

CONSULTING BUSINESS STARTUP

by

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## **Abstract**

Most of our education in college is focused on producing students that will graduate and go on to work for someone else. Most classes taken in college are based on theory and technical subjects, which are very important to understand. Where the education falls short on is showing the opportunity of owning and running your own business. This report describes basic steps necessary to start up a consulting business. The report concentrates on the challenges involved, deciding on the right type of business ownership, location and equipment, and extensively on the business plan. Engineering is typically considered a technical field with little interaction with people, which is only half right. There is a lot of interaction between the engineer and the architect, client, contractor, and any other consultants for any particular project. This report will also talk about relationships and how to convey a professional image. The emphasis of this report is to describe basic steps to get started on owning your own company.

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## **Dedication**

To my loving husband, Tracy, who has supported me from the beginning in everything that I do. Truly, “You are the Best”! Uncow!

To my parents, Monty and Nancy Mercer, who let me be myself and for believing in me.

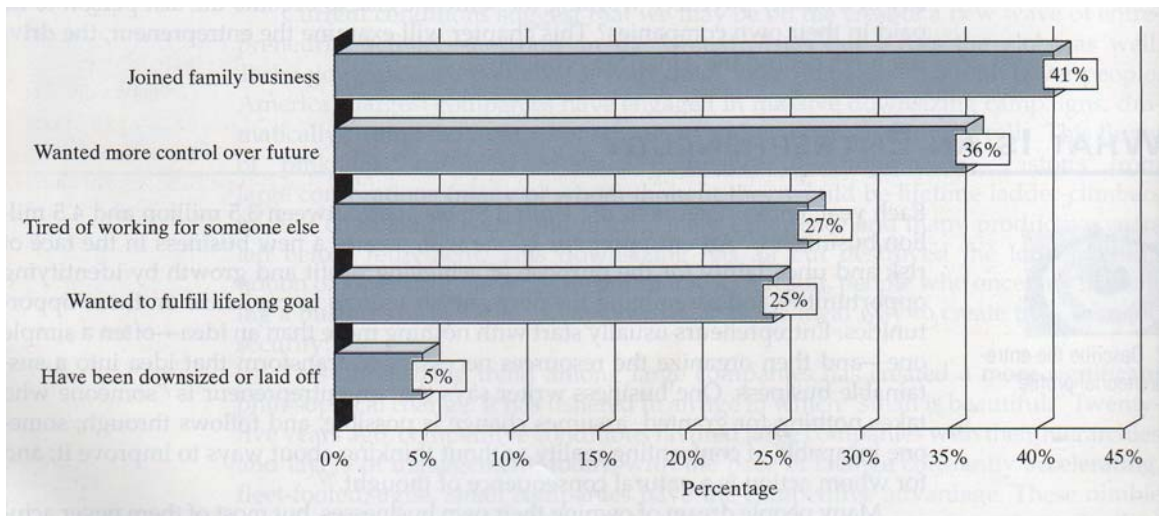
To my children, Jarod and Joselyn, who I hope will always do their best and understand they can do anything they set their mind to.

To Jerry and Nellene Sandburg, who has treated me like their own daughter and has given me complete support in everything I do.

# CHAPTER 1 - Challenges of Owning a Consulting Firm

Many people dream of starting a business for themselves, but never follow through with their intentions. There are many reasons why people go into business for themselves. The number one reason was they joined their family business. The second most popular reason to go into business for them is to gain more control over their future. There are many reasons why individuals go into business for themselves. Figure 1 below shows the break down of the reasons.

**Figure 1.1 Reasons Individuals Went into Business**



Source: Dun & Bradstreet 19<sup>th</sup> Annual Small Business Survey, 2000. (Scarborough & Zimmerer, 2003, p. 4)

## 1.1 Benefits

There are many benefits to owning an engineering consulting firm. Anyone considering starting their own business should take note of all benefits and opportunities of owning a small business. There are many reasons today that encourage engineers to take control over the direction of your career. The relationship between the company and the employee has changed over the years. Companies require longer hours, less benefits, more insecurity in your future, less time devoted to professional development and fewer defined paths to advancement. One of the benefits of owning your own firm is gaining independence and having the opportunity to

specialize in a field that is of interest to the engineer. Some engineers start their own business to challenge their skills, abilities, creativity, and determination (Scarborough & Zimmerer, 2003). The success of the business is solely reliant on the owner(s). Many small business owners have a feeling of self-satisfaction in running their business and do not consider owning a business a 'job'. Another benefit might include the opportunity to unlimited profits. As an employee, you are limited to the amount of salary your boss is willing to pay you. Self-employed people are four times as likely to become millionaires that those who work for someone else (Scarborough & Zimmerer, 2003).

## **1.2 Disadvantages**

Even though there are many benefits to being a business owner, there are also potential drawbacks. A major disadvantage is the inability to provide an adequate income. The owner is the last one to get paid. During slow periods income may be scarce and the owner could be forced to live off of their savings. As a general rule business owners should have four months to one year's earnings when they start out and have three ongoing projects to ensure adequate cash flow. (Stasiowski, 1994) Another disadvantage is the risk of losing everything they have invested. Failure rates for small businesses are high. As shown in a study cited by Scarborough & Zimmerer (2003), "According to a study by the Small Business Administration, 34 percent of new businesses fail within two years, and 50 percent shut down within four years. Within six years, 60 percent of new businesses will have folded" (p. 12).

Starting a new business usually means long hours and lots of hard work. The owner usually does everything themselves spending long hours and working 6-7 days a week without a paid vacation. During the startup period the owner may experience a lower quality of life until the business is established. Often times new business owners have left their jobs, and invested significant amounts of money to start their new venture. There is a lot on the line for the owner to succeed. This alone can create high levels of stress.

Being an owner is quite rewarding, but at times the owner will be required to make decisions on topics they may not be very knowledgeable about. In this situation there isn't anyone to ask. This adds to the intense stress. Business owners must possess dedication, discipline, and tenacity to get them through the slow periods and the discouragement associated with owning their own business.

## **CHAPTER 2 - Deciding on a Form of Business Ownership**

All business forms are guided by the state in which the business is set up in. New businesses need to address all legal aspects related to the state(s) the business will be set up in. If need be an attorney or accountant can be consulted to make sure the business is choosing the form of business that best suits their needs. In order to choose the right form of organization, the business owner should understand all forms of businesses and how they affect the business being set up and personal circumstances.

There are a few issues that should be considered when evaluating each form of business. Tax considerations are important because they are different for each form. Even if one form of business may be beneficial this year for tax reasons, it may be completely different the second year of business. Tax codes are constantly changing and the business's income fluctuates from year to year making this important in the decision making process.

An owners' ability to assume personal responsibility for their companies' obligations will be another important factor in the decision. Some forms of business offer more protection from personal liability due to a multitude of difficulties the company may face.

Start-up capital may be more important to some new business owners and the form of ownership may affect their ability to obtain such start-up capital. Some forms of ownership are better than others in acquiring start-up capital.

Other issues to consider in the evaluation process include cost, control, business goals, and succession plans. In this chapter some of the more common forms of ownership will be described.

### **2.1 Sole Proprietorship**

Sole proprietorship is owned and managed by one individual. This is the most common form of ownership in the country. "Sole proprietorship is also the easiest and most hassle-free form of business ownership" (Kaye, 1998, p. 214). An individual can feasibly set up a sole proprietorship and immediately start operating all in one day. All that is required is filling out

the appropriate forms with the state. There are several advantages and disadvantages of choosing the sole proprietorship as a form of ownership.

### ***2.1.1 Advantages of Sole Proprietorship***

One distinct advantage of the sole proprietorship is the ease and speed of the formation. The sole proprietorship is the least expensive form of ownership to set up. This form does not require any lengthy legal documents unlike the corporation; therefore saving even more money. One major advantage to being a sole owner is that all profits, once all expenses and taxes are paid, go to the individual. The sole proprietor has total control over the day-to-day operations of the business. If changes are necessary then the individual has control to make the changes quickly. Other forms of ownership can not respond so quickly to the necessary changes. Another advantage includes the lack of government regulations and reporting requirements as seen in other forms of business. One other advantage is the ability to discontinue the business quickly; even though the sole owner is still liable for all debts and obligations. There are many great advantages to being a sole proprietor, but new businesses should be aware of the disadvantages as well.

### ***2.1.2 Disadvantages of Sole Proprietorship***

The single most important disadvantage is the unlimited personal liability of the owner. The business owner is liable for all of the business's debts and creditors can force the sale of the owner's personal assets to recover the payment of debts. The sole proprietorship also does not lend itself to raising capital. If the owner is just starting out or even looking for more capital to grow and expand, usually the banks will not lend money unless a personal residence or bond is put up for collateral (Kaye, 1998). Being a sole proprietor means the owner is responsible for all aspects of the business. An owner may not possess all the required skills to make the right decisions for the business. There may be times when the owner will avoid problems because they lack the ability or experience to solve the issues. By avoiding the problems this could spell out doom for the business.

The sole proprietorship may be ideal for those owners that do not intend on growing to a very large, complex business. By forming a partnership a business could avoid some of the disadvantages of the sole proprietorship.

## **2.2 Partnership**

Partnerships, as defined by the Uniform Partnership Act, are the “association of two or more persons to carry on as co-owners of a business for profit” (Kaye, 1998, p. 215). A partnership agreement or articles of partnership is not required, but highly suggested. This document states all of the terms of operating the partnership which outlines the status and responsibility of each partner. As stated in Kaye (1998), the major topics covered by this document are: (p. 215)

- Amount of equity contributed by each partner and percentage ownership
- How profits and losses are distributed among the partners
- Who makes management decisions
- Who is authorized to spend monies
- How liabilities are to be shared
- What happens when one partner dies or decides to leave
- How disputes are to be resolved
- Terms for additional partners to enter the partnership

### ***2.2.1 Advantages of the Partnership***

The partnership is also easy and inexpensive to form. The structure of the partnership is very similar to the sole proprietorship, just with more than one owner. Depending on the partners involved, their strengths and weaknesses should be complementary to each other. Some individuals may have strengths in management and other individuals may have strengths in marketing. Determine each individual strengths and weaknesses to determine the compatibility as a team. Another advantage is the larger borrowing capacity of the business based on each partner’s assets. The partnership just like the sole proprietorship, are devoid of government regulations and reporting requirements. As far as taxation is concerned, the partnership is not taxed. All income taxes are paid by the individual partners and based on the amount of net income or losses incurred by the partner.

### ***2.2.2 Disadvantages of the Partnership***

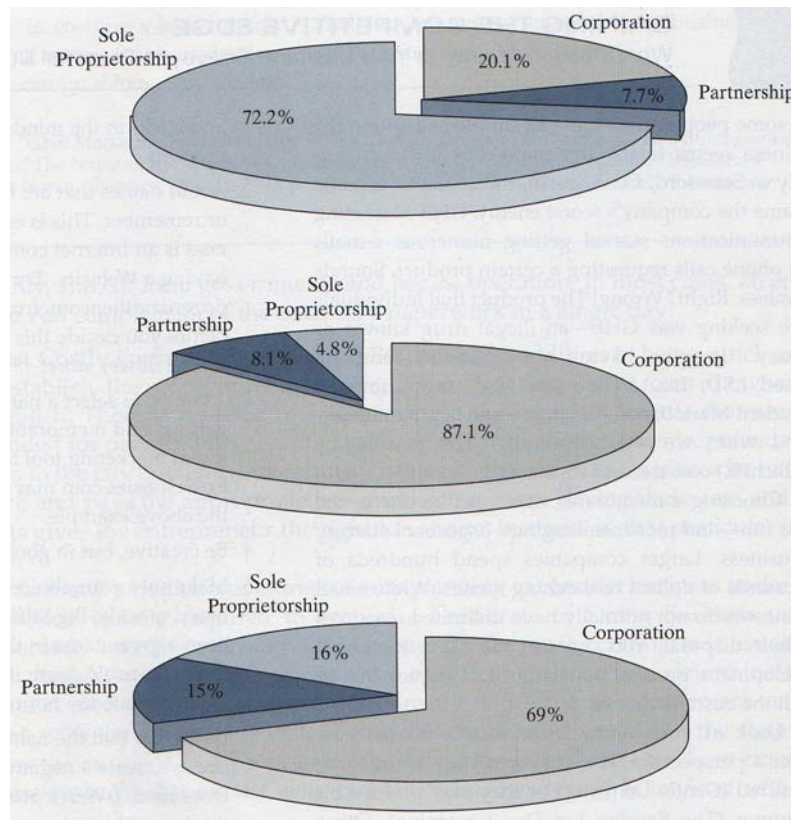
A major disadvantage to the partnership is that all partners may be held liable for the business decisions made by any one partner. At least one person must be a general partner, meaning that partner takes unlimited personal liability (Kaye, 1998). Change of

ownership/partners is another disadvantage. If for some reason a partner must leave or another partner is added, usually the partnership must be dissolved and a new agreement drafted.

## 2.3 Corporation

Corporations make up slightly more than 20 percent of the three major forms of business ownership. Even though corporations are the smallest group, they are responsible for more than 87 percent of sales and 69 percent of the income gained from the major forms of ownership. See figure below for the breakdown of the three major forms of ownerships.

**Figure 2.1 Forms of U.S. Businesses by Percentage of Number of Businesses, Sales, and Net Income, 1997**



Source: Internal Revenue Service, 1997 (Scarborough & Zimmerer, 2003, p. 67)

### 2.3.1 C Corporations

The corporation is a separate entity apart from most of its owners and may engage in business, make contracts, sue and be sued, and pay taxes (Scarborough & Zimmerer, 2003).

Corporations are formed by state law, thus it must abide by the regulations and restrictions set by the state in which they will do business.

Corporations can retain earnings without paying them out to the owners. These retained earnings can be distributed to shareholders as dividends, kept as liquid assets, or reinvested in the business (Kaye, 1998). The difference between a proprietorship and a corporation is that corporations have to file a yearly return and pay taxes on retained earnings.

### ***2.3.1.1 Advantages of the Corporation***

A major benefit to the corporation is that investors can limit their liability to the total amount of the investment. Although most start-up companies are required to personally guarantee loans made to the corporation. By doing this, the owners are putting their personal assets at risk, just like a sole proprietor does.

Another advantage is the ability to raise money by selling shares of its stock to investors. If the company is small though, the sale of these shares may be restricted. Another major advantage to the corporation is the transferable ownership. If an owner dies or becomes dissatisfied for any reason, they can sale their shares or pass on their shares through inheritance.

### ***2.3.1.2 Disadvantages of the Corporation***

For a corporation to be established, they can be very expensive and time consuming. Each state has different requirements and may impose fees for the setup of the corporation. Another major disadvantage is that the corporation profits are taxed twice. Since the corporation is a separate entity, the net income is taxed based on the corporate tax rate and then the stockholders will pay taxes on the dividends from the same profits based on the individual's tax rate. This is commonly referred to as double taxation.

Often times as corporations grow and get to big the stockholders find it hard to provide all necessary managing skills and expertise. At this point they will require additional outside assistance in managing. Unfortunately the outside assistance lacks the intense interest in the business to be as successful. They just do not have any personal assets invested in the company; therefore their motivation tends to be less than what the owner has invested.

Corporations have more stringent legal and financial requirements than any other form of organization. Corporations can retain earnings without paying them out to the owners. There are several ways these earnings can be used. They can be paid out in dividends, reinvested in the



company or just kept as an asset. Annual meetings must be held with the board of directors. They must also be consulted on major business decisions, which could affect the speed with which the company is able to react to changes in the industry. Other requirements involve filing quarterly and annual reports with the Securities and Exchange Commission.

Another disadvantage includes a potential loss of control by the owners due to selling shares of their company. Business owners may have to give up significant amounts of control in order to get the required start-up money. In this instance they become a minority shareholder therefore giving up control of their own company. In some cases the majority shareholders could vote them out of their own business.

### ***2.3.2 Professional Corporation***

This type of corporation is ideal for professionals who want the benefits of being a corporation. This particular type will offer a limited amount of liability. Regardless of the level of ownership, the individual must maintain their professional responsibilities in the public interest. Therefore if a professional is in business with other professionals they would not be liable for the errors or omissions of the others. Each would be held responsible for their own actions.

### ***2.3.3 S Corporation***

S Corporation is very similar to the general corporation, except the income or loss flows through the company, which does not have liability for taxes, and can be distributed to the shareholders in proportion to their share ownership. The dividends paid out to the shareholders are then taxed. In 1996, Congress passed legislation to simplify or eliminate some of the restrictive rules and requirements for S corporations so that businesses seeking “S” status must meet the following criteria:

- A. Must be a domestic corporation
- B. Cannot have a nonresident alien as a shareholder
- C. Can issue only one class of common stock, which means that all shares must carry the same rights
- D. Cannot have more than 75 shareholders

(Scarborough & Zimmerer, 2003, p. 84)

Recently changed laws allow the S-Corporation to sell shares of their stock to certain tax-exempt organizations such as pension funds, which will allow corporations to raise capital more easily. S-Corporations are also allowed to own subsidiary companies. This eliminates the need to set up separate companies for new ventures and the liabilities of one business cannot destroy the assets of the other company.

### ***2.3.3.1 Advantages of the S Corporation***

The advantages of the S Corporation have all of the same advantages as the general corporation. The number one advantage is that it passes all of its profits and losses through to shareholders and the income is only taxed once at the individual's tax rate. This avoids the double taxation that the general corporation must pay.

Another advantage is that it avoids the tax that the general corporations pay on the assets that have appreciated in value and are sold. Another advantage is the ability to pay out dividends at the end of the year if the profits are high.

### ***2.3.3.2 Disadvantages of the S Corporation***

The maximum personal tax rate is 4.6 percent higher than the maximum corporate tax rate. There are many things to consider in determining if this tax rate will affect the total amount of taxes paid. Items like the size of the profits, tax rates of shareholders, plans to sell the company and the impact of the double taxation penalty on income distributed as dividends. (Scarborough & Zimmerer, 2003)

## **2.4 Limited Liability Company (LLC)**

The limited liability company is very similar to a partnership and a corporation. An LLC combines the management flexibility and tax advantages of general partnerships with the liability protection of a corporation. Owners in an LLC take responsibility equal to their share interest and they are responsible for their own professional errors. In order to set up an LLC, there are two documents that must be filed with the secretary of state: the articles of organization and the operating agreement. The articles of organization establish the company's name, its method of management, its duration, and the names and addresses of each member. The method of management could be board managed or member managed. The duration must be stated because some states have limitations on the length of the business. (Scarborough & Zimmerer, 2003)

The operating agreement outlines the provisions governing the way the LLC will conduct business. The other requirements include a registration fee set by the state the company is filed in.

#### ***2.4.1 Advantages of the LLC***

The partnership prohibits limited partners from participating in day-to-day management, but an LLC does not restrict the partners' ability to manage the company. This form of organization also avoids the double taxation as seen by the general corporation. Very similar to the S-Corporation, the LLC does not pay taxes on income; its income flows through the partners, who are then responsible for paying income taxes on their share of the net income. The LLC does have the ability to distribute profits between the partners however they see fit.

#### ***2.4.2 Disadvantages of the LLC***

One disadvantage to an LLC is that it may be expensive to set up. Starting out a new business as an LLC may be ideal, but converting an existing corporation to an LLC can cause large tax obligations. Converting a sole proprietorship or a partnership to an LLC should not be a problem.

**Figure 2.2 Characteristics of the Major Forms of Ownership**

FEATURE	SOLE PROPRIETORSHIP	PARTNERSHIP	C CORPORATION	S CORPORATION	LIMITED LIABILITY COMPANY
Owner's personal liability	Unlimited	Unlimited for general partners Limited for limited partners	Limited	Limited	Limited
Number of owners	1	2 or more (at least 1 general partner required)	Any number	Maximum of 75 (with restriction on who they are)	2 or more
Tax liability	Single tax: proprietor pays at individual rate	Single tax: partners pay on their proportional shares at individual rate	Double tax: corporation pays tax and shareholders pay tax on dividends distributed	Single tax: owners pay on their proportional shares at individual rate	Single tax: members pay on their proportional shares at individual rate
Maximum tax rate	39.6%	39.6%	35% (39.6% on distributed dividends)	39.6%	39.6%
Transferability of ownership	Fully transferable through sale or transfer of company assets	May require consent of all partners	Fully transferable	Transferable (but transfer may affect S status)	Usually requires consent of all members
Continuity of business	Ends on death or insanity of proprietor or upon termination by proprietor	Dissolves upon death, insanity, or retirement of a general partner (business may continue)	Perpetual life	Perpetual life	Perpetual life
Cost of formation	Low	Moderate	High	High	High
Liquidity of owner's investment in business	Poor to average	Poor to average	High	High	High
Complexity of formation	Extremely low	Moderate	High	High	High
Ability to raise capital	Low	Moderate	Very high	Moderate to high	High
Formation procedure	No special steps required other than buying necessary licenses	No written partnership agreements required (but highly advisable)	Must meet formal requirements specified by state law	Must follow same procedures as C corporation, then elect S status with IRS	Must meet formal requirements specified by state law

Source: (Scarborough & Zimmerer, 2003, p. 88)

## **CHAPTER 3 - Location and Office Equipment**

The location of your office must be quiet and be a presentable space. This space must accommodate a desk, file cabinets, computers, copiers, phones, book cases and any other equipment required for the owners and all of the assistants. If there is a need, a conference room table should be provided with about 4-6 chairs. If meetings are held in your office, make sure the space is presentable for the clients. Starting out with a new business, this space does not need to be located in an expensive, high traffic area.

### **3.1 The Search from Region to State to City to Site**

Finding a location for an office that is best suited for the company will aid in the likelihood of success. One needs to keep an open mind while looking for an office. Choosing the most appropriate location requires finding the site that best serves the needs of the business's target market. Scarborough & Zimmerer (2003) asked the question, "Is there a location where the new business will have the greatest number of customers that need, want, and can afford the products or services your business provides?" (p. 469). The business owner in search of finding a location to land should be asking themselves this question and determining the location that best answers this question.

A business should locate in a place that is convenient for the company's clients. Every year there are publications that report on regions of the country that are growing, that are stagnant, and those that are declining (Scarborough & Zimmerer, 2003). Studying these reports will give the business owner an idea of where the action is. The best source for this type of information is the U.S. Census Bureau. The following is a list of other excellent resources for obtaining valuable information about demographics for specific locations.

- Government Information Sharing Project (<http://govinfo.kerr.orst.edu/>)
- American Demographics magazine
- AmeriStat ([www.ameristat.org](http://www.ameristat.org))
- Demographics USA Series
- Lifestyle Market Analyst

- Markets of the U.S. for Business Planners
- Rand McNally Commercial Atlas & Marketing Guide
- Sourcebook of County Demographics
- Sales and Marketing Management's Survey of Buying Power
- Editor and Publisher Market Guide
- Zip Code Atlas and Market Planner

(Scarborough & Zimmerer, 2003)

Utilizing these resources can assist in the decision making of choosing the right region of the United States in which to locate an office. The next step would be to narrow the search to a state. Every state has a business development office that will be more than happy to assist in answering questions and providing assistance for setting up the business. When determining which state to land in, key issues that need to be considered are the laws, regulations, and taxes that govern businesses and any incentives the state may offer for opening a business in that state. Locating the business in a close proximity of the market or clients could be a huge benefit. This would allow the business to provide a higher quality of service than if the business was located in a different city/state. Another element to consider is the labor supply. The company should analyze how many workers there are in the area and what is their level of education, training and experience. Along with labor supply, the wage rates for each of the states being considered should be analyzed.

Refer to Table 3.1 for an example of an evaluation matrix that can be constructed by an entrepreneur to assist in the state-to-state evaluation process.

**Figure 3.1 State Evaluation Matrix**

LOCATION CRITERION	WEIGHT	SCORE	STATE WEIGHTED SCORE (WEIGHT X SCORE)		
			FLORIDA	ALABAMA	SOUTH CAROLINA
Quality of labor force		1 2 3 4 5			
Wage rates		1 2 3 4 5			
Union activity		1 2 3 4 5			
Energy costs		1 2 3 4 5			
Tax burden		1 2 3 4 5			
Educational/ training assistance		1 2 3 4 5			
Start-up incentives		1 2 3 4 5			
Quality of life		1 2 3 4 5			
Availability of raw materials		1 2 3 4 5			
Other		1 2 3 4 5			
Other		1 2 3 4 5			
Total score					

Assign to each location criterion a weight that reflects its relative importance. Then score each state on a scale of 1 (low) to 5 (high). Calculate the weighted score (weight X score) for each state. Finally, add up the total weighted score for each state. The state with the highest total weighted score is the best location for your business.

Source: (Scarborough & Zimmerer, 2003, p. 474)

After determining the state to locate the business, the next decision is to find the city that is a good fit for the company. When deciding on a city, items like population trends and density, competition, costs, and local laws and regulations are important factors to consider (Scarborough & Zimmerer, 2003). Looking into population trends could give a company good insight to the increase or decrease of disposable income available and whether a city is dying or experiencing rapid growth. Locating the office near locations of high density areas, may be ideal for many reasons. This indicates a location where people are living or working, which may result in larger amounts of projects available. This also could mean a larger pool of people to draw employees from. Location of the competition may also factor into where the business sets up business. Costs of doing business and costs of the location will definitely factor into the decision process. Local laws and regulations need to be checked prior to signing a lease. The city will have zoning

laws which are intended to control the use of the land, buildings, and site. The business owner can appeal to the city to change the zoning laws to allow your business in that area, but this may cause the business to update the building to current codes. This should be thoroughly investigated so the business owner is not surprised with addition costs of opening up the business.

### **3.2 Factors in Deciding on the Right Space**

There are many factors that will influence the decision of choosing the right location. The most important factor is the price per square foot for a space, which is usually affected by the location. The higher profile spaces will cost more. Other factors include utilities, business insurance to protect personal property, insurance to cover general liability, and local property associations or fees for that particular location. Other factors that may influence the decision are the length of lease contracts and the possibility of a high rent increase after the lease has expired. If cost is a concern, business owners should look into sharing office space with other professionals or rent a portion of another business's space.

Size is another important factor. There should be enough room to accommodate daily activities comfortably. Starting out with not enough space could spell trouble. The lack of space will cause inefficiency, reduced productivity and possibly force a costly move to a new location in just a short amount of time.

Some other factors to consider in the selection process might include a clean, presentable reception area, adequate storage facilities or file space, proper lighting, and clean rest rooms. Having a presentable reception area, will allow clients to comfortably wait for the meeting. If you do not have that front reception area, clients may be thrown directly into the office space causing an interruption in daily work activities. A space that has adequate storage is a definite benefit. The design profession generates quite a bit of paper files and this is the last thing that clients need to see just strewn about the office. Find adequate storage space for all catalogs and project files, this will keep the office organized and will save time when trying to locate information for a particular job. A space that provides proper lighting will aid in increased production and efficiency. Lighting that is too bright will cause a glare on computer monitors which will slow down productivity. When light is too dim employee's eyes will be stressed and may cause headaches and again a slow down in production.



## **CHAPTER 4 - Creating a Business Plan**

A carefully written business plan can be a huge benefit for any company. The plan can assist the owner in thinking through the proposed venture and analyze all the options and considered potential difficulties. The plan can also be a useful tool when finding potential investors and/or lenders. This document serves as an operating guide for the business. It will outline many procedures, marketing plan, financial plan, growth plan and many other areas that will need to be considered when writing the plan. The business plan will need to be updated on a regular basis. Obviously the more thorough the plan is the better off the company will be. In this chapter the content of the business plan will be looked at in great detail.

### **4.1 Document Cover**

Business plans should start with a document cover. This is nothing more than a front introductory page with information that includes: name, address, phone and fax numbers and company logo if available. The business plan should always portray a professional look; hence it should be bound or put into a 3-ring binder.

### **4.2 Executive Summary**

This part of the plan is a clear, concise summary. The executive summary should be able to stand alone without the rest of the document. Some reviewers may not read the rest of the plan, so it is important to make this as the best representation of the company as possible.

Topics that might be included are:

- Type of business
- What is the product or service that will be provided
- Form of ownership
- Identify the principals
- How much money is required for the business
- How the money will be used
- Why the business will succeed

These topics should be a good start on providing a clear understanding of the business. The executive summary should be the very last section to be completed.

### **4.3 Title Page**

This is a repeat of the cover page only adding the principal owners' names and addresses and date. This page could contain a copy number. This will help number the copies and keep control of how many copies there are.

### **4.4 Table of Contents**

The next section of the plan should be a table of contents. This will identify major topics with corresponding page numbers and allow readers to easily find the information they may be searching for.

### **4.5 Vision and Mission Statement**

The vision influences everyone associated with the business whether they are clients, investors, employees, or lenders. The vision typically identifies the beliefs and values of the business owners. By making the vision transparent, the company has a much better chance of being successful. Once the values are determined it is important to create the mission statement and use the values as the guidelines. The mission statement must establish the purpose of the business. Some other issues that need to be considered when writing a mission statement are:

Who are the target clients?

What are our products and services?

What client needs and wants do they satisfy?

Why should clients use our services rather than our competitors?

How can we offer better value to our clients?

What is the company's competitive advantage?

Which markets will the company compete in?

(Scarborough & Zimmerman, 2003)

The mission statement could be the most essential communication tool for everyone associated with the company. After writing the statement, now the owners must communicate it to the employees. They will make decisions on a daily basis, but if they are not aware of the vision they may lose sight of what the company is trying to achieve. "To be effective, a mission statement must become a natural part of the organization, embodied in the minds, habits,

attitudes, and decisions of everyone in the company every day.” (Scarborough & Zimmerer, 2003)

#### **4.6 Business Description**

This section should include the basic details of the company. The goal of this section is to provide background information about the company’s structure, ownership, and developments. Items to include in this description are all names associated with the business. There could be a number of different names associated with the business, including the owner’s name, corporation name, DBA (doing business as), any brand names, and any website names (Abrams, 2005). The location of the business should be listed along with any other branch locations. Another basic detail is stating the legal form of the business, whether it is a sole proprietor, a corporation or any other form. Specifically identify the owners of the business and the portion they own.

Even though this may seem obvious to the owner, this would be an excellent location for a description of the industry the company intends on operating in. Lenders and investors may be reading the business plan and if they are not familiar with the industry may not think this venture to be a profitable one. Briefly explain the economic health and rate of growth for the company’s particular industry. Or if the industry is shrinking, why you think the business will survive.

One more item that may be included is a brief description of the company’s financial situation. Include major sources of income already committed to the company in the form of projects or large clients. If one of the purposes of the business plan is to seek financial assistance from lenders, indicate how much money is needed and how that money will be used in the operation of the company. This is a business description, so stick to the basics to give an overall picture of the company. If the person reading the plan is interested in more detail, they can read additional information in other sections of the business plan.

#### **4.7 Company Products and Services**

In this section the company should describe the services provided by the design firm, giving an overview of how customers use its services. The owners should address the comparisons of the company’s services and the services provided by the competitors. Specifically identify the advantages or improvements that explain why the company is unique

and why a client will choose them over their competitors. This part of the plan should explain how a business will take a tangible service and put it into intangible service or benefits to the client.

## **4.8 Business Strategy**

Developing a strategic plan and implementing the plan can give great value to the goals set for the company. Each company should set goals and evaluate how these goals are being met or not met at least every six months. Some companies may even evaluate certain goals on a more consistent basis. The strategic planning provides a starting point for developing a budget.

### ***4.8.1 Developing the Goals***

First one must understand where the company stands and where the company is heading. At this point goals can be set for the company. Once the goals are set, a plan needs to be developed on how these goals will be achieved. These goals that are set need to be goals that are measurable. Everyone needs to understand what the company's mission and goals are. The owner's responsibility is to communicate the mission and goals to the employees and get them to buy into them. A list of goals may include the following items in Figure 4.1 below.

#### **Figure 4.1 Sample Set of Goals**

- Increases and decreases in basic numbers, such as gross revenues, number of employees, or number of locations
- Changes in the mix of business, measured against target percentages as to type of client and type of work.
- Skills measurement, including professional registrations and formal courses completed
- Marketing indicators that reflect strategic goals, such as the number of proposals, the number of reviews, and the number of wins.
- Measurement in terms of ownership transition, if there is some sort of statement as to what ownership transition is going to be and how it is going to occur.
- Revenue per employee. What did you set as a goal? What are you receiving?

(Stasiowski & Willard, 1994)

Strategic planning should include objectives for revenue, profits, employees, markets, disciplines, branches, clients, ownership, and professional achievement. It is important to determine the firm's strengths and weaknesses. This way the company can capitalize on their strengths and minimize the importance of the weaknesses when considering the objectives. Once the overall objectives are established, then specific annual operational plans can be developed, which include the business plan, budgets, marketing plan, human resources and ownership strategy.

## **4.9 Marketing Strategy**

Doing a market research is an integral part of the strategic planning process. Understanding the market and the opportunities available in the marketplace are keys to being able to plan for the future. It is important to review valuable resources on a regular basis to fully understand how the marketplace is changing and the direction it is taking. Resources may include governmental agencies, publications, real estate organizations, financial institutions, universities, and professional associations. (Stasiowski & Willard, 1994)

Below is a checklist of the items to monitor in the development of the firm:

- List of targeted project types
- List of targeted client types
- List of services
- Geographic area
- Market trends for targeted markets
- Knowledge of competitors

(Stasiowski & Willard, 1994)

The first step in developing an effective marketing strategy is to fully understand the company's target markets. The following is a list of questions that should be asked to get an accurate fix on the company's target market.

- Who are the target clients?
- What are the clients characteristics (age, gender, education, and income)
- How many of them are in the company's local area/region

- What expectations do they have about the services provided
- Will the firm focus on a niche
- How does the company seek to position itself in the market(s) it will pursue

#### **4.10 Competitor Analysis**

A company needs to honestly analyze their competition. This section should concentrate on the company's advantage over the competition. What is it that sets their company apart from the rest? Some of the questions that need to be asked include: Who are the company's competitors? What are their strengths and weaknesses? What are their strategies? And how successful are they? Finding this information gives great insight to the competitor and allows your company to define how they are different and will fill the needs of the clients. The analysis also allows the company to determine their competitive edge.

"Sizing up the competition gives a business owner a more realistic view of the market and his or her position in it" (Scarborough & Zimmerer, 2003, p. 47). By listing out the strengths and weaknesses of the competition and your business, this should help identify reasons why clients should hire your firm.

#### **4.11 Management Team and the Organization**

Management is a very important factor in the success of the company. This section will concentrate on the key management positions and who will occupy these positions. An organizational chart would be very helpful in describing the structure of the company. In addition to the chart, include a brief description of what each position does. This is an excellent section to outline the number of staff needed and determine what skills they should possess for each position. By listing a proposed salary for each of the positions, the company can budget accordingly.

#### **4.12 Growth Plan**

Growth in a company can be the downfall of the business. Planning and preparing for growth will help control how quickly the company will grow. Without a controlled growth, a

company could fail. Engineers need to be in tune with the industry trends and where they fit in the industry. If the engineer is currently pursuing markets that may be gone in ten years, they need to be considering how they will change over the next ten years. Will the company offer more services? Offering more services or getting into different markets are excellent paths to expanding the company. This section will need to consider how the company will deal with this growth. What additional staff will be needed? Will the company open a new branch in a different city to better serve the new market? How much money is needed and how does the company pay for it? The growth plan is essential part of a successful business plan.

### **4.13 Contingency Plan**

It is important to evaluate potential problems and determine how the company will deal with them. There are all kinds of issues that could arise and affect the success of the business. The engineer needs to consider what they will do if they lose a large client or a group of clients. What if the market turns sour? How will the company deal with the slow down of the industry? What if a competitor is reducing the company's market share? How does the company deal with liability issues? What if the company can not open up on time? How will the company address these issues? Each company is unique and requires a separate list of potential problems relative to the individual company. They also need to come up with a plan to dealing with the problems. Thinking out a contingency plan in advance will prepare the company to deal with the problems as they arise in a quick, executed plan.

### **4.14 Financial Forecasts**

According to Stasiowski & Willard (1994) here is a checklist of the items to monitor in the development of the firm:

- Gross revenues versus net revenues
- Revenues generated by client type
- Profitability by client type
- Revenues generated by project type
- Profitability by project type

- Bonus structure and disbursement
- Pension/profit sharing contributions
- Ranking of annual revenues generated by client

(p. 66)

#### **4.15 Loan or Investment Proposal**

This section of the business plan should include the purpose of the loan or investment, the amount requested, and the plans for repayment (Scarborough & Zimmerer, 2003). Just giving a generic statement about the purpose may not grant the business a loan. Go into detail and explain exactly what the money will be used for.

The other important element in this section is the repayment schedule. If a lender has granted a loan, they will want to know how the business intends to repay the loan. If an investor has put money into the business, they will be concerned with what their rate of return will be. The financial projections for the business should convey the ability of the business to repay loans and provide an adequate return for the investor.

#### **4.16 Appendices**

The last section of the business plan should be the appendix. All supporting information shall be placed here. Items in this section may include: resumes of all principals, personal financial statements, job descriptions, contracts, lease agreements, marketing research and brochures.



## **CHAPTER 5 - Financial Management**

There are three financial statements that are important when analyzing how the company is doing. The income statement is important to analyze the revenues, expenses, and net income for a certain period of time. The balance sheet is more of a snapshot of the company at a particular time. This statement identifies the assets, the liabilities, and the net worth of the company. The third statement that provides more insight on how the company is doing is the statement of cash flows. This statement shows exactly where the money comes from and exactly what the money is spent on.

### **5.1 Income Statement**

The income statement shows revenue, expenses, and net income or a loss for a defined period. Revenue is generated for an engineer by providing design services for a client. Revenue increases either the cash account or accounts receivable. Expenses refer to the value of services rendered or all of the expenditures required to conduct business during the period of time being analyzed. The third component is the net income or possibly loss. Basically this is the amount left over after all expenses have been deducted from revenue. Refer to Figure 5.1 for an example of an income statement.

#### **Figure 5.1 Example of an Income Statement**

Joan Biehl is a self employed engineer. For the month of May 19X1, she earned income of \$10,000 from services rendered. Her business expenses were: telephone \$1,000, electricity \$500, rent \$2,000, secretarial salary \$300, and office supplies used \$400. Her income statement for the period is shown in the income statement:

Joan Biehl  
Income Statement  
For the month of May 31, 19X1

Revenue from professional services		\$10,000
Less: Operating expenses		
Telephone	\$1,000	
Electricity	500	
Rent	2,000	
Secretarial salary	300	
Office supplies	400	
	<hr/>	
Total operating expenses		<hr/> 4,200
Net Income		\$5,800

(Shim & Henteleff, 1995, p. 16)

## 5.2 Balance Sheet

The balance sheet gives an overview of the financial status of a company's position at a specified time. It shows what is owned or the assets, how much is owed or liabilities, and equity or net worth. The assets are items that are owned by the company. Not only are tangible items considered assets, but so are accounts receivable. The liabilities are the debts owed by the company. The accounts payable, which are items that are purchased goods or services on credit, are considered liabilities. And equity or net worth is calculated by subtracting the liabilities away from the assets column. Refer to Figure 5.2 for an example of an account form of a balance sheet.

**Figure 5.2 Example of Balance Sheet in Account Form**

<b>Assets</b>		<b>Liabilities and Capital</b>
Cash	\$10,000	<b>Liabilities</b>
Accounts Receivable	20,000	Accounts Payable
Office Supplies	10,500	
Office Equipment	30,000	<b>Capital</b>
<b>Total Assets</b>	<b>\$71,000</b>	Balance May 1, 19X1
		Net income for May: \$5800
		Less: Withdrawals 400
		Increase in capital
		5,400
		Total capital
		41,000
		<b>Total Liabilities &amp; Capital</b>
		<b>\$71,000</b>

(Shim & Henteleff, 1995, p. 19)

The \$5800 for the net income for May comes from the income statement in Figure 5.1. The easiest thing to remember is that it is a balance sheet, so the assets column must always equal the liabilities and capital column. This serves as a good check.

### **5.3 Statement of Cash Flows**

Unfortunately the balance sheet and the income statement do not give any indications about the actual cash flow of the company. The best way to analyze the cash flow of the company is to analyze the statement of cash flow. This shows the monthly cash expenditures and the monthly cash income. The actual management of the cash flow of a company can determine

whether the firm will succeed or fail. Cash is very important to the operation of any business, lack of money spells trouble. Refer to Figure 5.3 for an example of statement of cash flows.

**Figure 5.3 Example of Statement of Cash Flows**

Liverpool Sugar Corporation		
Statement of Cash Flows		
For the Year Ended December 31, 19X1		
Cash flows from operating activities:		
Cash received from customers	\$1,004,000	
Cash payment for acquisition of materials	(469,000)	
Cash payment for interest and dividends	(12,000)	
Cash payment for taxes	(136,000)	
Net cash provided by operating activities	\$ 387,000	
Cash flows from investing activities:		
Cash paid to purchase plant and equipment	\$(676,000)	
Sale of long-term investment	(100,000)	
Net cash provided by investing activities	(776,000)	
Cash flows from financing activities:		
Sale of bonds	\$300,000	
Cash paid for dividends	(36,000)	
Net cash used in financing activities	264,000	
Net decrease in cash and cash equivalents	\$(125,000)	
Cash and cash equivalents at the beginning of the year.	198,000	
Cash and cash equivalents at the end of the year	\$ 73,000	

(Shim & Henteleff, 1995, p. 22)

## **CHAPTER 6 - Proposals**

The basics of most proposals consist of a cover letter, a collection of resumes, some project sheets with information about past projects, and a list of names and phone numbers for references. The proposal becomes a statement of the company's understanding of the project, the client, how you intend to solve the client's problem, and how different you are from the competition.

On average, only 30 percent of proposals written are rewarded the job at hand (Stasiowski, 2003). Considering the odds, a proposal must stand out from all the rest. The client will only spend a few minutes looking over the proposal, forming an initial impression of your company. It is important to make your proposal very focused, readable, and convincing in both content and appearance. A winning proposal will focus on the clients' needs and concerns. In order to do this, you must know your client and their specific real issues and counter them in the proposal with the benefits your company provides that will solve their problems.

There are three critical steps in the process of writing any proposal. The first step is to evaluate whether you should spend the time and money on pursuing a specific project. Consider the financial objectives, your strategic plan and the value of the client to your business.

The second step is to analyze the issues, features, and benefits of the project. What are the client's issues and what features and/or benefits does your company provide to solve the client's problems? Then how do you prove that you can do it?

The third step is to get members of the company to review the proposal. They should pretend to be the client and review the proposal in that respect.

### **6.1 75/25 Rule of Marketing**

"Marketing to a new client costs 10 times as much as marketing to repeat clients. But on the average, 75 percent of annual revenues come from repeat clients" (Stasiowski, 2003, p.11). Considering this, it makes sense to spend more on your marketing budget on getting new business from repeat clients. In addition you want to focus on how you plan on getting your clients to keep coming back. Every aspect of the project will demonstrate to your client how

excellent you really are. Everything you do for a client presents an opportunity to create an image of competence and professionalism. Don't get hung up on chasing new clients without trying to do a great job for your existing clients.

## **6.2 Determining how much to spend on preparing the proposal**

According to Strasiowski (2003), "the marketing cost as a percentage of gross revenue should range between 2 percent and 8 percent" (p. 19). Obviously each company may have different reasons for higher or lower costs. When considering how much to spend there are several pieces of information that could be used. Consider the Gross Margin Sold (GMS), Gross Sales, Percentage of revenue, and/or Predetermined number of proposals are all measures of success. Make sure the company keeps record of all costs associated with the proposal writing process. Sometimes principals may not count their time during travel or evenings and this may skew the data. If using the GMS as a basis for your decision, a GMS of 35 percent to 50 percent or revenue is a good target to aim for (Strasiowski, 2003).

"The proposal process can be considered like a funnel" (Strasiowski, 2003, p. 22). The business may get hundreds of leads and will send out 100 Statements of Qualifications (SOQs). The business may receive about 30 Request for Proposals (RFPs) and then submit about 20 proposals. Out of those 20 proposals the business may win between 4 to 7 contracts. It is vital to keep track of the information on the proposal process, in order to know how well the proposal process is working. The company should track the following information:

- SOQs submitted

- RFPs received

- RFPs responded to

- Success rate (the number of proposals won to the number of proposals submitted)

- Cost of all labor, out of pocket costs, presentation costs, number of hours spent

- Average capture cost (what is spent, on average, per proposal)

(Strasiowski, 2003).

Decide on a set of measurements that best fit the company's need and keep track of them. Then utilize the data to determine how successful your company's proposal process is.

## **6.3 Elements of the Proposal**

As you are writing the proposal keep in mind that you will want to follow the order of the RFP. Another thing to consider is to not fill the proposal with unnecessary boilerplate information. Size doesn't always mean it is the better proposal. Be very concise and to the point and tailor every item of your response to the RFP. Do not add unrelated items to the proposal.

### ***6.3.1 Cover Letter***

The first part of the proposal is the cover letter, which may be the most important element of the proposal. Even though you may spend hours even days to weeks preparing a proposal the client typically spends less than a minute reviewing your proposal. The cover letter and the appearance of the proposal may determine whether or not you get the project. The idea is to make your cover letter stand out. Frank Strasiowski (2003) points out a few guidelines to follow when writing your cover letter:

- Talk about the clients “hot buttons” immediately
- Treat the cover letter as a mini executive summary
- Make it personal to the client and specific to the project
- Keep it short. Aim for one page
- Make it readable: use bullets to highlight key points
- Clients like to read about themselves. Include more “you” and “your” than “us” and “our”
- Use present-tense, action-oriented verbs, short sentences, and a conversational tone
- Bind your cover letter into the proposal document

(p. 77).

### ***6.3.2 Table of Contents***

The next portion of the proposal should be a table of contents. This is recommended if the proposal exceeds ten pages. Table of contents should identify the section title and the page number it can be found on. Organize the content of the proposal logically and follow it throughout the proposal, keeping in mind the order of the RFP. Avoid adding too many subsections and make it as short and concise as possible. Remember that proposals are generally viewed for less than a minute.

### ***6.3.3 Executive Summary***

Typically the executive summary is used for medium to large size projects and should consist of all the important issues for the project. This part of the document is used to summarize key elements of the proposal. This portion is important to those individuals that do not have time to read through the entire proposal. Think of it as a condensed version of the full proposal that includes all the major points. An executive summary needs to include the purpose and the scope of the proposal, the company's understanding of the project, and results the company's approach will produce.

### ***6.3.4 Resumes***

Clients are looking for brief resumes tailored to the project. The company should view these resumes as a marketing tool and an opportunity to convince the clients that your team is exactly right for the job. The resumes should concentrate on how the team's qualifications will benefit the client. A good resume will draw attention to your team's experience by listing out the disciplines individually. The resume section should also include any other consultants or subcontractors that make up the team. Each firm should receive an individual page to properly introduce the company to the client and to express exactly how they will contribute to an integral team.

### ***6.3.5 Scope of Services***

This section is important to define exactly the scope of the project. Most problems in a project can be traced back to a deficiency in the scope of services. This section should contain three different parts: the statement of understanding, detailed scope of services, and the project approach (Stasiowski, 2003). The statement of understanding should demonstrate that the company fully understands what the client is wanting and needing. Avoid using generalized statements that do not state the exact needs of the client. In the detail scope of services, provide exactly the type of services your company will perform. Clearly specify what the project consists of. All scope of services should include:

- What needs to be done
- When it needs to be done
- Who is responsible by using a project organization chart



- How much it will cost with a project budget
- How quality will be assured

(Stasiowski, 2003, p. 98)

The project approach addresses how the company will get the job done. This section should model the statement of understanding as far as the order of contents. Be very specific as to how the company intends to meet the expectations of the client. After all requirements are met, then proceed to offer exceptions or other options. At this point the company can present any additional services they feel might benefit the client or add value to the project. Just be very clear these are additional services and are optional and will cost additional money.

### ***6.3.6 Schedule***

Your success will be measured based on how well you meet schedules or on the milestone date that wasn't met. Clients will remember that your company did not meet the promise you made at the beginning of the project. Always use specific calendar dates when dealing with the schedule for a project as opposed to numbered days. State the day your company can start the project and outline the months that will be devoted to the design. Outline when meetings with the clients will occur and how often. It at all possible it is best to display the schedule in graphic form. A bar chart works well for this type of application, just keep it simple. Make sure the schedule will include major tasks and significant milestones for submissions and reviews. Also this is an excellent time to include any examples of other projects that the company may have completed ahead of schedule and how your company was able to do it.

### ***6.3.7 Fees***

This is a very important part of the proposal. The price determined for the project can lose the project or worse yet allow you to get the project and then have to provide those services for such a low price. There are three basic types of pricing.

- Firm Fixed Price
- Time + Material
- Cost + Fixed Fee

In firm fixed price the client and the company agrees on a lump sum amount for the project. This is by far the riskiest pricing type and could potentially be the most profitable. This method requires a very specific, detailed scope of services. When the project is halfway done,

then you bill for half of the fee. An earned value as part of the firm fixed price, the progress of the project is more closely analyzed and the company will get paid for the work they have done to date. Each task will be individually listed with major milestone dates. When the company completes 50% of the work for that specific task then they will bill for that portion of the work. This strategy has many advantages. The progress of each task is more closely analyzed and everyone knows what is being billed for each task.

The second type of pricing is time and material which is based on the effort put forth. Usually this amount doesn't exceed an agreed upon limit. According to Stasiowski, (2003), "this fee structure gives more freedom in doing the work than the firm fixed pricing type" (p. 109).

The last type of pricing is cost and fixed fee which contains elements of both the firm fixed price and time and material. The costs of the project are guaranteed to be covered, but this pricing type is harder to make a significant profit.

### ***6.3.8 Related Experience***

This section should include projects that are comparable or related to the project currently being proposed. Clients are more interested in how you completed projects, what you learned and what benefits you bring to their project. Do not provide a large list of projects for this section, instead provide about five or six projects that are very closely related in scope. Identify for each project how they relate to the current one. Talk about the things the interest the client. If it is completing projects on time, refer to projects that were completed on or before the scheduled completion time. The best way to address this section is to develop a professional, good looking template. Each related project should be effectively utilized on a single sheet. This template should contain a project title, basic information about size, date, and cost, pictures of the project, and a brief description about how this project relates to the current project.

### ***6.3.9 Appendix***

The appendix is where all supporting information goes. The appendix should include insurance certificates, professional licenses, affidavits, and any other important forms. This is where additional team member resumes, and reference lists.

## **CHAPTER 7 - Determining Fees and Contract Negotiations**

“All design professionals find setting fees a challenging task, especially because most clients want to know in advance what the fee will be for their project, even when the scope is unclear and the services will be provided over several years” (Piven & Perkins, 2003, p. 81). There are many things to consider when determining the fee for a project. Type of project, client, schedule, type of services rendered and many other factors could affect the fee for a project.

### **7.1 Methods of Determining Fees**

First the company should evaluate the cost of providing the service. There are two methods that could be used, a bottom-up budget or a top-down budget. The top-down budget starts with a desired total fee and then each category is assigned part of that fee. In this case the company should subtract desired profit from the lump sum amount or a percentage of a lump sum. This will provide the cost of professional services. From this amount all costs of other consultants or services hired out should be subtracted giving the cost of the companies' services. The cost of the services is then divided by the overhead rate producing the salary expense. Take the salary expense and divide by the average hourly rate for the project and obtain the amount of hours available. The last step is to assign the hours to the different phases and tasks required to complete the project. Refer to Figure 7.1 below.

**Figure 7.1 Top Down Budget**

$$\begin{aligned} & \text{DESIRED TOTAL FEE} \\ & \quad - \text{DESIRED PROFIT} \\ & = \text{PROFESSIONAL SERVICES} \\ & \quad - \text{ALL COSTS OF OTHER CONSULTANTS} \\ & = \text{COST OF COMPANY'S SERVICES} \\ & \quad / \text{OVERHEAD RATE} \\ & = \text{SALARY EXPENSE} \\ & \quad / \text{AVERAGE HOURLY RATE} \\ & = \text{HOURS AVAILABLE} \end{aligned}$$

The bottom-up approach is the opposite of the top-down approach. The process for this method is as follows: first identify the phases and tasks required and estimate the amount of time required to complete, and then multiply by average or specific hourly rates. This will produce the salary expense which is then multiplied by the overhead ratio. This will produce the cost of services in house. The company will need to add in the costs of any other services or consultants hired out. This total number will give the cost of services. At this point profit should be added to obtain the total fee required. Refer to Figure 7.2 for the steps of the bottom up method of calculating fees.

**Figure 7.2 Bottom Up Budget**

$$\begin{array}{r}
\text{ESTIMATED AMOUNT OF TIME} \\
\text{X HOURLY RATES} \\
= \text{SALARY EXPENSE} \\
\text{X OVERHEAD RATE} \\
= \text{COST OF COMPANY'S SERVICES} \\
+ \text{ALL COSTS OF COMPANIES' SERVICES} \\
= \text{COST OF SERVICES} \\
+ \text{PROFIT} \\
= \text{HOURS}
\end{array}$$

Both of these methods can be used to compare the fees obtained. By comparing the two methods, a fee could be determined that could be a good place to start. If you are competing for a project these numbers should be analyzed closer. If the company is too high they may not be awarded the project. If they are too low they still may not be awarded the project or worse yet they may be awarded and then have to provide the service at that rate.

## 7.2 Competitive Analysis

Another step in determining fees is to do a competitive analysis. Do as much research as possible in determining what your competitors are getting for their services. A common fee for comparable projects exists in most cases. These fees can be obtained simply by asking other firms that are not competing for the same projects.

## 7.3 Risk Analysis

There are many other factors that could increase the cost of a project. The company should perform a risk analysis, identifying potential trouble areas. According to Piven & Perkins (2003) these potential trouble areas include:

- An indecisive client
- An unreasonable client
- An extremely tight budget

- A very tight or an unpredictable schedule
- An interrupted work process
- A difficult approval process
- Slow payment
- A difficult construction phase
- An insecure client or a client in trouble

(p. 84)

## **7.4 Choosing a Fee Method**

There are not any set costs for any one of these trouble areas. The costs will be different for each project, but the more experienced a company becomes the easier it becomes to identify these trouble areas.

Choosing a fee method is very important, but sometimes the final decision is made by the client. There are many methods that could be used and each has their own advantages and disadvantages, but no one methods works for all situations.

Lump Sum is very common with clients. This method assumed that the scope is fixed. This method has very little flexibility and the clients tend to resist any request for additional money and/or services.

Percentage of construction cost was the most common way of determining fees. The best part of this method was that the fee increases as the scope increases. On the other hand a disadvantage to this method is the reluctance of engineers to reduce budget. If they reduce the budget that means their fee is reduced. Another major disadvantage is the fee is just a percentage and not a true reflection of the actual cost of that particular project.

Percentage of approved budget is best used when the scope is not completely defined at the start of a project.

When a projects scope is unclear an hourly fee structure may be used. Usually this is only allowed for small projects or for phases where scope is undefined. Sometimes a fee structure of hourly with a cap is ideal. This allows the client to feel more comfortable with the amount of money they could be spending. This is similar to lump sum except in lump sum the engineer keeps any amount under the maximum. In the hourly with a cap fee structure the client

keeps the difference. If the project exceeds the cap, the engineers are responsible for the amount over the cap.

Another popular fee structure is the dollars per square foot. This is common for commercial finish-out construction. This is equivalent to lump sum if the square foot total is known in advance.

Some clients may offer a performance bonus, which rewards the designer when certain targets are met. This agreement needs to be very clear as to the requirements.

Fee structures can be based on a single one of these or it can be based on a combination of these. The type of project, client and schedule could affect the decision for the correct fee structure for the right job.

## **7.5 Contracts**

The main content of any contract includes a description of the services to be provided and the compensation that is to be paid for the services. The American Institute of Architect (AIA) provides several standard contract forms that are highly recommended. Using these standard forms will at the very least provide an excellent starting point for writing your own contract. The contract should include all involved parties, the description of the project, scope of services, additional services, ownership of documents, arbitration, payment, payments withheld, basic compensation, and any other provisions.

## **CHAPTER 8 - Managing Cash Flow**

New business owners often start their business with insufficient cash to cover the startup costs and the cash to cover the difference between the expenses and revenues. A business will typically start out losing money. It will take some time for a business to reach the break-even point and depending on a lot of factors some may reach that point sooner than others. As stated by Scarborough & Zimmerer (2003), “It is entirely possible for a business to have a solid balance sheet and to make a profit and still go out of business by running out of cash (p. 256).”

### **8.1 Cash Management**

Managing cash in a company involves forecasting, collecting, disbursing, investing, and planning (Scarborough & Zimmerer, 2003). Having cash on hand is very valuable in order to pay expenses as they come due. If all cash reserves have been used, this could mean the company will go bankrupt. Many owners will count on growing revenues from increased projects, but growing companies usually consume more money than they generate. By increasing the work load, this means more employees, equipment, benefits, software licenses and so on. It costs a lot of money for a company to grow, so good cash management is required to keep your cash in check. An important item to understand when managing cash flow is the cash flow cycle for the business. The cash flow cycle is the time lag between paying employees and all other expenses related to the project and receiving payment from customers. The longer this cash flow cycle, the more likely the owner will have difficulties with managing cash flow. By preparing a cash forecast, this will help avoid any cash crisis. After determining the cash flow cycle duration, the next step would be to cut down the cycle or reduce the amount of days it takes to be paid back for services. By decreasing this duration, a business can free up incredible amounts of cash that could be used to finance growth (Scarborough & Zimmerer, 2003).

### **8.2 Cash Budget**

A cash budget is a necessary step in managing the cash flow of the business. The amount of cash flowing into a business is never the same or equal to the cash flowing out. This



unevenness creates cash surpluses and shortages throughout the year and should be documented so they can be anticipated for the next year of operation. By creating a cash budget the business is better equipped to make sure there will be enough cash, but also not an excessive amount, to cover the operating costs.

Preparing a cash budget for the company will determine approximately how much a business will need on hand to cover the operating costs. There are five basic steps in completing a cash budget:

- Determining an adequate minimum cash balance
- Forecasting sales
- Forecasting cash receipts
- Forecasting cash disbursements
- Determining the end-of-month cash balance

(Scarborough & Zimmerer, 2003, p. 264)

Determining an adequate minimum cash balance is best by using historic data for the company. The cash balance is different for each company even if they are in the same type of business. Seasonal fluctuations could also affect the minimum cash balances for certain months out of the year.

For a consulting firm, the major source of income is payment for services rendered. Established businesses are able to utilize past years income statements to estimate the sales for the coming year. Trying to forecast sales for a new firm is like trying to extract information from a crystal ball. A business owner can research similar firms and their sales patterns for the first year and come up with a forecast for their business. One thing to remember is that these are estimates. They are more than likely wrong and will need to be closely scrutinized.

The next item in preparing a cash budget includes forecasting cash receipts. When a firm sells their services on credit, the cash budget must account for the delay between the sale and the actual collection of accounts receivables. If the cash has not been collected yet, then a firm can not spend it. So it is very important to make sure the cash receipts are entered on the day they are received. Accounts receivables are notorious for tying up money that the company could be utilizing to their benefit.

Another basic step to completing the cash budget includes forecasting cash disbursements. Most expenses are a set amount due on a certain date. This makes it fairly easy

to estimate these values. Unfortunately most companies tend to underestimate cash disbursements, which can result in a cash crisis (Scarborough & Zimmerer, 2003). When starting a new company, the owner should estimate the amount for disbursements and then increase that amount and over estimate the total disbursements.

The last step is estimating the end-of-month cash balance. First the company needs to start at the beginning of the month with total cash on hand and any cash in checking and savings accounts. Take this beginning total and subtract all disbursements and add in all cash receipts to determine the cash balance at the end of the month. If the owner takes the total cash receipts and subtracts total cash disbursements and gets a positive number this means a cash surplus and if it is negative this means a cash crisis is coming. A fluctuating cash flow balance is normal. The trick is being able to use the cash flow budget and make sure there is enough cash available to cover all expenses when they are due. As stated by Scarborough & Zimmerer (2003), “Businesses tend to succeed when their owners manage cash effectively. Those who neglect cash flow management techniques are likely to see their companies fold (p.269).

## **CHAPTER 9 - Portraying a Professional Image**

“Presenting an acceptable visual image, being easy to work with, doing competent work and being considerate of the client’s interests all contribute to the client’s good feelings about your presence” (Kaye, 1998, p. 169).

### **9.1 Projecting a Positive Visual Image**

When visiting a client, one should dress one level over the client. By under dressing and over dressing the client will feel awkward and not comfortable at all. If the client is casual, then the appropriate attire would be a jacket and tie. If in doubt always wear a jacket and tie. Dressing well not only portrays a pleasant visual image, it also boosts confidence and self-respect. Providing a positive image attracts clients and increases your confidence. To build client relationships, the consultant and the client should look similar and act similar. If there are not any similarities between consultant and client, building trust and opening a line of communication is much harder. This does not mean fooling your clients into thinking you are something that you are not. If you are fake, the clients will see right through it.

### **9.2 Consideration of Client’s Interests**

Being considerate of the client’s interests is an important part of having a professional image. Kaye (1998) suggests many NEVERs when dealing with clients (p. 173). Even one mistake could label you for your career.

- NEVER discuss your rate with client’s employees
- NEVER complain
- NEVER act boisterously
- NEVER criticize your client’s management
- NEVER say anything about yourself that would make your client feel inadequate by obvious comparison.
- NEVER bluff on a technical point
- NEVER knock your competition

- NEVER foster romances with your clients' personnel
- NEVER mention details about one client's business to another
- NEVER goof off on your client's time
- NEVER take office supplies from your client's stockroom
- NEVER make important phone calls from a client's office to conduct business not related to the client's project.

### **9.3 Successful Meetings**

“Successful participation in meetings can bring you more contracts, greater respect, and enhanced credibility” (Kaye, 1998, p.175). If the consultant has called the meeting and intends to run it, they better have a clear understanding of the objectives of the meeting. Once the purpose of the meeting is determined, the presentation strategy can be set. What is the intent of the meeting? Do you want to inform them of progress, propose new work, resolve differences, or have a group discussion? After all this has been decided, the next step is to set up an agenda to be sent to the participants. The agenda should include a short statement about the purpose of the meeting and a list of the major topics. Next assemble all documents required for the meeting and put together the presentation. Take time to rehearse the presentation. There is nothing worse than delivering an unorganized presentation. While running the meeting, it is very important to stay on track. Do not waste your clients' time as well as your own time in running a meeting that can not stick to the agenda. If there are many other issues or a larger issue at hand that need attention make note of them and set up a separate meeting for those. These other issues may not pertain to everyone involved in the current meeting, so do not waste other people's time talking about them.

## **CHAPTER 10 - Dealing with Clients**

According to Kaye (1998), “Clients will come back again and again when they feel that you consider and respect their best interests. They will show appreciation when you are able to offer good value from their point of view” (p. 181). Building good relationships with clients is hands down the best road to take. There are many benefits to building good relationships. A good working relationship aids in having a project go well, helps retain clients for future projects, and gets the business referrals. There are so many more benefits that can be obtained from having an excellent relationship as apposed to having a relationship conflict with the clients.

### **10.1 Basic Components of a Relationship**

The basic components of a consultant-client relationship consist of respect, communication, mutual benefits, ability to resolve differences, and emotional competence. Concentrating on these five components will strengthen any relationship that a business owner will have with their clients.

Respect consists of being concerned about the well-being and integrity of your clients. A consultant should always act with the clients’ best interest at hand.

Communication consists of being able to express yourself and also being able to listen to the client’s needs.

In consulting practice it is important to make sure that each party gets enough to feel that they are getting a good deal. Mutual benefits mean that each party is satisfied with their deals. As a consultant, we should always give the clients more than they ask for. Throw in a small extra to make the deal more attractive. As a warning, do not make the extra too big of an item, because the client may expect it in the future and time may not allow you to complete the item prior to project completion.

Ability to resolve differences can go a long way to securing a loyal client. Being able to resolve conflicts with clients can definitely be a benefit to the consultant and the client.

The last component is emotional competence. If both the client and the consultant act with emotional maturity, they will not practice fighting, cheap insults, hostile humor, and manipulative tricks (Kaye, 1998).

## 10.2 Negotiation Skills

During projects a firm may experience disagreements with the client about the scope of the project, items contained in the contract, or how to deal with mistakes on the drawings. Developing the appropriate negotiation skills is necessary for dealing with clients. The idea is to come to an agreement where both parties feel as if they are equally being treated fair. As Kaye (1998) stated, “negotiation is not a bunch of cheap tricks and unethical tactics, but the creative art of finding compromise where it appears that no middle ground exists” (p. 188). Using a soft approach to negotiating helps build trust and goodwill, which will result in repeat business. Often times being aggressive and head strong with negotiations will probably only work once or twice and will make the client very resentful. The following is a list of items to remember while doing negotiations with the client:

- Give and take. Always seek win-win outcomes
- Don't make demands and ultimatums. They usually backfire and always cause ill will.
- The client's problem is your problem, but the reverse is not always true.
- Never present a problem without also giving some good alternatives to solve it.
- Negotiate only with those who are empowered to make decisions.
- Don't take unfair advantage; people remember.
- Some things are negotiable, others aren't. Your integrity is one such nonnegotiable.
- Address the issues, not the individuals.
- Getting your point across: State the message differently, but never yell the same message louder.
- Seek allies in high places before trying to scale a stone wall.
- Let the client make the first offer; it may be entirely acceptable without modification – or even exceed your expectations.
- Find the common ground (area of mutual benefit), even if you must

create it.

- Lose your cool, you're a fool. Never, never lose your temper!

(Kaye, 1998, p. 189)

Negotiations can still be firm with an owner, just remember that some things are nonnegotiable. Having the ability to say no at times, can be sign of good negotiation skills. The business does not want to continue to say yes to everything, because this could be costing the company and if you do say no at some point down the road could cost a client.

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## Appendix A - Examples of Business Plans

### A.1 Concrete Fabricators Business Plan Example



### Concrete Fabricators — Sample Plan

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## **Plan Outline**

### **1.0 Executive Summary**

1.1 Mission and Vision

### **2.0 The Company**

### **3.0 Products and Services**

3.1 Products

### **4.0 Market Description**

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4.1.1 Market Analysis

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4.3 Untitled

### **5.0 Strategy**

A5.1 Value Propositions

A5.2 Marketing Strategy and Plan

A5.3 Sales Strategy

### **6.0 Organization and Management**

### **7.0 Finance**

7.1 Projected Profit and Loss

7.2 Projected Cash Flow

7.3 Balance Sheets - Projected

7.4 Business Ratios

## 1.0 Executive Summary

Concrete Fabricators is a company that provides services for concrete fabrication, utilizing formwork, laying foundations, concrete placement, and excavation. The company has worked on several projects in the Norman and Southwestern Oklahoma areas, and plans to bid on contracts for commercial concrete projects at all levels throughout the state.

The company plans to develop into the leading formwork-services provider for reinforced concrete in the state. This means always having the best and most efficient facilities, processes, and people. To achieve this, Concrete Fabricators will invest in ways that will pay off in competitive advantages for its customers, such as structural plan review, including pre-job conferencing upon request, equipment, and a full line of forming, reinforcing, and aftermarket products. The company has developed a client evaluation form to gather feedback from our clients. The ultimate goal is to meet these needs and better the company.

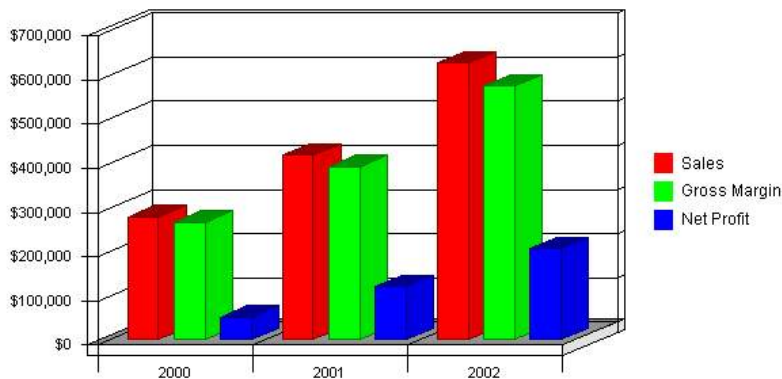
The biggest concern within the concrete work industry is the health and safety of its employees. Concrete Fabricators has made safety its number one concern; our employees and our customers expect to be safe on the job. The company has recognized the need to keep taking steps to develop a comprehensive infrastructure designed to make us not just a company with a safety policy, but a "safe company."

Concrete Fabricators participates in the concrete work industry. This includes special trade contractors primarily engaged in concrete work, including portland cement and asphalt. Companies in this industry generated total annual sales of approximately \$21 million, with an average sales per establishment of \$.7 million. Establishments that are primarily engaged in manufacturing portland cement concrete generated sales of approximately \$19 million, with an average sales per establishment of \$6.5 million.

## 1.1 Mission and Vision

The mission of Concrete Fabricators is to become the leading contractor by providing the best quality cement and concrete masonry work.

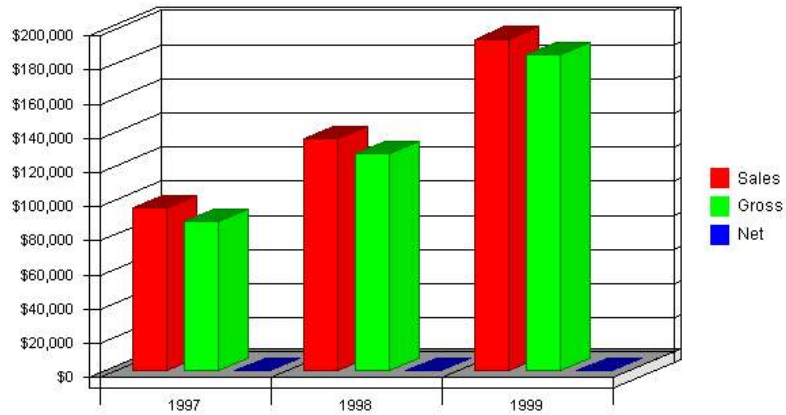
**Table A.1- 1 Highlights**



## 2.0 Company Summary

Concrete Fabricators was founded in January, 1987. The company was formed by Mr. Lloyd James and Mrs. Anne James; and is an Oklahoma sole proprietorship with principal offices located in Norman, Oklahoma.

**Table A.1-2 Past Performance Graph**



**Table A.1-3 Past Performance**

Past Performance	1997	1998	1999
Sales	\$95,248	\$136,069	\$194,384
Gross Margin	\$87,342	\$127,224	\$185,248
Gross Margin %	91.70%	93.50%	95.30%
Operating Expenses	\$7,000	\$10,500	\$14,000
Collection Period (days)	0	0	0
Inventory Turnover	6.00	6.00	6.00
<b>Balance Sheet</b>			
Current Assets	1997	1998	1999
Cash	\$21,120	\$25,222	\$30,308
Accounts Receivable	\$11,430	\$16,328	\$23,326
Inventory	\$0	\$0	\$0
Other Current Assets	\$7,867	\$8,345	\$8,830
<b>Total Current Assets</b>	<b>\$40,417</b>	<b>\$49,895</b>	<b>\$62,464</b>
Long-term Assets			
Capital Assets	\$439,098	\$472,149	\$507,687
Accumulated Depreciation	\$39,518	\$42,493	\$45,691
<b>Total Long-term Assets</b>	<b>\$399,580</b>	<b>\$429,656</b>	<b>\$461,996</b>
<b>Total Assets</b>	<b>\$439,997</b>	<b>\$479,551</b>	<b>\$524,460</b>
Capital and Liabilities	1997	1998	1999
Accounts Payable	\$23,812	\$34,017	\$40,596
Current Borrowing	\$0	\$0	\$0
Other Current Liabilities	\$19,707	\$21,190	\$22,785
<b>Subtotal Current Liabilities</b>	<b>\$43,519</b>	<b>\$55,207</b>	<b>\$63,381</b>
Long-term Liabilities	\$15,689	\$16,700	\$17,766
<b>Total Liabilities</b>	<b>\$59,208</b>	<b>\$71,907</b>	<b>\$81,147</b>
Paid-in Capital	\$0	\$0	\$0
Retained Earnings	\$380,789	\$407,644	\$443,313
Earnings	\$0	\$0	\$0
<b>Total Capital</b>	<b>\$380,789</b>	<b>\$407,644</b>	<b>\$443,313</b>
<b>Total Capital and Liabilities</b>	<b>\$439,997</b>	<b>\$479,551</b>	<b>\$524,460</b>
Other Inputs	1997	1998	1999
Payment Days	0	0	0
Sales on Credit	\$0	\$0	\$0
Receivables Turnover	0.00	0.00	0.00

## 3.0 Products and Services

### Background

Concrete Fabricators provides concrete fabrication, to include foundations (commercial and residential), road construction, and excavation (dirt work). The company also creates house slabs and driveways for residential, trailer path foundations, and other roadwork. Jobs are solicited through bids from both business and personal ventures. We provide services to both commercial and individual customers. Geographically, the company offers its services to southwest Oklahoma and southeast Texas.

The Concrete Fabricators system can be adapted to almost any construction requirement that calls for forming and foundation work. The company's expert staff has the capability to design and manufacture any custom component or accessory item that may be required to complete the formwork and foundation package.

### 3.1 Products

Concrete Fabricators' formworks and foundations offer major advances and complete adaptability, high strength-to-weight ratio, and all at cost-effective prices. Accident prevention is the cornerstone of Concrete Fabricators' safety commitment. The company strives to eliminate foreseeable hazards which could result in personal injury or illness. Concrete Fabricators focuses on health and safety, and neither will be compromised for cost or convenience. The company operates in two market segments as described below.

#### Commercial

- **Foundations.** Concrete Fabricators has the ability to safely erect any structure on a properly-built foundation.
- **Parking Lots.** Concrete is the superior paving material for parking lot projects. Whether it is a new parking area, or one in need of reconstruction, concrete offers the durability and beauty that asphalt just can't match. Concrete's advantages include:
  - **Durability.** Concrete lasts longer than asphalt. A concrete parking area can serve your project for twenty or more years. The durability advantage means less maintenance, fewer repairs, and an end to the expensive reconstruction cycle.
  - **Beauty.** Concrete's durability means a surface free from ugly potholes, ruts, and damage from petroleum products. Add some colors or a pattern, and concrete turns a parking lot into the perfect showcase for your business.
  - **Safety and lighting.** Concrete offers a brighter, more reflective surface than asphalt. Better use of light means a safer and more inviting parking area for your customers and employees.
  - **Load-carrying capacity.** Trucks demand a structural pavement. Asphalt is no match for eighteen-wheelers and delivery vehicles. If product distribution is critical to your project, then concrete is your paving partner.
- **Parking Garages.** Concrete provides the same benefits for a garage as it does for a driveway. A structure made with concrete is strong enough to hold up under the pressure of many vehicles, and is also durable enough to last many years of heavy pressure.

#### Residential

Residential applications go beyond a solid foundation. Long lasting and low maintenance, concrete increases the value and performance of a very important investment: the home. Strong, durable, and safe, concrete will never burn or rot, and provides the best shelter against any storm. Residential applications are as follows:

- **Basement Walls.** A concrete basement is the most economical part of a home to build and is the best value for the dollar spent. Concrete basements offer a variety of benefits:



- **Extra room for work or play.** Consider a game room, den, guest bedroom, or office. Create a space as unique as your own family. Economical full basements can almost double the enclosed living space, at only a fraction of the cost of the home.
- **Permanent finished look.** Add a dramatic color or texture for a permanent, finished look.
- **Extra storage.** Storage that frees up other, more expensive floor space in the house and garage.
- **Easy access to utilities.** Better access to plumbing, heating, and wiring. All can be reached without crawling or breaking up floors.
- **Concrete Homes.** Concrete homes are energy efficient, resistant to strong winds, practically soundproof, and offer a broad range of design options. Concrete homes offer a variety of benefits over standard construction:
  - **Fast and easy construction.** Using insulating concrete forms results in a faster and more efficient building cycle.
  - **Versatile and compatible.** Stucco, wood siding, vinyl siding, brick, and other traditional exterior finishes can be easily used with insulating concrete forms.
  - **Environmentally responsible.** Concrete and polystyrene foam are inert and can be recycled.
  - **Energy efficient.** Energy savings are built into concrete homes. Many concrete homeowners report savings of more than 40% on their heating/cooling costs.
  - **Security.** Secure concrete houses perform very well in hurricanes and other violent storms.
  - **No Rot or Rust.** Neither concrete nor polystyrene will rot, rust, or corrode.
  - **Peace and Quiet.** A concrete home built with insulating concrete forms has much greater noise reduction characteristics than wood or steel.
- **Driveways.** A concrete driveway can have a dramatic effect on the first impression, value, and resale potential for a home. Concrete driveways are preferred over other paving materials for a variety of reasons.
- **Durability.** A key component to the longevity of driveways. Concrete driveways stand up to traffic day in and day out, year after year, often for over 30 years.
  - **Maintenance.** Concrete does not need to be seal coated every year, making its maintenance practically non-existent.
  - **Environmentally friendly.** Cured concrete is an inert material and can be recycled.
  - **Homeowner satisfaction.** Homeowners were surveyed, and of those already owning a concrete driveway, 96% said they would choose concrete again.
  - **Versatility.** This is important, especially in today's upscale housing market. Concrete can be colored, stamped, or stenciled to create a variety of textures and decorative finishes.
  - **Appearance.** A critical component in selecting a driveway paving material, concrete, with its smooth, bright surface, provides an important safety feature by increasing the effectiveness of exterior lighting.

## 4.0 Market Description

### Target Markets and Market Description (information provided by Standard & Poor's)

The housing industry has proceeded at a red-hot pace for several years running. An all-time record was set in 1998, when 886,000 new site, single-family homes were sold. That represented a 10% gain from the robust total of 804,000 homes sold in 1997, and an 8.1% rise from the prior record of 819,000 units in 1977. Single-family housing construction accounted for approximately \$48 million of the total \$125 million generated in the industry.

Home sales were strengthened even further during the first ten months of 1999. In that period, new single-family home sales increased by 4.8% on a year-to-year basis, to 791,000 units, according to the U.S. Department of Commerce. Through October, 1999, seasonally adjusted sales had exceeded 800,000 on an annualized basis in every month since the start of 1998.

The record-setting string of home sales since the second half of 1997 has forced builders to pick up the pace of their construction activity. During 1998, total starts increased by 9.7% to 1.62 million units. Starts for single family units moved up 12% for the year, and those of multi-family units were ahead by 1.5%. As an indication of building

activity at year-end 1999, housing starts in November, 1999 came in at a seasonally-adjusted annual rate of 1.6 million units.

## 4.1 Target Markets

### Market size statistics--Single-family housing construction

General contractors primarily engaged in construction (including new work additions, alterations, remodeling, and repair) of single-family houses:

Estimated number of U.S. establishments	218,276
Number of people employed in this industry	831,158
Total annual sales in this industry	\$125 million
Average employees per establishment	4
Average sales per establishment	\$.6 million

### Market size statistics--Residential construction, nec

General contractors primarily engaged in construction (including new work additions, alterations, remodeling, and repair) of residential buildings other than single-family houses. This includes hotels, motels, apartments, and multi-family homes:

Estimated number of U.S. establishments	25,201
Number of people employed in this industry	114,523
Total annual sales in this industry	\$26 million
Average employees per establishment	5
Average sales per establishment	\$1.1 million

### Market size statistics--Heavy construction, nec

General and special trade contractors primarily engaged in the construction of heavy projects not elsewhere classified. This includes canal, drainage system, athletic and recreation facilities, land preparation, rock removal, waste, water and sewage treatment plants, and trenching construction:

Estimated number of U.S. establishments	16,914
Number of people employed in this industry	211,440
Total annual sales in this industry	\$51 million
Average employees per establishment	13
Average sales per establishment	\$3.2 million

### Market size statistics--Bridge, tunnel, and elevated highway construction

General contractors primarily engaged in the construction of bridges, viaducts, elevated highways, and highway, pedestrian and railway tunnels:

Estimated number of U.S. establishments	1,414
Number of people employed in this industry	43,899
Total annual sales in this industry	\$14 million
Average employees per establishment	34
Average sales per establishment	\$13 million

### Market size statistics--Highway and street construction

General and special trade contractors primarily engaged in the construction of roads, streets, alleys, public sidewalks, guardrails, parkways, and airports:

Estimated number of U.S. establishments	19,694
Number of people employed in this industry	302,944
Total annual sales in this industry	\$66 million
Average employees per establishment	16
Average sales per establishment	\$3.8 million

### Market size statistics--Nonresidential construction, nec

General contractors primarily engaged in the construction (including new work additions, alterations, remodeling, and repair) of nonresidential buildings other than industrial buildings and warehouses. This includes commercial, institutional, religious, and amusement and recreational buildings:

Estimated number of U.S. establishments	44,505
Number of people employed in this industry	540,550
Total annual sales in this industry	\$205 million
Average employees per establishment	12
Average sales per establishment	\$5 million

## 4.1.1 Market Analysis

The Market Analysis table and chart represent the estimated number of single-family homes, other residential units, and commercial buildings within the state of Oklahoma. This information is derived from estimates given by the U.S. Census Bureau and represents the total number of possible clients within the local reach of Concrete Fabricators.

**Table A.1-4 Market Analysis**

Market Analysis							
Potential Customers	Growth	2000	2001	2002	2003	2004	CAGR
Single Family Housing	4%	1,094,541	1,132,850	1,172,500	1,213,528	1,256,012	3.50%
Other Residential Housing	3%	670,848	687,619	704,809	722,429	740,490	2.50%
Commercial Construction	2%	82,623	84,275	85,961	87,680	89,434	2.00%
Total	3.07%	1,848,012	1,904,744	1,963,270	2,023,637	2,085,936	3.07%

## 4.2 Industry Analysis

### Market Size Statistics--Concrete work

Special trade contractors primarily engaged in concrete work, including portland cement and asphalt.

Estimated number of U.S. establishments	30,214
Number of people employed in this industry	230,338
Total annual sales in this industry	\$21 million
Average employees per establishment	8
Average sales per establishment	\$.7 million

Establishments primarily engaged in manufacturing portland cement concrete, manufactured and delivered to a purchaser in a plastic and unhardened steel.

Estimated number of U.S. establishments	5,798
Number of people employed in this industry	89,662
Total annual sales in this industry	\$19 million
Average employees per establishment	17
Average sales per establishment	\$7 million

## 4.3 Competition

### Competition

Competitive threats come from other concrete fabrication companies in the area. Specifically, competitors include Jones Construction, James Boyd Construction, Jerry Manuel Construction, Quality Construction, and Charles Johnson, Inc.

## 5.0 Strategy

The company's overall strategy is based on a continuous improvement process of setting objectives, measuring results, and providing feedback to facilitate further growth and progress. Included are detailed quarterly and annual reporting and crisis management plans for medical, product, and natural disaster emergencies.

*\*\*Note: Report has been removed from this sample plan for confidentiality.*

The company plans to rapidly develop marketing alliances with industry leaders and pursue new sales of its services to residential and commercial builders. The market strategy is to capitalize on Concrete Fabricators' alliances by securing city, parish, state, and government contracts.

Concrete Fabricators is committed to ensuring that the products used on its customers' job sites are safe and approved by the Occupational Safety and Health Administration (OSHA). Along with its clients, the company believes in a health and safety initiative that is all pervasive, managing any potential loss in the work environment.

Concrete Fabricators has adopted a corporate strategy that is dedicated to improving the performance of activities on the critical path of its customers' projects. The company does this by building on its core strengths, innovative equipment, design engineering expertise, and project and site management, within an environment of safety excellence.

From the customers' point of view, this strategy translates into these benefits:

- Reduction of set-up time for trades.
- Increased site safety.
- Project cost reduction.
- Quality construction practices.
- Resolve punch list immediately after concrete placement.
- Review of structural plans.

## 5.1 Value Propositions

The company plans to become the leading provider of formwork and foundation services in the area. This means always having the best and most efficient facilities, processes, and people. To achieve this, Concrete Fabricators is investing in many ways that will pay off in competitive advantages for its customers, for example:

- **Review of structural drawings.** The company eliminates possible structural problems and delays.
- **Pre-job conferencing upon request.** The company thoroughly understands the construction business and the science of formwork and laying foundations. Recommendations are made, and customers are alerted when things could be done better. A partnership is based on trust and includes planning and teamwork.
- **Delivery.** Material placement is of cardinal concern to the company. Concrete Fabricators constantly upgrades and rotates its vehicles to maximize efficiency on the job.
- **Forming, reinforcing, and aftermarket products.** One of the things the company does for its customers is to help streamline the ordering process. Concrete Fabricators offers a large variety of concrete forming and foundation materials.

## 5.2 Marketing Strategy and Plan

**Marketing Strategy and Plan.** The overall marketing plan for Concrete Fabricator's service is based on the following fundamentals:

- Segmentation of the market(s) planned to reach.
- Distribution channels planned to reach market segments: television, radio, sales associates, and mailings.
- Share of the market expected to capture over a fixed period of time.

**Market Responsibilities.** Concrete Fabricators is committed to an extensive promotional campaign. This is done aggressively and on a broad scale. To accomplish initial sales goals, the company has implemented an effective promotional campaign to accomplish two primary objectives:

- Attract a quality work force that has a desire to be successful.
- Attract customers who will constantly look to Concrete Fabricators for their construction projects.

In addition, Concrete Fabricators advertises in the yellow pages, newspapers, radio, and on billboards throughout the state.

**Promotion.** In addition to standard advertisement practices, Concrete Fabricators gains considerable recognition through these additional promotional mediums:

- Caps and T-shirts.
- Signs located strategically throughout the state.
- Word of mouth from satisfied customers.

**Incentives.** As an extra incentive for customers (and potential customers) to remember the name, Concrete Fabricators plans to distribute coffee mugs, T-shirts, pens, and other advertising specialties with the company logo. This will be an ongoing program for the company, when appropriate and where it is identified as beneficial.

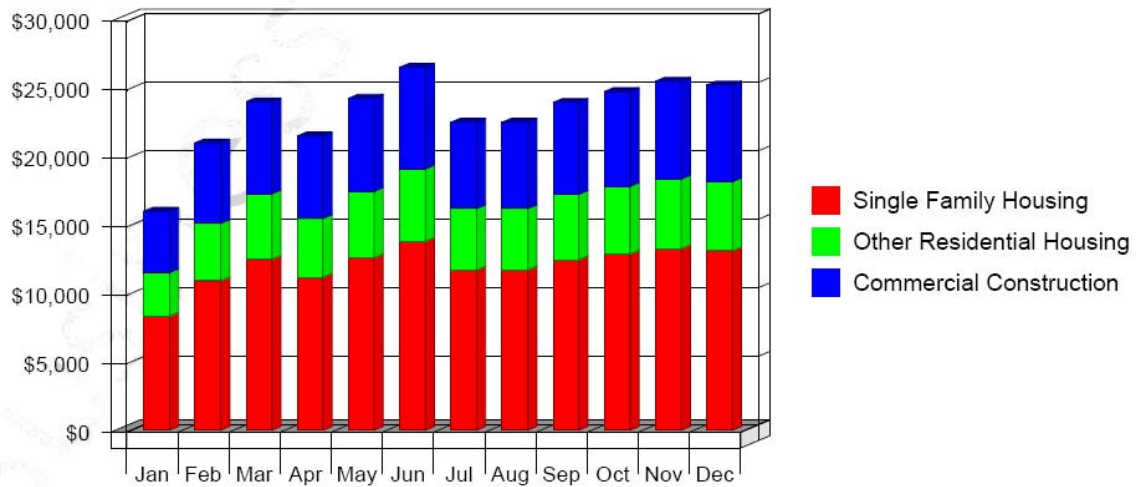
**Brochures.** The objective of brochures is to portray Concrete Fabricators' goals and products as an attractive functionality. It is also to show customers how to use the latest in technology as it relates to construction and building services.

**Investment in Advertising and Promotion.** Concrete Fabricators hopes to allocate ten percent of revenues for the ongoing, state-wide advertising campaign.

### 5.3 Sales Strategy

The following chart and table show our estimated sales forecast for this plan.

**Table A.1-5 Monthly Sales Graph**



**Table A.1-6 Sales Forecast**

Sales Forecast			
Sales	2000	2001	2002
Single Family Housing	\$144,399	\$216,600	\$324,900
Other Residential Housing	\$55,538	\$83,308	\$124,961
Commercial Construction	\$77,755	\$116,631	\$174,946
<b>Total Sales</b>	<b>\$277,692</b>	<b>\$416,539</b>	<b>\$624,807</b>
Direct Cost of Sales			
	2000	2001	2002
Single Family Housing	\$5,200	\$10,400	\$20,800
Other Residential Housing	\$2,000	\$4,000	\$8,000
Commercial Construction	\$2,800	\$5,600	\$11,200
<b>Subtotal Direct Cost of Sales</b>	<b>\$10,000</b>	<b>\$20,000</b>	<b>\$40,000</b>

## 6.0 Organization and Management

### Organization

The company's management philosophy is based on responsibility and mutual respect. Concrete Fabricators maintains an environment and structure that encourages productivity and respect for customers and fellow employees.

Concrete Fabricators' employees and management are committed to:

- Providing a safe work environment to protect employees, the employees of customers and subcontractors, and the public.
- Supplying safe products for customers.
- Continuously improving the company's safety program to reduce the risk of accidents and occupational illness in a changing work environment.
- Encouraging employees to participate in accident prevention programs, and take personal responsibility for their, and their co-workers', health and safety.
- Employing properly trained personnel, equipment, and procedures necessary to enable regulatory compliance, and contribute to the high safety standards for our industry.
- Monitoring workplaces, enforcing safe work practices, and communicating the company's safety performance to employees and other stakeholders.
- Making safety a value-added service that the company provides to its customers.

### Senior Management Team

Concrete Fabricators' management is highly experienced and qualified. Its key management team includes Mr. Lloyd James, Mrs. Anne James, and Mr. Sam McDonald. Mr. James acts as general manager, construction consultant, and occasionally as a site manager. Mrs. James carries out office management duties and Mr. McDonald acts as the primary on-site manager.

Table: Personnel

Personnel Plan	2000	2001	2002
Cement Layer No. 1	\$22,104	\$22,104	\$22,104
Cement Layer No. 2	\$22,104	\$22,104	\$22,104
Cement Layer No. 3	\$22,104	\$22,104	\$22,104
Part time Cement Layer No.4	\$0	\$5,688	\$12,000
Part time Cement Layer No. 5	\$0	\$0	\$5,688
Total People	3	4	5
Total Payroll	\$66,312	\$72,000	\$84,000

## 7.0 Finance

### Financial Projections

#### Summary of three-year projections

Financial projections are based on sales volume at the levels described in the revenue section; it presents, to the best of management's knowledge and belief, the company's expected assets, liabilities, capital, revenues, and expenses. Further, the projections reflect management's judgment of the expected conditions and its expected course of action, given the hypothetical assumptions.

- Financial notes and assumptions

Revenues will be derived from sales of services for the installation of reinforced concrete utilizing formwork, reinforcing steel, embedded items, concrete placement, and engineering. Concrete Fabricators plans to bid and receive contracts for commercial concrete projects at all levels throughout the state. Management also expects to achieve a small percentage of revenues resulting from consulting services arising out of training.

- Annual Growth

The company expects annual growth to increase by 110%, on the basis that the company will be stepping up its sales efforts, as well as initiating new partnerships and alliances that will foster growth and extensions of our existing markets. These strategies are designed to build momentum and critical mass within the company and its overall sales results.

- Cost of Goods

Concrete Fabricators expects that its services will bear a reasonably high markup, which translates to a relatively low cost of goods. Cost of goods includes consideration for cost of equipment, cost of products, bank charges due to credit card transactions (not passed along to the consumer), and labor.

- Operating Expenses

Concrete Fabricators groups sales and marketing expenses, and general and administrative expense items under this category.



## 7.1 Projected Profit and Loss

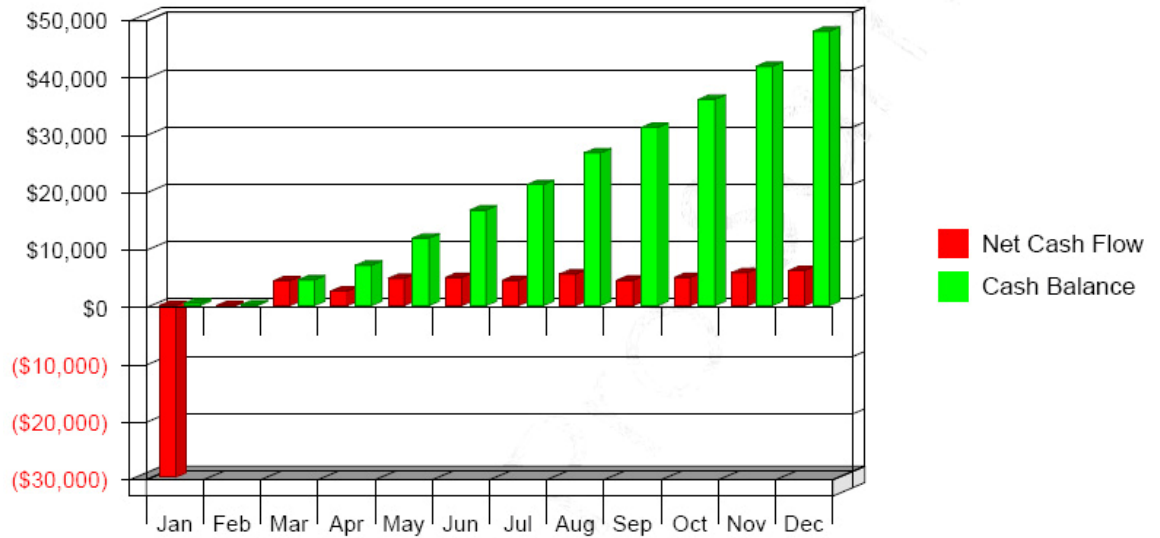
The following table outlines our expected profit and loss for fiscal years 2000-2002.

Table: Profit and Loss				
Pro Forma Profit and Loss				
	2000	2001	2002	
Sales		\$277,692	\$416,539	\$624,807
Direct Costs of Goods		\$10,000	\$20,000	\$40,000
Other		\$3,000	\$6,000	\$12,000
		-----	-----	-----
Cost of Goods Sold		\$13,000	\$26,000	\$52,000
Gross Margin		\$264,692	\$390,539	\$572,807
Gross Margin %		95.32%	93.76%	91.68%
Expenses:				
Payroll		\$66,312	\$72,000	\$84,000
Sales and Marketing and Other Expenses		\$34,344	\$47,610	\$71,010
Depreciation		\$47,997	\$50,333	\$52,668
Rent/Mortgage		\$12,420	\$12,420	\$12,420
Supplies and Equipment		\$9,926	\$19,851	\$39,702
Insurance			\$14,459	\$21,688
Services			\$2,833	\$2,833
Payroll Taxes		\$9,947	\$10,800	\$12,600
Other		\$0	\$0	\$0
		-----	-----	-----
Total Operating Expenses		\$198,237	\$237,536	\$307,766
Profit Before Interest and Taxes		\$66,455	\$153,003	\$265,041
Interest Expense		(\$499)	(\$4,888)	(\$9,693)
Taxes Incurred		\$16,739	\$39,473	\$68,684
Net Profit		\$50,216	\$118,419	\$206,051
Net Profit/Sales		18.08%	28.43%	32.98%
Include Negative Taxes		TRUE	TRUE	TRUE

## 7.2 Projected Cash Flow

The following chart and table show our estimated cash flow for this plan.

**Table A.1-7 Cash Flow Graph**



**Table A.1-8 Cash Flow**

Table: Cash Flow

Pro Forma Cash Flow	2000	2001	2002
<b>Cash Received</b>			
<b>Cash from Operations:</b>			
Cash Sales	\$69,423	\$104,135	\$156,202
Cash from Receivables	\$203,755	\$298,484	\$447,725
Subtotal Cash from Operations	\$273,178	\$402,619	\$603,927
<b>Additional Cash Received</b>			
Non Operating (Other) Income	\$0	\$0	\$0
Sales Tax, VAT, HST/ GST Received	\$0	\$0	\$0
New Current Borrowing	\$2,000	\$0	\$0
New Other Liabilities(interest-free)	\$0	\$0	\$0
New Long-term Liabilities	\$0	\$0	\$0
Sales of Other Current Assets	\$0	\$0	\$0
Sales of Long-term Assets	\$0	\$0	\$0
New Investment Received	\$0	\$0	\$0
Subtotal Cash Received	\$275,178	\$402,619	\$603,927
<b>Expenditures</b>			
<b>Expenditures from Operations:</b>			
Cash Spending	\$10,322	\$16,499	\$26,949
Payment of Accounts Payable	\$201,930	\$226,607	\$331,219
Subtotal Spent on Operations	\$212,252	\$243,106	\$358,168
<b>Additional Cash Spent</b>			
Non Operating (Other) Expense	\$0	\$0	\$0
Sales Tax, VAT, HST/ GST Paid Out	\$0	\$0	\$0
Principal Repayment of Current Borrowing	\$26,501	\$26,250	\$28,000
Other Liabilities Principal Repayment	\$0	\$0	\$0
Long-term Liabilities Principal Repayment	\$18,900	\$20,250	\$21,600
Purchase Other Current Assets	\$0	\$0	\$0
Purchase Long-term Assets	\$0	\$0	\$0
Dividends	\$0	\$0	\$0
Subtotal Cash Spent	\$257,653	\$289,606	\$407,768
Net Cash Flow	\$17,525	\$113,013	\$196,159
Cash Balance	\$47,833	\$160,846	\$357,005

## 7.3 Balance Sheets - Projected

The following table provides Concrete Fabricator's projected balance sheets for 2000-2002.

**Table A.1-9 Balance Sheet**

Table: Balance Sheet

Pro Forma Balance Sheet  
Assets

Current Assets	2000	2001	2002
Cash	\$47,833	\$160,846	\$357,005
Accounts Receivable	\$27,840	\$41,760	\$62,640
Other Current Assets	\$8,830	\$8,830	\$8,830
<b>Total Current Assets</b>	<b>\$84,503</b>	<b>\$211,436</b>	<b>\$428,475</b>
Long-term Assets			
Long-term Assets	\$507,687	\$507,687	\$507,687
Accumulated Depreciation	\$93,688	\$144,021	\$196,689
<b>Total Long-term Assets</b>	<b>\$413,999</b>	<b>\$363,667</b>	<b>\$310,999</b>
<b>Total Assets</b>	<b>\$498,502</b>	<b>\$575,103</b>	<b>\$739,474</b>
Liabilities and Capital	2000	2001	2002
Accounts Payable	\$7,823	\$12,505	\$20,425
Current Borrowing	(\$24,501)	(\$50,751)	(\$78,751)
Other Current Liabilities	\$22,785	\$22,785	\$22,785
<b>Subtotal Current Liabilities</b>	<b>\$6,108</b>	<b>(\$15,461)</b>	<b>(\$35,540)</b>
<b>Long-term Liabilities</b>	<b>(\$1,134)</b>	<b>(\$21,384)</b>	<b>(\$42,984)</b>
<b>Total Liabilities</b>	<b>\$4,974</b>	<b>(\$36,845)</b>	<b>(\$78,524)</b>
Paid-in Capital	\$0	\$0	\$0
Retained Earnings	\$443,313	\$493,529	\$611,947
Earnings	\$50,216	\$118,419	\$206,051
<b>Total Capital</b>	<b>\$493,529</b>	<b>\$611,947</b>	<b>\$817,998</b>
<b>Total Liabilities and Capital</b>	<b>\$498,502</b>	<b>\$575,103</b>	<b>\$739,474</b>
<b>Net Worth</b>	<b>\$493,529</b>	<b>\$611,947</b>	<b>\$817,998</b>

## 7.4 Business Ratios

The following table includes Industry Profile statistics for the concrete work industry, as determined by the Standard Industrial Classifications (SIC) Index code 1799. These statistics show a comparison of industry standards and the key ratios for this plan.

**Table A.1-10 Ratios**

Ratio Analysis	2000	2001	2002	Industry Profile
Sales Growth	42.86%	50.00%	50.00%	7.50%
<b>Percent of Total Assets</b>				
Accounts Receivable	5.58%	7.26%	8.47%	34.20%
Inventory	0.00%	0.00%	0.00%	5.60%
Other Current Assets	1.77%	1.54%	1.19%	27.20%
Total Current Assets	16.95%	36.76%	57.94%	67.00%
Long-term Assets	83.05%	63.24%	42.06%	33.00%
Total Assets	100.00%	100.00%	100.00%	100.00%
Current Liabilities	1.23%	-2.69%	-4.81%	42.20%
Long-term Liabilities	-0.23%	-3.72%	-5.81%	12.30%
Total Liabilities	1.00%	-6.41%	-10.62%	54.50%
Net Worth	99.00%	106.41%	110.62%	45.50%
<b>Percent of Sales</b>				
Sales	100.00%	100.00%	100.00%	100.00%
Gross Margin	95.32%	93.76%	91.68%	33.10%
Selling, General & Administrative Expenses	77.24%	65.33%	58.70%	18.10%
Advertising Expenses	2.52%	3.36%	4.48%	0.30%
Profit Before Interest and Taxes	23.93%	36.73%	42.42%	3.20%
<b>Main Ratios</b>				
Current	13.84	-13.68	-12.06	1.63
Quick	13.84	-13.68	-12.06	1.30
Total Debt to Total Assets	1.00%	-6.41%	-10.62%	54.50%
Pre-tax Return on Net Worth	13.57%	25.80%	33.59%	8.60%
Pre-tax Return on Assets	13.43%	27.45%	37.15%	18.80%
<b>Business Vitality Profile</b>				
Sales per Employee	\$92,564	\$104,135	\$124,961	\$0
Survival Rate				0.00%
<b>Additional Ratios</b>				
Net Profit Margin	18.08%	28.43%	32.98%	n.a
Return on Equity	10.17%	19.35%	25.19%	n.a
<b>Activity Ratios</b>				
Accounts Receivable Turnover	7.48	7.48	7.48	n.a
Collection Days	45	41	41	n.a
Inventory Turnover	0.00	0.00	0.00	n.a
Accounts Payable Turnover	21.62	18.50	16.60	n.a
Payment Days	22	16	18	n.a
Total Asset Turnover	0.56	0.72	0.84	n.a
<b>Debt Ratios</b>				
Debt to Net Worth	0.01	-0.06	-0.10	n.a
Current Liab. to Liab.	1.23	0.00	0.00	n.a

#### Liquidity Ratios

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Net Working Capital	\$78,396	\$226,897	\$464,015	n.a
Interest Coverage	0.00	0.00	0.00	n.a

#### Additional Ratios

---

Assets to Sales	1.80	1.38	1.18	n.a
Current Debt/Total Assets	1%	-3%	-5%	n.a
Acid Test	9.28	0.00	0.00	n.a
Sales/Net Worth	0.56	0.68	0.76	n.a
Dividend Payout	0.00	0.00	0.00	n.a

## **A.2 StructureAll Ltd. Consulting Engineers Business Plan Example**

### **Plan Outline**

#### **1.0 Executive Summary**

- 1.1 Objectives
- 1.2 Mission
- 1.3 Keys to Success

#### **2.0 Company Summary**

- 2.1 Company Ownership
- 2.2 Start-up Summary
- 2.3 Company Locations and Facilities

#### **3.0 Services**

- 3.1 Service Description
- 3.2 Competitive Comparison
- 3.3 Sales Literature
- 3.4 Fulfillment
- 3.5 Technology
- 3.6 Future Services

#### **4.0 Market Analysis Summary**

- 4.1 Market Segmentation
- 4.2 Service Business Analysis
  - 4.2.1 Business Participants
  - 4.2.2 Competition and Buying Patterns
  - 4.2.3 Main Competitors

#### **5.0 Strategy and Implementation Summary**

- 5.1 Competitive Edge
- 5.2 Marketing Strategy
  - 5.2.1 Positioning Statement
  - 5.2.2 Pricing Strategy
- 5.3 Sales Strategy
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- 5.4 Milestones

#### **6.0 Management Summary**

- 6.1 Management Team
- 6.2 Management Team Gaps
- 6.3 Personnel Plan

#### **7.0 Financial Plan**

- 7.1 Important Assumptions
- 7.2 Key Financial Indicators

- 7.3 Break-even Analysis
- 7.4 Projected Profit and Loss
- 7.5 Projected Cash Flow
- 7.6 Projected Balance Sheet
- 7.7 Business Ratios



## 1.0 Executive Summary

StructureAll Ltd. will be formed as a consulting firm specializing in structural engineering services. A home office in Yellowknife, NT will be established the first year of operations to reduce start up costs. The founder of the firm is a professional engineer with eighteen years of progressive and responsible experience.

Initial start up costs amount to \$20,000. Of this total, \$13,000 is required for start up expenses while the balance is to be placed in the company accounts as working capital. The founder, Philip Nolan, provided an initial investment of \$20,000 towards start-up costs.

Projected sales and profits for the first three years of operation are summarized below:

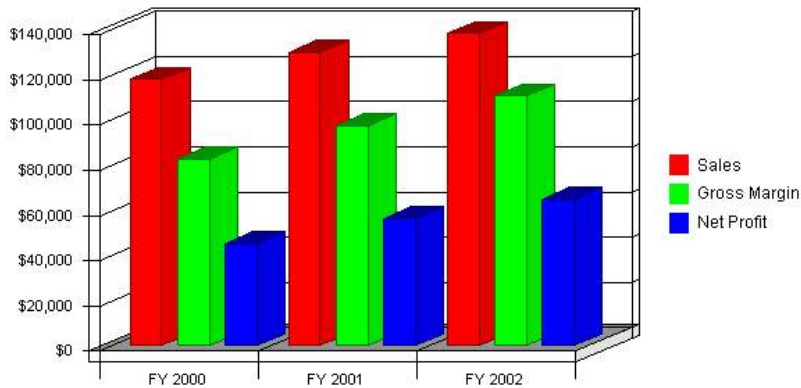
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<u>Year</u>	<u>Sales(\$)</u>	<u>Profits(\$)</u>	<u>Sales/Profit(%)</u>
1	118,000	9,150	7.8
2	130,000	12,650	9.8
3	138,000	15,100	11.0

The firm will specialize in providing three dimensional modeling and visualization to our clients. State-of-the-art analysis and design tools will be an integral part of the business plan. Implementation of a quality control and assurance program will provide a focus for production work.

---

**Table A.2-1 Highlights**



## 1.1 Objectives

- 
1. Revenues of \$118,000 the first year, approaching \$138,000 at the end of three years.
  2. Achieve 20% of market value at the end of the third year of operation.
  3. Increase gross margin to 80% by the third year of operations.
-

## **1.2 Mission**

Our mission is to provide clients across Canada's North with structural engineering services for all types of buildings, from concept planning through to completion, with a highly skilled professional team working together, using common sense and practical experience.

## **1.3 Keys to Success**

---

1. Provide professional quality services on time and on budget.
  2. Develop a follow-up strategy to gauge performance with all clients.
  3. Implement and maintain a quality control and assurance policy.
- 

## **2.0 Company Summary**

StructureAll Ltd. is a new company which provides professional engineering design services for clients which manage, maintain, and plan for residential, commercial, and industrial type buildings. Our focus will be the public sector market in remote communities across Canada's North.

### **2.1 Company Ownership**

StructureAll Ltd. will be created as a limited liability company. The company will be privately owned by Philip D. Nolan. Leslie C. Goit will also be listed as a Director.

### **2.2 Start-up Summary**

Our start-up expenses amount to \$13,000, which allows for initial legal expenses, licenses, permits, stationary, specialty software, office equipment, and furniture. In addition to these start-up costs, an initial balance of \$7,000 will be placed in the company accounts. The software purchases include an allowance of \$5,000 for AutoCADD® 2000, \$1,800 for National Master Specifications, and \$200 for Quickbooks® (accounting package).

Philip Nolan will contribute \$20,000 towards the overall start-up costs

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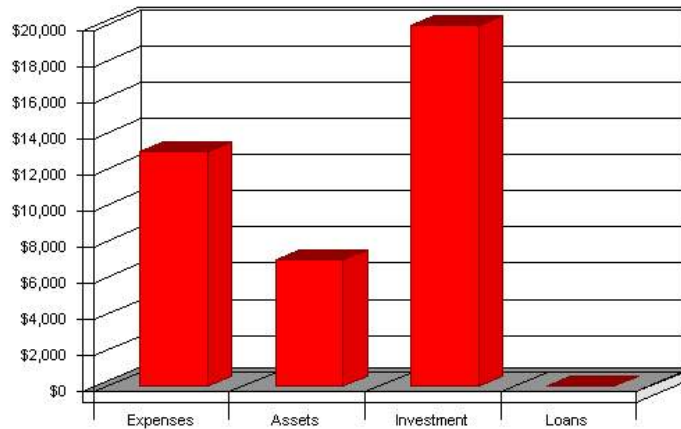
**Table A.2-2 Start-up Costs**

Start-up	
Requirements	
Start-up Expenses	
Professional Liability Insurance	\$1,200
Web Site Development	\$600
Legal Services	\$500
Business Licenses	\$1,000
Permit Holder ( NAPEGG )	\$500
Software Purchases	\$7,000
Stationery	\$600
Office Furniture	\$600
Office Equipment	\$500
Other	\$500
Total Start-up Expenses	\$13,000
Start-up Assets Needed	
Cash Balance on Starting Date	\$7,000
Other Current Assets	\$0
Total Current Assets	\$7,000
Long-term Assets	\$0
Total Assets	\$7,000
Total Requirements	\$20,000
Funding	
Investment	
Philip D. Nolan	\$20,000
Investor 2	\$0
Total Investment	\$20,000
Current Liabilities	
Accounts Payable	\$0
Current Borrowing	\$0
Other Current Liabilities	\$0
Total Current Liabilities	\$0

Long-term Liabilities	\$0
Total Liabilities	\$0

Loss at Start-up	(\$13,000)
Total Capital	\$7,000
Total Capital and Liabilities	\$7,000

**Table A.2-3 Start-up Costs Graph**



## 2.3 Company Locations and Facilities

We will establish a home office in Yellowknife, NT in order to reduce start-up costs. The office space is estimated to be 150 square feet. We will be installing a dedicated fax line as well as a high-speed Internet connection. An interactive website will also be developed which will serve as a marketing tool. The domain name of "structureall.com" has already been reserved.

## 3.0 Services

StructureAll Ltd. offers complete structural engineering services. We will focus on buildings with the following 'Use and Occupancies':

- 
- Residential.
  - Commercial.
  - Industrial.
-

The company is 'project' oriented where each project involves:

---

- Renovations.
  - Rehabilitation.
  - Additions.
  - New construction.
- 

We offer innovative and economical design services, maintaining state-of-the-art design technology. We meet client needs on projects of all sizes and smaller, special design projects.

### 3.1 Service Description

**Project Consulting:** Proposed and billed on a per-project and per-milestone basis, project consulting offers a client company a way to harness our specific qualities and use our expertise to develop and/or implement plans, from conceptual planning to turnover. Proposal costs will be associated with each project.

**Forensic Investigations:** Proposed and billed on a per-project and per-milestone basis, our investigations will serve the public and private sector markets. We will focus on troubleshooting buildings where damage and or failure has occurred. Our reports will outline the description of the problem, the nature of the mechanism which has caused damage or failure, and a list of options for remedial action including estimated budget costs for implementation.

**Project Management:** Our project management services include defining client needs, preparing bid documents, tendering, bid analysis, construction review, payment certification, contract administration, and warranty inspections. Projects include new facilities, renovations, repairs, and remodeling.

**Dispute Resolution:** We draw upon our broad range of construction and contract administration experience to provide dispute resolution services, including arbitration, mediation and expert reports for litigation. This work is supported by forensic engineering services to identify the cause of failures.

**Restoration Engineering:** We provide condition survey, design, and construction review services for the repair of building structures.

**Home Inspections:** We will provide prospective homeowners with an assessment of the various systems in a residential home, including foundations, framing, building envelope and efficiency, mechanical systems, electrical systems, and general safety issues. We provide a photographic record along with a thorough written report.

### 3.2 Competitive Comparison

StructureAll Ltd. offers their clients superior service accompanied with state-of-the-art analysis and design capabilities. We will offer three-dimensional visualization services to reduce the possibility of spatial conflicts with architectural elements and other engineering disciplines. In comparison, our competitors rely mostly on two-dimensional models.

We will implement a quality assurance and control program for all projects undertaken. This document will serve to focus on the standards which will be achieved and a means of measuring performance.

---

A systematic manner of sorting and retrieving a library of structural elements and assemblies will be implemented. Slide libraries will be available from a tool bar within AutoCADD for quick access. We will adopt the layering standards of the American Institute of Architects (AIA). In comparison, our competitors do not have an integrated database.

StructureAll Ltd. will adopt the filing systems developed by the AIA. All project information will be tracked using an integrated database management system. All of our business tools will be year 2000 compliant.

### **3.3 Sales Literature**

A brochure system, which covers a broad spectrum of the target market segment will be developed during the initial year of operations. This system will be modular in nature and include many 'boiler plate' sections which may be edited to suit specific needs. Brochure inserts will be maintained as individual sheets to facilitate their assembly in any custom situation.

Our website will be developed the first year of operations and include a description of our services, the areas which we plan to serve, contact information, a list of representative projects, and a brief biography of Philip D. Nolan. An Internet domain name has already been reserved for this purpose ... <http://www.structureall.com>

A series of templates will be developed for project proposals. The format for all proposals will include:

- 
- Cover letter.
  - Scope of services for each project.
  - Fee (if requested).
  - Firm's qualifications to provide services (overview).
  - Project Team (describes each person's tasks and qualifications).
  - Philosophy of design approach.
  - Relevant experience.
  - Schedule to provide services.
- 

### **3.4 Fulfillment**

We will turn to qualified professionals to supplement computer aided design and drafting (CADD) services, specialty connection designs, and analysis support services which are areas that we can afford to contract out without risking the core values provided to the clients.

We have fostered several alliances with suppliers of structural elements, including glued laminated lumber, pre-engineered dimension lumber trusses, engineered lumber, and steel to facilitate this strategy.

In the second year of operations, we intend to secure a storefront presence in Yellowknife. At this stage, we will seek qualified northern engineering students to provide them with work experience in a structural engineering office environment.

### **3.5 Technology**

---

StructureAll Ltd. will maintain complete and comprehensive Windows® based analysis tools for structural design. An integrated computer aided design and drafting tool permits several evaluations to be made on a structure at minimal cost.

StructureAll Ltd. will maintain an Internet website complete with file transfer protocol (ftp) capabilities.

### 3.6 Future Services

**Quality Control and Assurance:** Serving the needs of the welding industry, we will ensure that certified firms and their employee welders are qualified to perform specific welds in accordance with the requirements of the Canadian Welding Bureau (CWB) as a certified Welding Inspector. We are currently in the process of completing a comprehensive home study program offered through the CWB for this purpose.

There are four firms presently in the NWT which require these services in order to maintain their certification with the CWB. On-site inspections are required four times per year.

**Fabrication and Detailing Drawings:** Serving the special needs of steel and concrete construction, StructureAll Ltd. will be working toward offering these services to contractors in the future.

**Toll-Free Communications:** We will provide our clients a toll-free number to access 24 hours a day in the second year of operations.

### 4.0 Market Analysis Summary

StructureAll Ltd. will focus on traditional Architect/Engineering (A/E) contracts. The owner will usually contract the A/E to perform planning and design services. These design services include preparation of plans, specifications, and estimates.

Construction services may be limited to occasional field visits and certain contract administration requirements. Typically, these types of projects distribute total design fees amongst the professionals involved in accordance with the following guideline:

- 
- Architecture Design (65%).
  - Structural Design (10%).
  - Mechanical Design (15%).
  - Electrical Design (10%).
- 

Our most important clients will be established architectural/engineering firms who require structural engineering services.

### 4.1 Market Segmentation

The market for engineering services may be summarized with the following groups:

---

1. **Established Architectural and Engineering firms:** Typically, the structural portions of any building project involve a Prime Consultant who pre-selects their team members and promotes their strengths in a proposal call to prospective clients. Our strategy is to offer these established firms a viable resource from which to draw upon. We can undertake the entire structural engineering process or provide assistance to their own in-house staff.
2. **Territorial and Federal Governmental Departments:** The Government of the Northwest Territories (GNWT) and the newly created Nunavut Territory retain consultants for a variety of purposes. We intend to position ourselves as a local firm offering expertise in consulting, project management, forensic, and restoration engineering. The Federal Government also retains consultants for similar purposes.
3. **Law Firms:** We will market our services to the legal community to provide dispute resolution services, including arbitration, mediation and expert reports for litigation. This work is supported by forensic engineering services to identify the cause of failures.
4. **Contractors:** We will offer design/build services to contractors for the multitude of potential projects which the Territorial Government and Nunavut Territory have recently undertaken. Contractors occasionally require structural engineers to submit sealed alternatives for equivalents to construction details.
5. **Municipal Governments:** Remote Municipal Governments in the Territories can expect to have more autonomy with respect to infrastructure growth and development in the years to come. This initiative is part of the GNWT mandate. We will promote our services to the local municipal governments for this purpose. To attract this market potential, we will offer to train those students in each community who are interested in engineering as a career choice. On the local front, the City of Yellowknife often provides recommendations to builders and homeowners for structural engineering services related to renovations, additions, and new construction.
6. **Private Individuals:** We will focus attention on homeowners in Yellowknife who are renovating or contemplating an addition to their residence. We will also promote home inspections to those parties contemplating the purchase of a home.
7. **Realtors:** In conjunction with home inspections, we will make all the Realtors aware of this service.

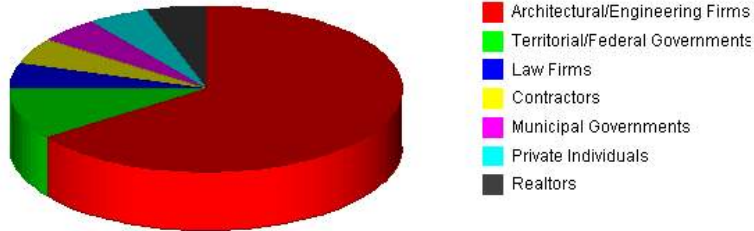
The Potential Market Chart and the Market Analysis Table are based on percentages which each of these groups could contribute to the services offered. This manner of describing the potential market is more appropriate for this type of business. As can be seen, the Established Architectural/Engineering firms account for 65% of the potential market with the other participants claiming the balance in smaller proportions.

**Table A.2-4 Market Analysis**

Market Analysis							
Potential Customers	Growth	1999	2000	2001	2002	2003	CAGR
Architectural/Engineering Firms	0%	65	65	65	65	65	0.00%
Territorial/Federal Governments	0%	10	10	10	10	10	0.00%
Law Firms	0%	5	5	5	5	5	0.00%
Contractors	0%	5	5	5	5	5	0.00%
Municipal Governments	0%	5	5	5	5	5	0.00%
Private Individuals	0%	5	5	5	5	5	0.00%
Realtors	0%	5	5	5	5	5	0.00%
Total	0.00%	100	100	100	100	100	0.00%



**Table A.2-5 Market Analysis Pie Chart**



## 4.2 Service Business Analysis

The following sections describe in more detail these aspects of the service business environment:

- 
- Business Participants.
  - Competition and Buying Patterns.
  - Main Competitors.
- 

### 4.2.1 Business Participants

The majority of consulting services cater to the needs of the Territorial Governments. The Territorial Governments operate on a budget of approximately \$1,170 million per year, based on the 1998/1999 Main Estimates. Of this total, approximately \$1,028 million is spent on Operating and Maintenance Expenditures while \$142 million is allocated to Capital Expenditures.

Within the Capital Expenditures, Buildings and Works is a sub-category. This is the area of the annual operating budget from which all building design consultants must draw upon. Our analysis of the 1998/1999 Main Estimates indicates a total expenditure of \$59,339,000. A typical A/E contract derives fee estimates from total budgets. For this analysis, we will apply 9% as a guideline for design fees. This yields a figure of about \$5,340,000 in design fees available for distribution to the consulting industry.

The major clients within the Territorial Governments include:

- 
- Department of Education.
  - Department of Transportation.
  - Department of Municipal and Community Affairs.
-

Our competition matrix indicates a total of 102 persons within the consulting field in the Territories. This total has been subdivided into the types of positions these people hold. Based on reasonable estimates of salary expectations including 30% burdens for administration yields a value of about \$7,800,000. This figure represents an estimate of the revenues required to sustain engineering consultants in the Territories.

From this evaluation, the Territorial Governments account for close to 70% of design fees while other participants in the building marketplace account for the balance. The Territorial Governments retain consultants for the following types of buildings:

- 
- Schools.
  - Health Centres.
  - Community Halls.
  - Arenas.
  - Warehouses.
  - Firehalls.
- 

These types of buildings are constructed on a rotating basis across several communities in the NT. In addition to new construction, rehabilitation, renovations, and additions are also in demand.

Typically, the Territorial Governments issue a proposal call to consultants to service these needs. StructureAll will position itself as a Structural Sub-Consultant or resource to the Prime Consultant.

StructureAll Ltd. will also promote its services as structural specialists and project managers to the Territorial Governments.

#### 4.2.2 Competition and Buying Patterns

Pricing of projects and billing rates are surprisingly variable. In consulting at this level, it is easier to be priced too low than too high. Clients and potential clients expect to pay substantial fees for the best quality professional advice. The nature of the billing, however, is sensitive. Clients are much more likely to be offended when a job starts at \$20K and ends up at \$30K because of overruns, than if the same job started at \$30K or even \$35K.

Clients rarely compare consultants directly, looking for two, or more, possible providers of a proposed project or job. Usually they follow word-of-mouth recommendations and either go for the job or not, rather than selecting from a menu of possible providers.

The most important element of general competition, by far, is what it takes to keep clients for repeat business. It is worth making huge concessions in any single project to maintain a client relationship that brings the client back for future projects.

#### 4.2.3 Main Competitors

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1. **Ferguson Simek Clark (FSC Group):** This well established architectural and multi-discipline engineering firm would be our main competitor. This firm has branch offices in Iqaluit, NT and Whitehorse, YT besides a head office located in Yellowknife, NT. Their principal strength is undertaking a project from inception through to completion under one roof. Their weakness stems from an understaffed structural

engineering group. At present, there is only one structural engineer who services the needs of all their in-house architects and outside clients. The drafting aspects of any project rely upon recollection and modification of past projects typically. There is no systematic manner in which standard block libraries are maintained or updated. They underutilize the programs at their disposal for structural analysis and design.

2. **A.D. Williams Engineering Ltd. (ADWEL):** This multi-discipline engineering firm is well established in Yellowknife. Their head office is located in Edmonton, Alberta. They can draw on additional resources from the core group as required to meet the demands of project schedules. At present, there is no resident structural engineer on staff in Yellowknife.
  3. **Girvan and Associates:** This is a small one person architectural and engineering firm which specializes in providing services for residential construction projects. Ian Girvan services the private sector mostly. It is our hope that we can form a strategic alliance to carry out consulting work jointly as needs and occasions arise.
- 

## 5.0 Strategy and Implementation Summary

StructureAll Ltd. will focus on the Western Arctic area initially. We believe the creation of Nunavut will still provide opportunities for structural engineering services; however a separate Association of Professional Engineers for Nunavut is anticipated.

We are also licensed to practice in the Yukon Territories, although we have not planned for any aggressive marketing in this area.

The target client is usually an Architect Manager.

### 5.1 Competitive Edge

StructureAll Ltd. offers the following competitive edge:

---

- State-of-the-art modeling, design, analysis, and drafting capabilities.
  - Quality control and assurance program.
  - An Internet website (<http://www.structureall.com>, and e-mail, [info@structureall.com](mailto:info@structureall.com)).
- 

### 5.2 Marketing Strategy

The sections which follow describe in more detail our positioning statement, pricing, and promotion strategy.

#### 5.2.1 Positioning Statement

For established engineering and architectural firms in Yellowknife who require structural engineering sub-consultant services, StructureAll Ltd. offers a competitive and economical option. Projects may be delegated to StructureAll Ltd. directly or arrangements can be made to supplement and assist their own in-house staff.

---

## **5.2.2 Pricing Strategy**

Most consulting work is billed on an hourly basis to pre-determined levels dictated by project schedule milestones. We have assigned a rate of \$80/hour for basic consulting services and \$40/hour for drafting services. These are conservative values for the consulting market. We have used conservative unit rates to remain more competitive.

## **5.2.3 Promotion Strategy**

We will be using the Internet extensively in our sales promotion. Together with a well targeted direct mail and e-mail campaign, we will make all the major players in the marketplace aware of our presence.

We will focus our limited advertising budgets to promote community sponsored events. We will also offer technical services at discount rates to non-profit organizations.

When traveling to remote communities, we will contact the local principals in elementary and high schools offering them a speaker on structural engineering as a career choice.

StructureAll Ltd. will apply for the Northwest Territories Business Incentive Policy. This policy is directed at those firms resident in the Northwest Territories and provides incentives with respect to evaluation of services.

## **5.3 Sales Strategy**

Success in a consulting market is focused on client service and typically translates into repeat business. We will avoid the pitfall of buying a project, only to find the scope of work far exceeds remuneration.

When a potential client questions the cost of a project, we explain the benefits and refer to our proposal which clearly outlines the tasks to be performed. If the budget is for less money, then we must offer less service.

Billing rates are not negotiated. One exception to this rule would be for not-for-profit organizations where marketing can be traded for services in kind.

### **5.3.1 Sales Forecast**

The following table and chart summarizes forecasted sales. We expect sales to remain at a constant level after three months of operation. We predict the first two months of operations will be slow. Revenues will be limited while a generic quality management plan is formulated and basic office administration tasks are completed.

Direct unit costs for the first year have been set at 30% of unit revenues, which yields a 70% gross margin. In the third year of operations, we plan to increase gross margin to 80% as a result of providing a more efficient service to our clients.

Our unit rate for basic consulting services has been set at \$80/hour. This is a conservative assumption based on published salary guideline levels for engineering professionals. Our unit rate for CADD services is \$40/hr.

---

**Table A.2-6 Sales Forecast**

Sales Forecast			
Unit Sales	FY 2000	FY 2001	FY 2002
Project Consulting	690	750	800
Project Management	240	260	280
Home Inspections	96	110	120
Computer Aided Drafting Services	890	1,000	1,050
<b>Total Unit Sales</b>	<b>1,916</b>	<b>2,120</b>	<b>2,250</b>

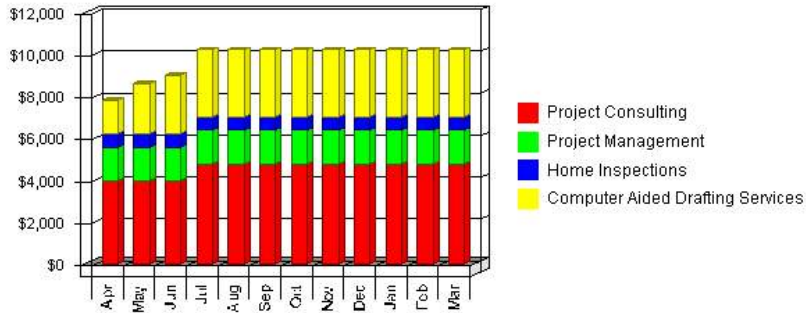
Unit Prices	FY 2000	FY 2001	FY 2002
Project Consulting	\$80.00	\$80.00	\$80.00
Project Management	\$80.00	\$80.00	\$80.00
Home Inspections	\$80.00	\$80.00	\$80.00
Computer Aided Drafting Services	\$40.00	\$40.00	\$40.00

Sales			
Project Consulting	\$55,200	\$60,000	\$64,000
Project Management	\$19,200	\$20,800	\$22,400
Home Inspections	\$7,680	\$8,800	\$9,600
Computer Aided Drafting Services	\$35,600	\$40,000	\$42,000
<b>Total Sales</b>	<b>\$117,680</b>	<b>\$129,600</b>	<b>\$138,000</b>

Direct Unit Costs	FY 2000	FY 2001	FY 2002
Project Consulting	\$24.00	\$20.00	\$16.00
Project Management	\$24.00	\$20.00	\$16.00
Home Inspections	\$24.00	\$20.00	\$16.00
Computer Aided Drafting Services	\$12.00	\$10.00	\$8.00

Direct Cost of Sales	FY 2000	FY 2001	FY 2002
Project Consulting	\$16,560	\$15,000	\$12,800
Project Management	\$5,760	\$5,200	\$4,480
Home Inspections	\$2,304	\$2,200	\$1,920
Computer Aided Drafting Services	\$10,680	\$10,000	\$8,400
<b>Subtotal Direct Cost of Sales</b>	<b>\$35,304</b>	<b>\$32,400</b>	<b>\$27,600</b>

**Table A.2-7 Monthly Sales Graph**



**5.4 Milestones**

The accompanying table lists important program milestones, with dates and managers in charge, and budgets for each. The milestone schedule indicates our emphasis on planning for implementation.

What the table doesn't show is the commitment behind it. Our business plan includes complete provisions for plan-vs.-actual analysis, which will be updated monthly to compare the variance and plan for course corrections.

**Table A.2-8 Milestones**

Milestones					
Milestone	Start Date	End Date	Budget	Manager	Department
Complete Incorporation	4/1/1999	4/15/1999	\$500	PN	Administrative
Acquire Tradename for Internet Website	3/6/1999	3/6/1999	\$400	PN	Administrative
Submit Business License Application to City	4/1/1999	4/16/1999	\$250	PN	Administrative
Acquire WCB Coverage	4/1/1999	4/16/1999	\$50	PN	Administrative
Apply for Staad-Pro Core Financing	4/1/1999	4/16/1999	\$0	PN	Administrative
Acquire E&O Insurance	4/1/1999	4/16/1999	\$1,200	PN	Administrative
Other	1/1/1999	1/1/1999	\$0	ABC	Department
<b>Totals</b>			<b>\$2,400</b>		

**6.0 Management Summary**

StructureAll Ltd. will initially have one employee who is also acting as general manager. Phil Nolan will be responsible for all daily operations in the firm.

## **6.1 Management Team**

Philip Nolan, P. Eng. has eighteen years of progressive and responsible engineering experience. Phil will be responsible for soliciting clients, marketing, promotion, and all daily aspects of running the business. He graduated from McGill University in Montreal, Quebec in 1981 with a Bachelor of Engineering degree.

Following graduation in 1981, Phil worked for consulting engineers in Toronto, Ontario on a variety of transportation planning projects.

In 1982, Phil moved to Yellowknife where he worked for the GNWT as a Project Engineer. Phil gained experience working on a host of community development and transportation related projects, including Little Buffalo River Bridge, Bridge Inspections, and Bridge Rehabilitations. Phil was with the GNWT for six years.

From 1988 to 1991, Phil worked for Foundation Co. of Canada Ltd., a large multi-national contracting firm as a project engineer where he gained experience in the use of explosives at the Magpie River Hydro Development and continued gaining experience on several bridge projects.

In 1992, Phil worked for Reid Crowther & Partners Ltd. out of Edmonton, Alberta on a host of bridge design and rehabilitation projects, including the Whitemud Ravine Pedestrian Bridges.

From 1993 to 1995, Phil was self employed as a private consultant offering services in quality control and assurance for building construction where he gained considerable experience in Preserved Wood Foundations and their use in residential and commercial applications.

In May of 1995, Phil joined the Ferguson Simek Clark (FSC) team of professionals and was responsible for all structural design, including quality control and assurance services for schools, arenas, health centres, and other buildings.

Phil will be the principal designer of all projects at StructureAll Ltd. Phil is currently working on a contract basis for Ferguson Simek Clark.

## **6.2 Management Team Gaps**

StructureAll Ltd. will require administrative support to ensure clients are billed on a timely basis. We will be looking to an outside source for ensuring the books are kept in order and up to date.

Self sufficiency in computer aided drafting capabilities will require Phil to become more familiar with AutoCADD 2000 as a drafting tool. We will invest in continuing education to fulfill this need. We have accounted for this in the business plan.

## **6.3 Personnel Plan**

The following table summarizes our personnel expenditures for the first three years, with compensation increasing from \$50K the first year to \$70K in the third. The detailed monthly personnel plan for the first year is included in the appendices.

**Table A.2-9 Personnel**

Personnel Plan			
	FY 2000	FY 2001	FY 2002
Name or title	\$0	\$0	\$0
Other	\$0	\$0	\$0
Total People	0	0	0
Total Payroll	\$0	\$0	\$0

## 7.0 Financial Plan

The financial plan which follows summarizes information regarding the following items:

---

- Important Assumptions.
  - Key Financial Indicators.
  - Break-Even Analysis.
  - Projected Profit and Loss.
  - Projected Cash Flow.
  - Projected Balance Sheet.
  - Business Ratios.
- 

## 7.1 Important Assumptions

The financial plan depends on important assumptions, most of which are shown in the following table as annual assumptions. The monthly assumptions are included in the appendices.

Some of the more important underlying assumptions are:

---

- We assume a strong economy, without major recession.
  - We assume the creation of Nunavut will not dramatically change the delivery of engineering services.
  - Interest rates, tax rates, and personnel burdens are based on conservative assumptions.
- 

**Table A.2-10 General Assumptions**

General Assumptions			
	FY 2000	FY 2001	FY 2002

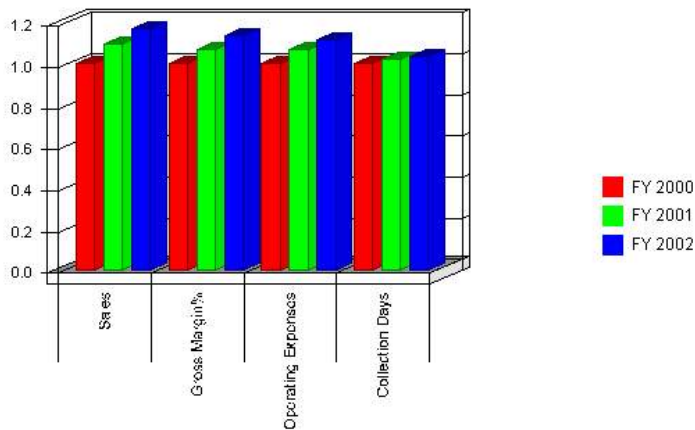


Plan Month	1	2	3
Current Interest Rate	10.00%	10.00%	10.00%
Long-term Interest Rate	10.00%	10.00%	10.00%
Tax Rate	16.25%	15.00%	16.25%
Sales on Credit %	100.00%	100.00%	100.00%
Other	0	0	0

## 7.2 Key Financial Indicators

The following benchmark chart indicates our key financial indicators for the first three years. We foresee modest growth in sales and a marginal reduction in operating expenses for the years presented.

**Table A.2-11 Benchmarks Graph**

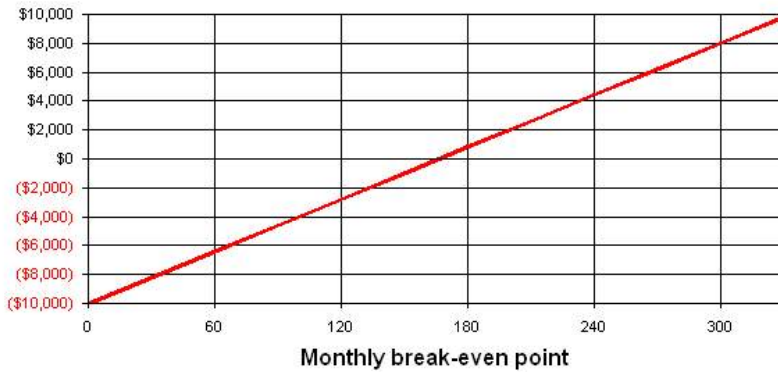


## 7.3 Break-even Analysis

The following table and chart summarize our break-even analysis. With estimated monthly fixed costs of \$6,500, billing targets of \$10,000 per month will cover our costs. We don't really expect to reach break-even until a few months into the business operation.

The break-even assumes unit variable costs at 30 percent of unit revenue. The unit revenue value of \$60/hour is an aggregate measure for all the types of services which will be offered.

**Table A.2-12 Break-even Analysis**



Break-even point = where line intersects with 0

### Break-even Analysis

Break-even Analysis:	
Monthly Units Break-even	167
Monthly Revenue Break-even	\$10,000
Assumptions:	
Average Per-Unit Revenue	\$60.00
Average Per-Unit Variable Cost	\$0.00
Estimated Monthly Fixed Cost	\$10,000

## 7.4 Projected Profit and Loss

The gross margin for a service-based business is a reflection of the efficiency at which those services are offered. In the initial year of operations, we have targeted a gross margin of 70%. This is not an unreasonable figure for a consulting business. For the second and third year of operations, we have targeted gross margins of 75% and 80% to indicate overall improved efficiency at service delivery. Net Profit/Sales is determined to be 7.8% the first year, increasing to 9.8% the second year and 11.0% the third year. In order to fulfill the requirements of the mission statement and simultaneously reduce start up costs, we have made arrangements to purchase software on quarterly repayment options:

- Staad-Pro Core is a structural engineering design and drafting suite offered through Research Engineers Ltd. This program fulfills the need to carry out three-dimensional analysis and design requirements and is a key feature of the business plan. This program supports Canadian codes and standards. We have contacted the authorized Canadian reseller (Detech Corporation Ltd.) and will made arrangements to purchase this tool on four payments of \$1,550 over the first year of operations.
- Errors and Omissions Insurance is required for all consultants working on behalf of the Territorial Governments. Through Falconair Insurance, we have received a quotation of \$1,200/year for this coverage. The first year's premium payments are included in the start-up costs, with subsequent years indicated at the same annual premium.

- Website hosting fees are included as quarterly payments to Internic.com, the Web host. As part of this service, we will have at our disposal file transfer protocol capabilities. This feature permits us to place electronic media on the Internet for our clients and strategic allies.

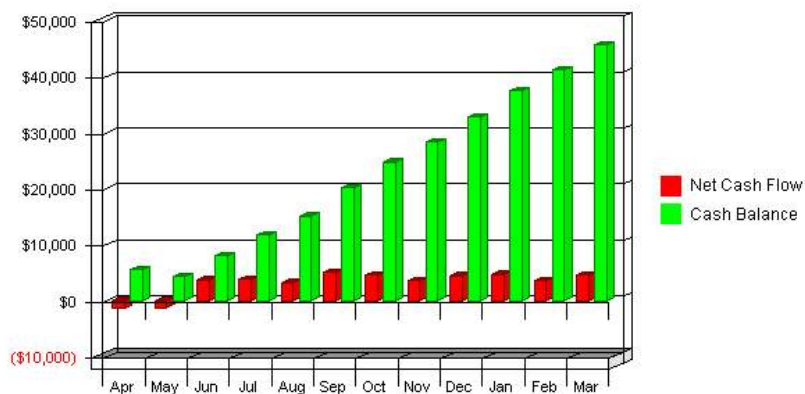
**Table A.2-13 Profit and Loss**

Pro Forma Profit and Loss				
	FY 2000	FY 2001	FY 2002	
Sales	\$117,680	\$129,600	\$138,000	
Direct Cost of Sales	\$35,304	\$32,400	\$27,600	
Other	\$0	\$0	\$0	
	-----	-----	-----	
Total Cost of Sales	\$35,304	\$32,400	\$27,600	
Gross Margin	\$82,376	\$97,200	\$110,400	
Gross Margin %	70.00%	75.00%	80.00%	
Expenses:				
Payroll	\$0	\$0	\$0	
Sales and Marketing and Other Expenses	\$9,450	\$9,750	\$9,750	
Depreciation	\$1,800	\$1,800	\$1,800	
WebSite Hosting Fees	\$380	\$380	\$380	
Telephone/Fax	\$2,400	\$2,400	\$2,400	
Software Purchases (Staad-Pro Core)	\$6,200	\$300	\$300	
Utilities	\$1,200	\$1,200	\$1,200	
Errors and Omissions Insurance	\$0	\$1,200	\$1,200	
Rent	\$0	\$4,800	\$4,800	
Payroll Taxes	\$7,500	\$9,000	\$10,500	
Other	\$0	\$0	\$0	
	-----	-----	-----	
Total Operating Expenses	\$28,930	\$30,830	\$32,330	
Profit Before Interest and Taxes	\$53,446	\$66,370	\$78,070	
Interest Expense	\$179	\$495	\$830	
Taxes Incurred	\$8,319	\$9,881	\$12,552	
Net Profit	\$44,949	\$55,994	\$64,689	
Net Profit/Sales	38.20%	43.21%	46.88%	

## 7.5 Projected Cash Flow

Cash flow projections are critical to our success. The monthly cash flow is shown in the illustration, with one bar representing the cash flow per month, and the other the monthly balance. The first few months are critical. It may be necessary to inject additional capital in this time-frame if the need arises. The annual cash flow figures are included here and the more important detailed monthly numbers are included in the appendices.

**Table A.2-14 Cash Flow Graph**



**Table A.2-15 Cash Flow**

Pro Forma Cash Flow			
	FY 2000	FY 2001	FY 2002
Cash Received			
Cash from Operations:			
Cash Sales	\$0	\$0	\$0
Cash from Receivables	\$102,661	\$128,079	\$136,928
Subtotal Cash from Operations	\$102,661	\$128,079	\$136,928
Additional Cash Received			
Sales Tax, VAT, HST/GST Received	\$0	\$0	\$0
New Current Borrowing	\$0	\$0	\$0
New Other Liabilities (interest-free)	\$0	\$0	\$0
New Long-term Liabilities	\$3,300	\$3,300	\$3,400
Sales of Other Current Assets	\$0	\$0	\$0
Sales of Long-term Assets	\$0	\$0	\$0
New Investment Received	\$0	\$0	\$0
Subtotal Cash Received	\$105,961	\$131,379	\$140,328
Expenditures	FY 2000	FY 2001	FY 2002
Expenditures from Operations:			
Cash Spending	\$5,673	\$5,516	\$5,112
Payment of Accounts Payable	\$61,581	\$66,393	\$66,661
Subtotal Spent on Operations	\$67,254	\$71,908	\$71,773
Additional Cash Spent			
Sales Tax, VAT, HST/GST Paid Out	\$0	\$0	\$0
Principal Repayment of Current Borrowing	\$0	\$0	\$0
Other Liabilities Principal Repayment	\$0	\$0	\$0
Long-term Liabilities Principal Repayment	\$0	\$0	\$0
Purchase Other Current Assets	\$0	\$0	\$0
Purchase Long-term Assets	\$0	\$0	\$0
Dividends	\$0	\$0	\$0
Subtotal Cash Spent	\$67,254	\$71,908	\$71,773
Net Cash Flow	\$38,707	\$59,471	\$68,555
Cash Balance	\$45,707	\$105,178	\$173,733

## 7.6 Projected Balance Sheet

The balance sheet in the following table shows managed but sufficient growth of net worth and a sufficiently healthy financial position. The monthly estimates are included in the appendices.

**Table A.2-16 Balance Sheet**

Pro Forma Balance Sheet			
<b>Assets</b>			
<b>Current Assets</b>	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY 2002</b>
Cash	\$45,707	\$105,178	\$173,733
Accounts Receivable	\$15,019	\$16,540	\$17,612
Other Current Assets	\$0	\$0	\$0
<b>Total Current Assets</b>	<b>\$60,726</b>	<b>\$121,718</b>	<b>\$191,345</b>
<b>Long-term Assets</b>			
Long-term Assets	\$0	\$0	\$0
Accumulated Depreciation	\$1,800	\$3,600	\$5,400
<b>Total Long-term Assets</b>	<b>(\$1,800)</b>	<b>(\$3,600)</b>	<b>(\$5,400)</b>
<b>Total Assets</b>	<b>\$58,926</b>	<b>\$118,118</b>	<b>\$185,945</b>
<b>Liabilities and Capital</b>			
<b>Current Liabilities</b>	<b>FY 2000</b>	<b>FY 2001</b>	<b>FY 2002</b>
Accounts Payable	\$3,677	\$3,575	\$3,314
Current Borrowing	\$0	\$0	\$0
Other Current Liabilities	\$0	\$0	\$0
<b>Subtotal Current Liabilities</b>	<b>\$3,677</b>	<b>\$3,575</b>	<b>\$3,314</b>
<b>Long-term Liabilities</b>	<b>\$3,300</b>	<b>\$6,600</b>	<b>\$10,000</b>
<b>Total Liabilities</b>	<b>\$6,977</b>	<b>\$10,175</b>	<b>\$13,314</b>
<b>Paid-in Capital</b>	<b>\$20,000</b>	<b>\$20,000</b>	<b>\$20,000</b>
<b>Retained Earnings</b>	<b>(\$13,000)</b>	<b>\$31,949</b>	<b>\$87,942</b>
<b>Earnings</b>	<b>\$44,949</b>	<b>\$55,994</b>	<b>\$64,689</b>
<b>Total Capital</b>	<b>\$51,949</b>	<b>\$107,942</b>	<b>\$172,631</b>
<b>Total Liabilities and Capital</b>	<b>\$58,926</b>	<b>\$118,118</b>	<b>\$185,945</b>
<b>Net Worth</b>	<b>\$51,949</b>	<b>\$107,942</b>	<b>\$172,631</b>

## 7.7 Business Ratios

Business ratios for the years of this plan are shown below. Industry profile ratios based on the Standard Industrial Classification (SIC) code 8711, Engineering Services, are shown for comparison.

**Table A.2-17 Ratios Analysis**

Ratio Analysis				
	FY 2000	FY 2001	FY 2002	Industry Profile
Sales Growth	0.00%	10.13%	6.48%	7.10%
<b>Percent of Total Assets</b>				
Accounts Receivable	25.49%	14.00%	9.47%	35.40%
Inventory	0.00%	0.00%	0.00%	3.70%
Other Current Assets	0.00%	0.00%	0.00%	38.30%
Total Current Assets	103.05%	103.05%	102.90%	77.40%
Long-term Assets	-3.05%	-3.05%	-2.90%	22.60%
Total Assets	100.00%	100.00%	100.00%	100.00%
Current Liabilities	6.24%	3.03%	1.78%	44.50%
Long-term Liabilities	5.60%	5.59%	5.38%	11.70%
Total Liabilities	11.84%	8.61%	7.16%	56.20%
Net Worth	88.16%	91.39%	92.84%	43.80%
<b>Percent of Sales</b>				
Sales	100.00%	100.00%	100.00%	100.00%
Gross Margin	70.00%	75.00%	80.00%	0.00%
Selling, General & Administrative Expenses	62.22%	65.24%	69.07%	81.80%
Advertising Expenses	0.51%	0.58%	0.54%	0.20%
Profit Before Interest and Taxes	45.42%	51.21%	56.57%	2.50%
<b>Main Ratios</b>				
Current	16.51	34.04	57.74	1.69
Quick	16.51	34.04	57.74	1.37
Total Debt to Total Assets	11.84%	8.61%	7.16%	56.20%
Pre-tax Return on Net Worth	102.54%	61.03%	44.74%	6.00%
Pre-tax Return on Assets	90.40%	55.77%	41.54%	13.60%
<b>Additional Ratios</b>				
	FY 2000	FY 2001	FY 2002	

Net Profit Margin	38.20%	43.21%	46.88%	n.a
Return on Equity	86.53%	51.87%	37.47%	n.a

Activity Ratios				
Accounts Receivable Turnover	7.84	7.84	7.84	n.a
Collection Days	43	44	45	n.a
Inventory Turnover	0.00	0.00	0.00	n.a
Accounts Payable Turnover	17.75	18.54	20.04	n.a
Payment Days	21	20	19	n.a
Total Asset Turnover	2.00	1.10	0.74	n.a

Debt Ratios				
Debt to Net Worth	0.13	0.09	0.08	n.a
Current Liab. to Liab.	0.53	0.35	0.25	n.a

Liquidity Ratios				
Net Working Capital	\$57,049	\$118,142	\$188,031	n.a
Interest Coverage	299.00	134.08	94.06	n.a

Additional Ratios				
Assets to Sales	0.50	0.91	1.35	n.a
Current Debt/Total Assets	6%	3%	2%	n.a
Acid Test	12.43	29.42	52.43	n.a
Sales/Net Worth	2.27	1.20	0.80	n.a
Dividend Payout	0.00	0.00	0.00	n.a