

EXTERIOR HOME ENVIRONMENT  
HOMEBUYER PREFERENCES

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by

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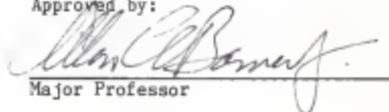
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## CHAPTER ONE

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### INTRODUCTION

The American dream of owning a single-family detached house with lots of space and a private yard is still important to the majority of Americans today. Having a comfortable and desirable place to live and raise a family remains an important goal for most Americans. (Sichelman, 1984)

The realization of this dream has been gradually fading due to changes and growth in population and a changing economy. Changes in family composition and individual life-styles are also major influences affecting traditional home ownership patterns. "Peoples choices about where they want to live, the kind of home they prefer, ... and other aspects of community life are different from what they were in the 1960's and 1970's because the conditions in which these choices are being made are different." (Marshall, 1983)

As we observe the many social and economic changes taking place in our nation we are coming to realize the issue of affordability could force many households to scale back their dreams. This in particular affects the first-time homebuyers. (Sichelman, 1984) The increasing land and building costs, higher interest rates, rising costs, and the decreasing family size are major influences on the homebuyer of today. We can begin to see a shift from quantity to quality-of-life concerns. 'Bigger' and 'more' are no longer 'better'. (Marshall, 1983) These social and economic changes are leading to a dramatic shift in housing market demands and are making it increasingly difficult to determine what is important in the homebuying market today. "Builders are presently responding to these demands by offering smaller,

more efficient living units, at higher densities, to keep the cost within reach of the American homebuyer." (Johnson, 1984)

For the development team to provide solutions to current and future housing market demands, it is essential for them to have current knowledge of the needs, preferences, and expectations of today's homebuyers. "After gaining this knowledge the team can then apply it in a rational, comprehensive, and creative way." (Marshall, 1983)

Many preference studies have been conducted throughout the housing industry, however, the majority have focused on the house itself and little attention has been given to preferences in the exterior surroundings of the house. (Johnson, 1984) We must realize that the home environment in which we live is much more than the space within the home. The exterior surroundings of our homes also make a very important contribution to a healthy and happy home environment.

As the social and economic influences cause the house size to go down, the housing density to go up, and the demand for quality to increase, the exterior home environment "... will take on increasingly more importance as it becomes an extension of the shrinking interior environment. As the housing units become more standardized, the landscape takes on new importance to the quality of our lives." (Marshall, 1983)

#### Importance of the Study

This study is important to the landscape architect, the American homebuyer, the developer, and the investor. The landscape architect can benefit by gaining a better understanding of what factors or amenities are important to homeowners/homebuyers in their exterior environment. As a land planner, site designer, or design consultant, this knowledge could assist

the landscape architect in providing home environments that will improve the quality-of-life for the homebuyer and provide a more marketable and sound investment for the developer.

Future American homebuyers can also benefit from this study. Knowledge gained from this study may provide homes in the housing market that meet the homebuyers' basic needs, desires, and expectations at a price they can afford. By knowing what is important to the homebuyers, these new homes may provide a more pleasant and useful exterior environment around homes and improve quality-of-life.

This study could also be of considerable benefit to the developer and investor. Having a better knowledge of what is important and what is not important to the homebuyer will allow the developer to make wiser investment decisions. Providing homes with more desirable home environments could make the homes more marketable. This would result in quicker sales and a faster turnover rate on investments for the developer and investor.

#### Objectives

The primary objectives of this study were as follows:

1. To determine homebuyer preferences in the exterior surroundings of the home. As the cost of buying a new home continues to rise and housing density continues to increase, what factors remain important to the homebuyer and what factors are they willing to do without?
2. To determine how individuals anticipate using the exterior environment of their home. What activities do they intend to perform and what activities are important to them in their exterior home environment.

3. To determine whether homebuying preferences in the exterior environment differ considerably with regard to location, population size, or the cultural setting of a community. For example, are homebuyer preferences in a smaller, less densely populated community different than the homebuyer preferences in a larger, more densely populated community?

4. To determine what these homebuyer preferences are for the exterior home environment and to do so with a significant degree of statistical confidence in the results. This study intended to estimate the proportion of homebuyers with preferences in a given category. This was to be done with a confidence level of between 80 and 95 percent and with a confidence interval of plus or minus 4 percent.

5. To provide additional information about homebuyer preferences that can be compared with information about homebuyer preferences gained in other studies and in other regions of the United States. This information may help to establish preferences unique to a particular region or identify particular trends that may be occurring throughout the country.

6. To test the findings of the Mark Johnson study (Kansas State University, 1984). This study would use an approach similar to that of the Johnson study but would attempt to survey a sample population more representative of the average American homebuyer, with respect to annual income and level of education, and to establish a more sound statistical approach to the study. This study would be based on the same housing type, use the same three alternatives to development, and use a similar survey questionnaire.

### Scope of the Study

This study deals with :

\* Homebuyer preferences in the exterior environment of the single-family detached home. Single-family detached is defined as a housing type in which the house is roughly centered on the lot and has a large front yard and rear yard and narrow side yards.

\* Affordable housing which may be defined as low to middle priced housing that can be purchased by a family with earnings equal to the median income of a given area or region and qualify for the purchase of the home based upon conventional standards of financing (ie.: monthly mortgage payments less than or equal to 25% of monthly earnings).

\* The exterior environment of the home which includes the materials, features, situations, and conditions surrounding the home. The exterior environment of the home includes the immediate surroundings of the home, bounded by the property lines of the lot. For this study it also includes the area defined by the boundaries of the entire development. This will include the areas such as shared open space and the development recreation facilities.

This study does not deal with:

\* Homebuyer preferences in the exterior surroundings of multi-family or zero-lot-line housing.

\* Homebuyer populations outside the central plains region of the United States.

\* The exterior environment outside the boundaries of the housing development community.

## Methodology

A survey questionnaire method of research was used to achieve the stated objectives. Three cities, each with a distinctly different population size and potentially different cultural setting, were selected as survey locations. At each of these locations, a home on the 'Parade of Homes' spring tour was selected for the purpose of surveying potential homebuyers. Three distinct housing development alternatives were presented in a display consisting of a site plan and model for each alternative. Participants were given a questionnaire, pertaining to the three alternatives on display. The questions dealt with preferences pertaining to the three alternatives and the importance of various factors that were influential in their preferences. The responses from the questionnaire were then entered into a computer and the results tabulated by number of responses to each answer and percentage of total responses. The results were then analyzed. Conclusions about what was important and what wasn't important in the exterior home environment were then drawn from the analysis of the results. A more detailed discussion of the methodology can be found in Chapter Three.

## Chapter Outline

Chapter Two, the Literature Review, includes a review of recent studies and surveys relating to homebuyer preferences. It also includes an overview of the Johnson study.

Chapter Three, gives a detailed description of the methodology used.

Chapter Four, reports the results of the survey in table form for easy comparison and analysis. Conclusions about homebuyer preferences are then drawn from these results.

## CHAPTER TWO

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### LITERATURE REVIEW

The housing industry has made great efforts to keep in touch with current and future needs of the homebuyer. With large capital investments involved, quick sales are critical to profit margins and many times survival of the homebuilder/developer. Studies are continuously being conducted for the purpose of helping the homebuilder/developer understand trends in the housing market. By building homes and development communities that satisfy these trends, at an affordable price, the homebuilder/developer has a better chance of making quicker sales and realizing a faster turnover rate on his investment.

In a recent article of Professional Builder magazine (November, 1985) Eli Broad, chairman of Kaufman and Broad Inc., Los Angeles, told how his company is responding to changes in the housing industry. He stated:

"At Kaufman and Broad Inc., we have changed our designs to reflect the consumers' needs. We now build smaller homes with a higher-quality design that utilizes space more efficiently. Further, we are targeting our homes to the first-time home buyer and incorporating design elements usually found in more expensive homes. ...what sells today may not sell tomorrow. The market is constantly changing. One constant factor we will work with over these next 15 years is that ownership of real property is deeply embedded into our nations consciousness and home owners continue to value their privacy."

Numerous marketing research studies are regularly published by housing industry trade journals such as Builder magazine and Professional Builder. The information provided from these and other studies can be of significant

value to individuals in the housing industry and can assist them in making decisions about future development.

Most of these marketing studies and surveys focus primarily on what the homebuyer wants in a home. They are concerned with size and type of home, architectural style, room size and arrangement, extras such as carpet or kitchen appliance packages, and cost. Other studies in these publications deal with homebuilder predictions concerning these same issues. In general, these studies and surveys show little consideration for the homebuyers' needs and preferences in the exterior home environment.

Looking at recent studies and surveys, one can occasionally find a few results dealing with the exterior home environment. The January, 1985 issue of Professional Builder featured an exclusive survey of individual attitudes and practices relative to affordable housing. Contributions to the survey results were made by National Family Opinion Inc., an independent research firm, and Professional Builder's affiliate, the Bureau of Building Marketing Research.

The results of this survey indicated that consumers see a trend toward smaller, more efficient housing and they will buy smaller, more affordable homes. First-time buyers will buy these smaller homes in order to keep their budget in line and 'empty-nesters' because of less maintenance.

In this survey, first-time homebuyers were asked to rate ways to reduce the cost of the home. They rated 'building expandable' as number one followed by using 'standard designs' as number two. 'Using smaller lots' was last in these ratings. (TABLE 2.1)

First-time buyers think expandable home  
can reduce costs

Way to reduce cost	First-time buyer
Build expandable	66.3 %
Standard designs	30.7 %
Build smaller	28.7 %
Build attached	26.7 %
Prefabricated	18.8 %
Use smaller lot	13.9 %

TABLE 2.1 : (Adapted from Professional Builder, 1985)

Additional results indicated that the most popular techniques used by builders for marketing down-sized, detached housing were 'improved interior spaces' and 'better land planning'. (TABLE 2.2) 81.8% of the builders

Special design marketing techniques  
for down-sized housing

Technique	Attached	Detached
Improved interior space	73.3 %	81.8 %
Energy features	43.9 %	33.3 %
Improved interior design of models	39.4 %	43.9 %
Additional standard features	35.0 %	42.4 %
Better land planning	32.2 %	48.5 %
More amenities	25.0 %	25.8 %

TABLE 2.2 : (Adapted from Professional Builder, 1985)

surveyed indicated that they 'improved interior spaces' to market down-sized, detached homes and 48.5% indicated that they used 'better land planning' techniques. Adding 'more amenities' was the least used technique.

Information was also given regarding the average lot size for single-family detached housing by both region and a nationwide average. It was stated that lot sizes of detached housing varied by regions; from 36,790 square feet in New England; to 8,638 square feet in the Pacific region. The average nationwide lot size is 17,160 square feet. It was also mentioned that lot sizes do not vary much in houses costing less than \$149,000.

Another survey featured in the January, 1985 issue of Professional Builder, queried 452 building companies for the '1984 Annual Report of the Housing Giants'. These 'Giants', leaders in the industry, said their prime target for new housing this year was the first-time buyer. Move-up buyers were rated second. In their 'Hot Products' category, 'single-family detached' housing ranked first and 'Zero-lot-line units' ranked second. (TABLE 2.3) This is a strong indication that private exterior space remains important in the homebuyer market today.

#### Hot Products

1. Single-family detached
2. Zero-lot-line units
3. Rental apartments
4. Townhouses
5. Condominiums
6. Manufactured housing

TABLE 2.3 : (Adapted from Professional Builder, 1985)

The New York City Partnership's New Home Program has also conducted research for measuring the consumer pulse in the housing market. This research was directed specifically at their local market. The study was

conducted with the intention of deriving detailed information on the housing needs and expectations of the community members and intended purchasers. Taped interview methods were used for this study so that needs and preferences could be expressed in the participant's own words. Knowing what kinds of homes people are looking for in various neighborhoods has helped the Partnership and community organizations clarify their input into design decisions. Housing that was sensitive to these needs could then be developed. (Mariampolski, no date)

Builder magazine has recently published results from several housing studies. Many of these studies have primarily served to identify who buys homes, and why; what types of homes are selling; and attitudes about various features of the house, such as room size. A study published in May, 1984 did, however, acquire a few results with reference to the exterior of the home. This study was conducted by Housing Futures Group, a program of the Harvard-MIT Joint Center for Urban Studies. These studies are sponsored by a group of 20 diverse organizations with interests in housing. The results of this study indicated that:

"Of the 43,000 respondents who completed the survey, 50 to 60 percent were very satisfied or somewhat satisfied with each of the 25 aspects which described their housing. The study did, however, find two 'noteworthy areas of dissatisfaction'. Twenty percent were unhappy with the amount of interior space and 19 percent were disappointed with the amount of yard privacy or outside space. Fourteen percent of all owners and 28 percent of all renters were unhappy with the lack of privacy of their outside space. These responses 'indicate that adequate interior space and yard privacy, two elements associated with the traditional single-family detached house, remain important concerns of today's consumers.'" (Sichelman, 1984)

Another interesting study was discussed in the October, 1985 issue of Builder magazine. This was a national market research survey called 'Homestyle 1988' and was commissioned by Carole Eichen Interiors, Inc., Santa Ana, California. The survey was discussed in an interview format with Carole Eichen, ASID, president and chief of design for the firm.

This survey was a little different in that it intended to study consumer buying intentions not next year, but two to three years down the road. Eichen stated that "building just for today - or - even next year - is dangerously shortsighted."

Pilot research was done first by random telephone survey of people who had never owned a home, who were between the ages of 25 and 39, and whose future plans included buying a home several years down the road. It was found that the people surveyed had traditional values. If they weren't married, they planned to be, and families were part of their dreams. The initial pilot survey only covered California, Arizona, and Nevada. The national survey that followed, covered all regions of the United States.

The pilot study made a surprising, yet comforting discovery: "Tomorrow's first-time home buyers do not necessarily want to be dazzled with high-tech design or high-density condominiums. Their dream house is just an updated version of what their parents bought two decades ago - a three-bedroom, two-bath, single-family home that has 1,400 square feet, a garage and a backyard."

The results brought out several messages to the builders. First, that the old values of a home and a family are here to stay and second, that the single-family home is still the foundation of the residential market.

Another message was that young people have no concept of what their dream home will cost.

When asked if it was difficult for builders to market the very small homes being offered, Eichen's comment was "Not at all. It simply takes coordination among all members of the building team, including the builder, architect, landscape architect and marketing staff." Two additional comments from Eichen, in the article, are worth noting.

"Marketing specialists have to recognize what consumers dream about and how they want to live. Then we have to help them find a way to do that."

"The national tabulations for 'Homestyle 1988' aren't in yet, but indications are that from California to New York, the same basic impulse governs the consumer: the fundamental human need to have a home. So the primary message to builders is that if they recognize and act on this consumer need, they will carve a steady niche for themselves in the marketplace. Would-be buyers will need to be educated about the economic realities of homeownership, and builders should be ready to do that. At the same time they should be careful to sell lifestyle and a 'home', not just a house."

A recent study, focusing specifically on preferences in the exterior home environment, was conducted by Mark Johnson at Kansas State University, 1984. Johnson's study was based upon three alternative design schemes for housing development. In all three schemes, the location, the house and the monthly cost to the owner remained constant. The changing variables among the three alternatives were lot size, degree of landscape development, and type of amenities. As the lot size decreased and the density of the development increased, the degree of landscape development increased.

The three alternatives were displayed as two-dimensional drawings and individuals were asked to respond to questions, on a questionnaire, relating

to the alternatives. Alternative 'A' had the largest lot size, the lowest density development, and the least amount of landscape improvement, only a seeded lawn and one shade tree. Alternative 'B' had the medium sized lot, the medium density range of development, and had landscape improvements completed on the home site. These improvements included a wood deck, wood fence, planting beds, flowering trees and shrubs and shade trees. Alternative 'C' had the smallest sized lot, the highest density development, the same landscape improvements on the home site as alternative 'B', and community open space with community facilities. These facilities included a swimming pool and clubhouse, 2 tennis courts, childrens play equipment, picnic tables, open playfields, and a jogging/walking trail.

Participants were asked which alternative they preferred and why. They were also asked about their intended uses of the exterior surroundings of their home and which amenities they preferred and why.

This study produced some interesting and surprising results. Almost 60 percent of the respondents chose Alternative 'C' which had the smallest size lot, the highest density development, and the greatest amount of site development including recreation amenities. The least preferred alternative, chosen by 19 percent of the respondents, was Alternative 'A' which had the largest lot size and the lowest level of landscape development. These results would indicate that the American dream of owning a single-family home on a large lot is not desirable unless landscape improvements have been completed. It may also indicate that people are not only accepting high density development but preferring it.

The results also indicated that the two most important considerations in selecting an alternative were 'privacy' and 'the outdoor living area'.

Many of the participants in this survey also preferred the small yard because of the minimal time it would require for maintenance. The most popular community development amenities were the open space and its system of jogging/walking paths.

Another interesting discovery was that most of the people surveyed wanted the landscape improvements completed when they moved in rather than doing it themselves. These improvements would include deck and fences, planting beds with shrubs and room for flowers, shade trees, and ornamental trees. Most of the respondents also preferred to have a minimum amount of yard maintenance but still desired a place to work with annual and perennial flowers. The results also indicated that even though most people preferred the small yard, they still needed or preferred some open space.

The decision was made to use the Johnson study as a base from which to build this study. In effect, the Johnson study was to be used as a pilot study. There were several reasons which led to this decision. One of the primary reasons was that the purposes were the same for both studies. The purpose being, to determine what is important and what is not important to the homebuyer/homeowner in the exterior surroundings of the home. The Johnson study was also the only study found that dealt exclusively with preferences in the exterior home environment.

Another reason for using Johnson's methodology was that it was basically sound and that with a few modifications it could be used to accomplish the objectives of this study, three of which were to survey a sample population more representative of the average American homebuyer, to survey a more random sample population, and to achieve a higher level of confidence in the results.

A third reason was that the three housing development alternatives (A,B,C), used for the Johnson study, were developed on the basis of a real site located in Manhattan, Kansas. Manhattan is located in the same region in which this study would be conducted. The three alternatives were also developed using realistic development cost figures from the Manhattan area. This made the three alternatives, used in the Johnson study, very applicable to this study.

The essence of research in any profession is to build a combined body of knowledge, or knowledge base, from which to draw upon. By taking a bit of knowledge gained from one research project and developing other research projects from which additional bits of knowledge are gained, the knowledge base of the profession is increased or expanded. Therefore, a fourth and final reason for using the Johnson study as a pilot study was that, much of the groundwork had already been done and could be applied to this study. This study could then be used to test, extend and possibly support the knowledge already gained from the Johnson study.

## CHAPTER THREE

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### METHODOLOGY

A survey questionnaire method was used as the means to accomplish the previously stated research objectives. This allowed a much larger sample response to be collected in a shorter period of time. The survey questionnaire was also conducive to targeting a particular sample population, which is the potential homebuyer in this study.

This study is based on the concept that higher densities in housing development result in a lower per unit cost for the site improvements. "As densities increase, the developer could return the cost savings into a higher level of development throughout the project without increasing the cost of the individual home. There is a basic trade off between the size of lot and the level of development."

"For this study the independent variables are lot size and level of development. As the lot size decreased the level of site development increased while the cost of each home site remained constant. These independent variables were manipulated in an effort to determine how they affected homeowner/homebuyer preferences, the dependent variable."

Three hypothetical housing situations, developed for single family detached housing, were used for this study. Although these housing alternatives were hypothetical, they were developed on the basis of a real site in Manhattan, Kansas and on realistic cost figures for site development and site improvements. The unrealistic assumption in developing these alternatives was that the developer would return 100 percent of the cost savings, resulting from higher density development, back into the project.

This is not likely to happen, however, but the assumption was made to keep the costs for each alternative constant. In this way, cost would not influence the preference of those surveyed.

Three alternatives were used in this study because each alternative represented a clearly recognizable and distinct choice without becoming confusing. More than three alternatives would have made the choices less distinct and possibly more confusing, which could have led to questionable results. Only two alternatives would have narrowed the homebuyers choices to much and reduced the accuracy of the survey results.

#### DESCRIPTION OF ALTERNATIVES

##### Alternative A

Alternative A (Figure 3.1) had the largest lot. Its dimensions were 110'x125' or 0.32 acres. The level of development for this alternative is minimal. A seeded lawn and one shade tree are all that were included. Additional improvements would have to be completed by the homebuyer after the purchase of the home, and at additional expense. There are no additional community improvements like those found in alternative C.



Figure 3.1 (Alternative A)

The development that occurred in the 'right of way' remained constant for each alternative and included a sidewalk on one side of the street, a grass strip with street trees, street lighting, and signage.

Alternative A is most typical of the traditional suburban neighborhood home sites. It was the lowest density alternative and offered more land for the money. This alternative had more space which could be used for additional improvements and activities. The larger yard area would allow for a home addition, patio, small pool or hot tub, garden, entertainment or childrens play. The larger yard area would, however, require more time and expense to develop and maintain.

### Alternative B

Alternative B (Figure 3.2) represents a choice, mid-range, between alternative A and alternative C. It was a higher density solution than alternative A and lower density than alternative C. The lot size was 80'x120' or 0.22 acres. The cost savings gained by reducing the lot size were redirected into landscape improvements. In addition to the seeded lawn and one shade tree found in alternative A, the improvements included a



Figure 3.2 (Alternative B)

15'x15' wood deck, 50 lineal feet of wood screen fencing, 1-2 additional shade or evergreen trees, 1-2 flowering trees, and some planting beds with shrubs and groundcover. These landscape improvements could be completed by the developer at the time the house is sold.

The landscape improvements done by the developer would not have to be repetitious and monotonous throughout the development. Several plans, added variations, and the homeowners own personal modifications could provide some excitement and variety throughout the development.

### Alternative C

Alternative C represents the highest density development and had the smallest lot size. This lot was 55'x100' or 0.12 acres. The cost savings gained from reducing the lot size to this dimension was also redirected back into site improvements. These redirected savings provided alternative C with the same home site improvements as provided for alternative B and in addition provided for the development and maintenance of community open space and improvements.



Figure 3.3 (Alternative C)

Although the home site improvements adequately provide alternative B with a finished yard, these same improvements on an even smaller lot, create a very finished and privately screened back yard for alternative C.

The community improvements included a large open space with 2 tennis courts, a pool and clubhouse, an area with childrens play equipment, picnic tables, a jogging/walking trail, open fields for softball and other games, and the installation of plant materials throughout this open space. A monthly maintenance and replacement cost for this community open space was included in the cost of the home.

Alternative C was the only alternative that experienced a slight modification from those used in the Johnson study. Only minor modifications in design were made to the jogging/walking trail and to the plant materials located in the open space. The trail was looped and the plant materials rearranged in an attempt to improve the visual interpretation of the participants.

#### METHOD OF DATA COLLECTION

As previously stated, the method chosen for data collection in this study was a survey questionnaire. An important aim of this study was to survey potential homebuyers. It was, therefore, important to conduct this survey at locations attended by potential homebuyers. Several options were considered.

One option was to set up a display of the three alternatives at community home shows. Home shows are generally sponsored by building product manufactures, local building product suppliers, and home builders. The home show provides an opportunity for building products, plans, and new

building methods to be put on display for public viewing. An investigation revealed that most communities held their home shows in the months of January and February which had already passed. The study would have to wait a full year if the survey was to be conducted at home shows. It was also concluded that the majority of visitors at home shows were more interested in remodeling their present homes or building their own home and not particularly interested in purchasing a new home.

Another option was to set up the display at a real estate office and ask the real estate agents to present the survey questionnaire to clients interested in purchasing a home. The survey questionnaires would then be collected at certain time intervals. This would have definitely surveyed potential homebuyers, however, it was decided that most real estate offices would feel that the survey disrupted their sales procedures and would not be inclined to spend their time conducting the survey.

Setting the display up at a lending institution for mortgage loans was another option. As potential homebuyers would come in to these institutions to arrange financing, they would be asked to take a few minutes to participate in the survey. The survey questionnaires would then be collected at certain time intervals. It was decided that this option would be a very slow process and that it would be difficult to sample a large number of homebuyers.

Another option was to set up the display at homes on the 'Parade of Homes' tours held in early spring in many communities. The 'Parade of Homes' tours are sponsored by local chapters of the National Homebuilders Association in an effort to show and promote sales of new homes to the public. These tours are generally held in various communities each spring

and in some of the larger communities an additional tour is held in the fall. These tours generally run for duration of 2-10 days.

The 'Parade of Homes' tour was the option selected for this survey because of its potential to survey a large number of potential homebuyers, in a relatively short period of time. Even if the people viewing the homes on the tour were not intending to buy a home in the near future, they would at least be willing to consider the issues addressed in the survey and provide some indication of the general public's preferences. It was also anticipated that by conducting the survey on the 'Parade of Homes' tour a good cross-section of people could be surveyed, providing a good random sample for the study. The spring 'Parade of Homes' tour was chosen for the survey because more communities conduct the tour in the spring than in the fall and would, therefore, provide a larger selection of survey locations. A survey of the spring tour would also allow the study to progress more rapidly and would be more conducive to the proposed schedule of the research.

#### Display Description

The survey display (Figure 3.4) consisted of the three alternatives, each mounted separately on display boards. These display boards were each set on a folding 'card' table and placed side-by-side in order, A, B, and C, from the left. A fourth folding 'card' table was placed adjacent to the displayed alternatives. This table held the remainder of the display as well as the materials used in administering the survey. At the front edge of this table, a sign was placed for the identification and explanation of the research project. Also on the front edge of the table, a box was placed for the deposit of completed questionnaires. The back portion of this table was used for the clip boards and pencils, additional survey questionnaires,

and packets of Cooperative Extension publications used in the administration of the survey.



Figure 3.4 (Survey Display)

It was important to place the display in a location that would not interfere with the circulation of people moving through the home. For this reason the display was placed along a wall. This also prevented the people from viewing the back of the display.

Limited cargo space to and from the survey sites, required folding and dismantling capabilities for the display. The folding tables and display boards that could be disassembled were, therefore, used for the purpose of conserving space.

Seating at the display was considered for the rest and comfort of the participants. Folding chairs were provided only at one survey site. This was only because they were available in that particular city and did not have to be transported from Manhattan. These chairs were frequently used,

however, most participants did choose to stand. A few chairs would have been provided at the other survey locations if they had been available. They were not, however, and the participants seemed to do just fine standing.

#### Display Boards

As stated in the Johnson study, one of the most challenging problems of the study was to communicate each alternative clearly. This was necessary for the people to understand exactly what their choices were. It was also important for the people to understand each of these choices quickly, without investing much of their time. The Johnson study also pointed out that the general public has difficulty in understanding or interpreting two-dimensional plan graphics. Therefore, if a plan of the housing development or home site were represented, it must be made as clear as possible.

The decision was made to display the three alternatives in a manner similar to the Johnson study but with several improvements. A display board for each alternative would include both a graphic and written description. Each board would graphically show the distinct character of each alternative and summarize the most important features. Each board was approximately 20"x38" and had the same sequence of graphic and written descriptions.

The base of the display boards consisted of a 1/16" sheet of 'delft blue' matboard glued to a 3/16" sheet of styrofoam core board. The graphic and written information included an overall conceptual plan of the housing development positioned on the left side of the board; an enlarged portion of the plan, including a model of a home site and its surroundings, positioned on the lower right of the board; a written summary of the main features of each alternative located on the upper right of the board; and a letter, A,

B, or C, identifying each alternative positioned at the upper center of the board. (Figures 3.1, 3.2, 3.3)

The overall conceptual plan of the development was a 'blackline' diazo print at the scale of 1"= 50' and was to give an indication of the density of home sites and how they related to one another. One of these typical home sites was rendered in color using 'design' markers and prisma color pencils making it easier for people to pick out a single home site. Spray glue was then used to attach the plan onto the display board.

The purpose of the home site enlargement and model was to indicate what each home site was like, in detail. The small portion of the overall plan, which included the home site and its surroundings, was enlarged at a scale of 1"=20'. On this enlarged portion of the plan, the colored model of the home site represented the same colored home site that appeared on the overall plan of the development. It was anticipated that people could more readily make the association between the colored home site on the plan and the colored model. It was also thought that the colored model would provide easier recognition and a greater understanding of the features in each alternative. The surroundings of the home site remained in plan form. The houses surrounding the model home site, however, were represented in plan using subdued color in order to provide a better understanding of the density of this particular alternative. The subdued color was used to accentuate the surrounding houses but not divert attention away from the model.

The base for this enlarged portion of the plan consisted of a lightweight sheet of chip board glued onto a 3/16" sheet of styrofoam core board. The plan was drawn on the chip board base in ink and the houses were

rendered with brown prisma color pencils. For the model of the home site, 'saddle tan' matboard was used for the walls of the house and for the privacy fences. Lightweight chip board covered with 'tampico brown' drawing paper was used for the roof of the house. 'Moss point green' drawing paper was used for the turf, gray drawing paper was used for the driveway and walks, lightweight chip board was used for the deck, and 1/16" white 'zip-a-line' tape was used for the property line. Yarrow and other weed seeds, spray painted in red, green, and yellow, were used for the trees and shrubs. Press-on letters were used to identify features such as the deck, street, adjacent lot, community open space, and the dimensions of the lot.

Four 'velcro' tabs were glued onto the display board and the enlarged model portion of the plan for easy removal of the model during transport to and from the survey sites. This allowed for greater protection to be given to the models in transport and storage.

The written summary of important features was produced on a 'blackline' diazo print. Press-on letters were used to describe the size of lot with its dimensions (ie. 80'x100') and its equivalent acreage. The description also identified what improvements were included in the yard area and what, if any, community improvements were included. Spray glue was used to attach the written summary onto the display board.

The letter that identified each alternative was also on a 'blackline' diazo print. This letter was rendered with red orange 'design' marker and prisma color for easy identification. The letter was attached to the display board with spray glue.

A small stand was made to support each display board at approximately a 70 degree angle for easier viewing at a distance. This helped to alleviate

the problem of congestion around the display when a number of people were participating in the survey at the same time. The display supports were constructed from 3/16" styrofoam core board and was attached to the display board using cut notches and 'velcro' tabs.

For viewing purposes it would have been more advantageous if the display boards had been made at a larger scale. In situations where a lot of people were participating in the survey at the same time, it was difficult for some of the people to see the display at a distance. The scale used was very satisfactory for the majority of the survey situations. Larger scale boards would have been a problem with the limited cargo space in the car.

#### Survey Questionnaire

The survey questionnaire was very similar to the questionnaire used for the Johnson study. One additional question was added and several questions were modified for faster response time or for easier and faster statistical analysis. The questionnaire (Appendix A) was organized into four sections. The first section consisted of introductory remarks and the last three sections contained questions. Questions 1-13 involved demographic information about the respondent. This included sex, age, marital status, income, and others. Questions 14-24 included questions for determining the preferences of the respondent and questions 25-29 included questions specifically directed toward alternative C, for those participants who had selected it as their first choice.

The introductory remarks give the title of the study, a brief explanation of the setting for the three alternatives, and enough additional information for the participant to complete the survey.

The purpose of the demographic information gained from questions 1-13 was to get an understanding and identification of the sample population surveyed. These questions were also used to see if there were any particular correlations between characteristics of those surveyed and their preferences. Question 14 asked participants to choose their first, second, and third preference from the three alternatives. The purpose of questions 15-24 was to identify factors or reactions that may have influenced their preference. Some of these questions would also attempt to sort out the 3 most important and the 3 least important factors that were influential in their decision. Questions 25-29 along with question 15 were included to see how important community improvements were in influencing their choice. These questions also helped to identify which improvements were important and which were not.

Attached to the front of each questionnaire was a 8-1/2"x4" sheet of paper containing a statement required by the College of Architecture and Design Human Subjects Committee. (Appendix B) This statement was necessary to fulfill the 'informed consent' stipulation required when a human subject is involved in a research project associated with the university. The statement had to inform the respondent that their participation in the survey was entirely voluntary. It also informed them that provisions had been made for the confidentiality of their answers, that no name or other identification was required that would infringe upon their privacy, and that there was no apparent risk involved by participating.

Due to time constraints, there was not time for a pre-test of the questionnaire. A pre-test would have been beneficial for eliminating several minor problems discovered later in the study. The survey generally took the participants a little longer time to finish than was anticipated.

It took most respondents about 8-10 minutes to complete the questionnaire. Out of the 584 respondents, only about 5 had complaints about the time required to complete the questionnaire. From a pre-test, the time requirement could have been established and possibly some questions modified or eliminated to shorten the time required for completion.

A pre-test may also have prevented some problems discovered with question numbers four, seventeen, and twenty seven at the time of analysis. These questions appeared to be very straight forward but were not answered as anticipated. If these problems had been discovered in a pre-test, the questions could have possibly been modified to eliminate the problems.

#### Completed Questionnaire Box

A cardboard box approximately 10"x15"x15" was placed near the display boards for the deposit of completed survey questionnaires. This box had a top that could be closed while the survey was being conducted and opened for the later removal of the questionnaires. The box also had a slot in the front for depositing the completed questionnaires. This provided additional assurance to the participants that they would remain anonymous. The box was covered with 'delft blue' drawing paper, giving it some continuity with the three display boards. A bright yellow sign reading 'completed surveys' was placed on the front of the box below the slot.

#### Project Identification Statement

This statement was typed, enlarged, and photo-copied on bright yellow paper. This paper was then mounted on a 10 1/2"x16" styrofoam core board and displayed on the table near the entry and exit point of the display. This brief statement identified the project, its purpose, the person conducting the research, and the contribution provided by those who were willing to

participate. It also included a statement specifying that the survey was voluntary and that the information would remain confidential. (Appendix C)

This statement did not appear to get much attention. It did give some credibility to the study, however, when people did read it. The statement in a larger format may have drawn more attention and proved to be more successful.

#### Participant Incentive/Reward

It was anticipated that many of the people on the home tours would be tired, in a hurry and generally not inclined to take the time to fill out a survey questionnaire. For this reason it was decided that participants may be more willing to participate if there was some type of incentive or reward. If the people were to receive something in return or gain something of value that they could take away with them, they would have a more positive attitude about having spent their time and effort.

Leaving with a greater knowledge and awareness of some important issues to consider when buying a house was something of value that the participants could take with them. It was concluded, however, that something tangible would be more rewarding. Due to the limited financial resources available for the study, the incentive/reward had to be very inexpensive. If the goal of 600 participants was reached the reward also had to be available in large quantities. Finally, this incentive/reward should be of some value to the participants.

The final decision was made to obtain a large number of landscape related publications from the Kansas State University Cooperative Extension Service. After visiting with the Horticulture specialist for the Cooperative Extension Service and explaining the study, arrangements were

made to pick up 300 copies of each publication to be used. The agreement was made that the publications were not to be wasted but distributed to those participants who seemed interested in reading them. It was also the agreement that arrangements could be made for additional copies if needed and any copies remaining after the study should be returned to the distribution center.

Each packet of information given to the participants included five publications: Plants, Man, and Environment; Patio Design; Landscaping the Home Entryway; Walks; Fences in the Home Landscape; and a Horticulture Publications pamphlet.

Only one packet of publications was given to each family or single person. This allowed a more efficient distribution and prevented excessive waste of the publications. A total of approximately 325 packets of publications were given out for the three survey locations.

The general response from the participants after receiving this information was very positive. Most participants were very appreciative and many expressed that it may be of help in improving their home landscape. Only a few indicated that they didn't care for the information and a few already had most of the information.

#### Sample Size Determination

For the purpose of giving this study some statistical significance, consultation and assistance was aquired from the Department of Statistics at Kansas State University. It was important for this study to have some statistical reliability and to have a relatively high level of confidence in the results.

In the initial stages of the study a 'Confidence Coefficient Procedure' was used to determine a sample size that would produce a relatively high confidence level for the study.

Confidence Coefficient Procedure: To estimate a proportion 'P' to within 'd' % with confidence level 'C' %, requires a sample size of approximately:

$$n = \frac{Z^2}{4d^2}$$

(Where 'd' has been expressed as a decimal, and 'Z' is a value from the standard normal distribution and that depends on 'C')

It was determined that for a confidence level of 95%, with a confidence interval of plus or minus 4%, the study would need a sample size of 600. For a confidence level of 90%, with a confidence interval of plus or minus 4%, a sample size of 425 was needed. For an 80% confidence level, with a plus or minus 4% confidence interval, a sample size of 256 would be required. After these sample sizes were determined, the goal was set to reach a sample size of 600 for the study.

#### Site Selection (Cities)

Site selection was an important aspect of the study. One of the intents of this study was to survey a sample population from the Central Plains region. It was anticipated that homebuyers from this region would more closely represent the average American homebuyer than did the Ann Arbor, Michigan population sampled in the Johnson study.

The first step in the site selection process was to contact the Home Builders Association of Kansas, in Topeka, for the purpose of gaining information about the locations and schedules for the upcoming 'Parade of Homes' tours throughout the state of Kansas. This office had not yet received much of the needed information from the local chapters in the state

but did provide the information that was available. This office also sent a list of local chapter presidents and executive secretaries, their addresses, and their telephone numbers so that they could be contacted individually. The Home Builders Association of Nebraska was also contacted for the same information for Nebraska.

The second step in the site selection process was to contact each local chapter of the Home Builders Association to determine if, and when, a tour would be held in their area. The study and its purpose were explained during this conversation. In addition, permission to conduct the survey on their tour was requested. Several granted permission immediately, one stated that it would have to be discussed at the next board meeting, and others gave reference to another person having the authority to give this permission. This conversation also produced the names and telephone numbers of those persons in charge of the tours.

Step three was to determine in which communities the survey would be conducted. With one of the purposes of the study being to compare results between communities of various sizes and possible cultural differences, it was important to select communities with significant differences in population. Another important consideration was to select communities in which particular local institutions or businesses were not major influences so that they would not skew the general homebuying population of the community. An example might be a large university, industry, or military base located in or near a relatively small community. It was also important to select communities in which there was sufficient building activity.

The fourth step was to determine a range of travel for the study. Taking the limited time and financing for the study into consideration, a

travel range of 150 miles was established. Sites within 150 miles of Manhattan, Kansas would allow a relatively short and inexpensive travel distance.

The fifth, and final step was to select communities in which there were not major scheduling conflicts. The survey could not be conducted in two communities at the same time unless additional displays were made and additional survey attendants were provided.

From the five step procedure above, four communities were selected as survey sites: Lincoln, Nebraska; Topeka, Kansas; Salina, Kansas; and Wichita, Kansas. These four communities offered a considerable range in size of population and potential cultural differences. These cities appeared to have a balance of business, industry, educational and cultural facilities with the size of the community. These cities also appeared to be representative of many Central Plains cities and, therefore, would give some indication of what the preferences might be in this region of the United States.

#### Home Site Selection

After the four cities had been selected, it was necessary to select a home site at which to conduct the survey. At this point, the person in charge of the 'Parade of Homes' tour in each of these four cities was contacted by telephone. A brief explanation of the study and its purpose were again given. This person was then asked if he could refer the name and telephone number of any builders who might be willing to allow the survey to be set up at one of their homes on the tour. It was very important at this time to ensure the person that you would be very cooperative with the builder and not interfere with the showing of his home. It was also

mentioned at this time that the results of the study would be shared with the builder if they were interested. This may have offered some incentive and most of the builders were interested in receiving the results of the survey.

With the exception of Wichita, all of the persons in charge of the 'Parade of Homes' tour had a home showing on the tour and agreed to let the survey be set up at one of their homes. Although most of these builders sounded a little reluctant over the telephone, they were very cordial and accommodating at the time of the survey. A home site in Wichita was a little more difficult to arrange than were the other home sites. Most of the telephone conversations resulted in a rather negative and unsupportive manner. A classmate from Wichita finally served as a personal contact with a builder having a home on the tour and this builder was willing to allow the survey to set up at one of his homes.

It was important to make these initial contacts several weeks early. This allowed time for contacting other builders in the event that earlier contacts failed to yield a survey site. Early contact was also important in the process of setting up a survey site in Salina. I was told in my initial telephone conversation that the study had to be introduced, discussed and approved at their next board meeting. This meeting was to be held two weeks later. Approval was granted at this meeting and one of the builders on the board offered to allow the survey to be set up in one of his homes. A last minute contact may have prevented the survey from being set up in Salina.

A final telephone call was made to the builders approximately 1 week prior to the survey date. The purpose of this call was to reconfirm permission to conduct the survey, notify the builder of my arrival time, get

any final directions needed to find the home, and to arrange a time to set up the survey.

## SURVEY SITE DESCRIPTIONS

### Lincoln, Nebraska

Lincoln was the second largest city surveyed and has a population of approximately 180,000. It is the second largest city in Nebraska and is the state capitol of Nebraska. Lincoln has several universities and small colleges. Much of its business revolves around the state government and the University of Nebraska, however, it is also a major grain market, manufacturing, insurance, finance, trade and cultural center for the state.

Time: The 1985 'Parade of Homes' tour for Lincoln was held from Sunday, May 5 through Sunday, May 12. The tour hours were from 6:00pm to 9:00pm on weekdays and between 1:00pm and 9:00pm on Saturdays and Sundays. The survey was conducted only on the first Sunday of the tour, May 5, from 1:00pm until 8:30pm.

Home Site Location: The home site was located in 'Taylor Meadows', one of the last residential development areas within the city and was considered a top dollar market area.

Home and Lot: The home was a two-story, three bedroom home on a lot approximately 85'x110' and having a selling price of \$124,900.00. The exterior site improvements included a finished deck area in the back but no turf or additional plant materials existed. (Figure 3.5)

Display Location: The survey display was set up in the garage. This was a convenient location because it provided ample room for a large number of people to participate in the survey at the same time. It also had the

advantage of exposure as people approached or left the house. The entry into the house was designed in a manner that required the people to approach up the driveway before reaching the walk that led to the front door. This brought the people right to the survey display in the garage as they entered the home. The location inside the garage also provided the display with wind and rain protection. The only problem encountered with the garage was that the overhead lighting was slightly inadequate for illuminating the display in the evening hours. This was not a major problem however.



Figure 3.5 (Lincoln Survey Site)

Weather Conditions: The weather conditions were beautiful. It was a warm, sunny and mild day. Perfect for leasurly outdoor activities such as touring new homes.

Tour Activity: Lincoln had the most tour activity of all the cities surveyed. This could have been due to the location of the home, the beautiful weather, being the first day of the tour, a stronger homebuying market or possibly because the people of Lincoln enjoy looking at new homes.

During the time from 1:00pm to 8:30pm, 293 survey questionnaires had been completed. At times the garage was almost completely full of people participating in the survey. This exceeded our initial expectations.

The Builder: The builder was very cordial and accommodating throughout the day. The majority of his time was spent inside the home, greeting people as they entered and answering questions. He would occasionally come out to see how our survey was going.

The surprising success of the first day led to the decision that a return visit to Lincoln the following weekend was unnecessary. Enough questionnaires had been completed at this site and it looked as though there would be no problem in reaching the goal of completing 600 questionnaire for the survey.

#### Topeka, Kansas

After the huge success at the Lincoln survey, it was decided that the Topeka survey could be cancelled and the remaining number of questionnaires completed at the Salina and Wichita sites. The primary reason for cancelling Topeka instead of one of the other sites was the fact that Topeka was the most similar to Lincoln in population, geographical location, and employment opportunities.

#### Wichita, Kansas

Wichita was the largest city surveyed with a population of approximately 279,272 and is located approximately 280 miles south of Lincoln. Wichita is the largest city in Kansas. It has two universities and one college, agricultural and oil industries, and is a major aircraft production center. Wichita is also one of the midwests' major cultural and entertainment centers.

Time: The 1985 'Parade of Homes' tour for Wichita was held from Sunday, June 2 through Sunday, June 9. The tour hours were from 5:00pm to 9:00pm on weekdays and from 1:00pm to 6:00pm on Saturdays and Sundays. The survey was conducted on the last weekend, Friday, Saturday, and Sunday for the duration of tour hours.

Home Site Location: Upon arriving in Wichita and contacting the builder, we were informed that our home site had been changed. Another survey was going to be conducted at the original site because it was specifically directed to that particular floor plan and style of home. Previous arrangements had been made between builders for this survey to set up in another home about one block away in the same development.

The home site was located in a very nice development called 'Cobblestone' on the eastern edge of the city. This area was very low density but is considered one of the major growing areas of the city.

Home and Lot: The home was a one-story, 3 bedroom, ranch style home on a lot approximately 85'x120'. The selling price was \$140,000.00. The exterior site improvements included a finished deck in the back, turf and shrubs in the front and one side yard, and no turf or other plant materials in the back or other side yard. (Figure 3.6)

Display Location: The survey display was set up in the garage. This again provided protection from wind and rain and allowed ample room for a large number of people to participate in the survey at the same time. This location provided the display with excellent exposure to the people approaching the home. The design of this home also required people to approach up the driveway in order to reach the walk leading to the front

door. This again made it very easy to intercept the visitors as they approached or left the home.

With the exception of Friday evening, poor lighting conditions in the garage was not a problem. On Saturday and Sunday the tour ended at 6:00pm which allowed adequate natural light.



Figure 3.6 (Wichita Survey Site)

Weather Conditions: The weather conditions were generally favorable but it was hot. Saturday was very uncomfortable because of relatively high humidity and a temperature of approximately 102° F. Sunday was also very warm with temperatures in the mid to high 90's.

Tour Activity: The tour activity was much slower than in Lincoln and was generally disappointing. Friday was very slow, Saturday was generally slow with a few surges of activity, and Sunday was slightly more active as the tour came to an end. Most of the people were willing to take part in

the survey, however, as the day passed on, many were in a hurry to see other houses before the tour ended and wished not to participate.

At the end of the 3 day survey in Wichita, only 153 survey questionnaires had been completed. With Wichita being the largest city surveyed, this was very surprising and disappointing.

There are several possible reasons for the low number of survey participants. One reason may have been that the people looking at the homes were more scattered throughout the city because of the much larger number of homes on the Wichita tour. This tour had 72 homes compared to 25 on the Lincoln tour and 8 on the Salina tour. Another reason may have been that the location of the housing development was not as preferable as were other developments closer in. The uncomfortably high temperatures may have been another reason for the low number of participants. The fact that this was the last weekend of the tour could have been another reason. One final reason may have been that the people of Wichita are not as inclined to participate in the 'Parade of Homes' tours as are people in other communities. This would appear untrue, however, when the city offers such a large number (72) of homes for the tour.

The Builder: The builder and members of the marketing team were very cordial and accommodating. The majority of their time was spent inside, showing the home. They were very cooperative in allowing the people to complete the survey questionnaires inside the home while taking advantage of the air conditioning.

With the disappointing low number of completed questionnaires, there were second thoughts about having cancelled the Topeka survey. We were

confident, however, that the remaining 154 questionnaires needed to reach our goal of 600 could be completed at the Salina tour.

### Salina, Kansas

Salina was the smallest city surveyed with a population of 41,843. Salina is located approximately midway between Lincoln and Wichita and slightly farther to the west. Salina has two small colleges and is the county seat of Saline County. Salina is the leading agricultural, industrial, manufacturing and cultural center of central Kansas.

Time: The 1985 'Parade of Homes' tour for Salina was held from Sunday, June 9 through Sunday, June 16. The tour was closed on Saturdays. Tour hours were from 6:30pm to 8:30pm on weekdays and from 1:30pm until 8:30pm on Sundays. Due to the involvement in the Wichita survey on June 9, the Salina survey was only conducted on Friday, June 14 and Sunday, June 16 for the duration of the tour hours.

Home Site Location: The home site was located in the 'Country Club Estates', one of the nicer residential areas in Salina. This location is on the eastern edge of the city.

Home and Lot: The house was a single-story, 3 bedroom, 1,684 square foot, ranch style on a 85'x125' lot. The selling price was \$96,500.00. The exterior site improvements included a finished deck and a shrub bed along the front entryway of the home. There was no turf or additional plant materials in the front, back or side yard areas. (Figure 3.7)

Display Location: As a result of building materials being stored in the garage, the display was set up in the living room. This was a very convenient location and provided excellent exposure for the display.

Everyone who passed through the home had to pass by the display. It was very convenient to ask people to participate. The interior of the home provided a richer and more pleasant atmosphere for the survey display and the air conditioning provided a more comfortable environment.

One disadvantage of the living room location was that there was less room than in the garage and there were occasional times of congestion which interrupted the flow of people through the home. This was, however, more of an advantage for the survey because people were curious as to what was going on and it held people at the display location longer. Having no overhead lighting in the living room was another slight disadvantage for the display during evening hours.



Figure 3.7 (Salina Survey Site)

Weather Conditions: The weather conditions were generally favorable for the tour. The temperatures were in the mid 90's. There were gusty winds and occasional light showers. On both days of the survey strong storm fronts moved into the area shortly after the tour ended. The weather did not

affect the comfort of the people participating in the survey because of the interior location.

Tour Activity: The tour activity was slow on Friday evening but resulted in about 30 completed questionnaires. On Sunday the tour produced a fairly consistent flow of visitors to the home and by the end of the tour 144, questionnaires had been completed. These results were pleasing because it brought the total number of completed questionnaires to 590, only 10 short of our 600 goal.

The Builder: The builder and his sales representatives were also very cordial and accommodating. They remained primarily in the kitchen and family room areas for answering questions and distributing information about their homes. They would occasionally visit the living room area to see how the survey was doing.

#### SURVEY ADMINISTRATION

##### Assistance

The administration of the survey went very well at all three locations. The greatest contributing factor to this success was having more than one person administering the survey. For this study my wife assisted me at all three locations. This proved to be extremely important when a large number of people were moving through on the tour. Many of the people would have eluded the survey with only one survey attendant. For example, while he was answering questions or explaining the survey to a few people, many others would have passed by. Two attendants were able to get at least twice as many people to participate as one would have. It would have been extremely difficult for one person to invite people to participate in the survey, explain the survey and answer questions, keep blank questionnaires ready on

the clip boards, and distribute the incentive/reward packets during the most active times of the tour. It is the active times that are the most critical because this is where you get the greatest number of participants in a relatively short period of time.

Assistance is also very important if emergency errands are required. For example, in Lincoln, it was discovered that 5 clip boards were not nearly enough for the volume of participants. With two people attending the survey, one was able to continue running the survey while the other left to purchase more clipboards and pencils. Another emergency errand was needed when the unexpected large number of participants depleted the supply of questionnaires and additional copies had to be made.

The male/female combination also seemed to work very well for administering this survey to the public. This may not, however, have had any particular influence on the success of the survey.

#### Procedure

The procedure used in administering the survey was as follows: The two survey attendants positioned themselves at the door of the garage and near the table containing the clip boards and questionnaires, the completed survey box, and the incentive/reward packets. This allowed them to intercept the people approaching the survey and to assist the participants after they finished the survey.

As the people approached the home, one of the survey attendants would greet them, briefly describe the study, and ask if they would mind participating in the survey. It was important to be cordial and cheerful, making it a fun and enjoyable experience, and not to be forceful or

overbearing. Many of the people seemed more willing to participate when informed that this study was for my Master's thesis.

Those who agreed to participate were each handed a clip board with a blank questionnaire and a pencil. Then one of the attendants would take them over to the three alternatives on display and briefly describe each one. Even though there was enough information on the questionnaire to complete the survey, this seemed to get them into the questions much quicker and with a better understanding of each alternative. Each participant was then reminded of the written summary on each display board and that if they had any questions, just ask. They were then told to deposit the completed questionnaires in the box provided on the table and that free information on landscaping would be available to them if they were interested. After completing the survey they were given their packet of extension publications and thanked for participating.

An attempt was made to approach every group, couple, or single person that visited the home. The attempt was also made to try and maintain a group of people at the display as much as possible, with the assumption that others would see them viewing or participating in the survey and be more inclined to participate as well. This may not have been a valid assumption because many were willing to participate when there were no other participants present.

#### Dress

Appropriate dress was essential for conveying a serious and professional image for the study as well as a positive image for the home builder. The builders and their representatives all wore a jacket and tie.

The builder in Lincoln wore a sport jacket and tie, the builders and representative in Salina and Wichita wore a suit and tie. The suit coats were not worn most of the time in Wichita because of the extreme high temperatures.

For the Lincoln survey, the survey attendants wore nice casual slacks and nice short sleeve shirt or blouse. This seemed appropriate in the garage. A jacket and tie and a dress, however, would not have looked out of place. In Wichita, casual dress also seemed appropriate in the garage, particularly in the extreme heat. A tie and jacket and dress were worn for the Salina survey. This seemed more appropriate for the nice interior of the home and for working in close proximity to the builder who was also wearing a coat and tie.

#### ANALYSIS OF THE DATA

Immediately after the last survey was completed, the responses on each survey questionnaire were entered into a computer located in the statistics laboratory at Kansas State University. During this data entry process it was discovered that many of the survey questionnaires had not been filled out completely. For unknown reasons, the respondents chose not to answer one or more of the questions. These questionnaires did, however, provide enough useful information to merit entry. Only 9 survey questionnaires, 6 from Lincoln and 3 from Salina, were so incomplete that they could not make a contribution to the results. The very few responses from these questionnaires were not entered.

After the data entry process had been completed, the data was computed on the university's mainframe computer using the Statistical Analysis System (S.A.S.). The computation process computed the number of responses and the

percentages for each question with relation to the total survey population and each individual city surveyed. This allowed a comparison of the results between cities and also gave a summary for the total survey population. The number of responses and the percentages for questions 1-24 with relation to the three alternatives (A,B,C) were also computed. This allowed for a comparison between the preferred alternatives (A,B,C,) and the various factors influencing them. Computations were also made to compare other combinations of questions. This was for the purpose of identifying additional correlation between preference and factors contributing to these preferences, especially the demographic variables.

Questions 16, 17, and 26 required the participants to select the most (least) important, second most (least) important, and third most (least) important factors. When the number of responses are simply totaled, there are sometimes contradictions and confusion as to what order (first, second, third,...) these factors were ranked. A weighting system was, therefore, used for these three questions in order to provide a distinct separation between the most (least), second most (least), and third most (least) important factors.

This weighting process was accomplished by taking each factor separately. The number of responses listed as most (least) important were then multiplied by 3, giving them the most weight. The number of responses listed as the second most (least) important were multiplied by 2, and the number of responses listed as the third most (least) important were multiplied by 1, giving them the least weight. These values were then totaled for a single value for each factor listed. From these values a distinct separation was made between the most (least), second most (least), and third most (least) important factors.

The computed results of the matrix tables, obtained from the mainframe computer, were then organized into simplified tables using an IBM personal computer and a 'Lotus 1-2-3' program. The results from these simplified tables and their analysis then served as a basis for the conclusions.

## CHAPTER FOUR

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### RESULTS AND CONCLUSIONS

During this survey 584 participants from three geographical locations responded to 29 questions. Analyzing the many combinations of data sets has generated a great deal of information. All 29 questions on the survey questionnaire were first analyzed according to location (city). Questions 1 through 24 were then analyzed according to preference choice (alternative A, B or C). Questions 25 through 29 were only applicable to respondents who selected alternative 'C'. Additional correlations of questions 11 through 27 and question 29 were analyzed according to sex, children, age, education, total income, and if they owned or rented their present home. Because of the considerably large number of additional correlation tables that were generated, only those tables which showed significant differences as indicated by the Chi Square test will be included in this section. Any interesting observations from the additional tables will, however, be mentioned in text.

As you begin to look at the data tables, you will notice that the number of responses found in some of the sample groups are very small. For example, there were only 2 responses to 'mobile home' in question #8 and only 1 response for 'separated' and 'widow/widower' in question #3. These small sample groups may only provide some indication of preference for that particular group. One cannot, however, have any degree of confidence that this preference holds true for this group in the general home buying population.

You may also notice that some of the column or row percentages do not always total 100%. This is due to rounding off the individual percentages to the nearest whole number.

A Chi Square test was used in the analysis of the data in order to assist in determining which tables of data had some significant differences between the various categories considered. The tables which had a p-value for the Chi Square statistic of 0.05 or less will be considered as having significant differences and will be indicated with a ( \*\* ) following the title.

The information in this chapter has been organized into 7 general categories as follows: profile of the sample, alternative preferences, outdoor living area, yard work, outdoor privacy, community amenities, and children-amenities. Each of these categories were then organized as follows: general comments, data tables and observations, summary, and conclusions. The data tables and observations were further organized by first listing tables according to location, then according to alternative preference, and last, any additional tables that indicated a significant difference using the Chi Square test. Final conclusions for the study and recommendations for future study conclude this chapter.

#### PROFILE OF THE SAMPLE POPULATION

The following results consist of demographic information gathered from the survey and provide some insight to the composition of the survey sample population. The following tables contain information pertaining to questions 1 through 12 and provide information on the sample population at each of the three locations and for the sample population in general.

## Results (Location)

### 1. Sex

	LINCOLN		SALINA		WICHITA		TOTAL	
Male	139	49%	55	38%	69	45%	263	45%
Female	147	51%	89	62%	84	55%	320	55%
	286	100%	144	100%	153	100%	583	100%

### Observations

- A. The sample was composed of a nearly even distribution men and women, with a slightly larger number of women. (45% men, 55% women)
- B. Salina had a greater imbalance with 38% men and 62% women.

### 2. Age.

	LINCOLN		SALINA		WICHITA		TOTAL	
Less - 20	2	1%	4	3%	4	3%	10	2%
21 - 29	57	20%	16	11%	32	21%	105	18%
30 - 39	182	49%	47	32%	69	45%	258	44%
40 - 49	41	14%	37	26%	31	20%	109	19%
50 - 60	33	12%	33	23%	13	8%	79	13%
60 +	12	4%	7	5%	4	3%	23	4%
	287	100%	144	100%	153	100%	584	100%

### Observations

- A. The largest percentage of the participants (44%) were between the ages of 30 - 39.
- B. Salina's population was generally older than was Lincoln's or Wichita's.
- C. The greater portion of the total sample (81%) were between the ages of 21 and 49 which would represent the bulk of the general home buying population.

3. Marital status.

	LINCOLN		SALINA		WICHITA		TOTAL	
Single	20	7%	11	7%	8	5%	39	7%
Married	258	90%	126	88%	142	93%	526	90%
Divorced	5	2%	4	3%	3	2%	12	2%
Separated	0	0%	1	1%	0	0%	1	0%
Widow/Widower	4	1%	1	1%	0	0%	5	1%
	287	100%	143	100%	153	100%	583	100%

Observation

A. 90% of the total sample were married and 7% were single.

B. The Salina sample had a slightly higher percentage of divorced or separated individuals.

4. Enter the number of children at home (1,2,3..) in each age category.

(Ages 0 - 5)	LINCOLN		SALINA		WICHITA		TOTAL	
0 - Children	128	62%	8	78%	65	64%	277	67%
1 - Child	45	22%	17	16%	26	25%	88	21%
2 - Children	26	13%	6	5%	7	7%	39	9%
3 - Children	7	3%	1	1%	4	4%	12	3%
	206	100%	108	100%	102	100%	416	100%
Did not answer the questions	82		36		51		169	

\*These are the number of responses (not the number of children)

(Ages 6 - 10)	LINCOLN		SALINA		WICHITA		TOTAL	
0 - Children	244	87%	120	85%	129	85%	493	86%
1 - Child	30	11%	17	12%	22	14%	69	12%
2 - Children	7	2%	3	2%	0	0%	10	2%
3 - Children	1	0%	1	1%	1	1%	3	0%
	282	100%	141	100%	152	100%	575	100%
Did not answer question	6		3		1		10	

\*These are the number of responses (not the number of children)

(Ages 11 - 15)	LINCOLN		SALINA		WICHITA		TOTAL	
0 - Children	238	84%	117	83%	129	85%	484	84%
1 - Child	36	13%	16	11%	18	12%	70	12%
2 - Children	8	3%	7	5%	5	3%	20	4%
3 - Children	0	0%	1	1%	0	0%	1	0%
	282	100%	141	100%	152	100%	575	100%
Did not answer question	6		3		1		10	

\*These are the number of responses (not the number of children)

(Ages 15 +)	LINCOLN		SALINA		WICHITA		TOTAL	
0 - Children	252	89%	118	84%	129	85%	499	87%
1 - Child	23	8%	17	12%	17	11%	57	10%
2 - Children	5	2%	2	1%	6	4%	13	2%
3 - Children	2	1%	4	3%	0	0%	6	1%
	282	100%	141	100%	152	100%	575	100%
Did not answer question	6		3		1		10	

\*These are the number of responses (not the number of children)

#### Observations

A. One third (33%) of the total sample had children at home under 5 years of age. Approximately 14% of the total sample had children at home in each of the other age groups.

B. The distribution of children in each age group was relatively even for each city. The percentages of children in each age group were within 5% of each other for the three cities.

C. Lincoln had a greater percentage of young children in the (0-5) age group.

D. Salina and Wichita had only a slightly higher percentage of older children at home.

#### 5. Level of formal education. \*\*

	LINCOLN		SALINA		WICHITA		TOTAL	
Some high school	2	1%	5	3%	2	1%	9	2%
High school complete	45	16%	40	28%	22	14%	107	18%
Some college	82	29%	57	40%	45	30%	184	32%
College degree	101	35%	26	18%	50	33%	177	30%
Graduate study	55	19%	16	11%	33	22%	104	18%
	285	100%	144	100%	152	100%	581	100%

Observations

- A. 80% of the total sample have at least some college education.
- B. Wichita had a generally higher level of education and Salina a generally lower level of education.

## 6. Number of incomes in household.

	LINCOLN		SALINA		WICHITA		TOTAL	
One	92	33%	52	36%	56	37%	200	35%
Two	187	66%	88	62%	92	62%	367	64%
More than two	2	1%	3	2%	1	1%	6	1%
	281	100%	143	100%	149	100%	573	100%

Observations

- A. 64% of the total sample had 2 incomes, 35% had 1 income.

## 7. Total family income. \*\*

	LINCOLN		SALINA		WICHITA		TOTAL	
Less - \$15,000	7	2%	7	5%	0	0%	14	2%
\$15,000 - \$21,000	18	7%	11	8%	11	8%	40	7%
\$22,000 - \$28,000	38	14%	18	13%	3	2%	59	12%
\$29,000 - \$35,000	53	19%	33	24%	15	11%	101	18%
\$36,000 - \$42,000	50	18%	19	14%	24	17%	93	17%
\$43,000 - \$49,000	30	11%	15	11%	19	13%	64	12%
\$49,000 +	79	29%	34	25%	70	49%	183	33%
	275	100%	137	100%	142	100%	554	100%

Observations

- A. The largest percentage of the total sample (33%) were in the (\$49,000 +) income category.
- B. Wichita had a generally higher level of income and Salina a generally lower income level.

8. What type of home do you currently live in? \*\*

	LINCOLN		SALINA		WICHITA		TOTAL	
Single-family home	241	84%	134	93%	128	84%	503	86%
Duplex	9	3%	6	4%	11	7%	26	4%
Three or fourplex	3	1%	1	1%	1	1%	5	1%
Mobile home	0	0%	0	0%	2	1%	2	1%
Townhouse	20	7%	2	1%	2	1%	24	4%
Apartment (larger/fourplex)	12	4%	1	1%	6	4%	19	3%
Condominium	2	1%	0	0%	2	1%	4	1%
	287	100%	144	100%	152	99%	583	100%

Observations

A. 86% of the total sample lived in a single-family home.

B. 93% of the Salina population lived in a single-family home.

9. Do you now own or rent your home?

	LINCOLN		SALINA		WICHITA		TOTAL	
Own	246	87%	134	94%	132	87%	512	89%
Rent	37	13%	9	6%	19	13%	65	11%
	283	100%	143	100%	151	100%	577	100%

Observations

A. 89% of the total sample owned their present home and 11% were presently renting.

10. If you own, how many homes have you owned?

	LINCOLN		SALINA		WICHITA		TOTAL	
One	101	39%	42	30%	44	32%	187	35%
Two	87	34%	40	29%	49	36%	176	33%
Three	31	12%	30	22%	20	15%	81	15%
Four or more	39	15%	26	19%	24	17%	89	17%
	258	100%	138	100%	137	100%	533	100%

\*Assumed that (584 - 533 = 51) participants had not owned a home.

Observations

A. 91% of the sample had owned at least 1 home and 9% had not owned a home.

B. A greater percentage of the Salina population (41%) had owned 3 or more homes. This coincides with a generally older sample population.

11. How soon do you plan to buy a home? \*\*

	LINCOLN		SALINA		WICHITA		TOTAL	
Within 6 months	28	10%	10	7%	21	14%	59	11%
Within 1 year	28	10%	11	8%	25	17%	64	11%
Beyond 1 year	77	29%	21	16%	49	33%	147	26%
Just looking	138	51%	95	69%	55	36%	288	52%
	271	100%	137	100%	150	100%	558	100%

Observations

A. 22% of the total sample were planning to buy a home within 1 year. 52% were just looking.

B. Wichita had the highest percentage (31%) of the sample planning to buy within 1 year. Salina had the lowest percentage of the sample (15%) and Lincoln (20%) in the near future homebuying market.

12. If you intend to buy a home, what reason(s) have led you to consider a new home? (Check all that apply)

	LINCOLN		SALINA		WICHITA		TOTAL	
More space	106	37%	32	28%	62	38%	200	35%
New location	70	24%	27	23%	43	26%	140	25%
Amenities	12	4%	7	6%	11	7%	30	5%
Job transfer	9	3%	9	8%	10	6%	28	5%
Less space	11	4%	3	3%	6	4%	20	4%
Less yardwork	19	7%	11	9%	11	7%	41	7%
Want to own, you now rent	23	8%	7	6%	9	5%	39	7%
Retirement home	16	6%	12	10%	8	5%	36	6%
Other	24	7%	8	7%	5	2%	37	6%
	290	100%	116	100%	165	100%	571	100%

Observations

A. 'More space' received the highest frequency response with 35% and 'new location' was second highest with 25%. 'Less yardwork' and 'wanting to own' were next with 7%.

B. Retirement received the highest response (10%) from the Salina sample as did less yardwork (9%).

C. 'Wanting to own' received the greatest response (8%) in Lincoln.

D. 'Looking for less space' received a slightly lower, but not significant, response (3% compared to 4% in Lincoln and Wichita).

E. Even though a greater percentage of the Salina sample are looking for a retirement home, they are not looking for less space. They are, however, looking for less yardwork. (Older sample population and close to military base)

F. There appears to be a higher job transfer rate in the Salina sample.

G. Amenities are more important to the Wichita sample and not as important to the Lincoln sample.

### Results (Children)

11. How soon do you plan to buy a home? \*\*

	WITH CHILDREN	WITHOUT CHILDREN	TOTAL
Within 6 months	33 12%	26 9%	59 11%
Within 1 year	35 13%	29 10%	64 11%
Beyond 1 year	53 20%	94 32%	147 26%
Just looking	145 55%	143 49%	288 52%
	266 100%	292 100%	558 100%

### Observations

A. A larger percentage of those individuals with children plan to buy a home within 1 year (25%)

B. A larger percentage of those individuals with children were also just looking, with no intention to buy.

C. A larger percentage of individuals without children plan to buy beyond 1 year (32%).

### Results (Own-Rent)

11. How soon do you plan to buy a home? \*\*

	OWN HOME	RENT HOME	TOTAL
Within 6 months	45 9%	13 21%	58 11%
Within 1 year	52 11%	11 17%	63 11%
Beyond 1 year	114 23%	31 49%	145 26%
Just looking	278 57%	8 13%	286 52%
	489 100%	63 100%	552 100%

### Observations

A. A greater percentage of those who rented their home planned to buy within 1 year (38%).

B. Only a small portion (13%) of those individuals who were presently renting their home were just looking, with no intention to buy.

### Results (Age)

#### 11. How soon do you plan to buy a home? \*\*

AGE	WITHIN 6 MONTHS		WITHIN 1 YEAR		BEYOND 1 YEAR		JUST LOOKING		TOTAL
Less - 20	2	1%	0	0%	2	22%	5	56%	9 2%
21 - 29	7	7%	13	13%	52	54%	25	26%	97 17%
30 - 39	35	14%	39	16%	56	23%	117	47%	247 44%
40 - 49	10	9%	8	8%	20	19%	68	64%	106 19%
50 - 60	5	7%	4	5%	11	14%	56	74%	76 14%
60 +	0	0%	0	0%	5	23%	17	77%	22 4%
	59	11%	64	11%	146	26%	288	52%	557 100%

### Observations

A. A greater percentage of individuals between the ages of 30-39 plan to buy a home within 1 year. (Homebuying age)

B. The greatest percentage of individuals who were just looking, with no intention to buy, were 50 years and older.

### Summary of Sample Profile

The sample population was composed of a relatively even distribution of males and females. The larger portion of the sample ranged between the ages of 21 and 60 with the '30-39' age group being the most strongly represented (44%). The majority (90%) of the sample population was married and approximately half (47%) of the sample had children at home. The sample population was generally well educated with 80% having some college education and 48% having college degrees. Family income levels were generally high with 80% having a total income of over \$29,000.00 and 33% having a total income of over \$49,000.00. Over half (64%) of the households

were two income households. The majority of the sample owned their present home (89%), and lived in a single-family detached house (86%). Over half (65%) of the sample population had owned at least 2 homes and over half (52%) were just looking, with no intention to buy. The sample populations' two primary reasons for considering a new home were 'looking for more space' and 'looking for a new location'.

#### Conclusions for Sample Profile

The sample population included a good representation of the general home buying population with respect to age, children, and number of household incomes. The results support evidence from previous studies that a greater number of households are becoming two income households. The high education and income levels of the sample population seem to indicate that these groups of the population are primarily the ones who can afford to consider a new home. This group of the sample population may then be representative of the average homebuying population of today. Further study of a population with a lower level of education and lower income level could support or disprove the validity of this statement.

This study may have been more representative of the average homebuyer if a greater number of the participants would have lived in a wider range of housing types such as townhouses, mobile homes, apartments, and condominiums. The results do show, however, that the study was relatively effective in reaching potential home buyers. About half (48%) of the survey population was considering the purchase of a home and were not just looking.

## ALTERNATIVE PREFERENCES

This section provides some indication of the type of exterior environment that the sample population of potential home buyers prefer. The following results show the preferences selected by respondents in each location and for the sample population in general. The results also show the preference for each alternative in correlation with several demographic variables. The data tables in this section pertain to questions 1 through 14 on the questionnaire.

### Results (Alternative Preferences)

14. Considering each alternative carefully, indicate which alternative (A,B,C) would be your (First choice, Second choice, Third choice) if you were to buy and live in the home.

	LINCOLN		SALINA		WICHITA		TOTAL	
Alternative A	62	22%	44	31%	46	30%	152	26%
Alternative B	164	57%	75	52%	82	54%	321	55%
Alternative C	60	21%	24	17%	25	16%	109	19%
	286	100%	143	100%	153	100%	582	100%

### Observations

A. 55% of the total sample preferred alternative 'B' which indicates that the majority preferred landscape improvements completed before moving in.

B. 26% of the total sample still preferred the large lot size and were willing to do the site improvements themselves.

C. Only 19% of the total sample preferred the higher density alternative 'C' indicating that even though they wish to have the improvements completed before moving in they do not prefer the high density development.

D. Lincoln had a slightly higher preference for alternative 'C' (higher density) and a slightly lower preference for the large lot size in alternative 'A'.

E. Salina had a higher preference for alternative 'A' with 31% and Wichita was very close with 30%. This might indicate that the size of city has no bearing on the lot size preference. Salina also had a slightly higher preference for the higher density development alternative 'C' (17%) than did Wichita (16%).

## 1. Sex

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Male	72	27%	147	56%	44	17%	263	100%
Female	80	25%	172	54%	65	21%	317	100%
	152	26%	319	55%	109	19%	580	100%

### Observations

A. The greater percentage of both males and females selected alternative 'B' as their first choice.

B. A slightly higher percentage of males preferred alternative 'A' over alternative 'C' and a slightly higher percentage of females preferred alternative 'C' over alternative 'A'.

C. There is no significant difference between males and females in their preference of alternatives. Their responses were within 2% of each other for alternatives 'A' and 'B' and within 4% of each other for alternative 'C'.

## 2. Age. \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Less - 20	0	0%	8	80%	2	20%	10	100%
21 - 29	27	26%	68	65%	10	10%	105	101%
30 - 39	71	28%	140	54%	47	18%	258	100%
40 - 49	32	30%	56	52%	20	19%	109	101%
50 - 60	19	24%	37	47%	22	28%	78	99%
60 +	3	14%	11	50%	8	36%	22	100%
	152	26%	320	55%	109	19%	581	100%

### Observations

A. The largest percentage of all age groups preferred alternative 'B'.

B. With the exception of the participants 20 years old and younger, as the age increased the preference for alternative 'C' increased.

C. Participants between the ages of 21 and 39 indicated a greater preference for alternative 'A' than for alternative 'C'.

D. Participants 50 years old and older indicated a greater preference for alternative 'C' than for alternative 'A'. This preference was most noticeable for those 60 years old and older with 36% selecting alternative 'C' as their first choice.

E. The '40 - 49' age group indicated the strongest preference for alternative 'A' with 30%.

F. No participant 20 years old or younger selected alternative 'A' as their first choice.

3. Marital status. \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Single	7	18%	24	63%	7	18%	38	99%
Married	145	28%	288	55%	92	18%	525	101%
Divorced	0	0%	6	50%	6	50%	12	100%
Separated	0	0%	1	100%	0	0%	1	100%
Widow/Widower	0	0%	0	0%	4	100%	4	100%
	152	26%	319	55%	109	19%	580	100%

Observation

A. The greater percentage of married, single, and separated participants preferred alternative 'B' over the other alternatives. The divorced participants were divided equally between alternatives 'B' and 'C' and the widow/widowers preferred alternative 'C'.

B. The married participants indicated a stronger preference for alternative 'A' (28%) than for alternative 'C' (18%).

C. The single participants were divided equally in their preference for alternative 'A' and alternative 'C'.

D. Although the number of respondents are very small for divorced, and widow/widower; these groups indicated a stronger preference for alternative 'C' than for alternative 'A'.

4. Enter the number of children at home (1,2,3..) in each age category.

(Ages 0 - 5)	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
0 - Children	72	26%	138	50%	65	24%	275	100%
1 - Child	20	23%	48	55%	20	23%	88	101%
2 - Children	12	32%	20	53%	6	16%	38	101%
3 - Children	4	33%	5	42%	3	25%	12	100%
	108	26%	211	51%	94	22%	413	99%

\*These are the number of responses (not the number of children)

(Ages 6 - 10)	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
0 - Children	128	26%	267	54%	95	19%	490	99%
1 - Child	17	25%	40	58%	12	17%	69	100%
2 - Children	5	50%	5	50%	0	0%	10	100%
3 - Children	1	33%	2	67%	0	0%	3	100%
	151	26%	314	55%	107	19%	575	100%

\*These are the number of responses (not the number of children)

(Ages 11 - 15)	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
0 - Children	128	27%	264	55%	89	19%	481	101%
1 - Child	17	24%	39	56%	14	20%	70	100%
2 - Children	5	25%	11	55%	4	20%	20	100%
3 - Children	1	100%	0	0%	0	0%	1	100%
	151	26%	314	55%	107	19%	572	100%

\*These are the number of responses (not the number of children)

(Ages 15 +)	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
0 - Children	131	26%	280	56%	87	17%	498	99%
1 - Child	16	29%	24	43%	16	29%	56	101%
2 - Children	2	17%	7	58%	3	25%	12	100%
3 - Children	2	33%	3	50%	1	17%	6	100%
	151	26%	314	55%	107	19%	572	100%

\*These are the number of responses (not the number of children)

### Observations

A. Participants with children in all age groups strongly indicated that alternative 'B' was their first choice.

B. Participants with children 15 years old and younger indicated a greater preference for alternative 'A' than for alternative 'C'. The only exception was that for respondents with 1 child 5 years old or younger there was an equal preference (23%) for both alternative 'A' and 'C'.

### 5. Level of formal education.

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Some high school	2	22%	5	56%	2	22%	9	100%
High school complete	33	31%	53	50%	20	19%	106	100%
Some college	41	22%	112	61%	30	16%	183	99%
College degree	49	28%	95	54%	33	19%	177	101%
Graduate study	27	26%	53	51%	23	22%	103	99%
	152	26%	318	55%	108	19%	578	100%

### Observations

A. There was a greater preference for alternative 'B' regardless of the level of education.

B. There is a general indication that regardless of the level of education, there is a slightly stronger preference for alternative 'A' than for alternative 'C'.

#### 6. Number of incomes in household.

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
One	53	27%	100	51%	45	23%	198	101%
Two	977	26%	206	56%	64	17%	367	99%
More than two	1	20%	4	80%	0	0%	5	100%
	151	26%	310	54%	109	19%	570	99%

### Observations

A. Regardless of how many incomes in the household, alternative 'B' was the most preferred.

B. Households with only one income indicated a slightly higher preference for alternative 'C' than did households with 2 or more incomes.

#### 7. Total family income.

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Less - \$15,000	4	29%	7	50%	3	21%	14	100%
\$15,000 - \$21,000	7	18%	27	69%	5	13%	39	100%
\$22,000 - \$28,000	14	24%	38	64%	7	12%	59	100%
\$29,000 - \$35,000	26	26%	55	54%	20	20%	101	100%
\$36,000 - \$42,000	20	22%	58	62%	15	16%	93	100%
\$43,000 - \$49,000	17	27%	31	48%	16	25%	64	100%
\$49,000 +	60	33%	82	45%	39	22%	181	100%
	148	27%	298	54%	105	19%	551	100%

### Observations

A. For all income levels, alternative 'B' was indicated as the most preferred.

B. For all income levels, there was a greater preference for alternative 'A' than for alternative 'C'.

8. What type of home do you currently live in? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Single-family home	140	28%	271	54%	89	18%	500	100%
Duplex	4	15%	21	81%	1	4%	26	100%
Three or fourplex	1	20%	2	40%	2	40%	5	100%
Mobile home	2	100%	0	0%	0	0%	2	100%
Townhouse	3	13%	11	46%	10	42%	24	101%
Apartment (larger/fourplex)	2	11%	11	58%	6	32%	19	101%
Condominium	0	0%	3	75%	1	25%	4	100%
	152	26%	319	55%	109	19%	580	100%

Observations

A. The greatest percentage of participants, with exception of those living in a mobile home, indicated a preference for alternative 'B'.

B. Alternative 'C' was preferred over alternative 'A' by those participants living in three and fourplexes, townhouses, larger apartment buildings and condominiums. In other words, those already living in higher density situations.

C. The sample sizes of all housing types except single-family detached are so small that little confidence can be put in these results.

D. Those participants living in single-family detached homes indicated a slightly higher preference for alternative 'A' than for alternative 'C'.

9. Do you now own or rent your home? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Own	140	28%	271	53%	98	19%	509	100%
Rent	10	15%	45	69%	10	15%	65	99%
	150	26%	316	55%	108	19%	574	100%

Observations

A. A greater percentage of both those who owned and those who rented, preferred alternative 'B'.

B. Those who owned their home indicated a slightly greater preference for alternative 'A' than for alternative 'C'.

C. For those who rented their home, there was an equal preference indicated for both alternative 'A' and alternative 'C'.

10. If you own, how many homes have you owned? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
One	47	25%	112	60%	28	15%	187	100%
Two	51	29%	96	55%	29	16%	176	100%
Three	23	29%	31	39%	26	33%	80	101%
Four or more	22	25%	46	53%	19	22%	87	100%
	143	27%	285	54%	102	19%	530	100%

Observations

- A. Regardless of how many homes owned, alternative 'B' was indicated as the most preferred.
- B. Those participants who had owned 3 homes indicated a slightly higher preference for alternative 'C' than for alternative 'A'.
- C. For those participants who had owned 4 or more homes indicated a slightly higher preference for alternative 'A' than for alternative 'C'.
- D. Those participants owning 1 or 2 homes indicated a greater preference for alternative 'A' than for alternative 'C'.

11. How soon do you plan to buy a home?

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Within 6 months	12	20%	32	54%	15	25%	59	99%
Within 1 year	19	30%	33	52%	12	19%	64	101%
Beyond 1 year	41	28%	80	55%	25	17%	146	100%
Just looking	74	26%	156	55%	56	20%	286	101%
	146	26%	301	54%	108	19%	555	99%

Observations

- A. Alternative 'B' was indicated as the most preferred, regardless of when the participants intended to buy or if they were just looking.
- B. Those intending to buy within 6 months indicated a greater preference for alternative 'C' than for alternative 'A'.
- C. Those intending to buy at a later time, within 1 year or beyond, indicated a greater preference for alternative 'A' than for alternative 'C'.

12. If you intend to buy a home, what reason(s) have led you to consider a new home? (Check all that apply)

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
More space	63	32%	108	54%	29	15%	200	101%
New location	40	29%	76	54%	24	17%	140	100%
Amenities	6	20%	11	37%	13	43%	30	100%
Job transfer	6	21%	16	57%	6	21%	28	99%
Less space	1	5%	11	55%	8	40%	20	100%
Less yardwork	2	5%	16	39%	23	56%	41	100%
Want to own, you now rent	5	13%	28	72%	6	15%	39	100%
Retirement home	8	22%	18	50%	10	28%	36	100%
Other	9	24%	22	59%	6	16%	37	99%
	140	25%	306	54%	125	22%	571	101%

#### Observations

A. Alternative 'B' was indicated generally as the most preferred alternative, however, respondents looking for 'amenities' and 'less yard work' preferred alternative 'C'.

B. The percentages indicated equal preference for alternative 'A' and alternative 'C' by those considering a job transfer.

C. There was a generally stronger preference toward alternative 'A' than toward alternative 'C' by those participants looking for more space and looking for a new location.

D. There was a generally stronger preference toward alternative 'C' than toward alternative 'A' by those participants wanting to own, considering retirement, looking for amenities, looking for less space, and looking for less yardwork.

#### Summary of Alternative Preferences

The majority (55%) of the total sample selected alternative 'B' as their first choice. Alternative 'A' was the second most preferred (26%) and alternative 'C' was the least preferred (19%).

Alternative 'B' was also generally preferred over the other two alternatives when correlated with each of the demographic variables. A few exceptions were as follows. Divorced respondents were divided equally between alternatives 'B' and 'C' and those widowed preferred alternative 'C'. Respondents with 2 children between the ages of 6-10 were divided

equally between alternative 'A' and 'B' and those with 3 children between the ages of 11-15 preferred alternative 'A'. Alternative 'A' was also preferred by respondents living in a mobile home. There were only 2 responses (probably husband and wife), however, and little confidence can be placed on this preference. One final exception to the preference for alternative 'B' was respondents looking for 'amenities' and/or less yard work preferred alternative 'C'.

The results also showed that males had a slightly greater preference for alternative 'A' than did females and females had a slightly greater preference for alternative 'C' than did the males.

There was almost no difference in alternative preference for those respondents who had children regardless of age. Those with younger children (ages 0-5) did have a slightly greater preference (22%) for alternative 'C' than did the respondents with older children (19%).

According to education level, number of incomes, and total family income, alternative 'A' was preferred over alternative 'C'. Respondents presently living in higher density situations such as apartment buildings, townhouses, and condominiums had a greater preference for alternative 'C' than for alternative 'A'. Those who were presently renting their home were equally divided between alternatives 'A' and 'C'.

The results also showed that those who planned to buy a home within 6 months had a greater preference for alternative 'C' than for alternative 'A'. Respondents in the longer range buying market, however, showed a greater preference for alternative 'A' than for alternative 'C'.

### Conclusions for Alternative Preferences

The majority of the sample population preferred alternative 'B'. This would indicate that the home buying population prefers a smaller well developed lot rather than the large lot, which offers more land for the money, but requires the improvements to be completed by the owner.

The results also indicated that even though the home buyers are preferring the smaller lot, higher density development alternative 'B', they do not prefer the smallest lot, highest density development alternative 'C' which included community amenities. The sample population in general would prefer the large, less developed lot of alternative 'A' rather than the small well developed lot of alternative 'C' as a second choice.

## Results (Location)

13. Is the exterior environment (yard area) an important consideration in your selection of a new home? \*\*

	LINCOLN		SALINA		WICHITA		TOTAL	
Yes, very important	163	57%	65	46%	90	60%	318	55%
Yes, somewhat important	116	41%	62	44%	52	34%	230	40%
No, not very important	5	2%	15	10%	9	6%	29	5%
	284	100%	142	100%	151	100%	577	100%

## Observations

A. 55% of the total sample said that exterior environment was a very important consideration in buying a new home. Only 5% said it was not very important.

B. Salina had the greater percentage (10%) who said the exterior environment was not very important. Lincoln had the largest percentage (98%) who felt that the exterior environment was very or somewhat important.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	LINCOLN		SALINA		WICHITA		TOTAL	
Yardwork	139	[4]	63	[4]	57	[5]	259	[4]
Outdoor privacy	179	[2]	88	[2]	92	[3]	359	[2]
Size of yard	198	[1]	93	[1]	119	[1]	410	[1]
Outdoor living area	176	[3]	78	[3]	98	[2]	352	[3]
Allow owner to landscape	67	9	43	8	51	7	161	8
Landscaped saves time/work	107	6	61	[5]	51	8	219	6
Allow for garden/plant.beds	124	[5]	56	6	61	[4]	241	[5]
Allow for home add./hot tub	76	8	46	7	54	6	176	7
Allow observation of children	91	7	28	10	39	9	158	9
Swimming pool	50	10	36	9	36	10	122	10
Tennis courts	33	13	15	13	17	12	65	13
Playground area	50	11	20	12	16	13	86	11
Playfields	28	14	10	14	12	15	50	14
Public open space	27	15	9	15	14	14	50	15
Jogging/walking trails	39	12	21	11	21	11	81	12
Other	13	16	5	16	6	16	24	16

\*First column is the number of responses and the second column is the "rank order" of the responses. The top 5 responses are in [ ].

## Observations

A. The factor that was most frequently checked as being influential in the choice of alternative was 'size of yard'. This was true for all 3 cities.

B. 'Outdoor privacy' was ranked as second most influential factor for the total sample, the Lincoln and the Salina samples. It was ranked third by the Wichita sample.

C. 'Outdoor living area' was ranked in the top three for factors that were influential in making a choice of alternatives. 'Outdoor living area' ranked 3rd for the total sample, Lincoln, and Salina; and 2nd for Wichita.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14?

(Weighted)	LINCOLN		SALINA		WICHITA		TOTAL	
Yardwork	144	4	64	5	76	4	284	4
Outdoor privacy	316	[1]	140	[1]	141	[2]	601	[1]
Size of yard	311	[2]	112	[2]	168	[1]	591	[2]
Outdoor living area	207	[3]	76	4	122	[3]	405	[3]
Allows owner to landscape	62	8	32	8	34	9	128	8
Landscaped saves time/work	133	5	85	[3]	59	5	277	5
Allows for garden/plant.beds	91	6	45	6	50	6	186	6
Allows for home add./hot tub	37	10	33	7	37	8	107	9
Allows observation of children	72	7	25	9	38	7	135	7
Swimming pool	42	9	23	10	30	10	95	10
Tennis courts	11	14	6	13	6	12	23	14
Playground area	28	11	10	11	6	13	44	11
Playfields	6	15	0	15	3	14	9	15
Public open space	20	12	5	14	3	15	28	13
Jogging/walking trail	19	13	7	12	11	11	37	12

\*The first column is the weighted value and the second column is the "rank order" of the important factors.

#### Observations

A. 'Outdoor privacy' was considered the most important factor in choosing an alternative by the total sample, the Lincoln and the Salina samples. It was considered second most important by the Wichita sample.

B. 'Size of yard' was considered the second most important factor for the total sample, Lincoln, and Salina. 'Size of yard' was considered the most important factor for the Wichita sample.

C. 'Outdoor living area' was considered the third most important factor for the total sample, Lincoln, and Wichita. For the Salina sample it ranked fourth most important.

21. In general, how often do you use your yard area now, weather permitting.

	LINCOLN		SALINA		WICHITA		TOTAL	
Very often (4-5 times/wk)	123	44%	49	35%	65	44%	237	42%
Somewhat often (1-2 times/wk)	83	29%	57	40%	46	31%	186	33%
Occasionally (2-3 times/mo)	44	16%	15	11%	20	14%	79	14%
Seldom (less 2-3 times/mo)	17	6%	13	9%	11	8%	41	7%
Don't have a yard	10	4%	4	3%	3	2%	17	3%
Yard area not important	4	1%	3	2%	2	1%	9	1%
	281	100%	141	100%	147	100%	569	100%

#### Observation

A. The greater percentage of the total sample (42%) indicated that they use their yard area very often (4-5 times/week). 33% of the total sample use their yard area (1-2 times/week). This indicates that 75% of the total sample use their yard area weekly.

B. Only 1% of the total sample indicated that the yard area was not important to their lifestyle.

22. How would you anticipate using your yard area? (Check all that apply)

	LINCOLN		SALINA		WICHITA		TOTAL	
Patio (relaxing/gathering)	250	[1]	118	[1]	133	[1]	501	[1]
Vegetable garden	124	4	69	[3]	69	[3]	262	4
Flowers	186	[2]	82	[2]	80	[2]	348	[2]
Childrens play	154	[3]	58	4	70	5	282	[3]
Addition to house	47	7	32	7	23	7	102	7
Small pool/hot tub	66	6	57	5	76	4	199	6
Working in yard (landscaping)	113	5	55	6	60	6	228	5
Other	2	8	1	8	7	8	10	8

\*The first column is the number of responses and the second column is the "rank order" of response frequency.

#### Observations

A. The greatest response, for all three cities, was 'patio for relaxing and gathering'.

B. The second most frequent response, for all three cities, was 'planting perrenial and annual flowers'.

C. The third most frequent response for the total sample and for Lincoln was 'childrens play'. For Salina and Wichita the third most frequent response was 'plant a vegetable garden'.

## Results (Alternatives)

13. Is the exterior environment (yard area) an important consideration in your selection of a new home?

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yes, very important	83	55%	167	53%	66	62%	316	55%
Yes, somewhat important	57	38%	140	44%	33	31%	230	40%
No, not very important	11	7%	11	3	7	7%	29	5%
	151	100%	318	100%	106	100%	577	100%

## Observations

A. The greater percentage of the participants indicated that the yard area was an important consideration in selecting a new home, regardless of their alternative preference.

B. Of the participants who indicated that the yard area was a 'very important consideration in their selection of a new home, 53% preferred alternative 'B'. 44% of the participants who indicated that the yard area was a 'somewhat important' consideration in the selection of a new home preferred alternative 'B'.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yardwork	32	8	154	[4]	73	[1]	259	[4]
Outdoor privacy	100	[4]	215	[2]	44	7	359	[2]
Size of yard	118	[1]	238	[1]	54	[5]	410	[1]
Outdoor living area	110	[3]	206	[3]	36	10	352	[3]
Allow owner to landscape	114	[2]	40	9	7		161	8
Landscaped saves time/work	3		151	[5]	65	[2]	219	6
Allow for garden/plant.beds	95	[5]	133	6	13		241	[5]
Allow for home add./hot tub	73	6	85	8	18		176	7
Allow observation of children	37	7	106	7	15		158	9
Swimming pool	28	9	31	10	63	[3]	122	10
Tennis courts	4		11		50	6	65	13
Playground area	17	10	26		43	8	86	11
Playfields	11		11		28		50	14
Public open space	4		9		37	9	50	15
Jogging/walking trails	5		18		58	[4]	81	12
Other	10		10		4		24	16

\*First column is the number of responses and the second column is the "rank order" of the ten most frequent responses. The top 5 responses are in [ ].

### Observations

A. 'Outdoor privacy', 'yard size', and 'outdoor living area' were checked more frequently by the respondents who selected alternatives 'A' and 'B'.

B. 'Yard work', 'landscaped yard saves time and work for owner', 'swimming pool', and 'jogging/walking trails, were checked more frequently by respondents who selected alternative 'C'.

C. 'Yard not landscaped allows the owners to landscape the yard their own way' was the second most frequently checked factor by those who selected alternative 'A'.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14. \*\*

(Weighted)	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Yardwork	24 8	172 5	88 [1]	284 4
Outdoor privacy	197 [1]	359 [1]	55 5	601 [1]
Size of yard	196 [2]	270 [2]	63 4	591 [2]
Outdoor living area	118 [3]	260 [3]	26 8-9	405 [3]
Allows owner to landscape	110 4	17 9-10	1	128 8
Landscaped saves time/work	2	192 4	83 [2]	277 5
Allows for garden/plant beds	82 5	98 6	5	186 6
Allows for home add./hot tub	29 6	56 8	6	107 9
Allows observation of children	26 7	90 7	19	135 7
Swimming pool	12 9	17 9-10	66 [3]	95 10
Tennis courts	0	2	21 10	23 14
Playground area	2	9	33 6	44 11
Playfields	5 10	3	1	9 15
Public open space	0	2	26 8-9	28 13
Jogging/walking trail	0	5	32 7	37 12

\*The first column is the weighted value and the second column is the "rank order" of the ten most important factors. The top 3 responses are in [].

### Observations

A. The three most important factors in making the choice of an alternative were the same for respondents who selected alternatives 'A' and 'B'. These were 'outdoor privacy' as most important, 'size of yard' as second most important, and 'outdoor living area' as third most important.

B. For those who selected alternative 'C', 'yard work' was the most important factor, 'landscaped yard saves time and work for owner' was second most important, and 'swimming pool' was third most important.

17. From the list in the previous question, which are the three least important factors in making your choice in question 14. \*\*

(Weighted)	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Yardwork	27 8	40 10	27 4-5	104 7
Outdoor privacy	0	9	5	14 14
Size of yard	3	7	19 9-10	29 13
Outdoor living area	0	0	5	5 15
Allows owner to landscape	3	64 7	32 [2]	99 10
Landscaped saves time/work	37 7	26	2	65 11
Allows for garden/plant.beds	10 10	22	16	48 12
Allows for home add./hot tub	8 11	59 8	36 [1]	103 8
Allows observation of children	25 9	55 9	20 8	101 9
Swimming pool	60 5	206 [1]	27 4-5	293 [2]
Tennis courts	94 [1]	187 [2]	24 7	306 [1]
Playground area	53 6	90 6	15 12	163 6
Playfields	71 4	158 [3]	30 [3]	261 [3]
Public open space	79 [3]	117 4	25 6	217 5
Jogging/walking trail	86 [2]	115 5	19 9-10	222 4

\*The first column is the weighted value and the second column is the "rank order" of the ten least important factors. The top 3 responses are in [].

#### Observations

A. There were greater differences among the three groups as to what they felt were the least important factors. In general, for those who selected alternatives 'A' and 'B' the public amenities were least important.

B. For those who selected alternative 'A', 'tennis courts' were the least important, 'jogging/walking trails' were second least important, and 'public open space' was third least important.

C. For those who selected alternative 'B', 'swimming pool' was the least important, 'tennis courts' were second least important, and 'playfields' were third least important.

D. For those who selected alternative 'C', 'room in yard allows for home additions or hot tub' was the least important, 'yard not landscaped allows owners to landscape the yard their own way' was the second least important, and 'playfields' were the third least important.

21. In general, how often do you use your yard area now, weather permitting. \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Very often (4-5 times/wk)	80	55%	116	37%	39	36%	235	42%
Somewhat often (1-2 times/wk)	44	30%	114	36%	28	26%	186	33%
Occasionally (2-3 times/mo)	12	8%	51	16%	16	15%	79	14%
Seldom (less 2-3 times/mo)	5	3%	20	6%	16	15	41	7%
Don't have a yard	4	3%	9	3%	4	4%	17	3%
Yard area not important	0	0%	3	1%	5	5%	8	1%
	145	100%	313	100%	108	100%	566	100%

#### Observation

A. Those who selected alternative 'A' as their first choice used their yard area more frequently than those who chose alternative 'B' or 'C'. Those who selected alternative 'B' as their first choice used their yard area more frequently than those who chose alternative 'C'.

B. As the frequency of yard area use decreased the preference for the smaller lot size increased.

22. How would you anticipate using your yard area? (Check all that apply)

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Patio (relaxing/gathering)	128	[1]	284	[1]	89	[1]	501	[1]
Vegetable garden	98	[3]	131	4	33	4	262	4
Flowers	102	[2]	194	[2]	52	[2]	348	[2]
Childrens play	85	5	162	[3]	35	[3]	282	[3]
Addition to house	48	7	44	7	10	7	102	7
Small pool/hot tub	67	6	102	6	30	5	199	6
Working in yard (landscaping)	88	4	118	5	22	6	228	5
Other	5	8	4	8	1	8	10	8

\*The first column is the number of responses and the second column is the "rank order" of response frequency.

#### Observations

A. Regardless of which alternative was preferred, 'Patio for relaxing and gathering' was ranked first and 'flowers' were ranked second for anticipated use of the yard area.

B. Those who selected alternative 'A' ranked 'Vegetable garden' third for anticipated use of yard area. 'Childrens play' was ranked third by participants who selected alternatives 'B' and 'C'.

Results (Age)

21. In general, how often do you use your yard area now, weather permitting. \*\*

AGE	VERY OFTEN	SOMEWHAT OFTEN	OCCASIONALLY	VERY SELDOM	NO YARD	NOT IMPORTANT.
Less - 20	2 22%	3 33%	3 33%	1 11%	0 0%	0 0%
21 - 29	34 33%	38 37%	16 16%	7 7%	7 7%	0 0%
30 - 39	129 51%	78 31%	29 11%	15 6%	3 1%	1 0%
40 - 49	35 33%	36 34%	20 19%	9 9%	3 3%	2 2%
50 - 60	25 33%	29 38%	7 9%	7 9%	3 4%	5 7%
60 +	11 52%	2 10%	4 19%	2 10%	1 5%	1 5%
	236 42%	186 33%	79 14%	41 7%	17 3%	9 2%

Observation

A. A greater percentage of individuals between the ages 30-49 and those individuals 60 years and older used their yard area very often (4-5 times/week).

B. Respondents between the ages 30-49 used their yard area most often.

C. A greater percentage of individuals between the ages of 50-60 considered the yard area not important to their lifestyle.

Results (Total Income)

21. In general, how often do you use your yard area now, weather permitting. \*\*

TOTAL INCOME	VERY OFTEN	SOMEWHAT OFTEN	OCCASIONALLY	VERY SELDOM	NO YARD	NOT IMPORTANT.
< \$15,000	4 33%	2 17%	3 25%	2 17%	0 0%	1 8%
\$15-\$21,000	11 29%	11 32%	8 21%	2 5%	4 11%	2 5%
\$22-\$28,000	24 41%	17 29%	5 8%	8 14%	5 8%	0 0%
\$29-\$35,000	35 35%	45 45%	13 13%	3 3%	3 3%	1 1%
\$36-\$42,000	39 43%	26 29%	15 17%	7 8%	2 2%	1 1%
\$43-\$49,000	27 43%	23 37%	9 14%	3 5%	0 0%	1 2%
> \$49,000	85 48%	54 30%	22 12%	13 7%	2 1%	2 1%
	225 42%	178 33%	75 14%	38 7%	16 3%	8 1%

Observation

A. Respondents with higher income levels used their yard area more frequently.

B. A greater percentage of respondents with the lower income levels had indicated that the yard area was not important to their lifestyle.

### Results (Own-Rent)

21. In general, how often do you use your yard area now, weather permitting. \*\*

OWN-RENT	VERY OFTEN		SOMEWHAT OFTEN		OCCASIONALLY		VERY SELDOM		NO YARD		NOT IMPORTANT.	
OWN HOME	211	42%	170	34%	66	13%	33	7%	9	2%	8	2%
RENT HOME	24	37%	13	20%	12	18%	7	11%	8	12%	1	2%
	235	42%	183	33%	78	14%	40	7%	17	3%	9	2%

### Observation

A. Respondents who owned their home used their yard area more often than those who rented their homes.

### Summary for Outdoor Living Area

The majority of the total sample (55%) indicated that the exterior environment was a very important consideration in the selection of a home. Ninety five percent of the total sample indicated that it was at least somewhat important. In general the sample populations of Lincoln (57%) and Wichita (60%) considered the yard area more important than did the Salina sample (46%). There was no significant difference with respect to alternative preferences. Seventy five percent of the total sample used their yard area at least 1-2 times per week. 'Outdoor privacy', an important factor in the outdoor living area, was ranked as the most important factor for participants choosing alternative 'A' and 'B'. A more detailed analysis can be found in the 'Outdoor privacy' section on page 93. 'Size of yard' and 'outdoor living area' were included in the 3 most important factors for selecting one of the alternatives. 'Size of yard' was

ranked slightly higher by the Wichita sample and 'outdoor living area' was ranked higher by the Lincoln and Wichita samples.

When asked about anticipated uses of the yard area, 'patio (relaxing/gathering)' ranked first and 'flowers' ranked second for all three locations. Wichita and Salina ranked 'vegetable garden' as third and Lincoln ranked 'childrens play' as third.

Respondents who selected alternatives 'A' and 'B' ranked 'size of yard' as the second most important factor in selecting an alternative and 'outdoor living area' as the third most important factor. These factors were not as important to respondents who selected alternative 'C'.

The respondents who selected alternative 'C' ranked 'room in yard allows for home or hot tub' as the least important factor for selecting an alternative.

The people who selected alternative 'A' used their yard area more often than those who selected alternatives 'B' or 'C'. Those who selected alternative 'C' used their yard area the least.

For the total sample the '30-39' age group used their yard area most often. Eighty one percent used the yard area at least 1-2 times per week. A very large percentage of those 60 years and older also used their yard area very often. The results also indicated that the respondents with higher income levels used their yard areas more often than those of lesser incomes (under \$28,000). The respondents who rented their home also used their yard area less often than those who owned their home.

#### Conclusions of Outdoor Living Area

The outdoor living area of the home is a very important aspect in selecting a home. This is supported by the fact that over half of the respondents indicated that it was very important and 95% indicated that it

was at least somewhat important. Further evidence is provided by the fact that 75% of the respondents use their yard area at least 1-2 times per week and that 'outdoor living area' was ranked in the top 3 most important factors for selecting an alternative.

Activity around the patio was the most popular anticipated use and having areas to plant flowers was also very important to those participating in the survey. Other activities that were important in the exterior home environment were childrens play and planting a vegetable garden.

If the landscape improvements are to be completed by the development team for future home sites as was suggested by the preference for alternative 'B' in the previous section, it will be important to give special attention to the area around the patio. Giving special consideration for the enhancement in this area of the home will provide a more desirable and enjoyable exterior environment for the owner and increase the saleability of the home for the developer. It is also apparent that people want to be able to add a personal touch to their home environment with flowers. The desire for flowers and a vegetable garden also indicated that people do enjoy a certain amount of gardening.

The results also indicate that even though home buyers are preferring smaller lot sizes, they still desire enough space to accommodate some personal and family activities on the home site, such as growing a garden and childrens play.

## YARD WORK

Yard work seemed to be an important consideration in determining preferences in the exterior home environment. Yard work can be viewed as a positive factor, a negative factor, or as having little influence in the selection of a new home. The following results deal with yard work and include information gained from questions 15, 16, and 18-20.

### Results (Location)

18. Do you enjoy working in the yard?

	LINCOLN		SALINA		WICHITA		TOTAL	
Yes, and do regularly	113	40%	51	36%	60	39%	224	39%
Yes, but don't have time	113	40%	53	38%	51	34%	217	38%
Prefer to do other things	56	20%	37	26%	41	27%	134	23%
	282	100%	141	100%	152	100%	575	100%

### Observations

A. 77% of the total sample enjoyed working in the yard but only half of the 77% (39%) had time to work in it regularly. 23% of the total sample had other things they preferred to do.

B. Lincoln and Wichita had a greater percentage of people who liked yardwork and did it regularly.

C. Wichita had a higher percentage of people (27%) who preferred to do other things and Salina was very close with (26%).

19. Did the amount of yardwork affect your decision?

	LINCOLN		SALINA		WICHITA		TOTAL	
Yes, I enjoy yardwork	83	30%	41	29%	42	28%	166	29%
No, not significantly	156	55%	76	54%	91	61%	323	56%
Yes, I try to avoid it	43	15%	24	17%	19	11%	84	15%
	282	100%	141	100%	150	100%	573	100%

### Observations

A. In all 3 cities, 'Yardwork' was not significant in affecting the choice of an alternative.

B. 29% of the total sample indicated that yardwork did affect their decision because they liked doing it.

C. Salina had the highest percentage (17%) indicating that yardwork affected their decision because they tried to avoid it.

20. Did the additional landscape improvements of alternatives B and C have an influence on your selection of a home?

	LINCOLN		SALINA		WICHITA		TOTAL	
Yes, prefer them completed	134	49%	75	54%	65	44%	274	49%
No, will do them myself	60	22%	32	23%	33	22%	125	22%
Other factors more important	78	29%	32	23%	51	34%	161	29%
	272	100%	139	100%	149	100%	560	100%

#### Observations

A. 49% of the total sample indicated that the additional landscape improvements in alternatives 'B' and 'C' had an influence on their selection. 51% indicated that other factors were more important or they would do the improvements themselves.

B. 22% of the total sample indicated that they would prefer to do the improvements themselves.

C. 29% indicated that landscape improvements were not as important as other factors in their selection of a home.

D. The Salina sample had the greater percentage preferring the improvements completed.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	LINCOLN	SALINA	WICHITA	TOTAL
Yardwork	139 [4]	63 [4]	57 [5]	259 [4]
Outdoor privacy	179 [2]	88 [2]	92 [3]	359 [2]
Size of yard	198 [1]	93 [1]	119 [1]	410 [1]
Outdoor living area	176 [3]	78 [3]	98 [2]	352 [3]
Allow owner to landscape	67 9	43 8	51 7	161 8
Landscaped saves time/work	107 6	61 [5]	51 8	219 6
Allow for garden/plant.beds	124 [5]	56 6	61 [4]	241 [5]
Allow for home add./hot tub	76 8	46 7	54 6	176 7
Allow observation of children	91 7	28 10	39 9	158 9
Swimming pool	50 10	36 9	36 10	122 10
Tennis courts	33 13	15 13	17 12	65 13
Playground area	50 11	20 12	16 13	86 11
Playfields	28 14	10 14	12 15	50 14
Public open space	27 15	9 15	14 14	50 15
Jogging/walking trails	39 12	21 11	21 11	81 12
Other	13 16	5 16	6 16	24 16

\*First column is the number of responses and the second column is the "rank order" of the responses. The top 5 responses are in [ ].

#### Observations

A. 'Yard work' was the fourth most frequently checked factor for influencing the general populations' choice of alternatives. 'Room in yard allowing for a garden or planting beds' was checked fifth most frequently.

B. 'Yard work' was generally a more influential factor for Lincoln and Salina samples than for the Wichita sample.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14?

(Weighted)	LINCOLN		SALINA		WICHITA		TOTAL	
Yardwork	144	4	64	5	76	4	284	4
Outdoor privacy	316	[1]	140	[1]	141	[2]	601	[1]
Size of yard	311	[2]	112	[2]	168	[1]	591	[2]
Outdoor living area	207	[3]	76	4	122	[3]	405	[3]
Allows owner to landscape	62	8	32	8	34	9	128	8
Landscaped saves time/work	133	5	85	[3]	59	5	277	5
Allows for garden/plant.beds	91	6	45	6	50	6	186	6
Allows for home add./hot tub	37	10	33	7	37	8	107	9
Allows observation of children	72	7	25	9	38	7	135	7
Swimming pool	42	9	23	10	30	10	95	10
Tennis courts	11	14	6	13	6	12	23	14
Playground ares	28	11	10	11	6	13	44	11
Playfields	6	15	0	15	3	14	9	15
Public open space	20	12	5	14	3	15	28	13
Jogging/walking trail	19	13	7	12	11	11	37	12

\*The first column is the weighted value and the second column is the "rank order" of the important factors.

#### Observations

A. 'Yard work' was considered the fourth most important factor in choosing an alternative for the total sample, for Lincoln, and Wichita.  
'Yard work' was considered the fifth most important factor for the Salina sample.

B. 'Landscaped yard saves time and work' was more important to the Salina sample as the third most important factor. It was ranked as the fifth most important factor for the total sample, Lincoln, and Wichita.

C. 'Room in yard allows for a garden or planting beds' was considered the sixth most important factor for all three locations.

D. 'Landscaped yard saves time and work' was more important to the respondents than 'allowing the owners to landscape the yard their own way' for all three locations.

Results (Alternatives)

18. Do you enjoy working in the yard? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yes, and do regularly	87	58%	104	33%	32	30%	223	39%
Yes, but don't have time	42	28%	141	45%	34	31%	217	38%
Prefer to do other things	21	14%	70	22%	42	39%	133	23%
	223	100%	217	100%	133	100%	573	100%

Observations

A. A greater percentage of those who chose alternative 'A' enjoyed yard work and did it regularly (58%). Only 14% of those who chose alternative 'A' preferred to do other things.

B. Only 30% of those who chose alternative 'C' and 33% of those who chose alternative 'B' enjoyed yard work and did it regularly.

C. A greater percentage of those who chose alternative 'C' preferred to do other things (39%)

19. Did the amount of yard work affect your decision? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yes, I enjoy yardwork	61	41%	84	27%	20	18%	165	29%
No, not significantly	86	57%	187	60%	50	46%	323	57%
Yes, I try to avoid it	3	2%	40	13%	39	36%	82	14%
	150	100%	311	100%	109	100%	570	100%

Observations

A. The greatest percentage of responses for each alternative chosen indicated that the amount of yard work did not have a significant affect their decision.

B. For those influenced by yard work, a greater percentage choosing alternative 'A' preferred yardwork over trying to avoid it.

C. For those who chose alternative 'C', a greater percentage indicated that they tried to avoid yard work.

20. Did the additional landscape improvements of alternatives B and C have an influence on your selection of a home? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yes, prefer them completed	11	8%	188	61%	75	71%	274	49%
No, will do them myself	76	52%	37	12%	11	10%	124	22%
Other factors more important	58	40%	83	27%	19	18%	160	29%
	145	100%	308	100%	105	99%	558	100%

#### Observations

A. The greater percentage of those who selected alternative 'A' indicated that yes, the additional landscape improvements did influence their choice because they preferred to complete the landscape improvements themselves.

B. The greater percentage of those who selected alternatives 'B' and 'C' indicated that yes, the additional landscape improvements did influence their choice because they preferred the landscape improvements completed prior to purchase.

C. The largest percentage of those who selected alternative 'A' (40%) indicated that landscape improvements were not as important as other factors in their selection.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yardwork	32	8	154	[4]	73	[1]	259	[4]
Outdoor privacy	100	[4]	215	[2]	44	7	359	[2]
Size of yard	118	[1]	238	[1]	54	[5]	410	[1]
Outdoor living area	110	[3]	206	[3]	36	10	352	[3]
Allow owner to landscape	114	[2]	40	9	7		161	8
Landscape saves time/work	3		151	[5]	65	[2]	219	6
Allow for garden/plant beds	95	[5]	133	6	13		241	[5]
Allow for home add./hot tub	73	6	85	8	18		176	7
Allow observation of children	37	7	106	7	15		158	9
Swimming pool	28	9	31	10	63	[3]	122	10
Tennis courts	4		11		50	6	65	13
Playground area	17	10	26		43	8	86	11
Playfields	11		11		28		50	14
Public open space	4		9		37	9	50	15
Jogging/walking trails	5		18		58	[4]	81	12
Other	10		10		4		24	16

\*First column is the number of responses and the second column is the "rank order" of the ten most frequent responses. The top 5 responses are in [ ].

### Observations

A. 'Yard work' and 'room in yard allows for garden or planting beds' were in the top five most frequently checked factors for selecting an alternative.

B. 'Yard work' was the most frequently checked factor and 'landscaped yard saves time and work' was the second most frequently checked factor for those who selected alternative 'C'.

C. 'Yard not landscaped allows the owners to landscape the yard their own way was the second most frequently checked factor by those who selected alternative 'A'.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14. \*\*

(Weighted)	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yardwork	24	8	172	5	88	[1]	284	4
Outdoor privacy	197	[1]	359	[1]	55	5	601	[1]
Size of yard	196	[2]	270	[2]	63	4	591	[2]
Outdoor living area	118	[3]	260	[3]	26	8-9	405	[3]
Allows owner to landscape	110	4	17	9-10	1		128	8
Landscaped savea time/work	2		192	4	83	[2]	277	5
Allows for garden/plant.beds	82	5	98	6	5		186	6
Allows for home add./hot tub	29	6	56	8	6		107	9
Allows observation of children	26	7	90	7	19		135	7
Swimming pool	12	9	17	9-10	66	[3]	95	10
Tennis courts	0		2		21	10	23	14
Playground area	2		9		33	6	44	11
Playfields	5	10	3		1		9	15
Public open space	0		2		26	8-9	28	13
Jogging/walking trail	0		5		32	7	37	12

\*The first column is the weighted value and the second column is the "rank order" of the ten most important factors. The top 3 responses are in [ ].

### Observations

A. 'Yard work' was ranked 4th and 'landscaped yard saves time and work' was ranked as 5th as important factors by the total sample.

B. For those who selected alternative 'C', 'yard work' was the most important factor and 'landscaped yard saves time and work for owner' was second most important.

Results (Sex)

18. Do you enjoy working in the yard?

	MALES		FEMALES		TOTAL	
Yes, and do regularly	115	44%	108	34%	223	39%
Yes, but don't have time	95	37%	121	39%	216	38%
Prefer to do other things	49	19%	85	27%	134	23%
	259	100%	314	100%	573	100%

Observations

A. Males enjoyed working in the yard and did more regularly (44%) than did females (34%).

B. A greater percentage of females preferred to do other things.

Results (Age)

18. Do you enjoy working in the yard? \*\*

AGE	YES, DO REGULARLY		YES, BUT NO TIME		PREFER TO DO OTHER THINGS		TOTAL	
Less - 20	2	22%	3	33%	4	44%	9	99%
21 - 29	33	32%	52	50%	18	17%	103	100%
30 - 39	105	41%	88	34%	64	25%	257	100%
40 - 49	42	40%	43	41%	20	19%	105	100%
50 - 60	30	39%	21	27%	26	34%	77	100%
60 +	12	52%	9	39%	2	9%	23	100%
	224	39%	216	37%	134	23%	574	100%

Observations

A. A considerably large percentage of respondents (91%) 50 years and older enjoyed yard work and did it regularly. Only 9% indicated that they would prefer to do other things.

B. The largest percentage of respondents who indicated that they enjoyed yard work but didn't have time for it were between the ages of 21-29.

20. Did the additional landscape improvements of alternative B and C have an influence on your selection of a home? \*\*

AGE	YES, PREFER COMPLETE		NO, PREFER TO DO MYSELF		NOT AS IMPORTANT		TOTAL	
Less - 20	7	78%	0	0%	2	22%	9	100%
21 - 29	49	49%	17	17%	34	34%	100	100%
30 - 39	109	43%	61	24%	83	33%	253	100%
40 - 49	48	46%	33	32%	23	22%	104	100%
50 - 60	46	64%	10	14%	16	22%	72	100%
60 +	14	67%	4	19%	3	14%	21	100%
	273	49%	125	22%	161	29%	584	100%

#### Observations

- A. Respondents younger than 20 years and older than 50 years indicated a greater preference for the landscape improvements being completed prior to purchase.
- B. The greatest percentage of respondents who indicated that landscape improvements were not as important as other factors were between the ages of 20 - 39.
- C. The greatest percentage of respondents who indicated that they preferred to complete the landscape improvements themselves were between the ages of 30 - 50.

#### Summary of Yard Work

The majority of the respondents (77%) enjoyed yard work. Approximately half of these, however, indicated that they didn't have time for it. A slightly larger percentage of the Lincoln population enjoyed yard work than did those from Wichita or Salina. The results indicated that a greater percentage of those who selected alternative 'A' enjoyed yard work and did it regularly. A larger percentage of those who selected alternative 'C', the smallest lot size, preferred to do other things and tried to avoid yard work. Approximately half of the total sample indicated that yard work was not a significant factor in making their choice of an alternative. Of the half indicating that yard work did affect their decision, the larger percentage enjoyed it.

There wasn't a significant difference between male and female preferences for yard work, however, a slightly larger percentage of males (44%) enjoyed yard work and did it more regularly than did females (39%). Fifty two percent of the respondents 60 years and older enjoyed yard work and did it regularly. Regardless of age, most respondents enjoyed yard work but approximately half of them didn't have time for it.

The majority of respondents, regardless of location, indicated that yes, the landscape improvements of alternatives 'B' and 'C' did have an influence on their selection of an alternative. Those who selected alternatives 'B' and 'C' preferred the improvements be complete prior to purchase. The majority of those who selected alternative 'A' preferred to complete the landscape improvements themselves.

For all age groups, the majority also preferred the landscape improvements completed prior to purchase. The larger percentage of respondents between the ages of 40-49 preferred to complete the landscape improvements themselves.

'Yard work' was not ranked as one of the top three most important factors in selecting an alternative when analyzed by location, however, it was ranked 4th most important. 'Yard work' was ranked as the most important and 'landscaped yard saves time and work' was ranked second most important by those who selected alternative 'C'. These two factors were also ranked fairly high, 4th and 5th, by those who selected alternative 'B'.

#### Conclusions for Yard Work

The results of this section indicated that about half of the respondents preferred the landscape improvements completed prior to purchase and they are willing to purchase a home on a smaller lot to get these

completed improvements. This seems to indicate that homes with completed improvements, on smaller lots, would be more marketable than the homes where, traditionally, the owner has to complete the improvements. This could be an eye opener for developers who have traditionally left the completion of landscape improvements to the owner and could prove valuable for future development and successful marketing.

When considering completed improvements, some serious attention should be given to the quality of design, materials and installation. Poor quality in any of these areas would decrease the marketability of the home rather than increase it.

The results also indicate that the majority of the people enjoy yard work but many of them don't have time for it. One can conclude that low maintenance landscapes are important to the home buyer. The exterior home environment should provide an opportunity, however, for some yard work activities. These activities may include yard work only in small areas within the home site or a minimal amount of yard work required throughout the entire yard area. Reference to question 22 in the previous section indicated that people prefer working with flowers or vegetable gardens. In the design and development of exterior home environments, areas within the home site could be scaled to accommodate satisfactory amounts of yard work.

#### OUTDOOR PRIVACY

Privacy is a very important aspect of everyones home life. Whether inside our homes or outside within the boundries of our home site, privacy is an important consideration in selecting a new home. Questions 15, 16, 23 and 24 provide information with regard to privacy in the exterior home environment.

Results (Location)

23. Was outdoor privacy an important factor in your decision?

	LINCOLN		SALINA		WICHITA		TOTAL	
Yes, very much	143	51%	75	54%	84	56%	302	53%
Yes, somewhat	104	37%	48	35%	46	31%	198	35%
No, not significantly	32	12%	16	11%	19	13%	67	12%
	279	100%	139	100%	149	100%	567	100%

Observations

A. 53% of the total sample indicated that yes, outdoor privacy was a very important factor in their decision. 35% indicated that outdoor privacy was somewhat important in their decision. This indicates that outdoor privacy was important to 88% of the total sample.

B. 12% of the total sample indicated that no, outdoor privacy was not a significant factor in making their decision.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	LINCOLN		SALINA		WICHITA		TOTAL	
Yardwork	139	[4]	63	[4]	57	[5]	259	[4]
Outdoor privacy	179	[2]	88	[2]	92	[3]	359	[2]
Size of yard	198	[1]	93	[1]	119	[1]	410	[1]
Outdoor living area	176	[3]	78	[3]	98	[2]	352	[3]
Allow owner to landscape	67	9	43	8	51	7	161	8
Landscaped saves time/work	107	6	61	[5]	51	8	219	6
Allow for garden/plant.beds	124	[5]	56	6	61	[4]	241	[5]
Allow for home add./hot tub	76	8	46	7	54	6	176	7
Allow observation of children	91	7	28	10	39	9	158	9
Swimming pool	50	10	36	9	36	10	122	10
Tennis courts	33	13	15	13	17	12	65	13
Playground area	50	11	20	12	16	13	86	11
Playfields	28	14	10	14	12	15	50	14
Public open space	27	15	9	15	14	14	50	15
Jogging/walking trails	39	12	21	11	21	11	81	12
Other	13	16	5	16	6	16	24	16

\*First column is the number of responses and the second column is the "rank order" of the responses. The top 5 responses are in [ ].

Observations

A. 'Outdoor privacy' was the second most frequently checked factor for influencing a choice of alternatives for the total sample, for Lincoln and Salina. It was third most frequently checked factor for the Wichita sample.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14?

(Weighted)	LINCOLN		SALINA		WICHITA		TOTAL	
Yardwork	144	4	64	5	76	4	284	4
Outdoor privacy	316	[1]	140	[1]	141	[2]	601	[1]
Size of yard	311	[2]	112	[2]	168	[1]	591	[2]
Outdoor living area	207	[3]	76	4	122	[3]	405	[3]
Allows owner to landscape	62	8	32	8	34	9	128	8
Landscaped saves time/work	133	5	85	[3]	59	5	277	5
Allows for garden/plant.beds	91	6	45	6	50	6	186	6
Allows for home add./hot tub	37	10	33	7	37	8	107	9
Allows observation of children	72	7	25	9	38	7	135	7
Swimming pool	42	9	23	10	30	10	95	10
Tennis courts	11	14	6	13	6	12	23	14
Playground area	28	11	10	11	6	13	44	11
Playfields	6	15	0	15	3	14	9	15
Public open space	20	12	5	14	3	15	28	13
Jogging/walking trail	19	13	7	12	11	11	37	12

\*The first column is the weighted value and the second column is the "rank order" of the important factors.

#### Observations

A. 'Outdoor privacy' was considered the most important factor in choosing an alternative for the total sample, for Lincoln and Salina. 'Outdoor privacy' was considered the second most important factor for the Wichita sample.

24. How well do you feel each alternative provides for outdoor privacy?

(Alternative A) **	LINCOLN		SALINA		WICHITA		TOTAL	
Very well	97	38%	70	56%	74	55%	241	47%
Adequately	40	16%	20	16%	23	17%	83	16%
Somewhat	53	21%	17	14%	18	14%	88	17%
Not at all	65	25%	17	14%	19	14%	101	20%
	255	100%	124	100%	134	100%	513	100%

#### Observations

A. 47% of the total sample indicated that alternative 'A' provided privacy very well and 20% indicated that alternative 'A' didn't provide privacy at all.

B. The Salina and Wichita samples indicated that alternative 'A' provided for privacy better than did the Lincoln sample.

(Alternative B)	LINCOLN		SALINA		WICHITA		TOTAL	
Very well	73	29%	29	24%	35	26%	137	27%
Adequately	147	59%	78	64%	83	61%	308	60%
Somewhat	29	11%	14	12%	17	12%	60	12%
Not at all	2	1%	0	0%	2	1%	4	1%
	251	100%	121	100%	137	100%	509	100%

#### Observations

- A. All three cities indicated that alternative 'B' provide privacy 'adequately' (60%).
- B. Only 1% indicated that alternative 'B' did not provide privacy at all.
- C. Only 27% indicated that alternative 'B' provided privacy very well.

(Alternative C) **	LINCOLN		SALINA		WICHITA		TOTAL	
Very well	92	37%	27	23%	31	23%	150	31%
Adequately	58	24%	32	28%	25	19%	115	23%
Somewhat	54	22%	34	30%	35	27%	123	25%
Not at all	42	17%	22	19%	41	31%	105	21%
	246	100%	115	100%	132	100%	493	100%

#### Observations

- A. 31% of the total sample population indicated that alternative 'C' provided privacy 'very well'.
- B. 21% of the total sample population indicated that alternative 'C' did't provide privacy at all.
- C. The Lincoln sample indicated more strongly that alternative 'C' provided for privacy better than did Salina or Wichita samples.
- D. Wichita indicated more strongly that alternative 'C' did not provide privacy (31%).
- E. Salina and Wichita were within 3% of each other on almost all responses. This might indicate that the perception of privacy is independent of city size or income and may be affected more by cultural influences.
- F. This question had the most even distribution of responses to the four possible answers which might indicate a great diversity in the perception of what provides for privacy in a high density situation.

An Overview of question 24

A. It was indicated more strongly, by 47% selecting 'very well', that alternative 'A' provided for privacy more than did alternative 'B' or 'C'.

B. A fairly even percentage of the total sample population indicated that alternative 'A' (20%) and alternative 'C' (21%) did not provide privacy at all.

C. Eighty seven percent of the total sample indicated that alternative 'B' provided privacy at least adequately. Sixty three percent indicated that alternative 'A' provided privacy at least adequately and fifty four percent indicated that alternative 'C' provided privacy at least adequately.

Results (Alternatives)

23. Was outdoor privacy an important factor in your decision? \*\*

	ALT. 'A'		ALT. 'B'		ALT. 'C'		TOTAL	
Yes, very much	103	71%	153	49%	43	40%	299	53%
Yes, somewhat	29	20%	131	42%	38	36%	198	35%
No, not significantly	14	10%	27	9%	26	24%	67	12%
	146	101%	311	100%	107	100%	564	100%

Observations

A. Outdoor privacy was a more important factor for those who selected alternative 'A' than for those who selected alternatives 'B' or 'C'.

B. Outdoor privacy was a more important factor for those who selected alternative 'B' than for those who selected alternative 'C'.

C. As the importance of outdoor privacy increased the preference for a larger lot size increased.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Yardwork	32 8	154 [4]	73 [1]	259 [4]
Outdoor privacy	100 [4]	215 [2]	44 7	359 [2]
Size of yard	118 [1]	238 [1]	54 [5]	410 [1]
Outdoor living area	110 [3]	206 [3]	36 10	352 [3]
Allow owner to landscape	114 [2]	40 9	7	161 8
Landscaped saves time/work	3	151 [5]	65 [2]	219 6
Allow for garden/plant.beds	95 [5]	133 6	13	241 [5]
Allow for home add./hot tub	73 6	85 8	18	176 7
Allow observation of children	37 7	106 7	15	158 9
Swimming pool	28 9	31 10	63 [3]	122 10
Tennis courts	4	11	50 6	65 13
Playground area	17 10	26	43 8	86 11
Playfields	11	11	28	50 14
Public open space	4	9	37 9	50 15
Jogging/walking trails	5	18	58 [4]	81 12
Other	10	10	4	24 16

\*First column is the number of responses and the second column is the "rank order" of the ten most frequent responses. The top 5 responses are in [ ].

#### Observations

- A. 'Outdoor privacy' was the second most frequent for the total survey population and for those who selected alternative 'B'.
- B. 'Outdoor privacy' was the 4th most frequently checked factor for those who selected alternative 'A'.
- C. 'Outdoor privacy' was less influential in the selection of an alternative for those who selected alternative 'C'.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14. \*\*

(Weighted)	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Yardwork	24 8	172 5	88 [1]	284 4
Outdoor privacy	197 [1]	359 [1]	55 5	601 [1]
Size of yard	196 [2]	270 [2]	63 4	591 [2]
Outdoor living area	118 [3]	260 [3]	26 8-9	405 [3]
Allows owner to landscape	110 4	17 9-10	1	128 8
Landscaped saves time/work	2	192 4	83 [2]	277 5
Allows for garden/plant.beds	82 5	98 6	5	186 6
Allows for home add./hot tub	29 6	56 8	6	107 9
Allows observation of children	26 7	90 7	19	135 7
Swimming pool	12 9	17 9-10	66 [3]	95 10
Tennis courts	0	2	21 10	23 14
Playground area	2	9	33 6	44 11
Playfields	5 10	3	1	9 15
Public open space	0	2	26 8-9	28 13
Jogging/walking trail	0	5	32 7	37 12

\*The first column is the weighted value and the second column is the "rank order" of the ten most important factors. The top 3 responses are in [ ].

#### Observations

A. 'Outdoor privacy' was ranked as the most important factor for selecting an alternative for those who selected alternatives 'A' and 'B'.

B. 'Outdoor privacy' was less important to those who selected alternative 'C' and was ranked as the 5th most important factor.

24. How well do you feel each alternative provides for outdoor privacy? \*\*

(Alternative A )	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Very well	104 73%	106 38%	30 34%	240 47%
Adequately	21 15%	47 17%	15 17%	83 16%
Somewhat	11 8%	57 20%	20 23%	88 17%
Not at all	7 5%	71 25%	23 26%	101 20%
	143 101%	281 100%	88 100%	512 100%

#### Observations

A. Regardless of which alternative was selected, the greater percentage of each group indicated that alternative 'A' provided for outdoor privacy 'very well'.

B. Those who had selected alternative 'A' showed a stronger indication (73%) that alternative 'A' provided privacy better than did those who selected alternatives 'B' (38%) or 'C' (34%).

C. One fourth of the participants who selected alternatives 'B' and 'C' indicated that alternative 'A' did not provide outdoor privacy at all.

(Alternative B)	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Very well	19 15%	100 34%	18 20%	137 27%
Adequately	73 59%	179 60%	56 64%	308 61%
Somewhat	31 25%	17 6%	11 13%	59 12%
Not at all	1 1%	0 0%	3 3%	4 1%
	124 100%	296 100%	88 100%	508 100%

#### Observations

A. Regardless of which alternative was selected, the greater percentage of each group indicated that alternative 'B' provided outdoor privacy 'adequately'.

B. Only a very small percentage of those who selected alternatives 'A' or 'C' indicated that alternative 'B' did not provide outdoor privacy at all. Everyone who selected alternative 'B' felt that it provided privacy at least somewhat.

C. A greater percentage of those who selected alternative 'B' indicated that alternative 'B' provided outdoor privacy very well.

(Alternative C)	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Very well	16 13%	82 30%	52 53%	150 30%
Adequately	23 19%	61 22%	31 32%	115 23%
Somewhat	35 29%	76 28%	12 12%	123 25%
Not at all	46 38%	55 20%	3 3%	104 21%
	120 99%	274 100%	98 100%	492 100%

#### Observations

A. A large percentage of those who selected alternative 'A' (67%) indicated that alternative 'C' only provided privacy somewhat or not at all.

B. For those who selected alternative 'B' there were generally mixed opinions as to how well alternative 'C' provided outdoor privacy. There was a fairly even distribution from providing it very well to not providing it at all.

C. A greater percentage of those who selected alternative 'C' indicated that it provided outdoor privacy very well.

#### An Overview of Question 24

A. Regardless of which alternative was selected, each group gave a stronger indication that their chosen alternative provided for outdoor privacy better than did the other two alternatives.

B. Regardless of which alternative was selected, the greater percentage of each group indicated that alternative 'B' provided outdoor privacy adequately or better.

C. Regardless of which alternative was selected, the greater percentage of each group indicated that alternative 'A' provided for privacy 'very well'.

D. With regard to location, more people (47%) felt that outdoor privacy was provided for 'very well' in alternative 'A' and this was a higher rating than for alternatives 'B' or 'C'.

#### Summary of Outdoor Privacy

Fifty three percent of the total sample indicated that outdoor privacy was very important in selecting an alternative. Eighty eight percent indicated that it was at least somewhat important. These results were typical for all three locations.

Outdoor privacy was also important regardless of which alternative was selected. Although privacy was important to all respondents, it was more important to those who selected alternative 'A'. Seventy one percent of those who selected alternative 'A' indicated that outdoor privacy was very important in their selection of an alternative. Only 49% of those selecting alternative 'B' and 40% of those selecting alternative 'C' indicated that outdoor privacy was very important in their selection of an alternative.

Outdoor privacy was considered the most important factor in selecting an alternative for respondents in Lincoln, Salina, and the total sample population. It was ranked as the second most important factor in Wichita. Outdoor privacy was also ranked as the most important factor by respondents selecting alternatives 'A' and 'B'. Those selecting alternative 'C' ranked it 5th most important.

Regardless of location, the greater percentage of respondents indicated that alternative 'A' provided for outdoor privacy 'very well'. When considering at least adequate provision for outdoor privacy, the majority of the people indicated that alternative 'B' provided for outdoor privacy the best and alternative 'C' provided for outdoor privacy the least. Regardless of the alternative preferred, each group felt that their chosen alternative provided for outdoor privacy better than the other two alternatives. The Lincoln sample rated the provision of outdoor privacy higher for alternative 'C' and lower for alternative 'A' than did the Wichita or Salina samples.

#### Conclusions for Outdoor Privacy

Outdoor privacy is a very important factor in considering a new home. It was ranked in the top 3 most important factors in selecting one of the alternatives, for all three locations. Special consideration in the design and planning of home environments could prove to be of great value to both the home owner and to the developer or home builder.

The results pertaining to question 24 proved very interesting. With regard to alternative preference, each group felt that their chosen alternative provided for privacy better than the other two alternatives. This would indicate that people perceive privacy differently. Even though there were no fences or plant material screens in alternative 'A', a large number of respondents indicated that it provided for outdoor privacy 'very well'. This was a higher rating than for the other alternatives which included fence and plant material screens. It could be concluded that many people perceive privacy more in terms of distance separation than by visual screening. Those respondents who selected alternatives 'B' and 'C', however, must have felt that privacy was well provided for by the use of

visual screening. This aspect of privacy would make an interesting future study to gain more insight into the perception of privacy.

#### COMMUNITY AMENITIES

Gaining a knowledge of preferences in the exterior home environment is also important at the community level. Information pertaining to community amenities can also be of considerable value and benefit to the designer, developer, and homeowner in community type developments. The following data tables provide information about preferences for community improvements such as open space and recreation facilities. Questions 15, 17, and 25-28 from the survey questionnaire are included in this section. Questions 25-28 were only completed by respondents selecting alternative 'C' as their first choice.

#### Results (Location)

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

	LINCOLN	SALINA	WICHITA	TOTAL
Yardwork	139 [4]	63 [4]	57 [5]	259 [4]
Outdoor privacy	179 [2]	88 [2]	92 [3]	359 [2]
Size of yard	198 [1]	93 [1]	119 [1]	410 [1]
Outdoor living area	176 [3]	78 [3]	98 [2]	352 [3]
Allow owner to landscape	67 9	43 8	51 7	161 8
Landscaped saves time/work	107 6	61 [5]	51 8	219 6
Allow for garden/plant.beds	124 [5]	56 6	61 [4]	241 [5]
Allow for home add./hot tub	76 8	46 7	54 6	176 7
Allow observation of children	91 7	28 10	39 9	158 9
Swimming pool	50 10	36 9	36 10	122 10
Tennis courts	33 13	15 13	17 12	65 13
Playground area	50 11	20 12	16 13	86 11
Playfields	28 14	10 14	12 15	50 14
Public open space	27 15	9 15	14 14	50 15
Jogging/walking trails	39 12	21 11	21 11	81 12
Other	13 16	5 16	6 16	24 16

\*First column is the number of responses and the second column is the "rank order" of the responses. The top 5 responses are in [ ].

### Observations

A. The listed facilities and open space all ranked low as factors being influential in making a choice of alternatives.

B. The two facilities that were the least frequently checked as being influential in the choice of an alternative were 'public open space' and 'playfields'.

C. Of the facilities listed, 'swimming pool' was the most frequent response for being influential in the choice of an alternative.

16. From the list in the previous question, which are the three most important factors in making your choice in question 14. \*\*

(Weighted)	ALT. 'A'	ALT. 'B'	ALT. 'C'	TOTAL
Yardwork	24 8	172 5	88 [1]	284 4
Outdoor privacy	197 [1]	359 [1]	55 5	601 [1]
Size of yard	196 [2]	270 [2]	63 4	591 [2]
Outdoor living area	118 [3]	260 [3]	26 8-9	405 [3]
Allows owner to landscape	110 4	17 9-10	1	128 8
Landscaped saves time/work	2	192 4	83 [2]	277 5
Allows for garden/plant.beds	82 5	98 6	5	186 6
Allows for home add./hot tub	29 6	56 8	6	107 9
Allows observation of children	26 7	90 7	19	135 7
Swimming pool	12 9	17 9-10	66 [3]	95 10
Tennis courts	0	2	21 10	23 14
Playground area	2	9	33 6	44 11
Playfields	5 10	3	1	9 15
Public open space	0	2	26 8-9	28 13
Jogging/walking trail	0	5	32 7	37 12

### Observations

A. 'Swimming pool' was the only facility that was considered as one of the most important factors. It was ranked 3rd most important by those selecting alternative 'C'.

17. From the list in the previous question, which are the three least important factors in making your choice in question 14?

(Weighted)	LINCOLN	SALINA	WICHITA	TOTAL
Yardwork	47 10	17 9	30 7	104 7
Outdoor privacy	6 14	6 14	2 13	14 14
Size of yard	20 13	7 13	2 14	29 13
Outdoor living area	2 15	1 15	2 15	5 15
Allows owner to landscape	60 8	13 10	26 8	99 10
Landscaped saves time/work	30 11	22 8	13 11	65 11
Allows for garden/plant.beds	25 12	11 11	12 12	48 12
Allows for home add./hot tub	68 7	10 12	25 9	103 8
Allows observation of children	53 9	31 7	17 10	101 9
Swimming pool	181 [1]	59 4	53 4	293 [2]
Tennis courts	153 [2]	70 [1]	83 [1]	306 [1]
Playground area	85 6	33 6	45 6	163 6
Playfields	116 4	65 [2]	80 [2]	261 [3]
Public open space	89 5	60 [3]	68 [3]	217 5
Jogging/walking trail	123 [3]	49 5	51 5	222 4

\*The first column is the weighted value and the second column is the "rank order" of the least important factors

#### Observations

A. For the total sample, 'Tennis courts' were considered to be the least important factor in choosing an alternative. 'Swimming pool' was considered second least important and 'playfields' third least important.

B. For Lincoln, 'swimming pool' was considered the least important, 'tennis courts' were second least important and 'jogging/walking trails' were third least important.

C. For Salina, 'tennis courts' were considered the least important, 'playfields' were the second least important and 'public open space' was third least important.

D. For Wichita, 'tennis courts' were considered the least important, 'playfields' were second least important and 'public open space' was third least important.

25. If you chose alternative C, was the near proximity of open space a factor in your choice?

	LINCOLN	SALINA	WICHITA	TOTAL
Yes, favorable factor	35 69%	11 52%	14 56%	60 62%
No, not significant factor	16 31%	10 48%	11 44%	37 38%
	51 100%	21 100%	25 100%	97 100%

### Observations

A. The proximity of open space was a favorable factor to 62% of the total sample.

B. Near proximity of open space was a more favorable factor for Lincoln (69%). (Lincoln had a slightly stronger preference for the higher density alternative 'C')

26. If you chose alternative C, rank in order (1,2,3,..) the facilities which were the most important in your choice.

(Weighted values)	LINCOLN		SALINA		WICHITA		TOTAL	
Tennis courts	38	5	43	[2]	49	[1]	70	5
Swimming pool	81	[2]	48	[1]	45	[2]	161	[1]
Open space	82	[1]	26	4	25	4	133	[2]
Playground area	46	4	16	5	23	5	85	4
Jogging/walking trails	52	[3]	31	[3]	41	[3]	124	[3]
Playfields	18	6	8	6	8	6	32	6

\*The first column is the weighted value and the second column is the "rank order" of important facilities.

### Observations

A. For the total sample, 'swimming pool' was the most important facility, 'open space' was second most important, and 'jogging/walking trails' were third most important.

B. For Lincoln, 'open space' was the most important, 'swimming pool' was second most important, and 'jogging/walking trails' were third most important.

C. For Salina, 'swimming pool' was the most important, 'tennis courts' were second most important, and 'jogging/walking' trails were third most important.

D. For Wichita, 'tennis courts' were most important, 'swimming pool' was second most important, and 'jogging/walking trails' were third most important.

27. If you chose alternative C, which facilities would you be most willing to do without? (Check all that apply)

	LINCOLN	SALINA	WICHITA	TOTAL
Tennis courts	22 [3]	10 [3]	11 [2]	43 [2]
Swimming pool	10	5	5 [3]	20
Open space	10	8	2	20
Playground area	24 [2]	11 [2]	2	37 [3]
Jogging/walking trails	12	4	2	18
Playfields	38 [1]	14 [1]	20 [1]	72 [1]

\*The first column is the number of responses and the second column is the "rank order" of the three facilities most willing to do without.

#### Observations

A. For the total sample, 'playfields' was the facility they were most willing to do without, 'tennis courts' was second most willing to do without, and 'playground area' was the third most willing to do without.

B. For Lincoln and Salina, they were most willing to do without 'playfields', 'playground area' was second most willing to do without, and 'tennis courts' third most willing to do without. (Salina has a contradiction in that 'tennis courts' were the second most important in the previous question)

C. For Wichita, they were most willing to do without 'playfields', 'tennis courts' was second most willing to do without, and 'swimming pool' third most willing to do without. (There is also a contradiction here because 'tennis courts' were considered most important and 'swimming pool' second most important in the previous question.

28. Are there any community facilities that you would include rather than one of the facilities listed above?

	LINCOLN	SALINA	WICHITA	TOTAL
No	30 79%	17 85%	17 77%	64 80%
Yes	8 21%	3 15%	5 23%	16 20%
	38 100%	20 100%	22 100%	80 100%

#### Observations

A. 80% of the total sample indicated that no, there were not any other facilities they would include.

B. In the 20% that said 'yes', the most frequent response was a 'golf course' (over budget). Other responses were racketball court, indoor exercise facility, benches for sitting, and fountains.

### Summary of Community Amenities

In the overall selection of factors influential in choosing an alternative, the community amenities were ranked as least influential. For the total sample, 'tennis courts' were the least important factor, 'swimming pool' was second least important and 'playfields' were the third least important. For Wichita and Salina, 'tennis courts' were the least important, 'playfields' were second least important, and 'public open space' was third least important. Lincoln respondents ranked 'swimming pool' as the least important, 'tennis courts' second least important and 'jogging/walking trails' as the third least important.

Only 1 community amenity was ranked in the top 3 most important factors for selecting an alternative. This amenity was the 'swimming pool' which was ranked 3rd most important factor by those who selected alternative 'C'.

Slightly more than half (62%) of the respondents who selected alternative 'C' indicated that 'public open space' was a favorable factor in their selection. 'Public open space' was considered a more favorable factor by the Lincoln population (69%) than by the Wichita or Salina populations.

For respondents selecting alternative 'C', the most important facility was the 'swimming pool', second was the 'public open space', and 'jogging/walking trails' were third. The 'tennis court' were more important to the Wichita and Salina populations than they were to the Lincoln population. The 'open space' was more important to the Lincoln population.

'Playfields' was the facility that all three locations were most willing to do without. For Lincoln and Salina, the 'playground area' was ranked second as most willing to do without and 'tennis courts' were ranked

third most willing to do without. Wichita ranked 'tennis courts' as the second most willing to do without and 'swimming pool' as third.

There is some discrepancy in these results. For Wichita and Salina, 'tennis courts' and 'swimming pool' appear as both a most important facility and as a facility they are most willing to do without.

When asked if there were any other facilities they would include, 80% of the respondents indicated no. Of the facilities requested, golf course was the most frequent response. This facility would have prevented alternative 'C' from maintaining a cost comparative to the other two alternatives. A racketball court, indoor exercise facility, benches for sitting, and fountains were other recommendations.

#### Conclusions for Community Amenities

Community facilities are important to particular lifestyles. The results of this study do, however, show that the community amenities are not nearly as important as previously thought nor as important as the concerns for the private living spaces within the boundaries of the home site. These facilities do have some importance in the higher density community developments. The results of this study suggest that before facilities are proposed for a community development it is essential for the designer and developer to study the population for which it is proposed and determine their particular preferences. If this is not done, the designer and developer may be providing amenities that are not really desirable to the homeowners.

The swimming pool was the most important facility. The playground area and the jogging/walking trails were ranked the next most desirable. Open space was another important factor to those who selected alternative 'C'.

Open space provides some relief for higher density development and contributes to the overall visual quality of the higher density home environments. Jogging/walking trails have also become very popular and this study indicated that it ranked as the third most important facility, for all three locations.

#### CHILDREN - AMENITIES

Children can be an important influence on the type of facilities home owners prefer in a community development. Question 29 has provided some results relative to the amenity preferences of home owners with children. Question 29 was only completed by respondents selecting alternative 'C' as their first choice.

#### Results (Location)

29. If you have children living at home, which factors were important in your choice when considering your children? (Check all that apply)

	LINCOLN	SALINA	WICHITA	TOTAL
Open space	15 [1]	5 4	10 [3]	30 [3]
Playground area	14 [3]	7 [2]	12 [1]	33 [2]
Swimming pool	15 [2]	10 [1]	11 [2]	36 [1]
Playfields	7 5	5 5	3 5	15 5
Tennis courts	10 4	6 [3]	4 4	20 4
A larger yard to play in	2 6	1 6	3 6	6 6

\* The first column is the number of responses and the second column is the "rank order" of the most important factors when considering children.

#### Observations

A. For the total sample, the Lincoln sample, and the Salina sample, the most frequent response was 'swimming pool'. For Wichita it was the 'playground'.

B. 'Playground' was second most frequent for the total sample population and Salina. 'Open space' was second for Lincoln and 'swimming pool' was second for Wichita.

C. 'Open space' was third for the total sample population and Wichita. It was 'playground' for Lincoln and 'tennis courts' for Salina.

### Summary of Children-Amenities

For the total sample of respondents who had children and selected alternative 'C', the factors which were important in their choice when considering their children were first 'swimming pool', second 'playground area', and third 'public open space'.

'A larger yard to play in' was the least frequently checked factor and 'playfields' was the second least frequently checked factor. 'Public open space ranked higher for the larger cities of Wichita and Lincoln than it did for Salina. 'Tennis courts' were ranked slightly more important to the Salina population than for Lincoln or Wichita.

### Conclusions for Children-Amenities

The swimming pool remained at the top as the most important amenity for respondents with children. This may be due to the long, hot summers in this particular region. Public open space was also an important factor but playfields were not. This might suggest that open space where children can run is desirable for families with children but structured playfields are not necessary.

The results indicated that when considering children, a larger yard to play in was not as important as other amenities in a community type development. In associating these results with the yard work results it appears that yard work is a major factor for those who selected alternative 'C', as long as a play area is provided for their children.

In referring back to the section on alternative preferences, only 19% of the total sample population selected alternative 'C'. From this group an even smaller number have children. This may indicate that in this

particular study childrens concerns were not as important when selecting alternative 'C'.

This does not mean, however, that consideration of children is not important to the development of exterior home environments. Additional study of a larger group of families with children would provide further knowledge about their amenity preferences.

#### FINAL CONCLUSIONS

This study has shown that alternative 'B' was the most preferred alternative. Today, fewer people are seeking the traditional large lot. Instead, they desire a smaller lot size that requires less time to maintain but still allows some space for personal and family activities.

At least half of the people would prefer that landscape improvements be completed prior to purchase. Most people enjoy some yard work, preferrably, working with flowers or a small vegetable garden. Half of the people who enjoy yard work, however, don't have time to do it.

Although many people desire a smaller lot size, they do not prefer the lots too small and at high density. Even numerous community amenities will not compensate for the higher density.

Privacy is an important consideration for the exterior home environment. This study indicates that people are more concerned with their private living space than with community amenities. This study also indicated that although people perceive privacy differently, many people perceive privacy in terms of distance separation rather than by visual screening. In higher density development situations, even at the density of

alternative 'B' (4.5 units/acre), it will be important to create a sense of privacy using methods other than distance. Oriental methods of perspective allusion may be one alternative method for creating a feeling of privacy through distance separation in higher density situations.

The patio area is very important in the exterior home environment. Special attention should be given to this area when developing a useful and desirable exterior home environment.

A considerable number of people still prefer a larger lot size and wish to complete the landscape improvements themselves. Approximately one fourth of the total sample selected alternative 'A' which depicts this situation. Privacy was the most important factor in selecting this alternative. This again supports the idea that many people perceive privacy as being greater in lower density development situations which provides for a greater separation of the homes. Those who selected alternative 'C' placed less importance on outdoor privacy. Wanting to complete the landscape improvements themselves also shows that many people enjoy yard work and wish to create their own exterior home environment.

For the smaller number of people who selected the higher density, community development, less yard work was the most important factor in making this selection. Age had an important influence on this selection. A larger percentage of people over 50 years selected this alternative. A large percentage of these people did, however, enjoy yard work. This suggests that these elderly people don't want a lot of yard work, but need space for some yard work, such as planting flowers or a small vegetable garden. A swimming pool was the most important amenity for this type of development and open space was also an important factor. Open space is

important to the higher density development because it provide some relief for the high density living conditions.

There appeared to be no major differences in the results in this study relative to location. The Lincoln sample did have a slightly stronger preference for alternative 'C' than did Wichita or Salina and gave a stronger indication that alternative 'C' provided privacy. These could possibly result from some cultural differences. Further study would be needed to determine if this is true. Another minor difference was that the exterior environment (yard area) was not as important in the consideration of a new home for the Salina sample as it was for the larger cities of Lincoln and Wichita. This may not be due to the size of the city, but to the fact that the Salina sample was generally older than the Lincoln and Wichita samples.

The results of this study provide some insight to the home buyer preferences in the exterior home environment. These results are, hopefully, representative of the average American home buying population. The results may, however, be limited to this particular region in the central plains. This study did provide results that can begin to identify some general trends that can be compared with the results of additional studies, both past and future.

A general comparison of the results of this study with the results of the Mark Johnson study, conducted in Ann Arbor, Michigan, found some differences in preference as well as some similar conclusions. The major difference of the two studies was that alternative 'C' was the most preferred alternative for the Ann Arbor sample, alternative 'B' was second, and alternative 'A' was the least preferred.

Some of the similar conclusions found in the Johnson study are that 'outdoor privacy' and 'outdoor living area' are both in the top three most important considerations for buying a new home. People are more concerned about their private living spaces rather than community improvements. Most people enjoy yard work but many don't have time to do it. They do, however, desire limited amounts of yard work such as flowers or small vegetable gardens. The patio area was also found to be important in the Johnson study. For those who selected alternative 'C', the swimming pool, the open space, and the jogging/walking trails were the important factors.

#### RECOMMENDATIONS FOR FUTURE STUDY

This study has opened many avenues for future study. It would be interesting to see if the preferences determined in this study are similar to those found in other regions of the United States. Some suggested areas would be the east coast region (Boston area), the sun belt regions (Houston, Phoenix), and the west coast regions (Los Angeles, Seattle). Additional studies in other regions would also assist in determining the general characteristics of the American homebuyer.

The survey for this study was conducted at home sites very similar in size to that of alternative 'B' (without the landscape improvements) and the majority of people selected alternative 'B'. It was the opinion of the homebuilders that people generally don't limit themselves to just visiting the type of home they wish to purchase but visit a number of homes varying in style, size and price. Another study might, therefore, be to conduct a survey at higher density home sites such as townhouses or condominiums to see if similar results are obtained.

It would also be interesting to conduct this survey at the same three locations, under similar circumstances, five or ten years from now to see if there are any noticeable changes or trends taking place, in this region, with regard to preferences in the exterior home environment.

A similar study could also be directed toward special population groups. Some of these groups may include, the retirement age population (50 years and older), young families with children, divorced and/or single parent families.

Additional studies could also be conducted to determine the most preferable sizes for the patio, gardens, and planting beds; or to determine the general amount of yard work people desire. Studies may also include preference for detail around these areas. Some examples might be to determine whether people prefer a simple concrete slab patio or a redwood deck, and do people prefer some type of shading device over the patio area or do they prefer it open and spacious?

Privacy was another important issue in this study. Great value could be placed on future studies that deal with peoples perception of privacy in their exterior home environment. Several different methods of providing outdoor privacy could be tested. These may include screens (visual, audible), distance separation, or perspective allusion. Studies pertaining to privacy perception may also deal with views from windows, and views to or from patio areas and hot tub facilities.

This study begins to identify some of the preferences that home buyers have in their exterior home environment. Some of the important factors are also identified which influence these preferences. It is hoped that this information can be used and that it can prove valuable to the landscape

architect and the developer, in making design decisions, and ultimately to the homeowner by providing pleasant and useful exterior home environments. It is also hoped that this, in turn, will provide the developers and homebuilders with marketable and more sound investments and the home buyer with an improved quality-of-life.

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APPENDIX A - QUESTIONNAIRE

HOME EXTERIOR PREFERENCE SURVEY

INSTRUCTIONS

As you can see, there are three different and hypothetical housing situations in the adjacent display. Each situation has been designed on the same site so that distance to work, school, and shopping are always the same. Consider the site to be located in the general area of your community. The downpayment and monthly cost to the homebuyer are the same in each situation. Also, keep in mind that the exact same house was used in each alternative, and that the quality level of the development is the same. What has been varied is the size of the lot and the level of amenities (privacy fences, outdoor living areas, shade trees, etc.) that the developer will provide.

Please take a few minutes to study each situation and when you have familiarized yourself with each alternative proceed with the questions.

1. Sex.

- Male
- Female

2. Age.

- 20 or younger
- 21 - 29
- 30 - 39
- 40 - 49
- 50 - 60
- Over 60

3. Marital status.

- Single
- Married
- Divorced
- Separated
- Widow/Widower

4. Enter the number of children at home (1,2,3..) in each age category.

- 0 - 5
- 6 - 10
- 11 - 15
- Older than 15 years

5. Level of formal education.

- Some high school or less
- High school completed
- Some college
- College degree
- Graduate study

6. Number of incomes in household.
- One
  - Two
  - More than two
7. Total family income.
- Less than \$15,000
  - \$15,000 - \$21,000
  - \$22,000 - \$28,000
  - \$29,000 - \$35,000
  - \$36,000 - \$42,000
  - \$43,000 - \$49,000
  - Over \$49,000
8. What type of home do you currently live in?
- Single-family home
  - Duplex
  - Three or fourplex
  - Mobile home
  - Townhouse
  - Apartment larger than a fourplex
  - Other: \_\_\_\_\_
9. Do you now own or rent your home?
- Own
  - Rent
10. If you own, how many homes have you owned?
- One
  - Two
  - Three
  - Four or more
11. How soon do you plan to buy a home?
- Within 6 months.
  - Within 1 year.
  - Beyond 1 year.
  - Just looking. No intention to buy.
12. If you intend to buy a home, what reason(s) have led you to consider a new home? (Check all that apply).
- Looking for more space.
  - Looking for a new location.
  - Looking for amenities (tennis courts, swimming pool, playground, etc.).
  - Job transfer.
  - Looking for less space.
  - Looking for less yardwork.
  - Want to own, you rent now.
  - Looking for a retirement home.
  - Other: \_\_\_\_\_
13. Is the exterior environment (yard area) an important consideration in your selection of a new home?
- Yes, very important.
  - Yes, somewhat important.
  - No, not very important.

14. Considering each alternative carefully, and remembering that the cost, location, and home are the same in each situation, please indicate which alternative (A,B,C) would be your first choice if you were to buy and live in the home.

First choice \_\_\_\_\_.

What would your second and third choices be?

Second choice \_\_\_\_\_.

Third choice \_\_\_\_\_.

15. Check the factors, in the list below, that were influential in your first choice of alternatives in question 14 above.

- a.  Yardwork.
- b.  Outdoor privacy.
- c.  Size of yard.
- d.  Outdoor living area.
- e.  The yard that is not landscaped allows the owners to landscape the yard their own way.
- f.  The landscaped yard saves time and work for the owner.
- g.  Room in the yard allows for a garden or planting beds.
- h.  Room in the yard allows for home additions or hot tub.
- j.  Room in the yard allows for close observation of children at play.
- k.  Swimming pool.
- l.  Tennis courts.
- m.  Playground area.
- n.  Playfield for softball or volleyball.
- p.  Public open space.
- r.  Jogging/walking trails.
- s.  Other: \_\_\_\_\_.
- t.  Other: \_\_\_\_\_.

16. From the list in the previous question put the letter (a,b,c..) corresponding to the three most important factors in making your choice for question 14.

\_\_\_\_\_ Most important.  
\_\_\_\_\_ Second most important.  
\_\_\_\_\_ Third most important.

17. Which factors listed in question 15 (a,b,c..) were the least important in making your choice for question 14?

\_\_\_\_\_ Least important.  
\_\_\_\_\_ Second least important.  
\_\_\_\_\_ Third least important.

18. Do you enjoy working in the yard?

- I enjoy working in the yard and do quite regularly.
- I enjoy working in the yard but usually do not have enough time.
- There are other things I would prefer to do.

19. Did the amount of yard work affect your decision?
- Yes, because I enjoy yardwork.
  - No, not significantly.
  - Yes, because I try to avoid it.
20. Did the additional landscape improvements of alternatives B and C have an influence on your selection of a home?
- Yes, I would prefer the landscape improvements be completed prior to purchase.
  - No, I would prefer to complete the landscape improvements myself.
  - Landscape improvements are not as important as other factors in the selection of a home.
21. In general, how often do you use your yard area now, weather permitting?
- Very often (about 4-5 times per week).
  - Somewhat often (about 1-2 times per week).
  - Occasionally (about 2-3 times per month).
  - Very seldom (less than 2-3 times per month).
  - Do not have a yard area to use.
  - Do not consider a yard area important for my lifestyle.
22. How would you anticipate using your yard area?  
(Check all that apply.)
- Using the patio area for relaxing or gatherings.
  - Plant a vegetable garden.
  - Plant perennial and annual flowers.
  - Childrens play.
  - Use the area for a possible addition to the house.
  - Possibly add a small pool or hot tub.
  - Working in the yard, landscaping.
  - Other: \_\_\_\_\_
23. Was outdoor privacy an important factor in your decision?
- Yes, very much.
  - Yes, somewhat.
  - No, not significantly.
24. How well do you feel each alternative provides for outdoor privacy?
- | Alternative A:                      | Alternative B:                      | Alternative C:                      |
|-------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> Very well  | <input type="checkbox"/> Very well  | <input type="checkbox"/> Very well  |
| <input type="checkbox"/> Adequately | <input type="checkbox"/> Adequately | <input type="checkbox"/> Adequately |
| <input type="checkbox"/> Somewhat   | <input type="checkbox"/> Somewhat   | <input type="checkbox"/> Somewhat   |
| <input type="checkbox"/> Not at all | <input type="checkbox"/> Not at all | <input type="checkbox"/> Not at all |

If you selected alternative A or B, as your first choice, you are finished with the survey and may turn to the final paragraph on the next page \*\*\*\*.

If you selected alternative C, as your first choice, please answer the 5 remaining questions.

25. If you chose alternative C, in question 14, was the near proximity of open space a factor in your choice?
- Yes, a favorable factor.
- No, not a significant factor.
26. If you chose alternative C, in question 14, rank in order (1,2,3..) the three facilities which were the most important in your choice.
- Tennis courts
- Swimming pool
- Open space
- Playground area
- Jogging/walking trails
- Play fields (softball, volleyball, soccer)
27. If you chose alternative C, in question 14, which facilities would you be most willing to do without? (Check all that apply.)
- Tennis courts
- Swimming pool
- Open space
- Playground area
- Jogging/walking trails
- Play fields (softball, volleyball, soccer)
28. Are there any community facilities that you would include rather than one of the facilities listed above?
- No
- Yes, \_\_\_\_\_.
29. If you have children living at home, which factors were important in your choice when considering your children? (check all that apply)
- Open space
- Playground area
- Swimming pool
- Play fields
- Tennis courts
- A larger yard to play in
- Other: \_\_\_\_\_.

\*\*\*\* If you are finished please place the questionnaire in the box marked "Completed Surveys". If you would like to comment on the survey or if you feel that some important considerations were left out, please use the space below for your comments.

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you very much for your time and contribution to our survey.

APPENDIX B - INFORMED CONSENT STATEMENT

HOME EXTERIOR PREFERENCE SURVEY

This survey is voluntary, incurs no apparent risk, and you have the option not to answer questions or to discontinue your participation at any time. Your responses will not be identified by name or any other personal identification so that the information will remain confidential.

If you have any questions, you may ask the person conducting the survey.

Thank you for your time and contribution to our survey.

Gail Stahlecker  
Department of Landscape Architecture  
Kansas State University

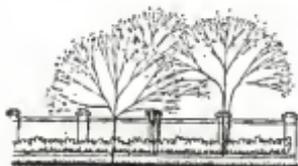
APPENDIX C - PROJECT IDENTIFICATION STATEMENT

I am a landscape architecture student at Kansas State University and would like your opinion..... I am studying homebuyer preferences dealing specifically with the exterior surroundings of the home. Knowledge of these preferences will assist members of the housing industry in providing home environments that are more desirable and that meet the needs of the homebuyer today. Your input will provide information about what is important to you as a homebuyer and why it is important.

This survey is voluntary and does not ask for your name or other information that might infringe upon your privacy.

Thank you very much for your time and participation in assisting this research project.

Gail Stahlecker  
Department of Landscape Architecture  
Kansas State University



EXTERIOR HOME ENVIRONMENT:  
HOME BUYER PREFERENCES

by

GAIL DEAN STAHLECKER

B. A. S., The University of Nebraska, 1981

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AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF LANDSCAPE ARCHITECTURE

Department of Landscape Architecture

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

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## ABSTRACT

The American dream of owning a single-family detached house with lots of space and a private yard is gradually fading. Changing social and economic influences are causing developers to build smaller and more efficient houses at higher densities in order to reduce costs and place home ownership within reach of more Americans. As the size of the house decreases, the exterior home environment will become more important as an extension of the shrinking interior environment. Design decision-makers can have a major influence in providing desirable, useful, and pleasant exterior surroundings for the 'affordable' home.

Changes in the economy, family composition, and individual life-styles appear to have changed the needs, expectations, and preferences of the American homebuyer. It is important for design decision-makers to know what these needs and preferences are if they are to make rational, comprehensive, and creative design decisions. With a knowledge of homebuyer needs and preferences, design decision-makers can provide exterior home environments that satisfy the needs and expectations of today's homebuyers.

This study analyzes the preferences of the homeowner and potential homebuyer with regard to lot size and level of development. This study also attempts to determine what factors are important to the homebuyers in their exterior home environment and what factors they are willing to do without. Three hypothetical alternatives for single-family housing were developed. As the lot size decreased, the level of site development increased so that the cost of each alternative would remain the same. A sample of potential homebuyers, from three different sized cities in the central plains region, were surveyed by means of a questionnaire to determine the effect of lot size and level of site development on preferences. The questionnaire also investigated various factors that were influential in their preference. These factors included outdoor living area, yard work, outdoor privacy, community facilities, and how children influenced the choice of a home.

The greater preference was clearly for the medium sized lot with the home site improvements completed prior to purchase. People prefer a lot size that requires less time to maintain but still allows some space for personal and family activities. When considering the purchase of a new home, the exterior environment (yard area) was definitely important in making a selection. The three most important site factors were outdoor privacy, yard size, and outdoor living area. Most people enjoy yard work but many of them do not have the time to do it. Working with flowers and a small vegetable garden are the most preferred yard work activities. It is also important that the outdoor living area provide a sense of privacy. The perception of privacy, however, varies for different groups of people. Many perceive it in terms of distance and others in terms of screening. Finally, the majority of people were more concerned about their private living spaces rather than community improvements. For those who did choose the alternative with community improvements; swimming pool, open space, and walking/jogging trails were the most important factors.

Having a knowledge of what is important to homebuyers in their exterior home environment and what is not, will allow the landscape architect to make wiser decisions in site planning, site design, and consultation with regard to home environments. These design decisions will, in turn, provide the homebuilders, developers and investors with more marketable homes resulting in a faster turnover rate on investments and provide the homeowners with home environments that are more useful and pleasant, and that improve their quality-of-life.