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Preliminary urban land use planning

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PRELIMINARY URBAN LAND USE PLANNING

An independent research project submitted
in partial fulfillment of the requirements
for the MBA degree

by

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January 10, 1986

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ABSTRACT

The purpose of this report is to create a primer of basic real estate development principles and practices pertaining to preliminary urban land use planning. The report is directed toward the decision maker who is oftentimes not a sophisticated real estate professional. Normally, the decision maker is the owner of the property or a small developer who selects the land use based upon his limited experience.

A methodology is developed for performing a preliminary site plan analysis, and rules of thumb for development are embodied in a use compatibility analysis to aid the decision maker in selecting the feasible alternatives to be tested by market analysis and financial analysis. An overview of market analysis and financial analysis is presented with the idea that a professional should be employed at this stage to verify the decision maker's alternative selection.

Finally, there is a discussion of the development process and the various professionals employed in the process. It is anticipated that this paper will help the decision maker formulate better plans for development which in turn should reduce his cost and increase his probability of success.

A case study involving an actual tract of raw land is included as a real life example of the detailed development team process. All steps are followed, and a best use decision is made for the site.

INTRODUCTION

Four perspectives of real estate analysis and decision making are:

1. An investor seeking an investment in real estate.
2. A real estate investment seeking an investor or buyer.
3. A use in search of a location.
4. A location in search of a use.

This paper will focus on the last of these perspectives. What is the highest and best use of raw land? What is the logical sequence that should be followed to arrive at an answer to this question? Which land use will maximize the return to the owner of the land?

Several factors make the question of how to use a piece of land the most complicated real estate decision. First, the large number of available alternatives makes selecting the best use a complex problem. Second, the real estate market is inefficient due to the heterogeneity of the product. Finally, real estate is a dynamic market. An appropriate decision today might be inappropriate tomorrow because predicting the future competition for a particular use is difficult.

The complexity of selecting the best use for a site

is not understood by many land owners and developers. Intuition and personal preference often weigh heavily in the decision-making process. Many alternatives are never considered, or worse, the wrong alternative is chosen. Many real estate failures are the result of a "knee-jerk" decision made by an entrepreneur because he saw a "good-looking project" in another city.

To increase the probability of a project's success, a developer needs to understand two major areas: the project development team process and the feasibility study.

PROJECT DEVELOPMENT TEAM

The site development team is a composite of many different professionals. The team can have many configurations, but a typical project team will be comprised of the following:

land developer/land owner
landscape architect/ land planner
site engineer
soils engineer
lending institution
marketing consultant
real estate agent
architect

The roles played by each member vary slightly from project to project; however, the following definitions are typical ones for each member.

The land developer/ land owner is usually the hub of the wheel that ties the project together. The level of sophistication varies from the seasoned veteran to the little old lady who inherited some land. It is the role of the developer or the land owner, however, to start the process and either appoint one of the other members as his agent to manage the project or to manage the process himself. Generally, the first step is to hire a land planner.

The landscape architect/land planner usually does the preliminary site analysis and land planning. The original

land plan takes the form of "bubble" diagrams on sketch paper showing several different use alternatives for the site.

The site engineer is hired to do topographical and boundary survey work. A site plan showing the topography, boundaries, sewer and water lines, and utility easements is then given to the landscape architect to aid him in his land planning. The site engineer can also provide site work estimates to aid in the financial analysis.

Later the site engineer will detail the sewer and water lines, drainage plans, and grading plans that are to be followed by the sitework contractor.

A soils engineer is used to do soils testing. Samples of the site's soils are tested to see if any undercutting is required in order to support the buildings planned for the site. The soils engineer will determine the extent of any rock excavation that might be required.

A lending institution has someone on its staff who has some impact on projects of any size. The lender must also hire an independent appraiser who will verify the amount of any loan requested by the developer.

The marketing consultant's role may be filled by an independent consultant, by a real estate appraisal firm, or by the real estate agent. The role of the marketing

consultant is to provide a market analysis to be used in the financial analysis.

The marketing consultant is especially helpful in cases where rezoning is required. For example, a statement of need analysis showing that the use is required by the surrounding community could make a valid case for rezoning.

The real estate agent is usually the leasing agent or in some cases the sales agent. His input can be helpful in avoiding errors he has observed in previous land plans. For example, a real estate agent should be knowledgeable about bay widths in the unloading areas of a shopping center. He can recommend the addition or deletion of garages in a townhouse project based on the past requirements and wishes of buyers. While his input is valuable, it should not take the place of market research to decide key issues of land use.

The architect takes the footprint given to him by the land planner and creates the vertical building structure. Oftentimes, the architect is the last member of the team involved in the project. Before the architect starts work, a firm set of guidelines should be developed which tells the architect as much detailed information as possible. An architectural program specifing such information as the number of bathrooms needed, storage area sizes, column

spacing for merchandise display, bay widths, electrical outlet requirements, and typical furnishings should aid the architect in his drawings.

Through an understanding of the entire development process, the developer can carry out his responsibility of coordinating the work of the entire development team.

SITE DEVELOPMENT PROCESS

Land planning is done in stages or phases. The three stages of land plan development are the preliminary phase, the development phase, and the working drawing phase. The development phase and the working drawing phase are those in which the ideas outlined by the development team are put into hard line drawings to be followed by the sitework and building contractors. Any competent land planner and architect can produce satisfactory working drawings. The key to successful development, however, lies in the preliminary land planning phase.

Phase I Preliminary Land Planning

Step No.	Action Required	Action By
1.	Hire site engineer	Developer
2.	Prepare plat and topographical survey of site	Site engineer
3.	Obtain aerial photographs showing 1 mile radius around site Obtain zoning, utility and traffic information from the municipal planning department Obtain census tract data from the library for tracts within three miles of the site.	Developer
4.	Prepare a site analysis form (Exhibit A)	Developer
5.	Prepare a use compatibility analysis form (Exhibit B)	Developer
6.	Form a hypothesis for the general land use category, i.e. residential, retail, office, industrial, or other.	Developer
7.	Hire a land planner	Developer

8.	Prepare preliminary land use plans showing natural attributes and problems of the site. Confirm the use hypothesis.	Land planner
9.	Hire a marketing consultant	Developer
10.	Prepare a market analysis. Confirm the use hypothesis.	Marketing consultant
11.	Contact lender and real estate agent.	Developer
12.	Hold a development team meeting: land developer, land planner, marketing consultant, real estate agent, lending institution. Brainstorm session is to determine project specifics, i.e. no. of stories, no. of square feet, phasing, timing, architectural type, etc.	Team
13.	Prepare a feasibility study. Confirm the use hypothesis.	Marketing consultant

The preparation of development drawings is expensive; therefore, a market analysis and a feasibility analysis should be completed before continuing to Phase II.

Phase II Development Planning

Step No.	Action Required	Action By
1.	Prepare site plan development drawings showing: parking, setbacks, screening, building footprint.	Land planner
2.	Apply for zoning	Developer
3.	Receive zoning approval	Municipality
4.	Hire architect	Developer
5.	Write architectual program	Developer
6.	Complete building plan development drawings	Architect
7.	Hold development team meeting to approve development plans	Team

After development drawings have been completed, it is customary to involve the lending institution, the marketing consultant, the real estate agent, and the architect. If a major tenant is to be involved, it is time to get their input also. Every member of the team should approve the development drawings before working drawings begin.

Phase III Working Drawings

Step No.	Action Required	Action By
1.	Prepare final working drawings for building	Architect
2.	Prepare final working drawings for sitework	Site engineer
3.	Send drawings to bank for appraisal Send drawings to sitework contractor Send drawings to building contractor	Developer
4.	Obtain bids from sitework contractor and building contractor	Developer
5.	Start preleasing or sales promotion	Real estate agent
6.	Make loan application	Developer
7.	Obtain appraisal and make loan application	Lender
8.	Confirm feasibility study with actual financing and construction commitments	Developer
9.	Break ground	Developer

FEASIBILITY STUDY

The developer's success is determined by his ability to perform in two areas. First, he must be able to coordinate a team of experts toward a common goal. Secondly, he must be able to initialize an idea for the project and then decide on the form of the final product. The development of an idea into a final land use decision is a process of forming a hypothesis and then proving it or disproving it through the use of a feasibility study.

A feasibility study looks at the entire development process. It combines the market study with the cost of development. It examines the development cost, time element, equity requirements, financing, zoning, and site characteristics. It is a total package that lays out the details of the project based upon a specific use. The feasibility study includes four levels of analysis. These are:

1. Location analysis
2. Use compatibility analysis
3. Market analysis
4. Financial analysis

The location analysis takes into account the specific attributes of the site. Information about the size, shape, topography, and zoning for the particular site are gathered and categorized. The use compatibility analysis narrows the list of potential alternatives available.

The market analysis estimates the market gap for each alternative use. The uses with the widest gaps and with the ability to pay the highest prices for the land are likely to be selected. The market analysis further narrows the list of alternatives available.

The financial analysis compares each remaining alternative according to specific criteria. The use that has the highest value, that is compatible with the site and the market analysis, and that meets the needs and desires of the owner or land developer is the highest and best feasible use.

LOCATION ANALYSIS

The process of determining the best use for a site is inductive. It must begin with the specifics of the site, not the market. (Grissom, 1984). The physical attributes of the property are the most constraining because they are the least changeable. Six basic resources for site information are:

1. On-site tour: This should be the first step in site analysis to get an idea of the lay of the land. Pictures should be taken.
2. Site topographic survey: This should be obtained from a local engineer.
3. Aerial photographs: These can be obtained from the municipality, or services are usually available. Contact local airport. The photograph should be large enough to show a three mile radius of the site and should be less than six months old.
4. Municipal planning department: Contact for zoning information.
5. Municipal engineering department: Contact for utility and future plans on roads.
6. Census tract data: This may be obtained from public library. See 1980 Census of Population and Housing, U.S. Department of Commerce, Bureau of the Census.

On-site tour

1. Vacant or improved: Note any improvements that may have to be demolished. For example, old barns, fences, even trash piles are costly to remove.
2. Vegetation: Note size and type of trees. Wooded land is favorable for residential use but unfavorable for commercial and industrial development.

3. Rock outcropping: This could portend the need for detailed soil analysis. Rock is detrimental to site grading, drainage, and utilities.

4. Drainage problems: Low lying land must be undercut, and suitable material must be brought in. Bringing in fill from off-site can be extremely expensive.

5. Noise level: Obtain a general impression of the noise at the site.

6. Quality of the surrounding neighborhoods: In what phase of the life cycle are they?

Site topographic survey

1. Topography: What is the percentage of slope across the site? Is the site above or below the road surface?

2. Size and dimensions of the site: Record the acreage, width, and depth of the site. Also what is the road frontage?

3. Easements: Are there any easements which could prevent full use of the site?

Municipal planning department

Zoning: What is the present zoning and is any new zoning planned by the municipality of the site? What are the chances of getting the zoning changed? Have the surrounding neighbors been opposed to zoning changes lately?

Municipal engineering department

1. Accessibility: Where will any new curb cuts be allowed? Are there any traffic signals planned?

2. Soil quality: Many engineering departments have soil reports for the area. Does soil drain well;

is there rock present; what is the soil bearing capacity?

3. Traffic: What is the traffic count on the access roads adjacent to the property?
4. Utilities: Where is the closest sewer and water? What does it cost to extend utilities to the site?
5. Requirements for development: Are any deceleration lanes going to be required for the site?

Census tract data for the surrounding neighborhoods:

1. Number of persons per household.
2. Mean income per household.

Aerial photograph

1. Population within 1,2, and 3 mile radius: This should be obtained by counting the number of houses and multiplying this times the number of persons per household to yield population figures.
2. Record distances from site to other uses: See Site Analysis Form for a list of the pertinent uses. A city map might also be helpful here.

The following form is presented to aid in organizing information gathered during the site analysis.

EXHIBIT A

SITE ANALYSIS FORM

1. Vacant or improved

2. Vegetation

3. Rock outcroppings

4. Drainage Problems

5. Noise

6. Quality of Surrounding Neighborhoods

7. Topography: _____ drop per 100'

   Ft. above road_____ ft. below road _____

   Side to side slope _____ Front to Back _____

8. Size: Ft. Road frontage _____ Depth of site _____

9. Easements:

10. Zoning: Present: _____ Proposed _____

    Probablility of up zoning _____%

11. Accessibility

12. Soils: Rock present_____ Soil bearing _____

    Percolation _____

13. Traffic: Cars per day main road _____

    Cars per day side road _____

14. Utilities: Water
    Sewer
    Gas
    Power
    Railraod

15. Off site improvements required.

EXHIBIT A (continued)

16. Population:

_____Houses w/i 1 mile radius X _____ persons/house = _____

_____Houses w/i 2 mile radius X _____ " " = _____

_____Houses w/i 3 mile radius X _____ " " = _____

17. Mean average income within 1 mile radius _____

18. Distance from site to:

Elementary school	_____	miles	_____	minutes
Middle School	_____		_____	
High School	_____		_____	
Grocery Store	_____		_____	
Convenience Store	_____		_____	
Department Store	_____		_____	
Downtown Bus. Dist.	_____		_____	
Airport	_____		_____	
Restaurant	_____		_____	
Interstate	_____		_____	
Fire Station	_____		_____	

19. Adjacent Uses:

Present	Proposed
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

20. Real Estate Tax

USE COMPATIBILITY ANALYSIS

After a thorough site analysis, the information gathered can be tabulated as shown on Exhibit B - the Use Compatibility Analysis Form. This form can be used like a filter to sift out the possible alternative uses that are compatibile with the site. There are five major use categories:

--residential
--apartment
--retail
--office
--industrial

Under each use category is a listing of the major criteria that are important in choosing that use. Each use category has two additional columns. One is a maximum rating for each criterion. The ratings are based on the knowledge gained through research of each major use category. The idea is similar to a method used by Larry Smith and Company, Inc. to predict the success of regional shopping centers. (McKeever, p. 311).

To use the form, score each criteria for each use using the maximum rating as a guide. For example, if the site had a land cost of $20,000 per acre, the score under residential use would be 0, but the score under office use would be 5.

In order for a use to be selected as a possible alternative, it should have a total score of at least 70. (Maximum rating total is 100 for each use category.) If none of the use categories scores at least a 70, perhaps development should be delayed or a non-conventional use should be explored.

EXHIBIT B USE COMPATIBILITY ANALYSIS

PARAMETERS	SITE ANALYSIS	RESIDENTIAL USE		APARTMENT USE		RETAIL USE		OFFICE USE		INDUSTRIAL USE	
		Requirements	Score	Requirements	Score	Requirements	Score	Requirements	Score	Requirements	Score
ZONING		Residential	5	Multifamily	15	Retail	5	Office	10	Industrial	20
LAND COST		$8K /AC	15	$10K/AC	10	$35K /AC	5	$25 K /AC	5	$25K/AC	10
ACCESSIBILITY		Good	5	Good	5	Excellent	5	Good	5	Good	5
TOPOGRAPHY		20% max	5	35% max	5	10% max	5	10% max	5	5% max	5
TRAFFIC VOLUME						15,000CPD	10	15,000CPD	5		
POPULATION 1 mi radius						6,000	35	6,000	5		
POPULATION 2 mi radius						12,000	10				
POPULATION 3 mi radius						20,000	5				
ACREAGE		1 - 40 AC	5	10-40 AC	5	1-80 AC		1-10AC		5-100AC	
ROAD FRONTAGE						YES	10	YES	10		
CORNER SITE						YES	5				
UTILITIES PRESENT		YES	5	YES	10	YES	5	YES	5	YES	13
COMPETITION				5% Vacancy	5	WEAK	5	5% Vacancy	10	Govt aid	20
NEIGHBOR COMPATIBILITY		YES	10	YES	5			YES	5	YES	5
DISTANCE TO:											
Schools		2 1/2 mi.	10	2 1/2mi.	5						
Convenience Store		3/4 mi.	10	3/4 mi.	10			3/4 mi.	5		
Grocery Store		2 mi.	10	1 mi.	10						
Department Store		4 mi.	5	4 mi.	5						
Downtown/Employment		30 min.	10	20 min.	10			15 min.	5		
Airport								40 min.	10	20 mi	5
Restaurant								1/2 mi.	10		
Interstate								10 min.	5	1 mi.	5
Fire Station		2 miles	5								
Rail Line										On Site	5
		TOTAL SCORE		TOTAL SCORE		TOTAL SCORE		TOTAL SCORE		TOTAL SCORE	

MARKET ANALYSIS

The third phase in the process is market analysis which involves reducing market data to factors that are relevant to a specific site and the specific possible land uses that fit the site. (Grissom, 1984). The market analysis should follow a thorough site analysis which sets out the physical limitations of the site. The knowledge in the site analysis is then filtered through the use compatibility analysis to produce the best possible alternatives. After the best alternatives are selected, a market study can be targeted toward these specific uses. The information gathered can be tailored to the compatible uses.

A professional marketing consultant should be hired to perform the market study unless the developer has expertise in this field. A thorough discussion of a marketing analysis is beyond the scope of this report.

An outline of information to be gathered for each use is as follows: (Freedman, p.355).

A. Housing Marketing Analysis Outline

1. Get a total number for building permits for the last five years.
2. Determine the population growth during the last five years.
3. Obtain population growth projection for the next five years.

4. Derive the median value of the houses in the area from housing census. Note the contract rent, occupancy, year built, and condition.

5. Complete a competition analysis:
   a. Types of housing being developed
   b. Price ranges of competition
   c. Economic characteristics of buyers
   d. Areas of new growth

6. Compare the surrounding neighborhoods with the general housing in the city.

7. Create a product positioning map using price range as the horizontal axis and lot size as the vertical axis. Plot competition (both existing and future) on the map. Look for possible market gaps.

8. From market gaps, select appropriate lot size, house style, and price ranges.

9. Estimate buyer income level from mortgage data.

10. Estimate annual absoption rate for market. Using an estimated capture rate, predict the annual volume.

11. Compare annual sales forecast including a buyer profile and amenities expected.

B. Apartment Market Analysis Outline

1. Obtain rent levels for apartments by size and quality.

2. Record occupancy levels for apartments by size and quality.

3. Observe recent trends in apartment construction. Note type of building and size of unit.

4. Create a product positioning map using rental cost as the horizontal axis and number of bedrooms as the vertical axis. Plot competition (both existing and future). Look for market gaps.

5. Select an appropriate rental range and apartment size.

6. Estimate the number of renters using income levels

7. Estimate annual absorption rate using an estimated capture rate.

8. Compile rentals expected.

C. Retail and Service Market Analysis Outline

1. Using a new aerial photograph, outline a tentative trading area, usually 1, 2, and 3 mile concentric circles. (McKheever, p. 290).

2. Inventory possible competition in the trading area denoting it with colored dots. Physically count the number of households within the trading area.

3. Consult census data and tabulate the number of persons per household and income per capita.

4. Contact key tenants.

(For a more detailed market discussion of Market Analysis, see McKeever, pp. 287 - 297.)

D. Office Market Analysis Outline

"The best market analysis for an office building is a signed lease." (Dave Whittaker, 1985).

1. Survey existing office buildings. Find inventory of available space and rent levels.

2. Classify existing office space by type and quality.

   Class A - high visibility, high quality building materials, landscaping, good architectural style. Less than ten years old.

   Class B - visible, but off main road. Good quality materials, usually residential architectural styling. Less than ten years old.

   Class C - frame structure. Low visibility, one story, boxy, amateurish detailing, low exterior maintenance.

3. Create a product positioning map with the rent per square foot on the horizontal axis and the class of office on the vertical axis for favorable office space. Look for possible market gaps.

4. From market gaps select target market based upon rent per square foot and class of office needed

5. Project future demand based upon:
   a. estimate of future employment growth
   b. space required due to obsolesence of old space

6. Segment market to determine percentage of market that falls into the selected target market.

7. Estimate capture rate.

8. Estimate the number of square feet of office space that can be consumed at the site.

NOTE: Don't neglect offices required for services in residential areas. For example, banks, insurance companies, real estate agents, doctors, and dentists require space in

outlying areas close to customer base. These services and professionals become a hybrid market between the retail and the office space market.

E. Industrial Market Analysis Outline

1. Gather historic employment data and employment projections.
2. List major industries in the SMSA, and from this compile a list of the types of industries suitable for the community.
3. On a map of the area, denote the amount of land available and the location of the industrial land. Don't neglect zoned land/planned industrial districts, and even unzoned land that may be suitable fro development because of rail access and flat topography.
4. Gather land sales price information for other sites.
5. Create a product positioning map using the acreages available for sale (lot sizes) and sales price to see if any market gaps exist.
6. Select target market, i. e. large industry paying $30,000 per acre or small plant needing only two acres but willing to pay $50,000 per acre.
7. Estimate annual absorption for the target market selected showing general lot sizes and price per acre.
8. Make a list of types of potential tenants.

NOTE: Don't overlook the competition of local governments that can offer special tax incentives for businesses to locate in their industrial parks.

F. Hotel - Motel Market Analysis Outline

1. Make an inventory of accomodations in the area. Record rental rates.
2. Ascertain the general occupancy levels.
3. List generators of business travel in the vicinity:
   a. industrial plants
   b. government facilities
   c. deneral office complexes
   d. don't neglect pleasure travelers, if appropriate
4. Create a product positioning map with rental charges on the horizontal axis and types of accomodations on the vertical axis. Determine market gaps.
5. Select target market. Denote type of accomodation and rental range.
6. Estimate number of additional rooms of this type needed by the area.
7. Estimate capture rate.
8. Estimate number of rooms required at the site.

After a thorough market analysis is completed, it is suggested that a review session be held to fine tune the marketing information. The review session should include the following:

land developer

land planner

leasing or sales agent

major lender

The product of this meeting should be a detailed program for the site. For example, if the use were to be for apartments, then the program would include:

the number of stories

townhouses or flats

number of bedrooms or mix of units

parking

phasing, etc.

The inforamtion could then be used to perform a financial analysis for the project.

FINANCIAL ANALYSIS

The goal of financial analysis is to determine the feasibility of the project. The developer should determine via a marketing study the supply of space required and the price the market will bear for the space provided. Then he should work backwards to determine the capital budget and the amount that can be paid for the land. This is known as the back door approach or debt cover ratio approach. Many projects have failed because project design specifications have determined the cost to the consumer rather than designing a project to meet consumers' needs. (Grasskamp, 1981).

A simple example of the back door approach is shown on Exhibit C.

EXHIBIT C

EXAMPLE: DEBT COVER RATIO APPROACH FOR INCOME PROPERTIES

ASSUME:

1. Market study indicates: A gross leasable area of 27,000
   Market rental rate $9.25/S.F. GLA
   (Total building = 27,200 Gla X 1.17 = 32,000 S.F.)
2. 5% Vacancy rate
3. Operating expenses = $2.50/S.F. or $80,000
4. Real estate taxes = $1.00/S.F. or $32,000
5. Replacements fund = $1,000/year
6. Debt coverage rate required by lender 1.2
7. Loan at 11 1/2% for 20 yrs. (Debt service constant .127968)
8. 6% Cash dividend to equity partners
9. Typical building cost $27.80/ S.F.

Cash Disbursements		
Gross rent potential (27,200Gla @ $9.25		$251,600
Less: Vacancy loss (5% X $251,600)	12,600	
Operating expenses	80,000	
Real estate taxes	32,000	
Replacements	1,000	
Subtotal		125,600
Cash available for debt payment		$126,000
Less: Maximum debt payment ÷ cash available / debt cover ratio		105,000
($126,000/ 1.2)		
Cash avilable for equity investors		21,000
Capital Budget		
Justified Mortgage Loan = Debt payment / Constant		820,000
($105,000/.127968)		
Justified Equity investment = Cash Avail. / Dividend rate		350,000
($21,000/ .06)		
Total Capital Budget		$1,170,500
Less: Building costs		889,600
(32,000 X $27.80/S.F.)		
Available for land		$280,900

SUMMARY

Preliminary site analysis is a blend of properly managing a team of professionals and developing reliable detailed estimates of marketing and financial data. Success depends upon the developer or his agents' ability to master the art of managing and forecasting.

Planning and forecasting should follow an orderly sequence. Site analysis should always come first because the physical characteristics of the site are the most constraining. Once a hypothetical land use has been postulated, then marketing analysis should confirm the decision. If not, then a new hypothesis should be formed and that particular market should be analyzed. Financial analysis should then be used to be sure that the land use meets the investor's and the lender's objectives.

Selecting the team members is another key to the project's success. A professional that can bring creative solutions to problems, who can finish his work in the time required, and who can remain sensitive to budget constraints must be sought out by the developer. The team members must be compatible. There must also be respect for the talents of the other

professionals and for the objectives of the developer.

The developer or his agent is the key stone that holds the process together. The following case study will illustrate the process and the analysis procedures by exploring an actual site.

PRELIMINARY LAND USE PLANNING

A CASE STUDY

Doctor Pidgeon, a prominent surgeon, hired Robert Sabre of Sabre Real Estate Consultants to aid him in deciding what to do with a piece of land that had been left to him in his great uncle's will. Pidgeon had been offered $60,000 for the ten acre tract, but he wanted to know if the property would be worth more if he developed it himself. Sabre was to decide what the land use should be, what improvements should be made, and finally, what the residual land value would be.

Sabre proceeded with preliminary land use planning after obtaining the following brief description of the site from Pidgeon.

The property is a rectangular site of about ten acres that lie at the northeast corner of the intersection of Adkins Road and Stroud Road. It has approximately 600 linear feet of frontage on Adkins Road and is 800 feet deep. The land immediately surrounding the site is undeveloped. Stroud Road is a dirt road which serves as access for ten lower class families that reside behind

the site. Adkins Road is a fairly well-traveled secondary road that serves as a collector for several medium-sized middle class subdivisions.

The land had been zoned by Pidgeon's great uncle to a general business zoning classification. A one acre parcel on the southeast corner of the site had been sold to a convenience food store which has been operating there for two years.

On January 2, 1986, Sabre hired J.K. Timid Engineering Company to do a topographical survey of the site and to reset any boundary corners that were missing. He also requested a tree location for six very large oak trees that surround an old home site. Sabre also requested that the engineer planimeter the site to get the exact acreage.

Sabre then visited the county planning office where he met with Bill Poole, the Assistant County Planner. Poole showed Sabre the county zoning maps for the site (Figure 1). The site was surrounded by agriculturally zoned land, but across Adkins Road the land had all been zoned R - 1 residential.

Sabre asked Poole if the property could be up-zoned and if there were any restrictions on the property. Poole

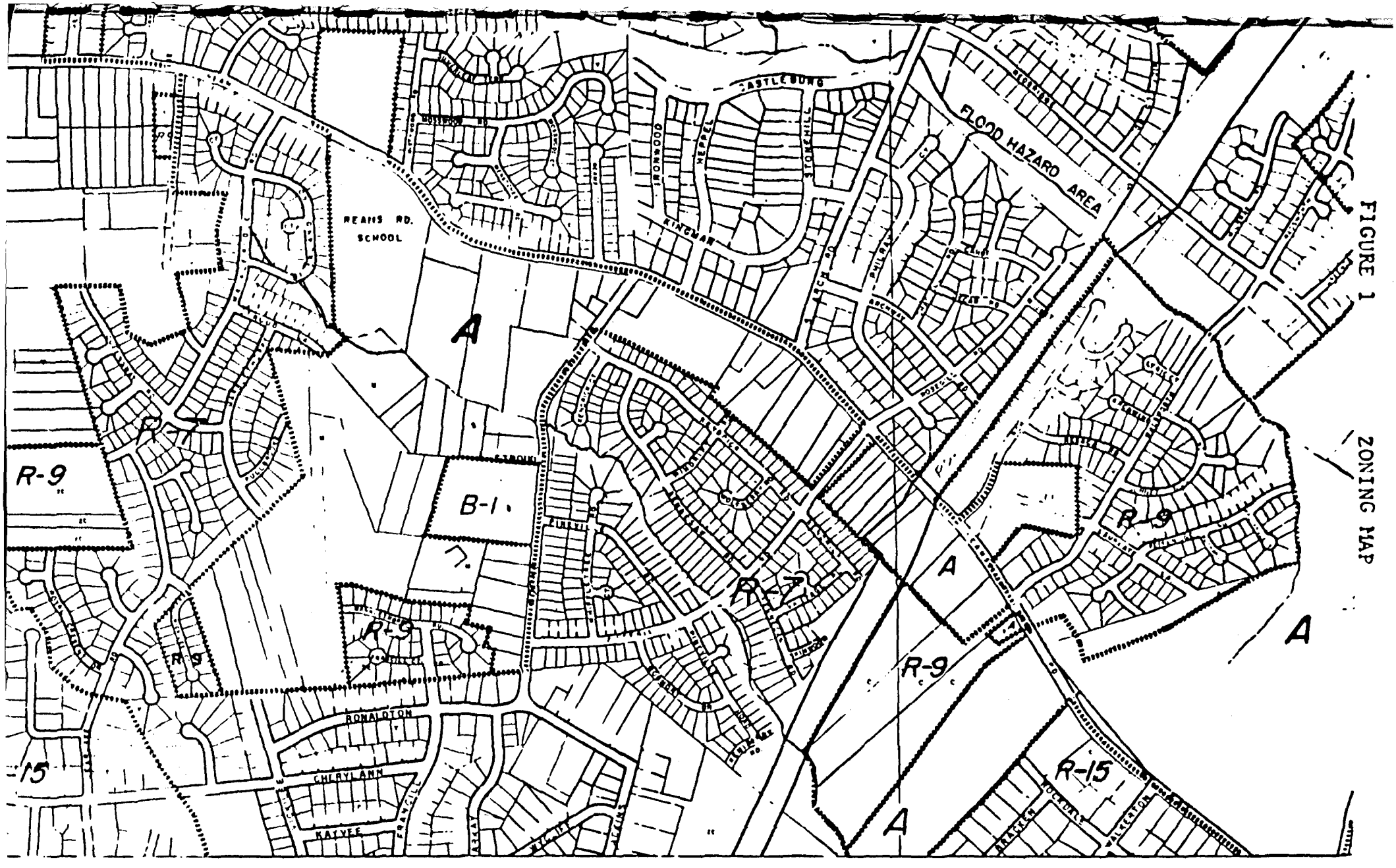


FIGURE 1 ZONING MAP

PLANNING DEPT.

RT. 147 & RT. 6(
DRAINAGE AF

stated that up-zoning would be very difficult because of the surrounding residential neighborhoods. The building setbacks were 30 feet front and rear. The parking setback was 15 feet from the two roads. Screening would be required for any trash yards because of the residential neighborhoods around the site. Poole guessed that the surrounding land now zoned agricultural would be rezoned residential within three years.

Next, Sabre visited Jim Banks in the county transportation department. Jim looked up the state highway department traffic counts that had been made in December, 1984. Southbound on Adkins Road, there were 1921 cars per day, and there were 1655 cars northbound. Banks also stated that there were no immediate plans to improve either Adkins Road or Stroud Road.

Mike Brown, the Assistant County Engineer in the utilities department, told Sabre a 16" water line and a 24" sewer line were located along the front of the property in Adkins Road.

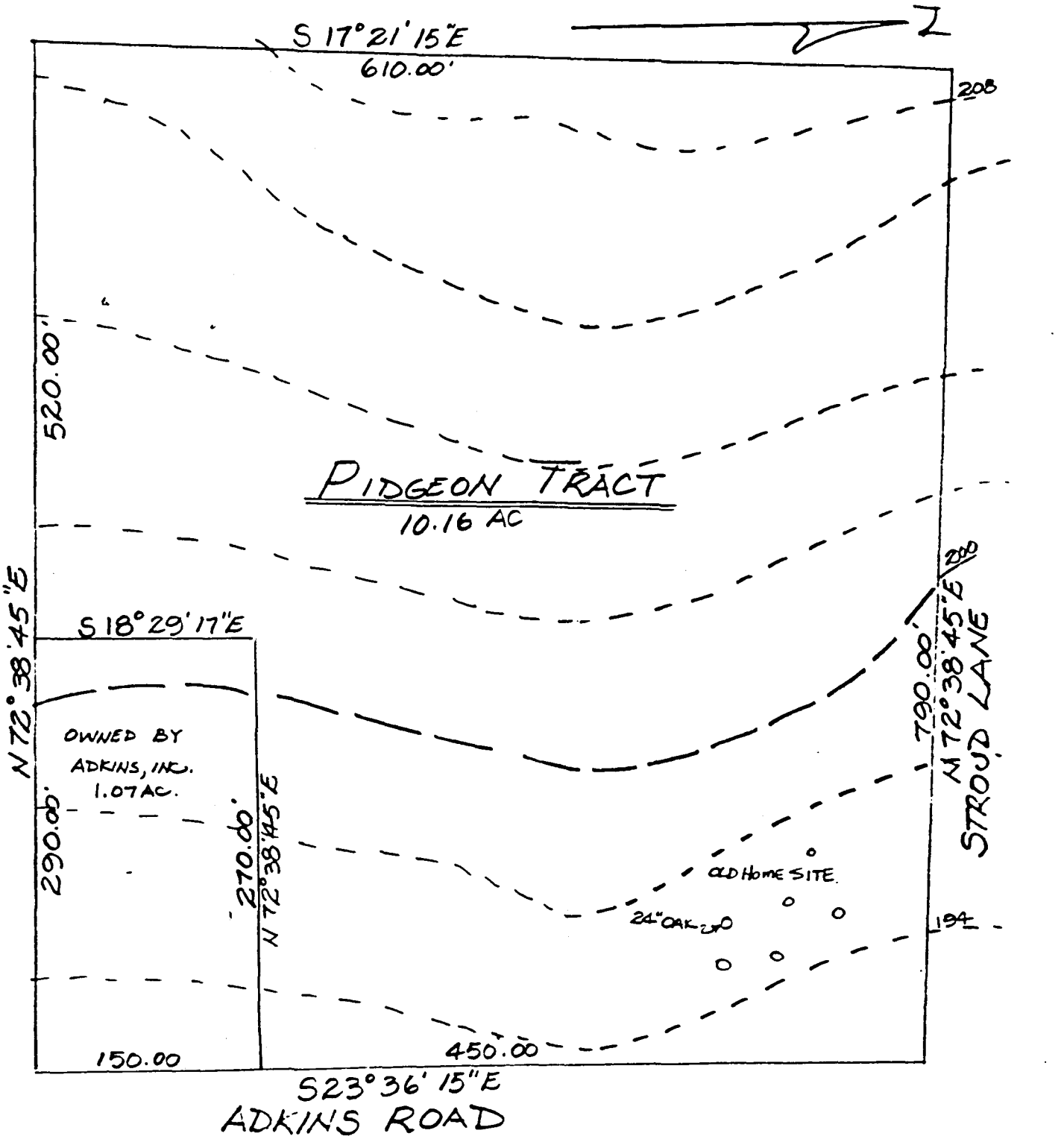
To obtain demographic information, Sabre went to the county library. On a census map he drew two concentric circles - one with a 2 mile radius from the site and one with a 3 mile radius from the site. He then

recorded the identification number of the census tracts within each circle. Next, he made copies of the census information for each tract from the 1980 Census of Population and Housing, U.S.Department of Commerce, Bureau of the Census. He also purchased a booklet from the county titled "The Residential Development Report 1984." The booklet gave information that updated the 1980 Census. It listed the units in place and lots available by subdivision. It also stated the census tract in which the subdivisions were located.

Sabre wanted a very close approximation of the population within a one mile radius; therefore, he hired Steve McDorman to make an aerial photograph of the area around the site.

By mid-January, Sabre had received his topographic survey (Figure 2) and his aerial photograph. His next step was to tour the site so that he could correlate what he saw on the ground to the photograph and the survey. After the site tour, he was ready to prepare his location analysis (Figure 4).

The majority of the information was readily available to him, but he had to calculate his population projections. First, he drew a 1 mile radius



THIS PROPERTY IS NOT WITHIN A HUD DEFINED FLOOD HAZARD AREA

COMMONWEALTH OF VIRGINIA
KENNETH M. COX
CERT. # 1039
K.M. Cox RMLS
CERTIFIED LAND SURVEYOR

This is to certify that on 1-17-86 I made an accurate field survey of the premises shown hereon, that all improvements and easements known or visible are shown hereon, that there are no encroachments by improvements either from adjoining premises or from subject premises upon adjoining premises, other than as shown hereon.

K.M. Cox RMLS

J.K. TIMMID & ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS
711 N. COURTHOUSE RD. RICHMOND, VA.
8803 STAPLES MILL RD. HENRICO CO., VA.
2340 PAGEHURST DRIVE MIDLOTHIAN, VA.
411 E. BROADWAY HOPEWELL, VA.

DATE: 1-17-86 SCALE: 1"=40'
DRAWN BY: MSF
CHECKED BY: WEBB
PREVIOUS JOB NO.
JOB NO. 49421

FIGURE 2

FIGURE 3 POPULATION PROJECTION - UNITS WITHIN 3 MILE

	SUBDIVISION	% IN 3 mi	LOTS RECORDED	EST. NO OF UNITS JAN 1986	NO OF UNITS IN 3 mi RADIUS	% IN 2 mi	NO OF UNITS IN 2 mi RADIUS
09 01	HY-TOR PARK *	100%	210	210	210	80%	168
	STONEHENGE	100%	255	235	235	30%	71
09 04	OLD COACH VILLAGE	20%	386	375	75	-0-	0
09 05	GREENFIELD	90%	439	400	360	0	0
09 08	HERITAGE COMMONS	100%	62	62	62	10%	6
09 09	STUDEBOOK APTS	100	229	219	219	100	219
09 03	POCONO	100	186	180	180	100	180
09 08	AVON PARK	100	45	45	45	100	45
09 05	BON AIR TERRACE	100	245	240	240	0	0
09 06	POINTE VILLAGE APT	100	29	219	219	0	0
09 08	EDGEHILL	100	138	138	138	0	0
01 05	CHATHAM	40	46	46	18	0	0
09 07	BRIGHTON GREEN	100	477	450	450	50	225
09 09	PENN ACRES	100	69	68	68	0	0
02 07	PROVIDENCE GREEN	100	202	200	200	0	0
09 12	BRIARCLIFF *	100	221	221	221	100	221
09 09	TERMS RUN *	100	148	138	138	100	138
09 09	HEATHERIDGE *	100	117	110	110	100	110
09 12	TWINBROOKE *	100	142	136	136	100	136
09 12	FOREST ACRES *	100	170	165	165	100	165
09 10	KINGSWOOD *	100	126	123	123	100	123
09 09	ARCHWAY *	100	162	155	155	100	155
09 12	SPRING HILL *	100	81	80	80	100	80
09 09	SOLAR I	100	224	220	220	100	220
09 10	SHADYMIST	100	100	100	100	100	100
02 08	BEXLEY	100	571	250	250	50	125
02 06	LOCH EDEARNAL	100	151	151	151	100	151
02 06	LAKE GEORGE HAMLET	100	23	23	23	0	0
03 02	FAIRING CREEK	100	112	110	110	0	0
09 11	LAKE GOSTO	100	308	302	302	0	0
09 11	CLARENDON	100	333	280	280	0	0
09 09	SOLAR II	100	124	124	124	100	124
09 11	LOGAN TRACE	9%	27	25	23	0	0
09 11	SMALLTREE	100	524	470	470	50	235
				TOTAL	5,900	TOTAL	2997

* WITHIN 1 MILE RADIUS

EXHIBIT A

PIDGEON PROPERTY

SITE ANALYSIS FORM

1. Vacant or improved - VACANT EXCEPT FOR 1 ACRE OUT PARCEL ON NORTHEAST CORNER
2. Vegetation SMALL OAKS & PINE
3. Rock outcroppings NONE
4. Drainage Problems FAIRLY LOW AREA DOWN MIDDLE OF SITE
5. Noise QUIET. ON SECONDARY STREET RESIDENTIAL NEIGHBORHOOD
6. Quality of Surrounding Neighborhoods < 10 YRS OLD. MIDDLE CLASS
7. Topography: 2'-6" drop per 100'

   Ft. above road 5' ft. below road —

   Side to side slope _____ Front to Back _____
8. Size: Ft. Road frontage 600 LF Depth of site 800' ±
9. Easements: NONE
10. Zoning: Present: B-1 OFFICE & RETAIL Proposed NONE

    Probablility of up zoning 10 %
11. Accessibility GOOD
12. Soils: Rock present SHALE @ 6' DOWN Soil bearing 3000 lb/sf

    Percolation SEWER PRESENT
13. Traffic: Cars per day main road 3800

    Cars per day side road 10
14. Utilities: Water 16" WATER LINE
    Sewer 24" SEWER LINE
    Gas NOT AVAILABLE
    Power ON SITE
    Railraod NOT AVAILABLE
15. Off site improvements required. NONE

EXHIBIT A (continued)

16. Population:

1,256 Houses w/i 1 mile radius X 3.21 persons/house = 403

2,997 Houses w/i 2 mile radius X 3.21 " " = 962

5,900 Houses w/i 3 mile radius X 3.21 " " = 18,9

17. Mean average income within 1 mile radius # 27,577 (1980)

18. Distance from site to:

Elementary school	1/2	miles	3	minutes
Middle School	4		15	
High School	2 1/2		10	
Grocery Store	2		8	
Convenience Store	0		—	
Department Store	2		8	
Downtown Bus. Dist.	12		30	
Airport	20		45	
Restaurant	2		8	
Interstate	10		15	
Fire Station	2		8	
GOLF COURSE	1		5	

19. Adjacent Uses:

Present	Proposed
RESIDENTIAL	
AGRICULTURAL	RESIDENTIAL

20. Real Estate Tax # 0 98/#100 OF ACCESSED VALUE.
ASSESSMENTS RUN ABOUT 95% OF APPRAISED VALUE

FIGURE 5

EXHIBIT B USE COMPATIBILITY ANALYSIS

PARAMETERS	SITE ANALYSIS	RESIDENTIAL USE Requirements	Score		APARTMENT USE Requirements	Score		RETAIL USE Requirements	Score		OFFICE USE Requirements	Score		INDUSTRIAL USE Requirements	Score	
ZONING	B-1 RETAIL & FREE OFFICE	Residential	5	0	Multifamily	15	0	Retail	5	5	Office	10	10	Industrial	20	0
LAND COST	6K/AC	$8K /AC	15	15	$10K/AC	10	10	$35K /AC	5	5	$25 K /AC	5	5	$25K/AC	10	10
ACCESSIBILITY	Good	Good	5	5	Good	5	0	Excellent	5	0	Good	5	3	Good	5	5
TOPOGRAPHY	2% slope	20% max	5	5	35% max	5	5	10% max	5	5	10% max	5	5	5% max	5	5
TRAFFIC VOLUME	3000 CPD							15,000CPD	10	0	15,000CPD	5	0			
POPULATION 1 mi radius	4000							6,000	35	20	6,000	5	1			
POPULATION 2 mi radius	9600							12,000	10	8						
POPULATION 3 mi radius	14,000							20,000	5	4						
ACREAGE	10 AC	1 - 40 AC	5	5	10-40 AC	5	5	1-80 AC			1-10AC			5-100AC		5
ROAD FRONTAGE	600LF							YES	10	10	YES	10	10			
CORNER SITE	Yes							YES	5	3						
UTILITIES PRESENT	Yes	YES	5	5	YES	10	10	YES	5	5	YES	5	5	YES	13	13
COMPETITION	—				5% Vacancy	5	0	WEAK	5	2	5% Vacancy	10	7	Govt aid	20	5
NEIGHBOR COMPATIBILITY	—	YES	10	5	YES	5	0				YES	5	1	YES	5	0
DISTANCE TO:																
Schools	2½ mi	2 1/2 mi.	10	10	2 1/2mi.	5	5									
Convenience Store	- 0 -	3/4 mi.	10	10	3/4 mi.	10	10				3/4 mi.	5	5			
Grocery Store	2 MI	2 mi.	10	10	1 mi.	10	10									
Department Store	2 MI	4 mi.	5	5	4 mi.	5	5									
Downtown/Employment	30 MIN	30 min.	10	10	20 min.	10	5				15 min.	5	1			
Airport	40 MIN										40 min.	10	10	20 mi.	5	0
Restaurant	2 MI										1/2 mi.	10	2			
Interstate	10 MI										10 min.	5	1	1 mi.	5	2
Fire Station	2 MI	2 miles	5	5												
Rail Line	—													On Site	5	0
		TOTAL SCORE		90	TOTAL SCORE		65	TOTAL SCORE		67	TOTAL SCORE		66	TOTAL SCORE		45

on his aerial photograph and physically counted the dwellings he found there. He then used his census information to calculate the population within a 2 and 3 mile radius of the site (Figure 3). After completing his location analysis, he entered the information on a use compatibility analysis form (Figure 5). The scores for each of the major use categories were:

Residential Use	90
Apartment Use	65
Retail Use	67
Office Use	66
Industrial Use	45

This information left Richard in a dilemma. The site would be fine for residential use, but his per acreage yield would be much lower than that for retail or office use. The site was already zoned B-1 which provided for retail or professional offices (See Figure 6 "Chesterfield County Zoning Ordinance," pp. 31 - 33); however, both of these uses had marginal use compatibility scores. Even though the site has a good population within a 1 mile radius, Adkins Road traffic volume is very low, and the site is not visible from the more highly traveled Reams Road. In order for retail or office land use to be successful on the site, the use would have to be one that provided a convenient service

Figure 6 Copied from Chesterfield County Zoning Ordinance

Section 15-4 Uses allowed by Special Exception subject to the provisions of Section 27-5.

(a) Same as specified for R-40 District.

(b) Individual mobile homes for a period not to exceed two years. At the expiration of the two year period a new application may be made for a new Special Exception. The Board of Zoning Appeals may take action on such application without prior notice being published in a newspaper on the date the Board will act on such application and no notice to adjoining landowners shall be required unless directed by the Board of Zoning Appeals.

(c) Billboard signs subject to Section 24.2-5.

Section 15-5 Required conditions:

(1) Percentage of lot coverage. Same as specified for R-15 District.

(2) Front yard. Same as specified for R-15 District.

(3) Side yard. Same as specified for R-15 District.

(4) Corner side yard. Same as specified for R-15 District.

(5) Rear yard. Same as specified for R-15 Distrct. (1/23/74)

ARTICLE 16 (RESERVED)

ARTICLE 17 B-1 CONVENIENCE BUSINESS DISTRICT

Section 17-1 Uses permitted.

Within any B-1 District, no building structure, or premises shall be used or arranged or designed to be used in any part except for one or more of the following uses:

(1) Any permitted use as regulated in the R-40 District except dwellings; provided, however, that any dwellings legally existing in this District at the time of adoption of the Ordinance of any amendment hereto shall not be subject to the restrictions or non-conforming uses contained herein. (1/23/74)

(2) Antique shop
(3) Appliance store
(4) Art school, gallery or museum
(5) Artist material and supply store
(6) Bakery goods
(7) Bank
(8) Barber shop
(9) Beauty shop
(10) Bicycle sales and rental
(11) Book or stationery store

(12) Brokerage
(13) Camera store
(14) Candy store
(15) Catering establishment
(16) Cleaning, pressing and laundry
(17) Clothes store
(18) Curio or gift shop
(19) Drug store
(20) Dry goods store
(21) Dairy products store
(22) Delicatessen
(23) Dress shop
(24) Florist shop, greenhouse, nursery
(25) Frozen food locker and sales
(26) Furniture store
(27) Governmental offices
(28) Grocery store
(29) Hardware store
(30) Hobby store
(31) Hospitals, rest, nursing, convalescent homes
(32) Jewelry store
(33) Laundromats and coin operated dry cleaning
(34) Libraries
(35) Locksmith
(36) Meat market
(37) Medical facility or clinic
(38) Messenger or telegraph service
(39) Museums
(40) Musical instrument sales
(41) Newspaper or magazine sales
(42) Nursery schools, child or day care centers and kindergartens
(43) Offices, business and professional
(44) Office supply store
(45) Optometrists sales and services
(46) Paint and wallpaper sales
(47) Pet shops
(48) Post office
(49) Photography studio
(50) Pharmacy
(51) Radio and television broadcasting studios and offices exclusive of towers
(52) Radio, television and other home entertainment sales and service
(53) Restaurants, not including drive-in establishments
(54) Savings and loan associations
(55) Self-service laundry establishments
(56) Sewing machine sales, instruction, and service
(57) Specialty shops
(58) Sporting goods sales
(59) Shoe repair shop
(60) Tailoring and dressmaking shops
(61) Taxidermy
(62) Telephone booth

(63) Telephone exchanges
(64) Toy store
(65) Variety store
(66) One mobile home for an owner or operator of a business being conducted on the premises subject to a mobile home permit from the Board of Supervisors(6/13/73).
(67) Travel arranging and transportation ticket services (1/23/74)

Section 17-2 Accessory uses allowed.

(1) Accessory uses allowed and as regulated in the R-40 District, unless previously allowed in Section 17-1. (1/23/74)

(2) Other accessory uses, not otherwise prohibited, customarily accessory and incidental to any permitted use.

(3) Signs as regulated in Section 24.2.

(4) One dwelling unit for an owner or operator of the business being conducted on the premises.

Section 17-3 Uses allowed by Conditional Use subject to the provisions of Section 28-2.

(1) Any conditional use as allowed in the R-40 District, unless previously allowed in Section 17-1. (1/23/74)

(2) Jails, prisons, road camps.

(3) Commercial automobile parking (1/23/74)

Section 17-4 Uses allowed by Special Exceptions subject to the provisions of 27-5.

(1) Any special exception allowed in the R-40 District, unless previously alloed in Section 17-1. (1/23/74)

Section 17-5 Required conditions.

(1) In any "B-1" Business District the parking, driveway, and loading facilities shall be at least fifteen feet from any established street right-of-way lines, and the buildings and structures at least thirty (30) feet from such lines, except on rights-of-way of eighty (80) feet or greater the buildings and structures need be set back only twenty-five (25) feet. (See Section 24-7)

(2) Individual stores and shops shall not exceed 12,000 square feet of gross floor area.

(3) Goods may be produced for retail sale on the premises provided not more than five persons are engaged in such production.

(4) All uses, including storage, shall be conducted entirely within an enclosed building, except for parking, loading or unloading facilities.

for the area and one that could still attract customers even though the site lacked high visibility. Of the uses allowed by the county, Sabre decided to further investigate the following:

antique shop
barber shop
catering establishment
dry cleaning service
nursing home
coin operated dry cleaning
day care center
television repair shop
medical clinic
kennel
professional offices

The uses could be categorized as stand alone uses and uses that would work well in a small convenience shopping center. The stand alone uses were the nursing home, the medical clinic, the kennel, the day care center, and the professional offices.

On January 20, Sabre met with Gary Flowers, a local landscape architect. He gave Gary all the topographic maps and told him to prepare 6 site studies.

Study No. 1 - Residential Use: Plan as many 70' wide lots on the site as possible.

Study No. 2 - Convenience Shopping: Plan for a small

convenience center of about 6000 square feet placed along Adkins Road in the form of a strip. Show a kennel operation on the rear of the property.

Study No. 3 - Elderly Care: Plan a small elderly care facility of 24,000 square feet in a campus style; all one level with a 3000 square feet medical clinic that could serve the elderly as well as the surrounding community

Study No. 4 - Day Care Facility: Plan a day care facility with a 4 acre playground at the front of this site and a kennel operation at the back of the site with a good buffer between the two operations.

Study No. 5 - Mixed Uses: A mixed use site plan using Flowers' creativity for placement and mix of facilities.

Sabre's next step was to gather additional information for the day care center, the elderly care facility, and the kennel. He contacted Sandra Day with Children's Playschool, Karl Nine with Pet Resorts, Inc., and Diane Delong with Retirement World.

Sandra Day was not encouraging. She stated that it takes a highly visible site with good access for a day care facility. Government regulations keep the fees fairly high, and she didn't believe that the market surrounding the Adkins Road site would support a day care facility.

Karl Nine was also discouraging. Kennel operations are either Mom and Pop operations out in the country, or

they are very professionally run operations appealing to the upper class. The Adkins Road site was in a lower middle class neighborhood and was difficult to get to from the more affluent neighborhoods.

Diane Delong had a positive response to the idea of a retirement center. The Retirement World operation was very expensive, and she got a lot of calls from older people who could not afford a first class retirement facility. The quiet location and the residential setting were also positive factors. Diane had a good marketing study prepared for the local area that she would be glad to share with Richard.

Sabre decided to prepare a market analysis for the retirement home use. The approach he used was similar to the approach used for the apartment market analysis. From the study loaned to him by Ms. Delong, he was able to see the sales prices and rent levels for the other retirement homes in the area. Information on occupancy levels and trends in building types and unit sizes were included. There was also a competition survey which listed all units contemplated for the next 12 months. Richard used the information to create a product positioning map (Figure 7). On the horizontal axis he plotted the monthly cost, and on the vertical axis he plotted

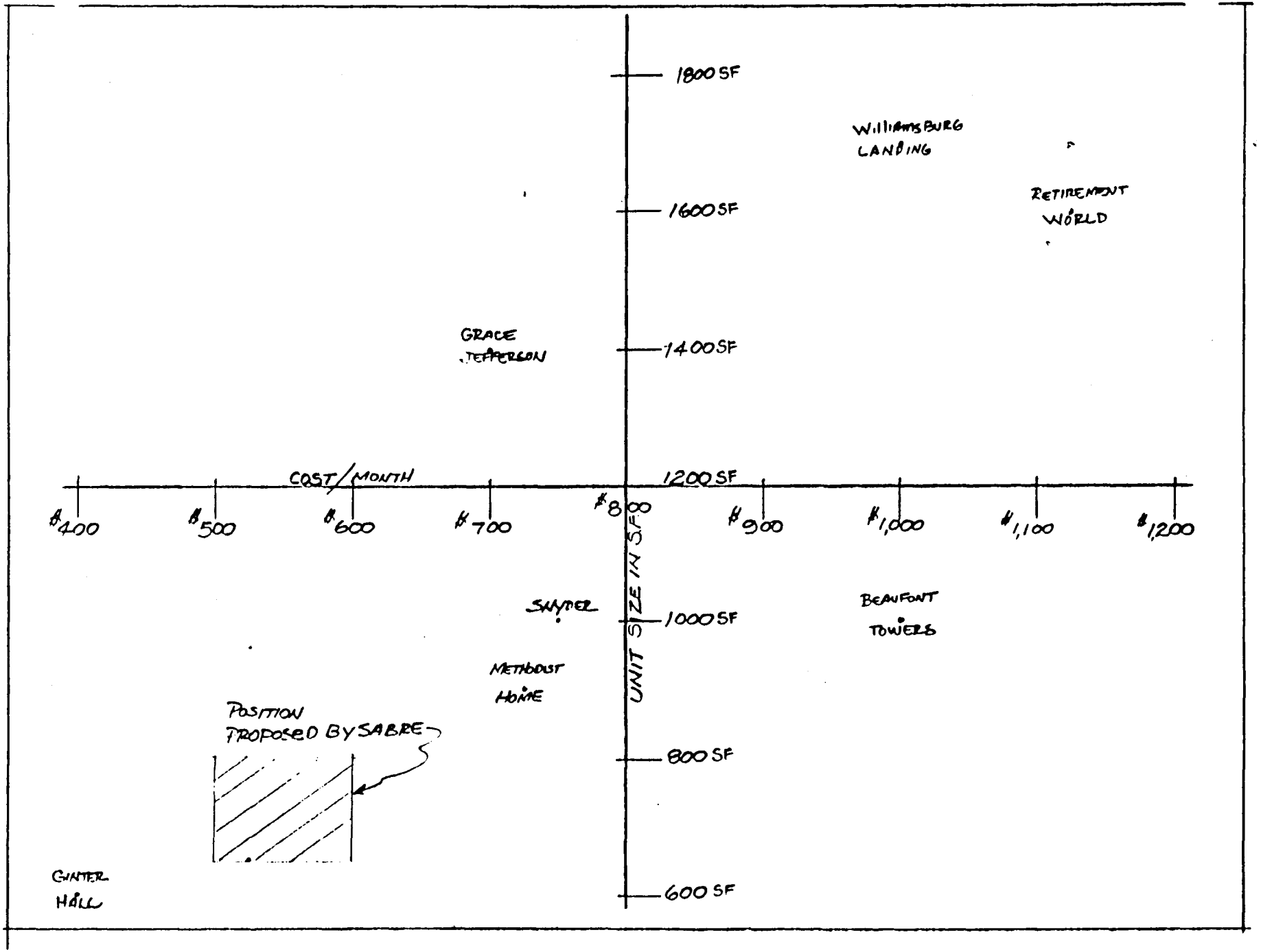


FIGURE 7 MARKET POSITION OF RETIREMENT HOMES IN THE RICHMOND AREA

the unit size.

Richard confirmed his hypothesis. A market gap existed in the area for a retirement facility with lower cost smaller units built on one level. He also saw that most of the present retirement centers were located in high noise areas close to busy streets. The Adkins Road site was very residential and quiet. He was ready for a presentation to the development team.

He called a meeting for February 10 among Gary Flowers, landscape architect; Dr. Pidgeon, owner of the property; Bob Booker, a local banker; Ralph B. Spender, a real estate broker; and himself. The group agreed with Sabre that there was an opportunity for a retirement center in a more rural setting, but they cautioned that a full feasibility study would need to be done to see if the project was financially sound.

Over the next two weeks, Sabre prepared a detailed feasibility study. (Figures 8 and 9). The study showed that the residual land cost would be $100,000. This was higher than the $60,000 Pidgeon had been offered for the raw land so Sabre called Flowers and told him to proceed with more detailed site plan development drawings.

FIGURE 8 A FINANCIAL FEASIBILITY ANALYSIS FOR:

PIDGEON HILL RETIREMENT HOMES

I. ASSUMPTIONS

1. Building Form: Apartments - 32 one story units built in fourplexes. Units to be 800 SF, 2 bedrooms, 1½ bath, kitchen, great room. Rent to be $600 per month per unit.

   Medical Facility - 3000 Sf GLA, 1 level. Rent to be $9.25/SF.

2. Parking: Paved parking, 2 per unit and 10 spaces for medical facility. Total 74.

3. Vacancy Rate: 5%.

4. Operating Expenses: $3.00/SF/Year or $85,000.

5. Real Estate Taxes: $32,000/Year.

6. Replacement Fund: $2,000/Year.

7. Financing: 70% loan to value. 11½% for 20 years. Debt service constant = .127968. Debt cover rate 1.2.

8. Equity Financing: 6% cash on cash return each year.

9. Building Cost: (See Figure 9).

II. ANNUAL CASH FLOW PROFORMA

Rent Revenues:		
Apartment Units (32 X $600 X 12)	230,400	
Medical Facility 3000 SF X 9.25	27,750	
Subtotal	258,150	
Less: Vacancy Loss (5%)	(12,907)	
Total Rent Revenues		$245,242
Expenses:		
Operating Expenses	85,800	
Real Estate Taxes	32,000	
Replacement Fund	2,000	
Total Expenses		119,800
Cash Available for Debt Payment		125,442
Maximum Mortgage Payment ($125,442 / 1.2)		104,535
Cash Available for Equity Investors		$20,907

III. CAPITAL BUDGET DERIVATION

Maximum Mortgage Loan

Maximum Mortgage Payment	$104,535	
÷ Debt Service Constant	.12798	
Justified Mortgage Amount		$816,807

Maximum Equity Investment

Cash Available for Equity Investors	20,907	
÷ Dividend Rate (6%)	.06	
Justified Equity Investment		348,450
Total Capital Budget		$1,165,257

NOTE: This represents a mortgage with a 70% loan to value.

IV. RESIDUAL LAND VALUE COMPUTATION

Total Capital Budget			$1,165,257
Less: Development Costs			
Design Fees:			
Architect	40,000		
Land Planner	10,000		
Soils Engineer	3,000		
Site Engineering	7,000		
Subtotal		60,000	
Site Development:			
Sewer	60,000		
Water	48,000		
Grading	32,000		
C & G	20,000		
Power	8,000		
Paving	32,000		
Subtotal		200,000	
Building Cost:			
8 Fourplexes X $87,400	699,200		
Medical Facility	79,000		
Subtotal		778,200	
Marketing Fees:			
Real Estate Consultant	15,000		
Leasing Expense	12,000		
Subtotal		27,000	
TOTAL DEVELOPMENT COST			$1,065,200
AVAILABLE FOR LAND			$100,057

FIGURE 9

BUILDING COST ESTIMATE

BUDGET ESTIMATE FOR: Pidgeon Hill Retirement Homes

GENERAL SPECIFICATIONS:

PLAN NO.	1
HEATED S.F.	3200 (4 units)
SHED S.F.	400
DECK S.F.	567
GARAGE S.F.	0
SCREEN S.F.	0
COVERED PORCH	400

EXTERIOR:

ROOF	Asphalt
SIDING	Hdboard
FOUNDATION	Block
FRONT DOOR	Steel Ins.
REAR DOOR	S G D
WINDOWS	Ins.
DRIVEWAY	Paved
WALKS	Concrete
SHRUBBERY ALLOW.	$200

INSULATION:

CEILING	R-30
FLOOR	Slab
WALLS	R-19

ALLOWANCES:

CARPET ALLOW.	9.00
VINYL ALLOW.	9.00
LITE FIXTURES	3.00
CABINETS	$4,000

INTERIOR:

HARDWOOD	--
CARPET	Thru Out
VINYL	Kit Baths
STAIN	--
INT. DOORS	Masonite
TRIM	376
FIREPLACE	--
HEARTH	--
MANTLE	--
APPLIANCES	$3,200

PLUMBING:

TUBS	F.G.
TOILETS	Briggs

HEATING:

TYPE	Heat Pump

BUDGET ESTIMATE SUMMARY:

TOTAL COST $87,400

COST BREAKDOWN

BUILDING COST	80,000
FINANCIAL COST	4,200
LAND COST	--
PERMIT & FEES	3,200
SALES COMMISSION	--
OTHER	--

Sabre had earned his fee. He had completed a location analysis which laid out the limitations of the site. He had gone through a use compatibility analysis to see what major land uses were appropriate. He had used a professionally prepared market analysis to confirm his hypothesis, and then he had completed a feasibility study to obtain the residual land value. He had coordinated the other members of the team and managed the process to properly complete the preliminary land use planning phase of the project. Ground will be broken in April.

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