

CHEVIOT  
MUNICIPAL  
COMPLEX

CHEVIOT, OHIO

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Thesis 1980 - 1981  
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ABSTRACT

CHEVIOT MUNICIPAL COMPLEX

This project was the design of a new municipal complex for the city of Cheviot, Ohio. The complex consist of the city hall, the police station, and the firehouse. The complex is approximately 65,000 in square feet and is located on a site in the center of the city. It has both some residen-tial and retail and commercial context to relate too. Its estimated cost is around \$6 million dollars. The project would be a valuable asset to the community in that the local government would be able to serve the people better, it would be more accessible, and it would reinstate a sense of pride and community among the people.

## ACKNOWLEDGEMENTS

### CHEVIOT MUNICIPAL COMPLEX

I wish to thank Paul Laseau, Sony Palmer, and especially Bob Koester for their guidance and input for without them this project wouldn't have come about in this form.

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CHEVIOT MUNICIPAL COMPLEX

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**BODY of THESIS**

# SCHEMATIC DESIGN

## Introduction

In forming the design concept for this thesis, the first quarter was used for analyzing the problem, the site, and constructing the program.

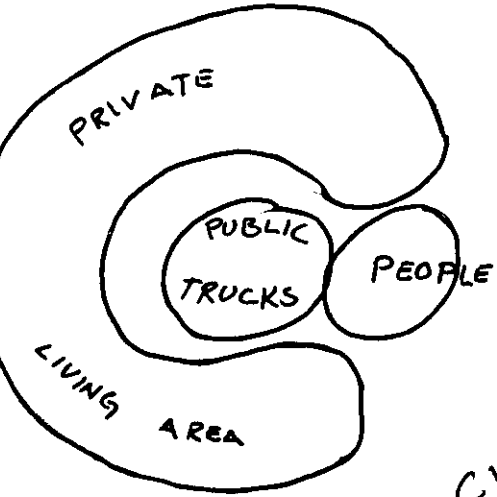
Looking at the program, some design directions or issues were first explored. The program is made up of three separate functions; the firehouse, the police station, and the city hall. Emphasis was put on the role of the citizen and his involvement with his government. It should be on display. It should be accessible, both visually and physically.

In the firestation, the apparatus room is the heart of the operation. It should be open to the public because there is a great amount of interest in the fire equipment. The private spaces want to wrap around the apparatus room. The government wants to "wrap" around the people.

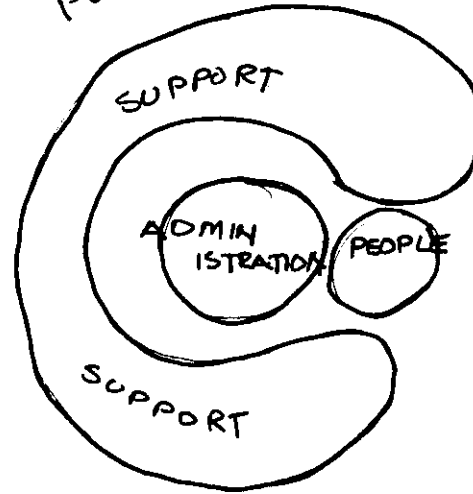
The police station has more of a linear progression from public to private. Paralleling this, is the progression of security from open to closed. These can be wrapped around the people too.



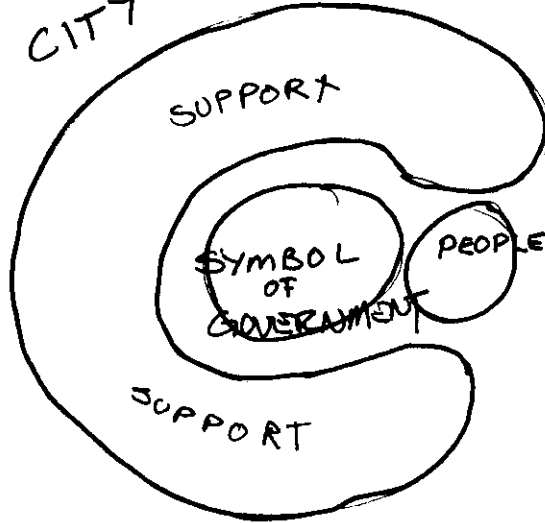
FIRE HOUSE



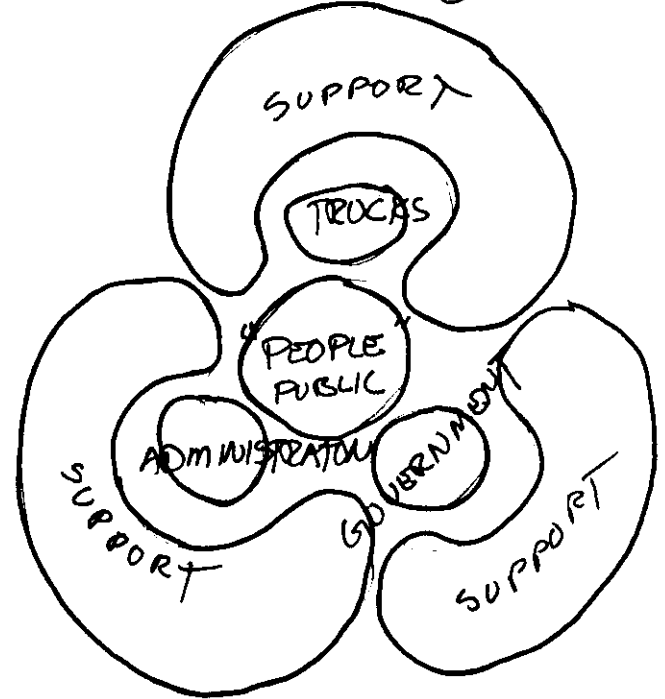
POLICE STATION



CITY HALL



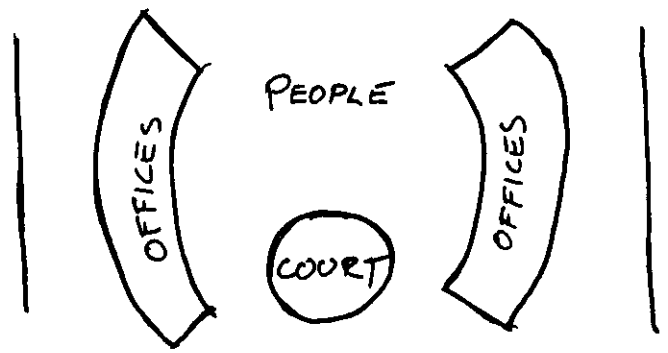
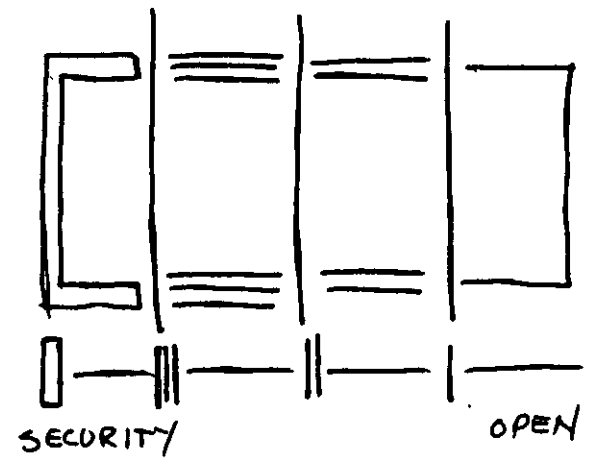
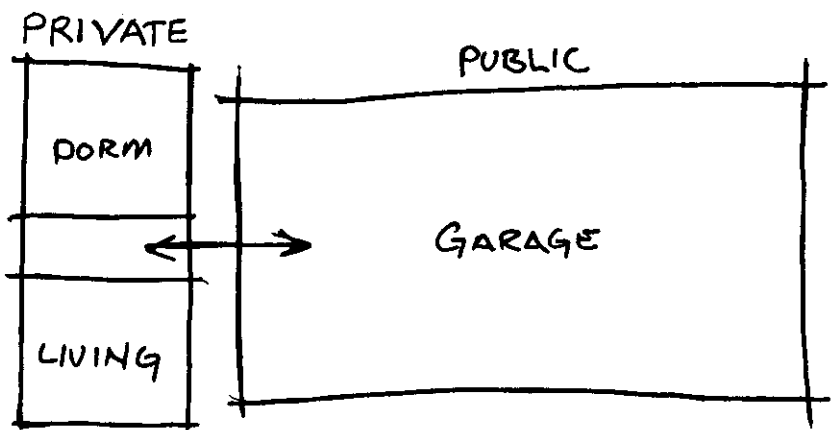
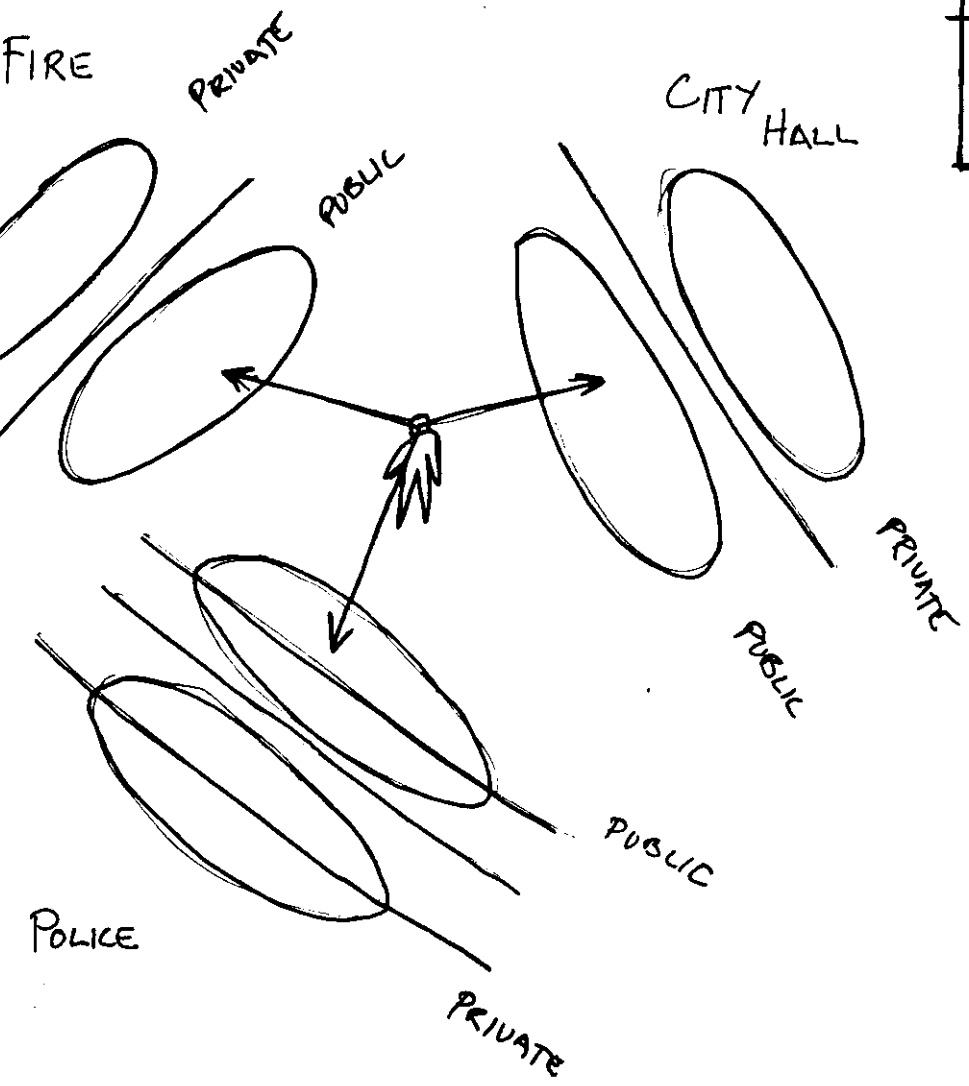
COMBO



The city hall, itself, is an extension of the basic idea of wrapping. This gives access to the individual departments to the citizen. He is made to feel closer to the government.

The site suggests that the concept take into account areas of perception from the passing auto and pedestrian. The corner of Harrison and Glenmore is a major intersection between the city and the site. This is where the most public activity takes place on the site. This intersection acts as the front door for the site.

Research into building types similar to those functions represented here, also reinforce the idea of the government wrapping around the people. The firehouse study indicates that there are two major zones; the living area and the equipment area. The police study showed the progression of tightened security as one penetrated the building. And, the city hall study emphasized the idea of spaces within the building being visible and possibly accessible to the public.

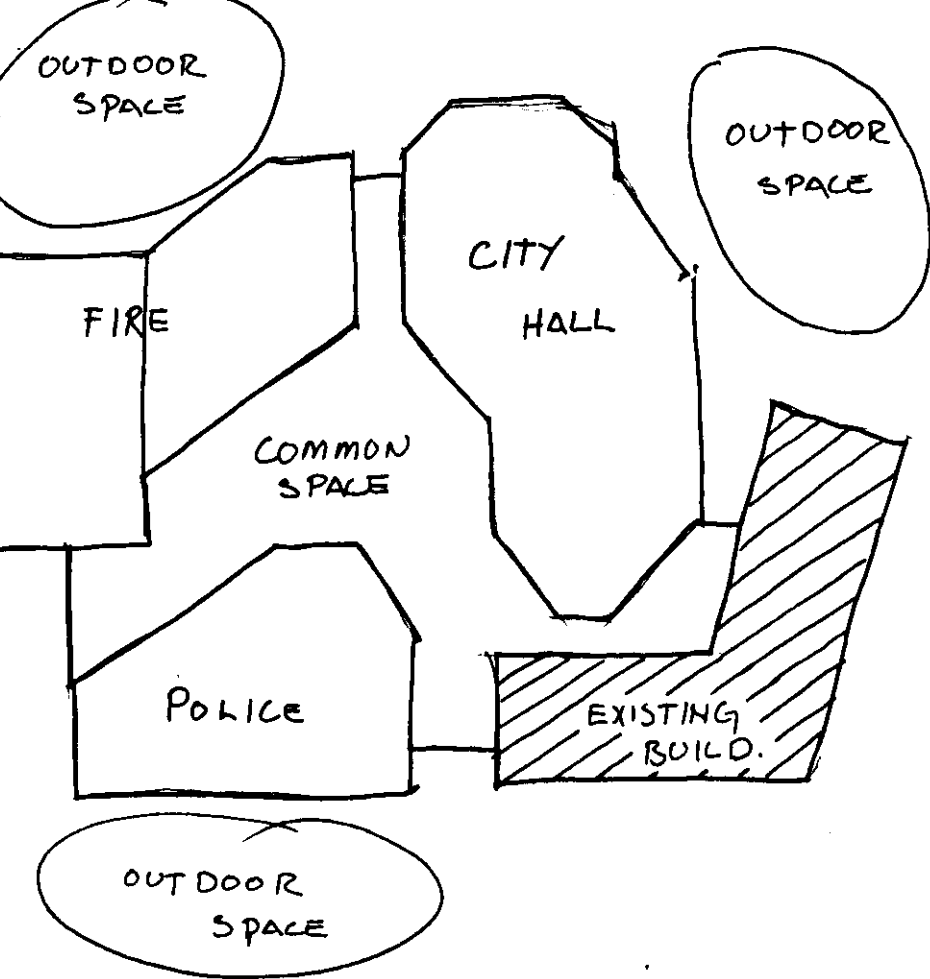


## Design Development

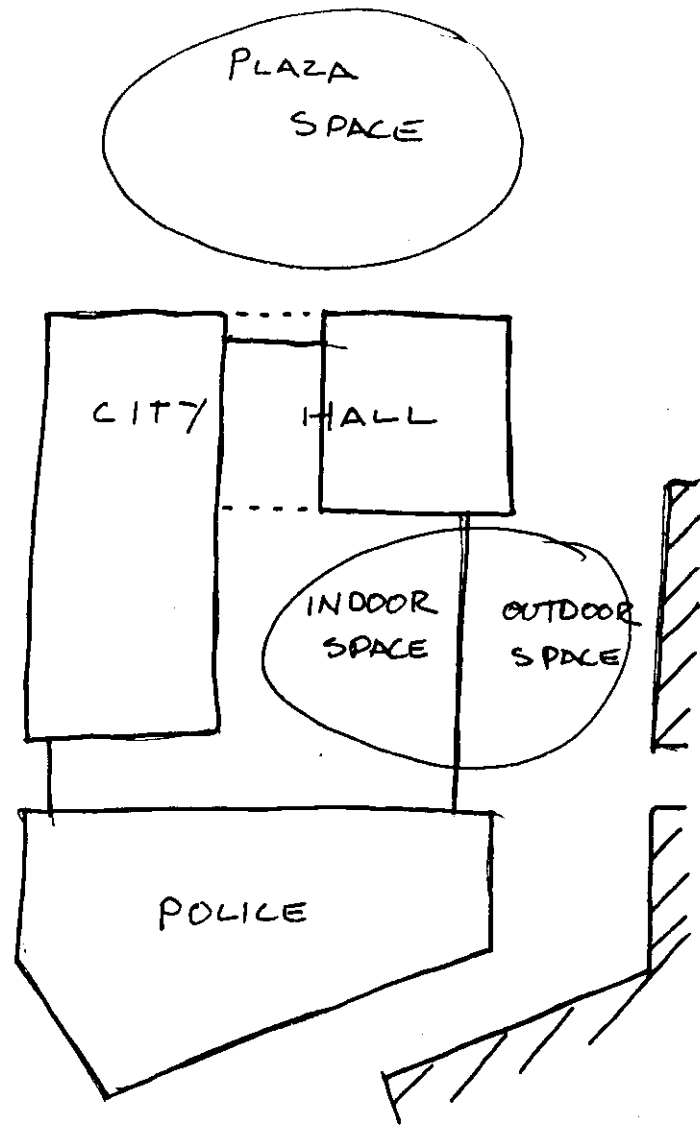
In testing the concept of the government wrapping around the people on a whole and individually by the three functions, the design entered the design development stages.

At first, a literal interpretation was considered. A common space had been thought of as the center of the complex like a bulls eye of a target. The three functions were placed around it giving the wrapping effect. The three functions took into account various items like accessibility for emergency vehicles and existing site geometries for enclosure. It was really inward focusing and neglected some of the good points of previous research, especially in what was happening around the site, both on and off.

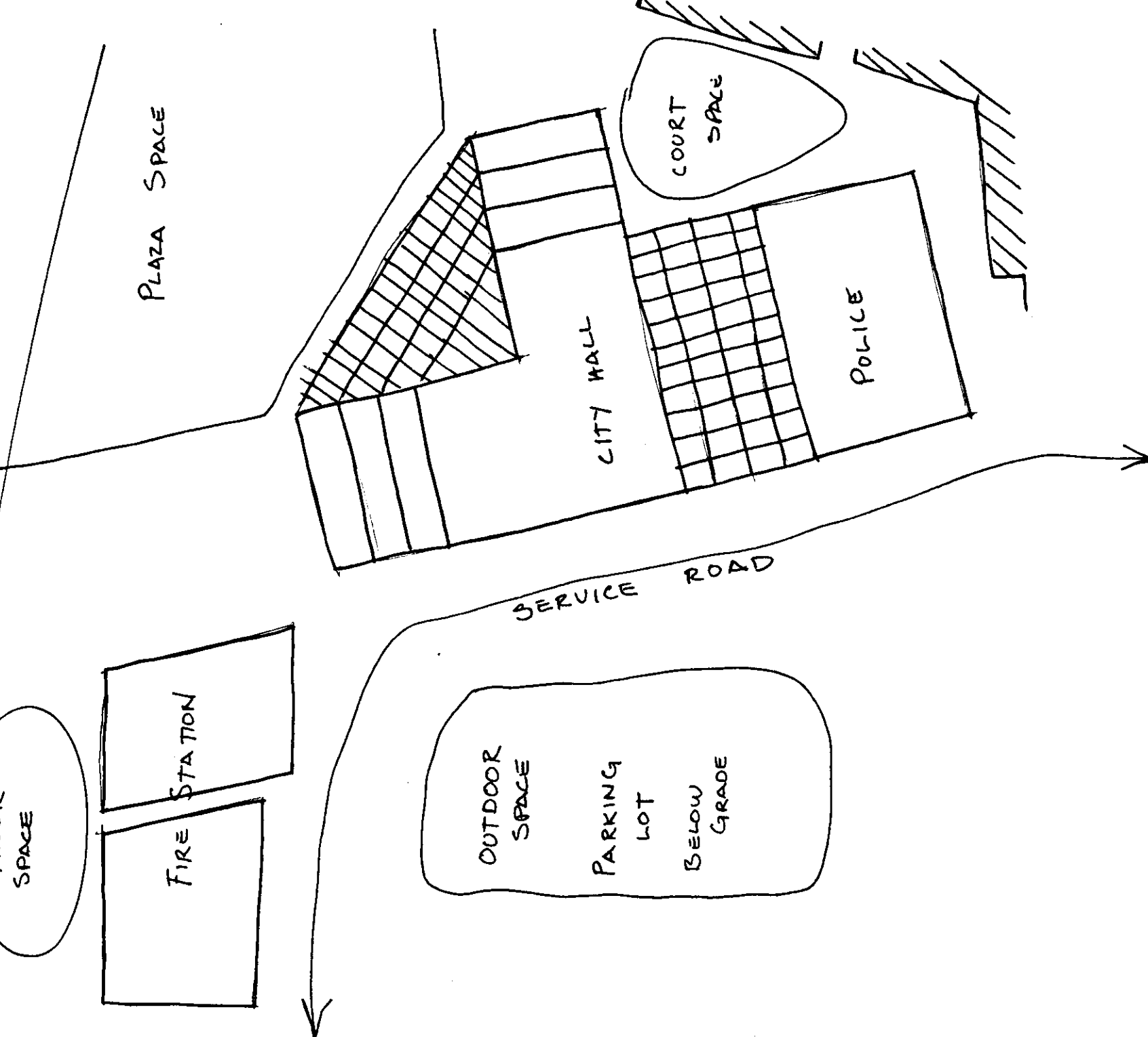
Gradually, the concept test changed the solution until a similar one in idea but responding more favorably to the criteria took shape. Using site geometry and separating the firehouse (because of its differences with the other two functions), the idea of the government wrapping around the people was better reinforced.



FIRE STATION  
REMOVED



The city hall function developed arms that reached out to physically wrap around an atrium space. These arms helped to define exterior spaces as well, unifying the site with the concept. The police station is used in this way too, defining outside areas. It acts as a third arm.



## Conclusion

Over the course of the year, the concept was put to the test and each time it responded by changing to take on good points and throw out bad points. The final design is not complete, but it is a solution that at a point in time had to be taken and refined and presented. There is a lot of time between concept formation and presentation drawings represented in this solution. The schematic design and the design development periods made up most of it. The complex changed quite a bit and all of them were for the better. Not too many compromises had to be made. The final design presented can be considered the best up to this time.



FINAL DESIGN

## Introduction

Cheviot, Ohio is a small city that borders on the Western side of Cincinnati, Ohio. Presently, its city hall, police station, and fire house are located in an undersized facility that was not intended to be used by the local government.

The new complex I proposed and designed accommodates the local government and its activities, providing a unifying force to the other. Some of the problems dealt with in the design include 24-hour occupancy and functioning, nerve center for the protection services, and accessibility of offices.

## Site Information

The site is located on the Southwest corner of Harrison Ave. (U.S. 52) and Glenmore Ave. in Cheviot, Ohio. This intersection is in the heart of a semi-urban area that contains a mixture of retail/commercial and residential context. The corner is a major attraction for the site. It is the front door for people and the cars driving by.

The firehouse garage is angled to set it off from the regularity of the other structures. This angle is complimentary to site geometries and causes a focus to be created in the city hall/police structure. The arms of the city hall reinforces this focus and also helps to define the focused area as the center. The massing of the complex helps to reinforce this too. The highest elevation is over the area being focused on further emphasizing it. The sloped plaza causes the intersection and busy street life to flow down to the building and the atrium provides a transition from outside to inside. It also allows people to see into the government from the outside. The police station behind the city hall terminates the focusing and it helps to define the other outside areas; the court between the new and existing buildings and the space over the below grade parking garage.

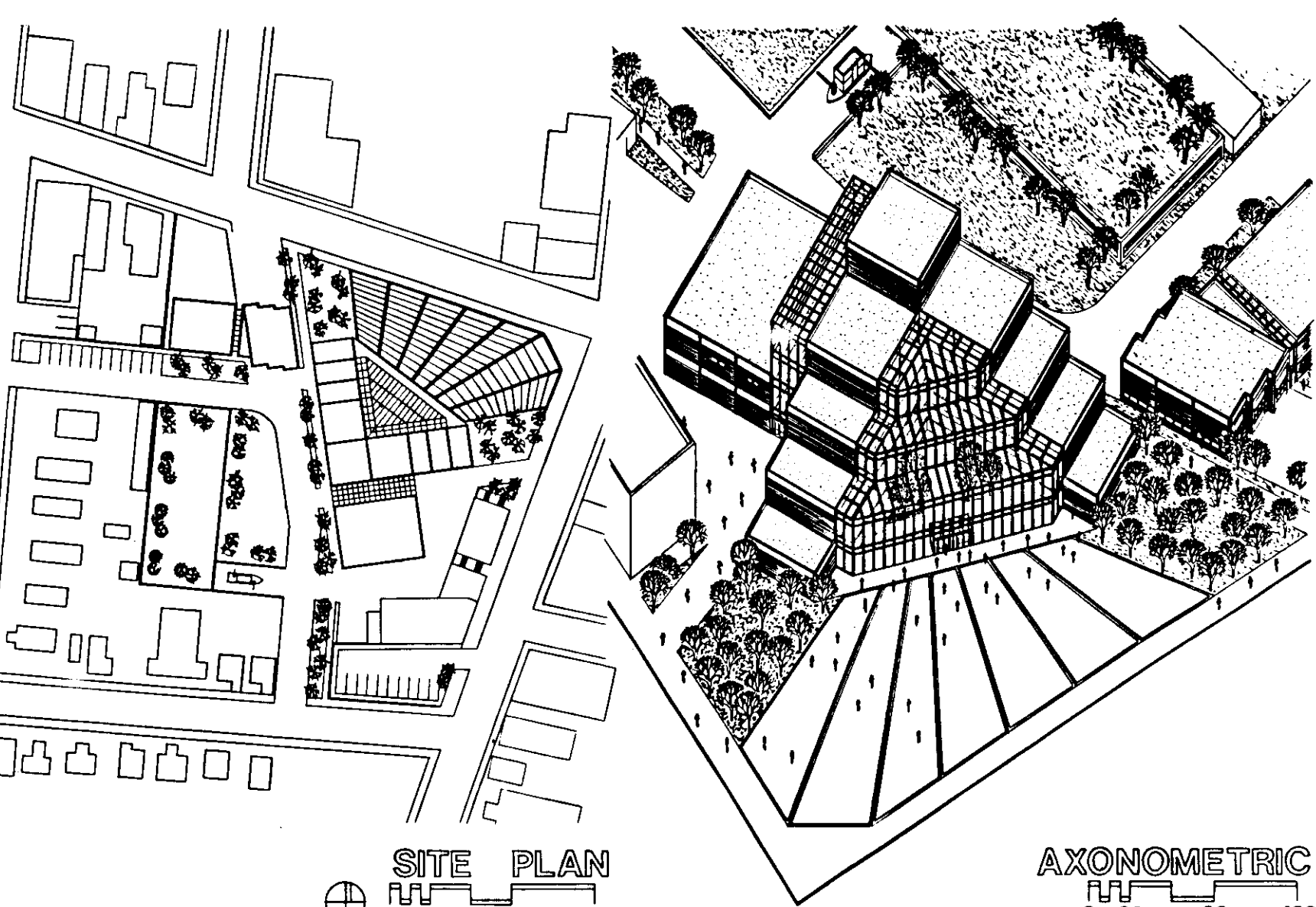
The plaza space is more formal in nature, being big and open and somewhat regular. The court between the new and existing buildings is less formal because of its size and the heights of the surrounding buildings. It is intended to be more of an outdoor shopping type area servicing the rear of the existing buildings. The parking garage is below grade to provide some visual relief. The spaces over it are intended to be open, grassy, treed areas for general enjoyment. It is separated by the service road from the new buildings. This service road is intended to serve both emergency vehicles and the parking garage. There wouldn't be that much interaction between these two because this road is more for returning emergency vehicles to their ready stations and speed is not necessary. The emergency vehicles would be housed off this road. The fire trucks in the apparatus area and the police under the parking lot for the existing bank building. This also provides for a private court area for the police to carry on their duties with some security.

## Program Information

The fire station is a separate building because, by its nature; the men staying for 24 hours at a time, the speed of departing on a run, etc., is more distant from the needs of the other two areas being represented. The first level is the most public consisting of offices, the watch, and the living area for the men. The second level is the more private area with the dormitory, the study, and the bath facilities. The lower level is for a class room/training area and storage spaces. An open hall connects the living quarters to the garage in an attempt to develop similarities that were used in the other building.

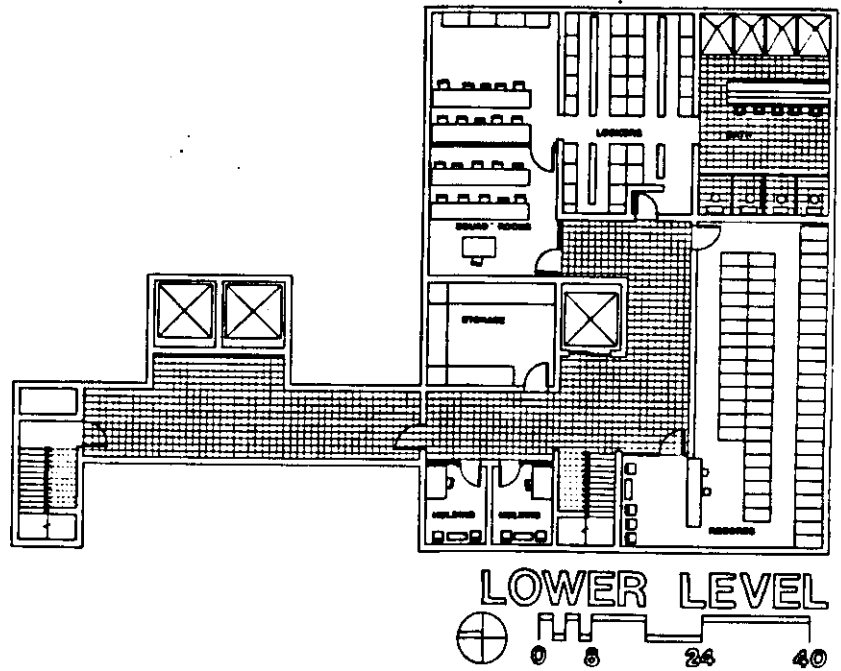
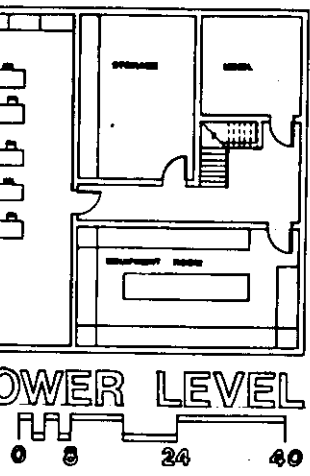
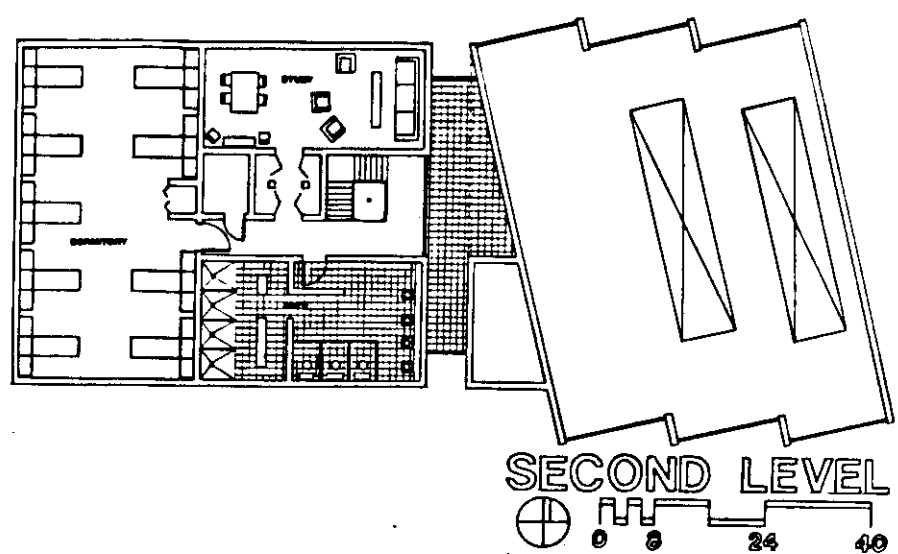
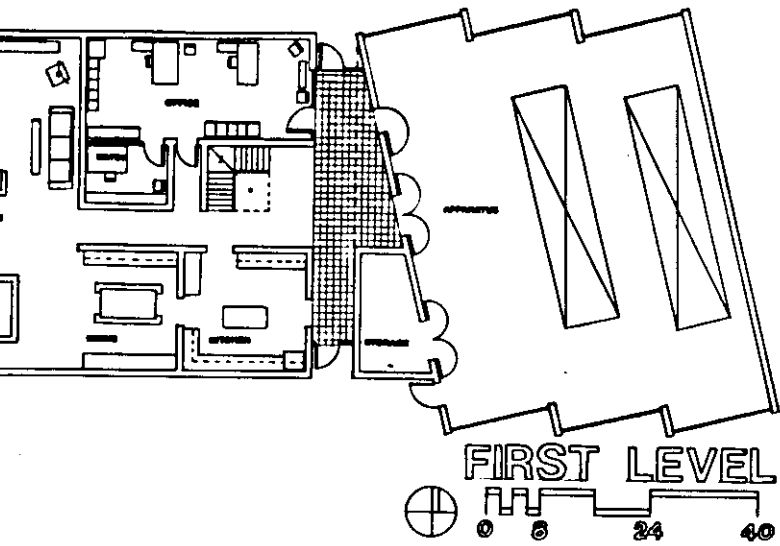
The police station is closer to the city hall because the people use it more frequently. The first level has the reception areas for both visitors and those requiring assistance and for prisoners. The second level has more offices for the different areas like investigation and administration. The lower level is for the uniform officers and storage facilities. Also, a connecting hallway to the city hall is included, providing for a secure transfer of prisoners, etc.

The city hall is more open than the other two. It is the government in action. One can stand in the atrium space and experience all the areas of concern. The first level is open in that the snack area is open and flows out into the atrium. Here, one can experience the government wrapping around oneself, both horizontally and vertically. The various levels contain the offices necessary for the smooth operation of the local government

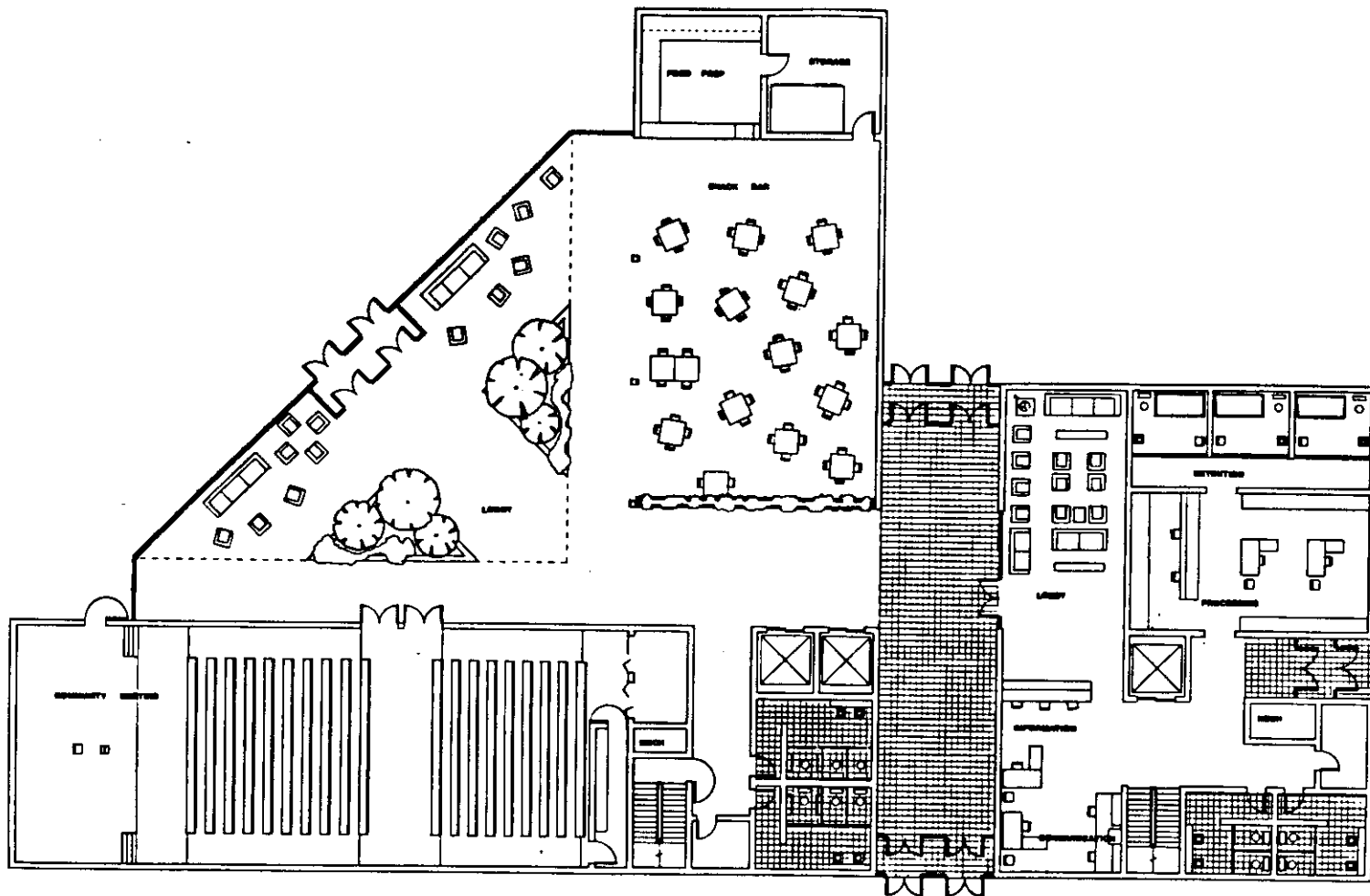


SITE PLAN  
0 40 120 200

AXONOMETRIC  
0 20 60 100

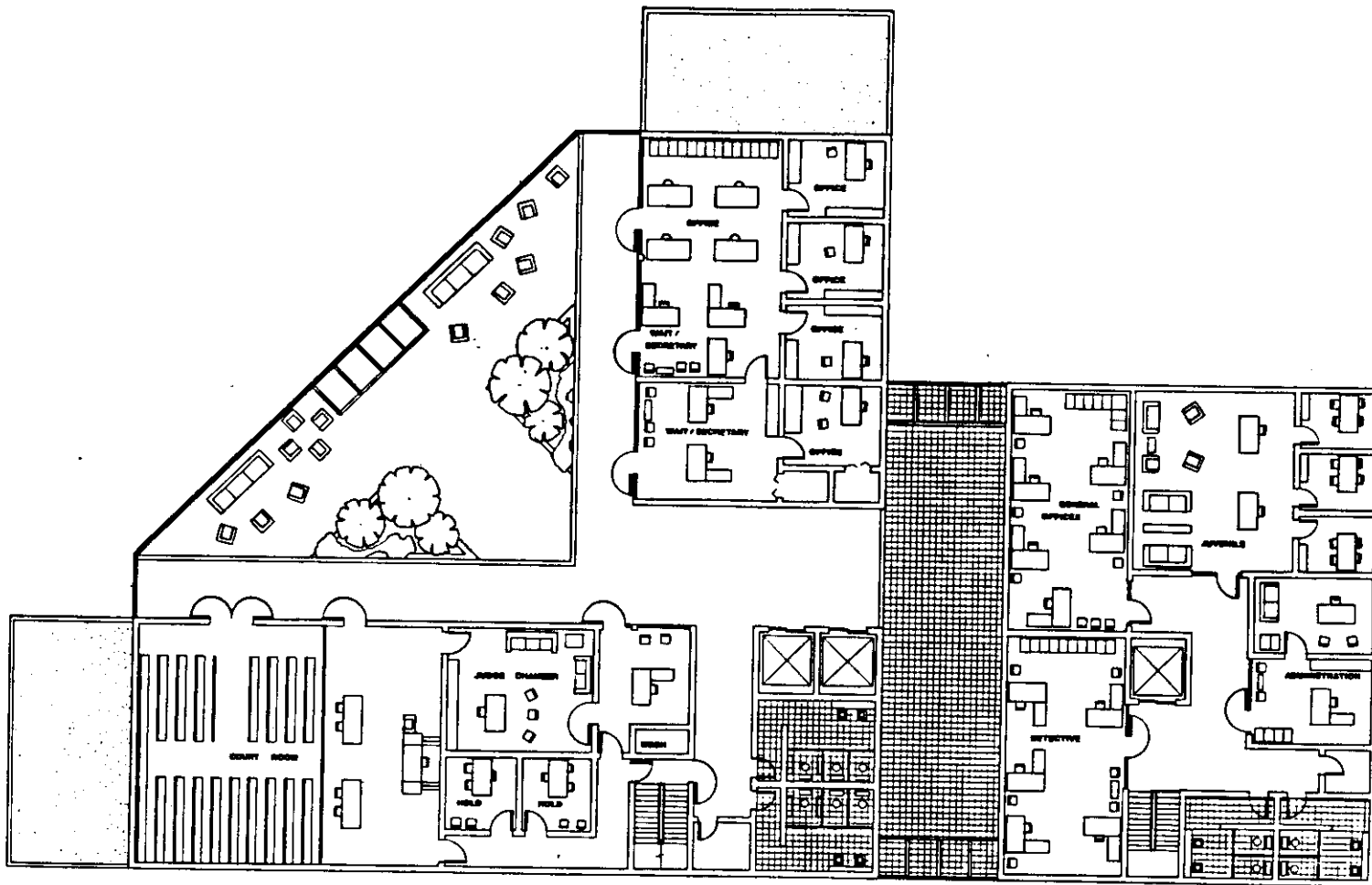






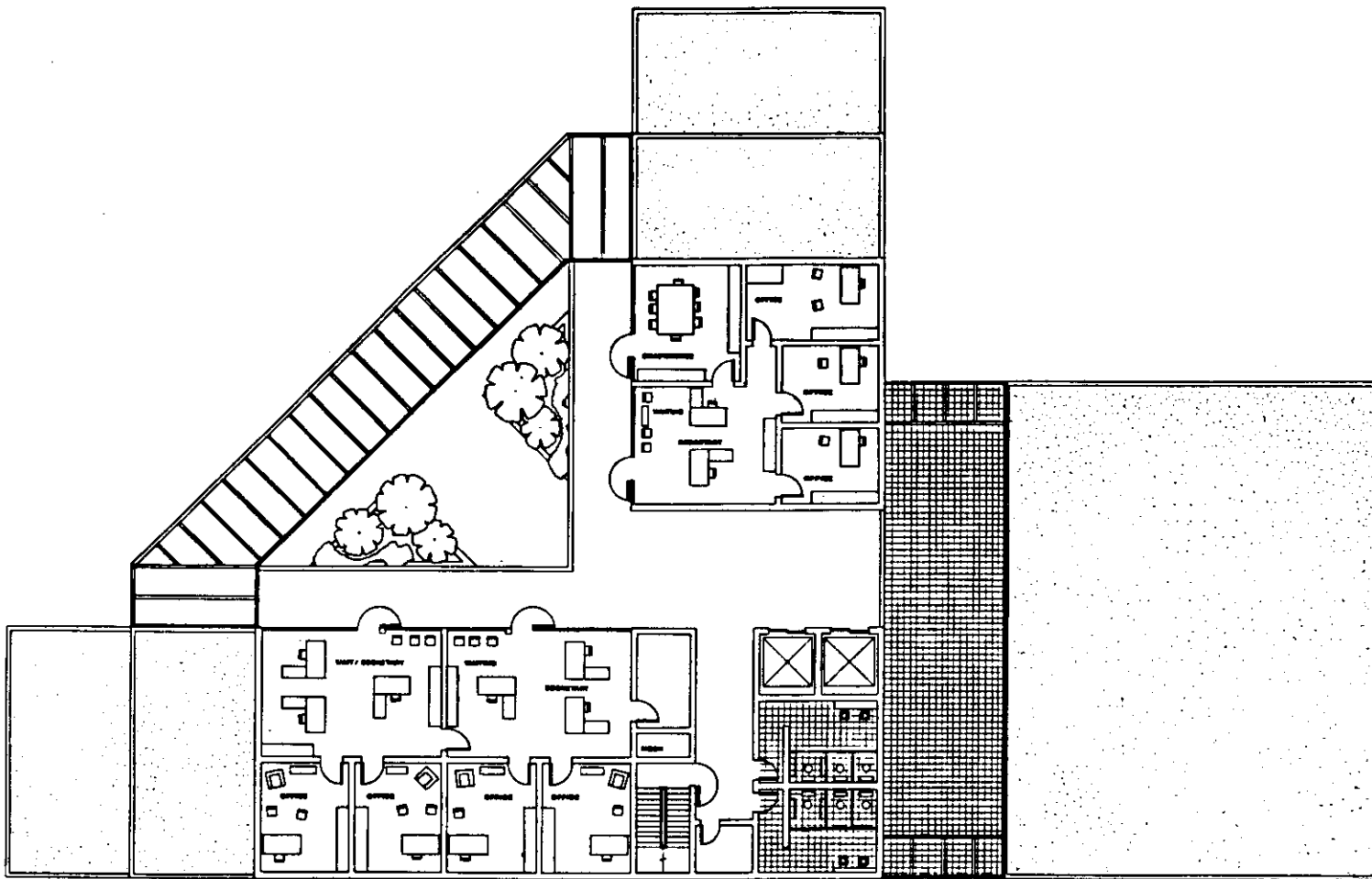
FIRST LEVEL

0 8 24 40



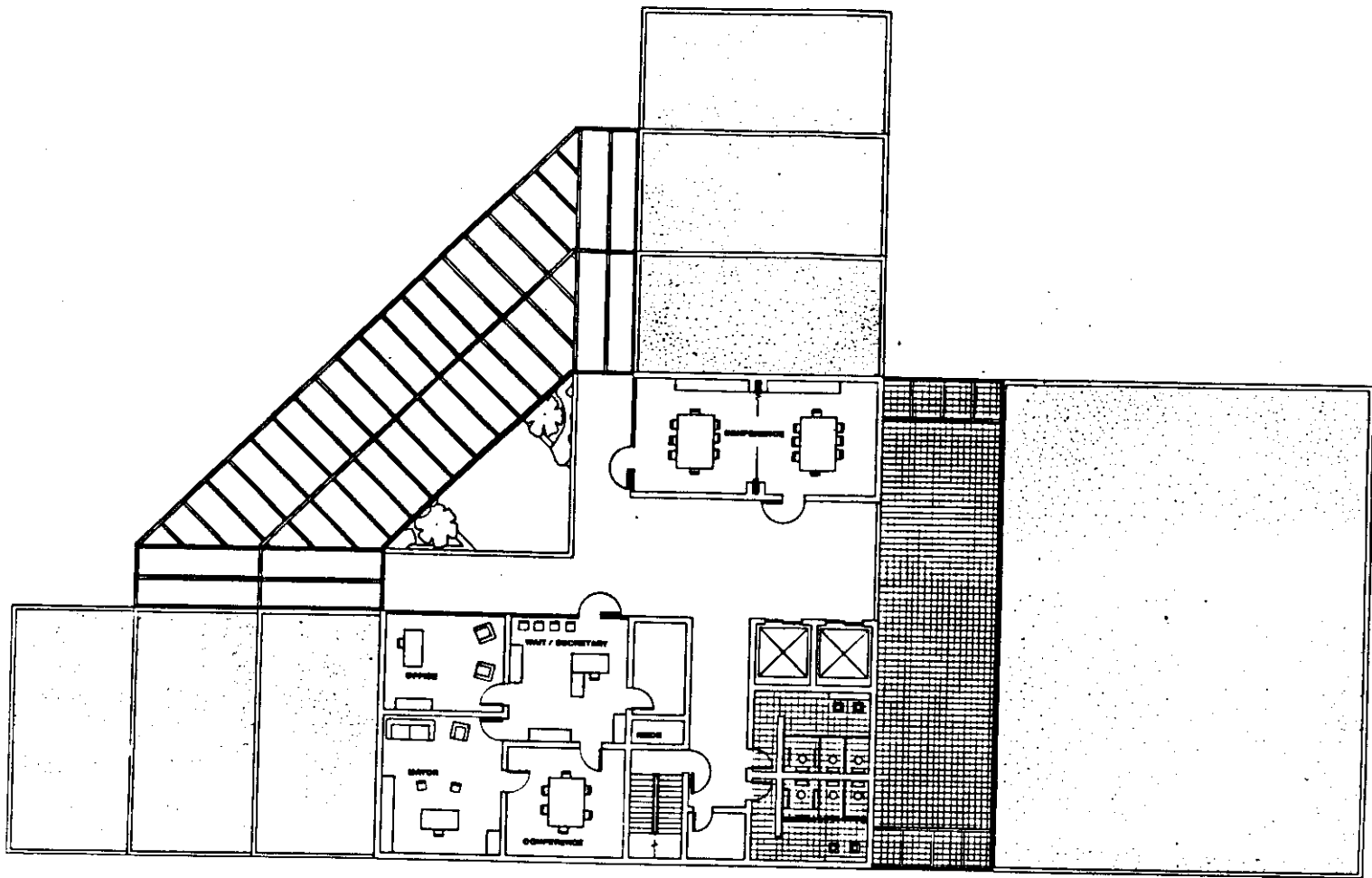
SECOND LEVEL

0 8 24 40

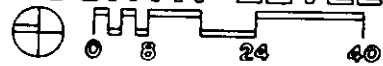


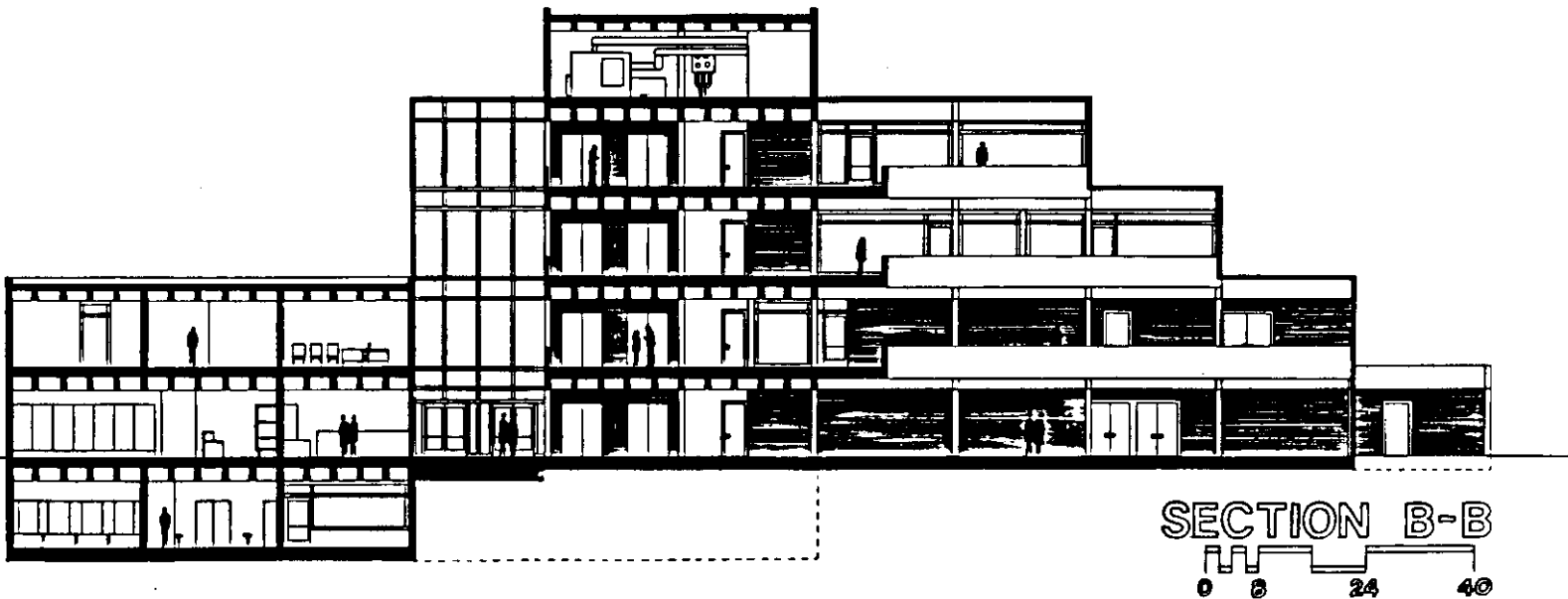
THIRD LEVEL

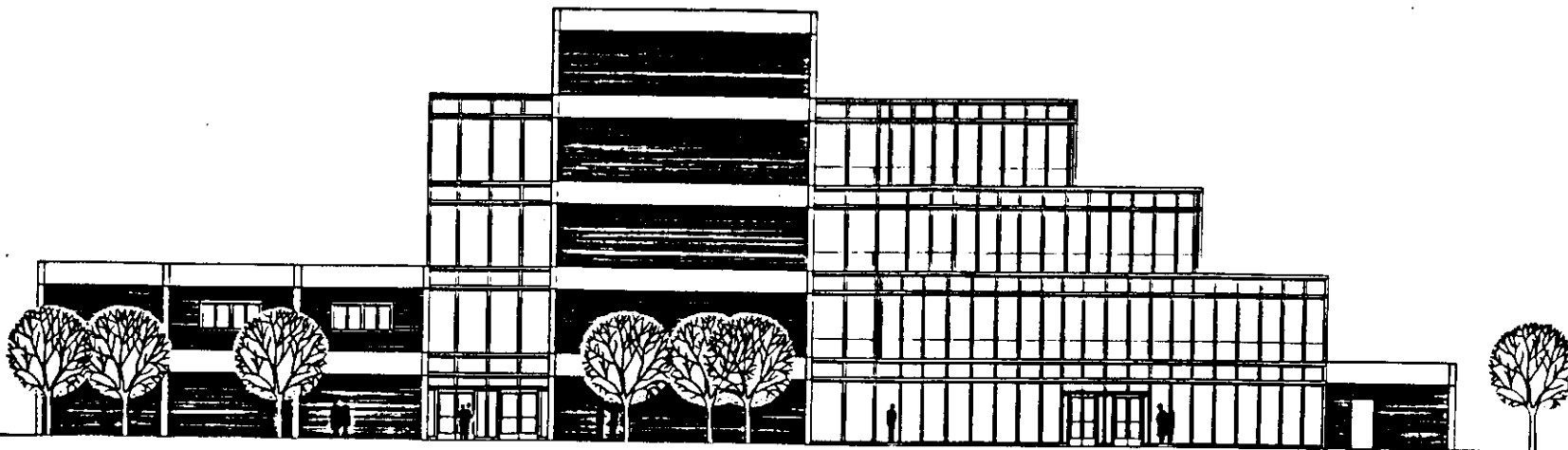




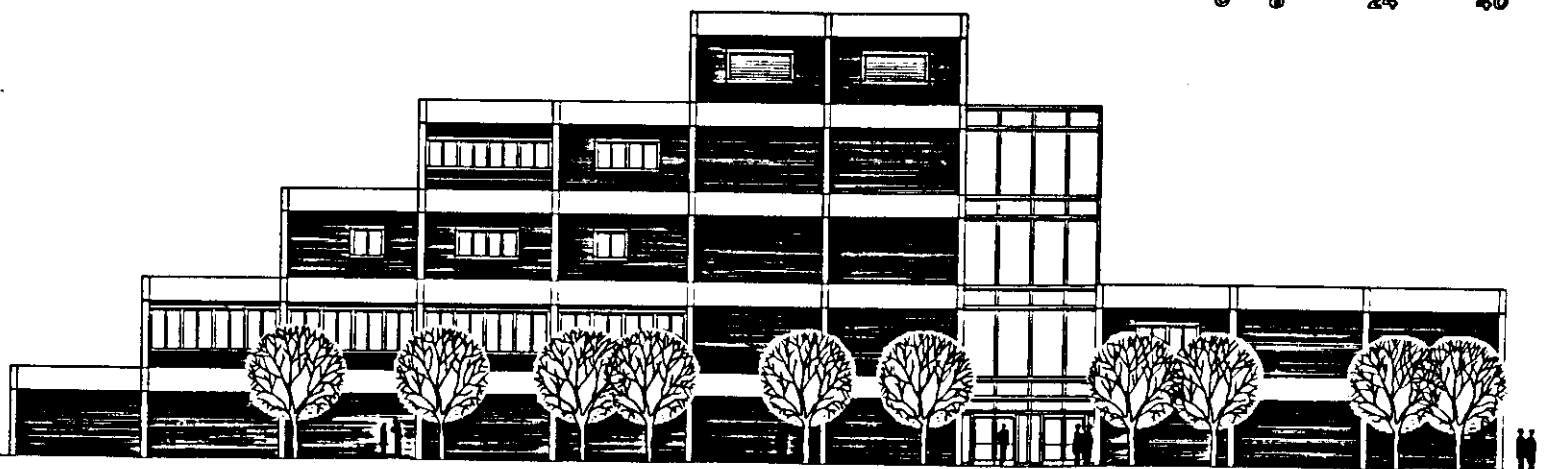
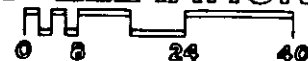
FOURTH LEVEL



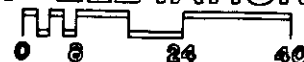


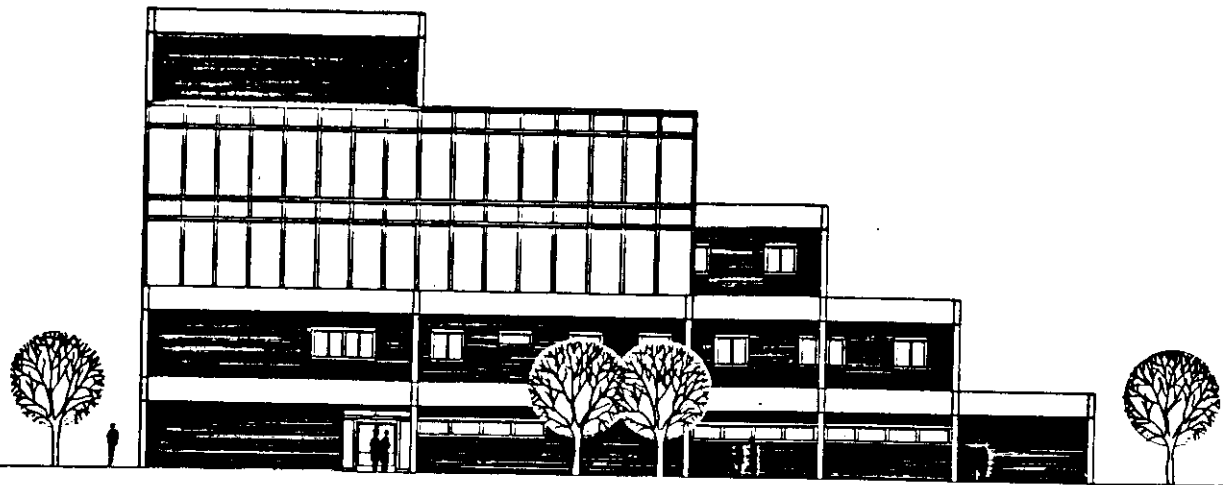


EAST ELEVATION

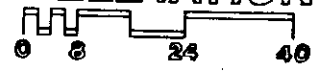


WEST ELEVATION

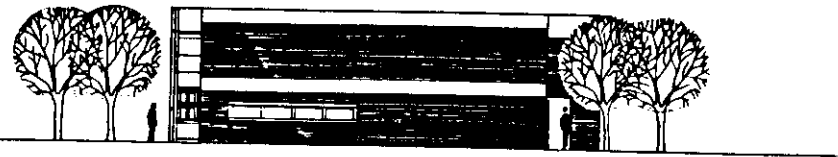
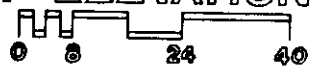




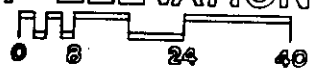
SOUTH ELEVATION



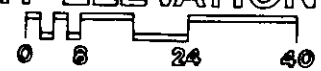
EAST ELEVATION



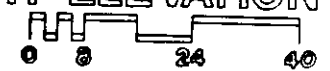
WEST ELEVATION



SOUTH ELEVATION



NORTH ELEVATION



## APPENDICES



## Appendix A

### Site Analysis

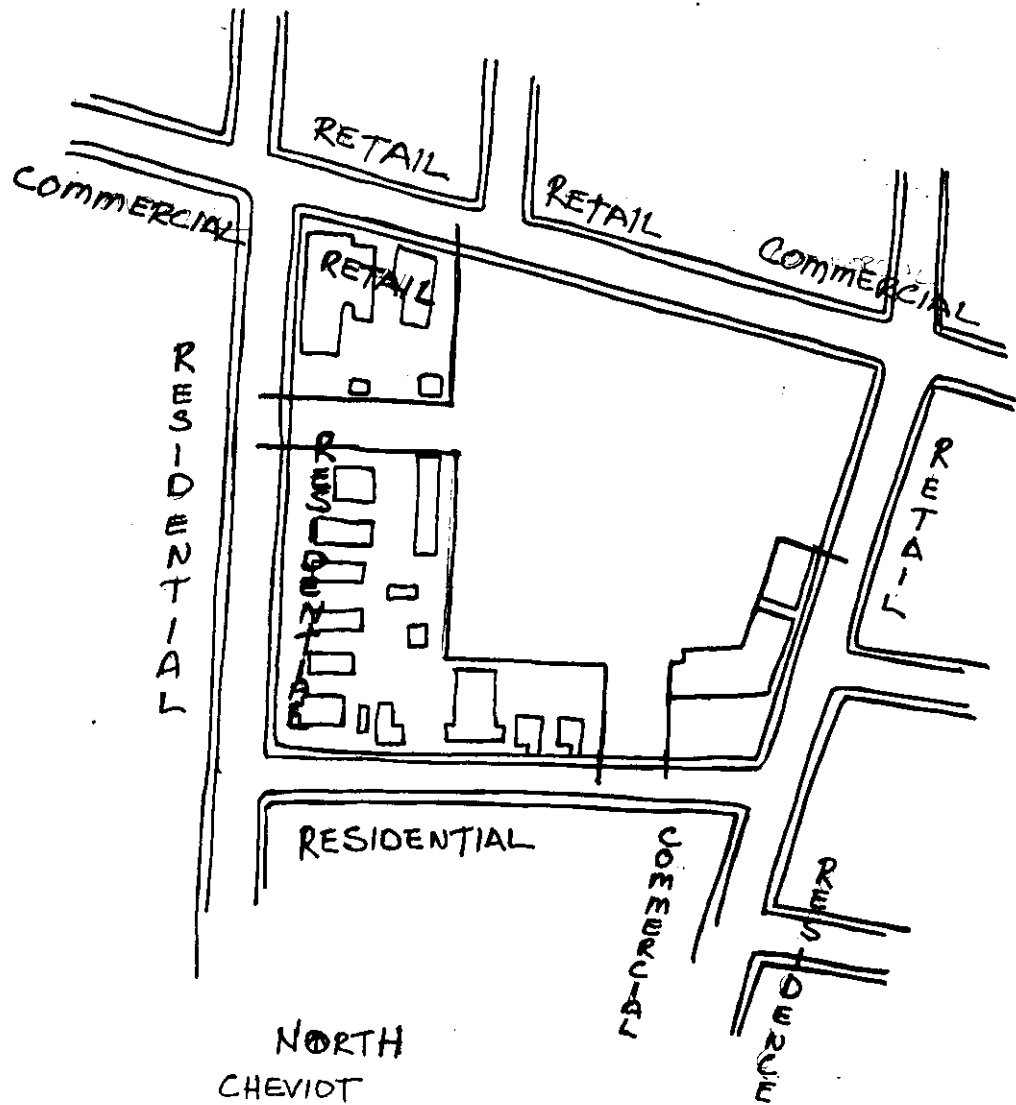
Cheviot is a small city on the Western side of Cincinnati, Ohio. The site for the Cheviot Municipal Complex is on the Southwest corner of the intersection of Harrison Ave. (U.S. 52) and Glenmore Ave. This intersection is the center of the city both economically and physically.

The site is in a semi-urban context, the block containing both retail/commercial and residential buildings. The site presently is a public parking lot between the retail stores and the residences. Some of the existing buildings will be torn down including a small factory that also exist on the site. All of the residences will remain.

In the analysis, items such as accessibility were looked at. The fire trucks would have to enter onto the street network via Harrison or Glenmore for turning radius reasons. The best place is on Harrison between the two intersections so the lights can be changed to avoid causing accidents. Drive thru capabilities would be best so as not to tie up traffic with backing in procedures. The parking lot is below the street level so the drives and walks would have to slope down onto the site.

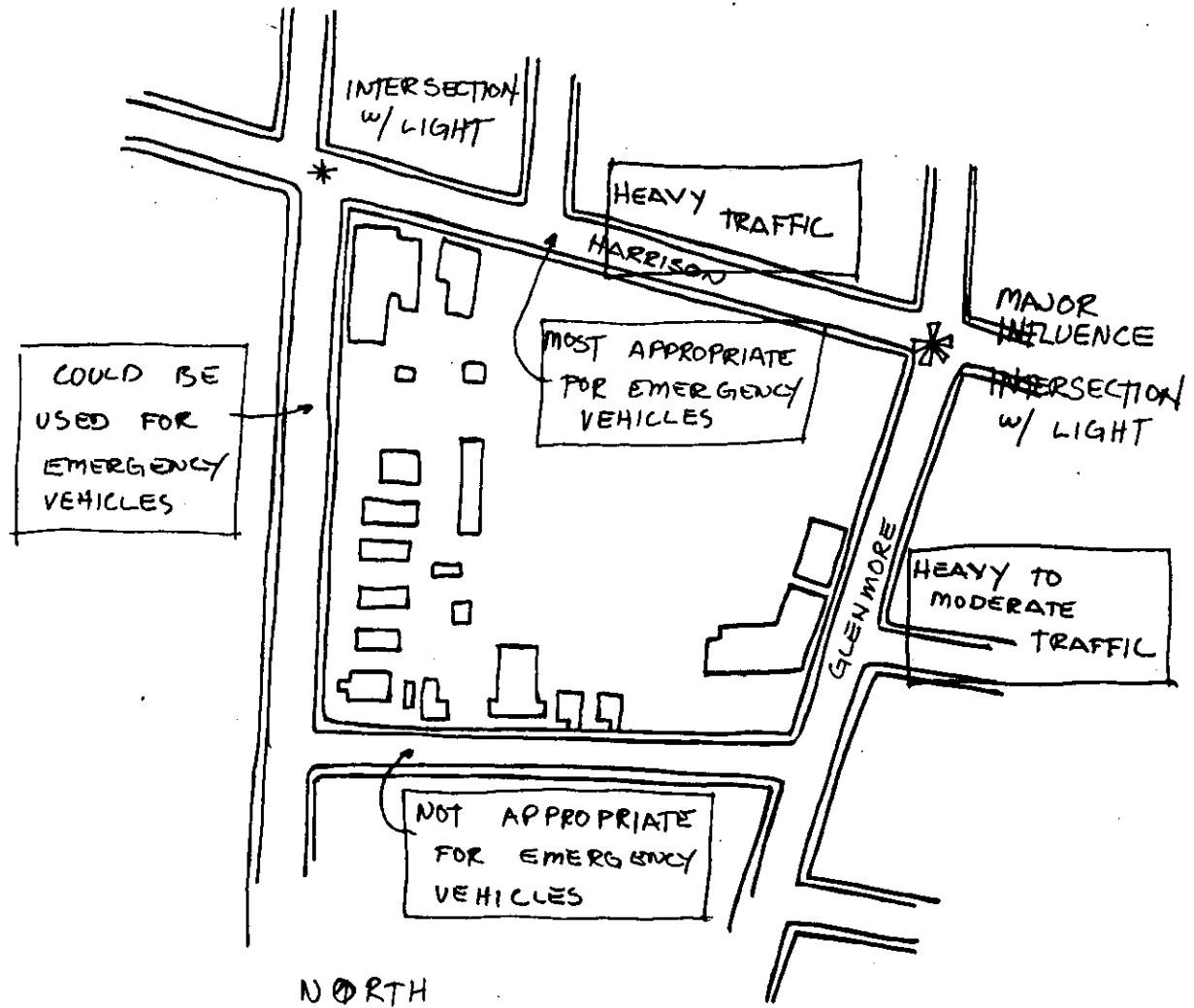
Other things include no significant vegetation, service by all utilities, on the bus routes, etc.

SURROUNDING CONTEXT



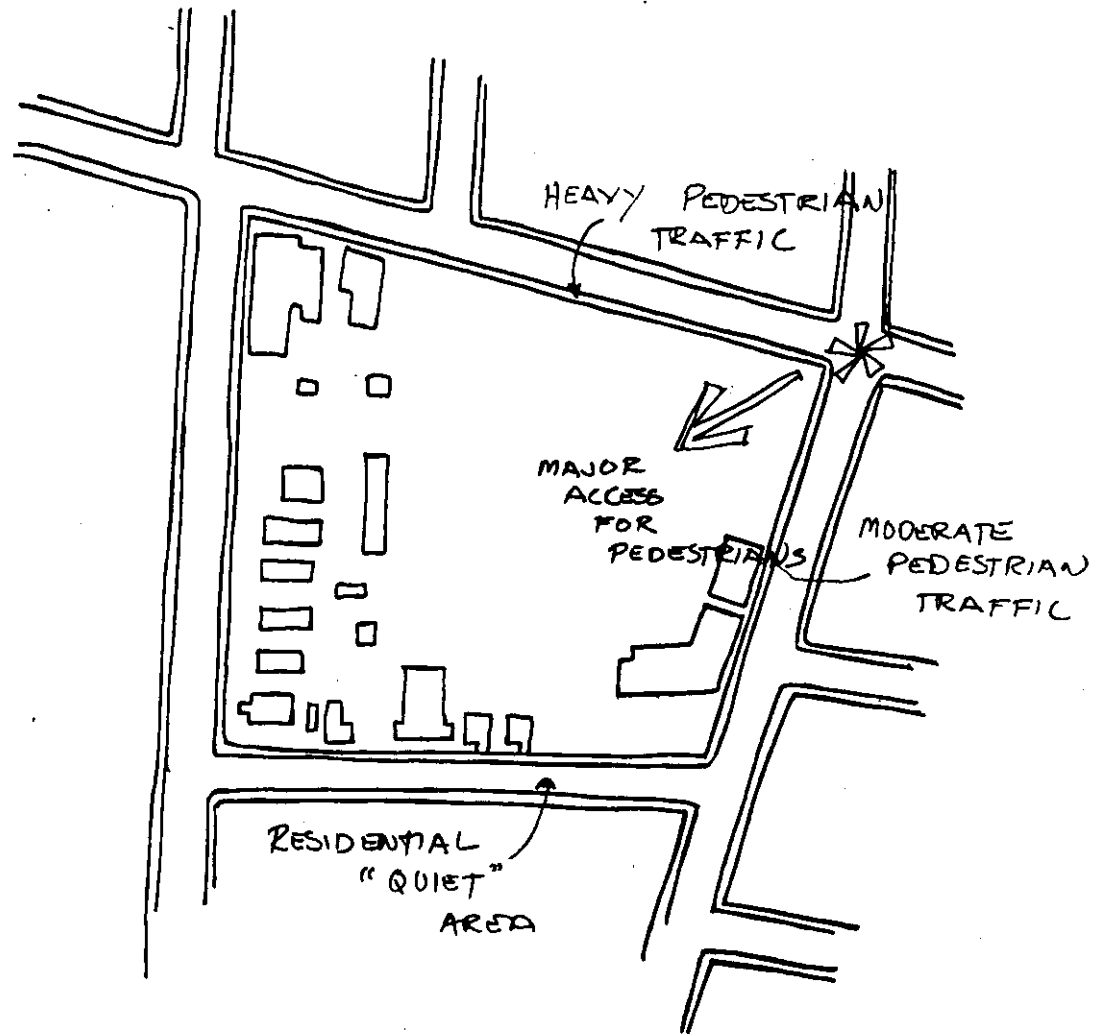
NORTH  
CHEVIOT  
MUNICIPAL  
COMPLEX

# TRAFFIC PATTERNS



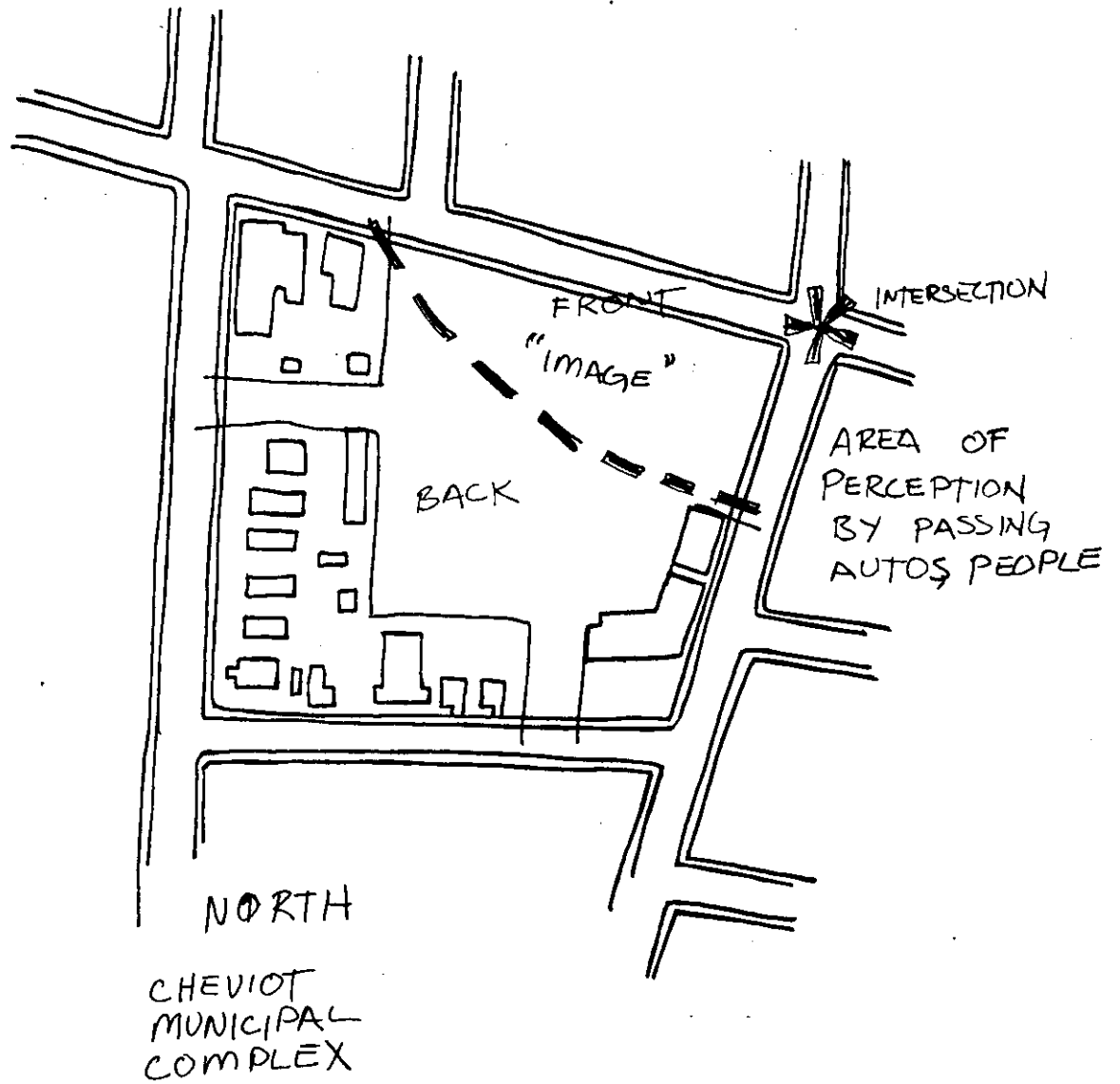
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# PEDESTRIAN PATTERNS



NORTH

CHEVIOT  
MUNICIPAL  
COMPLEX



## Appendix B

### Facility Program

A facility program is, according to Webster's unabridged, "a statement of an architectural problem and of the requirements to be met in offering a solution." What follows in this appendix are parts of a facility program completed for the design of a new municipal government complex for Cheviot, Ohio.

## Introduction

Cheviot, Ohio is a small city that borders on the city of Cincinnati. At one time, it was an independent, thriving force on the Western side of Cincinnati. Over the years, its business and retail area has steadily lost customers to the large commercial shopping areas of the suburbs. To re-establish the commercial district, the government of the city must take steps to insure that it can prosper. By starting with a strong tie in to the government, through the building of a new municipal complex, it is hoped that increased awareness to the possibilities of the downtown area will be seen and utilized.

## Program Summary

This program will attempt to generate the criteria needed for the design of a new municipal complex for Cheviot, Ohio. This municipal complex will contain the three groups present in any municipal government; The firehouse, the police station, and the city hall. The program will incorporate a "common" space for the public, so they have access to each of the three functions of the complex. The building will be approximately 65,000 square feet and will cost around \$6 million dollars.



## Goals

- To improve the image of the semi-urban area.
- To become a visual focal point.
- To become a spiritual focal point.
- To induce a feeling of pride in the citizens
- To enhance the environment.
- To provide a positive affect on the surrounding areas.
- To make the government better suited to the serving of the  
top.

## Space Summary

This is a summary of the required spaces.

### Firehouse:

Apparatus/Garage	2700
Watch	100
Office	450
Training/Class Room	1000
Storage	200
Equipment Room	560
Lounge	1200
Dining	200
Kitchen	250
Dormitory	1200
Study	500
Bath/Showers	700
	<u>11700</u>

### Police Station:

Storage	700
Squad Room	800
Locker Room	1200
Bath/Showers	600
Records	700
Lobby	500
Reception	300
Communication	100
Processing	600
Detention	600
Investigation	500
Offices	500
Juvenile	800
Administration	300
	<u>14400</u>

### City Hall:

Community Room	4000
City Court	3200
Judge Chamber	800
Mayor Office	750
Conference	800
City Clerk	900
Park Dept.	700
City Controller	1250
City Engineer	1450
Building Comm.	700
Purchasing Agent	1000
	<u>29680</u>

Cost Estimate

Building Cost	63100 s.f.@ \$60/s.f.	3,786,000
Fixed Equipment	8% of Bldg. Cost	454,320
Site Development	10% of Bldg. Cost	378,600
Total Construction Cost		4,618,920
Site Acquisition/Demolition	allowable	
Moveable Equipment	8% of Bldg. Cost	454,320
Professional Fees	8% of Total Costruction	369,513
Contingencies	10% of Bldg. Cost	378,600
Administration Cost	2% of Total Construction	92,378
Total Budget		<u>5,762,291</u>

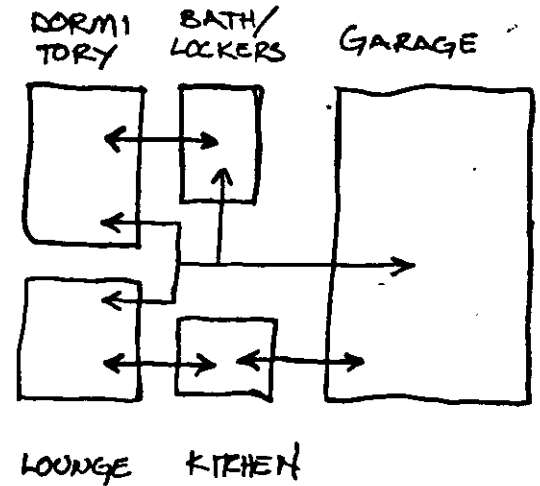
## Appendix C

### Building Type Analysis

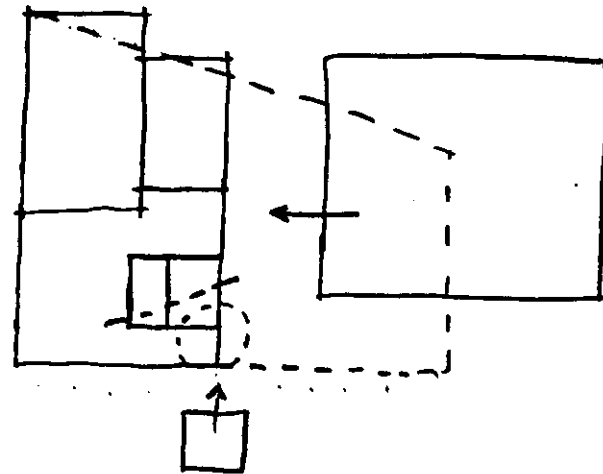
A Building Type Analysis involves the study of same or similar type projects to the one being programmed or designed. Usually, the purpose is to understand how other designers have dealt with problems by analyzing such items as correlation, graphic composition of plan, zoning and circulation patterns, entry and enclosure statements, structure, three dimensional patterns and rhythms, siting, and unique features and image where appropriate. With the exception of unique features and image, these elements form a design concept.

## Firehouse No. 4, Columbus, Indiana

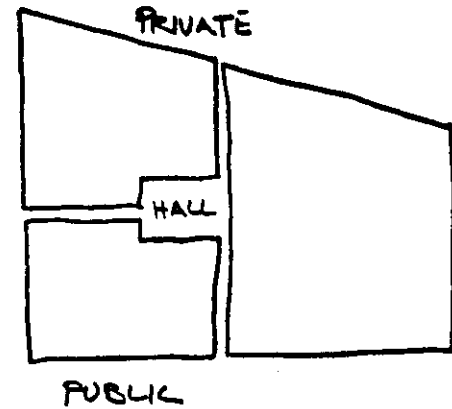
**Correlation** This analysis involves the identification of the major spaces of the building and graphically showing these relationships to each other. The major spaces are identified as the garage, the dormitory, the bath, the lounge, and the kitchen.



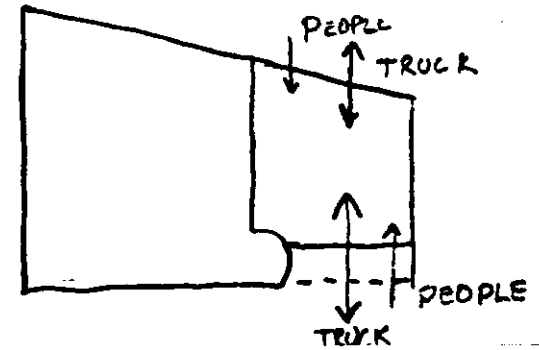
**Graphic Composition of Plan** This building is graphically made up of squares that are slid against one another so that from the front they appear as a solid and in the rear they are expressed individually.



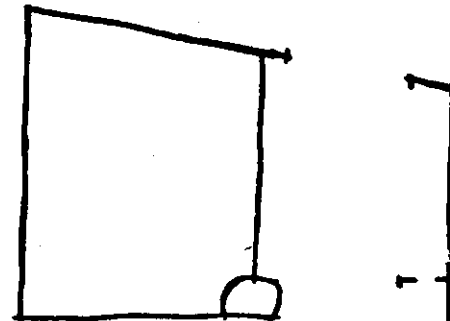
**Zoning and Circulation** The building is zoned into two parts, the people half and the truck half. The people half is divided into two parts by a hallway, the public lounge area and the private dorm area.



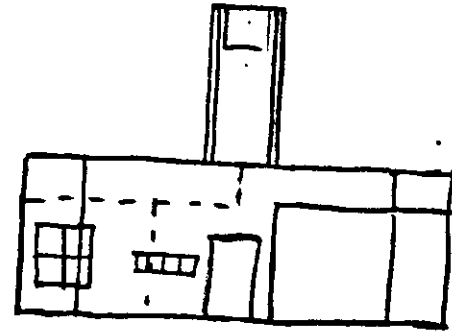
**Entry and Enclosure** The main entry into the building is by the front garage door. There are doors at both ends of the garage for drive thru. The private entry is in the rear



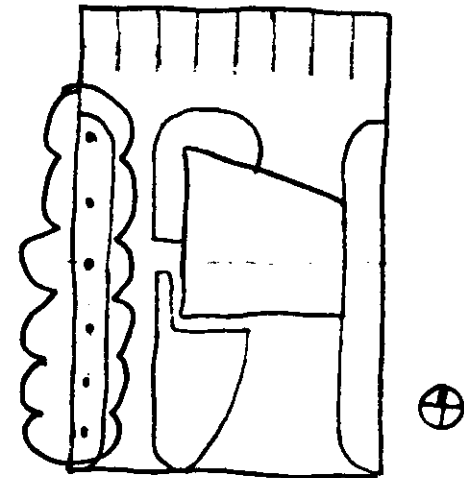
**Structure** Structure is simple masonry bearing walls that define the two halves, the people and the truck spaces.



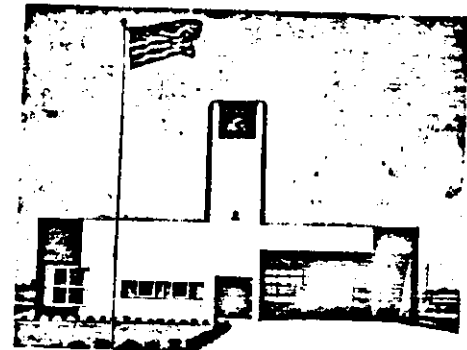
**Three Dimensional Patterns and Rhythms**      The front facade has a high parapet wall to keep the height uniform from garage across the entire surface. In the rear, the three functional elements are directly expressed by the building.



**Siting**      The siting was simple and effective, providing a private parking area and for drive thru capability for the trucks.

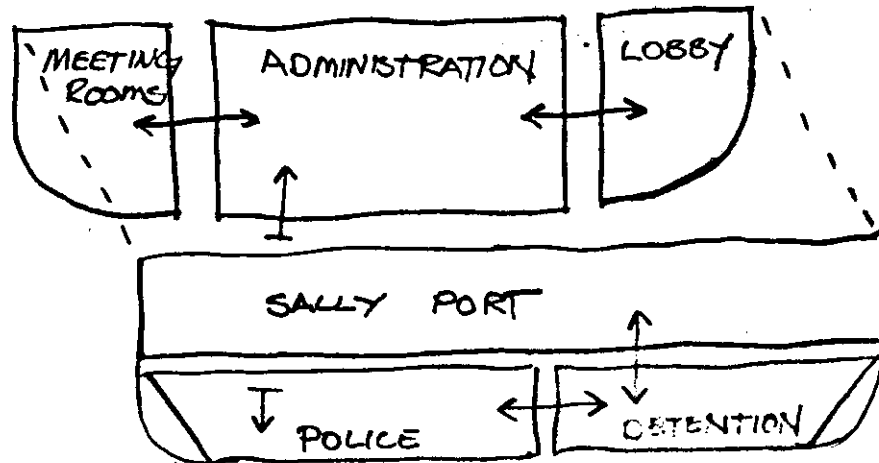


**Unique Features and Image**      \* Special attention was given to the main pedestrian entry. Image wise, it is clearly a firestation, its hose tower insuring this.

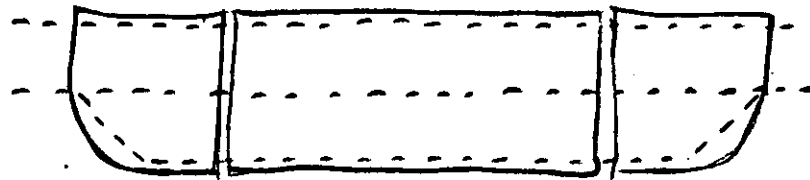


## Police Station, Kansas City, Missouri

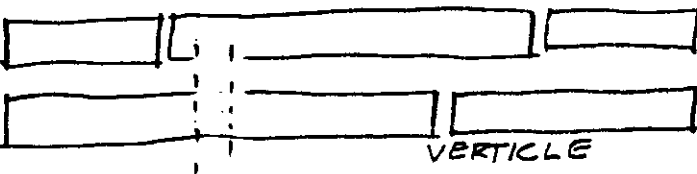
**Correlation** The major spaces involved include a lobby area, the administration area, meeting rooms with movable partians on the upper floor. On the lower floor, there are a sally port, the detention area, and the officers quarters.



**Graphic Composition of Plan** Graphically, this building is a long rectangle with rounded corners on the two outer most edges (near the highway).

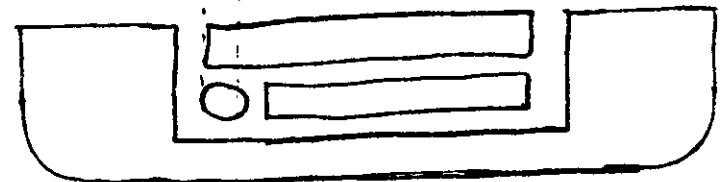


**Zoning and Circulation** The building is zoned public on the upper and private on the lower. Circulation is by a spine that runs down the building



PUBLIC

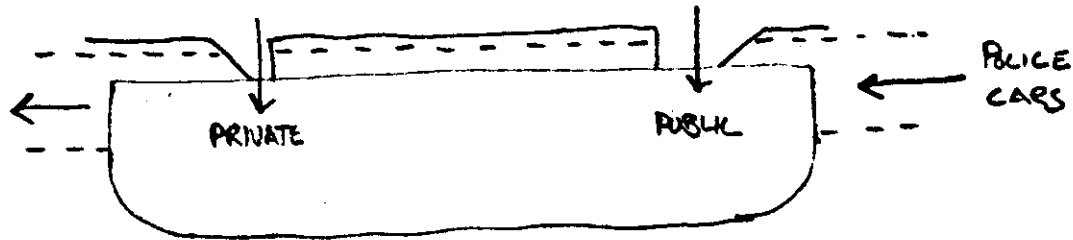
PRIVATE



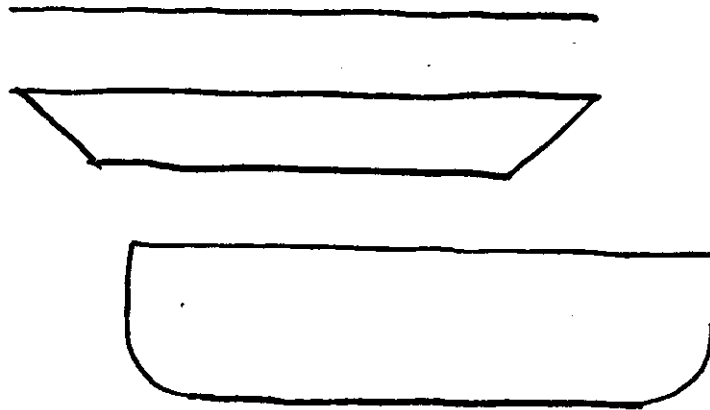
HORIZONTAL



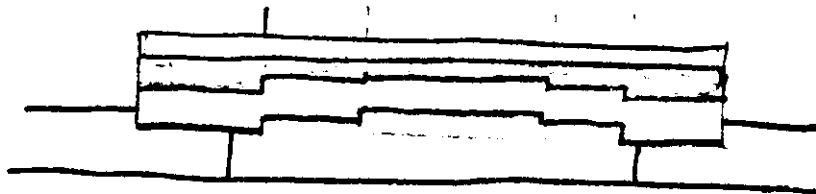
**Entry and Enclosure** The main entry is separated from the staff entry although the staff entry is closer to the parking lot. Prisoners enter through sheltered sally port for security.



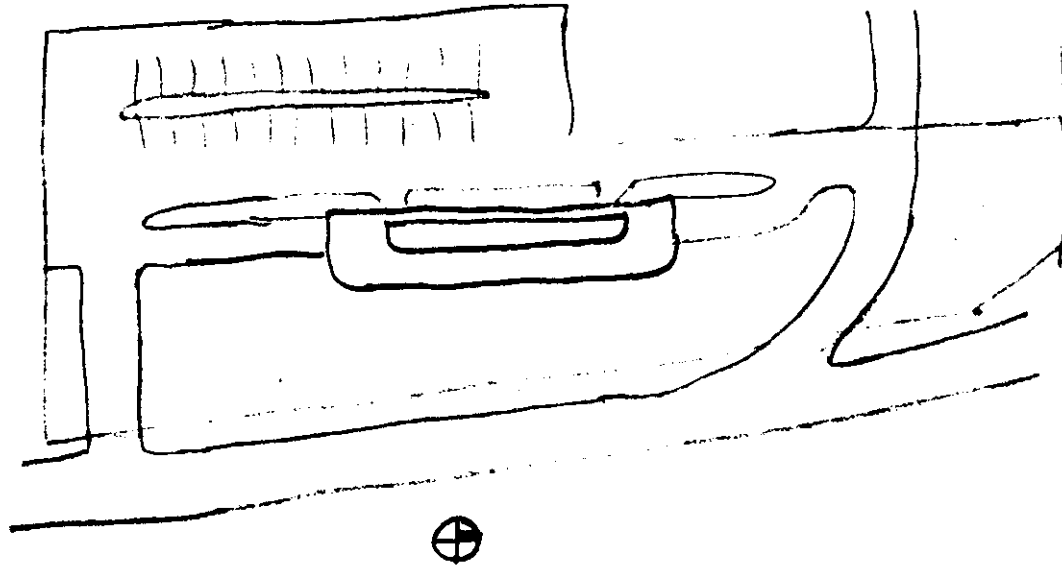
**Structure** Structure of the lower floor is concrete walls supporting steel frame upper floor (open plan).



**Three Dimensional Patterns and Rhythms** The building has a look of self containment like a travel trailer. The windows get smaller expressing privacy demands and room sizes on the inside.



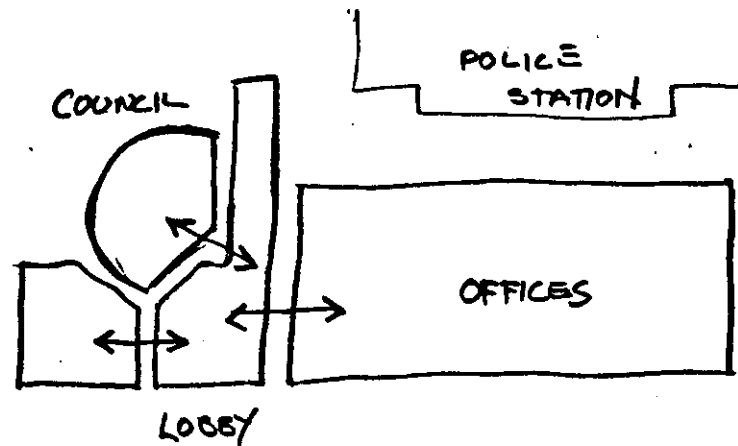
Siting The architects helped pick the site for maximum accessibility to and visibility from traffic.



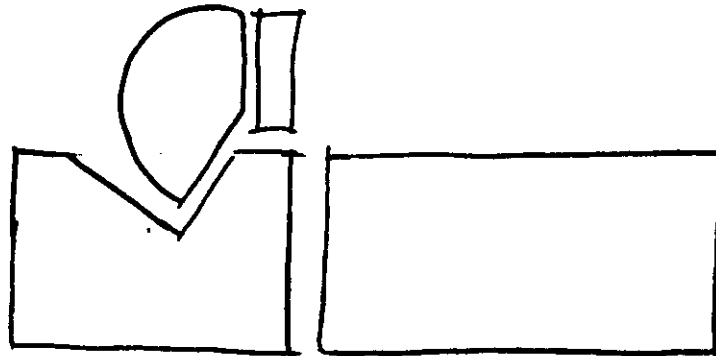
Unique Features and Image The building has been described as a three dimensional traffic sign. It defies stereotyping as a typical police station.

## City Hall, Durham, North Carolina

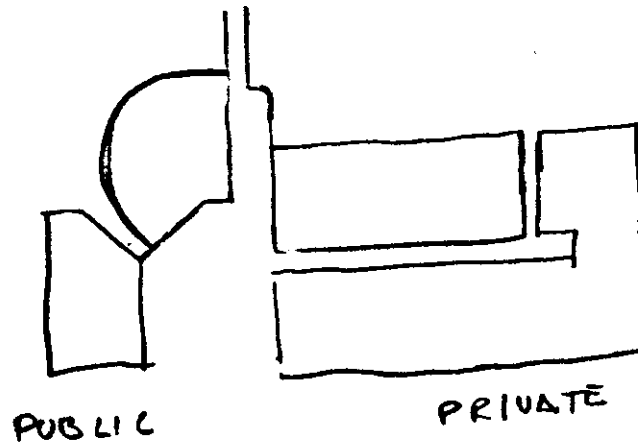
**Correlation** The major spaces include an office block separated by a lobby from the council chamber and a display area. There is a separate police building on the North side.



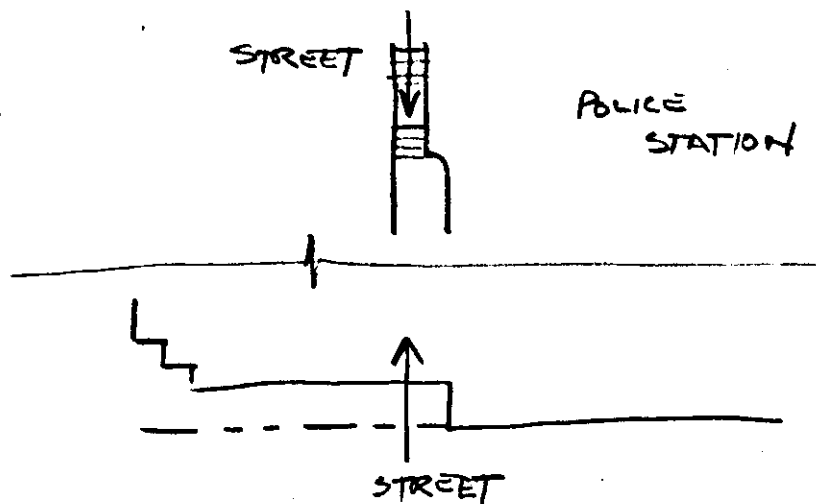
**Graphic Composition of Plan** Graphically, the plan is two rectangles butted against each other. One side of the smaller rectangle has a notch cut out and a curvilinear form has been installed.



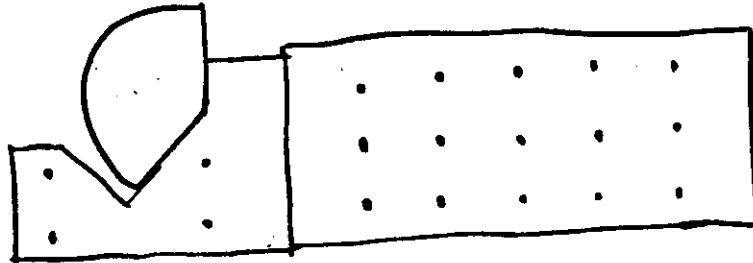
**Zoning and Circulation** A major lobby space separates the council chamber from the offices. Circulation in this lobby is from several equal entries on the first level. A spine runs down the office block.



**Entry and Enclosure** Several main entries on the first level create pedestrian activity around the building. Facade with cut outs revealing true wall help to enclose and define the space.

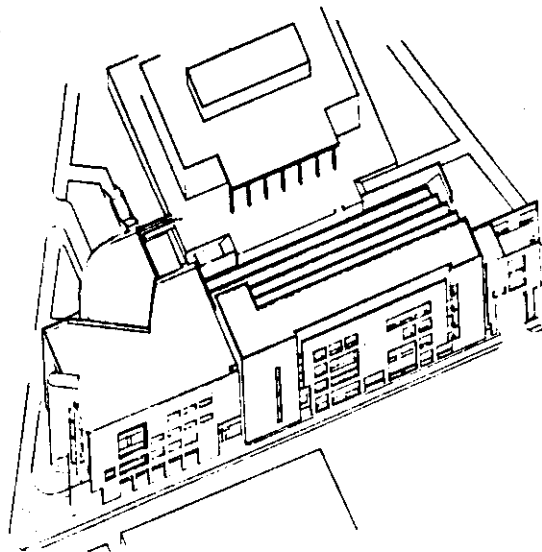


**Structure** The structure has order to its placement. It is present in regular spaces and not so regular spaces (lobby). The council chamber stands out on its own.

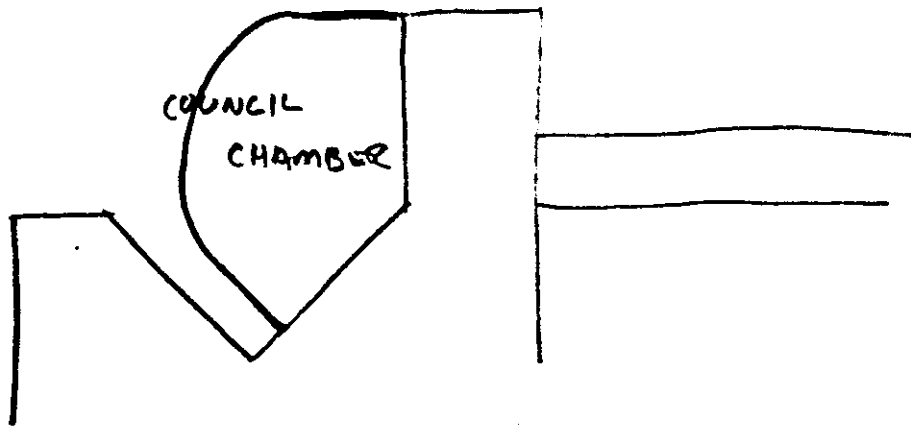


**Three Dimensional Patterns and Rhythms** The council chamber sticks out as being important. False facade continues down street interrupted by cut out revealing true facade under or behind it. It matches the rhythms of the older buildings opposite and providing visual breaks.

**Siting** The siting takes advantage of the triangular site, projecting council chamber and other ceremonial spaces yet staying in the urban context.



Unique Features and Image The building is both a good neighbor and a unifying force in the neighborhood of mixed background. Council chamber projected for sense of importance.



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