

- a. less than 10% (24) b. 10-20% (8) c. 30-40% (1) d. Other _____ (8)
* none
* no staff

Questions 7a-7d were to determine the use of a formal marketing plan and the contribution to the marketing effort by the principal and the staff. Most of the firms do not have a formal marketing plan, 36 (71%) of the firms of the sample don't have a marketing plan. The principal is almost exclusively involved with the marketing of the firm, 36 (71%) of the firms had only the principal involved with the marketing.

36 (51%) of the principals spending less than 20% on marketing activities. 24 (47%) of the firms had their staff spending less than 10% of their total time on the marketing effort.

Question 8. If you have a marketing plan, do you use a marketing matrix system to organize the plan?

a. yes (2) b. no (24) c. other _____ (0)

Question 8 was to determine the relevancy and use of the marketing matrix system for architectural marketing organizational planning. 24 (47%) of the firms don't use the marketing matrix. 2 (4%) of the firms actually use the matrix.

Question 9a. Where is your office?

a. in downtown Honolulu (25) b. out of downtown Honolulu (26)

Question 9b. Why is your office located there?

a. convenience (37) b. low rent (16) c. image suitable for firm (9)
d. other _____ (4)

*personal

*building designed by firm

*home

*close to clients

Question 9c. What scale of Architectural projects does your office generally do?

a. Small scale, low-rise or low budget (9)
b. Medium scale, average budget or mid-rise (7)
c. large scale, large budget or hi-rise (4)
d. all scales, small to large (23)
e. other *med. to small (1)

Questions 9a-9c were to determine any trend in the location of small architectural firms in proximity to downtown Honolulu. The identification of the reasons why the firms have selected their current location. The last question was to determine the relative type of projects most small architectural firms do. There appears to be a relative equal distribution of the survey sample in and out of downtown Honolulu. 25 (49%) of the small firms are located in downtown Honolulu and 26 (51%) of the firms are located outside of downtown Honolulu. The most influential reason why the firm is located there is the convenience of the location, 37 (73%) of the firms selected their location by convenience. 23 (45%) of the firms do all scales of projects from small to large and 7 (14%) of the firms do medium scale projects.

4 (8%) of the firms do large scale projects predominately.

- Question 10. What marketing technique does your firm use most often?
- a. direct mail marketing, mailing letters to prospective clients (2)
 - b. brochures (5)
 - c. phone-calling or bird-dogging (5)
 - d. personal contacts (20)
 - e. high public visibility (5)
 - f. Other _____ (3)
 - *referral
 - *none
 - *do good work

Question 10. was to determine where the small firms are focusing their marketing effort - 71% of the firms use personal contacts as their primary marketing technique.

- Question 11a. Does your firm use financial ratios?
- a. yes (3) b. no (4)
- Question 11b. Does your firm use managerial feedback systems for the evaluation of your firm's performance?
- a. yes (7) b. no (4)
- Question 11c. If yes how often is the performance evaluation of the firm done?
- a. annually (1) b. quarterly (2) c. monthly (2) d. weekly (1)
 - e. other _____ (1)

Questions 11a-11c were attempting to determine the use and frequency of financial and management performance techniques to evaluate the performance of the firm. 40% of the firms do not use financial ratios. 43% of the firms don't have a feedback system to evaluate the performance of the firm. There appears to be no trend in the frequency of when the evaluations are done.

- Question 12a. Who makes the major decisions for the firm?
- a. principal (4) b. principal and staff (2) c. secretary (0)
 - d. other (0)
- Question 12b. Does the firm have goals to guide the business management of the firm?
- a. yes (24) b. no (2)
- Question 12c. If yes, how often are these goals revised?
- a. annually (13) b. Quarterly (9) c. monthly (1) d. weekly (0)
 - e. other _____ (2)
 - *semi-annually
 - *varies
 - *as reqd.

Question 12d. To whom are these goals articulated and understood?

- a. principal(s) (17) b. staff (1)
c. both (1) d. Other _____ (0)

Questions 12a-12d were determining the decision making responsibility of the principals and the relative use of goals to guide management of the firm and the frequency of revisions. 14 (41%) of the firms have the principal making all of the major decisions exclusively. 24 (71%) of the firms have goals for management, generally 13 (25%) of them revise those goals annually. The goals are primarily for the principals to understand, 17 (59%) of the firms that have goals only communicate those goals to the principal of the firm. 11 (33%) of those who produce goals articulate it to the staff and principals.

Question 13a. Does the firm have employee incentives and recognize their contribution to the firm?

- a. yes (28) b. no (14) c. other _____ (4)
*no employees

Question 13b. If yes, what type of incentives/recognition is used the most?

- a. bonus salary (2) b. promotion-pay raise (17)
c. profit-sharing (13) d. verbal commendation (9) e. other _____ (1)

Questions 13a-13b were determining the use of incentives and recognition by the personnel management of the small firms and the determination of the most frequently used technique. 28 (53%) of the firms have incentive programs and 14 (27%) do not have any incentive programs. The most frequently used incentive was the bonus salary, 21 (75%) of the firms with the incentive programs used bonuses. 17 (41%) of the firms also used promotion and pay raise as an incentive measure. 13 (47%) of the firms with incentive programs had profit sharing as an incentive.

Question 14a. Prior to hiring an employee would you do a compatibility evaluation of the prospective employee's goals with the firm's goals?

- a. yes (36) b. no (9)

Question 14b. Does your firm have individual employee evaluations?

- a. yes (23) b. no (21)

Question 14c. Who is involved with the employee evaluations?

- a. principal (25) b. staff (1) c. a and b (7) d. entire staff (0)
e. a, b, and d. (0) f. other _____ (2)*no employees

Question 14d. How often are the employee evaluations done?

- a. annually (14) b. 6 month intervals (1) c. quarterly (2)
d. other _____ (5)

*constantly

*none

*as needed

Questions 14a-14d were to determine the employee performance evaluations in regard to the recruiting techniques and the method of evaluation of the employees performance. 30 (71%) would have compatibility evaluations for the recruiting of employees. 22 (45%) of the firms have individual employee evaluations and 21 (41%) of the firms do not have individual employee evaluations. The principal of the firm is exclusively in the evaluation of the employees. 25 (44%) of the firms surveyed have the principal solely involved with the evaluations. The evaluations are predominately done annually, 14 firms have their evaluations done annually and 11 of the firms have their employee evaluations on a 6 month interval period.

Question 15a. How many hours does a principal spend on office work on an average?

- a. 40hrs/wk. (11) b. 41-50hrs/wk (16) c. 51-60hrs/wk. (46)
d. other _____ (6)

* over 60 hrs/wk.

* 20 hrs.

*10-15 hrs.

* 70 hrs.

* 6 hrs per wk.

*25 hrs.

Question 15b. How many hours does an employee spend on office work on an average?

- a. 40 hrs/wk. (23) b. 41-50hrs/wk. (2) c. 51-60 hrs/wk (0)
d. other _____ (4)

*20 hrs.

*none

*minimum

- Question 15c. Does the principal become involved in all aspects of management of the firm? (project management, construction management, business management)
- a. yes (45) b. no (3)

Questions 15a-15c. were to determine the relative commitment of time involved for the principal and the commitment of time by the staff. Also the final question identifies the role of the principal in a small firm's management. 41 (22%) of the principals spend just 40hrs/wk on office work, 16 (31%) of the principals spend 41-50hrs/wk., and 16 (31%) of the principals spend 51-60 hrs/wk. The trend is that most of the principals spend more than 40 hrs/wk on office work, 32 (62%) of the firms have the principals spend more than 40hrs/wk. The employees of the firm are generally maintained at 40 hrs/wk. 29 (57%) of the firms have the employees spend 40hrs/wk on office work. 45 (88%) of the firms have the principals of the firm involved in all aspects of the management of the firm.

- Question 16a. Does your firm have a micro-computer or word processor?
- a. yes (12) b. no (8)

- Question 16b. If no, why not?
- a. not needed (22) b. too expensive (5) c. will purchase soon (1)
 d. do not know why it is needed (2) e. other _____ (1)
 *will retire soon

- Question 16c. If yes, how useful is it for small architectural firm business management?
- a. none (0) b. minimal (3) c. satisfactory (1) d. good (4)
 e. excellent (4)

- Question 16d. Does the computer/word processor increase the productivity and increase the efficiency in the office?
- a. yes (12) b. no (5)

- Question 16e. Does the computer/word processor release more principal time to work on other projects?
- a. yes (14) b. no (8)

Questions 16a-16e determine the relative use of the computer/word processor in the small architectural firms and the relative value of it for the

office. 12 (24%) of the firms surveyed had a micro-computer/word processor and 31 (76%) of the firms did not have. The dominant reason why the 31 firms did not have a computer/word processor was that they felt it was not needed. 8 (17%) of the 12 firms that had a computer/word processor felt that it was satisfactory or excellent for their architectural business management. The computer/word processor was generally felt to increase the productivity and efficiency of the office. 18 (37%) of the firms felt that it increased productivity and 5 (10%) of the firms felt that it did not increase the productivity of the office. 14 (27%) of the firms felt that it released more billable principle time and 8 (16%) of the firms felt that it did not.

Question 17a. How often do you repeat bill the client?

- a. monthly (42) b. every 2 weeks (1) c. weekly (0)
d. other _____ (8)

*none
*as required
*only once
*seldom

Question 17b. What do you do if the client is late in paying you?

- a. telephone the client (27) b. send another invoice (33)
c. charge interest (14) d. call collection agency (3)
e. other _____ (2)

*send letter
*all of the above

Question 17c. What is the average time period from when the billing is sent until the payment is received from the client?

- a. 1 week (1) b. 2 weeks (4) c. 3 weeks (10) d. 1 month (26)
e. 6 weeks (?) f. 2 mo. or more (2)

Question 17d. Generally what do you do in periods when cash-flow is below the operating costs of the firm for a significant period of time?

- a. borrow money from the bank (23) b. lay-off staff (4)
c. temporarily cut salaries (3) d. other _____ (21)

- d. comments: (1)*market services more aggressively (5)*borrow from reserves
(1)*cash reserve (3)*borrow from principals
(1)*principal contribution (1)*cut down to 4 days
(1)*delay salary payment (1)*personal loan
(1)*borrow from parent company (3)*never had to
(1)*inter company borrowing (1)*pray
(1)*provide cushion
(1)*draw from reserve
(1)*birddog
(1)*use reserve funds CMA

Questions 17a-17d were to determine the cash-flow characteristics of the accounts receivable management and what methods the small firm's in Honolulu use to control periods when cash flow is below operating costs for a significant period of time. 42 (62%) of the firms repeat-bill their clients monthly. If the client doesn't pay on time, 27 (57%) telephone the client, and 33 (69%) send another invoice. The most common waiting period for a billing was 1 month, 76 (51%) of the firms waited 1 month to be paid. 33 (45%) of the firms borrow money from the bank when their cash flow is below operating costs for a significant period of time. The other firms have a variety of methods from borrowing from principals to praying; there doesn't appear to be any significant trend in the methods used to offset the low cash flow.

Question 18a. If you use a multiple of direct expense for profit calculations, what multiple do you use?

(multiple ratio)	X	(Base:ie salary, insur. FICA)
Total: 29 responses		
	*2.5 X	17/hr.
	*3.0 X	Base
(2)	*2.5 X	1.3
(10)	*2.5 X	Base
(2)	*2.5 X	Salary
	*2.5 X	Salary, insurance + FICA, ETC.
	*2.5 X	DPE
	*2.57 X	Salary
	*2.5-3.0 X	Base
(2)	*3.0 X	1.0
	*3.0 X	Salary
	*2.5-2.7 X	Base
	*2.5 X	Gross Hourly pay rate
	*2.5-3.0 X	Salary
	*2.0-3.0 X	Salary
	*2.6 X	Base
	*2.52 X	Base cost
	*2.5 X	Total employee expense
	*varies	

Question 18b. Does your firm breakdown the actual operating costs of the firm per project in the office?

a. yes (21) b. no (25)

Questions 18a-18b were to determine the common multiple ratio of direct personnel expense for small firms and the cost control management of the projects in the office. 29 (100%) of the 29 firms that use the multiple of direct expense use a 2.5 ratio. 25 (49%) of the firms don't break down their operating costs by project. 22 (43%) of the firms do break down their costs per project.

Question 19a. How does your firm manage time?

- a. time card system (40)
- b. personal journal or diary (15)
- c. calendar (1)
- d. other _____ (2)
 - *cost breakdown
 - *time sheets per project

Question 19b. If you have a time card system do you break down the time into specific phases and tasks?

- a. yes (32)
- b. no (10)

Questions 19a-19b were to determine the management of time by the small architectural firms. 40 (77%) of the firms use a time card system and 15 (29%) use a personal journal or diary to record time. 32 (76%) of the AC firms that use a time card system breakdown their time into phases and tasks.

Question 20. How are tasks delegated in the office?

- a. according to who is available (15)
- b. given to the most experienced (21)
- c. other _____ (15)
 - (1) * to principal
 - (1) * past experience with client
 - (1) * principal decision
 - (1) * each has specific duty
 - (1) * who is assigned to project
 - (4) * self
 - (1) * other
 - (1) * combination
 - (1) * work on each project together

Question 20 was to determine the delegation of tasks in the small office. 21 (41%) of the firms delegate by experience, 15 (29%) of the firms delegate according to availability.

Question 21. Do you have a profit program?

- a. yes (22)
- b. no (25)

Question 22. If yes, what type of program?

- a. invest in real estate (5)
- b. invest in money market certificates (10)
- c. invest in treasury bills (0)
- d. put money in bank (1)
- e. re-invest in the firm (2)
- f. other _____ (11)

Question 22, other comments:

- (1) * real estate
- (1) * trust
- (2) * other
- (1) * profit distributed to members
- (1) * diversify
- (1) * partnership, joint ventures
- (1) * invest in common stock
- (1) * various
- (1) * whatever best

Questions 21-22 were to determine the use of a profit plan and what the profit plan consisted of for small architectural firms. 72(43%) of the firms did have some sort of profit plan. 25(44%) of the firms did not have a profit plan. There was no trend in the various alternatives for investment in question 22. Money market certificates appear to be the most popular with 10(44%) of the 22 firms who had a profit plan investing in the certificates.

2004 SUPERFUND ANNUAL REPORT														
	M	J	J	J	J	J	J	J	J	J	J	J	J	J
General Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
State Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Local Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Other Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
...
Total	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000

2004 SUPERFUND ANNUAL REPORT														
	M	J	J	J	J	J	J	J	J	J	J	J	J	J
General Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
State Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Local Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
Other Fund	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
...
Total	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000	4000000

FOOTNOTES

¹Metzger, H.G. "Controlling the Cost of Architectural Services." Industrial Development, No. 149 (July-August 1980) p.19.

²Kliment, S.A. FAIA, Architect's Handbook Of Professional Practice: Architecture Professional Options. Washington D.C.: AIA Publication Fulfillment Office, 1982. p.3.

³Mattox, R.F. AIA, Financial Management for Architects. Washington D.C.: The American Institute of Architects, 1980. p.2.

⁴Koontz, H. and O'Donnell, C. and Wehrich, H. Management. New York: McGraw Hill Book Company, 1980. pp. 78-81

⁵Metzger, p.19.

⁶Mattox, p.2.

⁷Coxe, W. Managing Architectural and Engineering Practice. New York: John Wiley and Sons Inc., 1980. p. 6.

⁸Class, R.A. AIA and Koehler, R.E. Hon. AIA, Current Techniques in Architectural Practice. Washington D.C.: The American Institute of Architects and Architectural Record Books, 1976. p.1.

⁹Vosebeck, R.R. FAIA "Vosebeck Urges Architects to Sharpen Business Management Skills." AIA Memo, No. 614 (October 26, 1981) p.5.

¹⁰Koontz, O'Donnell, Wehrich, P. 156.

¹¹Mackenzie, A.R. "The Management Process in 3-D." Harvard Business Review, No. 40 (November-December 1969) p. 80.

¹²Coxe, p. 151

¹³Pritzker, P.E., PE "The Small Firm." Professional Services Management Journal, (October 1978) p.5.

¹⁴The Florida Association of the AIA, SOP Task Force Committee Report. Florida: Florida Association of the American Institute of Architects, 1971. p.2.

¹⁵Foot, R.F. Running an Office for Fun and Profit. Stroudsburg, Penn.: Dowden, Hutchinson and Ross, 1978. p.1.

¹⁶Schirmer, H.W. AIA Architect's Handbook of Professional Practice: The Architect's Office. Washington D.C.: The American Institute of Architects, 1980. p.4.

¹⁷Abdelsamad, M.H. and Sperry, J.B. "How to Set Up an Accounting System for Small Business." Management World. No. 6 (October 1977) p. 3.

¹⁸Bank of America, "Understanding Financial Statements".
Small Business Reporter, No. 6, 1980 p.4.

¹⁹Klatt, p. 196

²⁰Wilson, A. The Marketing of Professional Services, New
York: McGraw Hill Book Co., 1972 p. 95

²¹Kotler, P. Marketing Management, Englewood Cliffs, New
Jersey: Prentice-Hall Inc., 1980, p. 286.

²²Foxhall, W.B. Techniques of Successful Practice: For
Architects and Engineers, New York: McGraw Hill Book Co., 1975 p. 101.

²³Klimet, S.A. "Managing Your Marketing Communications
Program". Architectural Record, May 1977, p. 79.

²⁴Prentice, W.C.H., "Understanding Leadership". Harvard
Business Review, No. 61511, September-october 1961, p.7.

²⁵Bank of America, "Personnel Guidelines". Small Business
Reporter, No. 3, 1981 p.7.

BIBLIOGRAPHY

Primary Small Business Management Sources

- Baker, Alton W.. Personnel Management in Small Plants. Columbus, Bureau of Business Research, College of Commerce and Administration: Ohio State University, 1955
- Bank of America. Small Business Reporter. San Francisco: Bank of America, 1982.
- Barndt, Carvey. Essentials of Operations Management. Englewood Cliffs, N.J.: Prentice Hall Inc., 1982
- Becker, Benjamin. The Family Owned Business. Chicago: Commerce Clearing House, 1975.
- Brannen, William H.. Successful Marketing for Your Small Business. Englewood Cliffs, N.J.: Prentice Hall, Inc., 1978.
- Broom, Halsey. Small Business Management. Cincinnati: South Western Publishing Co., 1971.
- Burstiner, Irving. The Small Business Handbook. Englewood Cliffs., N.J.: Prentice Hall, 1979.

Cohn, Theodore. Survival and Growth: Management Strategies for the Small Firm. New York: Amacon, 1974.

Day, William H.. Maximizing Small Business Profits with Precision Management. Englewood Cliffs, N.J.: Prentice Hall, 1979.

Diable, Donal M.. Up Your Own Organization. Reston, Virginia: Reston Publishing, 1974.

Dixon, Robert. The Executives Accounting Primer. N.Y.: McGraw Hill, 1971.

Friday, Bill. Successful Management for the 1 to 10 Employee Business. San Francisco, CA.: Prudential Publishing Company, 1978.

Hayes, Backer. Accounting for Small Manufacturers. N.Y.: John Wiley and Sons, 1980.

Hayes, Backer. Simplified Accounting for Non-Accountants. N.Y.: John Wiley and Sons, 1980.

Kelly, Pearce, Clement. How to Organize and Operate a Small Business. Englewood, Cliffs, N.J.: Prentice Hall, 1968.

Killian, Ray A.. Managers Must Lead. N.Y.: AMACOM, 1979.

- Klatt, Lawrence A.. Small Business Management: Essentials of Entrepreneurship. Belmont, California: Wadsworth Publishing Co., 1973.
- Klatt, Murdick, Schuster. Human Resources Management. Homewood, Illinois: Richard D. Irwin Inc., 1978.
- Koontz, Harold. Management. N.Y.: McGraw Hill, 1980.
- Kotler, Philip. Marketing Management: Analysis, Planning, and Control. Englewood Cliffs, N.J.: Prentice Hall, 1980.
- Lim, Robin. Scientific Management for Small Business. Dobbs Ferry, New York: Oceana Publications, 1973.
- Lock, Dennis. Guide to Management Techniques. N.Y.: John Wiley, 1972.
- May, Mueller, Williams. A New Introduction to Financial Accounting. Englewood Cliffs, N.J.: Prentice Hall, 1980.
- McDonald, James O.. Management without Tears: A Guide to Coping with Everyday Organizational Problems. Chicago, Illinois: Crain Books, 1981.
- Osgood, William R. Basics of Successful Business Planning. N.Y.: AMACOM, 1980.

- Pescow, Jerome K.. Encyclopedia of Accounting Systems. Englewood Cliffs, N.J.: Prentice Hall, 1976.
- Petrov, John V.. Small Business Management: Concepts and Techniques for Improving Decisions. N.Y.: McGraw Hill, 1972.
- Rimler, Humphreys. Small Business: Developing the Winning Management Team. N.Y.: AMACOM, 1980.
- Roxe, Linda A.. Personnel Management for the Smaller Company. N.Y.: AMACOM, 1979.
- Rubey, Logan. The Engineer and Professional Management. Columbia, Missouri: Artcraft Press, 1963.
- Sloma, Richard. No-Nonsense Management: A General Manager's Primer. N.Y.: MacMillan, 1977.
- Steinhoff, Dan. Small Business Management Fundamentals. N.Y.: McGraw Hill, 1974.
- Steinmetz, Lawrence L.. Managing the Small Business. Homewood, Il.: R.F. Irwin, 1968.
- Stewart, Nathaniel. Strategies of managing for Results. London: Pitman, 1967.

Strauss, Sayles. Personnel: The Problems of Management. Englewood Cliffs, N.J.: Prentice Hall Inc. 1972.

Tate, Curtis E.. The Complete Guide to Your Own Business. Homewood, Il.: Dow Jones-Irwin, 1977

Tate, Curtis E.. Successful Small Business Management. Dallas: Texas Business Publications, 1975.

Townsend, Robert. Up the Organization. N.Y.: AMACOM, 1976.

Wortman, Leon A.. Successful Small Business Management. N.Y.: AMACOM, 1976.

Primary Architectural Business Management Sources

AIA. Compensation Guidelines for Architectural and Engineering Services. Washington: The American Institute of Architects, 1978.

AIA Emerging Techniques of Architectural Practice. Washington, D.C.: American Institute of Architects, 1968.

AIA Personnel Practices Handbook. Washington, D.C.: The American Institute of Architects, 1978.

AIA Case and Company. Profit Planning In Architectural Practice.
Washington, D.C.: The American Institute of Architects, 1968.

AIA Standardized Accounting for Architects. Washington D.C.: The
American Institute of Architects, 1978.

The American Institute of Architects. The AIA Handbook of Professional
Practice. Northwest, Washington D.C.: Aia Publications Fulfillment
Office.

Class, R. and Koehler, R.. Current Techniques in Architectural Practice.
New York: McGraw Hill Publication and Northwest, Washington D.C.:
The American Institute of Architects, 1976.

Cooper, David G.. Architectural and Engineering Salesmanship. New York:
John Wiley and Sons, 1978.

Coxe, Weld. Managing Architectural and Engineering Practice. New York:
John Wiley and Sons, 1971.

Foote, Rosslyn F.. Running an Office for Fun and Profit. Stroudsburg,
Penn.: Dowden, Hutchinson & Ross, 1978.

Foxhall, William B.. Techniques of Successful Practice: For Architects
and Engineers. New York: McGraw Hill Book Co., 1975.

Guidelines Publications. Architectural Promotion. Berkley: Guidelines Publications, 1969.

Guidelines Publications. Architectural Management. Berkley: Guidelines Publications, 1969.

Hunt, William Dudley, Comprehensive Architectural Services: General Principles and Practice. N.Y.: McGraw Hill, 1965.

Jones, Gerre L.. How to Market Professional Design Services. N.Y.: McGraw Hill, 1973

Jones, Gerre L.. Public Relations for the Design Professional. N.Y.: McGraw Hill, 1980

Mattox, Robert F.. Financial Management for Architects. Northwest, Washington D.C.: The American Institute of Architects, 1980.

McLaughlin, Robert William. Architect: Creating Man's Environment. N.Y.: MacMillan, 1962.

Piper, Robert J.. Opportunities in an Architectural Career. N.Y.: Universal Publishing and Distributing Corp., 1970.

Rossman, Wendell E.. The Effective Architect. Englewood Cliffs, N.J.: Prentice Hall, 1972.

Selected Small business Management Journal Readings

Abdelsamad, M.H. and Kindling, A.T. "Why Small Businesses Fail". SAM Advanced Management Journal, No. 43 (Spring 1978) pp. 24-32.

Abdelsamad, M.H. and Sperry, J.B. "How to Set Up an Accounting System for Small Business." Management World, No. 6 (October 1977) pp. 3-6.

Auken, P.M. and Ireland, R.D. "An Input-Output Approach to Practical Small Business Planning". Journal of Small Business Management, No. 18 (January 1980) pp. 44-50.

Belt, B. "The Cash Breakeven Point as a Tool for Small Business Analysis". Journal of Small Business Management, No. 16 (April 1978) pp. 27-34.

Bennett, K.W. "Small Company Grows with Cost Management". Iron Age, No. 216 (September 22, 1975) p. 30.

Edmunds, S.W. "Performance measures for Small Businesses. Harvard Business Review, No. 57 (January 1979) pp. 172-4.

Fuller, D. "Management Information for the Small Business". Accountancy, No. 89 (April 1978) pp. 58-9.

- Greenwood, F. "The Ten Commandments of Small Business Computerization".
Journal of Small Business Management, No. 19 (April 1981) pp. 61-67.
- Grollman, W.K., and Colby, R.W. "Internal Control for Small Businesses".
The Journal of Accountancy, No. 146 (December 1978) pp. 64-7.
- Kagerer, R.L. "Preventive Management in the Smaller Firm". Supervisory Management, No. 24 (September 1979) pp. 38-41.
- Lierheller, C.A. "Planning in the Medium Size Company". Managerial Planning, No. 28 (January 1980) pp. 16-19.
- Mackenzie, A.R. "The Management Process in 3-D" Harvard Business Review, No. 47 (November-December 1969) pp. 80-87.
- Metzger, H.G. "Controlling the Cost of Architectural Services".
Industrial Development, No. 149 (July-August 1980) pp. 19-20.
- Naor, J. "How to Make Strategic Planning Work for Small Businesses".
SAM Advanced Management Journal, No. J45 (Winter 1980) pp. 35-9.
- Patrone, F.L. and duBois, D. "Financial Ratio Analysis for the Small Business". Journal of Small Business Management, No. 19 (January 1981) pp. 35-60.
- Robinson, R. "Forecasting and Small Business." Journal of Small Business Management, No. 17 (July 1979) pp. 14-18.

Robinson, B.R., and Littlejohn, W.F. "Important Contingencies in Small Firm Planning." Journal of Small Business Management, No. 19 (July 1981) pp. 45-8.

Stancill, J.M. "Managing Financial Statements-Image and Effect." Harvard Business Review, No. 59 (March-April 1981) pp. 180-2.

Timnings, S.A. and Fraker, M.C. and Brown. J. "Large-Firm Forecasting Techniques Can Improve Small Business Decision Making." Journal of Small Business Management, No. 17 (July 1979) pp. 14-18.

Wilson, T.M. and Stone, D.R. "Project management for an Architectural Firm." Management Accounting, No. 62 (October 1980) pp. 23-8.

Woodward, H.N. "Management Strategies for Small Companies." Harvard Business Review, No. 54 (January 1976) pp. 113-21.

Selected Architectural Business Management Journal Readings

Burden, E. "Marketing: Winning Proposals for Commerical Work and Any Other Type as Well". Architectural Record, (October 1982) pp. 45-7.

Burden, E. "Marketing: What are the Agressive Firms Doing to Get Their Share of the Design Work?" Architectural Record, (February 1983) pp. 47-9.

Edeison, A.H. "Advertising, How To." AIA Journal, (December 1978) p. 54.

Harper, G.N. "Computer Based Financial Management." AIA Journal,
(December 1982).

Hoyt, C.K. "Management Strategies for Survival". Architectural Record,
(February 1983) pp. 43-5.

Johnson, D.A. "Architects Brochures". AIA Journal, (May 1975) p. 50.

Kliment, S.A. "Managing Your Marketing Communications Program."
Architectural Record, (May 1977) pp. 77-9.

LePatner, B.B. "The Architect as Businessman: Moving Beyond the Crisis
of Confidence." Architectural Record, (April 1982) pp. 63-6.

Meathe, P. and Henry, G. "Management: How to Run a Ten-Person Firm.
Advice From Two Giants Who Used To." Architectural Record, (August
1982) pp. 41-3.

Pivenl, P. "A User's View of Computer-Based Financial Management" AIA
Journal, (December 1972).

Smith, H.L. "SMPS Annual Award Winners Show the State of Art in
Marketing". Architectural Record, (November 1982) pp. 29-31.

Selected Additional Sources

Case and Co., The Economics of Architectural Practice in Hawaii. New York:

Case and Co., May 1972.

MRH Associates, Professional Services Management Journal. Newington, CT.:

MRH Associates.

MRH Associates, A/E Marketing Journal. Newington, CT.: MRH Associates

Professional Publications, Professional Practice Report. Rose Valley, PA.:

Professional Publications.

ProQuest Number: 28805104

INFORMATION TO ALL USERS

The quality and completeness of this reproduction is dependent on the quality and completeness of the copy made available to ProQuest.



Distributed by ProQuest LLC (2021).

Copyright of the Dissertation is held by the Author unless otherwise noted.

This work may be used in accordance with the terms of the Creative Commons license or other rights statement, as indicated in the copyright statement or in the metadata associated with this work. Unless otherwise specified in the copyright statement or the metadata, all rights are reserved by the copyright holder.

This work is protected against unauthorized copying under Title 17, United States Code and other applicable copyright laws.

Microform Edition where available © ProQuest LLC. No reproduction or digitization of the Microform Edition is authorized without permission of ProQuest LLC.

ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346 USA