

COMMERCIAL DEVELOPMENT FOR A SITE IN DOWNTOWN

JUNCTION CITY, KANSAS

by

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TABLE OF CONTENTS

	<u>Page</u>
<u>INTRODUCTION</u> .....	1
<u>LOCATION</u> .....	5
<u>PURPOSE OF STUDY</u> .....	9
<u>SCOPE AND METHOD</u> .....	12
<u>PROPOSED LAND USES</u> .....	17
<u>SITE DESCRIPTION AND EVALUATION</u> .....	20
<u>Site and urban setting</u> .....	20
<u>Site analysis</u> .....	20
<u>Analysis of existing built environment</u> <u>(a pictorial tour)</u> .....	22
<u>Site visual analysis</u> .....	22
<u>Circulation</u> .....	27
<u>Parking</u> .....	37
<u>Climatic conditions</u> .....	40
<u>DESIGN INVESTIGATION</u> .....	44
<u>DESIGN PROGRAM (for the block)</u> .....	55
<u>Mixed-use development</u> .....	55
<u>New in-fill construction</u> .....	57
<u>Building codes</u> .....	59
<u>Circulation and access</u> .....	61
<u>Delivery and services</u> .....	62
<u>Parking</u> .....	62
<u>Street furniture</u> .....	63
<u>Landscaping</u> .....	64

	<u>Page</u>
<u>DESIGN PROGRAM (for the building)</u> .....	65
<u>Specialty shop</u> .....	65
<u>Variety store</u> .....	65
<u>Offices</u> .....	67
<u>DESIGN PRESENTATION (graphic work)</u> .....	70
<u>DESIGN STATEMENT</u> .....	77
<u>EVALUATION AND CONCLUSION</u> .....	80
<u>BIBLIOGRAPHY</u> .....	85
<u>APPENDICES</u> .....	87
<u>ABSTRACT</u>	

**LIST OF FIGURES AND TABLES**

<b><u>FIGURE</u></b>	<b><u>Page</u></b>
1. Location Map.....	6
2. Junction City Area Map.....	7
3. Junction City Streets Map.....	8
4. Generalized Land Use Map.....	21
5. Site Analysis Map.....	23
6. Elevational Photos Location Map.....	24
7. Architectural Merit Classified Buildings Map.....	28
8. Buildings Physical Condition/Historical Importance Map.....	29
9. Junction City Arterial System Map.....	31
10. Automotive Traffic Flow Map.....	32
11. Paths Classified Map.....	34
12. Edges Classified Map.....	35
13. Nodes Classified Map.....	36
14. Landmarks Location Map.....	38
15. Parking Survey Results Map.....	41
16. Solar Angles.....	42

<b><u>TABLE</u></b>	<b><u>Page</u></b>
1. Design Process Chart.....	13
2. Summary of Results of Interviews.....	18
3. Junction City Parking Analysis.....	39

## LIST OF PHOTOGRAPHS

<u>PHOTOGRAPH</u>	<u>Page</u>
1. South Elevation from Eighth Street.....	25
2. East Elevation from Washington Street.....	25
3. West Elevation from Jefferson Street.....	26
4. North Elevation from Ninth Street.....	26
5. Office Tower with shops on periphery; pictured from Eighth Street.....	48
6. Office tower with shops on periphery; pictured from Ninth Street.....	48
7. Shops cum office block; pictured from the crossing of Eighth and Jefferson Street.....	51
8. Shops cum Office block; pictured from the crossing of Eighth and Washington Street.....	51
9. Revised design of shops cum office block; pictured from the crossing of Eighth and Jefferson Street....	54
10. Revised design of shops cum office block; pictured from the crossing of Eighth and Washington Street...	54

## INTRODUCTION

"The revitalization of small communities is part of the general search for smallness, appropriate technology, alternative lifestyles, and environmental conservation."<sup>1</sup>

According to writers Simon and Gagnon:

The land and economy of the United States will not support as many small towns as they did before. It is difficult not to see the future as a long drawn struggle for community survival, lasting for half a century, in which some battles may be won, but the war will be lost. A future in which most small towns will become isolated or decayed, in which most towns will deteriorate and finally be left with only the aged, the inept, the very young, and the local power elite.<sup>2</sup>

It is important to be aware that small community decline is often associated with factors of economy and land development patterns. Additional concerns are distance from metropolitan areas and difficulties of transportation, which make the economy of a county less flexible. Present day small agriculture communities in the United States frequently have retail business serving as a center of small scale commercial activities for a region. From the point of community decline and considering those factors affiliated with it, survival of such retail centers is important and quite possible by maintaining a people oriented downtown.

Perhaps what is being noticed is the loss in the number of consumer business establishments, a trend of decentralization and dispersal of non-metropolitan population. Towns as small as 2,500 or less are showing signs of urbanism. Urbanism or urbanization is not just a matter of growth of towns, but also a change in the life-style of towns. Incorporated small towns are not today the self sufficient local systems they once were

believed to be. With rising costs of traditional governmental functions, small towns are discovering with rapid frequency an inability to meet increasing demand for public services. Small municipalities are threatened with losing their functional identities, sacrificing responsibility to more centralized units of government. the resulting loss of local control has ramifications for the very existence of small towns.<sup>3</sup>

In this situation the federal government's initial response in the 50s and early 60s, based on the financial collaboration of the federal government and local city administration, was the creation of an urban renewal agency which came to the rescue of the downtown business interests, as well as other interest groups, in the form of a downtown redevelopment program. Based on the degree of success and failure of this program in later decades, the model city program, which also had a broad agenda, was started and was in effect from 1960 to 1970. Both these programs were heavily supported by the federal government.

Later, two other programs were started in 1974 and 1977, and are still in effect today. These are, the Federal Community Development Block Grant Program (CDBG) and Main Street Program of the National Trust for Historic Preservation. The CDBG program, replaced many federal urban development programs and was introduced as a system of community development based on decentralized programs and federal revenue sharing; aiming primarily on increasing housing opportunities and dispersing lower-income housing. As an improved structure of the CDBG program, Urban

Development Action Grant (UDAG) program was created in 1978 to assist distressed cities and urban counties through "leveraging": providing limited federal funds to induce private investment in areas of economic and neighborhood stagnation. In short, many of these programs, one way or the other, have been used to assist downtown business persons and citizens with incentives, both financial and technical, in working together to see ways to revive and extend their businesses through the physical revitalization of the downtown. Many of the same issues are of concern in a small center such as Junction City.

Junction City, Kansas, is a city with a population of 22,000 people. For quite some time the redevelopment of the downtown of this city has been under consideration by concerned authorities such as the City Commission and the Economic Development Commission of Junction City and Geary County. The question is how should this development be undertaken? Although a variety of proposals are possible, the main strategies are:

(a) Redevelop the downtown using the existing physical structures. For example, stores, housing, and offices may be added in existing but renovated buildings. New in-fill buildings may be constructed. Small but convenient parking areas also could be created in left-over lots etc. In many ways this approach is similar to the Lawrence, Kansas model.

(b) Add a new major shopping center to one edge of the central business district (CBD) and convert the existing CBD into the financial and office center of the community. This is the Manhattan, Kansas model.

(c) Build a new major shopping center at the edge of town along good access roads, while attempting to convert the CBD into a financial and office center. This model has been used in a number of cities close to Junction City, including Salina and Topeka.

In this thesis, the first model will be applied to Junction City. Redevelopment proposals will be developed using the existing physical structures. The existing comprehensive plan that has been developed using this strategy describes the general framework for downtown development. Therefore, after identifying downtown issues, this thesis will focus on a plan for the physical redevelopment of a single block in the heart of the CBD. The proposed design is intended to be a case study describing how general planning and development concepts can be translated into an inviting and interesting physical design.

## LOCATION

Junction City, the Geary County seat, is located on Interstate Highway 70 in the east-north central part of Kansas in the famed Flint Hills, only 130 miles west of Kansas City. Another major highway, U.S.77, which provides north-south access to Junction City, is slightly to the east, and connects with Wichita and Oklahoma on the south, Nebraska on the north and Milford Lake, which is northwest of Junction City (Figs. 1,2,3). The city was originally named because of its location at the junction of the Smoky Hill and Republican Rivers, which join to form the Kansas River. It is a city of some 22,000 people with an economic base supported by the military installation at Fort Riley, agriculture, tourism at Milford Reservoir, industrial development, and retailing.

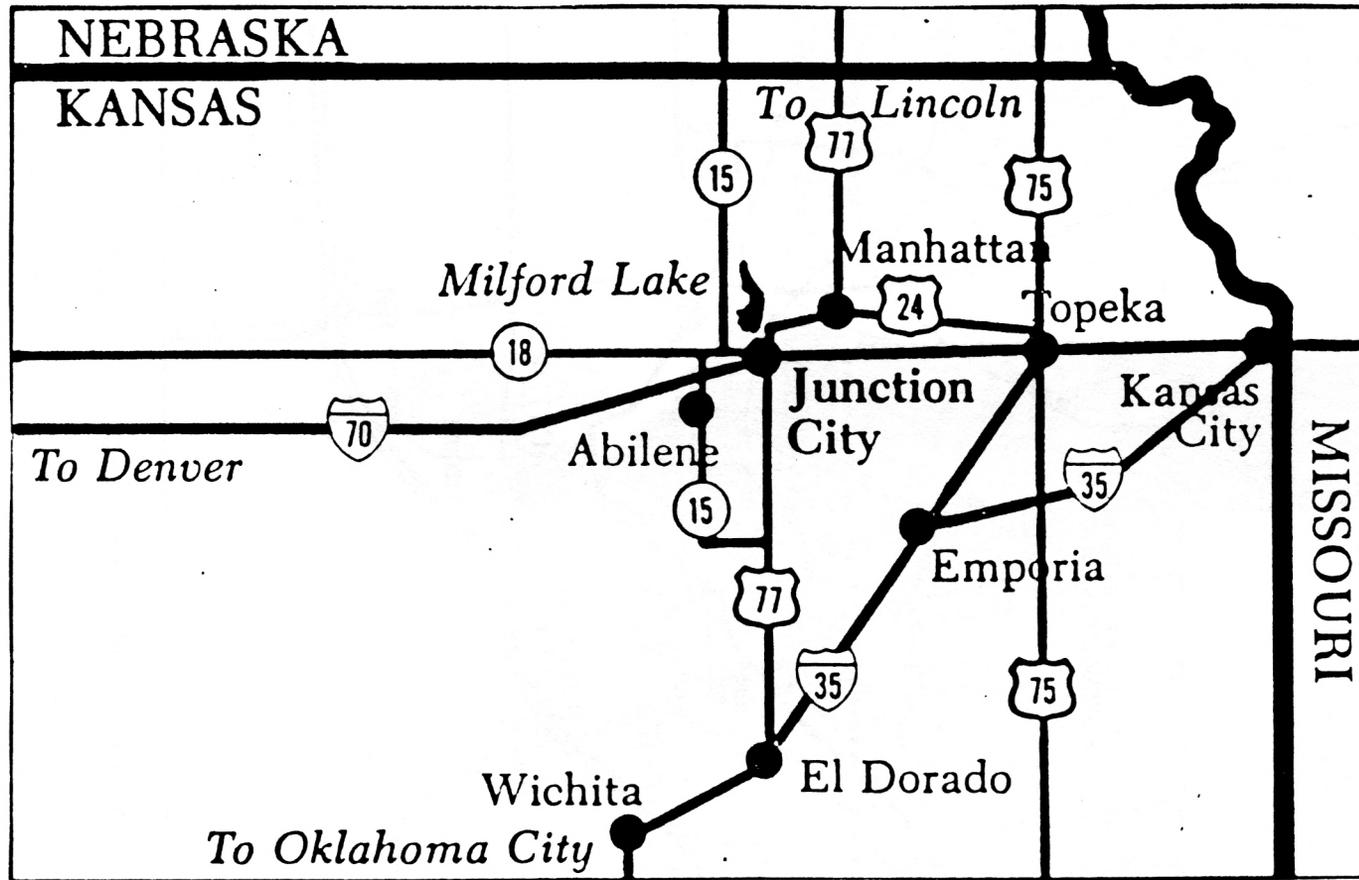


Fig. 1 Location Map

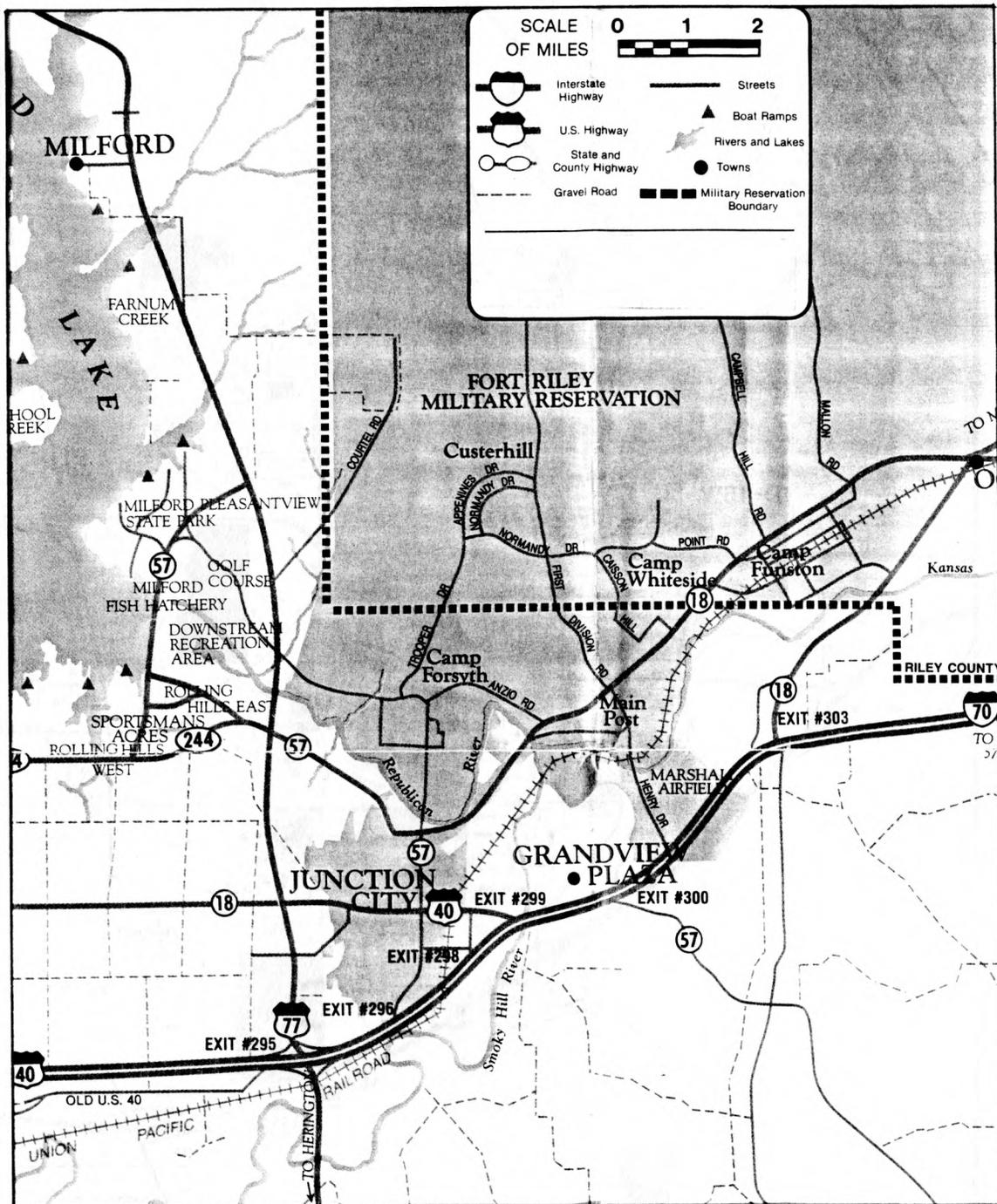


Fig. 2 Junction City Area Map

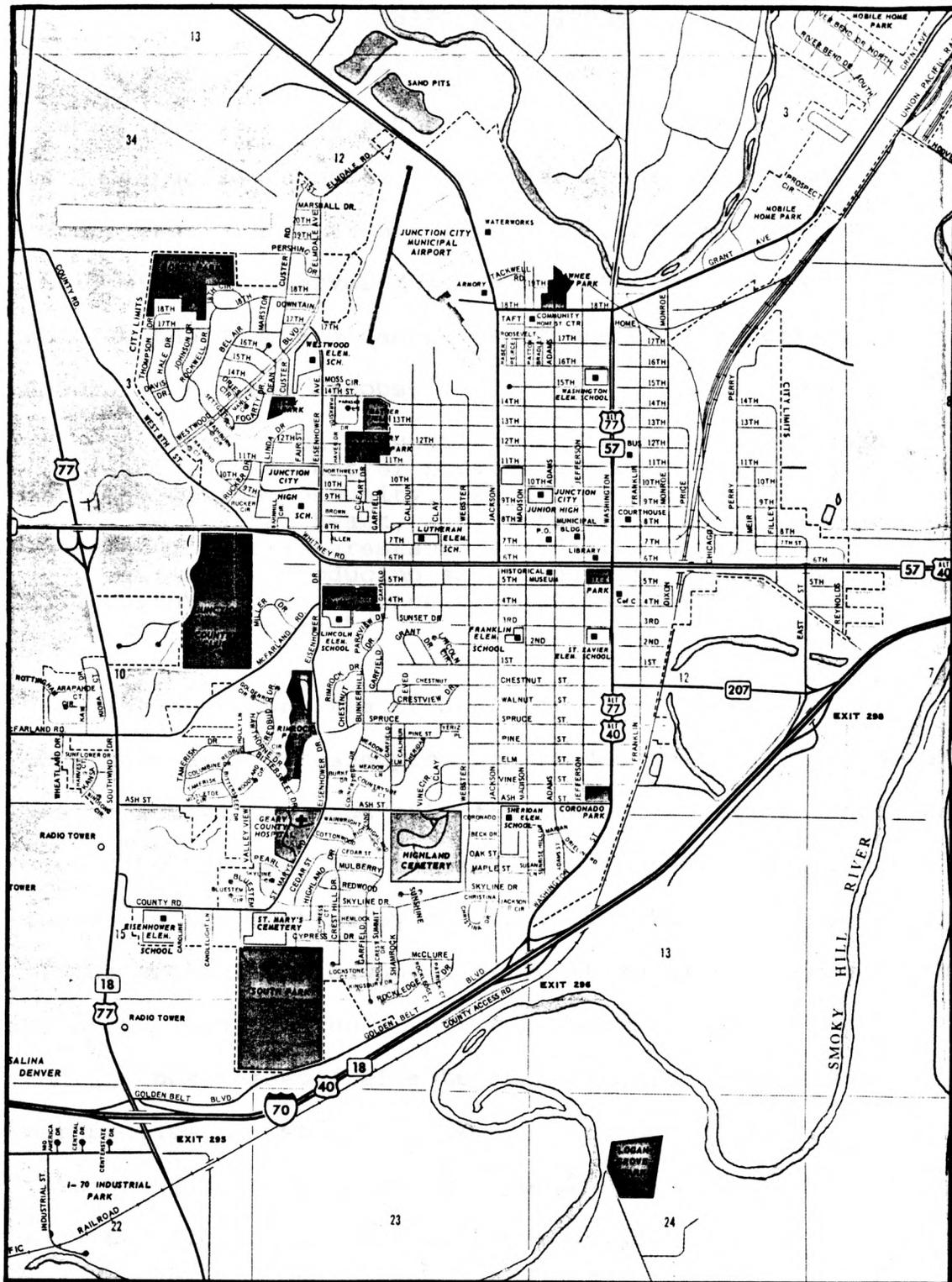


Fig. 3 Junction City Street Map

## PURPOSE OF STUDY

A central business district serves many functions in a city. Considered as a hub of the city, it is a place where people converge for shopping, business and recreational activities. It is also a place for cultural and governmental activities. It serves functions that have a direct relationship to the form and character of the entire community.

According to Jane Jacobs:

Perhaps the main function of the central business district is that of providing economic stability to the entire community. Without a strong and inclusive central heart, a city tends to become a collection of interests isolated from one another. It falters at producing something greater, socially, culturally and economically, than the sum of its separated parts<sup>4</sup>

The downtown area of Junction City, Kansas is an important area for shopping, business, cultural, and governmental activities, not only for the local residents of Junction City but also for those living in nearby small farming towns and the Fort Riley military reservation. The vitality of the present-day downtown of Junction City is an important question with reference to future physical growth of the city and its businesses (refer to appendix-A). From a regional perspective, first and foremost, Junction City's location within the area is quite important. This is mainly due to easy traffic access from different highways bordering the city (Fig. 2) as well as the proximity to the Fort Riley military base, upon which the city's growth has largely been

dependent in the past. The community at Fort Riley and small farming towns around the Junction City area are dependent on the business activities of downtown Junction City (includes an area of 5th to 10th St. adjacent to Washington Street) and existing strip commercial developments (includes those along Grant and 6th Avenues), mainly due to proximity and easy availability of daily use merchandise. At present, the central business district is surviving but it is not successful. The downtown area is lacking in retailing and personal services and thus, does not meet the growing demand of the community. Due to the gradual change in population, economy and land use pattern (over the years), the residents of Junction City, Fort Riley, and nearby small farming towns are often dependent on the business markets of large scale shopping malls, and other business activities in Topeka, Salina, and Manhattan. There is a loss of convenience. Therefore, there is a need to revitalize the commercial activities of the downtown, in order to meet the current and future business demands of Junction City and nearby farming towns. In this connection, within the general framework of studies for revitalization, the purpose of this study is to determine the potential businesses that are currently demanded most in the downtown of Junction City - such businesses that can help in fulfilling the current and future business needs of the people of the city and small communities within the area. Also, on the basis of that study, propose commercial develop-

ment on a selected downtown block to set an example for similar business establishments in the downtown of Junction City. In the general context of revitalization of a CBD, some other factors are:

(a) To revitalize the selected block to show how it may become a functional and aesthetic asset in the community and also can increase the economic base of the city.

(b) To continue to improve the image of Junction City as the central business district, i.e., a focal point readily identified with the community.

(c) To set an example for other blocks to follow (but not to copy) by using same basic design principles used in the revitalization of the selected block.

## SCOPE AND METHOD

As mentioned earlier, this thesis focuses on the physical design of a single block of downtown Junction City, Kansas. In order to properly examine this area, the overall effort has been divided into the following two categories:

### Preliminary research work

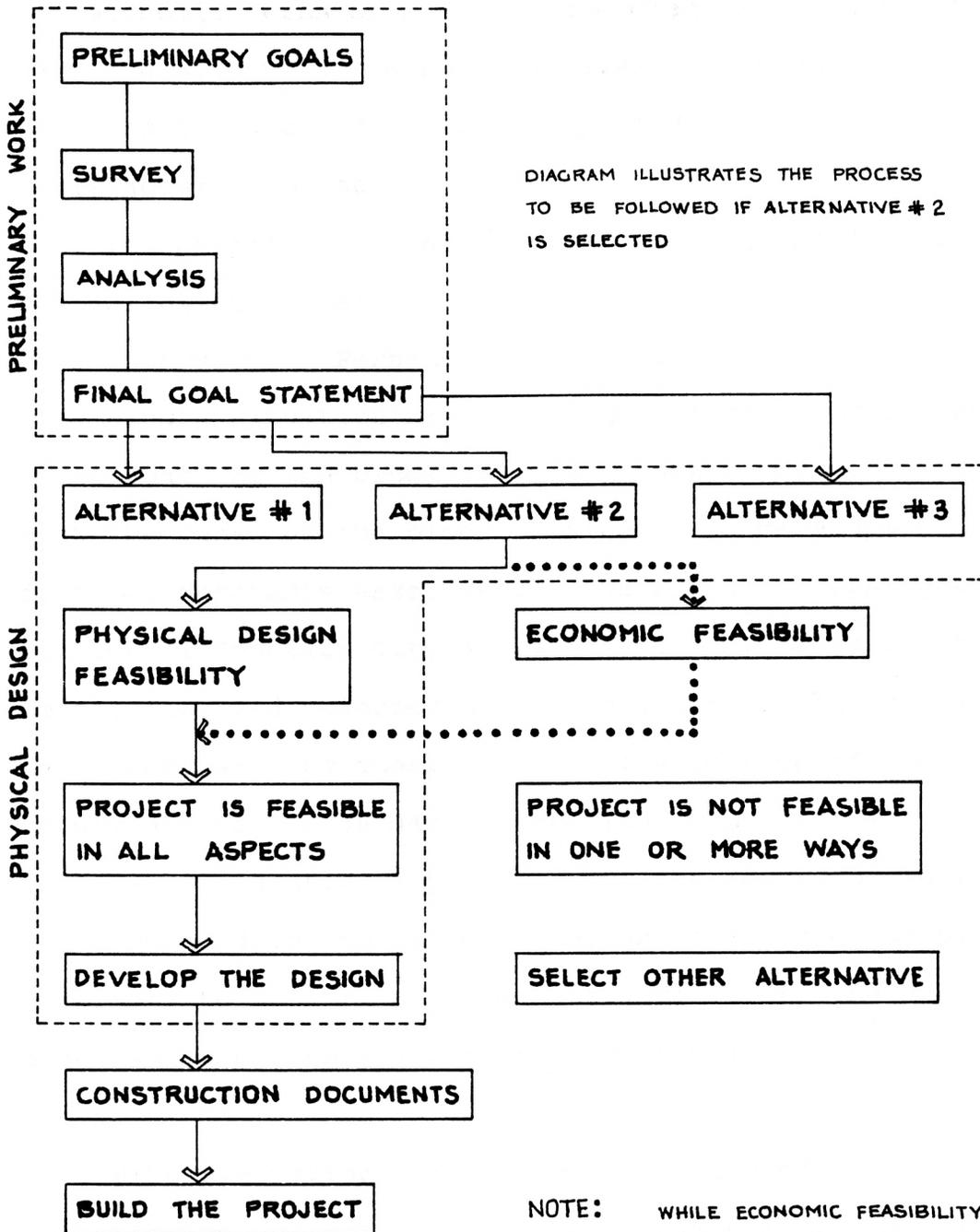
Design direction and parameters are developed by interviewing persons who have experience in business and knowledge of the economic development potential in Junction City. Surveys of existing conditions have been undertaken as a part of design decision making. The environmental analyses are particularly valuable in this regard. Finally, this material is organized in a design program.

### Physical design

In this part of the thesis, the parameters identified in the preparatory research are used to develop a physical design proposal. The architectural history, as well as the contemporary cosmopolitan aspect of the Junction City must be integrated into the physical design.

The relationship between the two parts is illustrated in Table 1. It can be seen from the diagram that the important issue of economic feasibility is outside the scope of this study. Economic feasibility is a vitally important issue which lies behind the realm of architectural design. Some developers make their projects dependant on economic feasibility. This often leads to poor design. In this

Table. 1 Design Process Chart



thesis, design feasibility is evaluated with no intent of ignoring economic issues. However, the author believes that it is necessary for a project to be feasible both in design and economic terms as shown in the diagram. You should not have one without the other. However, as shown in the diagram both can be adjusted in minor ways and still yield a satisfactory project.

The preliminary research work was organized according to the following steps:

**Interviews** - Perhaps the most common technique in assessing a situation are interviews, formal and informal. In approaching the block of study, interviews were conducted with the owner of the block, business and development leaders from the Merchants Association, the Economic Development Commission of Junction City and Geary County, Geary County Commission, and selected city Commissioners. Interviews were open-ended with no questionnaire. The purpose of these interviews was to gather information from different persons in order to identify key land uses, the amount of leasable spaces needed in the proposed design, the number of persons necessary to support proposed activities, and the amount of money which can be spent to rent spaces in structures on the block.

**Site evaluation** - The visual analysis of the block and the surrounding area is conducted to determine the structural condition of the buildings on the site, potential renovation

for future usage with reference to the study of immediate surrounding areas, paths, entrances, edges, nodes, vistas, etc. The analysis is organized with drawings developed through the use of maps, sketches, photographs, and selected statistics.

**Design brief (program)** - The design program is developed from the information gathered through interviews and site analysis. It is a brief program in which the basic use in terms of space, sizes, functions and methods of construction which make the project feasible are identified. Then a design is developed from this brief which satisfies the needs of economic feasibility while achieving aesthetic quality.

The physical design proposal is evolved from responses to the design criteria established while developing the design program. Criteria by which the proposal is evaluated is based on the following factors.

**Planning at CBD/city scale -**

- \* Application of building codes and ordinances dealing with the items such as percentage of open space to the built land, parking requirements, etc.
- \* Clarity of pedestrian and vehicular access to the site according to arterial system and traffic routes in the city.
- \* Clarity of building orientation with respect to climatic factors as well as function and character of the buildings in immediate surroundings.

**Design at scale of block and the immediate surrounding -**

- \* Clarity and ease in perception of shape and form of the building spaces.
- \* Building configuration and appearance in terms of height, massing, scale, proportion, material, ensuring harmonious relationship with the immediate visual environment, and the overall downtown.

**Individual building -**

- \* Livability and function of spaces according to scale and character appropriate for each individual space in proposed design.

**External space design -**

- \* Clear and easy access to parking and safe and nonconflicting pedestrian and automotive traffic.
- \* Functional and activity supported open spaces such as courtyards, harmonized with overall building design.

**Individual spatial development -**

- \* Clarity and ease of circulation.
- \* Workable functional spaces.

**Selected detail development -**

- \* Identity of individual object within its scale, comfort, and visual interest as well as harmony with other elements of proposed building design

## PROPOSED LAND USES

In the downtown area of a city, perhaps the two main kinds of commercial establishments are retail and office establishments, which are used by the people for shopping, business, and some governmental activities. The present day downtown of Junction City, Ks. has the same kind of commercial establishments. Some of the categories of these establishments are fulfilling the current business demand of the community people while some of them are not. In order to find out what kind of commercial establishments are required most in the downtown of Junction City for its current and future business vitality and, which can be proposed on the block of study, interviews were conducted. Conduction of interviews also was meant to identify the particular nature of businesses needed in retail and office establishments. The information gathered through different interviews for specifying the nature of the proposed development on the block of study leads to different results (Table. 2).

From the result of the interviews, it is clear that following are the main categories of business that may help in reviving the current business vitality of the downtown Junction City and, which can be proposed on the block of study.

- \* Grocery store, specialty shops, drug store and variety stores of daily use items - all of them may or may not be under one roof in a form of a small scale shopping mall or anchor store.

Table. 2 Summary of Results of Interviews

	ANS: RETAIL ESTABLISHMENTS			OFFICE SPACES		
	Y	X		Y	X	
INTERVIEWEE # 1	Y	X	GROCERY STORE	Y		—
	N		—	N	X	NOT RECOMMENDED
INTERVIEWEE # 2	Y	X	RETAIL STORE WITH VARIETY OF MERCHANDISE	Y	X	SMALL OFFICE FLOORS RECOMMENDED
	N		—	N		—
INTERVIEWEE # 3.	Y	X	SMALL MALL W/VARIETY OF MERCHANDISE	Y		—
	N		—	N	X	NOT RECOMMENDED
INTERVIEWEE # 4.	Y	X	DRUG STORE, DEPARTMENT STORE, SPECIALTY SHOPS	Y		—
	N		—	N	X	NOT RECOMMENDED
INTERVIEWEE # 5.	Y	X	ANCHOR STORE W/VARIETY OF SHOPS INC: GROCERY STORE	Y	X	STRONGLY RECOMMENDED
	N		—	N		—
INTERVIEWEE # 6	Y	X	SMALL RETAIL CENTER	Y		—
	N		—	N	X	NOT RECOMMENDED

Y = YES    N = NO

- \* Office spaces are comparatively less recommended. However, small office floors can be proposed depending upon the environmental and basic economical issues and designer's final interpretation about the whole scheme.

Through interviews also it was found that addition of new business floors in the CBD of Junction City, in addition to existing ones (particularly office business floors), has to be close or below per sq. ft. rental charges, otherwise the poor rental power of community people might force them to avoid renting new business floors. The general result of interviews shows that any planned development/addition of new business floors, either in retail or office establishments (within the parameters of particular businesses identified through interviews), hopefully will be successful and an economical and aesthetical asset for the community. In such case, should the proposed development be fitted to its best to current and future business demands of the people of Junction City and small neighboring towns, their positive response would encourage establishments of similar nature of businesses (at present and in future, in the downtown of Junction City, KS), to help and strengthen its business vitality.

## SITE DESCRIPTION & EVALUATION

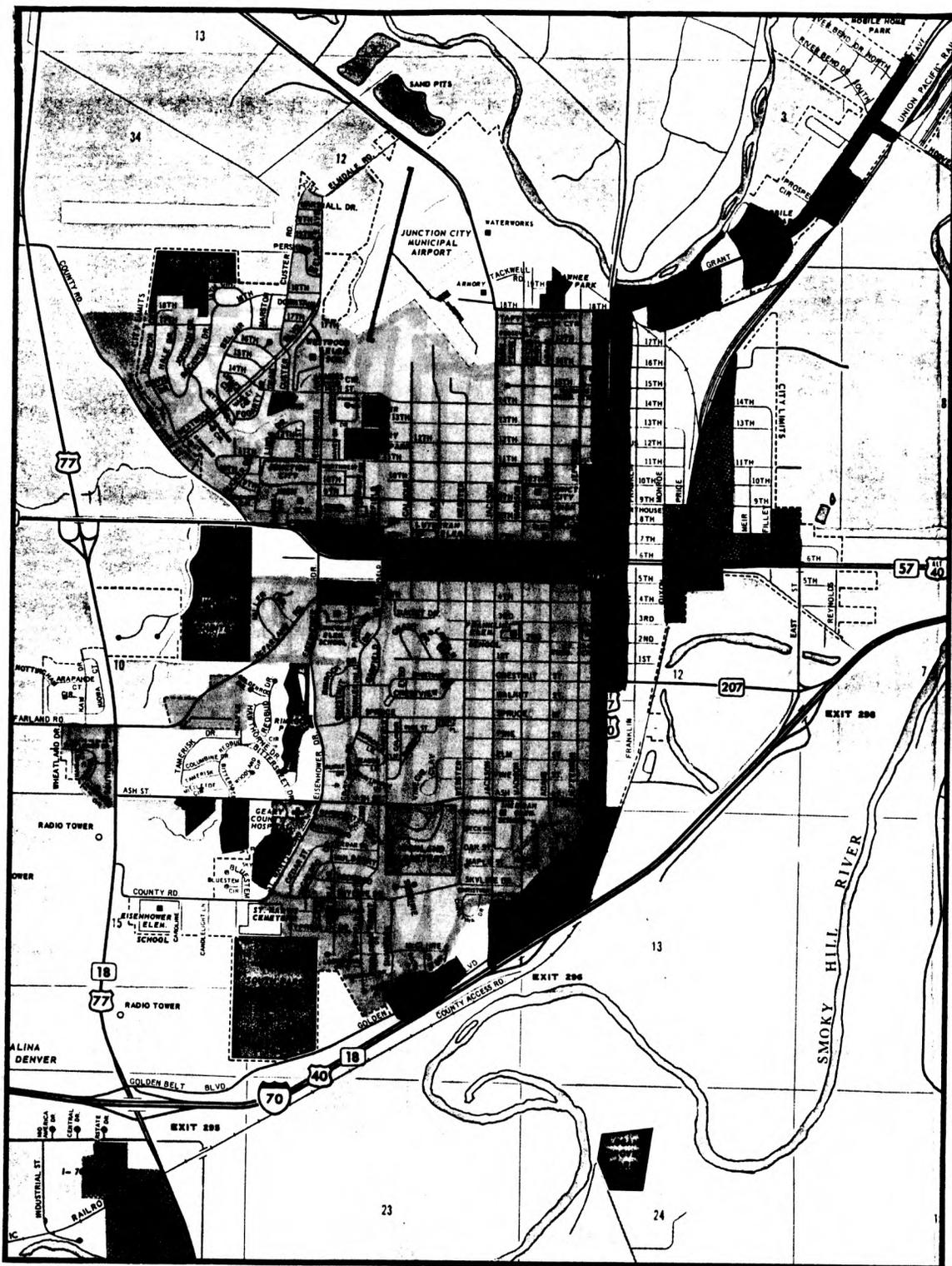
### Site and urban setting

The downtown block for the proposed commercial development is located at the northeast corner of 8th and Washington streets, approximately one mile north of exit 296 and half a mile northeast of exit 299 from Interstate I-70. The Fort Riley military reservation is about two and a half miles situated to the north of the site. The two to four story buildings surrounding the site are both commercial and residential.

The northeast side of the site is an area of commercial establishment mixed with single and two family structures. Northwest is mostly residential having single and two family residences. It also includes a municipal airport at the extreme corner of the city boundaries. The immediate area on the south side of the site is mostly the commercial area of downtown. But further down in south and southwest, it is partially commercial and mostly residential, having single two family, and multiple-family residences. The east and southeast sides of the site also have residential structures but mostly this is an industrial area, having lots of agricultural and vacant land around (Fig. 4).

### Site Analysis

The selected downtown block is situated along the busy commercial arterial, Washington Street, and surrounded by Jefferson, 8th and 9th Streets (Fig. 5). The establishments



- SINGLE & TWO FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- MULTIPLE-FAMILY RESIDENTIAL
- AGRICULTURE AND VACANT LAND

Fig. 4 Generalized Land Use Map

that currently exist on the block include a bank, an automobile workshop, a cable T.V. store, and a couple of beauty salons. In addition, there are some vacant buildings and parking lots. The site is almost flat and virtually without trees. Most of the existing buildings are on the east, south and west side of the block, making a U-shape. The area on the north side of the site creates a big void and is left for parking. This is the area on the block proposed for development. Additional land could be created by razing some existing vacant structures on the site in the process of revitalization.

#### **Analysis of existing built environment (a pictorial tour)**

See Figure 6 with reference to attached elevation photographs on pages 25 and 26.

#### **Site visual analysis**

The establishments that currently exist on the site are housed both in old and new structures. In order to determine which of the existing structures on the site can be saved and which should be torn down in the process of revitalizing the study block, an analysis of the existing structures on the site was conducted. The study is based on the following points:

**Architectural merit** - In this part of study, the two factors taken into account are:

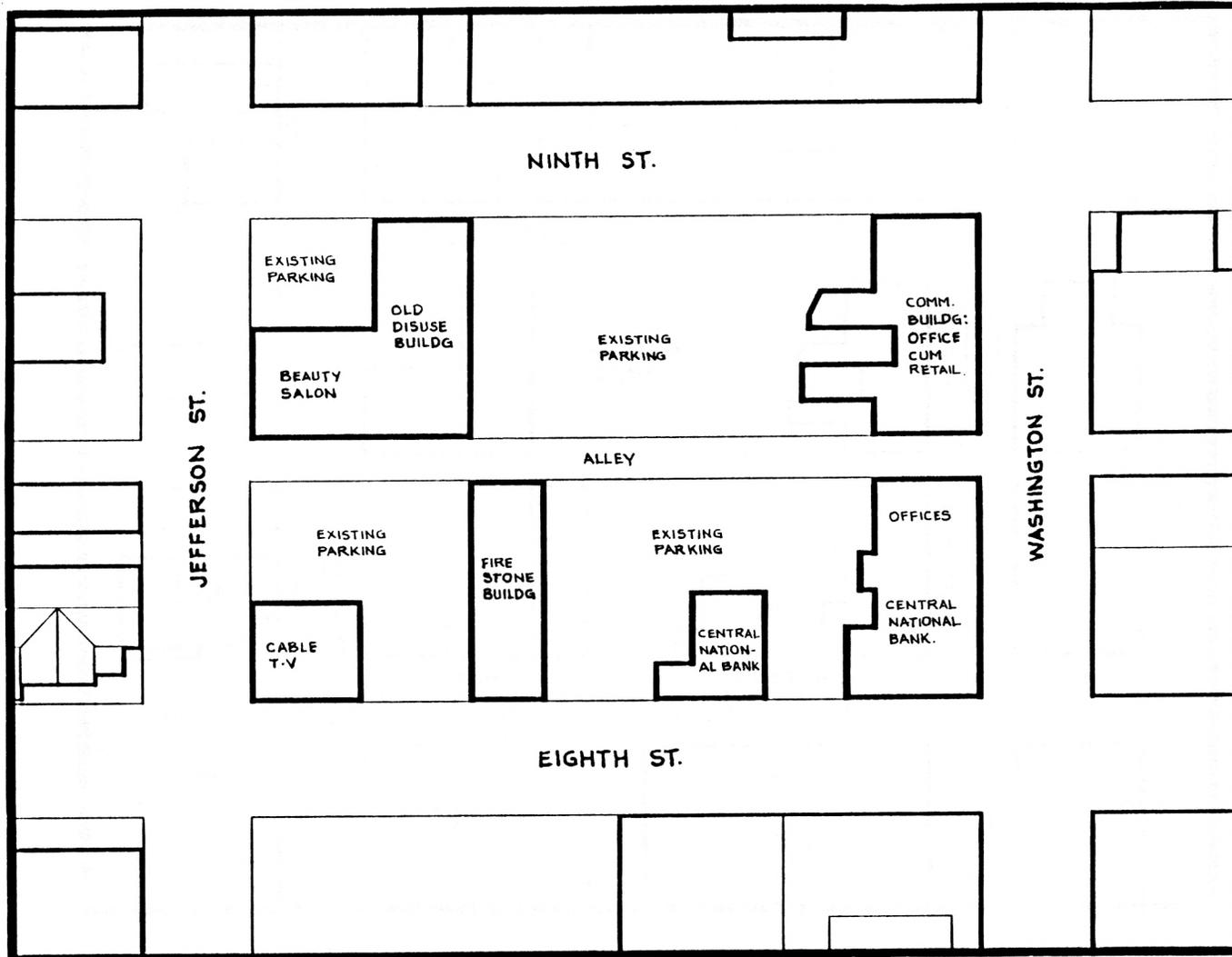


Fig. 5 Site Analysis Map

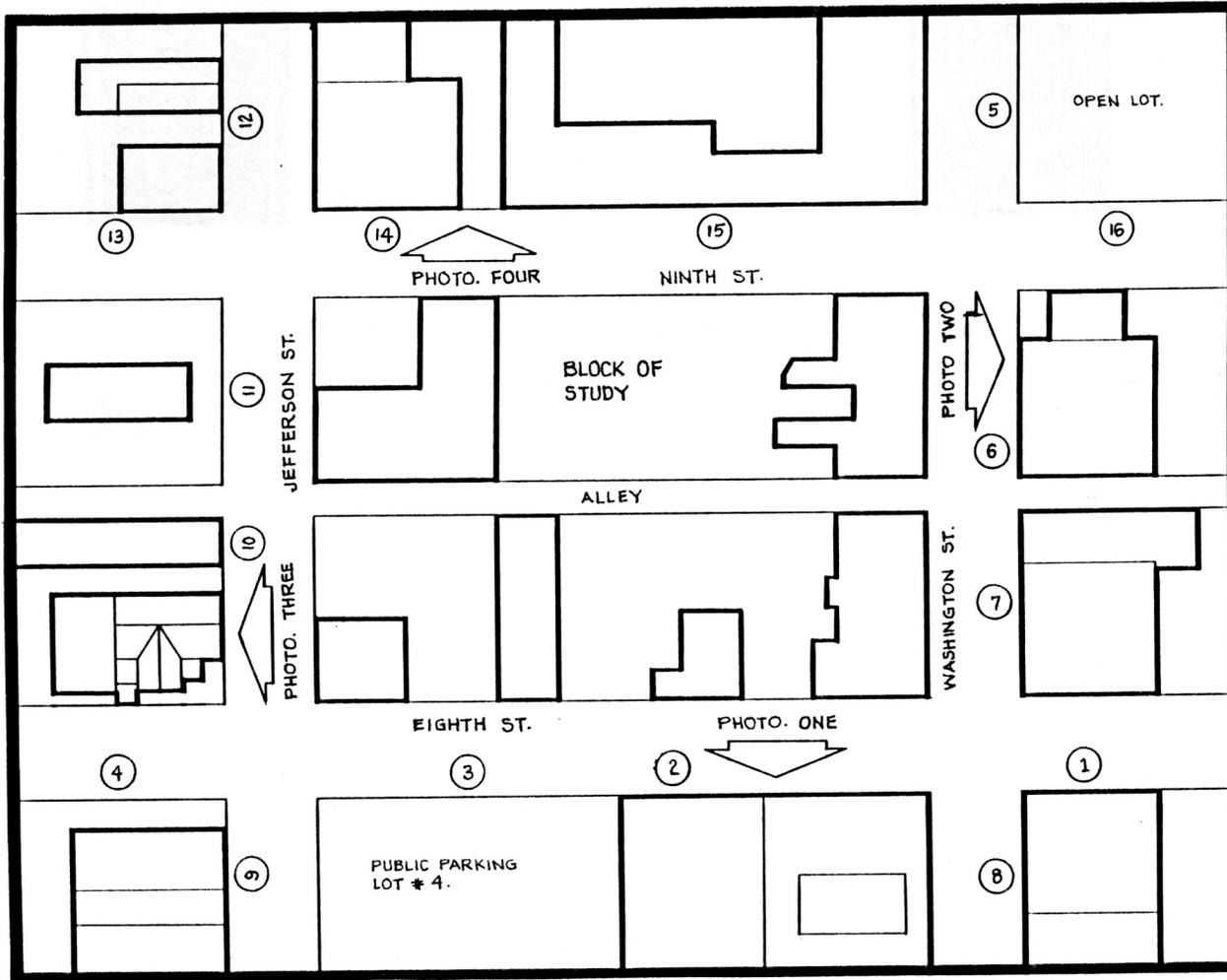


Fig. 6 Elevational Photos Location Map

# ANALYSIS OF THE SURROUNDING BUILT ENVIRONMENT

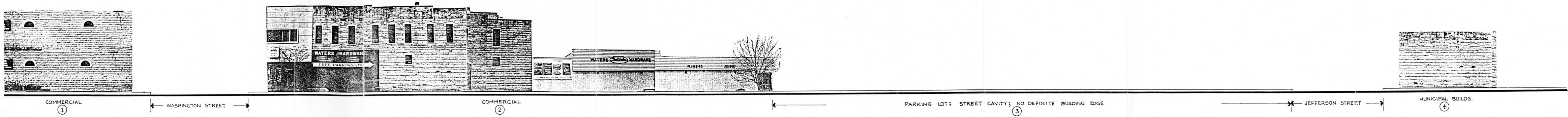


Photo #1 SOUTH ELEVATION FROM EIGHTH STREET

- \* Variation in building height, form, shape, proportion, material, etc.
- \* No uniform buildings skyline.
- \* Lack of sufficient plantation.

- \* Wide-open parking lot at the corner of Jefferson street makes big void - a street cavity having undefined edge by any physical object, vegetation, etc.

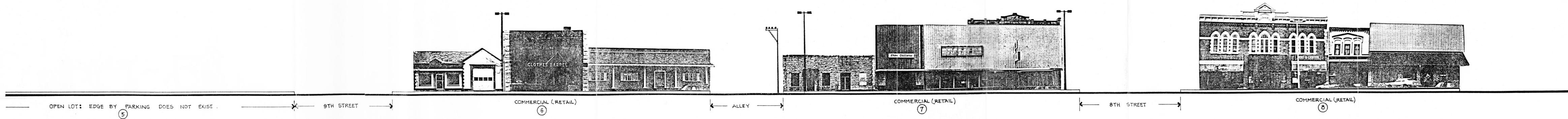


Photo #2 EAST ELEVATION FROM WASHINGTON STREET.

- \* No edge is made by building, trees, or any other object at the open lot left of Ninth Street. The visual sense of edge does not exist on this side.

- \* Building structure for different retail activities does not share similarity in height, (maximum height for tallest structure is about 32 feet) color, proportion, material, etc.
- \* Lack of sufficient plantation along the walkways.

# ANALYSIS OF THE SURROUNDING BUILT ENVIRONMENT

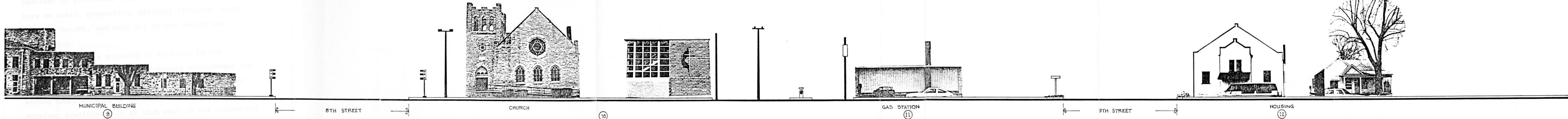


Photo #3 WEST ELEVATION FROM JEFFERSON STREET

- \* Mixed kind of building structures: Governmental, religious, commercial and residential.
- \* Street cavities and undefined street edges are quite dominating.

- \* No uniform building skyline; each building differ from other in height, form, and proportion.
- \* Lack of sufficient plantation along buildings and walkways.

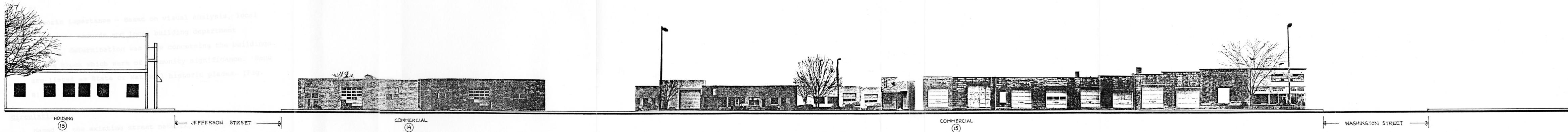


Photo #4 NORTH ELEVATION FROM NINTH STREET

- \* Low buildings height; all one story structures, sharing similarity in height; therefore, a uniform building skyline in dominating.

- \* No edge is made by building, trees, or any other object at the open lot right of Washington Street. The visual sense of edge does not exist on this side.

\* Examples of architectural style; an outstanding specimen of particular style includes such design factors as scale, proportion, material finishes, color, building height, and over all facade design and workmanship.

\* Consideration of a building in relation to its environment; a building which greatly strengthens the design composition of its immediate surrounding has strong architectural merit (Fig. 7).

**Physical condition** - It is that part of the survey and analysis process where an examination of the physical condition of all existing structures on the site is made for the purpose of determining how each building fits into the process of revitalizing the study block (Fig. 8)

**Historic importance** - Based on visual analysis, local historical records and local building department records, determination was made concerning the buildings on the block which were of community significance. None are listed as State or National historic places. (Fig. 8)

### Circulation

Based on the existing street network, it is possible to designate a system of major thoroughfares in Junction City. According to the nature of traffic routes and the load, the

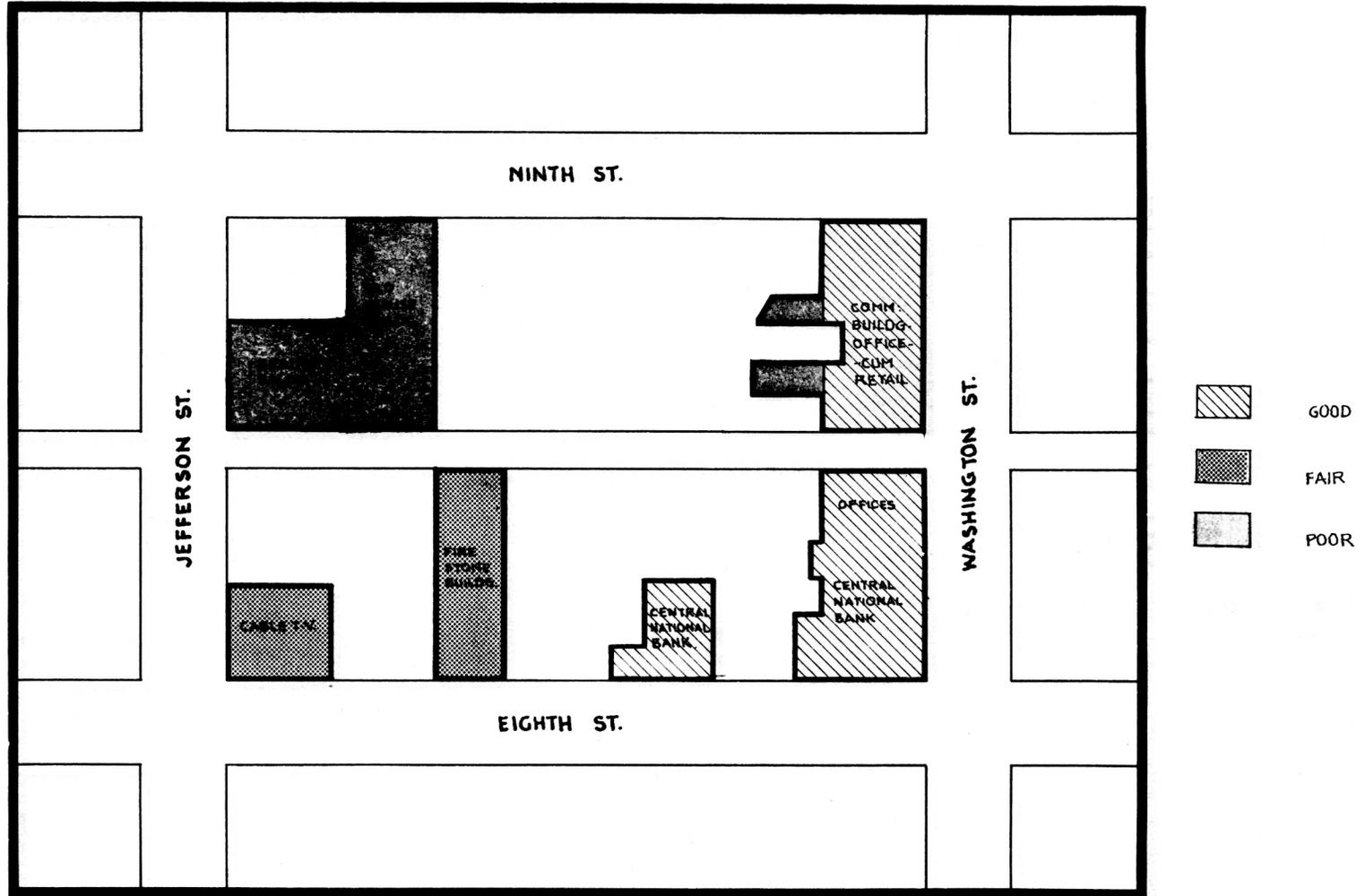


Fig. 7 Architectural Merit Classified Building Map

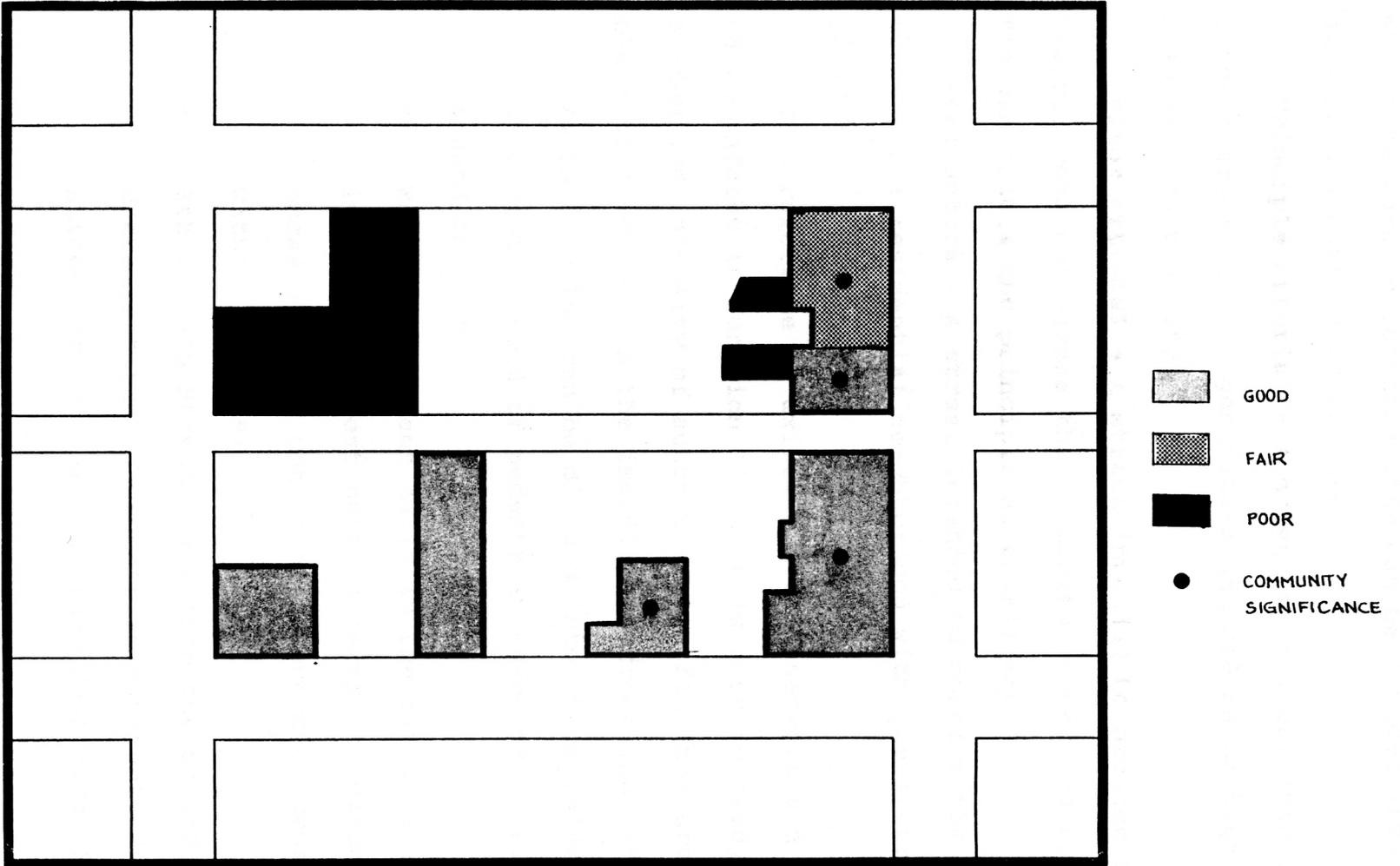


Fig. 8 Buildings Physical Condition/Historical Importance Map.

street network in Junction City can be divided into three different arterials as follows:

**Principle arterial** - A street or highway intended to connect major traffic generators and the major highway entrances into the city.

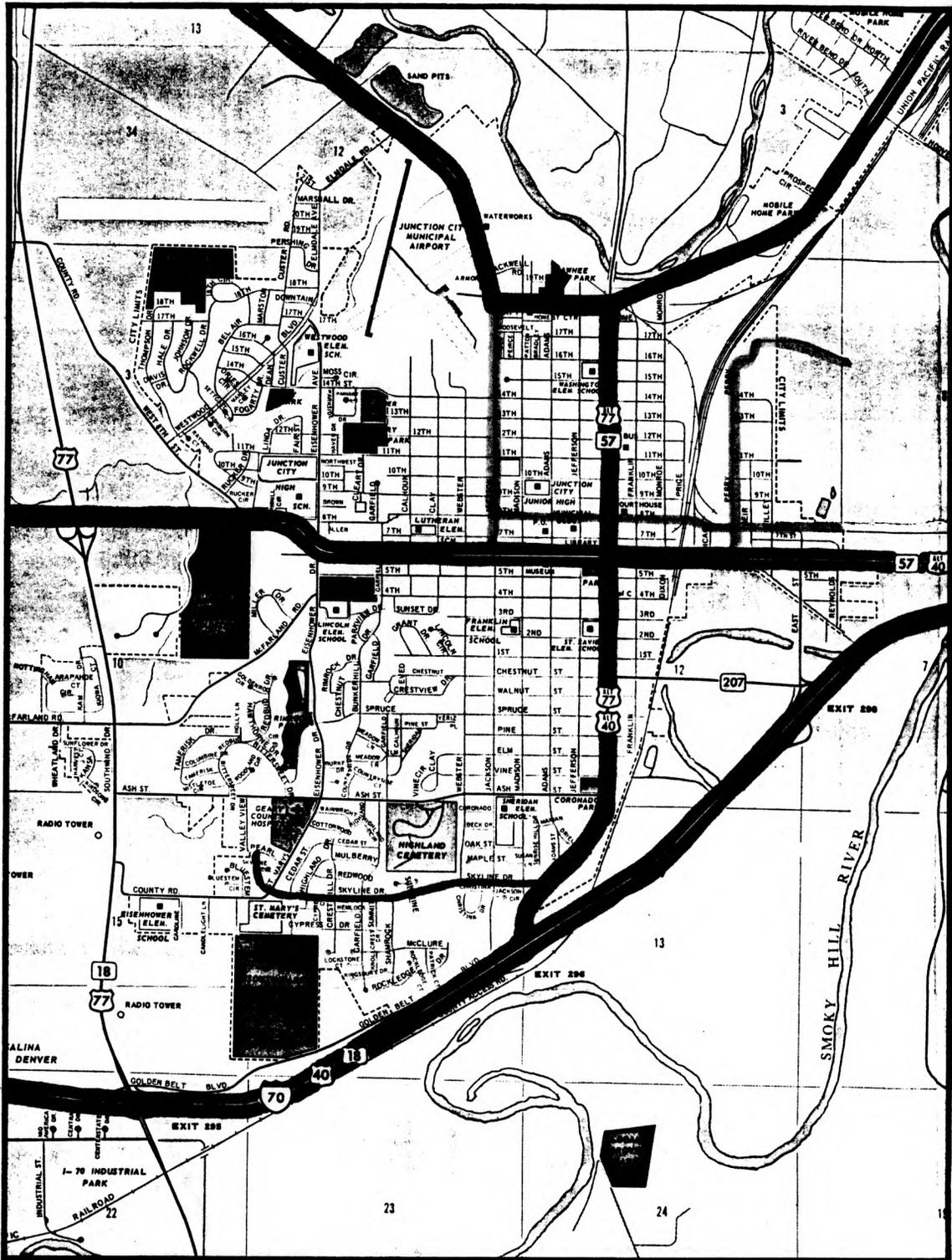
**Minor arterial** - A street intended to provide through traffic movement across the community connecting minor traffic generators and principle arterial; and

**Collectors** - A street intended to connect the local street of a residential neighborhood with the arterial system (Fig. 9).

With reference to existing street network and major thoroughfares in Junction City, it is easy to study the system and intensity of automotive traffic flow around the block of study and in the immediate surroundings (Fig. 10).

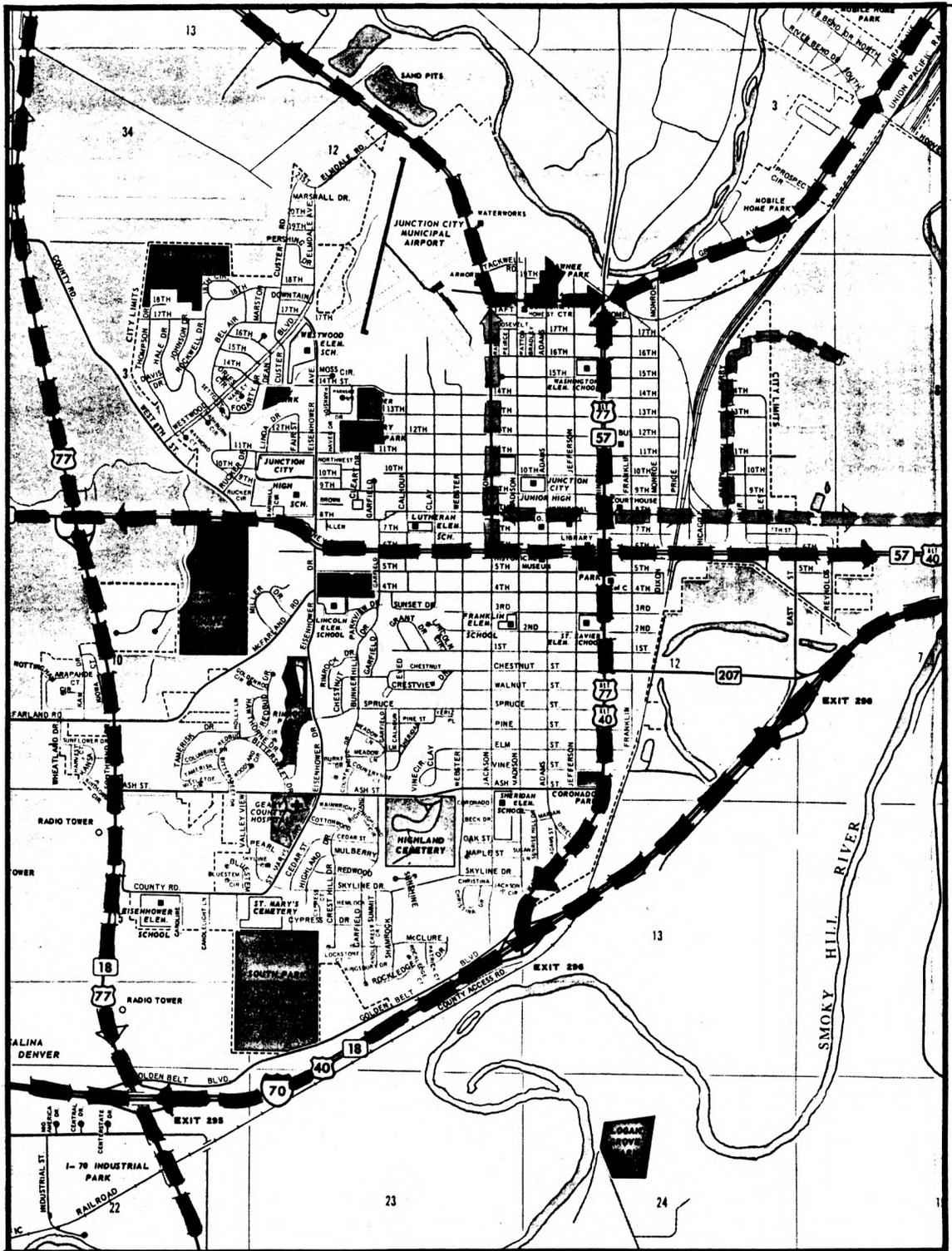
**Paths** - Paths can be divided into three categories according to load of pedestrian movement within and around the site.

- \* Washington Street falls in the first category, as it is the busiest path in terms of customarily, occasional, or potential movement of pedestrians within the area.
- \* 8th and 9th Streets fall into the second category. Where in terms of pedestrian movement, these streets are not as busy than Washington Street.



PRINCIPAL ARTERIAL
  MINOR ARTERIAL
  COLLECTORS

Fig. 9 Junction City Arterial System Map



1ST DEGREE HEAVY TRAFFIC

2ND DEGREE HEAVY TRAFFIC

Fig. 10 Automotive Traffic Flow Map

- \* The third category is for Jefferson Street and the alley. This path is less busy than the first two.

Currently, the alley, in particular, is being used both for pedestrian as well as automotive movement for the entrance and exit of automobiles to and from the existing parking lot on the site.

**Edges** - There are two different types of edges on the site.

- \* Edges by building
- \* Edges by parking lot.

Edges are made by buildings on the east side of the site. The south and west site is composed of edges by building as well as existing parking lots. The north side does not have a strong edge. The existing buildings and parking lot on either corner of the site does make an edge but the big open land in the center has visually weakened the overall sense of edge on the north side.

**Nodes** - Nodes can be divided into two main categories.

- \* Circulation node - for pedestrians
- \* Circulation node - for automobiles

The alley is the most dominating circulation node for pedestrians, those walking on the east or west side of the site use the alley occasionally and/or habitually to get to either sides of the site.

All existing parking spaces on the site are circulation node for automobiles currently being used by the customers

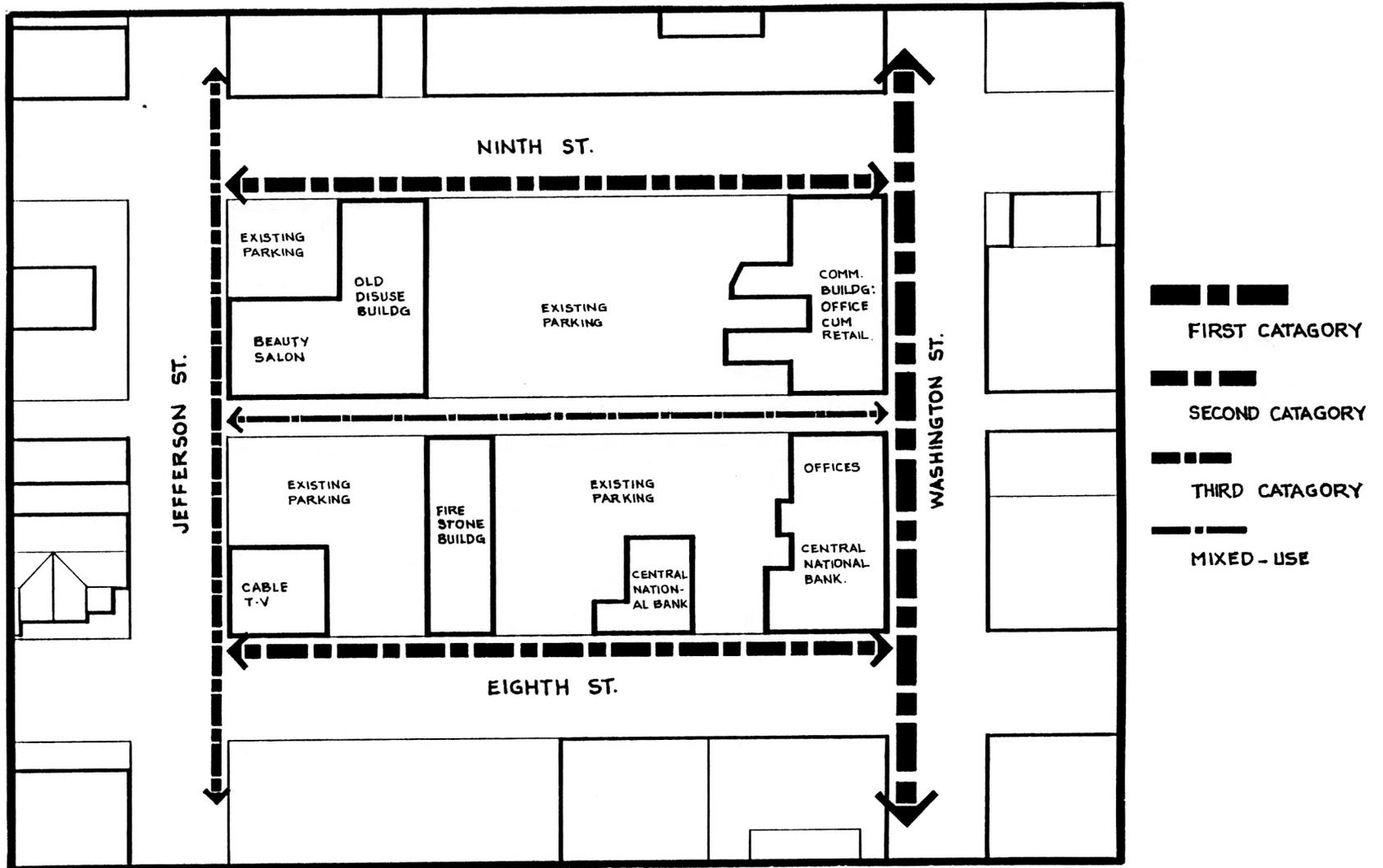


Fig. 11 Paths Classified Map

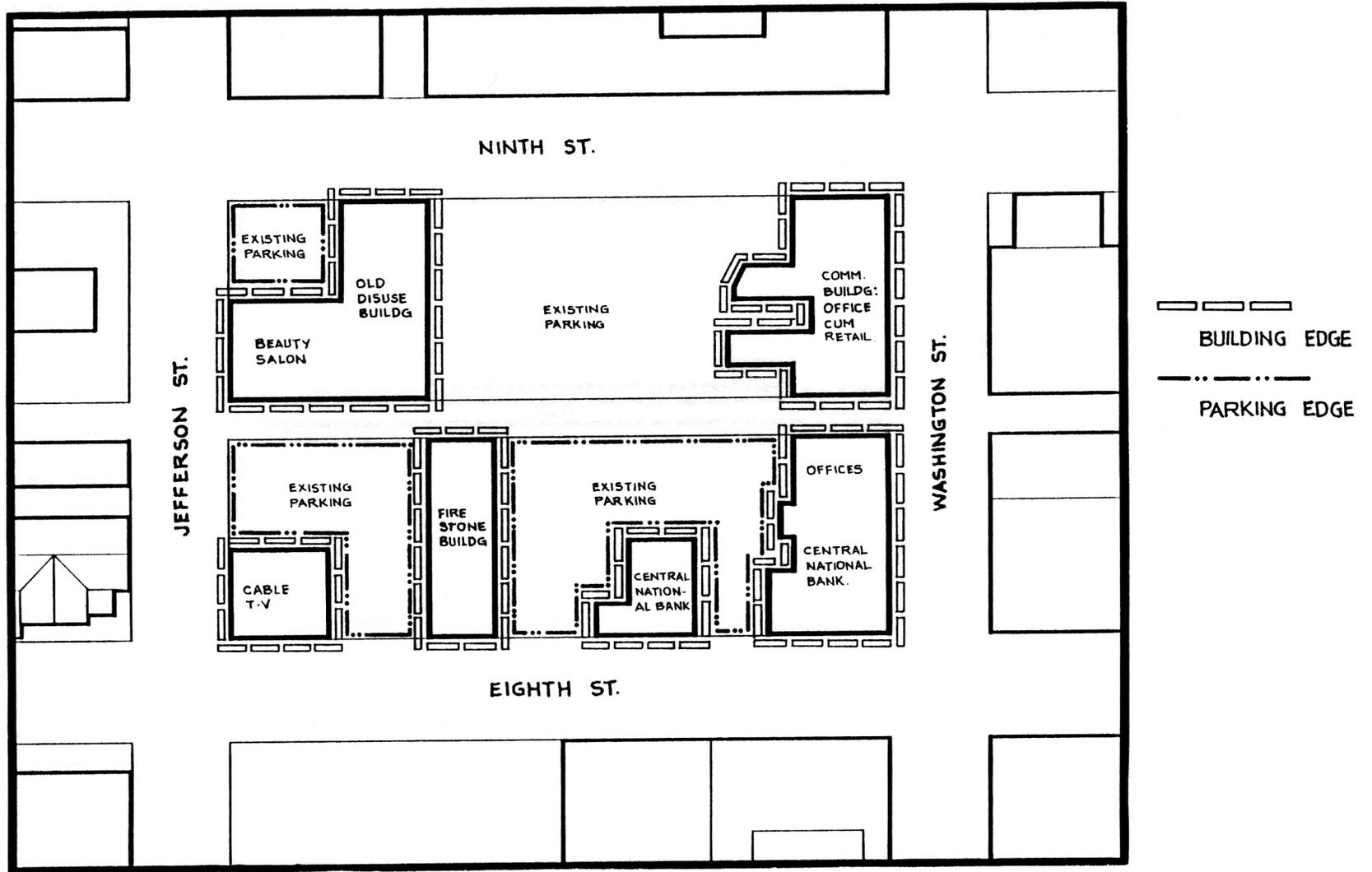


Fig. 12 Edges Classified Map

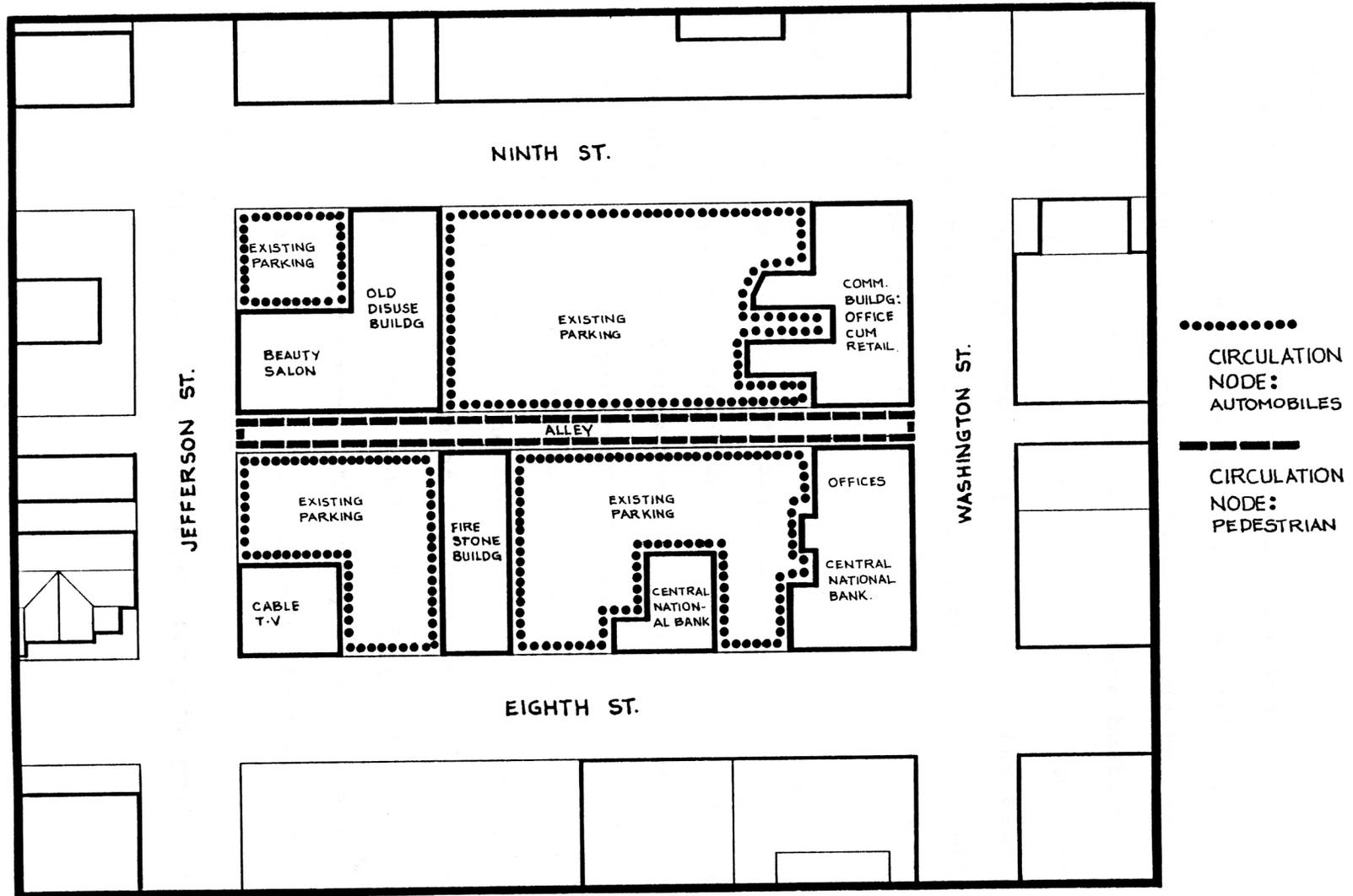


Fig. 13 Nodes Classified Map

and employees of the existing commercial establishments on the site.

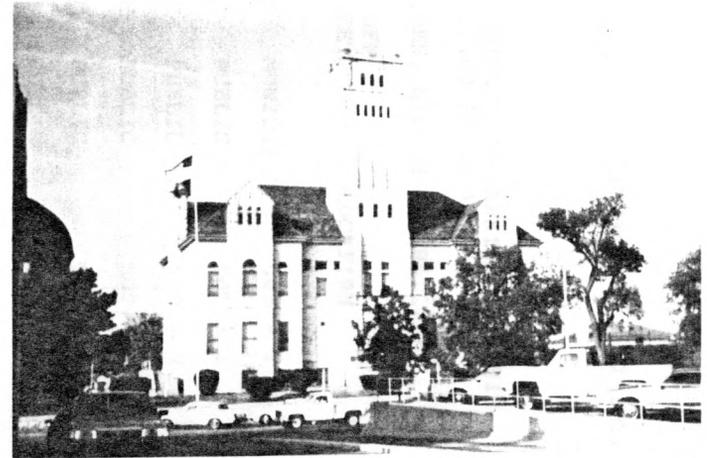
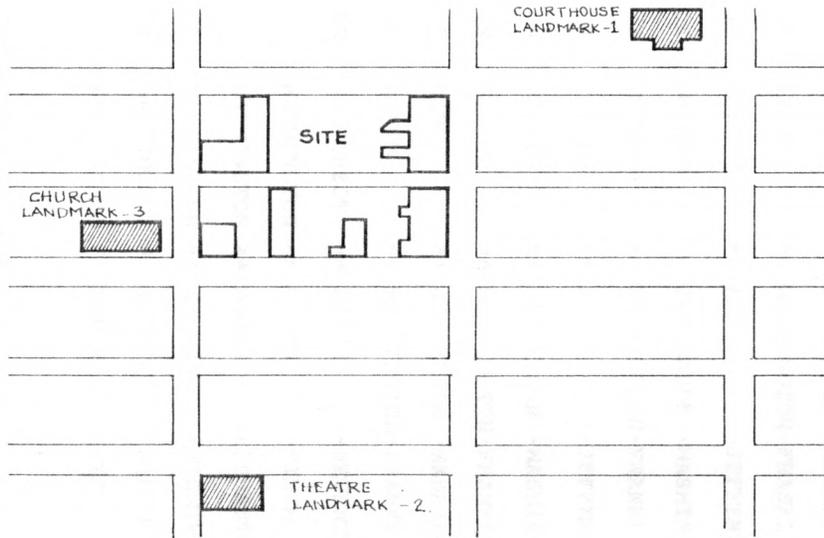
**Landmarks** - Within a radius of half-a-mile around the site, there are three prominent landmark buildings for the downtown and the city itself. These include the court house, a theater, and the church buildings. These buildings are considered as a landmarks, not only for their location in the heart of the city and proximity to the site, but also because they have historical value in the context of architectural history of the city (Fig. 14).

### **Parking**

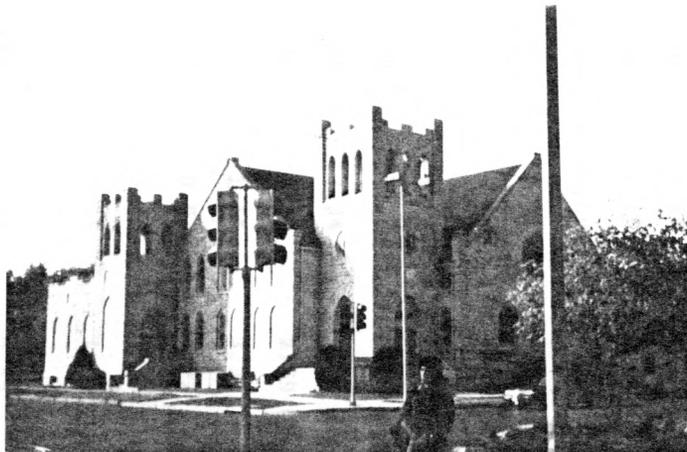
According to a survey conducted in 1986 there were a total of 792 public parking spaces identified in the core of the downtown. Out of this total, 313 spaces were off-street and 479 spaces were on-street (Table. 3).

For the downtown area as a whole, the usage rate was just under 64 percent. The average duration was approximately 1/2 hour and an average of 2.2 cars used each space. These values indicates that as a whole, there is not a shortage of parking spaces in downtown (there may be a shortage at desirable locations, though). This finding however, requires two qualifications.

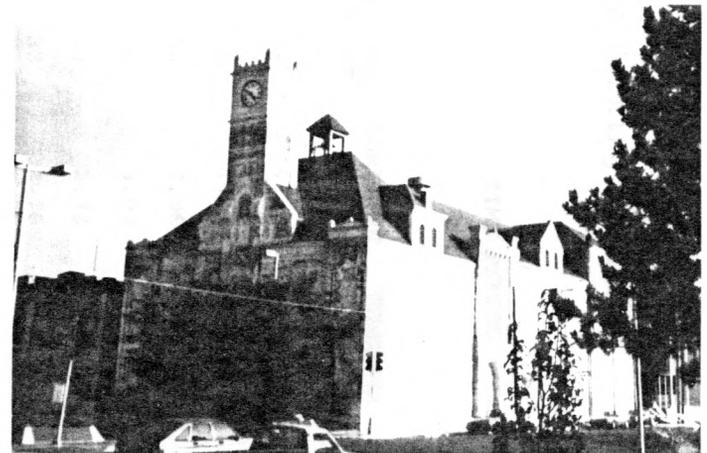
- \* The survey result does not apply to peak shopping days.



COURTHOUSE



CHURCH



THEATRE

Fig. 14 Landmarks Location Map

Table. 3 Junction City Parking Analysis

JUNCTION CITY PARKING ANALYSIS 10:00 TO 14:45			TIME PERIOD = 5.00 HOURS			
BUCHER, WILLIS AND RATLIFF						
ON/OFF STREET	LOCATION		NO. OF SPACES	DURATION RATE	TURNOVER RATE	USAGE RATE
OFF	MUNICIPAL	LOT = 1	72	1.95	1.50	58.54
OFF	PUBLIC	LOT = 1	32	1.69	1.66	55.94
OFF	PUBLIC	LOT = 2	34	2.56	1.74	88.68
OFF	PUBLIC	LOT = 3	18	3.03	1.28	77.50
OFF	PUBLIC	LOT = 4	73	2.73	1.37	74.93
OFF	PUBLIC	LOT = 5	32	2.76	1.50	82.81
OFF	PUBLIC	LOT = 6	52	2.54	1.10	55.77
ON	SIXTH	** JEFFERSON -WASHINGTON	31	1.74	1.94	67.42
ON	SIXTH	** WASHINGTON-FRANKLIN	20	1.60	1.75	56.00
ON	SEVENTH	** ADAMS -JEFFERSON	11	0.84	3.73	62.73
ON	SEVENTH	** JEFFERSON -WASHINGTON	36	0.83	5.25	86.94
ON	SEVENTH	** WASHINGTON-FRANKLIN	36	1.19	1.08	25.83
ON	EIGHTH	** ADAMS -JEFFERSON	4	5.00	1.00	100.00
ON	EIGHTH	** JEFFERSON -WASHINGTON	23	0.77	5.22	80.87
ON	EIGHTH	** WASHINGTON-FRANKLIN	48	1.31	2.50	65.31
ON	NINTH	** JEFFERSON -WASHINGTON	45	1.80	1.04	37.67
ON	NINTH	** WASHINGTON-FRANKLIN	39	1.98	1.59	62.82
ON	JEFFERSON	** SIXTH -SEVENTH	15	2.34	1.67	78.00
ON	WASHINGTON	** FIFTH -SIXTH	37	1.46	2.59	75.68
ON	WASHINGTON	** SIXTH -SEVENTH	30	1.11	3.33	74.17
ON	WASHINGTON	** SEVENTH -EIGHTH	36	0.52	5.72	59.72
ON	WASHINGTON	** EIGHTH -NINTH	37	0.86	3.57	61.22
ON	WASHINGTON	** NINTH -TENTH	31	1.68	1.03	34.68
TOTAL **** ALL SPACES			792	1.44	2.22	63.91

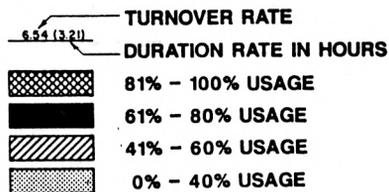
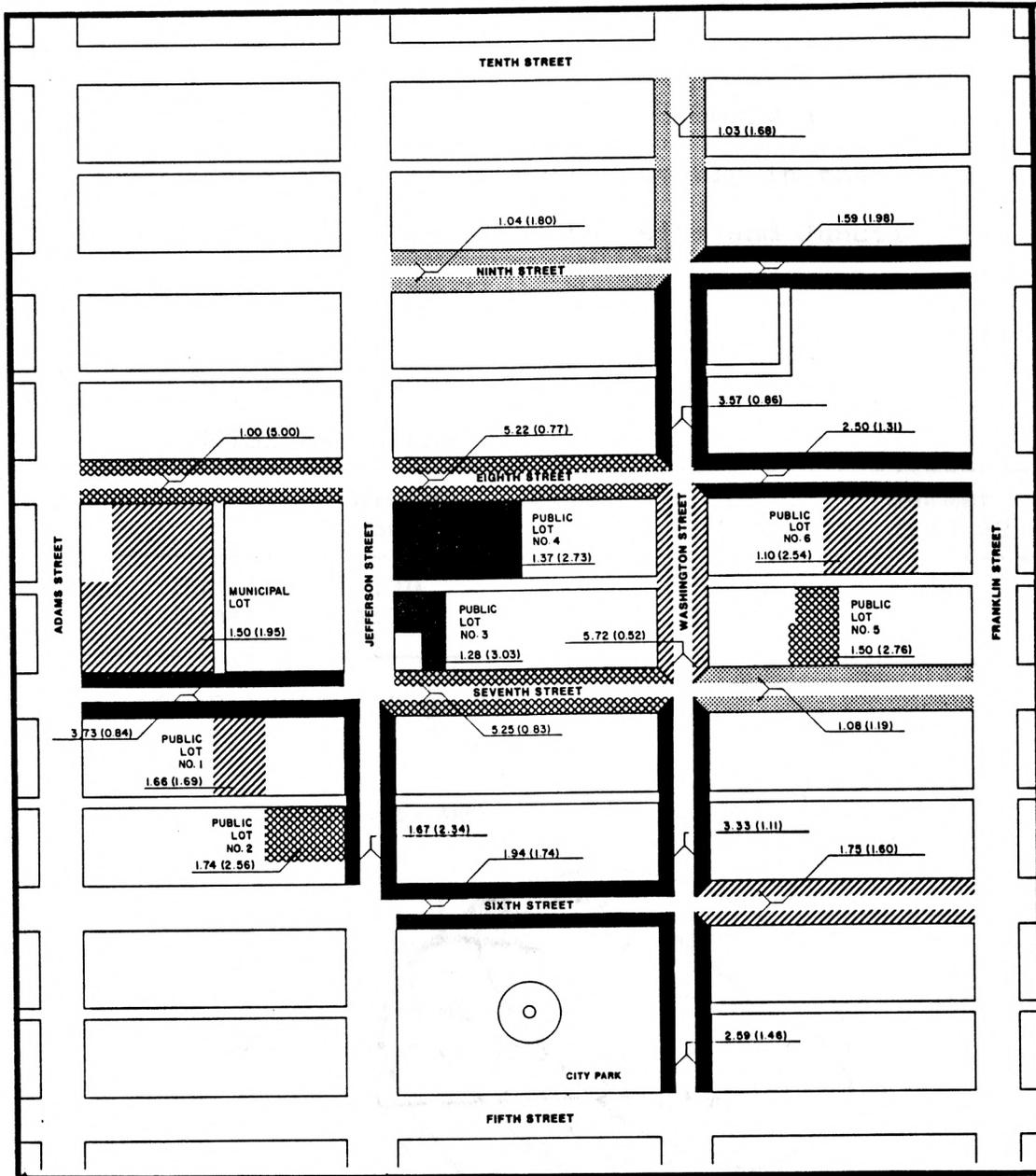
- \* The continued revitalization of the downtown area would cause a substantial increase in parking demand.

Based on the results of the survey, any project in the downtown of Junction City which increases commercial floors would need provision of additional off-street parking. In case of the selected block of study, its north, south and east sides for on-street parking are almost full to capacity, especially 8th Street already exceeds the recommended 80 percent (Fig. 15). Jefferson Street on the west side of the site is the only one which is capable of accommodating some on-street parking. In this respect, proposed development on the site heavily depends on off-street parking facilities and little on on-street.

### Climatic conditions

Climate has a basic influence on site planning; the location and orientation of structures, the material the equipment for cooling and heating.

The climate of Junction City, Kansas can best be described as continental. Summers are long, dry and hot with a mean temperature of 78. Spring is usually cool with frequent periods of rain. Autumn has only occasional periods of rain and is otherwise long, with mild temperatures. Winter is cold with a mean temperature of 32.6, and the average annual temperature is 55. The average annual rainfall and snowfall



BUCHER, WILLIS & RATLIFF  
 CONSULTING ENGINEERS, PLANNERS & ARCHITECTS



Fig. 15 Parking Survey Results Map

are 33" and 20," respectively, whereas the average humidity is 57%.

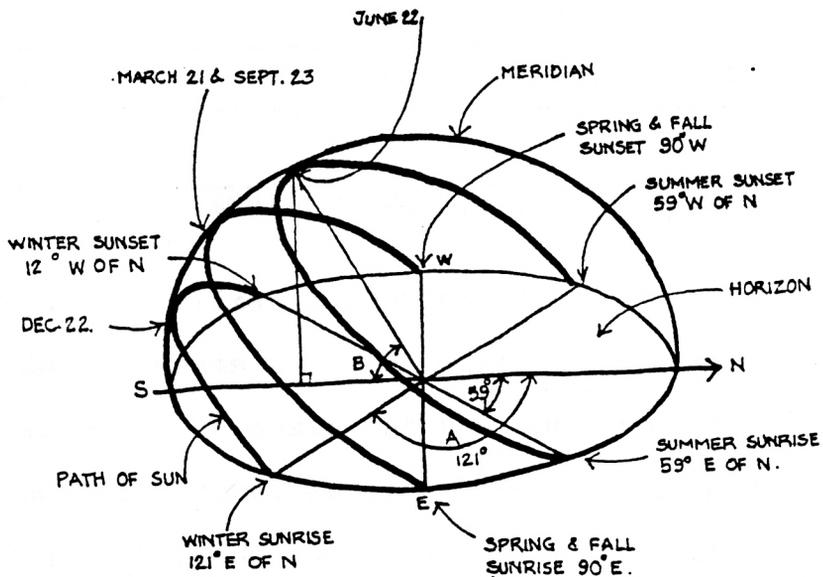
Prevailing winds shift from a southerly direction in the spring through early fall to northwesterly in the remaining months. Climatic conditions for the site and Junction City area are summarized below.

1. SUN (40 North Latitude)

a. SUNRISE AND SUNSET

	Winter Dec.22	Fall Sept.23	Spring March 21	Summer June 22
Sunrise	7:30	6:00	6:00	4:30
Sunset	4:30	6:00	6:00	7:30

b. SOLAR ANGLES. Fig. 16



Angle "A" = Azimuth  
 Angle "B" = Altitude

	Summer		Winter		Spring & Fall	
	Sunrise	Sunset	Sunrise	Sunset	Sunrise	Sunset
Azmith	59	59	121	121	90	90
	Noon		Noon		Noon	
Altitude	73 30'		50		26 30'	

Temperature (Months mean temperature - F)

Jan.	Feb.	March	April	May	June	
29.9	34.4	43.5	56	64.9	74.9	
July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann.
78.6	79.6	71.0	59.6	43.8	33.5	55.8

Humidity (Mean relative humidity - %)

Jan	Feb	March	April	May	June	
72	73	69	63	69	72	
July	Aug.	Sep.	Oct.	Nov.	Dec.	Ann
69	64	66	66	69	72	68

Source: State Climatologist.

Considering the climatic conditions of Junction City, the proposed design needs to be of maximum natural climate control. In summer, the design of the openings should allow maximum sun and cross-ventilation inside the building. Whereas, during winter and autumn when the sun will be low in sky, maximum sun coming inside would be desirable. For building climate control, canopies, overhangs, and window projections, should be carefully integrated in the overall design of the building.

## DESIGN INVESTIGATION

### Project brief

According to those people interviewed in Junction City, the key establishments proposed for the block of study were:-

1. Grocery store
2. Drug store
3. Specialty shops/variety stores; and,
4. Offices

In order to meet design challenge while achieving highly intensive use of land for mixed-use development, a design program both for the block and individual proposed buildings was made. In this connection, Firestone, Cable T.V., and the old out-of-use buildings were taken out to get additional land for the proposed development. The application of the design program resulted in a mixed-use design with the grocery store placed in the central part of the site and retail shops (both specialty and others) on the periphery. Offices were proposed on the upper floor of the retail establishments.

Since the grocery store requires plenty of convenient front-of-building parking facilities, a large piece of land had to be allocated for off-street parking for grocery store. This was in addition to parking facilities required for retail shops and offices (refer pages 110-12).

### First design review

In the first design review, good and bad design factors were determined in the design proposal of each establishment which on the whole seemed to affect the feasibility of the entire design scheme. In this regard, the major problems were those associated with the presence of a grocery store with other proposed and existing establishments on the site. This situation finally led to a conclusion of eliminating the grocery store completely from the design program in the next alternative design proposal. Recognizing the fact that this site is not a site particularly suited for a grocery store, the following were the main reasons which governed this decision:

- \* Off-street parking provided for a 30,000 square feet grocery store occupied a big area of open land on the site, thus, leaving little room for the parking required for other establishments such as offices and retail businesses.
- \* For the success of a grocery store, front-of-a-building surface parking is a must. With regard to that, suggestions for a multi-level parking facility was out of question as it was very expensive and unpracticable in Junction City's business market. Therefore, the acceptable solution was to eliminate the proposal for the grocery store from the block, otherwise the result

wise versa would be to force the elimination of other establishments from the site such as retail shops and offices.

Other problems associated with the presence of a grocery store on the site were:

- \* It was not easily accessible from two very important and busy arterials such as Washington Street and 8th Street.
- \* There were orientation and building services problem.
- \* The area was already congested enough inside the small block with other proposed and existing establishments.

#### **Project brief (Revision # 1)**

After the results of the first design review, the program was revised to fit more office spaces and retail establishments in the second design proposal by removing the grocery store from the site. In this connection, retail shops and offices (shops on first floor and offices on second floor) were proposed on the periphery of the site in a U-shape form with an square shaped office tower (shops on main floor and offices on upper floor) placed inside the U-shaped form. The second floor of the office tower was connected through bridges in three different directions directly to the office floor above retail establishments. Also, as in the first design proposal, off-street parking had been an

important part of this design and was provided in the basement of the office tower as well as on the periphery of the site in order to meet the parking requirements of tenants and shoppers in the proposed design (refer pages 48,113-115).

### **Second design review**

In this design review, two of the main problems found were those associated with the ratio of gross leasable area with that of the proposed parking and the proposed office tower in the middle of the site. In this regard, the central tower for the offices seemed to be most problematic in the sense of increasing building covered area compared to far less number of provided parking spaces on the site. Thus, the cumulative gross leasable area (both for retail and offices) was not matching with the number of required parking. Therefore, the main suggestions for design improvement given for the next design proposal were:

- \* The covered area for shops as well as offices must meet the required number of off-street parking.
- \* Leave out the central office tower.
- \* Provide required number of parking spaces for retail establishments within the premises of the site and possibly obscure them from the street.
- \* Shops on the periphery of the site having main entries on the street level should have a design strong enough to strengthen the level of street

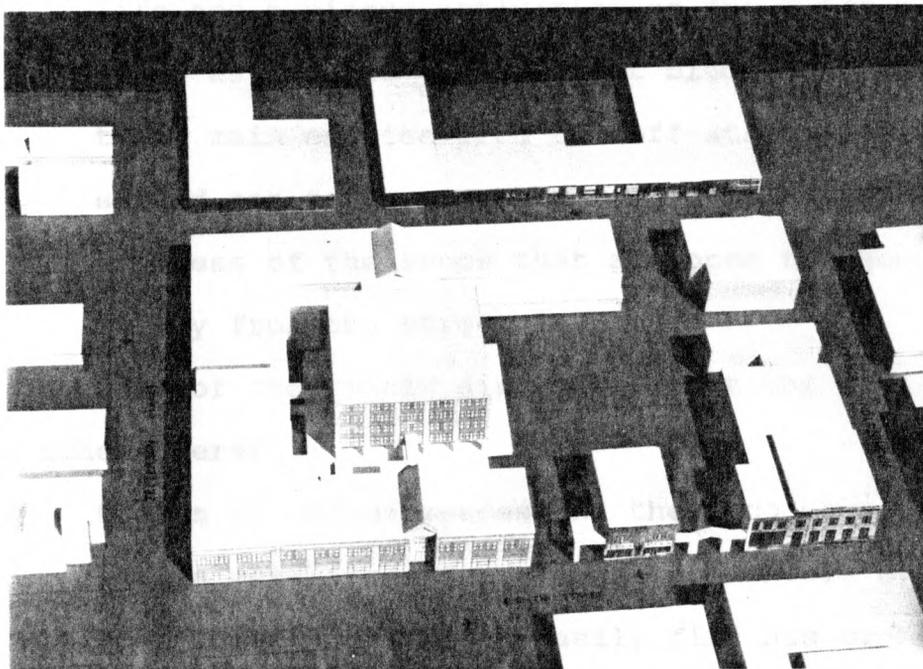


Photo #5 Office tower with shops on periphery; pictured from Eighth Street.

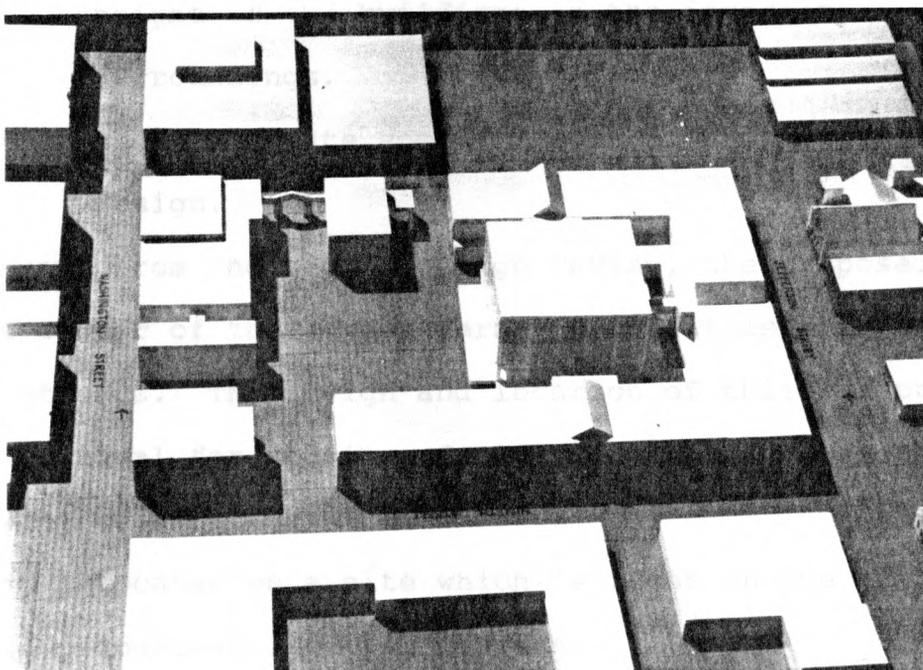


Photo #6 Office tower with shops on periphery; pictured from Ninth Street.

life and business activities on the block of study as well as the adjacent blocks. Shops having their main entries from the off-street parking lot should not to be proposed. This might affect business of the shops that are open to shoppers mainly from the street level.

Some of the points discussed about the general design scheme were:

- \* Design of office spaces and their connection to the office corridor and services core should be such that a new visitor can easily find his or her way to a particular office being sought.
- \* Height of proposed building should match with the height of the buildings in the immediate surroundings.
- \* Need to create some interest in shops and offices design.

Apart from the second design review, the proposed tower in the center of the site offers opportunities for other kinds of uses. The design and location of this structure could be ideal for housing of elderly people due to the following reasons:

- \* Located on a site which is right in the heart of downtown Junction City, Ks.
- \* All downtown shopping activities are within walking distance.

- \* Can provide good view of the city skyline and landmark buildings in the vicinity.
- \* A number of churches are close to the site.

### **Project brief (Revision # 2)**

The third design proposal addressed the issues raised in the review of the second proposal. The retail shops (both specialty and others) were kept on the periphery of the site on the main level with the offices on the upper floor. All shops had two way entries open from street level as well as from the proposed off-street parking lot connecting through a semi-covered shopping arcade. Parking for offices and retail establishments were provided separate from each other. Given criteria to the ratio of proposed gross leasable area to be matched with the required number of parking spaces for both establishments, office parking was provided in the basement, whereas retail establishments would have off-street surface parking within the premises of the site (refer pages 51, 116-18).

### **Third design review**

The design critiques given for the third design proposal were mostly dealing with small segments of design layout. They were not as serious and problematic as found in the first and second design reviews, which partially or as a whole seemed to affect the feasibility of the entire design scheme. The points discussed were as follows:

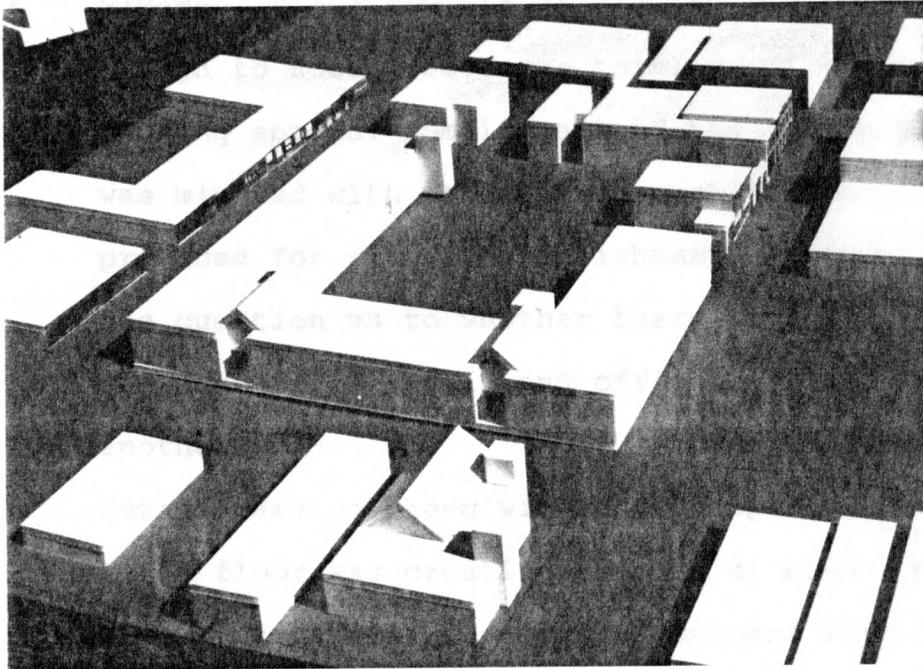


Photo #7 Shops-cum-office-block; pictured from the crossing of Eighth and Jefferson Streets.

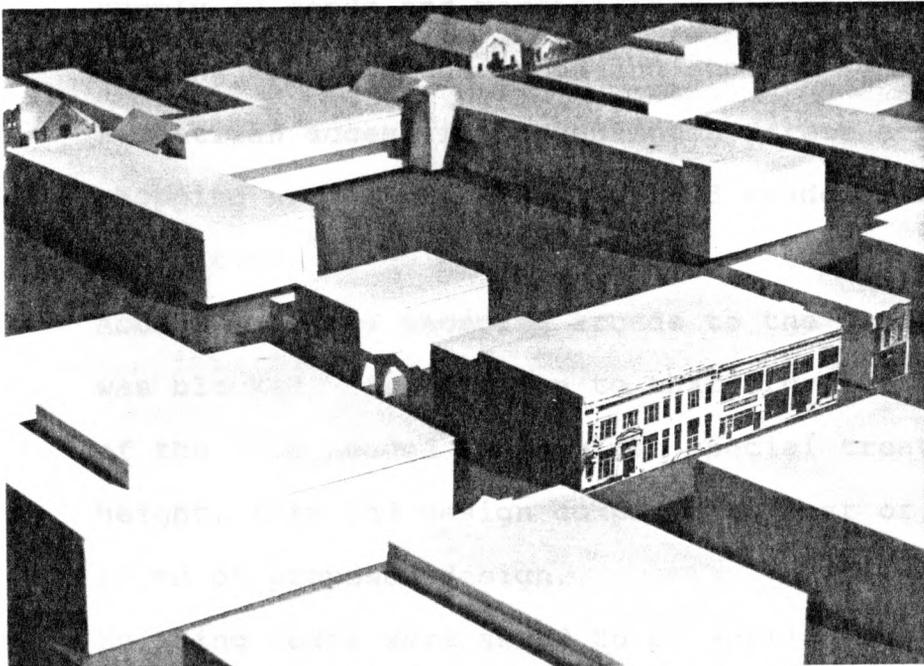


Photo #8 Shops-cum-office block; pictured from the crossing of Eighth and Washington Streets.

- \* Basement floor for office parking was not large enough to accommodate the total required number of parking spaces. Small part of the office parking was mingled with the surface parking facility provided for retail establishment. This brought up the question as to whether there should be total segregation of retail and offices parking one from another.
- \* Retail parking along with the shopping arcade on first floor was creating problem of clear and through access of pedestrian movement from parking areas to the shopping arcade.
- \* Problems were found in terms of access for the supply of goods and merchandises directly from loading docks to the shops and stores.
- \* Pedestrian access from Washington Street to shopping arcade was not clear and needed greater definition.
- \* Access from the shopping arcade to the corner shops was blocked. In addition to that, the two corners of the site needed to be given special treatment in height, form and design compared to rest of the parts of proposed design.
- \* Building codes were asked to be applied for required number of fire escapes, maximum traveling distances required between two fire escapes, etc.

After third design review, it was felt that the physical design proposal for the block was on the right track. Referring back to the changing directions observed in the first and second design proposals, the outcome of the third design proposal showed promise of clear direction for the development of the block onward. Further design work now focused on the development of major issues of parking and, character of buildings and scale with regard to the buildings in the immediate surrounding area (refer pages 54, 119-22). Therefore, in this connection, the design program for the block and the building is the one which is developed from the results of the first three design investigations.

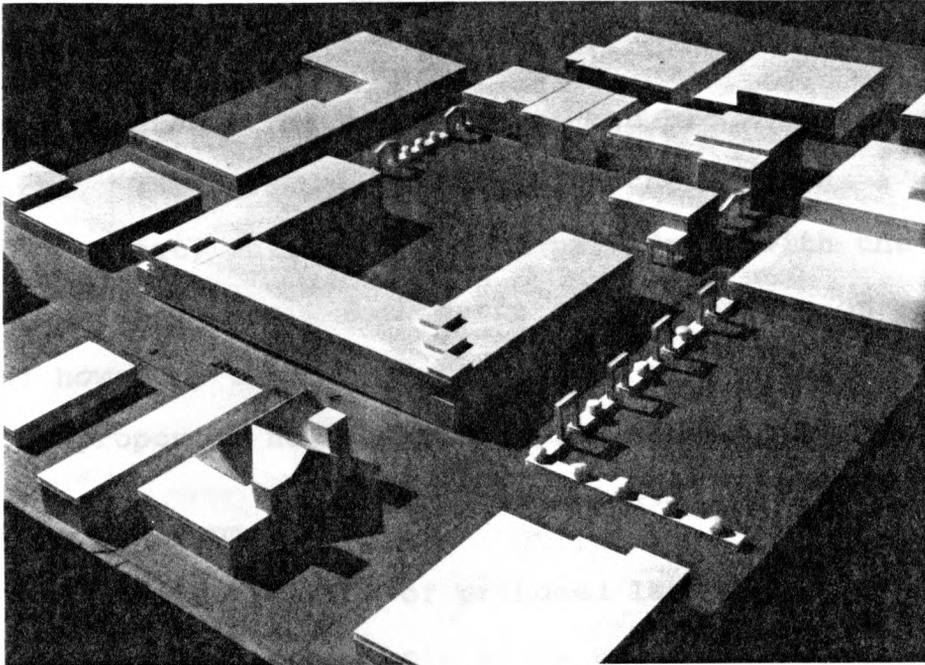


Photo #9 Revised design of shops-cum-office block;  
pictured from the crossing of Eighth and  
Jefferson Streets.

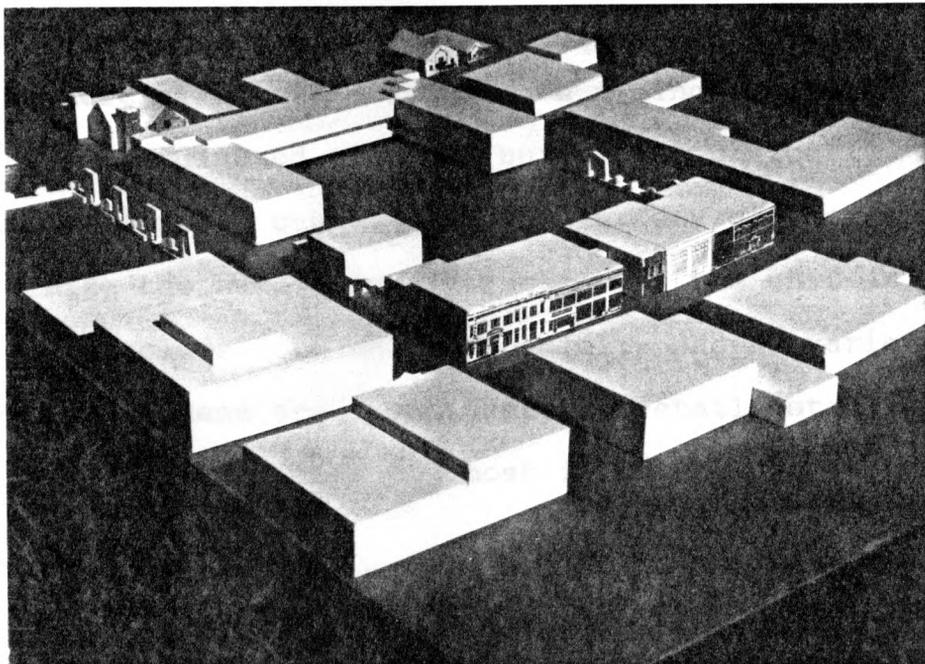


Photo #10 Revised design of shops-cum-office block;  
pictured from the crossing of Eighth and  
Washington Streets.

## DESIGN PROGRAM

### (for the block)

The program of development for the block is divided into two parts. The first part deals with the block as a whole and its context, while the second part deals with the individual building type. Both parts of program are on separate issues; however, they are interrelated within the broader issue of proposing new in-fill on the block.

### Mixed-use development

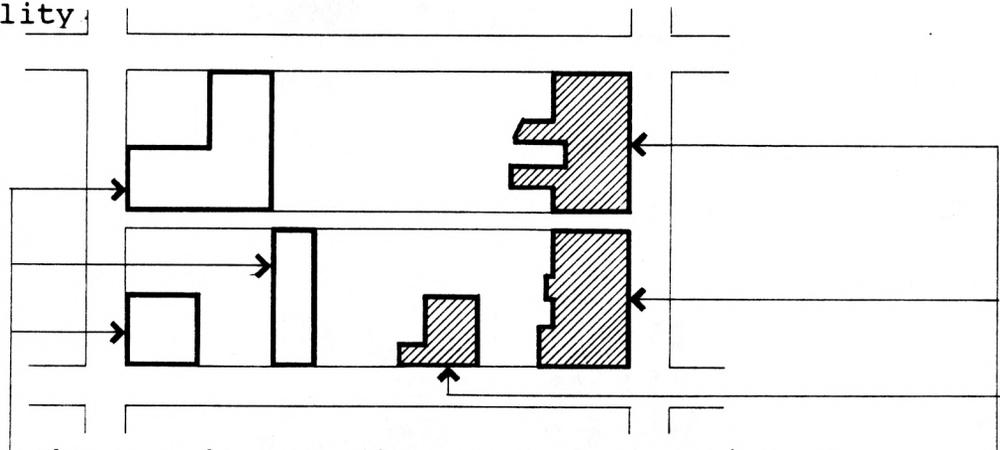
Based on the results of proposed land uses, established through interviews, the whole block will be a mixed-use development, having a collection of activities of interest to the downtown at large. These include the following main activities.

**Commercial/retail** - It will be a single building or a carefully coordinated group of buildings; basically, a community shopping center having a variety of stores tending to maximize the cumulative attraction of the unit as a whole. This will include food shops, specialty shops, variety stores, etc. These are those types of retail establishments which are currently demanded most in the downtown Junction City, Kansas.

**Offices** - An office floor will be proposed over the retail establishments. Segregating the two different activities one from another will be for the purpose of achieving better functional qualities of each activity yet

they will be integrated in overall design in such a way that can allow maximum ease of communication, services, parking etc. For proposed development, the existing open land on the site will be used. Since the success or failure of any commercial development is very much dependent on safe, easy and close to building on-and-off-street parking, it will be essential to tear down all those existing structures on the site which are less worthy compared to the importance of proposed parking facilities and the success of new establishments. Some of the other related factors are as follows:

- \* It is not economically feasible to tear buildings down that are in use. However, when site development is important, some buildings may need to be sacrificed.
- \* Ideally you save the better examples of architectural quality



These go because they are not expensive of character.

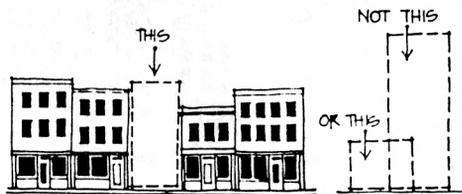
These buildings are kept because they express the character of Junction City.

## New in-fill construction

The design of new in-fill building needs special consideration. It should be designed to look appropriate and compatible in the midst of surrounding buildings. This approach strikes a proper balance between the existing architecture and good contemporary design. Following are the general recommendations which govern the visual relationship between an in-fill building and its neighbor.

### **Building height & width -**

- \* The downtown buildings generally share a similarity in height. The in-fill construction should respect this. A new building facade which is too high or too low can interrupt this consistent quality.

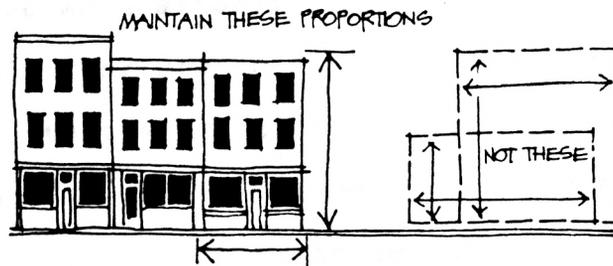


- \* The new structure should respect the characteristic rhythm of facades along the street. If the site is large, the mass of the facade can be broken into a number of smaller bays.

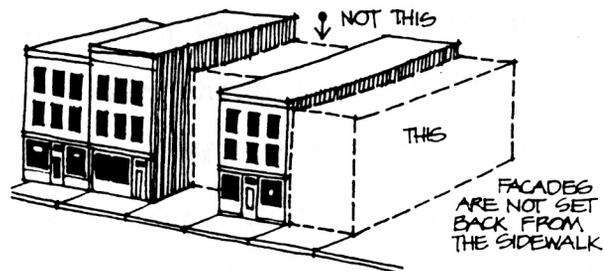


**Proportion, relationship to street, roof form, rhythm, material, color -**

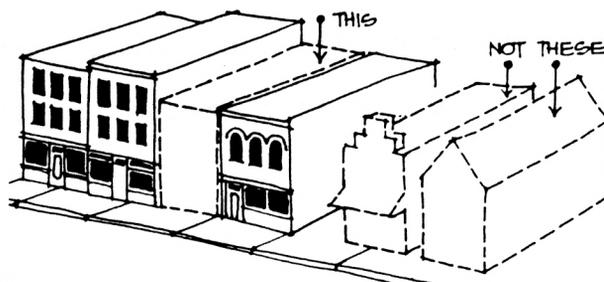
- \* The characteristic proportion (the relationship between height and width) of existing facades should be respected.



- \* The new facade should have a relationship to the street which is consistent with its neighbor.



- \* The type of the roof used should be similar to those found on adjacent buildings.



- \* The rhythm, scale, and proportion of openings in new buildings should respect the existing building.
- \* Facades of new structures should be composed of materials, textures, and colors that complement adjacent facades.

**Based on above recommendations:**

- \* The height of new in-fill building/s will vary from 2 to 3 story above street level. The parts adjacent to roads will be in harmony to the surrounding buildings in height.
- \* Respecting existing buildings' relationship to the streets, no building set back from street will be proposed which can break relationship of new facade to the street which is consistent to its neighbors.
- \* The type of roof for the existing building on the block and generally for most of the buildings in downtown is the flat slab. Respecting that, the new structure will also have a flat slab.
- \* The facade of new building will be using the same rhythm, scale, proportion of openings, material, textures, colors that the existing buildings on the block have.

**Building codes**

The primary purpose of applying building codes in a design is to ensure safety and convenience of its occupant. Therefore, a building structure cannot be completed in all

aspects of planning and design unless the building codes are applied in full. This design proposal will be addressed following important building codes as described in Uniform Building Codes of 1988.

**Means of egress -**

**Exits required:** Every building or usable portion thereof shall have at least one exit and not less than two exits (other than elevators) are required where number of occupants is at least:

Offices.....	30
Stores-Retail sales room	
Basement.....	11
Ground floor.....	50
Upper floors.....	10

**Distance to exits:** The maximum distance of travel from any point to an exterior exit door, horizontal exit, exit passage way or an enclosed stairway in a building not equipped with automatic sprinkle system throughout, shall not exceed 150 feet or 200 feet in a building equipped with an automatic sprinkler system throughout.

In an open parking garage, the exit travel distance may be up to 250 feet.

**Access to exit:** When one or more than one exit is required, they shall be so arranged that it is possible to go in either direction from any point in a corridor to a sepa-

rate exit, except for dead ends not exceeding 20 feet in length.

Stairways width: Stairways serving an occupant load of 50 or more shall not be less than 44 inches in width and the vertical distance between two landings shall not be more than 12 feet.

### **Circulation and access**

Success of a new construction in any location is very much dependent on clear and good circulation. The circulation pattern for a complex should be clear, easy to follow and related to the flow of people in nearby areas as well as vehicle and services around the site.

Under this proposal, a good circulation pattern will avoid confusion between the traffic for the two different types of activities. Safe, convenient and efficient flow of pedestrian and vehicular traffic on the site is a must.

**Vehicular access** - The access for vehicular traffic to the site (apart for the already existing entrances for existing buildings) will be mainly from 8th and 9th Streets. No entrance or exit for automobiles from Washington Street to the site (through alley) will be proposed. Washington Street is already a busy arterial; any proposal for access points may interrupt busy traffic flow on this arterial. Access for service vehicles to the site will be from 9th Street and will not mix with existing and proposed parking lots. Besides, the access and exit of all automotive traffic to the site

will be one way in design for the purpose of safety, convenience and effective traffic flow.

**Pedestrian access** - Main pedestrian access to the building for those who would be willing to shop as well as those benefiting from office activities (i.e., employees and visitors) will be from all four sides of the site i.e., 8th, 9th, Jefferson and Washington Streets. Safe and direct access from parking to all activities of development will be provided.

### **Delivery and services**

Under this proposal, special considerations will be given for delivery of merchandize and services to shops, In this regard, service areas on merchandizing level in the form of roads, service courts, and other types of loading facilities will be acceptable. However, good planning principles would demand that such areas be properly shielded by screen walls or landscaping and that service vehicles can enter or leave with no interference from automobiles or pedestrians.

### **Parking**

New and permanent parking space will be provided for in the new structure. In this regard, for better parking facilities on the site, the organizing of existing parking spaces with the proposed one would be an important consideration. A study for The Urban Land Institute (ULI) by Barton-Aschman Associates, together with data from The Institute of Trans-

portation Engineering and the Traffic Institute, Northwestern University suggests the following parking standards for stand-alone uses:

Offices: 3.0 spaces per 1,000 sq. ft. of gross leasable floor area (GLA).

Retail: 4.0 spaces per 1,000 sq. ft. of GLA for centers having 25,000 to 400,000 sq. ft.

However, according to Junction City, Kansas zoning regulations, revised Oct. 12, 1988, Article 7-103,B, for "all business and commercial establishments, at least one parking space for each 300 sq. ft. of floor area, plus one for each full-time employee" is required.

The parking requirement for the proposed retail and office establishments primarily will be based on the building codes for the central commercial district of Junction City, Ks. However, in any adjustment found necessary in reaching the required number of parking spaces in the proposed design, the parking standard established for Urban Land Institute (a research organization responsible for development activities) would be taken into consideration as a substitute.

### **Street furniture**

Attempts will be made to incorporate planters, seating areas, screen and entry features in site planning and design, in order to create an attractive and comfortable environment for the people.

## **Landscaping**

Landscape materials are necessary in adding beauty to the site and its developments. Also they are valuable in climate control. Proper landscaped design will add beauty to the whole block and particularly to that part of the site where the new structure will be proposed, by breaking up rigid lines of streets, walks and buildings. Also plants will give aesthetic value through their use in screening objectionable views. The shadows cast by plants will give temporary relief from sun for the pedestrian.

## **Others**

All utilities on the site are already existing. There can be a shifting and relocating of underground and surface utilities if the proposed design occupies part or the full area of the 20 feet alley, either with building structures, automotive circulation, surface and underground parking, etc. In such case, it will be necessary to provide access to underground utilities on the alley for maintenance purpose<sup>5</sup>

## DESIGN PROGRAM

### (for the building)

#### Specialty shop

A specialty shop is one that sells a limited range of related merchandise, such as women's apparel or men's wear, or else sells a single type of service, such as that offered by a shoe repair shop or by a personal finance agency. There are different types of specialty shops as there are different types of goods and services sold. All of them, however, are basically organized along the same line. Their sales and services, advertising and displays, all allow a similar pattern, whether they sell flowers, shoes, jewelry, women's apparel, men's wear, or service. A typical specialty shop ranges from 400 to 800 s.f. or more, depending upon the need and space availability.

#### Variety store

A variety type store in contrast to a specialty shop depends upon diversified sales for its existence. These stores offer their customers the convenience of shopping for a wide range of merchandise under one roof. They are very much like department stores pared down to a small store size, but unlike department stores, they don't offer a complete selection of "hard and soft" goods such as food, drugs, apparel, housewares, and furniture. Instead, they are liable to concentrate their merchandising within one of these different fields. Drug stores, sporting goods and camera

shops, hardware and appliance stores, and furniture stores, are all typical variety stores. A variety store usually is larger in floor than a specialty shop. The size depends upon the type of store and flexibility in sales floor area design.

### Design criteria

- \* Design of rentable floor area should be according to a standard structural grid pattern, so that the floor area can be leased according to the need and space required for each kind of specialty shop and variety store.
- \* Each shop should have availability of some storage space in the rear or the basement where easy shipment of goods and supplies can be possible.
- \* Shop and store fronts should be dignified, simple and straight forward in design having enough room over doors and display windows for proper execution of store signs and banners.
- \* Arrange all types of specialty shops and variety stores in a linear or cluster form and possibly under one roof for a coherent, pleasant and tempting shopping environment. This can also help in reducing buildup of floor area and the traveling distances from one shop to another.
- \* All shops should be easily accessible for pedestrian traffic moving around the site and coming from the neighboring areas. Provision of

good access for pedestrian traffic from parking lots is also required.

### **Considerations:**

- \* Common service facilities such as restrooms for shops and store employees and shoppers should be incorporated in design.
- \* Lounge and sitting areas should be provided at suitable locations for ease and comfort of shoppers and other people.
- \* Locate closet and storage facilities for janitorial services.

### **Offices**

The need for an office building can be summarized into four categories of space as follows:

- \* All on-street and all-street parking areas outside the building as public spaces.
- \* Building lobby which includes a general information area, waiting area, and rest rooms as a semi-public space.
- \* Elevators/staircases - their lobbies and hallways as semi-private spaces and,
- \* The individual offices, which are not accessible to general public as private spaces.

## Design criteria

Factors which should be considered in design of office spaces are as follows:

**Office space standards** - Module is a standard or unit of measure. A function module then refers to a unit of space required to perform a specific office function.

For a multiple tenancy office building, (such as proposed), a standard structure module of 20'x 20' should be adopted. This would help in partitioning the office space and the window bays on the perimeter of the building according to the rental need of individual tenants. Ceiling height should always be checked to ensure that there is sufficient room to install air-conditioning ducts over hung ceiling, while still maintaining a comfortable ceiling height. This would generally call for a distance of 12 to 13 feet between the floors.

### **Office and building services -**

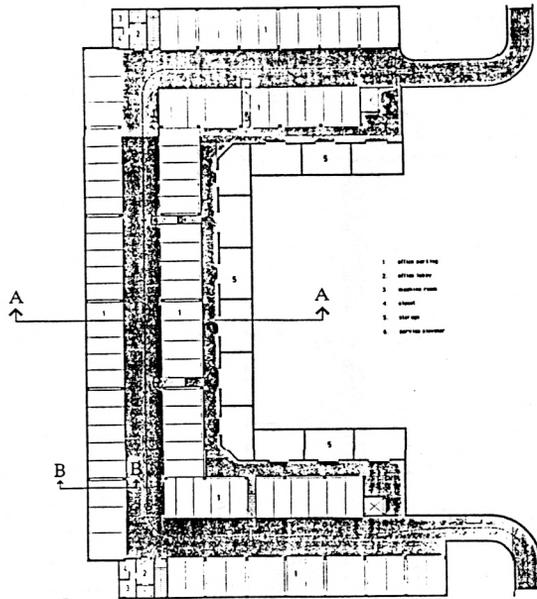
- \* In an office building design, the carefully planned location of the service core is of prime importance. An area consisting of staircases, elevator, rest rooms, storage facilities, and mechanical and electrical rooms should be incorporated in the design according to the overall shape/design of the building in order to;
  - reduce unnecessary circulation and travelling distances in the building and,

- provide safe maximum workable floor area.
- \* For the ease of individual tenants, a general storage facility should be provided in the service core area or at any other suitable location in the building.
- \* For better maintenance and work efficiency, janitor closets should be located on each office floor.
- \* Mail boxes should be provided in the main lobby of the building for individual tenants.
- \* The design of entrance and exit to the building and the service core should ensure maximum security for the users of the building at all times.
- \* Special design precautions should be taken for the handicapped while providing such services for them as ramps, elevators etc.

**Communication -**

- \* All signs should be easily read and self-explanatory so that the people know how to use the facilities they are entering.
- \* Provision for other means of communication such as telephone, computers, and radio and television should be made in design.

**DESIGN PRESENTATION (graphic work)**

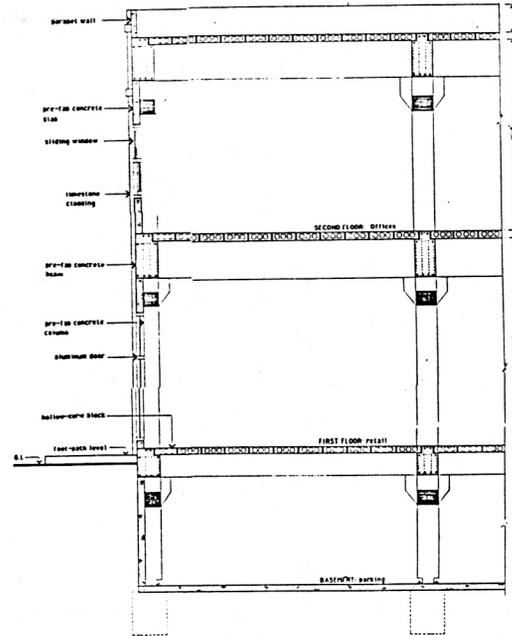
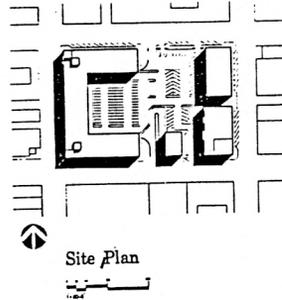


Basement Floor Plan



PROJECT DATA

Site Area	138,000 sq ft		
Building Coverage	38,000 sq ft		
Parking		Building Areas	
Open	12%	NET Retail (GLA)	26,270 sq ft
Covered	90%	NET Office (GLA)	25,290 sq ft
Total	21%	Total Net Rentable	51,560 sq ft

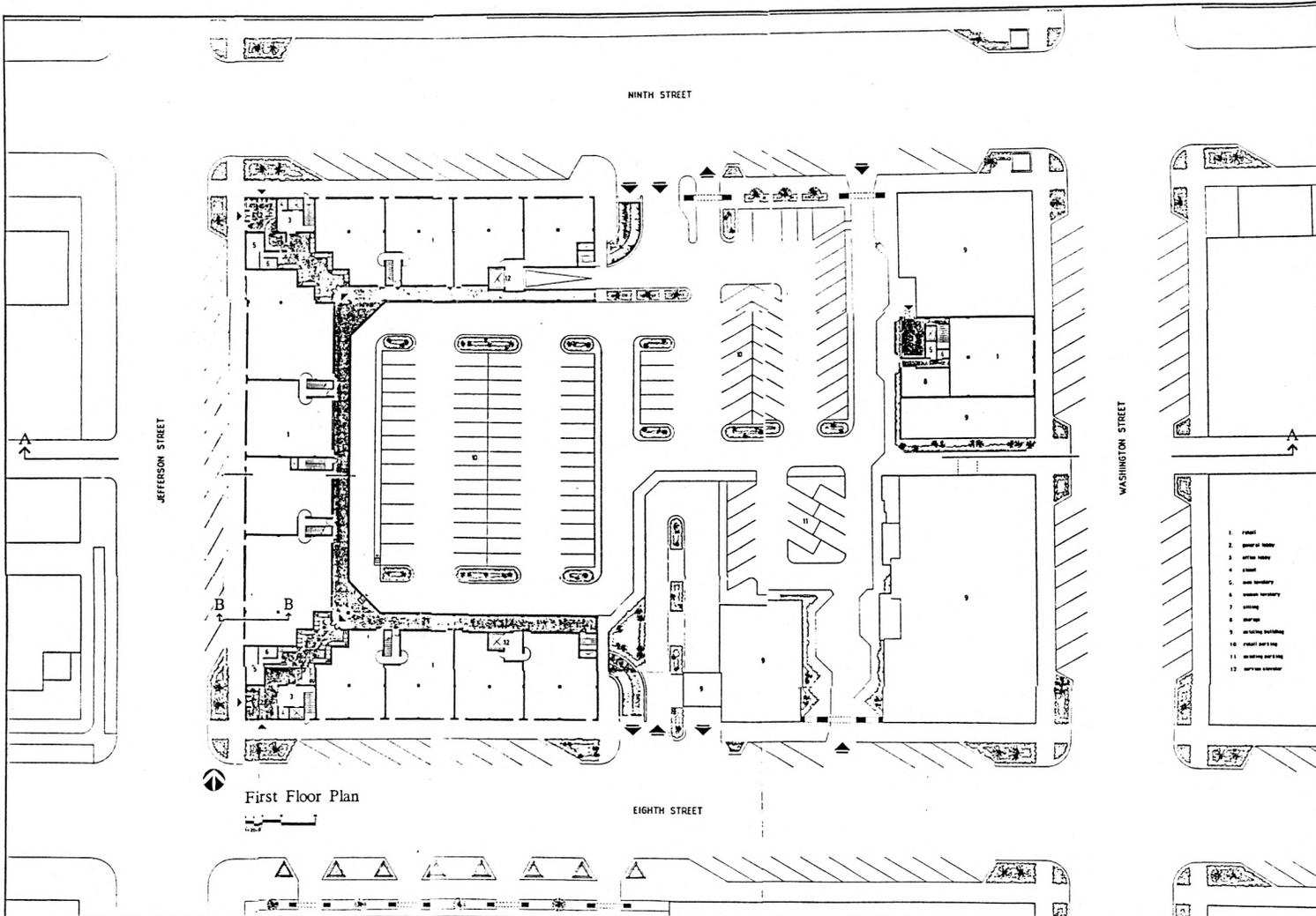


Section B.B



DOWNTOWN COMMERCIAL DEVELOPMENT  
 JUNCTION CITY, KANSAS

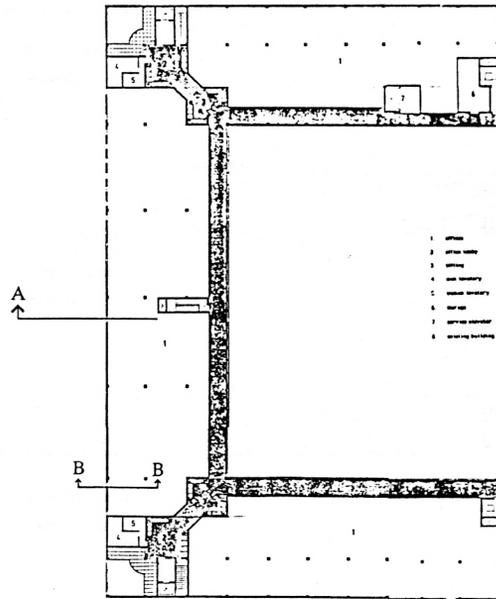
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 KANSAS STATE UNIVERSITY, MANHATTAN, KS  
 A Master's Thesis Fall 1990  
 BY  
 LEAH ALPHAD



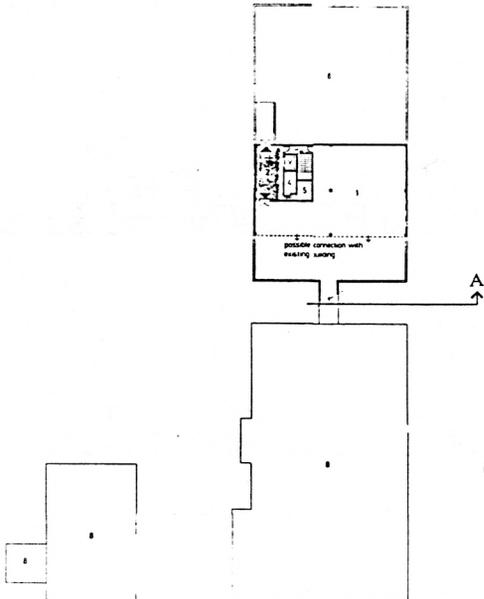
First Floor Plan

**DOWNTOWN COMMERCIAL DEVELOPMENT**  
 JUNCTION CITY, KANSAS

COLLEGE OF ARCHITECTURE & DESIGN  
 KANSAS STATE UNIVERSITY, MANHATTAN, KS  
 A Master's Thesis Fall 1990  
 BY  
 LEAN APPIAD

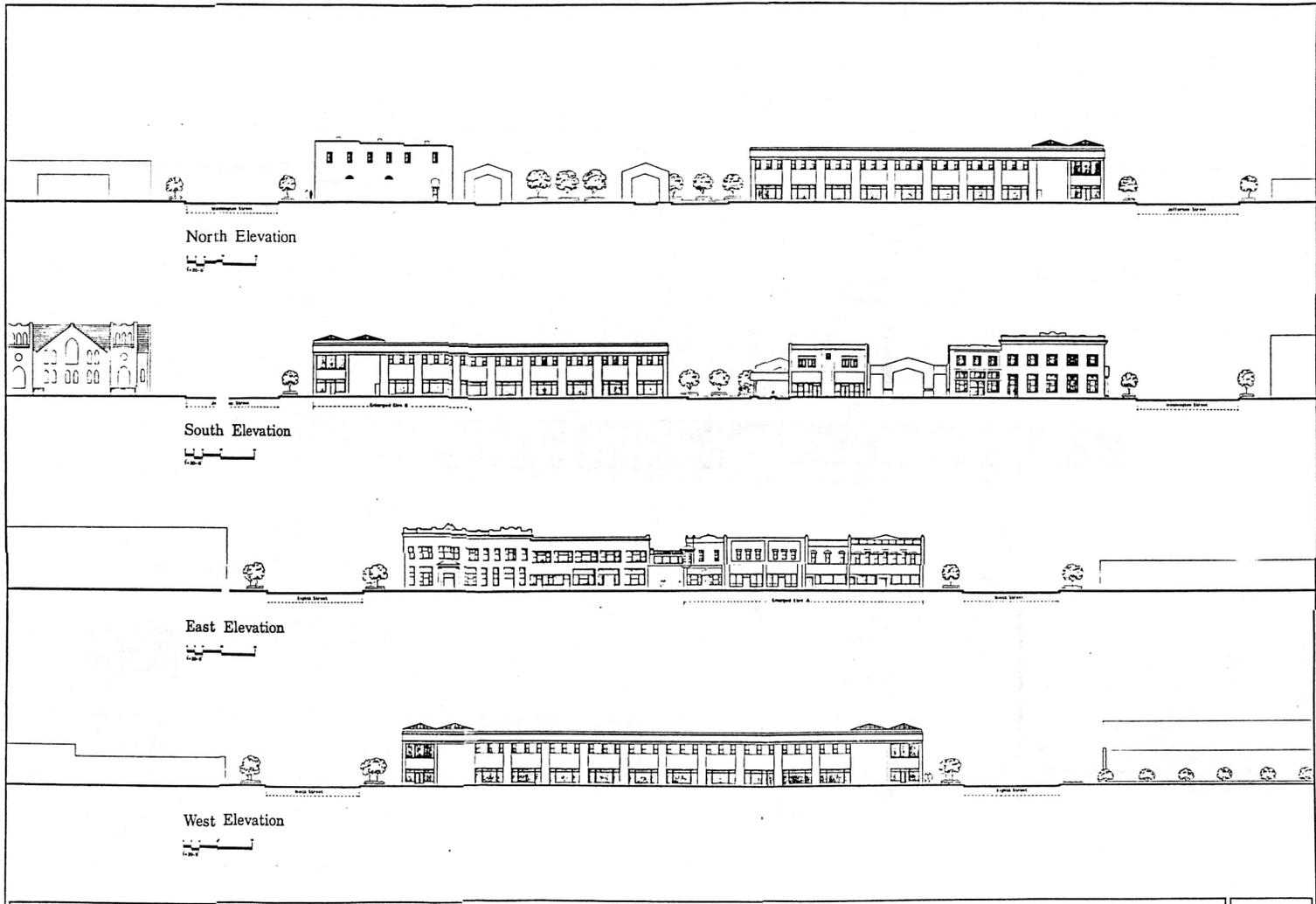


Second Floor Plan



DOWNTOWN COMMERCIAL DEVELOPMENT  
 JUNCTION CITY, KANSAS

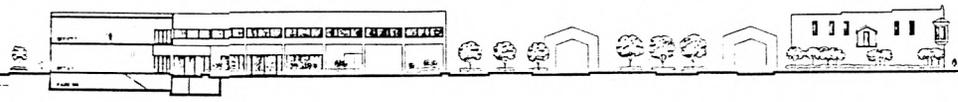
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 BY  
 EJAZ AHMAD



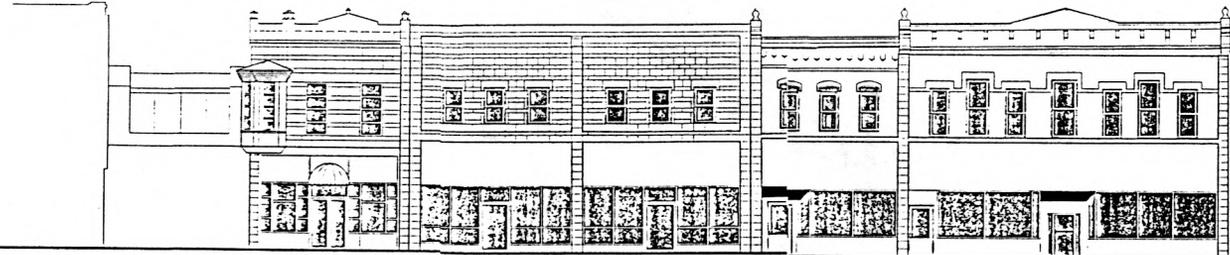
**DOWNTOWN COMMERCIAL DEVELOPMENT**  
**JUNCTION CITY, KANSAS**

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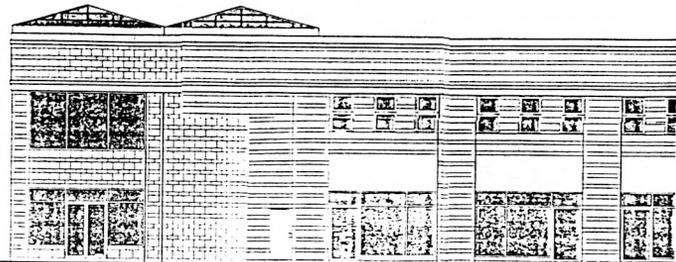
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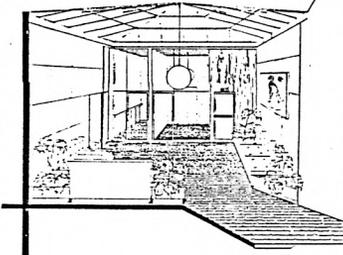
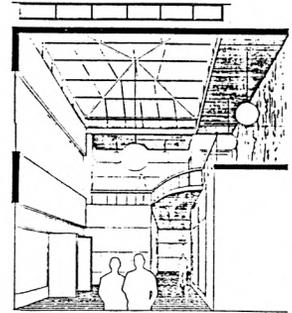
Section A.A



Enlarged Elevation - A

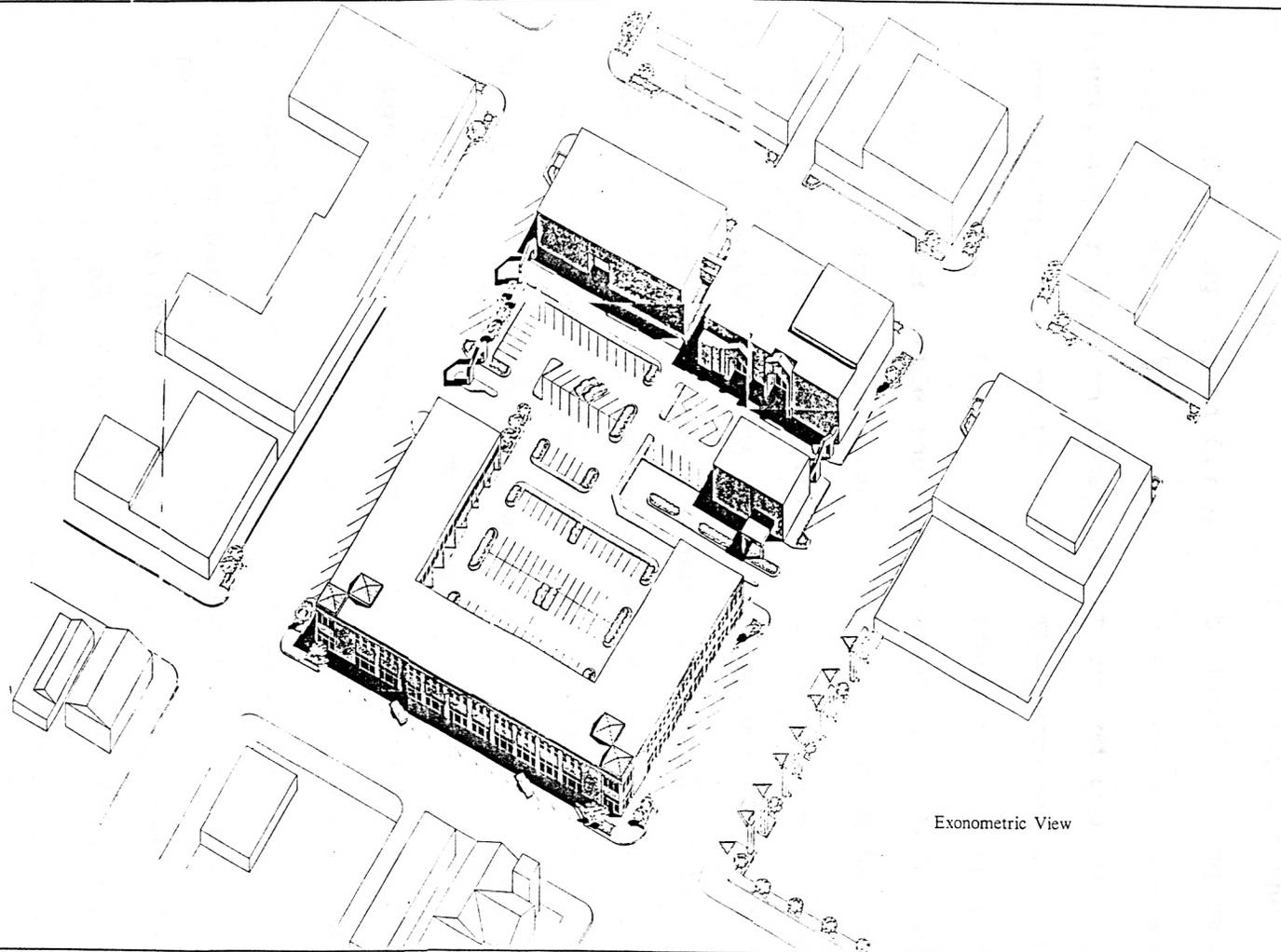


Enlarged Elevation - P



DOWNTOWN COMMERCIAL DEVELOPMENT  
 JUNCTION CITY, KANSAS

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Axonometric View

DOWNTOWN COMMERCIAL DEVELOPMENT  
JUNCTION CITY, KANSAS

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BY  
ELIZ AVENIO

## DESIGN STATEMENT

Part of the proposed commercial development is proposed on the old parking lot and part on the land acquired after demolishing abandoned and little used structures on the site. Those buildings facing to Washington Street and the stone buildings facing Eighth Street with their parking facilities on the block are to be saved, as these buildings are already in-use, are in good physical condition and represent the stone heritage of Junction City. The proposed building structure makes a U-shaped design covering the full block width on the West side and less than half of the block length on North and south sides of the site. Housing two different types of commercial activities, the first floor is designed for retail establishments while the second floor is for the office business activities. Building services for both commercial activities are provided in the design. For the shoppers, the retail spaces can be approached from street level at Eighth, Jefferson, and Ninth Streets, equally as they are approachable from inside of the block connected through a semi-covered shopping arcade running across the front of retail floor. The two corners of the building are given special consideration in design by making them a point of interest both for shoppers and office workers/visitors by providing a sky-roofed general lobby area, restrooms, an office lobby, and sitting spaces. The office lobby with passenger elevators connects to the basement and the second

floor. The enclosed public sitting area, connecting the general lobby and the office area provide direct views of either the inside (retail parking) and or the outside (street life) of the block.

The basement floor houses storage facilities for individual retail spaces located on the first floor, services the first floor with elevators running between that floor and the basement floor. For the manual transportation of goods and supplies from basement to first floor either from storage areas or directly from the service elevators, staircases are provided at several locations. These staircases serve the first floor at selected locations in the proposed design.

The parking provided for each commercial group is separated one from another. All required office parking is provided in the basement without inter-mixing either with spaces, or entrances and exits of the surface parking on the site which is provided exclusively for the retail establishments. The circulation of automobiles seeking access to the retail parking is laid out in such a way that it should not hinder or interrupt the circulation of existing parking on the site.

The proposed accesses for vehicular traffic (generating from the major streets surrounding the block) to the site is mainly from Eighth and Ninth Streets. Apart from the already existing entry and exit-ways from the Eighth Street providing for the existing parking on the site, the retail parking has

an entrance and exit from Ninth Street. Also, there are two other entries from the Ninth Street. The first one is for the automobiles for office parking in the basement while the other (common entry and exit pathway) is exclusively for the small trucks and delivery vehicles bringing supplies and goods to the retail and office establishments.

The pedestrian circulation, non-conflicting with automobiles circulation on the site, is encouraged by introducing walkways from Washington, Eighth and Ninth Streets. These walkways lead to the shopping arcade running in front of retail spaces inside the site. Landscape material is also introduced inside the retail parking lot as well as along the proposed and existing building peripheries in order to generate a soothing and appealing environment for the customer, workers, and visitors.

## EVALUATION & CONCLUSION

The final evaluating committee consisted of Professor Ray Weisenburger, Professor Bernd Foerster and Professor Donald Watts agreed with the proposed overall building configuration, design of different building segments, their inter-relationship, circulation and parking, etc. However, on the issue of some minor design problems, the committee had the following comments:

- \* The sitting area (connected to office lobby) provided on both floors, should be more coherent and compact in its design, seating arrangements, etc., instead of the seemingly scattered seating arrangements.
- \* The travelling distance for a visitor from certain points in the basement to a particular office on the second floor was found to be more than would be desirable.
- \* The entry and exit gateways to the retail parking needed to be revised in terms of mass, bulk, shape, and width with regard to the overall design development of the block, building facades, material, etc.

### Conclusion

Project successfully shows that a block in an existing city can be redesigned to bring more activities, pedestrians and shoppers to the urban core of a small city. The density of developments, will be increased, however, it will be

managed by the careful integration of land uses, facilities, etc., in the design.

It must be noted that redesign and redevelopment, when preserving existing buildings and activity patterns in a community often results in a less than perfect plan. In the Junction City example historic buildings with contemporary remodeling had to be included in the proposed site design causing some important design principles to be compromised.

**Street life and activities support:**

The success or failure of a commercial project in a downtown locality is very much depend on the nature of street life of the area. Street life of downtown Junction City is based on a number of uses and commercial activities along busy downtown arterials; Washington Street (the busiest one) being one of them. This street life is heavily supported by pedestrian and automobile movement. To encourage pedestrian movements from Washington Street onto Eighth and Ninth Streets, the site planning and configuration of proposed buildings is intend to bring more and more pedestrian as well as automotive traffic inside and around the site for the promotion of businesses activities and the street life. This kind of effort not only can help in improving the quality of business environment on the site but also, this effort collectively can help in improving the overall quality of the businesses in downtown area.

**Building form and massing:**

Configuration and appearance of any proposed building on an in-fill site in a downtown area has to justify its design appropriateness with regard to existing old and contemporarily remodel buildings on or around the site. In case of the proposed downtown development, the linear U-shaped building is using not only valued land on the periphery of the site, but also saving spaces inside the site for other purposes such as parking, pedestrian movements, planting materials etc. In addition, the uniformity in proposed building form and massing which relates to other old existing building structures on the site assists in maintaining the overall form, bulk, massing character of the buildings on the site and the buildings in the downtown area

#### **Parking:**

The parking element plays very crucial role in the survival of downtown commercial activities. Failure to recognize the importance of providing adequate parking areas for a proposed development can result in failure of downtown activities. The parking spaces provided on site for the proposed development are currently sufficient. However, addition of business floors in future on the site would require more parking spaces on some other locations in the downtown area.

#### **Landscaping and streetscape:**

Most of the downtown area is properly landscaped with planters, trees, shrubs, etc. However, some of the minor

arterials in downtown area are still lacking in sufficient landscaped materials; included in this are some of the arterials bordering the site. In this connection, the existing street cavities are the immediate results of insufficient landscape materials such as trees, plants, shrubs, etc., along the arterials which has resulted in poor landscaping of the area. These street cavities could be removed by the use of plants and other landscape materials. Other than that, the lack of well scaled street lights, public seating spaces and other street furniture give an impression of an incomplete streetscape. The landscaping of proposed commercial development inside the site and the existing parking lot across the street south of the site is assisting in reducing the image of street cavities by providing landscaped surroundings for viewers. However, there is always need for further improvement in the quality of landscaped areas for the proposed development as well as in areas immediately surrounding the site.

In general, Junction City is well maintained city with a number of attractive elements. The purpose of this thesis has been to show how a deliberate effort to improve upon the existing conditions can be made in a single block while respecting and preserving major elements of the city's architectural heritage.

#### ENDNOTES

1. william, Harold S. "Smallness and the Small Town," Small Town (Vol. 8, No. 4, October 1977), P. 12
2. Simon, William and Gagnon, John H., "The decline and Fall of the Small towns," Translation (Vol.4, No. 5, April 1967), P. 51
3. Swanson, Bert E., Cohen, Richard A., and Swanson, Edith P., "Small Town and small towners," Vol. 79, Sage Publication, Inc., London, P. 17-23
4. Jacobs, Jane., "The Death and Life of Great American Cities," (New York: Random House, 1961), P.165
5. Neil, Tom., Director of Engineering, City Engineering Office, Junction City, KS., "To built on alley is not allowed according to local development authority by-laws. However, in special cases, depending on geniune design need, it is possible to built on alley after getting permission from City Commission Office. Example of this kind of construction is the Junior High School, Junction City, Ks., at 9th and adams."

## BIBLIOGRAPHY

- Bucher, willis & Ratliff., "Junction City and Geary County, Ks. Comprehensive Plan Revised June 1981.
- Bucher, Willis & Ratliff., "Junction City, Kansas zoning regulation" Revised oct 12, 1988.
- Gosling, David & Maitland, Barry., "Design and Planning of Retail systems," Witney Library of Design., N.Y. 1976.
- Economic Development Commision, Junction city, Geary County, "Junction City Geary county, Kansas at a Glance," "Engineering Newws Record", August 23, 1984.
- Ernst, Gene F. AIA., "Architectural Standard Handbook,- Junction city, Ks," B.L. Bassler & schnackenberg, Manhattan, Ks.
- Chang, Huan-Seng., "The site planning of a planned unit development for a selected site in Junction city, Ks," a master's thesis, Kansas state University., 1977.
- Sheets, John L. PE., "Central Business district revitalization Study, Junction City, Ks., 1983," Reinhold Associates, Manhattan, Kansas., 1983.
- Mckeever, J. Ross., Griffin, Nathaniel M. & Sprink, Frank H., Jr., "Shopping center development Handbook," ULI-the Urban Land Institute, washington, D.C. 1978.
- Jacobs, Jane., "The Life and Death of Great American cities," New york: Random House, 1961, p.165.
- Pipnen, Kenneth H., "Office Space Administration," McGraw-Hill Book Company, N.Y., 1974

- Lynch, Kevin., "A Theory of good city form," Cambridge, Miss. MIT Press., 1981.
- Schmertz, Mildred F., AIA., "Office Building design," an Architectural Record Book, 1975.
- Saphier, Michael., "Planning the New Office," Mac Graw-Hill Book Company, 1978.
- Providence City Plan Commission, Providence Preservation Society and the Development of housing and Urban development, "College hill (a demonstration study of historic area renewal)," College Hill Press, 1967
- Craycroft, Robert., "Revitalizing Main Street," Center for Small Town Research and Design, School of Architecture, Mississippi State University., 1982.
- Shirvani, Hamid., "The Urban Design Process", Van Nostrand Reinhold., N.Y., 1985.
- Dane, Suzanne G., Gilsson, Linda S., and Wagner, Richard., "Guiding design on Main Street", c. 1988 National trust for historical Preservation, 1785 Mass. ave, N.W., Washington D.C. 20036.
- "Uniform building codes," International Conference of Building Officials, 5360 South Workman Mill Road, Whittier California 90601., 1988.
- simon, William and Gagnon, John H., "The Decline and Fall of the small Towns," Translation, Vol.4, No. 5, April 1967.

**APPENDICES**

**APPENDIX-A**

As a part of research for this thesis, several community leaders and officials were interviewed. These interviews are summarized in the following pages.

**Q: From a regional perspective, how can Junction City's growth and vitality be described ?**

**A: Blaine Hines, City Manager, City Commission office Junction City, Ks.**

Junction City has an important location within the region due to the proximity of Fort Riley and easy traffic routes from other nearby small towns and big cities. People of Junction City depend largely on the existing business facilities of the city and do not consider it as a sleeping town. The community people and those from nearby small farming towns still depend on the retail business of the downtown and strip commercial developments for daily use merchandise. They have the feeling that Junction City in the future should have more and comprehensive business establishments. The city government's future plan of bringing small scale industries in the downtown of Junction City (depending on the feasibility study) is one step towards the stability and future growth of the business of downtown. Although at city government scale no specific future housing schemes are planned, the private developers are planning for housing schemes for the next ten to fifteen years.

**Q: Describe the issue of revitalization of downtown with reference to general vitality of Junction City.**

The revitalization of Junction City downtown is important mainly for the promotion of commerce within the region.

The stability of downtown as a comprehensive business center of Junction City will hopefully fulfil the current and future business demands people in the community as well as the people of the nearby areas. Through revitalization, the more services provided in the downtown, the more it will encourage people to invest money in the establishment of new businesses, which will help in stabilizing city economy through an increase in tax revenues such as property tax, income tax, etc.

**Q: Mr. Tom Lally, City Manager, City Attorney Office, Junction City, Ks.**

My view is also based on many of those points already mentioned by Mr Blaine Hines. In addition to those points, I would like to compare the business organization of downtown and strip commercial developments. The existing strip commercial developments should not be encouraged over commercial setup of the central business district. This is because the growth of strip commercial developments is mostly associated with the problems of space limitations, disruption of residential areas and parking difficulties. Therefore, any consideration of future physical growth of the city in terms of its housing and transportation, enhances the importance of downtown as the only suitable area of business activities which should be improved and extended according to the business demand of the city and the region.

## INTERVIEWS

Following are the information gathered through different interviews for specifying the nature of proposed physical development on the block of the study.

**Name:** Blaine Hinds

**Position:** City manager, Junction City, Ks.

**Date of interview:** March 20, 1989.

**Mr. Blaine Hinds made the following statement:**

1. Specific key uses.

Retail establishments are in demand. A grocery store may also be proposed on the selected block of study. Further office spaces are not recommended as there are already sufficient office spaces in the downtown of Junction City.

2. Economic aspects.

Community people can rent spaces in new structures up to a cost of \$4 to \$5/sq.ft. If the price goes up, then the people would prefer to rent cheap spaces already available in old structures. In that respect, a new commercial structure might be a failure.

**Name:** Tom Lally

**Position:** Assistant City Manager, Junction City, Ks.

**Date of interview:** March 23, 1989.

**Mr Tom Lally made the following statement:**

1. Specific key uses and leasable spaces.

Retail establishments can be proposed on the block with stores having a variety of merchandise. Office spaces can also be proposed. Open office spaces are recommended as they can easily be partitioned and rented out according to the rental capacity of the different income group of people.

**Name:** Mrs. Sheri Kinnett

**Position:** Vice President of West Side Shopping Center Association, Junction City, Ks.

**Date of interview:** March 24, 1989.

**Mrs. Sheri Kinnett made the following statement:**

1. Specific key uses.

Retail establishments are in demand and can be proposed on the block. In this connection, the idea of putting a small shopping mall with variety of shops, may not be out of question.

**Name:** Mr. William Kelly.

**Position:** Chair, County Commission, Junction City & Geary County.

**Date of interview:** March 26, 1989.

**Mr William Kelly made the following statement:**

1. Specific key uses and leasable spaces.

Large drug store, department store and some specialty shops of women's clothing are needed. For retail establishments, stores of small business floor area are preferred over large floors because they can easily be rented out according to the rental capacity of different income groups of people. For giving customers better choice of merchandise, it is suggested that all retail establishments, whenever possible, should be close to each other and under one roof. Further office spaces should not be proposed as there are already enough office spaces in the downtown of Junction City, Ks.

**Name:** Mr. Larry Froschheuser

**Position:** Director, Economic Development Commission, Junction City & Geary County.

**Date of interview:** April 9th 1989.

**Mr Larry Froschheuser made the following statement:**

1. Specific key uses and leasable spaces.

Retail establishments can be proposed on the block of study in a form of anchor stores, i.e., different kinds of shops under one roof. A grocery store also can be added with higher standard of services compared to the three already existing grocery stores in town. Putting office spaces would be more appropriate than retail establishments. Recent trends have shown that in future years downtown would be

occupied more with office businesses than retail establishments.

1. Economic aspects.

Current per sq.ft. charges for leasable commercial space in downtown junction City is \$3 to \$3.50. If the per sq. ft rental value in a structure goes beyond that figure, there are still chances of survival of some of the retail establishments such as exclusive jewelry stores, special garment stores, etc. In that respect, a project will not be total failure. Provision of ample parking is very important for the success of both retail and office establishment and has to be and/or within the site premises. Also, it is important to be aware that underground or upper floor parking is always expensive and would not pay-off because of the low land value in Junction City.

**Name:** Mr. Tom Rolfs.

**Position:** Acting President, Central National Bank which owns most of the block.

**Date of interview:** April 28, 1989.

**Mr. Ed J. Rolfs made the following statements:**

1. Specific key uses and leasable spaces.

Existing bank building and a couple of those adjoining old structures facing to Washington Street are to be saved for renovation and extension of existing bank (Central National Bank) services as well as transfer of Economic

Development Commission offices in these structures. In addition to that, other existing structures (other than Firestone and Cable T.V. buildings) can be torn down.

According to Mr. Rolf, the intention is to put a small retail center on the block with surface parking facilities around it. I would not suggest putting office floors above retail center or on the site as a whole.

## 2. Economic aspects

Rent for leasable commercial spaces in Junction City is roughly about \$6 per sq. ft.

I am not very optimistic about business market for new structures on the block. Therefore, according to my point of view, it is better (without taking risk) to renovate existing old structures and rent them out.

**APPENDIX-B**

## CASE STUDIES

### FANEUIL HALL MARKETPLACE, BOSTON, Massachusetts.

#### Resorted and transformed in a successful downtown center.

The raw material of Boston's Faneuil Hall Marketplace are three 535 foot long and 60 foot wide granite buildings designed by architect Alexander Parris and built in 1826. The buildings housed the city's wholesale food industry for more than 130 years. Today, Faneuil Hall Marketplace - a collection of new shops, restaurants, and offices in the old buildings - is Boston's main street; day and night the commercial and social center of the downtown. It all started when the Boston Redevelopment Authority (BRA) began acquiring the property in 1963, and architect Benjamin Thompson & Associates of Cambridge, Mass. first proposed a plan to recycle the buildings in 1966. A \$ 2,000,000 grant for development was received from the Department of Housing and Urban Development (HUD) in 1969, and exterior renovation was started in 1972. The Rouse Co. was designated project developer in 1973.

The Quincy Market's three floors feature food - food in restaurants, delicatessens, sidewalk cafes, gourmet shops, and meat, poultry, fish, cheese, vegetables and fruit stands. A dome dominates the building inside and out. The six-floors (including the basement) south Market Building has 50 spe-

cialty shops and four restaurants on the lower three floors, plus 80,000 square foot of office spaces on the upper floors.

Following are the main features of Faneuil Hall Marketplace.

- \* Faneuil Hall Marketplace is in city center, surrounded by Bostons' magnificent Government centers, the financial district and the waterfront.
- \* Hard construction costs on Quincy Market and South Market - the first two buildings completed - ranged from \$35 to \$45 a square foot. By comparison, typically budgets are normally \$22 to \$32 a square foot for construction of new regional centers.
- \* Parking was and is an enormous problem at Faneuil Hall Marketplace. Nevertheless, a Rouse Co. (the developers of the project) survey shows that about one-half of the shoppers at the market place drive at least 20 miles into the city and find parking somewhere. Now that is a lot of cars and lot of shoppers.
- \* About 70 percent of the tenants in the market place are ma-and-pa operators, who bring in local traffic to the market places' bigger merchants, like "The Limited", a national women's apparel chain. Eventually, the Marketplace mix has worked.
- \* Addition of glass-enclosed canopies to either side of the Quincy Market, adding 23,000 square foot of

leasable space - a 33 percent increase to the building, is just as important as they give the Marketplace a festive, open-air atmosphere.

- \* In typical shopping centers there are always two or three major tenants to the center which acts as a magnet to the center. In Faneuil Hall Marketplace, each individual retail space was designed to stimulate certain kinds of traffic so that one type of purchase leads to another and for a shopper the whole shopping experience, besides necessity, could be an entertainment.

#### Concluding remarks

The landmark project of Faneuil Hall Marketplace is one of the most ambitious recycling projects ever undertaken. According to the project developer, Rouse, "The ground rules (for recycling) are not as clear as they are with regional shopping centers. For regional shopping centers, if you got an intersection with a freeway and a local street, and you got two department stores, you are home free."

However, according to my personal understanding about the whole project there are certain ground rules which governed the amazing success of recycling/revitalization experience of Boston's Faneuil Hall Marketplace. Those rules can be applied to any other recycled project or equally to a project of mixed-use development (having small retailing and

office floors with no major department stores) or a project of new in-fill construction in an urban area provided that:

- \* Has a good location. A building, no matter how magnificent, is a bad risk if it is surrounded by urban desolation. For achieving business success it has to have live urban atmosphere in the immediate surrounding.
- \* The architect/developer understands old buildings and retailing. A market retailing area can succeed if architect and developer knows the ways the tenant will be located in the space in its entirety and which would be a magnet. A retailing area can be successful if the architect understands the things that are essential to a market place.

Some other factors are as follows:-

- \* Success of a powerful retailing area has a lot to do with the success of big stores (other than brand name chain stores) and office floors in a mixed-use development. In reverse case, failure of retailing area due to slow sales and increased annual shop turnover rate, can directly or indirectly influence the business of big stores and offices which are benefiting from the shoppers of small retail establishments.
- \* The construction cost for a commercial project (especially in a poor community) also affects the

success or failure of the project. A well thought out and commercially successful recycled, mixed-use, or new in-fill construction, which beautifully answers the needs of a community, would have higher per square foot rental charges. But such a center will be an asset for the community (even for a poor one) for it is the annual per square foot sales that can easily pay off the investments of its tenants in a shorter period than a commercially failed center.

- \* The more the pedestrian oriented center could mean fewer off-street parking and a festive kind of shopping environment. Therefore, a center with maximum parking provided for retail establishments in the immediate surrounding area would have little to do with its failure.

#### **SOUTH STATION TRANSPORTATION CENTER, BOSTON, MASSACHUSETTS.**

##### **A revitalized South Station as transportation hub**

Saved from complete demolition and only being placed on the National Historic Register in 1975, Boston's once grand South Station is to the scene of an unparalleled mixed-use experiment based on "intermodal" transportation. The existing headhouse is only the cornerstone of a package - intricately laced together like a patch quilt, which includes restoration and rehabilitation of the headhouse, a new concourse and a train room, construction of bus terminal and

parking facilities, and the development of air-rights above the bus terminal into office, hotel, and exposition center. As a part of the Northeast Corridor Improvement project the station already has a design history of ten years, and yet-to-be-started construction plan of another ten years scheduled to begin in 1982.

**The first phase: headhouse and tracks**

The first of the three elements in the transportation package is the realignment of tracks, and restoration of the pivotal headhouse. Architects Skidmore, Owings & Merrill (Washington, D.C. office) and engineers DeLeuw, Cather/Parsons have designed the tracks to be shifted to the west and lengthened to have a logical relationship to the concourse, which in turn will be reoriented to open directly onto Dewey Square. Also designed is a new grand, open concourse and mezzanine for tenant and retail space. Their work also includes the exterior restoration of the headhouse, the only remaining part of the 1898 train station. Restoration will include its significant aspects: two story granite base with three large arches at the entrance; upper three stories along the curve treated as a colonnade with 16 Ionic order columns. A five story west wing will be rebuilt, the original having been torn down for commuter parking; this wing will be filled with stores and shops.

## The second phase: the bus terminal

Second of the three key elements of the package is the bus terminal. The architects, Collaborative, Inc./Howard Needles Tammen and Bergendoff, are responsible for designing a new structure that would provide bus staging areas and necessary auxiliary facilities, yet linked to the headhouse. This provides five separate entrances along prominent Atlantic Avenue for bus lobby, and lobbies for future air-rights buildings (office tower, hotel and exposition center), and parking garage. This terminal relates to the headhouse in a functional manner but maintains its own visual identity.

Control of vehicular circulation is critical to accommodate increased car and bus activity in the neighborhood, and a mix of traditional devices are used to rearrange traffic pattern. A dog-bone-shaped island along Atlantic Avenue permits indentations at each entrance and a secondary loop road for pedestrian pickup drop-off zones. Two helices lead to upper level parking, and an intricate ramp system separates auto traffic from a maze of bus lanes at the southern end.

The two bus operations levels are , of necessity, elevated above the train tracks. A sky-lighted interior rotunda acts as main circulation spine between the ticketing and baggage facilities and bus boarding areas. Commuter and inter-city parks are segregated and traditionally designed,

with drive-through/islands for commuter buses, and diagonal parking lanes for inter-city buses.

**The third phase: future "air-rights"**

The third element of the package is the future air-rights development. The most up-to-date feasibility plan presented here, designed by WZMH/Habib, Inc. for their client the Boston Redevelopment Authority, includes a 12 story, 400,000-square foot office building; a 24-story, 600-room convention hotel; and a two story, 250,000-square-foot exposition center. This plan is dependent upon certain programmatic requirements at ground level. The most important of these is the structural load bearing column size and the column placement on the train track level, thus pre-determining building height for the air-rights structures.

**Concluding remarks**

Following are the immediate results that can be derived from the study of South Station Transportation Center.

- \* A mixed-use can be proposed on a site with existing building/s of preservational quality by restoring and functionalizing it in overall design scheme. In other words, restoration, rehabilitation and new construction all together on a single piece of land is quite possible.
- \* A mixed-use can be successful in a downtown location within the broader meanings of mixed-use planning such as;-

- \* Three or four significant revenue-producing uses which in well planned projects are mutually self-supporting.
- \* Significant functional and physical integration of project components (and thus a highly intensive use of land), including uninterrupted pedestrian connections; and
- \* Development in conformance with a coherent plan (which frequently stipulates the type and scale of uses, permitted densities and related items)
- \* Apart from the magnitude of the project, it is a kind of project that the Junction City study deals with; demolition of some buildings, restoration of few, and new in-fill construction.

**ST. LOUIS UNION STATION, ST. LOUIS MISSOURI**

**St.Louis UNION Station is converted to meet new century's need.**

The St. Louis Station, abandoned after railroads lost their dominance of American transportation, is now undergoing a \$ 135-million metamorphosis into a combination hotel and tourist marketplace.

The owner of the revamped station is St. Louis Station Associates, with Oppenheimer Gateway Properties, Inc., as general partner. The 550-room hotel will be managed by Omni International Hotels, Ltd., Atlanta. The 16,000 sq. ft of shops will follow the by-now-familiar pattern of the Rouse

Co.'s "specialty retail" marketplaces (Boston's Faneuil Hall, for example).

Opened in 1894 while railroads were booming, the downtown station was built in the sumptuous style of the times as a grand gateway into the city. Architect Theodore C. Link designed the two-block-long headhouse in "a free treatment of the Romanesque style," opening it up with arches, cladding it in detailed, rough limestone and capping it with turrets and a 230-ft clock tower. The building is heavily ornamented with stained glasses, Venetian mosaic and marble from Africa, Italy, France, Switzerland and the U.S. The headhouse, or the main building, was designed with everything the turn of the century traveller could want: a gentleman's smoking room, a waiting room for ladies exclusively, a "ladies retiring room" and a second-class waiting room. A Grand Hall, roofed by a 65-ft-high barrel vault, was given an ornate treatment of gold leaf, scagliola, stencil work, stained glass and molded plaster relief. Along the back of the headhouse is a narrow "midway," and behind that is an 11.1 acre train shed - the largest of its kind anywhere when it was built. Although the station had much of the luxury of 19th century construction, it had little of the redundancy. Historical structures are usually overdesigned by today's standard. The heavy-timber frame of the headhouse and the roof of the train shed have been extensively reinforced.

Following are the main features of new construction in St. Louis Union Station.

- \* Much of the headhouse or main station building renovation work is to uncover or enhance what is already there in ornamental treatment of the building.
- \* The opulent headhouse will form only a small part of the new complex; however, most of the hotel rooms and retail shops are under construction in new structure under the train shed's expensive truss-arch roof.
- \* Due to low ceiling train shed only 20 to 35 ft of headroom, the buildings under the roof are given a post-tensioned concrete structural system to keep floor-to-floor height down.

#### **Concluding remarks**

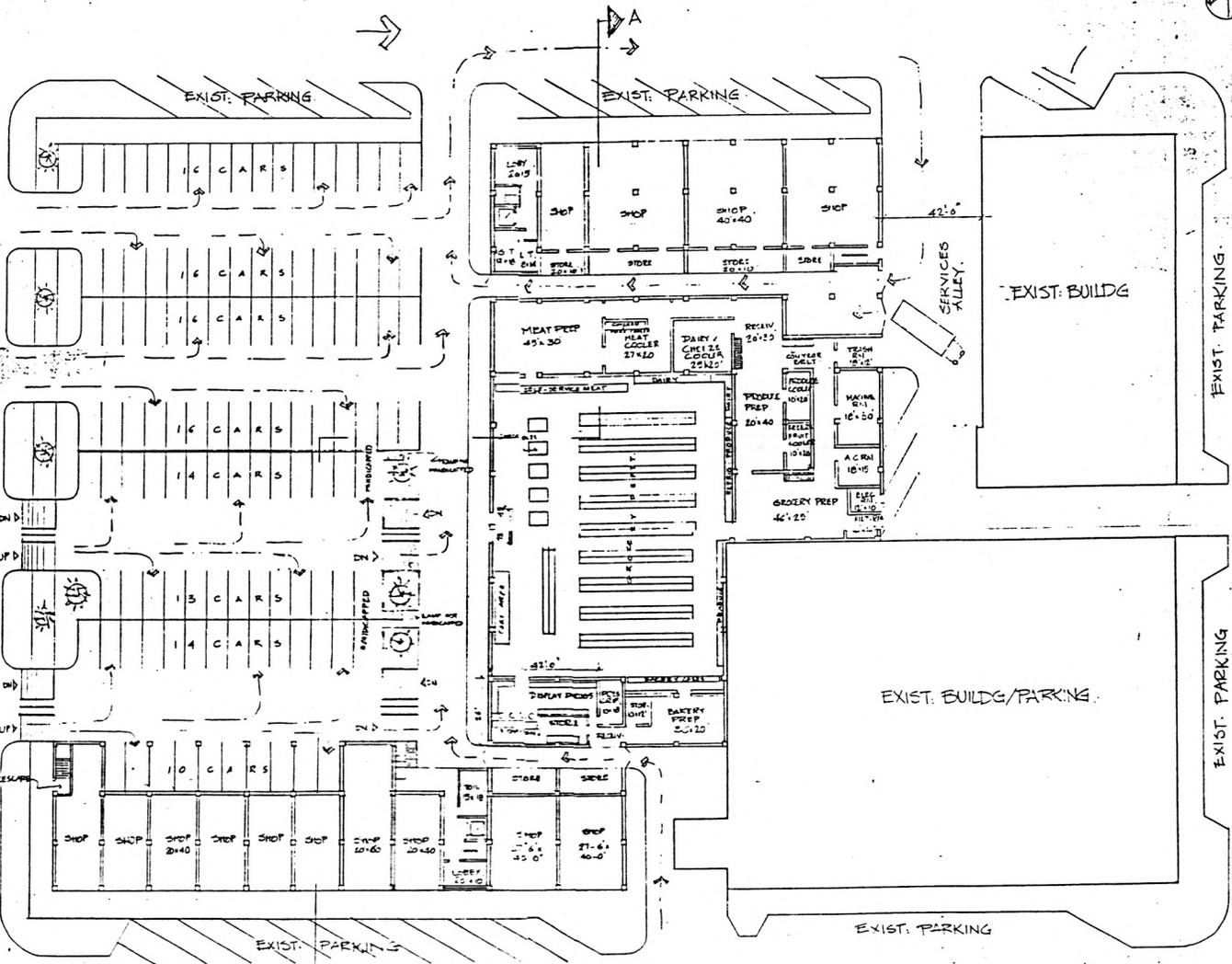
Following are the immediate results that can be derived from the study of St. Louis Union Station:

- \* This is a project of adaptive reuse and restoration, in terms of changing the function and character of old building structure by inserting new structure in it and restoration of the same.
- \* It also is an example of mixed-use development due to proposed mixed-use hotel and retail establishments; proposed under the roof of old train-shed.

- \* It is a unique project where mixed-use establishments (hotel and retail) for new structure are combined under the roof of old structure (trainshed) and main station building to a produce creative shopping and living environment for travelers and tourists.

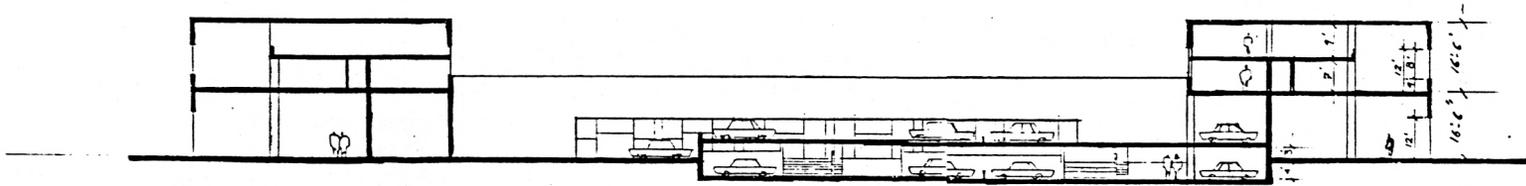
**APPENDIX -C**

9TH STREET

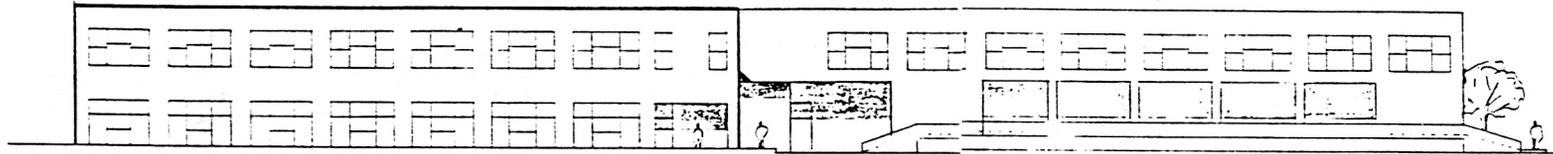


FIRST FLOOR PLAN

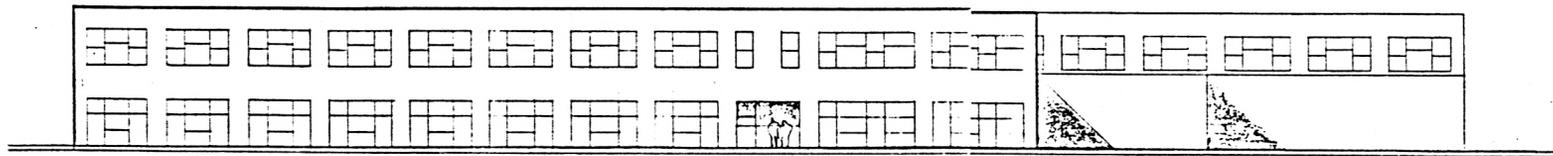




SECTION-AA



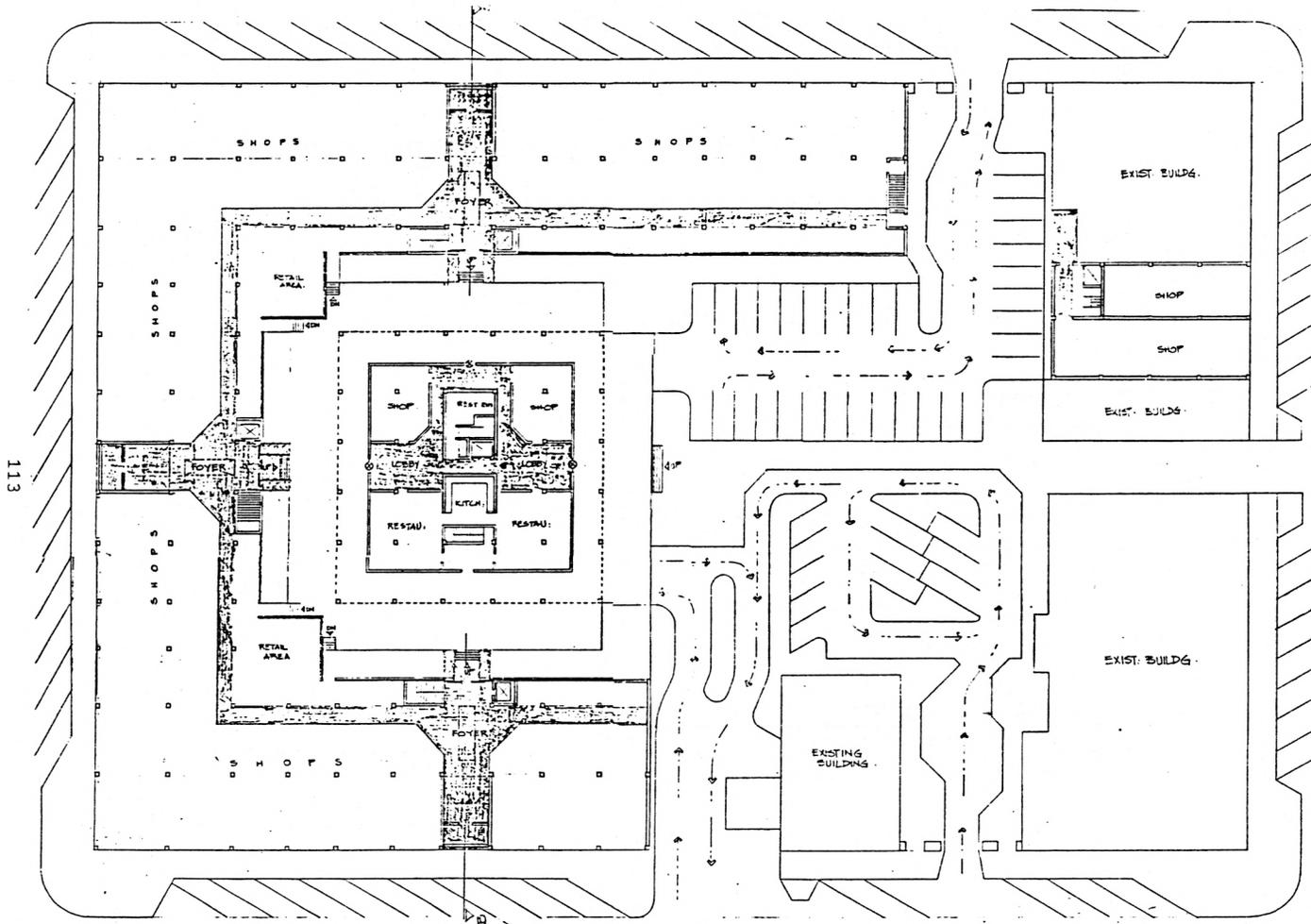
NORTH ELEVATION



SOUTH ELEVATION

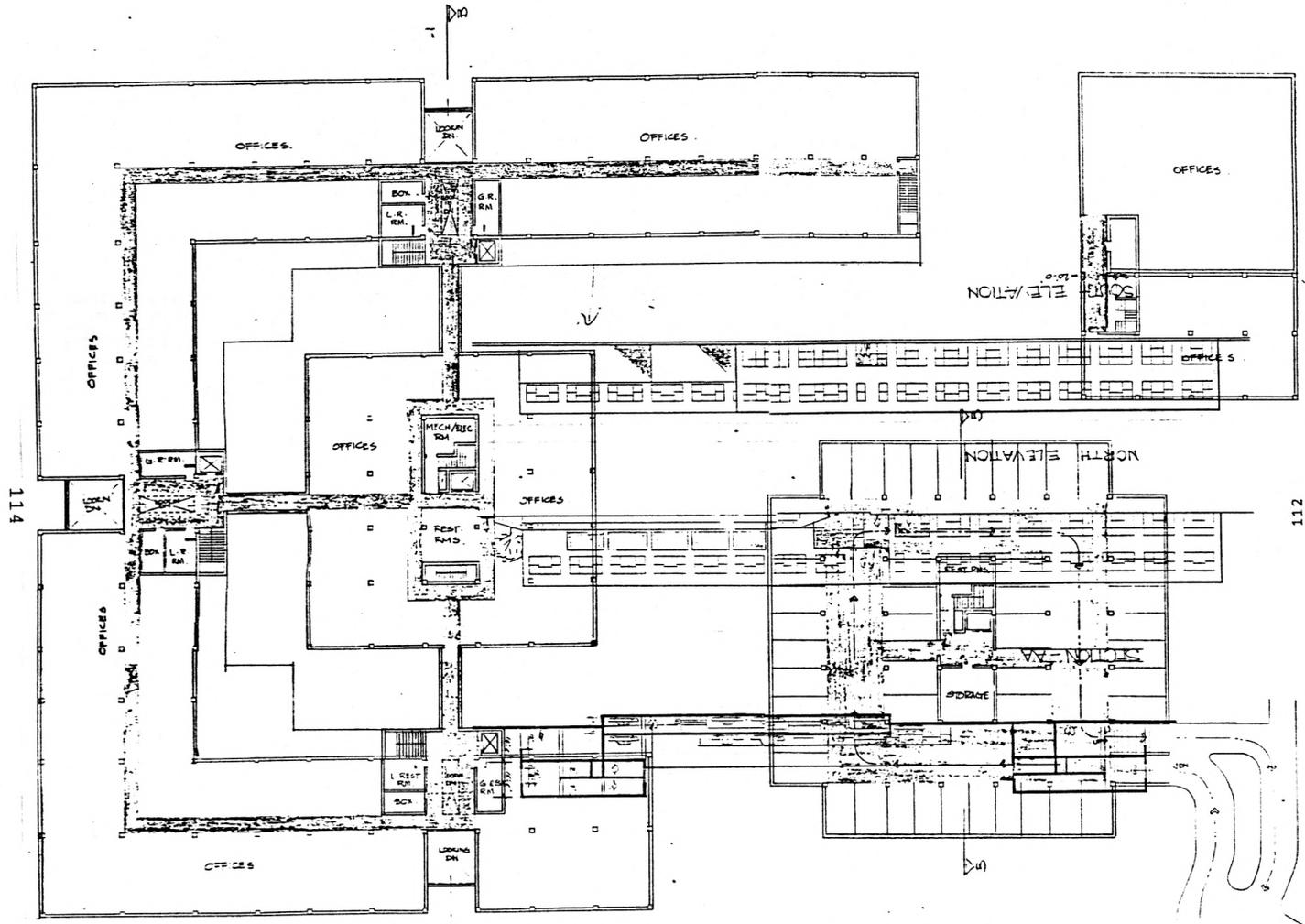
SCALE: 1" = 20'-0"





FIRST FLOOR PLAN  
SCALE 1" = 20'

CONCEPT #1



TYPICAL FLOOR PLAN

GROUND FLOOR PLAN

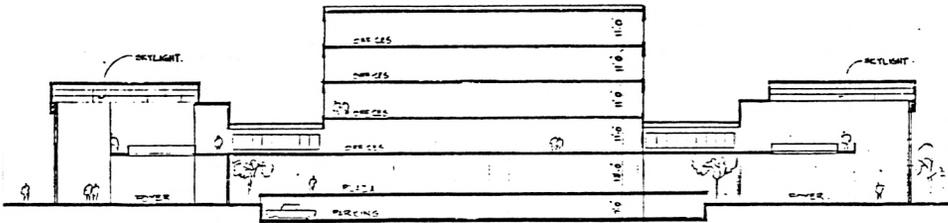
114

112



WEST ELEVATION

115



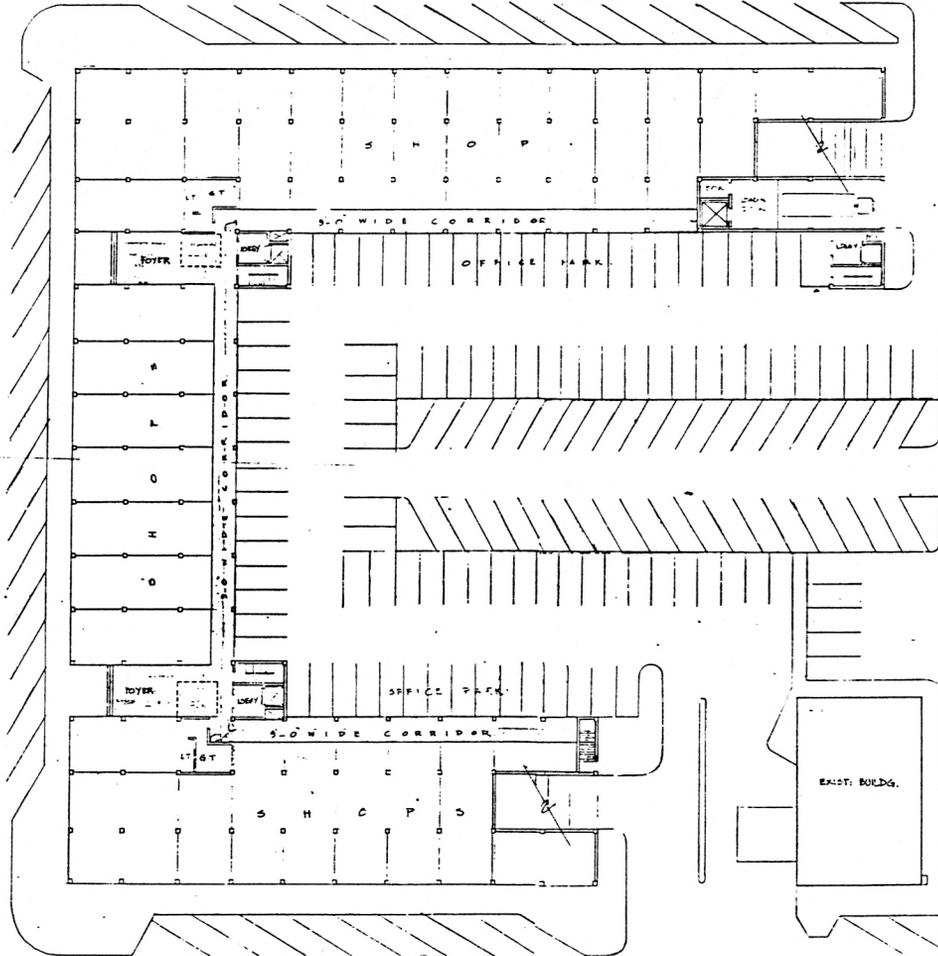
SECTION 33

COVERED AREAS & PARKING

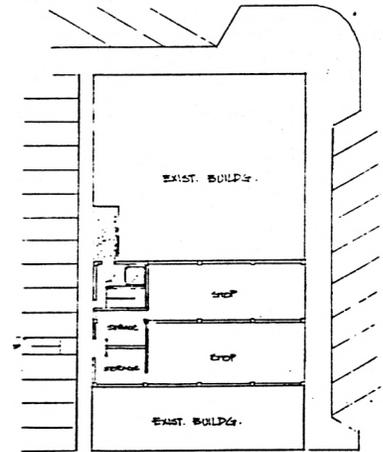
CONCEPT #1

TOTAL COVERED AREA: RETAIL	=	57759 SQ. FT.
TOTAL COVERED AREA: OFFICES	=	82504 SQ. FT.
TOTAL SQ. FT. OF GLA: RETAIL	=	49323 SQ. FT.
TOTAL SQ. FT. OF GLA: OFFICES	=	77592 SQ. FT.
PARKING REQ. FOR RETAIL	=	196 CARS
PROVIDED PARKING FOR RETAIL	=	45 CARS @ 4 CARS/1000
PARKING REQUIRED: OFFICES	=	217 CARS
PARKING PROVIDED: OFFICES	=	71 CARS @ 3 CARS/1000

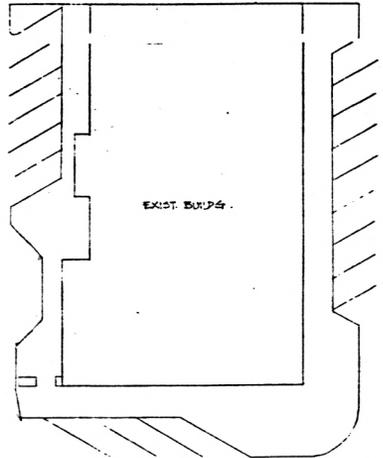
9TH ST



911 JEFFERSON ST.



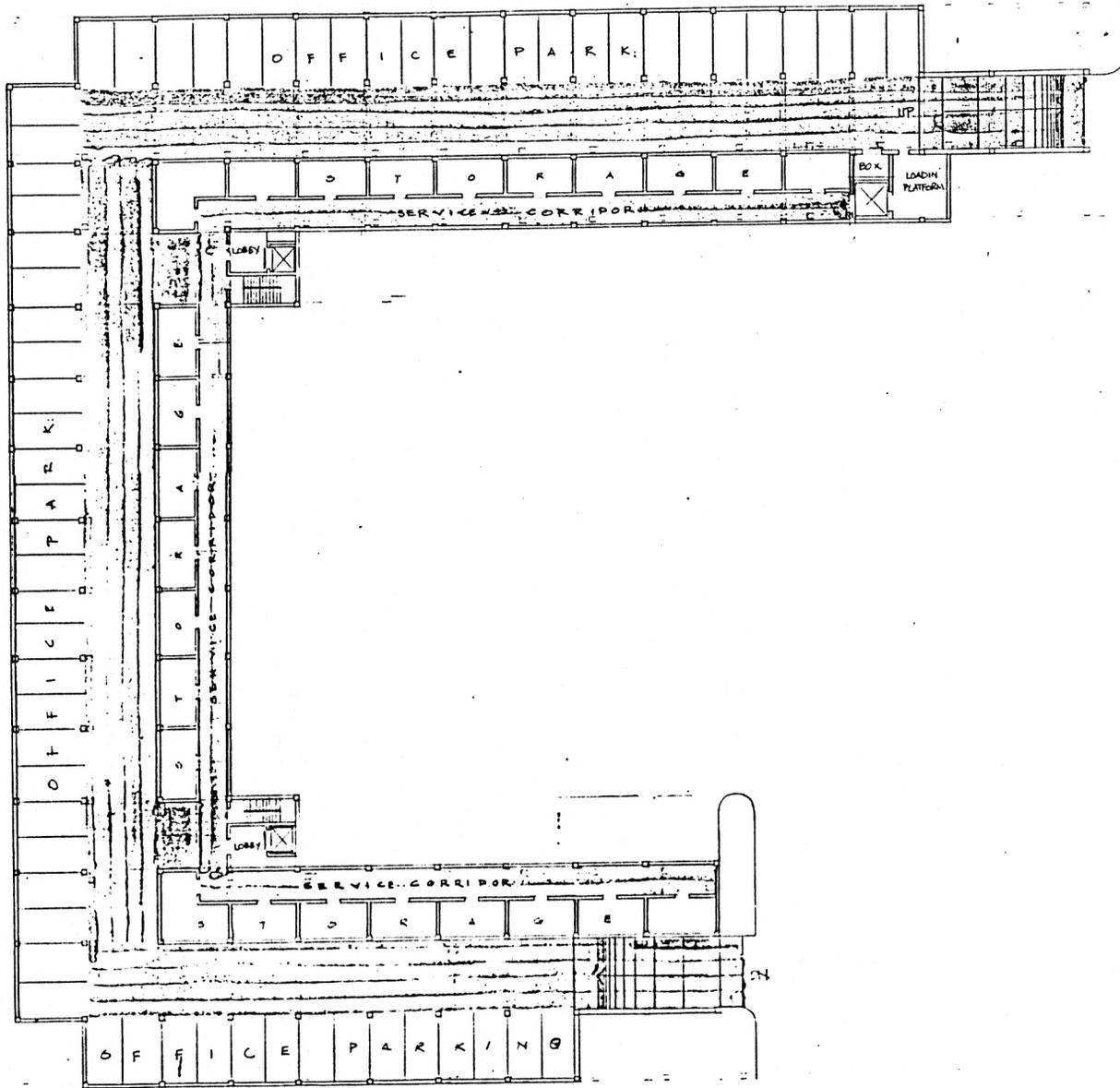
WASHING N ST.



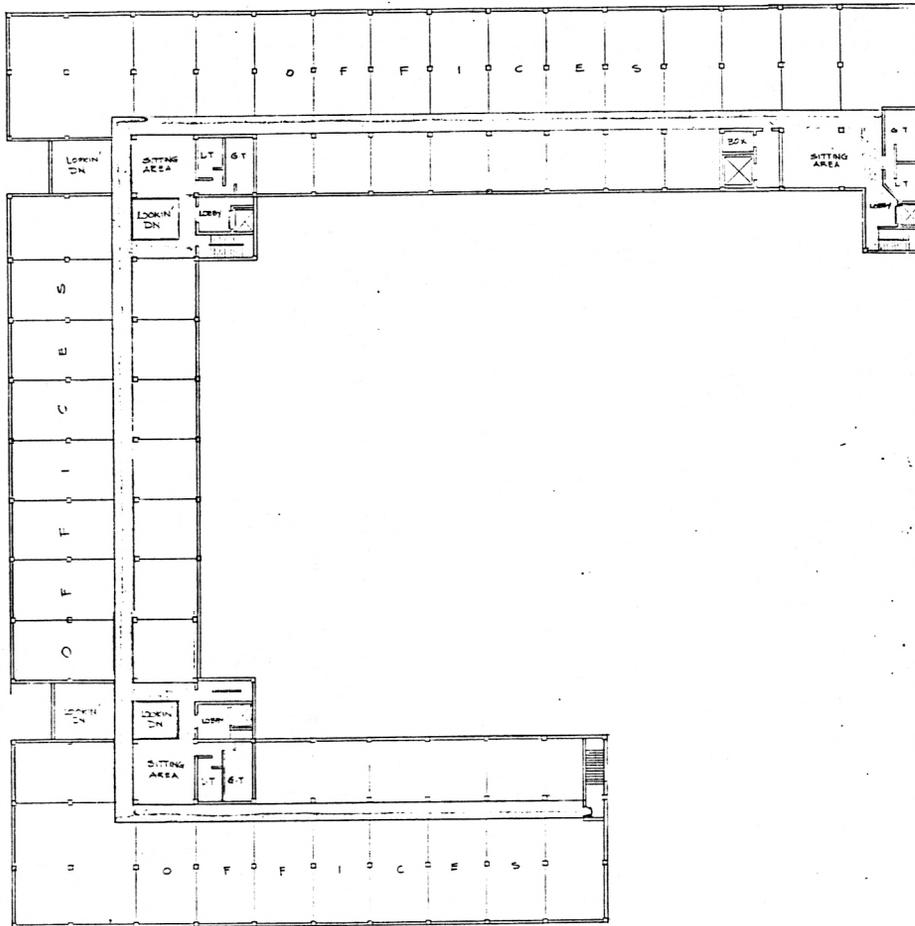
FIRST FLOOR PLAN  
SCALE 1" = 20'-0"

8TH ST

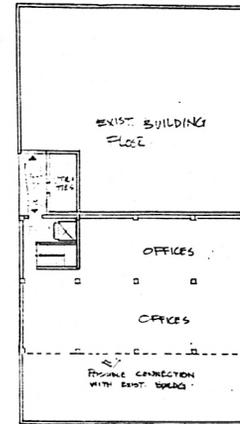




BASEMENT FLOOR PLAN (PARKING)  
 SCALE 1" = 20'-0"



SECOND FLOOR PLAN (OFFICES)



OFFICE PARKING

RETAIL

GLA - BASEMENT = 80000 sq ft

GLA - RETAIL = 33040 sq ft

OFFICES

GLA - OFFICES = 33589 sq ft

PARK REQ. FOR RETAIL @ 1000 sq ft FOR 2 CARS  
= 152 CARS

PARK REQ. FOR OFFICES @ 1000 sq ft FOR 2 CARS  
= 119 CARS

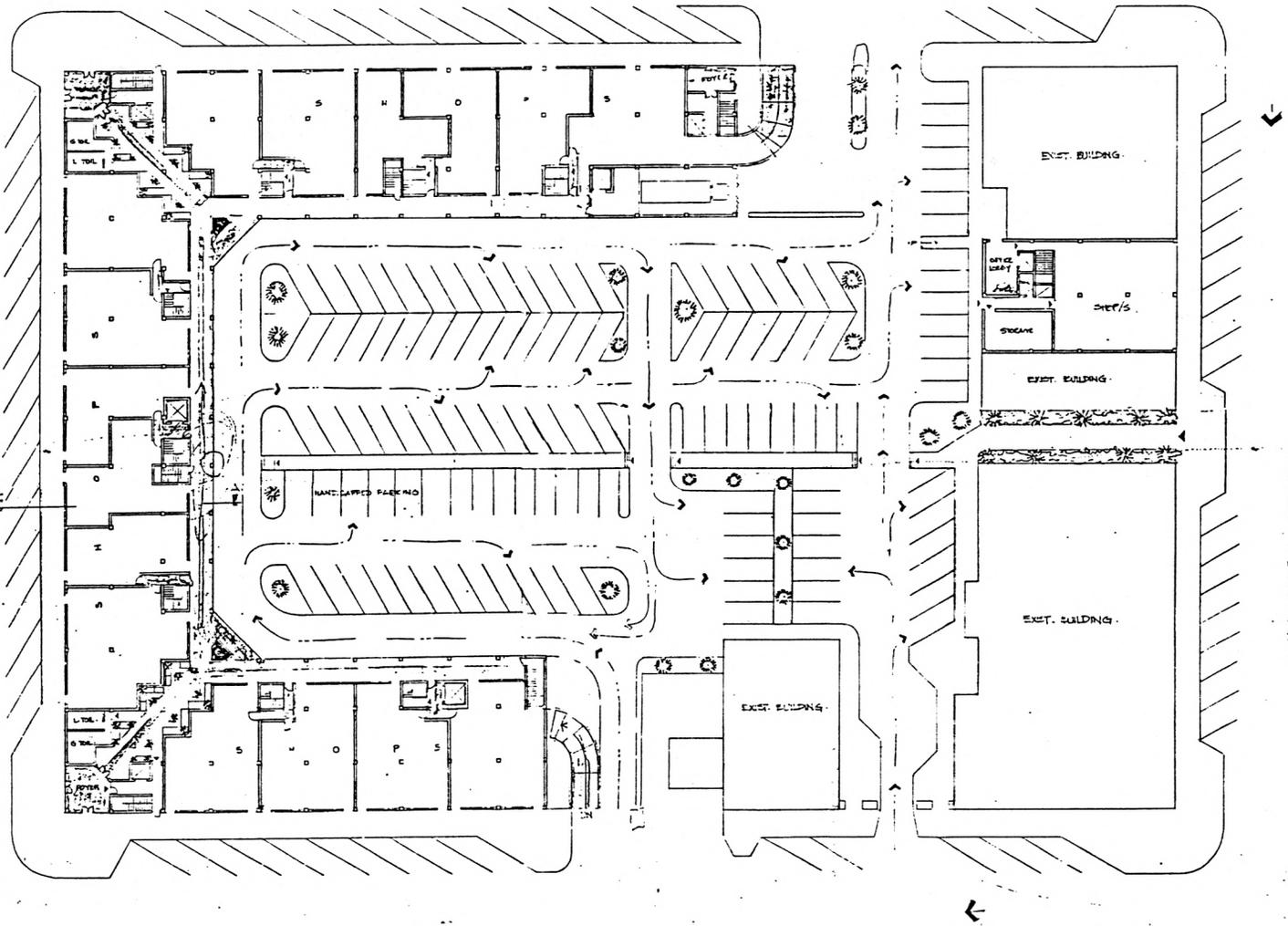
TOTAL PROPOSED PARKING = 271 CARS



9TH STREET



JEFFERSON STREET  
6TH STREET

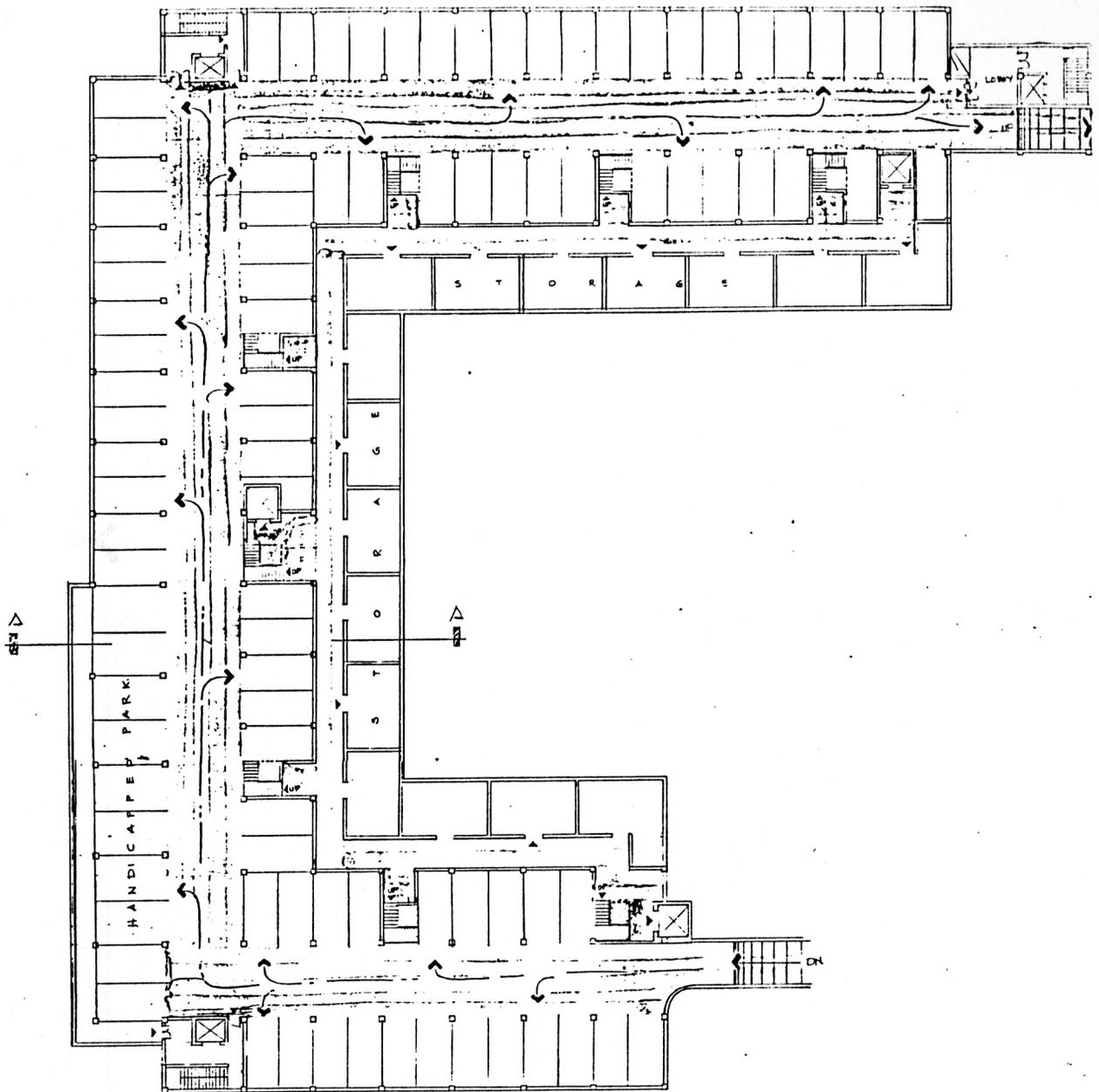


WASHINGTON STREET

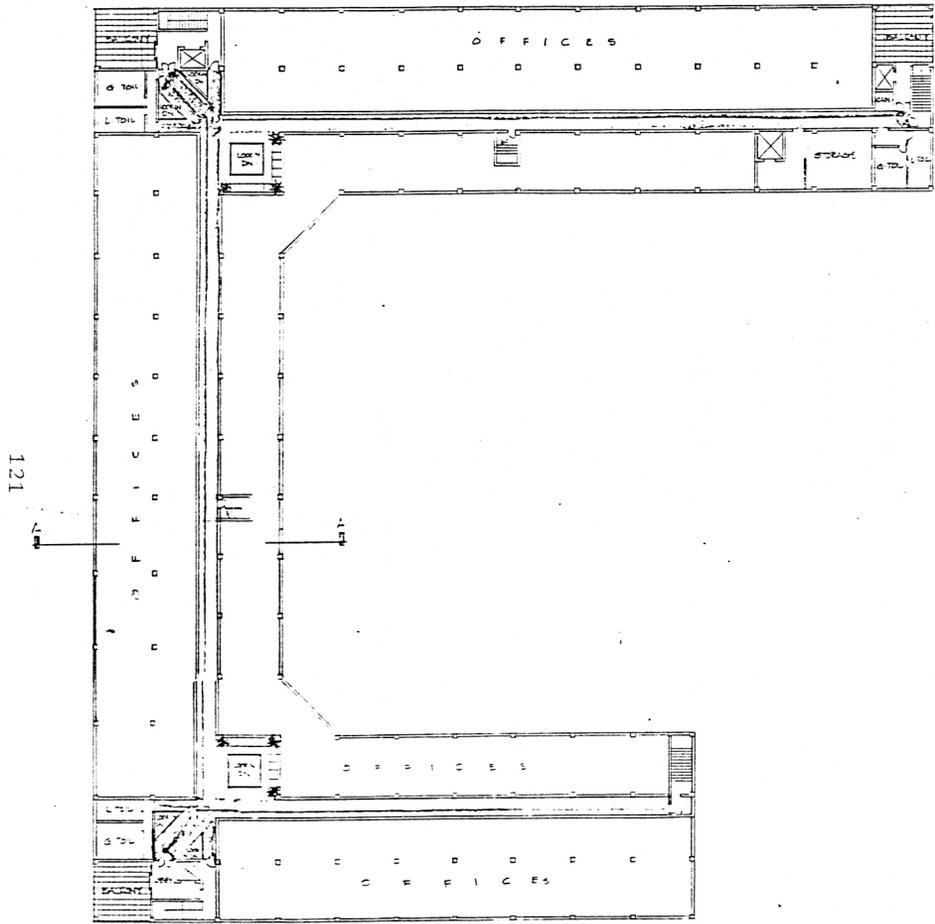


FIRST FLOOR PLAN (SHOPPING)  
SCALE 1" = 40'-0"

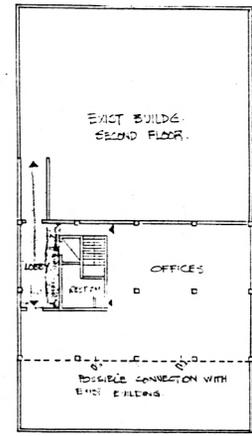
8TH STREET



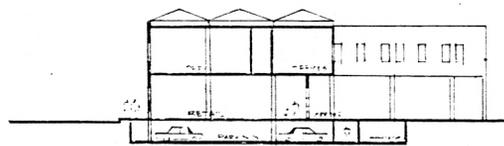
BASEMENT FLOOR PLAN (OFFICES PARKING)  
 SCALE 1" = 20'-0"



SECOND FLOOR (OFFICES)  
SCALE 1/8" = 1'-0"



SECOND FLOOR (OFFICES)



SECTION - AA

**COMMERCIAL DEVELOPMENT FOR A SITE IN DOWNTOWN**

**JUNCTION CITY, KANSAS**

by

**EJAZ AHMAD**

B. Arch. The N.E.D. University of Engineering and  
Technology, Karachi; Pakistan, 1982.

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**AN ABSTRACT OF A MASTER'S THESIS**

submitted in partial fulfillment of the  
requirements for the degree

**MASTER OF ARCHITECTURE**

Department of Architecture

KANSAS STATE UNIVERSITY

Manhattan, Kansas

1990

ABSTRACT

In small towns and cities all over in America, downtowns are in physical, economic, and social decline. External competition and internal problems are causing their centers to die. Today, most small towns are a gaudy collection of metal facades, signs, and neon strips. As small towns are beginning to experience their first real growth in (almost) a century, strip development has become the center of economic activity. The strip can only replace the retail function of the downtown, it cannot replace either its history or symbolic value.

There have been several reasons for the decay of downtowns in small communities. There are also initiatives that can be taken to improve downtown businesses. These include the concentration of activities in the central business district, the upgrading of the physical fabric, and the maximum use of local resources.

Concentration of activities would be enhanced by the reuse of historic buildings and other worthwhile structures in the downtown. Adaptive use should be pursued as a means of preserving or renewing social vitality. The construction of infill on vacant sites could further assist in the revitalization. Providing incentives to businesses to locate downtown would limit strip development and help in shaping the downtown image as a powerful and lively place for commercial, social and cultural activities.

The downtown of Junction City, Kansas, is an important area for shopping, business, cultural and governmental activities, not only for the local residents of Junction City but also for those living in nearby small farming towns and the Fort Riley Military Reservation. Although the CBD and existing strip commercial development have attempted to meet the needs of the people of Junction City and the surrounding areas, the efforts have not been totally successful. The downtown area is lacking in retailing and personal services and thus, does not meet the growing demand of the community. Associated with that is the need for improvement in the quality of business environment and the facilities provided for people.

This thesis deals with the central business district of Junction City, Kansas, and is applying the described strategies for revitalization to a proposal for a single block. The selected site is in the heart of downtown, and currently includes old and new structures as well as open land.

It is the purpose of this study to propose a design that might stimulate improvements in the quality of the business area environment.