

AN EVALUATION OF LOCATION, SITE PLANNING, AND PHYSICAL
DEVELOPMENT FOR A SHOPPING CENTER; A CASE STUDY OF
WESTLOOP SHOPPING CENTER, 1975

by

YUEN-CHUNG WANG

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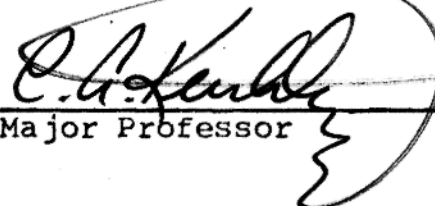
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Approved by:


Major Professor

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THE STATEMENT OF PROBLEM

The Industrial Revolution radically changed the pattern and characteristics of cities. They grew more and more dehumanized. Life in the cities soon became intolerable.

Today, the mass migration into cities which took place in the past is being reversed. With the emergence of the automobile for private transportation, the urbanized area expanded, and the distance between the places of residence and the central city increased. Use of automobiles created extreme traffic congestion and parking problems around the downtown areas, and made the downtown an unpleasant place to shop.

To escape from the hostile downtown public environment and to meet the immediate demand for shopping facilities in the suburbs, merchants are forced to band together and to create a more pleasant and sympathetic environment for trade --- the shopping center. The development of this building type is not only for the purpose of buying goods and services but also to satisfy a social need. Shopping center becomes a place of relaxation and of communication with others.

Some shopping centers are operated desirably while some are not. The success or failure of a shopping center deeply depends on what its location, how the site is planned, and what physical attractiveness is developed.¹ The need for a better and more efficient shopping environment is crucial. Evaluation of an existing shopping center can give vivid ideas for the future planning and design of shopping centers.

CHAPTER I

GENERAL DISCUSSION OF SHOPPING CENTER

I. INTRODUCTION

Shopping is a kind of activity which is concerned with looking at, pricing, and buying merchandise displayed for sale. In the ancient times, because of lack of transportation and the smallness of human settlements, shoppers went to stores and market places on foot. Commercial facilities existed in the center of settlements. The businessman considered only the attractiveness of individual stores and the smooth flow of pedestrian traffic.

In recent years, the availability of automobiles and their wide use permitted shoppers to go on wheels; therefore, the developer or businessman paid more attention to stimulating business by providing more convenience not only for pedestrians but also for automobiles. The planning and design of shopping centers tended to more complexity.

The term "shopping center" used in this paper is defined as a group of commercial establishments planned, developed, and managed as a unit related to the location, size, and type of shops to the trade area that unit serves.²

II. TYPES OF SHOPPING CENTERS

On the basis of function and trade area which the center serves, shopping centers can be divided into three basic types: neighborhood, community, and regional centers.

The neighborhood center may serve 2,500 to 20,000 persons. It provides for the sale of convenience goods (food, drug, and sundries) and such personal services as laundry and dry cleaning, hair styling and shoe repairing, and other day-by-day living needs of neighborhood.

Usually, the neighborhood center has 7 to 20 shops and the supermarket is the principal tenant. The average gross leasable area of the center is close to 50,000 square feet but may range from 30,000 to 100,000 square feet. The site of the center is about 1.5 to 10 acres. The parking spaces for customers number from 200 to 600. Maximum service distance is 1/2 mile for a walk or 5-minutes for driving time.³

The neighborhood center serves a mixed clientele of pedestrian customers and auto customers. The pedestrian trade is drawn from walking distance to the shopping center while the auto customers may come from outside the normal neighborhood trade area.

The community center is an intermediate place between the neighborhood and regional center. It serves between 20,000 and 100,000 persons. The center can provide 15 to 40 shops and stores on a 10- to 30-acre site. The amount of merchandise is greater than in the neighborhood center.

The community center includes the basic types of services and facilities required by the neighborhood center. In addition, the community shopping center contains radios and T.V.s, children's specialties, gifts, candy, liquor, restaurants, haberdasheries, florists, women's apparel, men's wear shops,

and a variety or junior department store as its core. Often, a theater, a bank, and a post office is included for creating more pulling power. If there are offices for professional men and doctors, the offices are generally on second floor of one of the stores, or in a separate building which may be used as a buffer between the stores and surrounding residences.⁴

In size, the average gross leasable area of a community shopping center is about 150,000 square feet. The range in GLA is between 100,000 and 300,000 square feet.⁵ The parking requirement for the center is 1,000 to 3,000 spaces.

The Maximum service distance is about 1 1/2-mile walk or 15-minute drive. The community shopping center serves mostly the auto customers. If the center is built within a high density residential area, the pedestrian customers should also be considered.

The regional center basically is a planned concentration of a great number of stores with full-line services and a variety of goods. It is much larger than the neighborhood or community center.

The regional center will provide a wide selection of fashion goods, household equipment and home furnishings. It is designed to serve from 100,000 to one million residents who are living within 30-minute driving time of the site. It provides 40 to 100 acre-site with at least 2,000 automobile parking spaces.

The regional shopping center has an average gross leasable area of 400,000 square feet. The centers range in GLA from

300,000 up to 1,000,000 square feet or more. The core of the regional shopping center contains one or two major department stores. In addition to the department stores, the center also contains some service stores normally found in lower rank shopping centers. Shoppers of the regional center go by car. Some of them go by bus, if the center has a bus terminal.⁶

III. PLANNING AND DESIGN

For the sake of achieving the implicit goal, namely, promoting the maximum sales at reasonable operation cost, thorough proper planning and design of the center are needed.

General

The principles of good shopping center planning are varied.

Some are:

1. It should give the maximum return to the stores therein.⁷
2. It should be planned logically for convenience or visual delight, and should make a significant contribution to the shopping atmosphere.⁸
3. Stores should be grouped to provide the greatest possible interplay between stores.⁹
4. Walking distance from parking areas to the stores should be held a minimum, and so also should distance within the store group itself.¹⁰
5. Foot and auto traffic should be separated as well as customer and service traffic.
6. The building group should be unified to look like a

shopping center and not like an assemblage of miscellaneous stores.

Also, design characteristics for the shopping center are varied:

1. The building pattern should suit the characteristics of the site.
2. The landscaping and the facilities sitting should be attractive.
3. Color and material should be used to integrate the center.
4. The parking layout should assist in making the center serve its function.
5. The exterior signs of the shops should be control so as to preserve some specific architectural effect.

The planning and design of a shopping center involves many variables: management, financing problems, the trade area, the site available, customers' buying habits and buying power, transportation facilities, zoning ordinances, building codes, climate, changing conditions, and so on. All affect the solution of a given problem. This paper focuses on location and site, site planning, and the physical development of the center.

Location and Site

The location contributes much to the success of a shopping center. According to Robert T. Nahas, council member of ULI, "The point of no return in development of shopping centers is soon reached unless you have an exceptionally good location."¹¹ A shopping center site should afford the best opportunity for

its successful functioning and operation.¹²

To start with a location study, economic analysis is inevitable. Victor Gruen suggests that three steps should be followed. First, the total economic potential of the area would be analyzed. Then, various segments of it would be analyzed in order to determine which segment or segments appear to have the most potential. Finally, the more defined location within this area would be selected.¹³

Inherent in this economic study, several factors should be considered: population, growth, purchasing power, competition, size, accessibility, and so on.

For deciding the economic potential of locations in the area, a comprehensive population study should be made --- the existing population, the potential for growth, and trend in the shifts in population. Combined with the population study, the area of substantially inadequate retail facilities and the remaining land available for residential development should be determined. Then the potential locations for a shopping center can be found.

A shopping center should fit its trade area. The term "trade area" is defined as "that area from which is obtained the major portion of the continuing patronage necessary for steady support of the shopping center."¹⁴ It is related to access by highways, driving times, the existence of natural and man-made barriers --- such as topography, rivers or parks, railways --- purchasing power of the people and competition.¹⁵

Before delimitation of the trade area, the available sites

in the economic potential locations, i.e. the locations of sufficiently large and economically strong population as well as of good accessibility, should be inventoried. If the site is already owned by the developer, its location should be in accordance with economic potentiality. Then, the inventoried sites can be evaluated by using the criteria of access, size and shape, cost, topography, and local conditions.

1. Access. The site must be easily reached over roads by automobiles or on foot, and must offer convenient, safe, and free traffic flow to enter and to leave. The capacity of the roads should be large enough for the additional traffic which is generated by the center.

2. Size and Shape. The site should be all in one piece, without odd shape, undivided by highways and free from dedicated streets. It should have sufficient acreage and depth for the type of the center contemplated and room for future expansion.

3. Cost. The cost of site acquisition should be reasonable. Usually, there is no particular rule for land cost but a higher land cost for a good location is preferable to a lower land cost for a poor or less desirable spot.

4. Topography. A steeply sloping site may require excessive leveling of the earth. Level ground and solid earth is needed for a neighborhood or a community center. For a regional center, a sloping site is admissible.

5. Local Conditions. The site must have adequate utility services available. Favorable zoning is needed to permit

shopping center development.

After site have been evaluated, the trade area of the leading ones could be determined by computing the isochronal driving time needed to reach the site. For a neighborhood center a single time zone within its trade area will be enough, but regional centers need to analyze various time zones which influence its trade. Generally, neighborhood shopping centers might attract business for an area not more than 5 minutes' driving time distant; a community center will draw most of its customers from an area lying within 15 minutes' driving distance; and regional centers will have its customers chiefly from within 30 minutes' driving distance.

In order to define the purchasing power and potential sales volume of each identified trade area in which the proposed shopping center will be built, analysis of population income, characteristics, and expenditure figure as well as the competition of present and future retail facilities should be carefully studied by using U. S. Census data and other local references.

Through comparison of the potential sales volume of trade areas, choice of a definite site for a shopping center can be achieved.

Site Planning

Site planning calls for designing the site layout to obtain the basic features which physically distinguish shopping centers. Usually, good site planning is the key to good business because shoppers desire ease and comfort in shopping. The elements of site layout are: 1) building area, 2) parking, 3) separation of

various traffic types, 4) circulation within the site area, 5) arrangement of the stores on the site, 6) selection of a building pattern, 7) landscaping, buffer and reserved areas.

1. Building Area. The building area is the ground area covered by the structure or structures.¹⁶ It is determined by the gross leasable area and the site's physical conditions. If the site is large and level, the gross leasable area might be arranged on one floor; hence the building area might equal the gross leasable area. If the site is small and slanted or needs to emphasize some particular architectural arrangement, the building area might be smaller than the gross leasable area. The gross leasable area can be transformed from potential sales volume by employing the percentage of total personal consumption expenditures and average gross leasable sales.

2. Parking. The parking needed is related to the size of the center. The arrangement of parking space should be in some basic pattern (angular or perpendicular) for ease in getting from the access highway into the stall and for reasonable walking distance from parked cars to shop.¹⁷

The number of parking spaces needed for a shopping center depends upon the size and type of center, the composition of the tenancy, shopper traffic from public transportation, character and income level of the trade area, amount of walk-in trade from nearby areas, local parking habits, rate of turnover in parking spaces, peak loads encountered, size and shape of the property, cost of the land and maintenance costs.¹⁸

Usually, parking ratio and parking index are terms used to describe the relationship between the parking and the structure of the shopping center. The parking ratio is the proportion of parking to gross floor area. The ratio may be stated as 2 to 1, 3 to 1, or 4 to 1.

The parking index is the number of car parking spaces per 1,000 square feet of gross leasable area.¹⁹

According to ULI's recommended standard, 5.5 parking spaces per thousand square feet of gross leasable area is a practical measurement. Whether computing parking capacity by the parking index method or by the ratio method, 400 square feet is usually needed for each car.²⁰ This figure includes access drives, storage spaces, and incidental areas such as landscape plots and unusable corners.

The walking distance between the parking stall at the outer fringe of the parking area and the stores should be a maximum of 400 feet. Limiting the depth of parking to between 300 and 350 feet from the store group is desirable²¹

Where there is a significant volume of walk-in shoppers in the neighborhood and community centers or in a regional center where shoppers arrive by means of public transit, the parking space provision can be reduced proportionately.

3. Separation of Various Traffic Types. These include private automobile traffic, service traffic, and pedestrian traffic. Pedestrian and auto traffic can be separated by planning the specified pedestrian areas between store groups

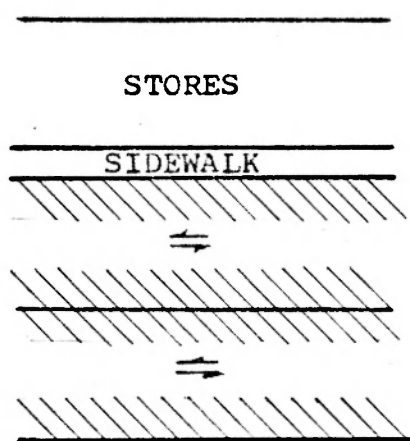
and by landscaping or planting low garden walls between the parking area and the sidewalk of the store front.

The truck tunnel is the ideal means of separating the automobile traffic from customers and services but high cost typically prevents its use except in large regional centers. In neighborhood and community centers, generally, the separation of customer automobiles and service trucks is achieved by limiting the customer traffic in front of the stores and the freight loading traffic in the rear.

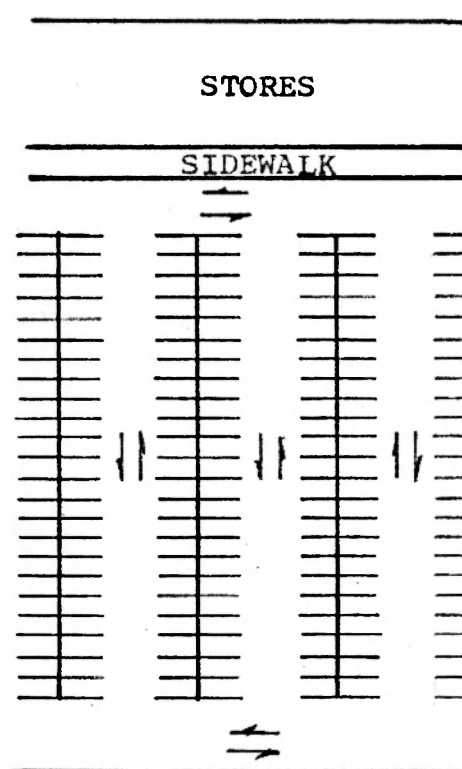
4. Circulation Within the Site Area. The pedestrian, auto, and bus traffic on the site should be planned to flow easily. The movement of pedestrians from parking area to store group should encounter as few as possible; therefore, the parking aisles should be set at a right angle to the stores.

If the aisles are set parallel to the store, shoppers have to squeeze between cars, and make a blind crossing at each aisle. Such a layout should only be used in shallow parking areas not more than two aisles in depth, where aisles double as access roads.²² (see fig. 1) Also, shoppers prefer the wide aisle pavement to a narrow space for walking between automobile bumpers in going from the car to the shops.

Auto circulation should make it possible to maneuver within the site without having to move the car onto the public highway giving access to the center.²³ In large regional centers, the auto circulation requires two types of roadways: entrance and exit roadways and circulatory roadways ---- one along the



A. Aisles are set parallel to the store front for shallow parking areas.



B. Aisles are set at right angle to the store front for deep parking areas.

FIGURE 1

perimeter, and the other around the building core. Sometimes, an additional secondary circulatory roadway is arranged as a loop near the halfway line of the depth of the parking area.²⁴ The inner parking areas provide for the normal business activities while the outer areas do so for peak shopping activities. The roadways may be planned for one-way or two-way traffic, and some kind of careful directional indicator should be used.

If a bus terminal is involved in the center, bus ingress and egress should be carefully planned.

5. Arrangement of the Stores on the Site. Arrangement needs to follow the "pull" principle. First, strive to make all locations equally valuable by locating key stores, which function as magnets, so that traffic will flow freely and uniformly between and around them. Then, put the rest of stores between the key stores. Because these traffic users cannot easily attract enough shoppers to survive, they depend on the foot traffic generated by key stores.

Stores which complement each other should be arranged together in one location. Such service buildings as a bank or a post office should not be placed between retail shops. Also, convenience goods stores should be located as close to parking as possible.

6. Selection of a Building Pattern. The selection of a building pattern is essentially based on the size of the center and the physical conditions of the site. Several accepted

patterns for shopping center buildings are the strip, the "L", the "U", the mall, and the cluster. (see fig. 2) These basic patterns might be used in any number of combinations and each has many variations.

a) The Strip. This is basically a line of stores that are placed side by side with common end walls, a united front, parking placed between the street and the building, and generally service in the rear. The strip is an efficient and economical building pattern. It also is easily adapted to most site conditions; and is best adapted to neighborhood centers.

As the size of the center increases, however, the advantages of the strip pattern are outweighed by its disadvantages. It becomes too elongated, too difficult for merchandising, foot traffic is diluted, and walking distances increase.

b) The "L" and "U". The "L" is basically a strip with one end turned; the "U" is a strip with both ends turned in the same direction. In most cases the intent of the "L" and the "U" is to reduce the length of an otherwise overly long strip.

The "L" shape is adaptable for site conditions at two important intersecting roads. Another use of the "L" or the "U" is to make maximum use of a site that is close to being square.²⁵

The parking area of the "L" pattern is such that the greater the difference in length is between the long and the short leg of the "L" the more the area ratio improves. The "U" will always have less good parking ratios until the "U" opens its jaws a considerable distance so that the parking ratio

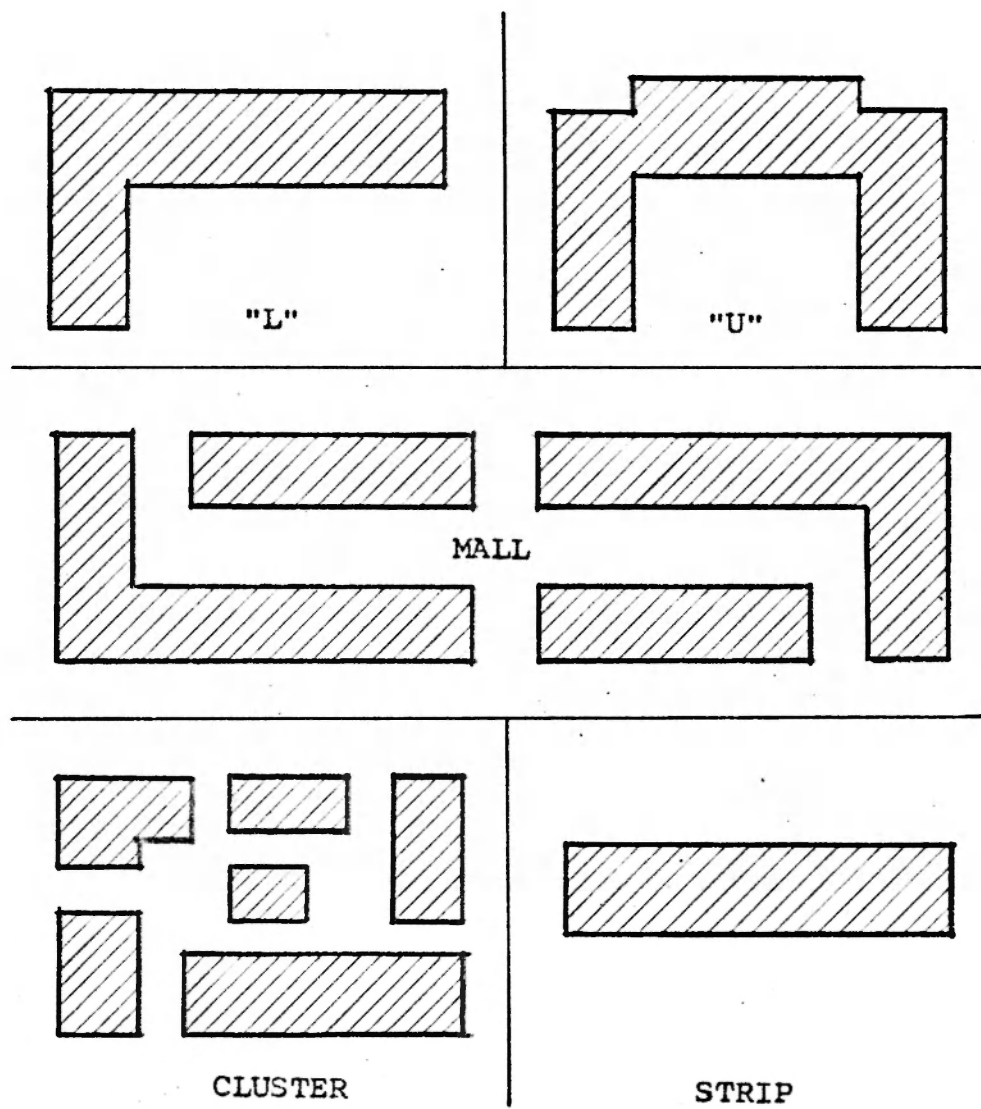


FIGURE 2: Building Patterns

begins to rise. Neither the "L" nor the "U" pattern ever reaches the same high ratio as the strip.²⁶

In general, the "L" is suitable for larger neighborhood and smaller community centers; the "U" for larger community centers.

c) The Mall. The mall is essentially two strips, face to face, with a landscaped pedestrian way in between. Several advantages are: 1) building area can be doubled with no increase in walking distance; 2) the volume of foot traffic can be significantly increased; 3) a desirable pedestrian area is created away from auto traffic; and 4) if the center is large enough to warrant the expense of underground delivery, a truck tunnel below the mall will serve the stores on both sides.²⁷ Because the parking areas are on each side of the mall, there will be enough parking of this pattern if the size of the site itself is adequate. The mall has become the most generally accepted pattern for regional centers and can also be used for community-size centers.

d) The Cluster. The cluster is a group of carefully planned buildings separated by pedestrian malls or courts and usually grouped around a key tenant as its nucleus. In its small form, the cluster is akin to the early bazaars and market places. In regional size, the cluster can produce a tightly integrated store grouping with a maximum interplay between stores. The disadvantage of this pattern is that the core key tenant receives a tremendous pedestrian flow but the small tenants are exposed

to only one-fourth or one-third of key tenant's traffic.²⁸ With this pattern, the parking is on an outside edge of the stores; therefore, the parking ratio is high. The cluster best fits the one-department store regional center.

7. Landscaping, Buffer and Reserved Areas. The landscaping areas might improve the appearance of a shopping center and create the shopping atmosphere for customers. Buffer areas separate the shopping center from nearby neighborhoods for relieving the noise, smell, and distraction created by the center. Reserved areas are for the future expansion of the center. Both the buffer and reserved areas might be landscaped. All these three areas should be considered for the better integration of the center.

To begin with the project, site planning should take form for its eventual adaptation to the physical characteristics of the site and to the potentials of the trade area. Through the entire site planning procedure the architect should remain aware of the architectural expression of the center toward surrounding streets, toward the parking lots and toward pedestrian areas. Site planning must also be directed toward gaining impressive vistas, a well-composed silhouette and well-proportioned space between structures.²⁹

Physical Development

The shopping center is a group of buildings which band together individual businesses in cooperative fashion with the

aim of creating greater commercial effectiveness. The physical development of a center, therefore, calls for a strong common treatment that permits variations for individual shop fronts yet results in a general uniformity and visual delight for the benefit of the whole project. The aspects of physical development are many. Several of them emphasized in this paper are: the tenant buildings, pedestrian areas, landscaping, sign designing, and lighting.

1. Tenant Buildings. The tenant buildings are vital parts of the shopping center. Not only can they gain income for the developer but also they are the places for doing business. Hence, the tenant buildings should be arranged efficiently.

The various merchandising categories and qualities influence the size, design, and independent ability of stores. Such stores as department stores, junior department stores, supermarkets, large fashion stores, restaurants, post office and bank, require free standing structures. The rest of the tenants are usually placed in multiple-tenant structures. The architectural design of buildings for single tenancy should be in harmony with the over all shopping center structure. Flexibility of utilization should be the objective for the design of multiple-tenant structures.

The width, depth, height, and column spacing of the structure as well as the material and structural method to be used for ceiling and partitions of the building should be carefully considered. The width of stores is affected by the types

of merchandising but the minimum usable width is 12 to 14 feet. The depth of stores, varying from 80 to 180 feet, depends on the location of their service facilities and shopper movement.

In general, stores of the same depth are put together and small stores are placed at the corner to allow for differing widths and depths. Improper placement of columns makes it hard for a tenant to divide the space for efficient merchandising layout. 20-foot column spacing along the store front, 40- or 60- and even 80-foot column spacing along the depth of the building have been extensively used. For smaller store spaces and in a small project, a column spacing of 30 feet provides great flexibility of frontage.³⁰ The height of the ceiling depends on the building height. It may vary from 8 to 14 feet but, as the ULI recommends, tenants needing large space (variety stores, supermarkets, etc.) require finished ceilings as high as 13 feet.³¹ To acquire flexibility, the ceiling should be of dry-built type, using lay-in panels and lay-on material. Partitions should be built of materials and by methods which makes them easy to remove and reuse.

If the site condition permits, construction of a basement may be worth-while. It would provide not only space for storage but also areas for later expansion.

To protect both customers and merchandise in show windows, canopies or overhangs are frequently installed at the store front. The width and height of these covers should be in proportion to the whole architectural scheme.

2. Pedestrian Areas. The pedestrian areas of a shopping center provide for walking, entertainment, and relaxation. Those areas should have a busy and colorful effect, seem exciting and stimulating, as full of variety and interest as possible in order to give an impression that shopping is fun.

In the pedestrian areas, trees and flowers, music, fountains, benches, sculpture and murals, and the free standing architectural structures should be effectively arranged. The size, shape and location of planting beds should be planned so as not to become obstacles to foot traffic. Colored brick, tile, or stone for a low parapet to enclose planting beds provide welcome relief within the main pavement area.³² To prevent a fountain from becoming dangerous for children, it should be designed so that bodies of water are shallow and be surrounded with protective curbs. The benches should be comfortable, easy to keep clean, simple in design, and scaled for varying human preferences. Sculpture, murals, and architectural structures should be in scale with the outdoors and nearly maintenance free. Other ways to create a pleasant shopping environment are through covered walkways, a screen on one or both sides, changing the size of spaces, a specially designed telephone booth, kiosks, and outdoor eating places.

3. Landscaping. Landscaping can prevent visual pollution in the center. It should be integrated with site planning, architectural design of buildings and pedestrian areas. Existing large, healthy trees, rock formations, water bodies that are at

at strategic locations should be preserved to add to the natural beauty of the center. Planting should be informal and natural as a contrast to the man-made structures.

Planting at appropriate places in the parking areas might provide shade and avoid a "sea of asphalt" feeling. In buffer areas, large scale plants might be used as noise, sound, and commercial lighting barriers. For landscaping the pedestrian areas, including the walkways and mall spaces, plantings and flower beds can be used with benches and fountains.

Planting materials of the center should be related to the surrounding area and the region. Not only will they give a homogeneous impression, but also they will reduce the maintenance cost.

4. Signing. W. G. Rouse, Council member of ULI, has said: "Signs are part of man's insatiable and very human desire to communicate," but the indiscriminate use of signs in commercial areas is ugly, unsightly, and objectionable.³³ Designers should regard them as an important element for the shopping environment. To attract shoppers from streets or highways, the shopping center sign should be simple and visible from a considerable distance.

To create a harmonious effect in the shopping center as well as to identify the shopping center as a whole, sign control is needed. This control should be concerned with size, design, location, color, and illumination. Guide lines should indicate: maximum letter height permitted; the general color

scheme to be set, and regulations as to illumination. Signs in walkways should be scaled to the pedestrian, near eye level and small in size. For special pedestrian areas, name signs should be centrally located and supported by free standing poles.³⁴

5. Lighting. Lighting also plays an important role in a shopping center. Well designed lighting can create a fantastic shopping environment. The structures in the shopping center, especially tall buildings, seem to be dark monsters at night. Floodlighting can prevent this illusion and attract shoppers on surrounding roads and in parking areas. Shopping center signs should also be brightly illuminated for the same reason. The lighting in the pedestrian areas should not be too bright but add interest and variety. Floodlighting of trees, sculpture and fountains, low-level lighting of flower beds, and illumination of seating areas by specially designed low-intensity lamps on posts,³⁵ generally help to attain these goals. In parking areas, illumination should be sufficient to let shoppers maneuver their cars and to protect the facilities there. The glow from the lighting standards should be directed downward to provide 1 - 1/2 foot candles at grade.³⁶

CHAPTER II

HISTORY OF THE WEST LOOP SHOPPING CENTER

The idea of the West Loop Shopping Center was initiated in 1958. The original site, which was owned by the developer, the Town Building Investment Co., was at the intersection of U.S. 24 (now Anderson Ave.) and U.S. 24 cut-off (now K-113). Its original area of approximately 40 acres included part of present Seth Childs Road (K-113) --- the area bounded by Claflin Road, Anderson Avenue, and Brighton Road.

No comprehensive study of the economic feasibility of the center was ever made, nor any formulation of physical development plan and program. Most of tenants joined the center singly.

Dillions supermarket was the first tenant of the center on September 21, 1960.

On August 7, 1962, the West Loop site was annexed by the city of Manhattan, under ordinance No. 2269, an ordinance extending the limits of the city of Manhattan, defining the boundaries of said extension and making all ordinance of that city applicable to the territory and the inhabitants thereof (see appendix 1). In December of the same year, T. G. & Y. store moved in.

On April 10, 1964, Tempo department store became the third.

In 1965, the Norton Rexall chain store, Lucille's Beauty Salon & Fashion Shop, and Beneficial Financial Co. decided to

set their buildings between Tempo and Dillons.

In 1967, the State Highway Department condemned about 16 acres of the West Loop site for the construction of Seth Childs Road (K-113) and limited the usable land of the center to 24 acres. After the construction of K-113 was started, to provide more accessibility to the center, between 1967 and 1974, there was a massive joining of businesses in West Loop.

King's Food Host, Cinderella Dry Cleaning, Mr. Steak, Mobile Station, and Pizza Hut got their building permits and started to build in 1967 and 1968. Thus a typical neighborhood shopping center was shaped. The adding of Kansas State Bank, Taco Hut, Drummer Boy Hamburger, and Canterbury Court in 1969 made the center added still more services.

West Loop site was in a C (commercial) zone, for local business, previous to 1969. On July 19, 1969, the site was zoned C-2 on the newly approved city zoning map. On March 24, 1970, the approval of ordinance No. 2703 permitted the West Loop shopping center tract to have higher density and increased the number of types of businesses from 16 to 39. That ordinance amended section 4-202(A) and 4-202(B) of zoning ordinance 2650 of the city of Manhattan, Kansas (see appendix 2). This approval provided more opportunities for new tenants.

In 1971 only a kiosk for photo developing was built. Due to the expansion of business of Dillons supermarket, in 1972, Dillons relocated at the southwestern edge of the center. The Calhoun store next to Dillons also was constructed at that time.

Twin theater also began to build in 1972.

The old Dillons supermarket was remodeled for People's Saving and Loan, Team Electronic and Army & Navy Recruiting Center in 1973. Also the structure along Claflin Road for Stevenson's Clothing, Retail Liquor Store, Salon de Madrid, Michael D. Wangsgaard Dentistry, Dr. Young Optometrist, and Beckley Barber Shop were under construction.

Between 1971 and 1974, the street improvement program of Anderson Avenue and Claflin Road was proceeding. The share of the center for the road improvement was on the base of \$20 per foot of the center's frontage along the road. According to the statement of Bill Farrell, manager of West Loop, the improvement of Anderson Avenue and Claflin Road provided certain business advantages.

In 1975, Union National Bank is under construction in West Loop Shopping Center. It is located at the north central part of the site and its GLA is about 2,300 square feet.

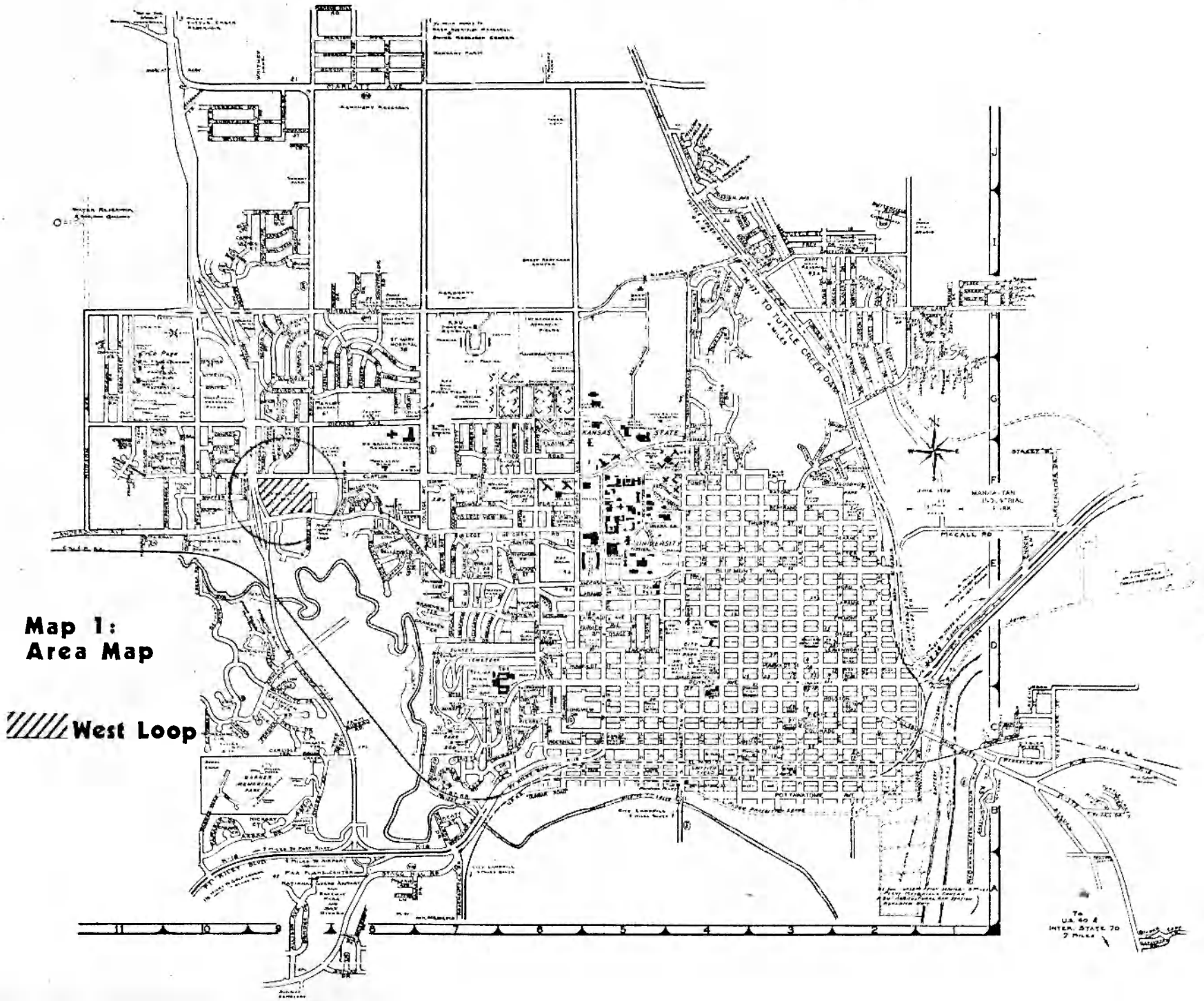
The zoning ordinance of the city of Manhattan limits additions to the center to a maximum building area of 25,000 square feet. After 1975, the center only has 22,700 square feet building area permitted; thus the development of West Loop Shopping Center will become static. The center could permit significant change, only if a new major tenant came and occupied that 22,700 square feet.

CHAPTER III
PHYSICAL CHARACTERISTICS
OF THE WEST LOOP SHOPPING CENTER

The West Loop Shopping Center is located in the northwest area of Manhattan. The north, west, and south parts of the site are bounded by Claflin Road, Seth Childs Road (K-113), and Anderson Avenue respectively. The east side is adjacent to a hill on which some eating places are built. The land that lies to the north and east of the shopping center has been developed as residential areas. The Seth Childs Road is a north-south bound two-lane highway connecting with Fort Riley Boulevard (K-18) and U.S. 24. Both Claflin Road and Anderson Avenue are east-west bound major arterials of the city. (see map 1)

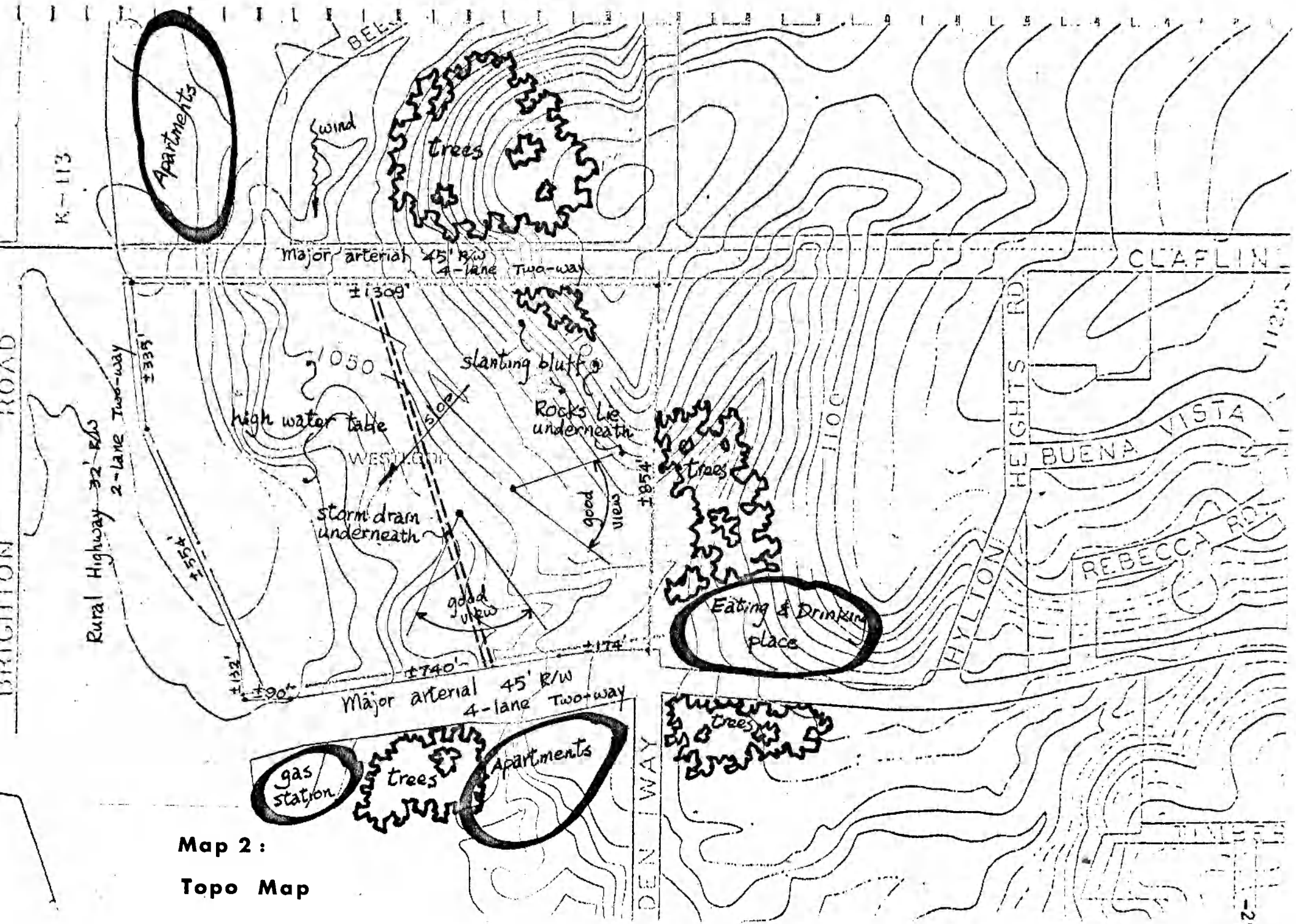
The site is approximately 24 acres, sloping (from east to west), a trapezoid plot. Most of the site now has been leveled. A small portion at the northeast is a slanting bluff. As for the subsoil, rocks lie under the northeastern corner, and an eight-foot water table under the main shopping area. The buildings on the main area need 23-foot piling to reach solid earth. The C-2 zoning law limits maximum lot coverage to 35 percent, and structure height to 50 feet. The structure can not be closer than 25 feet to the property line where it borders a residential street or it must occur no closer than 55 feet from the center line of the street whichever is greater. (see map 2)

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Map 1:
Area Map

West Loop



Map 2:
Topo Map

There are three main building groups in the center and several independent buildings clustered round the customers' parking area. The freight loading area are in the rear of buildings. The distance between store groups is as large as 700 feet. (see site plan 1)

Twenty-six tenants occupy the center, and total gross leasable area is about 143,140 square feet. The types of service include junior department store, variety store, drug store, supermarket, men's clothing, women's apparel, radio and T.V. shop, entertainment, restaurants, liquor store, dry cleaning, beauty salons, barber shop, gas station, bank, and professional office. The name and the gross leasable area of each tenant are as follows:

<u>Tenant Name</u>	<u>Gross Leasable Area (sq.ft.)</u>
Kansas State Bank	6,400
King's Food Host	4,800
T. G. & Y. Store	7,500
People's Saving and Loan	
Team Electronic	
Vacant (old Dillons)	12,400
Army & Navy Recruiting Center	
Lucille's Beauty Salon & Fashion Shop	2,700
Beneficial Finance Co.	1,600
Norton Rexall Drug Store	6,100
Tempo Department Store	30,000
Cinderella Dry Cleaning	2,300
Mr. Steak	3,200
Pizza Hut	1,500
Mobile Station	2,400

Stevenson's Clothing	1,930
Retail Liquor Store	1,130
Dr. Young Optometrist	470
Salon de Madrid	940
Wangsgaard Dentistry	940
Beckley Barber Shop	600
Canterbury Court	10,000
Taco Hut	1,100
Drummer Boy Hamburger	2,000
Twin Theater	10,000
Calhoun Store	11,570
Dillons Food Store	21,560

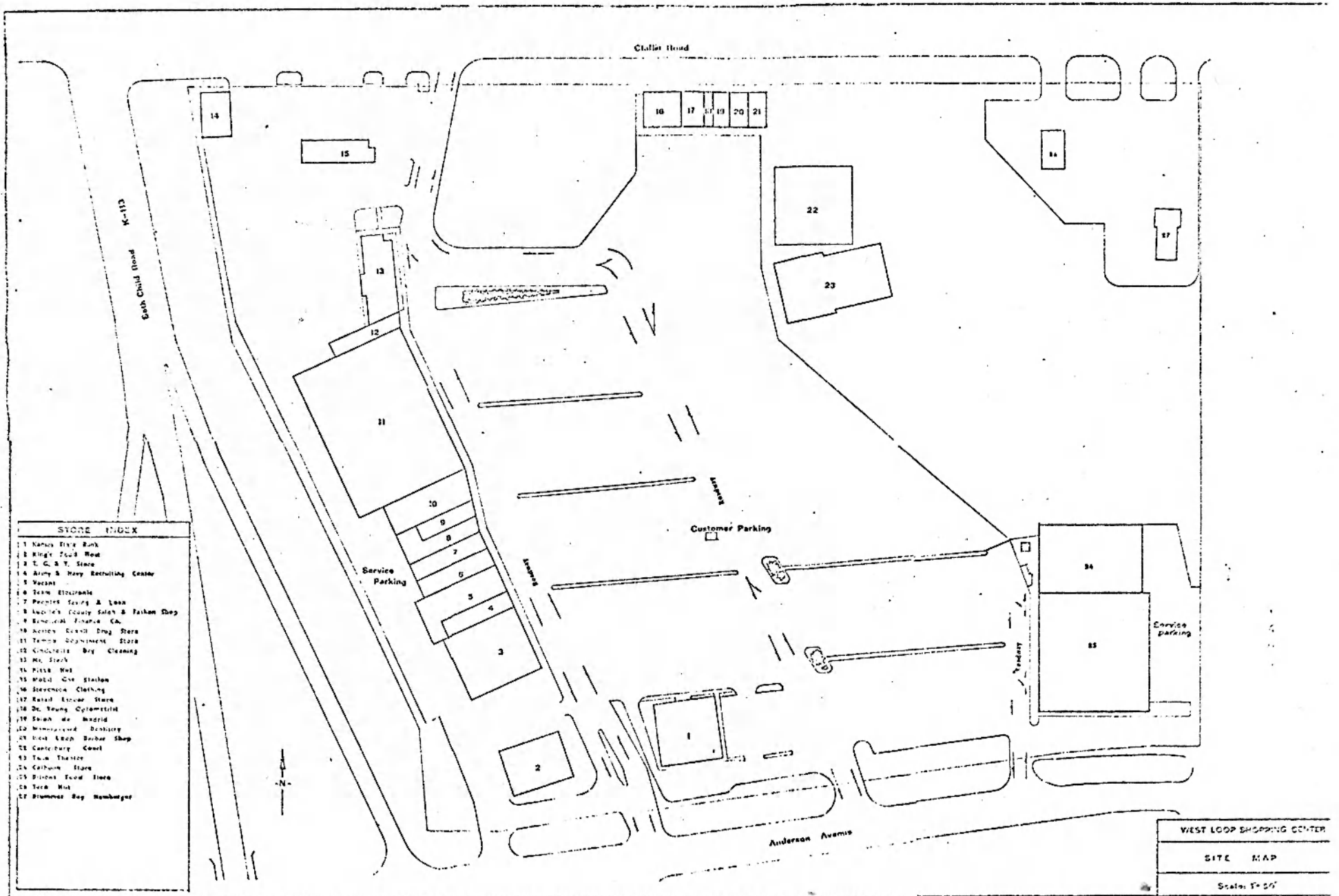
The present available customer parking area is approximately 370,000 square feet. Most of the aisles for customer parking are set at right angles to the store front. A few aisles are parallel to the store: those in front of Stevenson's Clothing, professional offices, Kansas State Bank, and in the rear of Mr. Steak. They have 45-degree and 90-degree parking stalls in the center.

There are three accesses to Anderson Avenue and one to Claflin Road for customers entering and leaving the center's main shopping area. Three major roadways are designed for the circulation in the center. The roadway in front of Mobile Station, Mr. Steak, Tempo, T. G. & Y., and King's Food Host goes through the center and joins Anderson Avenue and Claflin Road. The roadway in the middle of the main parking area is for customers of both side stores groups, for customers from Claflin Road to Dillons and Calhoun, and for customers from

Anderson Avenue to Twin Theater, Canterbury Court, Stevenson's Clothing, professional offices. The roadway along the store front of Dillons supermarket and Calhoun Store is still for serving these stores. All of the accesses and roadways have two-way traffic. (see site plan 1)

No specified pedestrian areas were arranged between parking area and sidewalk of store fronts nor between store groups. Few canopies for the protection of pedestrians were set up and the few were narrow. One covers the pedestrian sidewalk from Tempo to T. G. & Y.. The other is hanging along the store fronts from Stevenson's Clothing to Beckley Barber Shop. No specific landscaping areas were designed for this center. Only a few planting beds were set in the customer parking, and turfed areas along Anderson Avenue and Claflin Road. This center also has no reserved area for future expansion.

The architectural design of store facades in the old part of development, on the west side of the center, were diversified. The new store groups on the eastern part of the site presents more or less uniformity. The width and depth of the tenant buildings vary. No module was employed for the entire buildings in the center. Signs of each tenant are not regulated strictly. Different colors of letters and background, different height of signs, different methods of illumination and different lettering are general in appearance. The shopping center sign is erected between the Kansas State Bank and King's Food Host



Site Plan 1: Existing Site Conditions

near Anderson Avenue. There is no sign erected on Claflin Road.

The facilities such as trees and flowers, music, fountains, benches, sculpture and murals, and free standing architectural structures, are not enough provided in this Center in general.

In the customer parking area, 60-foot lighting poles are used with approximately 90-foot spacing.

CHAPTER IV
EVALUATION OF WEST LOOP SHOPPING CENTER

The evaluation of West Loop Shopping Center is based on the criteria described in the general discussion of shopping centers and the characteristics of West Loop today.

Classification of the Type of the Center

On the basis of function, size, and trade area which the center serves, West Loop Shopping Center might be classified as a community shopping center because most of the characteristics of West Loop conform with those of community shopping centers rather than with those of the other two types of centers. (see table 1)

Location

West Loop Shopping Center is in the northwest of Manhattan. (see map 1) Evaluation of this center, logically starts with delimitation of the trade area. This trade falls into two categories. The area within 5 minute's driving is for the purchase of daily convenience items. The area within 15 minute driving time is for higher priced shopping goods. Under normal road conditions, a 5-minutes drive will take the driver east to the K.S.U. campus, or south to Fort Riley Boulevard, or west to Hudson Avenue, or north to Kimball Avenue. A 15-minutes drive can take a person anywhere in the whole city of manhattan,

TABLE 1: USING COMPARISON METHOD TO CLASSIFY THE TYPE OF WEST LOOP SHOPPING CENTER

Shopping Centers	Neighborhood Center	Community Center	Regional Center	West Loop Center
population served	2,500-20,000 persons	20,000-100,000 persons	100,000-1,000,000 persons	27,575 persons plus the persons in surrounding areas
major functions	sale of convenience goods and personal services	same functions of neighborhood center plus sale of shopping goods (wearing, apparel, appliances, etc.)	same functions of community center plus sale of general merchandise, apparel, furniture, etc.	the same as community center
number of shops & stores	7-20	10-40	40-100	26
leading tenant	supermarket & drug store	junior department store & variety store	one or more large major department stores	Tempo Department Store and Dillons Food Store
site area	1.5-10 acres	10-30 acres	40-80 acres	24 acres
gross leasable area	30,000-100,000 sq.ft.	100,000-300,000 sq.ft.	300,000 to over 1,000,000 sq.ft.	143,140 sq.ft. at the present time
parking requirement	200-600 spaces	1,000-3,000 spaces	at least 2,000 spaces	approximately 1,000 spaces
other services	---	theater, bank, post office professional offices	same as community center	Twin Theater, Canterbury Court, Kansas State Bank, Beneficial Financial Co., People's Saving and Loan, T.G.&Y., Rexall, Team, etc.
area served	1/2 mile walk or 5-minute drive	1 1/2 mile walk or 15-minute drive	30-minute drive	the near by residential developments, Manhattan, and surrounding areas

Source: Joseph de Chiara and Lee Koppelman, Planning Design Criteria, 1969, P234.

or to part of Fort Riley or Tuttle Creek Lake. Thus all the population of Manhattan can be considered as in the trade area of West Loop Shopping Center.

Manhattan is bounded on the North by Kansas State University (State property), on the East by the Kansas River, and on the South by Wildcat Creek. These boundaries limit its development toward the west. Land for residential development was also available in the northwest of Manhattan before 1950.

The population of Manhattan was 19,056 in 1950, 22,993 in 1960 and 27,575 in 1970. The population growth rate of the city therefore was 20.66% between 1950 and 1960, and 19.95% between 1960 and 1970. The population growth rate of the United States in the same period, as previously, was 18.48% and 13.32% respectively. (see table 2)

It is therefore evident that Manhattan is a fast growing city. More housing has been built on the fringes of the city. City limits has been pushed farther out and the distance between the place of residence and downtown has increased.

Between 1950 and 1960, about half of the increased population moved to land in the northwest beyond the city limits, after 1960, this movement toward the west was even more apparent. In general, the tendency of the city's development is westward. (see map 3)

The median annual income per family in Manhattan went up from \$ 2,967 in 1950, to \$ 5,298 in 1960, to \$ 9,006 in 1970. Incomes of families in the surrounding counties went up also.

TABLE 2

POPULATION ANALYSES OF KANSAS AND U.S.

Manhattan Population

Year	1950	1960	1970
Population	19,056 ¹	22,993 ²	27,575 ³

Manhattan Population Growth

Year	1950-1960	1960-1970
Pop. Growth	3,937	4,582
Growth Rate	20.66%	19.95%

U.S. Population

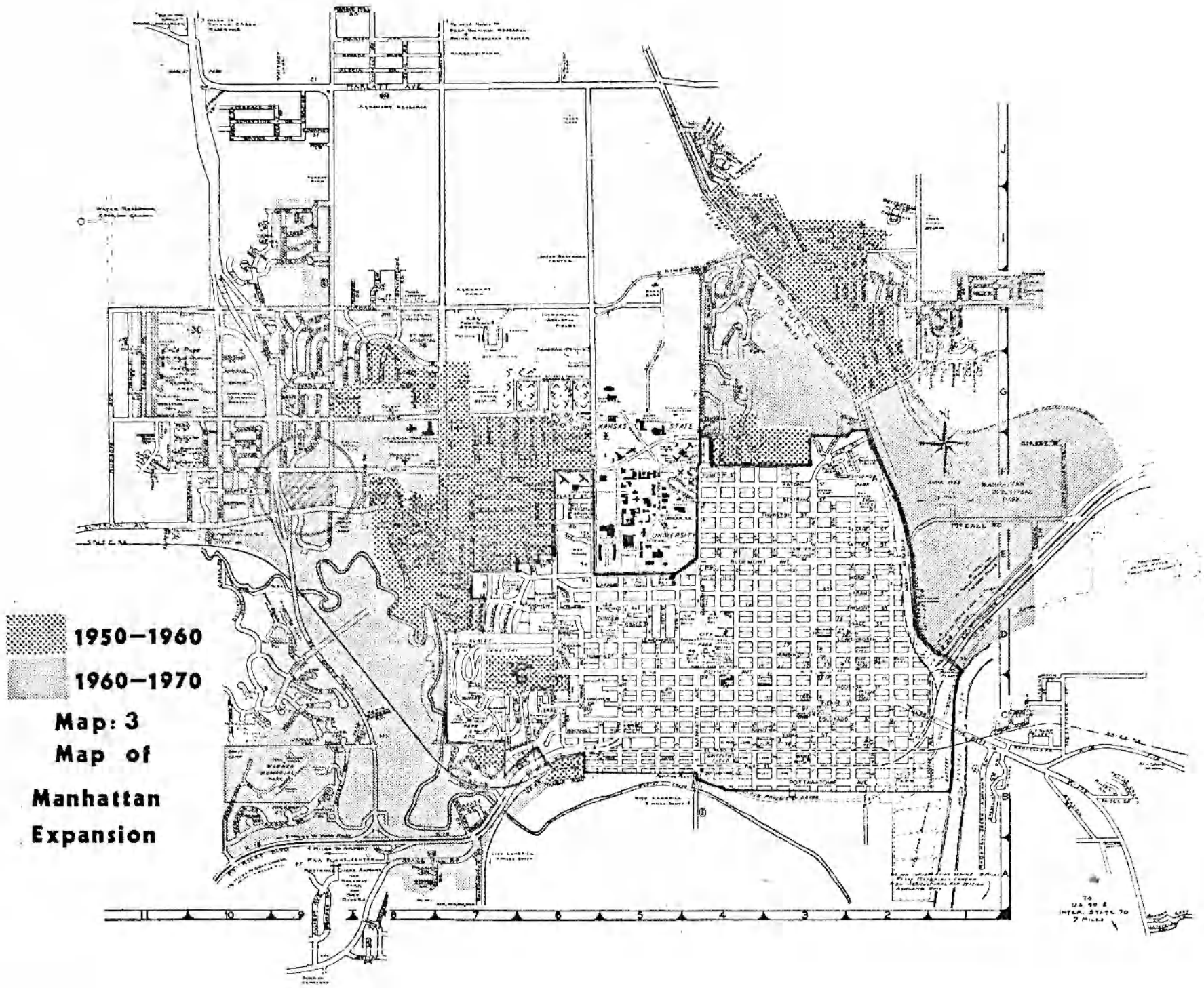
Year	1950	1960	1970
Population	151,325,798 ⁴	179,323,175 ⁵	203,211,926 ⁶

U.S. Population Growth

Year	1950-1960	1960-1970
Pop. Growth	27,997,377	23,888,751
Growth Rate	18.48%	13.32%

Source: 1. 1950 United States Census of Population, Kansas
 2. 1960 United States Census of Population, Kansas
 3. 1970 United States Census of Population, Kansas
 4. 1950 United States Census of Population
 5. 1960 United States Census of Population
 6. 1970 United States Census of Population

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The 1960 and 1970 family incomes far exceeded the 1950 figures (see table 3). Thus it is reasonable to say that the purchasing power of the families increased.

By 1960, there were only two places --- downtown and Aggeville for Manhattan people and those of surrounding areas to shop. Both of these two places were congested and had inadequate parking facilities. Manhattan's Chamber of Commerce was urged to solve those problems. The need for new shopping areas to relieve the distress of both shoppers and businessmen was urgent, especially, for the new residential development west of the city.

In the preceding analyses, it is evident that the location of West Loop is suitable for a shopping center because of its economic potential.

Site

West Loop is bounded by Seth Childs Road, Anderson Avenue, and Claflin Road.

Anderson Avenue, which is a major arterial of the city, leads to the heart of Manhattan (the old development) and to the new residential areas west of the site. Seth Childs Road (K-113), a north-south bound rural highway, passes by the west side of Manhattan; it connects with U.S. 24 in the north and K-18 in the south. Claflin Road is an arterial leading to the K.S.U. campus and collects the traffic generated by the residential areas north of the site. Thus, most of the customers

TABLE 3

USING THE PURCHASING POWER OF THE DOLLERS
TO STANDARDIZE THE MEDIUM ANNUAL FAMILY INCOME
FIGURES OF 1960 AND 1970 TO 1950 FIGURE

Year	1950	1960	1970
Annual Income Per Family	2,967 ¹	5,298 ²	9,006 ³
Purchasing Power of the Dollar	1.387 ⁴	1.127 ⁴	0.860 ⁴
Standardize the Incomes to 1950 Dollars	2,967	4,300	5,610

Source: 1. 1950 United States Census of Population,
Kansas, P.62
2. 1960 United States Census of Population,
Kansas, P.217
3. 1970 United States Census of Population,
Kansas, P. 329
4. Statistical Abstract of United States,
1974, P. 404

who are from the old development of Manhattan, K.S.U. campus, and its residential halls, the new residential areas in the north, south, and west, and even areas from a greater distance can be channeled to the West Loop site by those roads.

The site is medium in size, somewhat sloping, adequate in depth, all in one piece without odd shape, and is free from dedicated streets. West Loop site was zoned C-2, and the utility services had reached its border before the construction of the center.

Synthesizing the above factors, generally, it might be said that the West Loop site has adequate accessibility, favorable location and zoning, and is a good size and shape for a community shopping center development. For future development as a regional center, it is poorly equipped and has several drawbacks, i.e. 1) the accessibility of the site is inadequate for traffic created by a regional center, 2) the plot size is limited, and 3) the site is encircled by arterials, a highway, and a hill which make future expansion impossible.

Circulation

The external circulation is related to traffic volume and the physical condition of the surrounding roads.

For both directions, the AADT (Average Annual Daily Traffic), counted by Manhattan city engineers in 1970, for Anderson Avenue is 8,815 VPD (Vehicle Per Day), of Claflin Road is 2,785 VPD, of

Seth Childs Road is 9,410 VPD and 5,650 VPD respectively. Both Anderson Avenue and Claflin Road are 45 feet in width; the Seth Childs Road (K-113) is approximately 32 feet wide. (see map 4)

The service volume is computed by means of road conditions, driving speed, and v/c ratio (Volume/ Capacity ratio). The peak hour volume and the 30th highest hour volume are transferred from AADT traffic count. The service volume for one direction of Anderson Avenue is 2,070 VPH (Vehicles Per Hour) and that of Claflin Road is 1,760 VPH approximately. The approximate peak hour volume for one direction of Anderson Avenue is 1,160 VPH and that of Claflin Road is 385 VPH. The service volume for both directions of Seth Childs Roads is 1,010 VPH but its 30th highest hour volume near the site ranges from 770 VPH to 1,280 VPH approximately. (see table 4)

During the peak hour, Anderson Avenue is congested; the left-turning traffic of the three accesses to the center, to Anderson Avenue and that on Anderson Avenue, usually, is slightly delayed and backs up. The access to Claflin Road does not have this problem.

It is evident that the traffic volume is much heavier south of the center than in the north. Especially, the traffic volume at the southwest corner of the site on Seth Childs Road is greater than that road can easily accommodate. In general, the external circulation of the center is in fair condition.

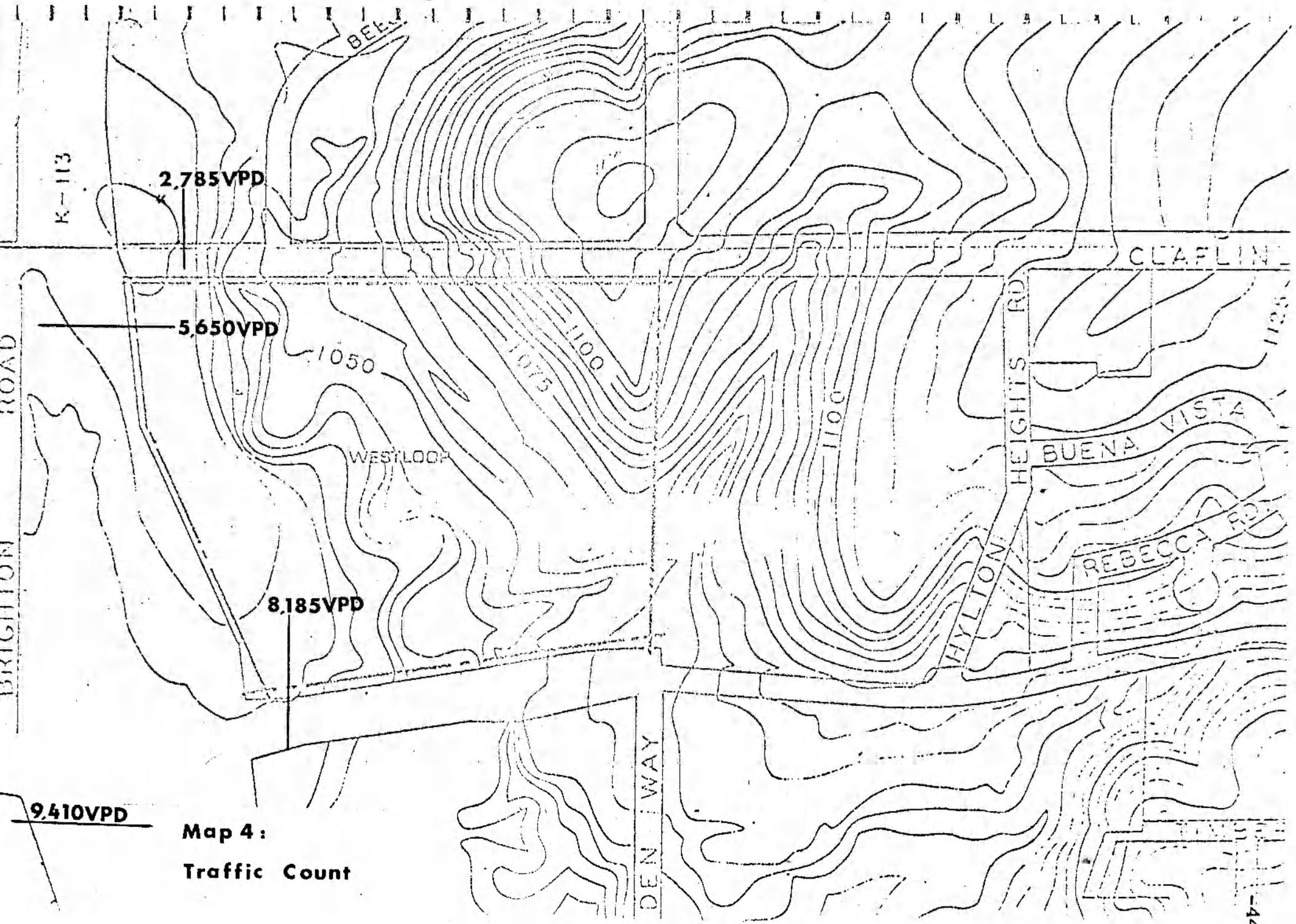


TABLE 4: TRAFFIC ANALYSES

One Direction Service Volume

Road Name	Basic Capacity	# of Lane	v/c	Lane Width Factor	Truck Factor	Volume
Anderson	2,000 ¹	2	0.7 ¹	0.85 ¹	0.87 ¹	2,070
Calflin	2,000 ¹	2	0.7 ¹	0.85 ¹	0.74 ¹	1,760

One Direction Peak Hour Volume

Road Name	AADT	% of AADT in Peak Hour	Volume
Anderson	8,185	13.8% ²	1,160
Claflin	2,785	13.8% ²	385

Both Directions Service Volume

Road Name	Basic Capacity	v/c	Lane Width Factor	Truck Factor	Volume
Seth Childs	2,000 ¹	0.56 ¹	1 ¹	0.95 ¹	1,010

Both Directions of the 30th Highest Hour Volume on Seth Childs

Check Point	AADT	% of AADT in 30th Highest Hour Volume	Volume
A	5,650	13.6% ²	770
B	9,410	13.6% ²	1,280

Source: 1. Highway Research Board, Highway Capacity Manual, 1965, P. 76, 323, 286, 287
 2. IBID, P. 40

A survey of the present internal circulation system of this center shows that pedestrian traffic between store groups rarely occurs, because no pedestrian area lies between them to guide customers going to another group. The gigantic parking in the middle of the center and the scattered pattern of building groups also are factors to discourage the customers shopping around on foot. Most of the customers go to other store groups by cars.

According to the traffic counts made by myself on march 22, 1975, (see table 5) the mode of movement of internal customers cars within the site are 1) 105 cars/8 hr. from the Dillons group to the Tempo group, 2) 41 cars/8 hr. from Dillons group to the Stevenson's Clothing group, and 3) 22 cars/8 hr. from Tempo group to Dillons group. Thus, some of the parking aisles are frequently utilized as roadways by customers. The auto traffic between the Tempo group and the Stevenson's Clothing group is sparse because most of the tenants of the latter group are professional offices which close at 5:00, and entertainment establishments which are open at night.

Use of the center's roadway as a connector between Anderson Avenue and Claflin Road is high. Within an eight hour period, an average of 217 vehicles from Claflin Road bypass the shops to Anderson Avenue and 77 vehicles went from Anderson Avenue to Claflin Road. (see table 6)

Conflict and congestion on roadways are evident because the roadway in front of Mr. Steak, Tempo, to King's Food Host and the roadway in the middle of the customer parking area not only

TABLE 5: INTERNAL TRAFFIC MOVEMENT COUNT

Date: March 22, 1975 (Saturday)
Time: 9:00 AM to 5:00 PM

Tempo group to Dillons group	by car	22
	on foot	11
Dillons group to Tempo group	by car	105
	on foot	12
Stevenson group to Dillons group	by car	12
	on foot	0
Dillons group to Stevenson group	by car	41
	on foot	3
Tempo group to Stevenson group	by car	1
	on foot	2
Stevenson group to Tempo group	by car	14
	on foot	2

TABLE 6: CENTER'S PASSING AUTO TRAFFIC COUNT

Date: March 22, 1975 (Saturday)
Time: 9:00 AM to 5:00 PM

From Claflin Road to Anderson Avenue	217
From Anderson Avenue to Claflin Road	77

serve a high volume of vehicles that are generated by the customers who approach shops from Anderson Avenue and Claflin Road but also are employed by the nearby residents as an alternate street.

From the above facts --- lack of any pedestrian area between store groups, misuse of parking aisles, high volume of passing auto traffic, conflict and congestion on roadways --- it is obvious that the internal circulation system of West Loop Shopping Center was designed very poorly, even though the arrangement of parking aisles is adequate, and customer auto traffic and service traffic are separated. Improvement is needed to discourage through traffic at the minimum.

Visual Perception

"Aesthetics" in a general sense means beauty; beauty in arts, in music, in architecture. Such beauty can be experienced emotionally, audibly, or visually.³⁷ Vision itself, the nature of perception of space, upon which every architectural effect depends, is the basis for judging the quality of physical design. Thus, the measurement of physical qualities of this center depends on its visual impression; i.e., what is seen by the user, the passerby, or the customers of the center.

The shape, size, material, color, texture, proportion, and the movement therein are all elements of visual perception. The physical quality is derived from them. Several workable criteria by which this center can be measured are defined in four categories:

1. Unity: Possessing the quality of unity, the physical characteristics will be a closed system of movement, balance between solids and voids, uncluttering signs, integration with surroundings, dynamic appearance, and dominance inherent in the design elements of the complex.³⁸

2. Scale: Possessing the quality of scale, the physical characteristics will be a three dimensional volume with human scale, suitable size for activities, appropriate visual space, and recognizing the environmental aspects of passing from exterior to interior space.

3. Composition: The quality of good composition can be achieved by imaginative use of materials, choice and compatibility of materials, materials suited to function, visual appearance of the materials excellent, relationship with other buildings and materials to effect a pleasing, unified complex.³⁹

4. Emotional Response:

a) Harmony: To achieve harmony requires use of the right shape, right size, right color, and the right materials, convenience of movement, lack of friction, comfort and reward, logical sequence and rational arrangement of parts.⁴⁰

b) Tension: Tension results from use of unstable forms,

split composition, illogical complexities, wide range of values, clashing colors, intense colors without relief, visual imbalance about a line or point, hard, rough, or jagged surfaces, unfamiliar elements, harsh, blinding, or quivering light.⁴¹

c) Fright: The physical characteristics will be sensed confinement, a quality of compression and bearing, an apparent trap, no means by which to judge position or scale, hidden areas and spaces, possibilities for surprise, sloping, twisted or broken planes, danger, unprotected voids, sharp intruding elements, contorted spaces, unfamiliar shocking, atartling, wierd, uncanny, symbols connecting horror, pain, torture, or applied force, dim, dark, eerie, pale, and quavering or blinding garish light, cold blue and cold greens, abnormal monochromatic color.⁴²

The first glance impression of this center is it was built fragmentary, without order, without common architectural characteristics, and with poor qualities. Three of the building groups are widely separated from the rest; the design of three building groups are not integrated even though the new built Dillons group and the Stevenson group are more or less harmonious.

The materials and construction methods used for the old establishment (on the westside) and for the new buildings

(on the eastside) are quite different. Signs of the stores differ in lettering and in color. Movement of customers' automobile traffic is irregular. No pleasant natural beauties or man-made masterpieces for improving the visual delight, entertaining, and relaxation of shoppers are provided in the pedestrian and parking areas. The location of the shopping center sign appears improperly. It can not be seen from a considerable distance on K-113 and Anderson Avenue. The scarcity of sign on Claflin Road makes the shoppers feel no clear guidance to enter the center. At night, the lighting of the customer parking areas is sufficient; the lighting for buildings, signs, and other facilities is so poor that black spots and hidden areas result.

As for visual perception, West Loop Shopping Center does not possess the qualities of unity, scale, and good composition. Psychologically, it does not create a delightful shopping atmosphere but makes customers feel tension and fright. The improvement in this aspect is certainly needed.

Functional Relationships

Usually, the business composition of a shopping center is represented by the percentage of center's GLA (gross leasable area) occupied by each business.

Compared with the business composition of most community shopping centers, West Loop has a lower percentage in general merchandise, other retail and dry goods stores, and offices,

and a higher percentage in financial, and other business types.
(see table 7)

According to ULI standards, the relationship between parking and shopping center structure is described by the parking index.

A check with the parking index, indicates that West Loop has adequate parking area at the present time. Even if 25,000 square feet more building area were to be added in the future, there would still be adequate parking space. (see table 8)

TABLE 7: COMPARISON OF BUSINESS COMPOSITION

Business	Average % of Community Center's GLA*	% of West Loop Center's GLA	Quality
Food and Food Service	22%	23.8%	Average
Clothing and Shoes	12	11.3	Average
General Merchandise	32	26.1	Below Average
Furniture	3	0	---
Other Retail and Dry Goods	15	8.5	Below Average
Financial	3	8.1	Above Average
Office	2	1.0	Below Average
Service	4	4.7	Average
Other	4	14.0	Above Average
Vacant	3	2.5	Average
Total	100%	100.0%	

Source: Urban Land Institute, Community Builders' Handbook,
1968, P.267

TABLE 8: PARKING ANALYSES

Total GLA of West Loop Shopping Center = 143,140 sq.ft.

GLA of West Loop Shopping Center's Main Shopping Area

= 140,040 sq.ft.

Total Customer Parking in Main Shopping Area = 370,000 sq.ft.

Customer Parking Area needed by present GLA of main shopping

area of West Loop

$$(140,040 / 1,000) \times 5.5 \times 400 = 308,000 \text{ sq.ft.} < 370,000 \text{ sqft.}$$

Customer Parking Area needed by present GLA of main shopping

area of West Loop plus 25,000 sq.ft. additional Building Area

$$((140,040 + 25,000) / 1,000) \times 5.5 \times 400 = 363,000 \text{ sq.ft.}$$

< 370,000 sqft.

Source: Urban Land Institute, Community Builders' Handbook,
1968, P.342

CHAPTER V
RECOMMENDATION

A well-planned and -designed community shopping center provides not only a convenient shopping facility but also a place of social contacts and relaxation for the residents.

According to the previous evaluations, it is evident that numerous problems exist in West Loop Shopping Center. To improve the present deficiencies, several remedies are proposed: (see site plan 2 and sketch 1, 2)

1. Discourage through-traffic in the center. Properly changing circulation pattern and closing the roadway in front of Mr. Steak, Tempo, to T. G. & Y. will be so arranged that the large amount of through traffic which interferes with the successful operation of the Center can be eliminated.

2. Separate auto and pedestrian traffic. Specified pedestrian walks, pedestrian areas and mall, will be placed in the Center for the protection of foot traffic between stores.

The gigantic customer parking area will be divided into several parking zones. Each zone will be close to certain stores or pedestrian walk so that shoppers can easily reach stores without conflicts with auto traffic.

3. Create pedestrian areas in front of stores. The pedestrian sidewalks along the store fronts will be expanded for creating more foot traffic volume and shopping excitement. Shoppers' entertainment and relaxation facilities such as

planting beds, benches, fountains, and art works, should be added to the sidewalks.

4. Secure a new tenant with "pull power". Adding a junior department store will increase business attractiveness and balance the Center's low percentage in general merchandise category.

The manager of the Center should contact with the department stores in downtown Manhattan and major companies in big cities to bring in one store which best meet the Center's policy and management regulation.

5. Tie up scattered store groups. A new pedestrian mall accross the existing customer parking area will be constructed for shoppers' convenience and fun in walking from one group of stores to another.

The new tenant building will be located by the side of the mall, as well as in the middle of the store groups; as a result, the volume of customers shopping around between store groups will be substantially increased not only because the new store has pull power but also because its existence reduce shoppers' feeling of distance between store groups.

Similar treatments will be used on the buildings or in the pedestrian areas in order to give shoppers an image of physical togetherness, so that they may have a stronger desire of shopping around.

6. Design landscaping areas in the Center to get a pleasant shopping environment. Trees and planting in wells will be

adequately located or placed in the Center's gigantic customer parking area so as to lessen the feeling of "sea of asphalt".

Landscaping will be also placed in buffer or insulation strips, the pedestrian areas, and mall spaces.

In the above mentioned open spaces, durable landscaping materials should be used in order to achieve better visual effects in all the year round.

7. Provide covered areas for the protection of shoppers.

The narrow canopy in front of Tempo group will be removed and replaced by a carefully designed arcade, since the nature of rhythm, smoothness, continuity of arcade, accompanied with the newly constructed pedestrian areas, will give an impression of "scale" on shoppers.

The arcade will also be used at the store fronts of Dillons supermarket, Calhoun as well as the new tenant building so that the main shopping area will be unified.

The arcade, together with pedestrian areas and mall spaces, achieves a good composition of solid vs. void, and man-made vs. natural in the Center.

8. Improve the signs of the stores and the Center. The various signs at store fronts will be removed and replaced by new signs, the size, location, color, and illumination of which are specially designed.

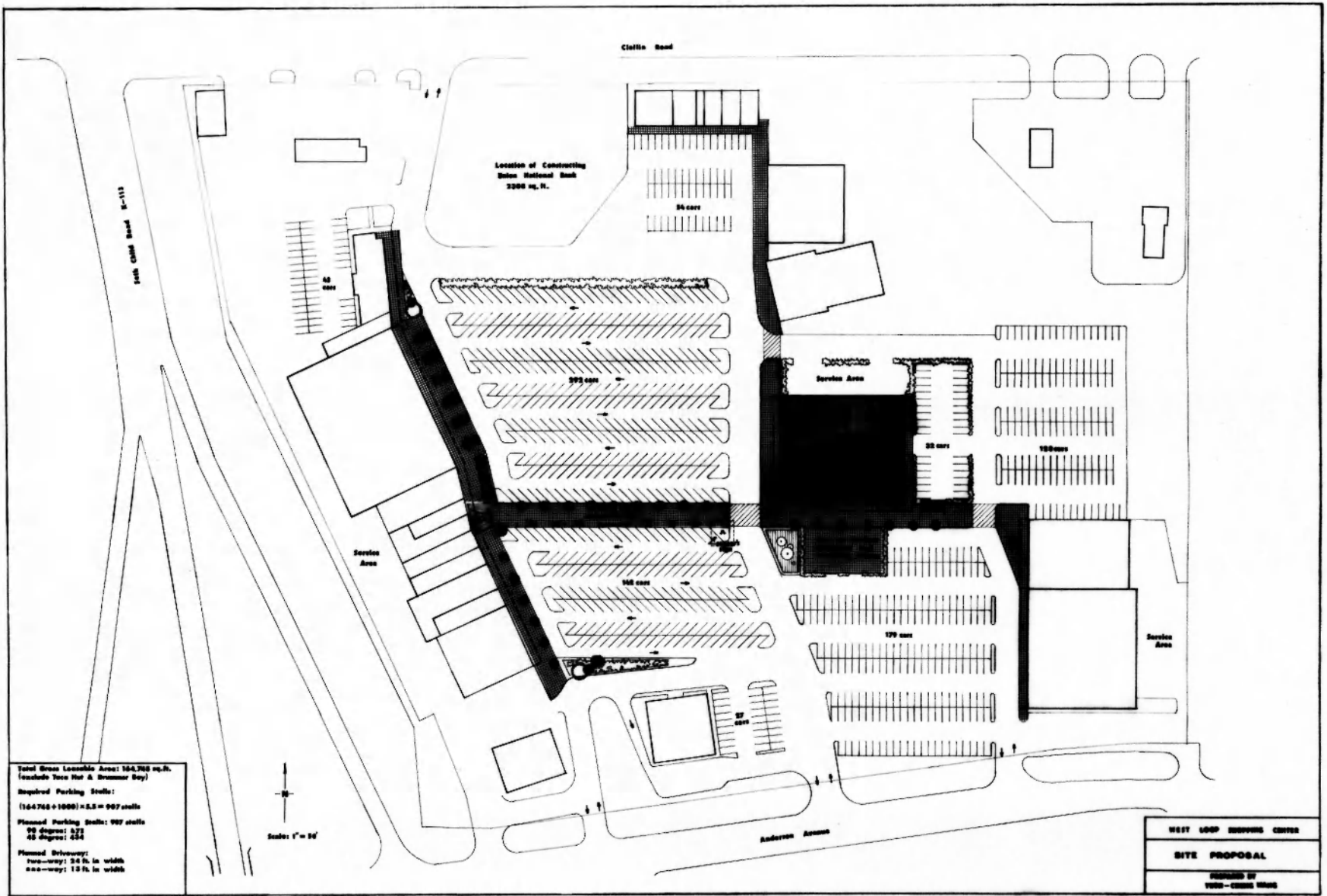
Uniform store signs will be posted under the arcades for guiding shoppers to stores.

A high, newly designed, single supported shopping center

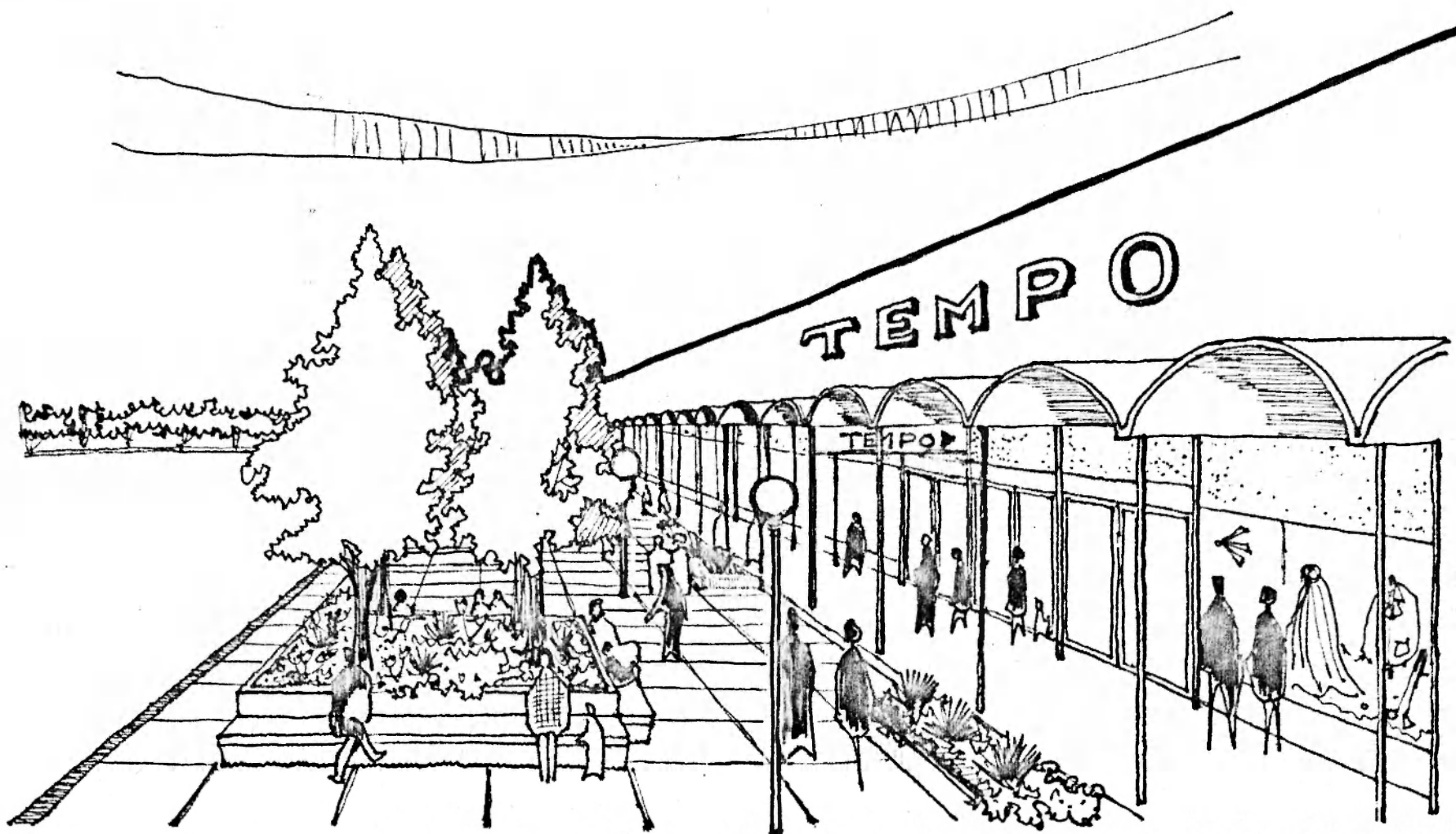
sign will be erected in the middle of customer parking area to replace the present low, and improperly located sign.

9. Improve the present lighting facilities. Floodlighting will be projected on the Center's buildings, store signs, and the shopping center sign, for preventing illusion and attracting shoppers on nearby roads and parking areas.

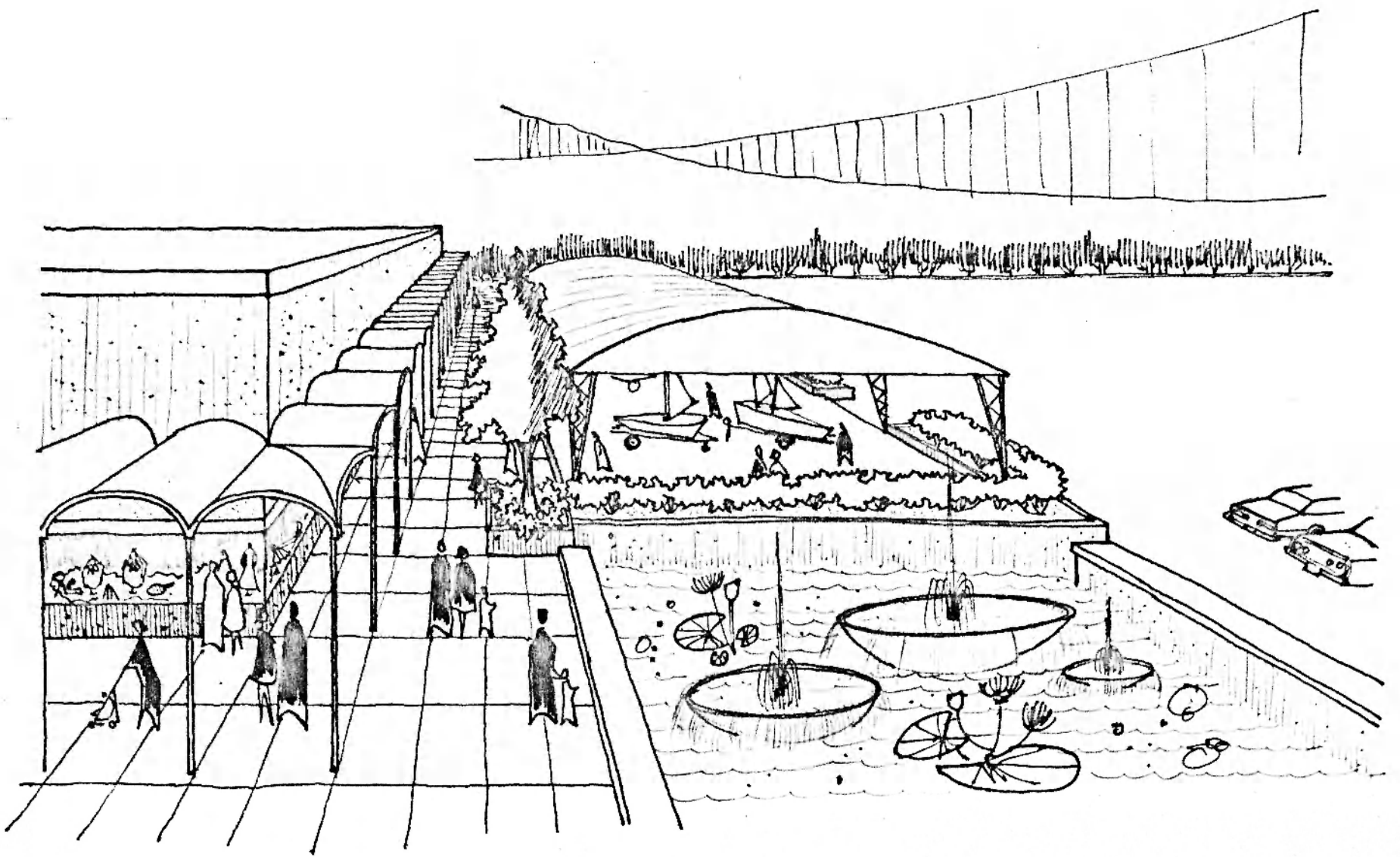
In the newly constructed pedestrian areas and mall space, low-level lighting of flower beds, floodlighting of trees, sculpture and fountains, as well as low-intensity lamps on posts will be applied to attain an attractive night-shopping environment.



Site Plan 2: Site Proposal



Sketch 1: Pedestrian Area



Sketch 2 : New Store and Outdoor Exhibition Area

FOOTNOTES

1. Urban Land Institute, Community Builders' Handbook, 1968, P. 272
2. Ibid, P. 264
3. Ibid. P. 267
4. Joseph de Chiara and Lee Koppelman, Planning Design Criteria, 1969, P. 232
5. Opcit, P. 267
6. Ibid, P. 267
7. Ibid, P. 279
8. James S. Hornbeck, Stores and Shopping Centers, 1962, P. 89
9. Opcit, P. 269
10. Ibid, P. 269
11. Ibid, P. 279
12. Victor Gruen and Larry Smith, Shopping Towns USA, 1960, P. 30
13. Ibid, P. 30
14. Opcit. P. 290
15. Ibid, P. 291
16. Ibid, P. 268
17. Ibid, P. 284
18. Ibid, P. 340
19. Ibid, P. 341
20. Ibid, P. 342
21. Ibid, P. 344
22. Geoffery Baker and Bruno Funaro, Shopping Center Design and Operation, 1951, P. 43
23. Opcit. P. 344-345

24. Victor Gruen and Larry Smith, Shopping Towns USA, 1960, P. 125
25. Urban Land Institute, Community Builders' Handbook, 1968, P. 321-322
26. Geoffery Baker and Bruno Funaro, Shopping Center Design and Operation, 1951, P. 38
27. Victor Gruen and Larry Smith, Shopping Centers, Progress Arch. June 1952, P. 90
28. Urban Land Institute, Community Builders' Handbook, 1968, P. 322
29. Joseph de Chiara and Lee Koppelman, Planning Design Criteria, 1969, P. 236
30. Victor Gruen and Larry Smith, Shopping Towns USA, 1960, P. 142
31. Urban Land Institute, Community Builders' Handbook, 1968, P. 360
32. Opcit, P. 150-153
33. Opcit, P. 382-383
34. Opcit, P. 168
35. Ibid, P. 159
36. Urban Land Institute, Shopping Center Zoning, 1969, P. 30
37. K.S.U., The Impact of the Physical Quality of Small Town Business District on Economic Growth and Development, 1974, P. 10
38. Ibid, P. 13
39. Ibid, P. 19
40. John Ormsbee Simonds, Landscape Architecture, 1961, P. 228-229
41. Ibid, P. 81
42. Ibid, P. 81

BIBLIOGRAPHY

BOOK

1. Baker, Geoffery and Funaro, Bruno. Shopping Centers; Design and Operation. New York: Reinhold Publishing Corp., 1951.
2. De Chiara, Joseph and Koppelman, Lee. Planning Design Criteria. New York: Reinhold Publishing Corp., 1969.
3. Gruen, Victor and Smith, Larry. Shopping Towns U S A. New York: Reinhold Publishing Corp., 1960.
4. Hornbeck, James S., ed. Stores and Shopping Centers. New York: Mc Graw-Hill Book Company, Inc., 1962.
5. Kansas State University. Center for Regional and Community Planning. The Impact of the Physical Quality of Small Town Business District on Economic Growth and Development. Manhattan: Kansas State University, Center for Regional and Community Planning, 1974.
6. Simonds, John Ormsbee. Landscape Architecture. New York: McGraw-Hill Book Company, Inc., 1961.
7. Urban Land Insititute. Shopping Center Zoning. Washington, D.C.: Urban Land Institute, 1969.
8. Urban Land Institute. The Community Builders Handbook. Washington, D.C.: Urban Land Institute, 1968.

ARTICLE

1. Gruen, Victor and Smith, Larry. "Shopping Centers." Progressive Architecture, June 1952, pp. 90.

APPENDICES

Appendix 1

ORDINANCE NO. 2269

INDEXED

AN ORDINANCE EXTENDING THE LIMITS OF THE CITY OF MANHATTAN, KANSAS, DEFINING THE BOUNDARIES OF SAID EXTENSION AND MAKING ALL ORDINANCES OF SAID CITY APPLICABLE TO SUCH TERRITORY AND THE INHABITANTS THEREOF.

WHEREAS, on the 6th day of August, 1962 the Board of County Commissioners of Riley County, Kansas, did find that it would be to the interest of the City of Manhattan, Kansas, and would cause no manifest injury to anyone owning land described in the petition of the City Commissioners of said city heretofore filed "In the Matter of Extending the Limits of the City of Manhattan, Kansas", to extend and enlarge the limits of said city by including therein all the territory described in said petition, which said territory is identical with that described in Section One of this ordinance.

NOW THEREFORE BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF MANHATTAN, KANSAS:

SECTION 1. That the following described territory, to-wit:

TRACT 1

Beginning at a point on the North line of Section 13, T10S, R7E of the 6th P.M., said point of beginning being 868.3 feet East of the Northwest corner of said Section 13-10-7 said point also being 197.3 feet West of the Northwest corner of Bellehaven Addition; thence South 150 feet; thence West 50 feet; thence North 100 feet; thence West 50 feet South of and parallel to the North line of said Section 13-10-7 a distance of 468.3 feet to the East line of Riley County Shop property, said East line being 400 feet East of the West line of said Section 13-10-7; thence south along said East line to the thread of Wildcat Creek; thence curving Westward up stream along the thread of said Wildcat Creek to the East line of Section 14, T10S, R7E of the 6th P.M.; thence South along the East line of said Section 14-10-7 to its intersection with the East line of Highway US 24 By-Pass (Seth Childs Road); thence Southwest across the said Highway US 24 By-Pass to the East corner of Lot 11 on University Heights Addition-First Unit, Manhattan, Kansas; thence S 39 degrees 45' W 731.55 feet to the South corner of said Addition, thence N 61 degrees 16' W 821.69 feet; thence N 38 degrees 10" W 598 feet; thence N 32 degrees 27' E 609 feet; thence S 87 degrees 39' E 406.34 feet to the centerline of Research Drive; thence curving Northward along the centerline of Research Drive 159.43 feet; thence N 71 degrees 11' E 221.84 feet to the Northermost corner of said addition and the West line of said Highway US 24 By-Pass; thence North along said West line to a point 150 feet South of the South line of Highway US 24 (Anderson Avenue); thence Southwest 150 feet South of and parallel to the South line of said Highway US 24 to the East line of Indian Village Addition-Revised; thence South on the East line of said addition to the South line of said Addition (North Right of Way line of the CRI & P RR); thence West along the South line of said Addition to the Southwest corner thereof; thence North 135.24 feet to the Northwest corner of Lot 20 in said Addition; thence East 20 feet to the Southwest corner of said Addition; thence North 119 feet along the West line of Lots 21, 22 and 23 in said Addition; thence East 34.5 feet; thence North 140 feet to the Northwest corner of said addition and the South line of Highway US 24; thence Northwest across said Highway to a point 30 feet North of and 199 feet East of the Southwest corner of the E½ of the SE¼ of the SW¼ of Section 11, T10S, R7E of the 6th P.M.; thence North 150 feet; thence East parallel to and 150 feet North of the North line of said Highway US 24 to a point 150 feet West of the West line of Wreath Avenue; thence North parallel to and 150 feet West of the West line of Wreath Avenue to the North line of Dickens Avenue; thence East along the North line of Dickens Avenue to the West line of Wreath Avenue; thence North 150 feet along the West line of Wreath Avenue; thence East along a line parallel to and 150 feet north of the North line of Dickens Avenue to a point 150 feet West of the West line of Browning Avenue; thence North along a line parallel to and 150 feet West of the West line of Browning Avenue to the South line of Howenstine Addition No. 3 to the City of Manhattan, Kansas; thence East along the said South line of the addition to the West line of Browning Avenue; thence South on the West line of Browning Avenue to a point 150 feet South of the South line of Dickens Avenue; thence West along a line parallel to and 150 feet South of the South line of Dickens Avenue to the East Right of Way line of the Highway US 24 Cut-off (Proposed K-113); thence South along the East Right of Way line of said US 24 Cut-off to the North line of Claflin Road; thence East along the North line of Claflin Road to the West line of Browning Avenue, thence South to the South line of Claflin Road; thence East along the South line to a point 243.5 feet West of the West line of Hylton Heights Road (to the West line of the Moody Dale Cannon tract); thence South parallel to and 243.5 feet West of the West line of Hylton Heights Road to the Southwest corner of the Melvin E. Davin tract. Recorded in Book 286, page 559, Register of Deed office Riley County, Kansas; thence East 243.5 feet to the West line of Hylton Heights Road; thence South West along the West line of Hylton Heights Road to the South line of Anderson Avenue (Highway US 24 Alternate); thence East along South line of said US 24 to the East line of the Roy D. and Elma C. Lumb tract recorded in Book 270, page 197, Register of Deeds Office, Riley County, Kansas, to a point that is 52 feet West and 319 feet more or less North of a point that is 868.3 feet East of the Southwest corner of said Section 12-10-7 thence South 105 feet more or less; thence East 52 feet; thence South to the Southwest corner of the Elsie A. and J. Glenn Graham tract and the said Lumb tract said corner being the point of beginning. All in Riley County, Kansas and containing 283.55 acres more or less.

TRACT 2

Beginning at the intersection of the North line of Claflin Road and the West line of North Manhattan Avenue; thence in a Northerly direction along the West line of North Manhattan to its intersection with the South line of Lot 21 in the Southwest quarter (SW $\frac{1}{4}$) of Section 6, Township 10 South, Range 8 East of the 6th P.M. also being the North line of Kansas State University property; thence West 150 feet along the South line of said Lot 21; thence North and curving Northeast and East along a line 150 feet West of and parallel to the West, Northwest and North line of North Manhattan Avenue to the West line of Kansas Highway K-13 (North Third Street); thence Southeast along the West line of said Highway K-13 to the South line of Lot 8A, Happy Valley Addition, Riley County, Kansas; thence Southwest 226.0 feet along the South line of Lot 8A to the furthestmost South corner of said lot; thence Northwest 78.3 feet along the West line of Lot 8A to the furthestmost West corner of said lot; thence West across Stillman Drive to the Southeast corner of Lot 13, Blue Hills Addition, Riley County, Kansas also being 60.3 feet South of the North corner of said Lot; thence Southwest 222.68 feet along the Southeast line of Lots 13 & 12, said addition also being the Northwest line of Stillman Road to the East corner of Lot 14 said Addition; thence Northwest 90 feet along the Northeast line of Lot 14 to the North corner of said Lot; thence Southwest 136.6 feet along the Northwest line of Lot 14, said Addition to the West corner of said Lot also being the furthestmost South corner of Lot 12, said Addition; thence Northwest 33.0 feet along the Southwest line of Lot 12 to the North corner of Lot 11, said Addition; thence Southwest 245.7 feet along the Northwest line of said Lot 11 to the West corner of said Lot also being the Northeast line of Blue Hills Road; thence Northwest 122.65 feet along said line to the furthestmost North point on said Road; thence curving Southwest and South 966.75 feet along the furthestmost Northwest and West line of Blue Hills Road to the Southeast corner of Lot 1, Blue Hills Addition; thence South along a line 150 feet East of and parallel to North Manhattan Avenue to the North line of Lot 3, Campus View Addition, City of Manhattan, Riley County, Kansas; thence West 150 feet along the North line of Lot 3, said addition to the East line of North Manhattan Avenue; thence South 1295 feet along said East line to the Southwest corner of Lot 1, Evans Addition, City of Manhattan, Riley County, Kansas also being the North line of Claflin Road; thence West on said North line extended across North Manhattan Avenue to the point of beginning. All in Riley County, Kansas and containing 39.47 acres more or less.

Be and the same is hereby declared a part of and included within the corporate limits of the City of Manhattan, Kansas.

SECTION 2. That all ordinances of the City of Manhattan, Kansas, be and the same are hereby made applicable to the territory described in Section One of this ordinance and to all the inhabitants thereof.

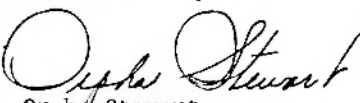
SECTION 3. This ordinance shall take effect and be in force following its passage and publication in the Manhattan, Mercury.

PASSED by the Governing Body this 7th day of August, 1962.

APPROVED this 7th day of August, 1962.



EMIL C. FISCHER, Mayor

(SEAL) 
 ATTEST: Orpha Stewart
 City Clerk

I hereby certify that the foregoing is a true and correct copy of the original ordinance; that said ordinance was passed on the 7th day of August, 1962; that the record of the final vote on its passage is found on page 13 of Journal 10; that it was published in the Manhattan Mercury on the 13th day of August, 1962.

Appendix 2

ORDINANCE NO. 2703

INDEXED

AN ORDINANCE AMENDING SECTIONS 4-202(A) AND 4-202(B) OF ZONING ORDINANCE 2650 OF THE CITY OF MANHATTAN, KANSAS:

WHEREAS, the Planning Board of the City of Manhattan, Kansas, at a meeting held March 9, 1970, recommended the amending of Section 4-202(A) Permitted Uses and Section 4-202(B) of Manhattan, Kansas, Zoning Ordinance No. 2650;

WHEREAS, a public hearing was held March 9, 1970 according to law of the Governing Body of the City of Manhattan, Kansas, to hear any and all persons interested in amending said ordinance;

NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF MANHATTAN, KANSAS:

SECTION 1. That Section 4-202(A) of Ordinance No. 2650 be amended to read as follows:

Section 4-202(A) Permitted Uses:

(A) Permitted Uses:

- (1) Antique shops.
- (2) Apparel Stores.
- (3) Appliance stores.
- (4) Automobile service stations, and tire, battery and automobile accessory stores.
- (5) Bank and financial institutions.
- (6) Barber shops.
- (7) Beauty parlors.
- (8) Book stores.
- (9) Business and professional offices
- (10) Camera and photographic supply stores.
- (11) Carpet and Rug Stores
- (12) China and glassware stores.
- (13) Drug stores.
- (14) Dry Cleaning Establishments.
- (15) Drygoods stores.
- (16) Food stores, including grocery stores, meat markets, bakeries and delicatessens.
- (17) Florist shops
- (18) Furniture stores.
- (19) Gift Shops.
- (20) Hardware stores.
- (21) Interior decorating shops.
- (22) Jewelry stores.
- (23) Jr. Department stores.
- (24) Music Stores.
- (25) Optical sales.
- (26) Package liquor stores.
- (27) Paint and Wallpaper stores.
- (28) Photography Studio.
- (29) Postal substations.
- (30) Restaurants, no drive-in type.
- (31) Schools.
- (32) Self-service laundries and dry-cleaning stores.
- (33) Show Repair shops.
- (34) Sporting goods stores.
- (35) Tailors.
- (36) Taverns.
- (37) Theatres, indoor only.
- (38) Travel bureaus and transportation ticket offices
- (39) Variety stores.
- (40) Any other similar retail business not specifically listed in any section is permitted if it complies with the conditions and restrictions contained in Section 4-202(E).
- (41) Accessory and temporary uses, as permitted by Article 5.
- (42) Signs, as permitted by Article 6.
- (43) Off-street parking and loading, as required by Article 7.

SECTION 2. That Section 4-202(B) of Ordinance No. 2650 be amended to read as follows:

SECTION 4. This ordinance shall be in effect from and after its publication in The Manhattan Mercury.

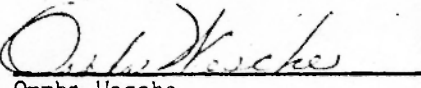
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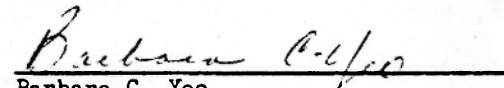
PASSED by the Governing Body of the City of Manhattan, Kansas, this 24th day of March, 1970.

APPROVED March 24, 1970.

(SEAL)

ATTEST:


Orpha Wesche
City Clerk


Barbara C. Yeo
Mayor

(First published in The Manhattan Mercury March 30, 1970.)

Ordinance No. 2704

INDEXED

AN ORDINANCE REZONING A CERTAIN TRACT HEREINAFTER DESCRIBED FROM "C-1" RESTRICTED BUSINESS DISTRICT TO "C-4" CENTRAL BUSINESS DISTRICT IN THE CITY OF MANHATTAN, KANSAS, AND ALTERING THE MANHATTAN ZONING MAP ACCORDINGLY.

WHEREAS the Planning Board of the City of Manhattan, Kansas at a meeting held March 9, 1970, recommended the rezoning of a certain tract hereafter described from "C-1" Restricted Business District to "C-4" Central Business District; and

WHEREAS, a public hearing was held on March 9, 1970, according to law of the Governing Body of the City of Manhattan, Kansas, to hear any and all persons interested in the amending of the zoning of said City, NOW THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF MANHATTAN, KANSAS:

SECTION 1. That the following described property in the City of Manhattan, Kansas, to-wit:

Lots 437 to 452, all lots inclusive, in Ward 2, (600 Block
between Humboldt and Leavenworth Streets)

be taken out of "C-1" Restricted Business District and placed in "C-4" Central Business District on the map referred to in the zoning ordinance of the City of Manhattan, Kansas, that zoning map referred to shall therefore be amended accordingly.


SECTION 2. That this ordinance shall be in effect and be in force after its passage and publication in the Manhattan Mercury.

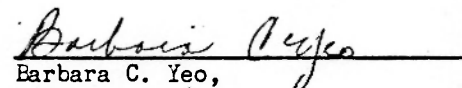
APPROVED by the Governing Body, City of Manhattan, Kansas, March 24, 1970.

PASSED by the Governing Body this 24th day of March, 1970.

(SEAL)

ATTEST:


Orpha Wesche,
City Clerk


Barbara C. Yeo,
Mayor