

**POLICE FACILITIES RENOVATION STUDY
CITY HALL ANNEX BUILDING
UNIVERSITY CITY, MISSOURI**

**ARCHITECTS:
POWERS ASSOCIATES INCORPORATED
ARCHITECTS & PLANNERS**

Powers Bowersox Associates, Inc.

Fred A. Powers, AIA

300 N. Fourth Street
Suite 206
Saint Louis, Missouri 63102

314 621 4160
fax 314 621 4161
fpowers@powersowersox.com
www.powersowersox.com

PBA



City of University City

POWERS ASSOCIATES INCORPORATED

ARCHITECTS & PLANNERS

January 16, 1980

Mr. Victor A. Ellman
City Manager
City of University City
6801 Delmar Boulevard
University City, Missouri 63130

Dear Mr. Ellman:

We are pleased to submit to you the attached final report of a feasibility study for the improvement of police facilities in the City Hall Annex Building.

This report presents our findings and recommendations for upgrading the Annex Building to accommodate present and future police department needs. Its content includes a description of the project background, existing conditions, an architectural program, proposed design solution, cost estimates, construction schedule, and a discussion of the advantages and disadvantages of renovation.

Our intent has been to develop information from which informed city officials can make intelligent decisions. We believe the material contained in this report will contribute to this process.

Very truly yours,

Fred A. Powers, AIA

T A B L E O F C O N T E N T S

PROJECT BACKGROUND	1
EXISTING CONDITIONS	2
ARCHITECTURAL PROGRAM	3
PROPOSED DESIGN SOLUTION	4
CONSTRUCTION COSTS AND SCHEDULE	5
SUMMARY OBSERVATIONS	6

Feasibility Study For The Improvement Of Police Facilities In The City Hall Annex Building

**University City, Missouri
January 14, 1980**

Mayor

Joseph W. Mooney

City Council

Cynthia Metcalfe
Patrick J. Kelley
Joseph L. Adams, Jr.
Allen Sabol
Lawrence Lieberman
Elsie Glickert

1st Ward
1st Ward
2nd Ward
2nd Ward
3rd Ward
3rd Ward

Acknowledgments

The product of this report represents the efforts of several individuals who were contacted throughout this project. The following persons contributed to the master plan report.

BUILDING COMMITTEE

Victor A. Ellman, City Manager
James P. Damos, Chief of Police
Michael T. McPhail, Director of Finance

DEPARTMENT OF PLANNING & DEVELOPMENT

Al Goldman, Director of Planning

UNIVERSITY CITY CITIZENS COMMITTEE

David P. Olson, Community Organization Consultant
Fran Herbig, Co-Chairman, Public Safety Committee
Kevin Sullivan, Co-Chairman, Public Safety Committee
Joyce Banaszak
Sandy Gussner
Tom Hudson
Jim Ratchford

UNIVERSITY CITY POLICE DEPARTMENT

Captain Ralph Tackes

UNIVERSITY CITY MAINTENANCE DEPARTMENT

Henry Rosenbloom

CONSULTANTS

Powers Associates, Inc., Architects and Planners
Colton/Lester Associates, Inc., Consulting Engineers

Project Background

The University City Police Department and Fire Engine House #1 are located in the City Hall Annex Building. In 1978, sub-committees of the University City Bond Issue Committee surveyed the Annex Building and concluded that facilities for the police and fire departments were inadequate. The Fire Protection Facility Sub-Committee recommended relocating Engine House #1 to a new facility which would be located on a site other than the municipal complex. The Police Service Facility Sub-Committee recommended that if a new fire station were constructed, the Annex Building should be upgraded to accommodate the police department. Funding for constructing a new fire station and renovating the police facility would be accomplished through a proposed bond issue election.

X In April 1979, a 6 million dollar bond issue program for municipal improvements was submitted to the voters. The fire and police facility programs failed to receive the necessary two-thirds majority for approval.

Following the election a Public Safety Committee, represented by persons from the police and fire sub-committees, discussed possibilities for resubmitting the bond issue program. One option called for the development of a new public safety complex where fire and police facilities would be co-located on a single site. The other option would be to resubmit the original proposal for voter approval.

Before resubmitting either program to the voters, the citizen's committee concluded that more information was needed before a decision could be made as to which option would be most feasible. Specifically, the committee wanted detailed information which would illustrate whether the Annex Building could be renovated to satisfy the needs of the police department; whether major renovation for a specialized building could satisfy the requirements of a historic

building; and, detailed cost information comparing the cost of renovation with the cost of building a new public safety building.

In October 1979, Powers Associates was selected by the City to prepare a feasibility study which would address the issues raised by the citizens committee. Conducted in two phases, the first phase, represented by this report as its product, addressed the renovation potential of the Annex Building to accommodate the police department. Project information on the feasibility of constructing a public safety building, containing both the police and fire departments, would be undertaken during the second phase.

The reader will find in this report information on several topics which were addressed throughout the study. The intent has been to provide detailed background information so that the City can make the best decision on the future use of the Annex Building. Among the topics which were addressed during the study are the following.

1. Preparation of as-built drawings documenting existing conditions and use.
2. Preparation of an architectural program which would identify the space needs for the police department.
3. Preparation of a conceptual design for renovating the Annex Building.
4. The development of cost estimates for renovating the Annex Building.
5. The preparation of a schedule for implementing the project.

Existing Conditions

The police and fire departments are located in a building commonly known as the Annex Building. It is a two story structure with a partial third floor and is located immediately north of City Hall. As part of the Civic Complex, it is connected to the City Hall by the one story emergency operations center. The City Hall and Annex Building are historically important to the founding of University City, and in recognition of their prominence, both buildings were nominated in 1974 to the National Register of Historic Places.

The Civic Complex was originally developed as facilities for a highly successful publishing company owned by Edward G. Lewis, founder of University City. Constructed in 1903, the five story octagonal City Hall was designed as an executive office building. Complementing City Hall, the low rise Annex Building was designed to house a tropical plant conservatory, a press room, and other production facilities for the publishing company. The original Annex Building was twice the size that it is today. Constructed in 1903, it has undergone a number of changes, including the addition of a partial third story in 1909 and a fire in 1940 which destroyed about half of the original building.

The architectural features of the Annex Building, though not as dramatic, are similar to City Hall. Both buildings embody limestone bases and both feature brick and terracotta construction. The terracotta entablature and window trims on the Annex Building are fine examples of the prominence St. Louis once had in the ceramics industry. Although much remains of the original detailing and construction the exterior has undergone several changes. Because of the fire in 1940, for example, the reconstructed north wall lacks the undulating character of the east and west facades, and, nearly all of the first floor windows have been replaced by either overhead garage doors for the fire department or filled in with concrete block and painted to match the terracotta.

Although some changes have been made to the building's exterior, the interior of the Annex Building has undergone dramatic alterations. These changes have evolved from

the need to meet new space requirements. For example, part of the first floor has been lowered to accommodate the fire engine garage, an elevator was added to improve circulation, and numerous office alterations which have been made to meet specific police and department needs. Other modifications have been made to accommodate the City print shop, mail room, and storage areas. Because these changes have largely responded to immediate needs, instead of an overall plan, they have contributed much to the problems that exist today.

Prior to the 1979 bond issue election, many of the Annex Building deficiencies were cited in a report prepared by the Citizens Subcommittee for Police Service Facility. The following were among the building deficiencies which the committee felt impede effective police operations:

"A. Only one entrance to the building is readily accessible and must be used by officers, prisoners and citizens. The potentially hazardous incidents created by this situation are immediately obvious and are compounded by the fact that many school children from Delmar-Harvard use this same entrance as a short cut through the Annex and City Hall. In addition, this entrance is located immediately adjacent to the xerox machine and print shop used by many clerks and secretaries employed by City Hall. In many instances, the employees and citizens are present and accessible as prisoners are brought into the building.

B. The layout and existing functions of the building dictate that prisoner holding facilities be located on three different floors. This situation presents several implications:

1. It is difficult to monitor the activities or condition of the prisoners should they attempt escape or suicide. In the past seven years there have been several attempted and two completed suicides by prisoners. Frequently, on the late

shift, the station is staffed only by the communications staff. During such time calls by prisoners cannot be heard in the radio room and calls for aid by prisoners would be futile.

2. During the process of booking and holding, the prisoners must be brought through the same stairwells, hallways, elevators and access areas as city hall employees using the xerox machine or print shop and citizens conducting business in the building.

3. The very nature of holding facilities on three different floors prevents efficient use of officer and command time.

C. There are no facilities provided for lawyer-client sessions, nor is there adequate space to provide these facilities in the existing building.

D. After an incident, there is only one room for booking and pressing charges that must be used at the same time by officers, suspects, victims and witnesses. This same room is separated by a room divider to the shift commander area used for officer meetings and briefings at the time of shift changes. Much of the information discussed at these briefings should not be overheard by suspects or criminals. When this space is used as a show-up room, witnesses and suspects cannot be adequately separated, which makes it very uncomfortable for witnesses.

E. The officer locker area is a small area in a room that also provides needed storage for the police department and other city departments. The officers lack shower and exercise facilities and have absolutely no privacy in using the area.

F. The area provided for the storage of evidence is inadequate and cannot be handled properly in existing facility. The security and storage of evidence is absolutely essential for efficient and successful prosecution of criminal cases.

G. Parking around and nearby the Annex is inadequate for police as well as citizen use.

With the library, school, firehouse, city hall and the police department all located within a few yards of one another, the area is overly congested almost constantly and presents many dangers to school children, citizens, firemen, police officers and other city employees should a disaster require a major response during congestion."

The committee concluded that because of the very specialized needs of the police department and because the building was designed for another purpose, it does not lend itself to meeting the needs of an efficient and effective professional police department. As the result of all of the building changes that have occurred over the years, especially the constant problems of coping with inadequate security, the department has operated in a continually frustrating environment.

Design recommendations in this report have been prepared to respond to the Annex Building deficiencies. The development of design solutions began by documenting existing conditions which are illustrated on the following plans and elevations.

SITE

The Annex Building is located on the north side of City Hall and has the following site characteristics:

- A. The parking lot on the west side is reserved for employee parking.
- B. The lot on the east side is reserved for city vehicle parking and fire lanes for the engine house. The lot has 12 parking spaces reserved for police and fire vehicles, and a gas pump located near the main fire engine doors.
- C. Public access to the Annex Building is on the south side, adjacent to emergency operations center. This entrance is also used for prisoner intake, and sometimes by children passing through the building on their way to or from Delmar Harvard School.
- D. Harvard Avenue is a two way street. It is used by official vehicles, including fire trucks on emergency runs from the station, and is a loading and unloading area for Delmar-Harvard School. Harvard Avenue and the service street on the north side of the Annex Building are used by school buses for loading and unloading children. Harvard Avenue serves as a major access point to the library parking lot from Delmar Boulevard.
- E. The service drive on the north side of the Annex Building is a one way street going west. This drive is used mainly for official vehicles, especially school buses exiting the school area. There are four unassigned parking spaces located on the north service drive.

BASEMENT

The basement level of the Annex Building is devoted to service functions, including storage, mechanical equipment rooms, lock-up cells and a pistol range. The following are observations which effect the renovation potential of this space and the building.

- A. The three lock-up cells in the basement are totally inadequate and should be removed. Lacking any potential for proper supervision, the potential for suicides and prisoner abuse is very great.
- B. As the result of lowering the fire engine house floor several years ago, the space below the engine house has a very low ceiling height. This space accounts for about half of the available basement floor area; and, because ceiling heights ranging from 6'-8" to 5'-0", its use is limited to storage and mechanical equipment.
- C. The Annex basement provides a secondary fire exit for the lower level of the emergency operations center. Any renovation to the Annex Building must maintain these exits.
- D. A utility chase, carrying steam lines from the central boiler to City Hall, runs under the basement floor of the Annex Building. The central power plant is located north of the Annex Building.

FIRST FLOOR

The first floor of the Annex Building serves both the police and fire departments. There are several problems on the first floor which should be considered if the Annex Building were to be upgraded to accommodate an efficient police department. Among the specific problems are the following:

- A. Public access to the police department is not well defined. Although the Annex Building is part of the civic complex, it is not easily accessible. As an agency serving the public needs, the police department headquarters should have greater public visibility.

Access to the police department is from two directions, both leading to an information desk in front of the records/communications room. Access to this station is from the

east entrance, or from along a corridor linking City Hall and the west parking lot. The public waiting area in front of the information area is inadequate.

- B. The booking room in the existing building is not properly designed nor equipped. It is too remote and lacks the features to properly carry out the booking process.
- C. There is no secure vehicular sallyport where inmates can be safely transferred from a patrol car to a booking area or vice versa. Prisoners now pass through public waiting areas when received at the department. This is a very dangerous situation. There is a need for a secure vehicular sallyport located adjacent to a book area.
- D. The present holding cells are very inadequate. Located on three different floors, the cells frequently house more than one person which is a very dangerous practice. Being separated they are very difficult to supervise, a situation which will continue to result in serious incidents. None of the cells has proper fire safety equipment.
- E. There are no interview rooms for attorney-client meetings in the holding area. A new booking-holding area should include interview space.
- F. The present staff locker area is very inadequate. There are no separate locker areas for male and female staff. Lockers are dispersed on two floors, with the road patrol lockers on the first floor and lockers for investigative and other staff located on the second floor.
- G. The present briefing room is too small and not properly equipped to accommodate report writing and other police work tasks. Since this room serves other multipurpose functions such as training and other group meetings, it should be designed to properly accommodate these activities.

- H. Supply storage, records, etc., are scattered throughout the building. On the first floor, for example, office supplies for City Hall and print shop supplies are located inside the police department. Entrance into the police/fire department zone in the Annex Building is through an electronically controlled door located next to the police information counter. Consequently it requires time to process authorized personnel into these areas; a practice which is inefficient and adds to operational costs. This problem is made greater by the location of the duplicating machine inside the police door which serves the entire civic complex. Future space planning should consider relocating this machine.
- I. As with any major police operation, the University City Police Department must maintain storage for a vast amount of evidence property. It must be properly stored and processed. There are strict legal requirements for processing evidence and the department should have adequate facilities to accommodate this storage. In the existing building evidence storage is scattered throughout. The amount of space should be increased; and spaces and equipment should be designed to accommodate the different types of evidence. All storage should be centralized as much as possible.
- J. The floor level of the engine house is 2'-9" below the level of the remaining first floor.
- K. The location of the elevator and main stairs on the first floor will affect renovation potential. Since these systems are expensive to replace, any scheme should consider their retention.

SECOND FLOOR

The second floor of the Annex Building contains space for the investigative division, city and county juvenile workers, support spaces and sleeping quarters for the fire department. The following are among the issues which should be resolved in any proposals for renovation.

- A. The women's holding cell on the second floor should be relocated. In its present location it cannot be properly supervised and it interferes with the flow of other operations.

- B. The investigative division located on the second floor is not properly designed for efficient operation. They need more space and privacy. All investigative officers should be accommodated with private or semi-private work areas, located in close proximity to technical support areas, i.e., labs, polygraph rooms and property storage. There is a need for interview rooms and a small conference area. At present most officers are grouped in an open area with desks arranged so that very little privacy is achieved. There is need for considerable improvement in this area.
- C. There is a need for more space and privacy for persons working with juvenile offenders. At present there are two rooms on the second floor which accommodate city and county juvenile workers and both share a common interview room.
- Future planning should emphasize flexibility to meet changing needs, recognizing that the county workers are located in the Annex Building because of a special program. Space planning should also consider the needs of the workers, considering the fact that the objective of the city workers is apprehension, while the county workers are providing rehabilitation services.
- D. Spaces accommodating supporting functions such as the kitchen, radio repair, meeting rooms for the auxiliary police, locker areas and uniform storage areas are poorly arranged. These functions need to be reviewed in terms of their role in police operations and planned accordingly.
- E. Access to the second floor is by elevator and the main stair on the south side of the building. There is an exterior door on the south side leading to an uncovered walkway to City Hall. This walkway passes over the emergency operations center. A second exit is a fire escape which is located on the north side of the building.

THIRD FLOOR

The third floor contains two large skylit rooms which were originally studios for the Lewis Publishing Company. Once used as court rooms, one of the rooms was recently renovated to accommodate staff for the Integrated Criminal Apprehension Program. This program is designed to maximize the police department's resources for the apprehension of criminals.

Located between the two rooms on the third floor is a mechanical equipment room housing the heating system for the third floor, and a restroom which was recently installed. Access to the third floor is by elevator and a stair.

Future use of the third floor should consider its remoteness and limited space. Consideration should be given to locating functions that do not have a lot of dependency of other police functions.

ENGINEERING SYSTEMS

A. Structural

Observation of the exposed areas of the building's reinforced concrete superstructure shows it to be in excellent condition. Close examination of a roof beam over the northwest portion of the second floor dormitory shows the concrete spalling throughout its soffit to be superficial in nature with the structural integrity of the beam intact. The spalling was most likely caused by the partially exposed conduit which was placed in the beam with less than 1/2" cover in lieu of the 1-1/2" to 2" normally specified.

B. Heating and Air Conditioning

The existing building obtains steam from a central steam generating plant located in the old library. A two pipe steam system is distributed from the steam plant through an underground utility tunnel. The tunnel enters the north side of the existing building. The tunnel continues through the existing building below the basement floor to serve the existing City Hall Building.

From a visual standpoint, the existing steam plant appears to be in a good state of repair and should continue to function properly with a good maintenance program. Steam piping should have several years of longevity. Condensate piping, because of its age, may require replacement in the not too distant future. Air entrainment in condensate water normally will cause corrosion in condensate piping much more rapid than in steam piping.

In general, the existing building heating system is a combination of cast iron radiators and convectors all of which are supplied by the two-pipe steam system. None of the radiators or convectors has automatic temperature controls. The existing fire house is heated with steam unit heaters that are thermostatically controlled. The third floor areas are heated with relatively new residential gas fired furnaces.

The existing building air conditioning system is a combination of various types of systems of varying age including a large single zone roof-top unit, small split systems in combination with direct expansion air cooled condensing units, window type air conditioners and residential type air conditioners in combination with gas fired furnaces.

C. Plumbing

The existing plumbing system, in some locations, appears to be in relatively good condition while in other areas appears to be relatively old and in a poor state of

repair. The existing plumbing piping system does not have adequate capacity for additional fixtures.

D. Electrical

The building is served by a pad mounted transformer at the north end of the building and the service is a three phase, 4 wire, 120/208 volt type.

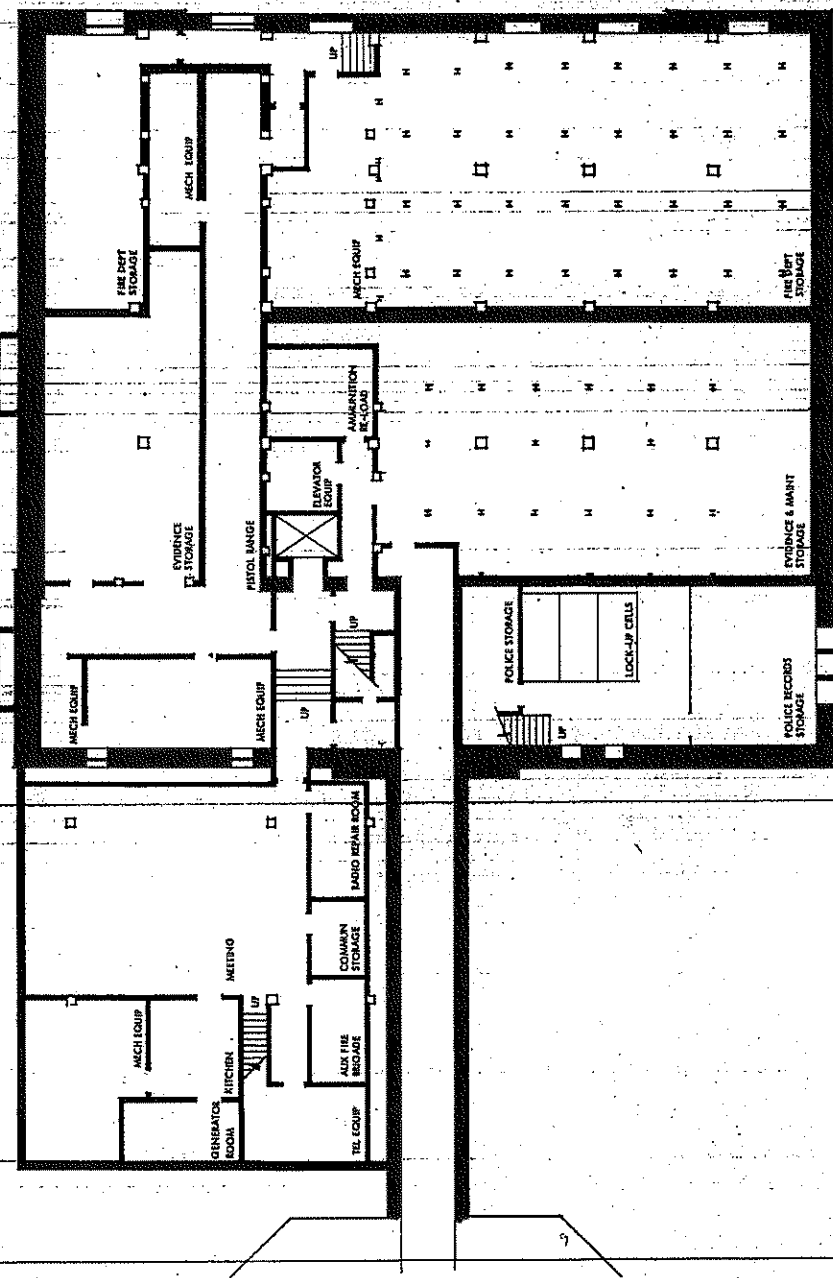
The main panel is located in an area north of the pistol range, and appears to be relatively new, although there are only two 60 ampere spare switches. The panel is rated at 1600 amperes.

There are about twelve other panels scattered throughout the building. They are a mixture of old and new, and according to the Maintenance Supervisor are all loaded to their capacities.

There is evidently some interconnection of electrical systems between the City Hall and the building surveyed.

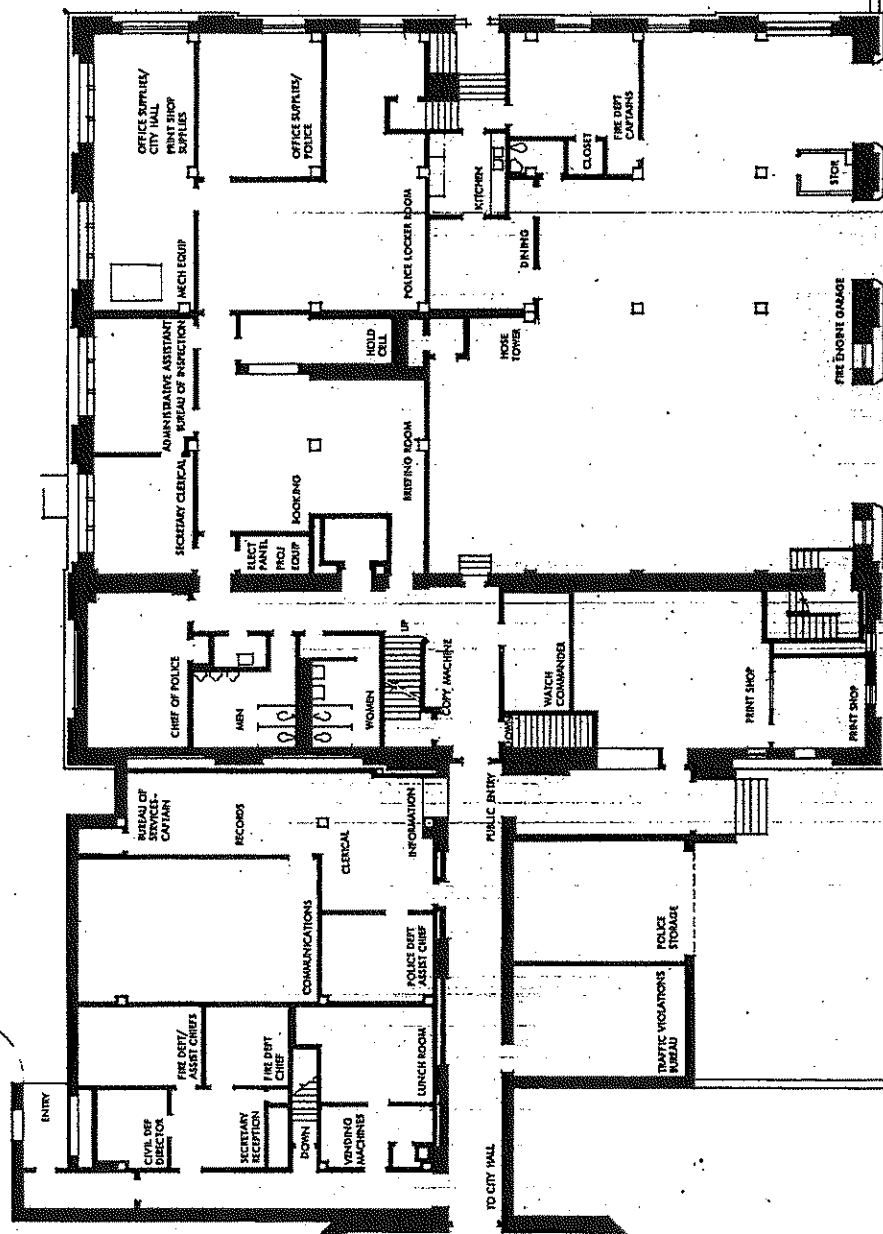
The City Hall is served by a second pad mounted transformer and the City is billed separately for each of the services.

A study should be made to determine the cost effectiveness of having a single service entrance.

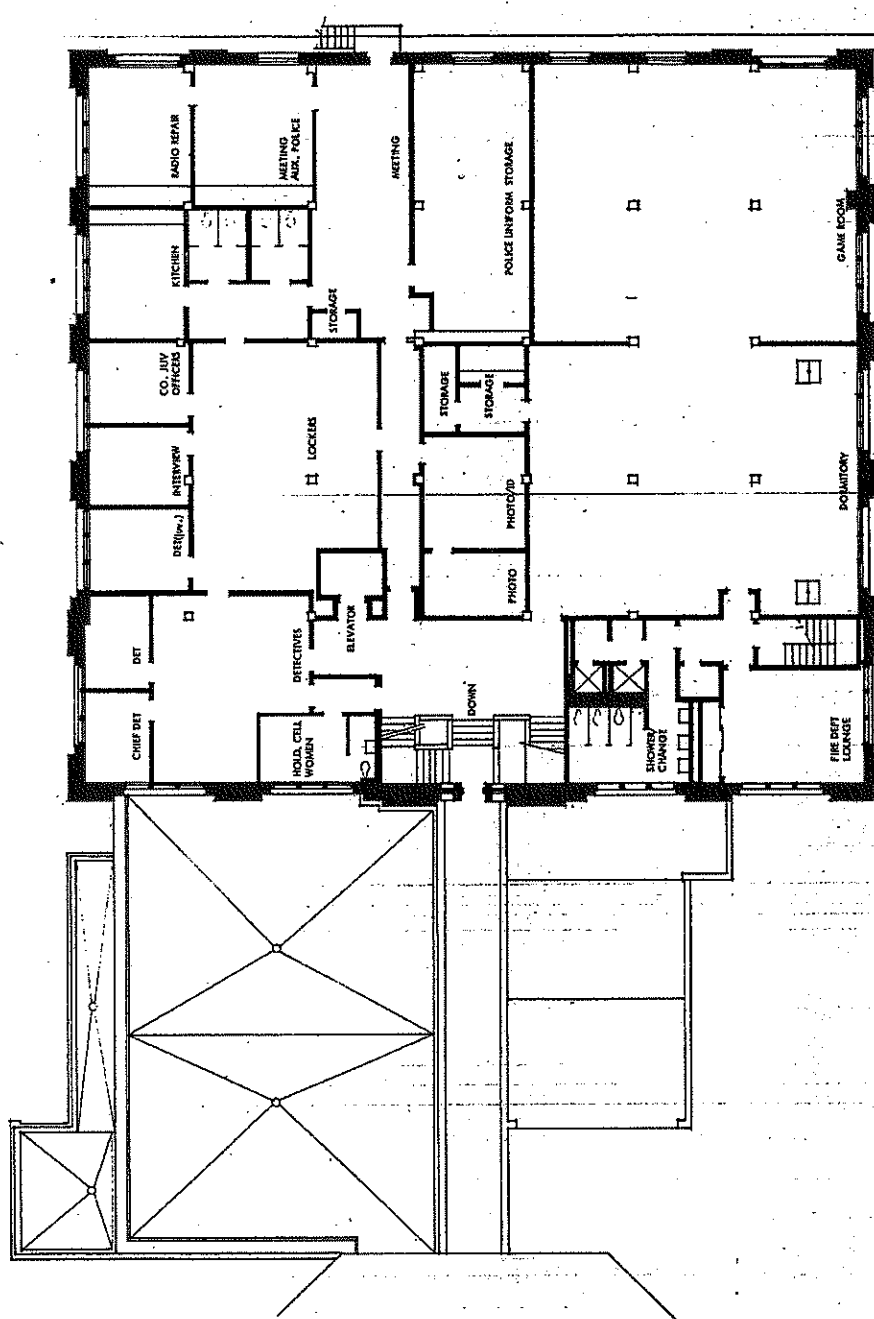


**EXISTING
BASEMENT FLOOR**

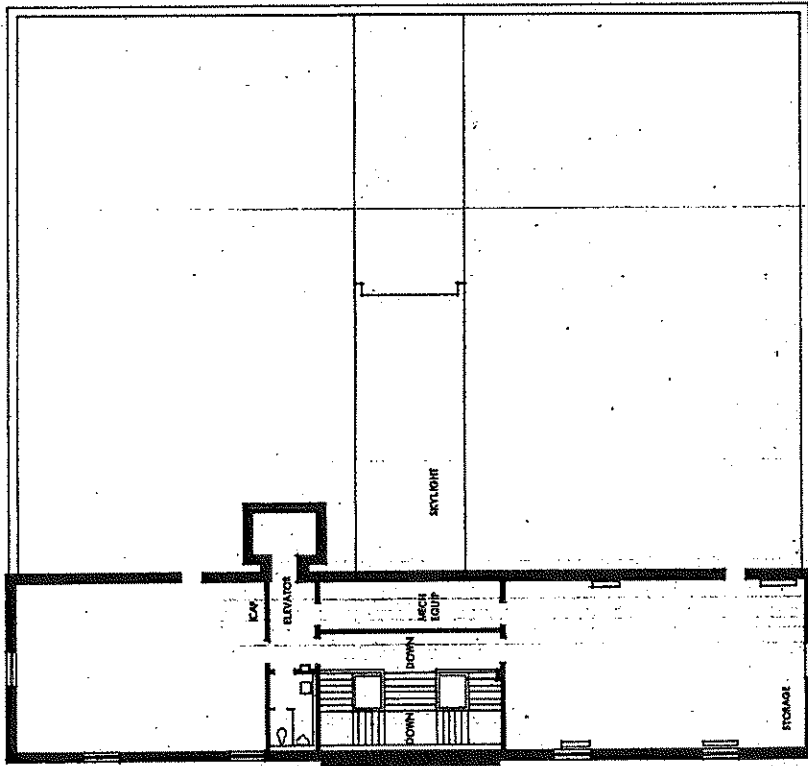
PARKING



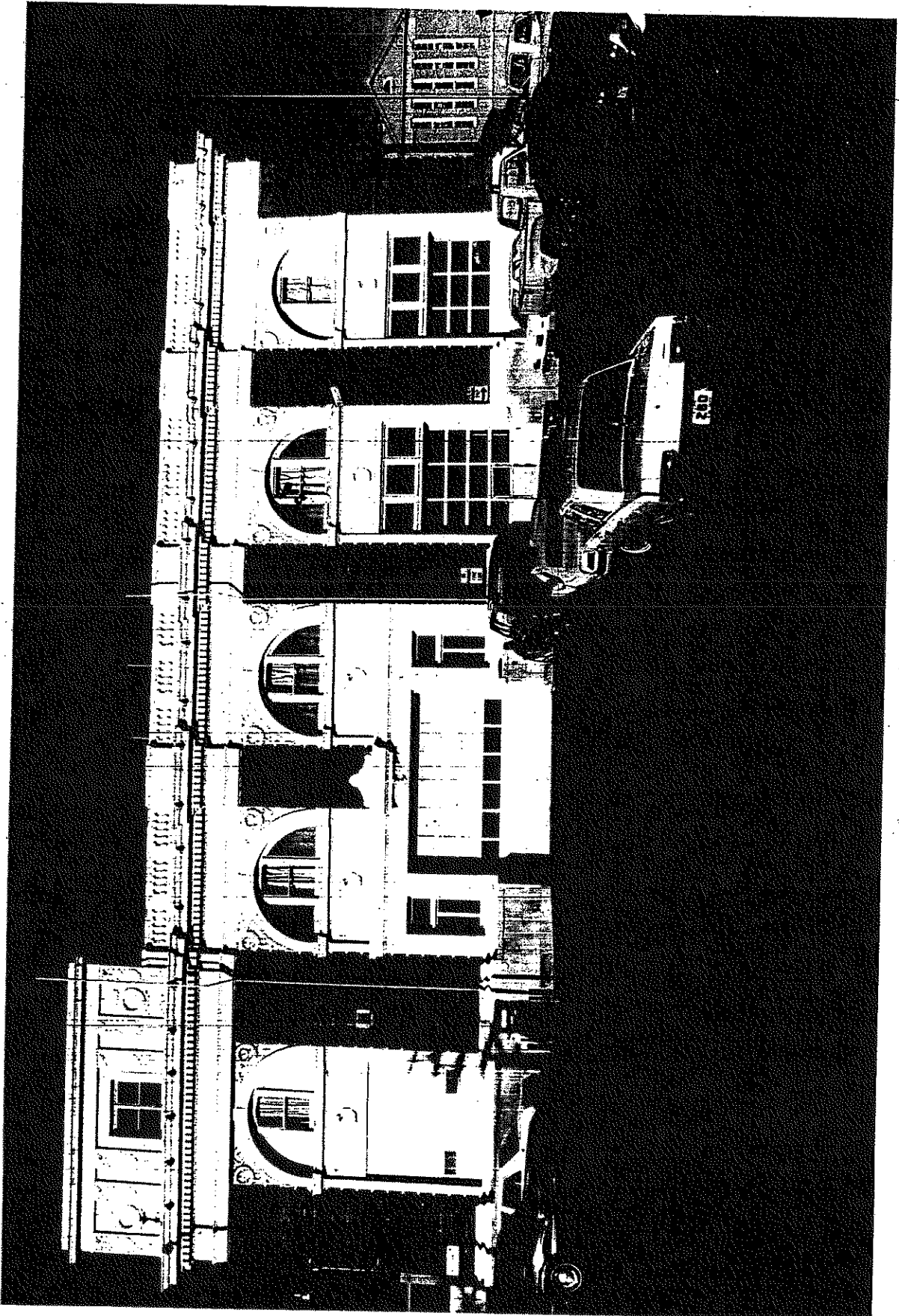
EXISTING
FIRST FLOOR



EXISTING
SECOND FLOOR



EXISTING
THIRD FLOOR



Architectural Program

The following is an architectural program which compares existing space utilization in the Annex Building to what would be desired in a new police facility. The program was prepared with input from the police department staff and recognition for national standards. The renovation proposal responds to this program with some modifications due to existing conditions in the building.

The net areas are the amount of space assigned to specific functions. The gross area includes the net area plus space for circulation, wall thicknesses, mechanical ducts, equipment rooms, etc. The staffing notations refer to existing positions. The program is organized to reflect existing police department organization.

FUNCTION

	<u>EXISTING AREA</u>	<u>REC. AREA</u>	<u>STAFFING</u>
--	--------------------------	----------------------	-----------------

I. Administration

A. Chief of Police	260	250	1
B. Reception/Secretary	200	280	2
C. Administrative Assistant	115	150	1
D. Bureau of Inspection	115	150	1
E. Assistant Chief of Police	165	200	1
F. Conference	0	250	—
Total Net Area	855	1,280	6

II. Bureau of Services

A. Bureau Captain	65	150	1
-------------------	----	-----	---

STAFFING

EXISTING
AREA

REC.
AREA

B. Communications 590 3
C. Communications Captain 170 1
D. Records 230
E. Records Clerks 130 2.5
F. Police Records Storage 350
G. Office Supplies 300
H. Evidence Storage 150

1. Basement/next to pistol range 780
2. Basement/under engine house shared w/maint. 1,780
3. Flammable materials 350

- I. Uniform storage 500
- J. Library 0
- *K. City Jail

1. Vehicular Sally port 0
2. Booking desk 215
3. Photo/ID 0
4. Personal Property Storage 0
5. Shower/clothing change 0
6. Cells 9 @ 70 370
7. Low Security Holding 0
8. Interview Rooms 2 @ 70 0
9. Show-up/Arraignment 60

Total Net Area

5,720

7,840

STAFFING

EXISTING
AREAREC.
AREA

III. Bureau of Investigation

A. Bureau Captain	100	150	1
B. Sergeant	100	120	1
C. Criminal Investigation	190	240	4
D. Juvenile Officers 2 @ 60	140	120	2
E. Interview Rooms 3 @ 70	130	310	
F. Photo Lab	300	300	
G. Temporary Evidence Storage	0	150	
H. Juvenile Court Workers 3 @ 60	135	180	
I. Secretary	65	65	
J. Conference Room	0	250	
K. Reception	0	80	
Total Net Area	1,160	1,865	8

IV. Bureau of Field Operations

A. Area Commander 2 @ 150	200	300	2
B. Sergeants 2 @ 120	135	240	2
C. Report Writing Stations 3 @ 50	0	150	
D. Briefing Room	260	700	
E. Audio Visual Storage	45	60	
F. Lockers (assumes re-use of existing lockers)	1,060	1,000	
G. Restrooms	0	250	
H. Pistol Range	650	650	
Total Net Area	2,350	3,350	4

STAFFING

REC.
AREAEXISTING
AREA

V. Integrated Criminal Apprehension Program

A. Planning and Research	115	150	1
B. Crime Analyst	115	150	1
C. Secretary	65	65	1
D. Conference Room	85	200	—
Total Net Area	380	565	3

VI. Police Community Relations Project

A. Conference/Storage	0	275	—
Total Net Area	0	275	—

VII. Other

A. Public Lobby	195	400	—
B. Restrooms (Per code; consider existing conditions)	—	—	—
C. Janitors' Closets (Per design)	—	—	—
D. Mechanical Equipment	800	800	—
As required with respect to existing conditions.	—	—	—
Total Net Area	995	1,200	—

STAFFING

EXISTING
AREA

REC.
AREA

SPACE SUMMARY (NET)

I. Administration	855	1,280
II. Bureau of Services	5,720	7,840
III. Bureau of Investigation	1,160	1,865
IV. Bureau of Field Operations	2,350	3,350
V. ICAP	380	565
VI. Police Community Relations	0	275
VII. Other	<u>995</u>	<u>1,200</u>
Total Net Area	11,460	16,375

GROSS AREA

NET AREA

SPACE SUMMARY (EXISTING BUILDING)

I. Annex Building

A. First Floor

1. Police Department	2,770	4,525
2. Fire Department	3,900	4,350
3. Other (Print shop supplies in basement)	1,150	1,525

Total First Floor Area

10,400

B. Second Floor

1. Police Department	3,790	5,870
2. Fire Department	3,930	4,530
3. Other	-	-

Total Second Floor Area

10,400

NET AREA GROSS AREA

C. Third Floor

1. Police Department
2. Other

1,665
none

2,740
none

Total Third Floor Area

1,665

2,740

D. Basement

1. Police Department
2. Fire Department

4,165
2,845

6,100
4,300

Total Basement Area

7,010

10,400

E. Total Building Space Summary

1. Police Department
2. Fire Department
3. Other (Print Shop, Mail Room, Storage for other city offices)

12,390
10,675
1,150

19,235
13,180
1,525

Total Building Area

24,215

33,940

II. Emergency Operating Center

A. First Floor

1. Police Department
2. Other

1,850
2,235

2,180
2,285

Total First Floor Area

4,085

4,465

NET AREA

GROSS AREA

B. Basement
(no police functions)

*The number of cells was derived from a jail survey which included all bookings for the month of January 1979, and Mondays and Thursdays for a 12 month period beginning in July 1978. The following are the results of the 1 year survey:

A. Number of days surveyed	103
B. Number of bookings (300 - male, 69 - female)	369
C. Percent of bookings per shift	
1. 7 - 3 pm	35%
2. 3 - 11 pm	40%
3. 11 - 7 am	25%
D. Average bookings per day	3.5
E. Highest number of bookings in one day for period surveyed	10
F. Number of days with booking greater than 5	21

G. Length of stay after booking by percent of total bookings

	<u>Bookings</u>	
1. 1 hour or less	95	25%
2. 1 - 2 hours	61	16
3. 2 - 6 hours	87	23
4. 6 - 12 hours	60	16
5. 12 - 23 hours	52	14
6. 1 day	10	2.5
7. 1 - 2 days	2	less than 1%
8. 2 - 6 days	1	less than 1%
9. 7 + days	1	less than 1%
Total bookings	369	100%

Proposed Design Solution

The design proposal illustrated in this report represents one approach for upgrading police facilities in the Annex Building. It was prepared to give specific information on the kind of facility one could expect from renovation. The approach and purpose of this study has been to illustrate not whether renovation can be accomplished, but can it be done in a manner which resolves the present deficiencies and can meet present and future police department needs.

In addition to providing information on design possibilities, the proposed design has provided a basis for preparing construction cost estimates. Cost estimates are more accurate if they can be prepared from documents illustrating existing conditions and specific design proposals rather than rule of thumb guidelines.

In reviewing the design proposal, it should be kept in mind that the design is conceptual, and will require additional refinement if the project proceeds. It illustrates development possibilities, but is not intended to resolve all of the design issues which must be addressed during schematic design.

There were a number of givens, or criteria which have influenced the conceptual design. These criteria are basic to the proposed building program and Annex Building, therefore they must be successfully resolved as part of any renovation program. The feasibility of renovating the Annex Building is largely determined by how well these criteria can be resolved. The proposed design illustrates a solution to these criteria, including responses to the following:

- A. As the result of renovation, the amount of space available to the police department should be no less than what would be achieved through new construction.
- B. As a structure on the National Registry for Historic Places, the constraints unique to

historic buildings should be respected. The major requirement is that the exterior of the building should not be significantly altered.

- C. The need to maintain police operations in the Annex Building while renovation is underway should be respected.
- * → D. Proposals for renovation should assume that the fire department will vacate the Annex Building, and that all of the building will be available for police use.
- E. Design emphasis should be on maintaining existing building systems, i.e., mechanical systems, elevators, stairs, etc. If these systems limit development potential, however, they should not restrict other alternatives.
- F. The design solution should emphasize a positive and well defined identity for the police department. The idea of an Annex Building, where a number of city operations are located, should be avoided. The facility should have good public identity and access.
- G. The site should be developed so that there is clear circulation; proper separation among police, public and other vehicles; and, complementary development to adjacent uses.
- * → H. There should be no reduction in the number of parking spaces on the site. Effort should be made to increase the number of parking spaces
- I. There should be minimal disruptions to the Emergency Operations Center as this center must serve the city as an operations center in the event of a disaster.
- J. The proposed design should conform to the BOCA Building Code and other city and county building requirements.

SOLUTION

The proposed design as illustrated on the following pages responds very favorably to the project constraints. Particular attention has been given to resolving those issues pertaining to the site, building identity, historical building issues, and the operational needs of the police department.

* → The design concept represents an attempt to create a strong identity for the Annex Building as a facility for the police department. Instead of a building attached, or located behind City Hall, emphasis has been on developing a separate identity for the police department, but one compatible to the civic complex. This has been accomplished in two ways. First of all, site and building modifications are proposed which will create a stronger identity on the site and a clear public entry. Secondly, the building interior has been reorganized to improve on present deficiencies. The design includes a secure lock-up facility, adequate space and accommodations for various police operations, better proximity relationships among divisions within the police department, clearer internal circulation, and better security for the police by proper separation of public and police functions. In addition, space utilization within the building has been clearly defined for police use, as storage spaces for other city offices have been relocated.

The design objectives have been accomplished with few alterations needed on the building's exterior, little change to the basement level, and retention of the existing elevator and all stairs. As will be explained in a later section, the proposal calls for a replacement of the major mechanical systems and re-organization of spaces on the first and second level.

The following is a description of the key features of the proposed design solution:

SITE

* The recommendations for site improvements include suggestions which will improve the building's identity, create a clear public entrance, improve parking and vehicular circulation. The specific recommendations include the following:

A. An important element of the proposed design is the lowering of the site on the east side of the building, the development of a small pedestrian terrace on the east side and the creation of a major public entrance where the main engine house fire door is presently located. It is recommended that the site lowering will occur from grade at Harvard Avenue to about four feet below grade at the edge of the building terrace. Public access into the building will be up a series of steps integrated with a landscaped terrace. The combination of the lowering of the parking and the landscaped terrace will have the effect of elevating the building, thus providing better separation between vehicular and pedestrian movement. The terrace steps would lead directly to a recessed entrance at the main engine house garage entrance. Both public and police personnel will use this entrance.

Parking on the site in front of the entrance will accommodate 18 spaces. Four or five of these spaces can be reserved for the public. Peak demands will be at shift changes which occur three times per day. Four additional parking spaces are available on the service street on the north side of the building. Entrance to the parking area from Harvard Avenue is proposed as a one way lane at the south end of the lot, circulating north, then out on to Harvard.

The service pick-up for the City Hall complex has been relocated from the north side of

the building, to the east side in a concealed area in front of the EOC addition.

The existing entrance to the police department on the east side will remain open, but its use will be directed to other city hall functions. This can be accomplished through signage.

- B. The major change to the north side of the site is the addition of a secure vehicular sally port for loading and unloading prisoners. The enclosed structure is sited so that entrance will be from the east, consistent with the one way service drive going west. It will be possible for school buses and other vehicles to pass the sally port unobstructed. It is proposed that the top of the sally port will meet the masonry base of the police building, which will not interfere with the existing building expression. If desired, the sally port could be faced in stone to complement the existing building base. Entrance from the sally port will be through an existing door and stair.

The construction of the sally port will require slight modifications to the existing fire escape. And, because of the sally port location, the existing diesel generator, power line support pole, electrical panel box and air conditioning units will need to be relocated.

- C. There are no changes proposed for the west side of the site.

BUILDING INTERIOR

Because of the present deficiencies substantial changes have been proposed for the building interior, especially on the first and second floors. Few changes are proposed for the basement and third floor.

Certain building systems have been retained while others will require substantial modifications. No changes are proposed for the structural system, except for partial slab removal to create an atrium space located underneath an existing clerestory. As a design element the atrium will bring natural light into the building interior and serve as a focus for organizing interior spaces. The existing elevator and stairs remain unchanged while all mechanical systems are proposed for replacement.

The following are among the specific recommendations proposed for the building interior:

A. Few changes are proposed for the basement level. The recommendation is that the basement continue to be used for storage and mechanical equipment. Some re-assignment of space can be made as the result of the fire department vacating the building.

If the engine house floor were raised, more than 50% of the basement level would have the potential for use other than storage. The cost estimate in this report includes an estimate for this alternative.

B. Major changes have been proposed for the first level. The first level will accommodate the public, an information desk, road patrol briefing, training and locker areas, a show-up arraignment room, and a secure lock up facility.

The public will enter the building from two directions, both leading to an information desk underneath the atrium. Entrance from the east side of the building will be from the main entrance, and from the south side through the existing north/south corridor linking the police facility with City Hall. The proposed information desk will serve the public during the day, while at night the public can be directed to the existing information counter next to the records area if staff are not available in the main building.

The briefing/locker room area, located in the northeast section of the building, will serve the road patrol officers and provide lockers for all staff. Included in this area will be an office for a training officer, report writing counters and storage.

The lock-up facility, located adjacent to the information desk, will accommodate nine individual cells (7 for men and 2 for women) and a waiting room for persons charged for minor offenses who will be held for an hour or less. Persons booked in the lock-up will enter from the vehicular sally port, pass up the stairs through interlocking doors to the booking desk. The booking desk will be equipped for proper intake procedures, individual storage and a photo/ID counter. A shower/change area is located across from the booking desk.

The cells can be observed from the booking desk which will afford direct staff supervision, a condition which does not now exist. The cells will be set in from the outside west wall which will enable security construction to be accomplished without altering the outside wall. Since the outside wall will be left undisturbed, the solution is compatible with the historical considerations of the building.

The lock-up area includes rooms for both contact and non-contact visiting. The contact visiting room has a dual use in that it can be used for taking complaints from the public. It is located adjacent to the information desk.

A combination show-up/arrestment room is located between the cell area and the records room. Prisoners can be brought into this room away from public contact, and the public can view prisoners without being seen. The space will serve as an arrestment room for those prisoners who would pose a security risk if they were transferred to court located in City Hall. It will require some changes in court scheduling, but given the infrequency of these kind of cases, it should not be a serious problem.

- C. The second level will provide space for major police divisions, including the Chief of Police, road patrol commanders and sergeants, ICAP personnel, investigative personnel and juvenile offices. The concept is based on the desire to have close proximity among the various divisions which will result in better internal communications among key personnel. Improved communications among department personnel will improve police services for the public.

The second floor is organized around an atrium and features a highly flexible office plan. There are private offices for key personnel but most work areas will be accomplished through open office planning. This concept permits a high degree of flexibility for meeting changing department needs, including the sharing of common support functions such as a library, interview rooms, conference rooms, storage, etc.

Public entrance to the second floor will be by instructions from the information desk on the first level. Directed from the information desk, the public will use the elevator or go up the stairs on the south side of the building. At the second level the public will wait in a seating area located in front of the atrium, and directed to someone by a receptionist located adjacent to this waiting area.

Staff circulation can use the elevator, public stair, or a staff stair which is the existing stair on the east side of the building.

The design intent for furnishing and finishes is to accommodate the needs of an efficient and modern police department. There appears to be no unusual restrictions on the second floor to prevent this from being accomplished.

- D. The third level will require few modifications, since about half of the space was recently renovated. Because of the remoteness of the third floor, it is recommended

that the spaces on this level be assigned to functions requiring infrequent use. Either room on the third level can serve as a meeting room for the auxiliary police, community relations, etc. To accommodate such use the room on the east side should be finished to permit greater flexibility.

There is a need for archives storage space which can be accommodated on the third level.

OTHER IMPROVEMENTS

In addition to recommendations for site improvements, and the Annex Building, the following are recommendations which are important to the success of the project.

- A. Improvements to the Annex Building should include funds for upgrading all windows, cornices, clerestory windows, and other miscellaneous building details.
- B. Although no substantial changes are proposed for the Emergency Operations Center, the records area should be reorganized, and private offices should be provided for the bureau of services captain and the communications captain.
- C. After review of the possible options it is recommended that the print shop remain in its present location. Although adjacent to the police department the two operations can be adequately separated. Print shop storage should be relocated with the basement of City Hall or the Emergency Operations Center as possibilities.
- D. Consideration should be given to relocating the copy machine which is presently located inside the police facility. The use of this machine by personnel other than the Police Department is time consuming and disruptive to internal police operations.
- E. The traffic violations bureau and the police storage adjacent to this space are proposed

to remain in their present location. If the Emergency Operations Center were reorganized, it is possible that the Traffic Violations Bureau could be relocated. The police storage should remain where it is because of the access to the service yard.

BUILDING SYSTEMS

The following are recommendations for the basic building systems which would require modifications to meet new design requirements. In addition to basic structural and mechanical/electrical recommendations, observations are offered on the potential for solar energy application.

A. Structural

The existing firehouse engine floor, lowered approximately 2 1/2" below the annex first floor to accommodate the fire engines, is composed of a reinforced concrete slab supported by steel beams framed over added infill steel columns and the original reinforced concrete columns cut down to basement "stub" columns. Construction of a new floor slab for office use at the annex first floor elevation can be accomplished by demolition of the existing slab, steel beams and steel columns and extending the basement concrete "stub" columns with new steel "stub" columns and framing a new steel supported floor system at the higher elevation. No infill columns are necessary.

The reinforced concrete second floor beam and slab system is such that saw cutting a new opening along the beam/slab interface (just below the existing roof clerestory skylight) is feasible without special structural measures.

B. Heating and Air Conditioning

Due to the age of most of the elements of the existing heating system, the entire

heating system within the existing building should be removed. Likewise, the existing air conditioning systems should be removed.

The adaption of existing systems to the remodeling program does not lead to adequate use. Most of the systems were installed when energy was cheap and plentiful and therefore are not energy conscious.

With the extensive remodeling design, it is recommended that a complete new heating and air conditioning system be an integral part of the remodeling program. The new system should be of the variable volume type system which will provide adequate temperature control, allow "free cooling" cycle during mild weather, provide proper ventilation requirements and provide minimum energy usage. A perimeter hot water heating system would supply the heating requirements for the building. The hot water for this system would be generated by the existing steam supply.

C. Energy Conservation

With the ever increasing energy problem, it is recommended that the existing skin heat loss - heat gain be reduced to an economical minimum. The addition of insulation on exterior walls and double glazing normally will provide cost effective means for accomplishing energy conservation.

D. Solar Energy

It is recommended that a cost analysis be prepared to analyze the cost effectiveness of a solar heating system. With the limited use of domestic hot water in the building, the heating of domestic hot water may not prove to be cost effective. However, the

use of solar energy to supplement the building heating requirements may prove to be cost effective.

Solar panels for hot water, with their support framing normally weighing 10 to 15 psf, most likely can be supported directly on the structural roof system without strengthening. However, structural analysis should be made to verify this. An alternate would be to frame a steel solar panel support system directly over the building concrete columns independent of the structural roof system. Structural analysis should show the column capacities, sufficient to accommodate the additional loadings.

If the City were to explore the possibilities of solar energy, consideration might be given to building a solar energy structure on the Delmar Harvard playground. There is ample space, and possibly the structure could be integrated with a play apparatus or other educational use.

There are Federal programs which may be available to provide funds for all or portions of solar energy systems. These programs should be investigated promptly in that there are long lead times before some funds become available.

E. Plumbing

It is recommended that a complete new plumbing system be installed throughout the building due to the age of present piping system.

F. Sprinkler System

It is recommended that a complete fire protection system be installed within the building. The system should be installed in accordance with all applicable codes. The fire protection system will require a new water service.

G. Electrical

The main panel, although it has only two spare 60 ampere switches might be adequate to serve a remodeled building through a better utilization of the feeder circuits. One section of the panel might have to be replaced or a section added. It has a capacity for 10 watts per square foot, which should be adequate for this type of building.

Few, if any of the branch circuit panelboards could be retained in a major renovation.

A much more logical and convenient arrangement of panelboards would be possible if extensive alterations are made to the building.

There are two emergency generators. One, outside the building at the north end is not in operating condition and might have some minimal salvage value.

The second generator is in the Generator Room and serves radio communications, telephone power and miscellaneous lights and receptacles. It has a capacity of 56 KVA on a standby basis (50 KVA for continuous operations). It has a remote radiator with a fan to exhaust the air to the outside. If possible, this should not be relocated when renovations to the building are considered as the relocation of the generator, auto-transfer switch, remote radiator and room exhaust could be expensive.

The generator capacity appears to be small for the emergency requirements for this type of building.

A major renovation of the building should include an additional generator as there are probably a number of additional services which should be included in the emergency system.

If at all possible, the communications areas should not be relocated in any program for renovation. The relocation of this equipment would necessitate an interruption to the vital services performed in this area, in addition to the high cost of relocations.

The lighting in a number of areas appears to be inadequate, and any changes to be made should include replacement of inefficient incandescent lighting with fluorescent type.

PHASED CONSTRUCTION RECOMMENDATIONS

The proposed police department renovation has been evaluated in order to identify phased development plans based on the proposed design. The most important factor in this process is the fact that construction cannot begin until the fire department vacates the Annex Building. Assuming passage of a November 1980 bond issue, occupancy of a new fire station would not be possible until late winter of 1981 or spring of 1982.

Assuming that the fire department will vacate the Annex Building, the following is one approach for construction:

A. Phase One

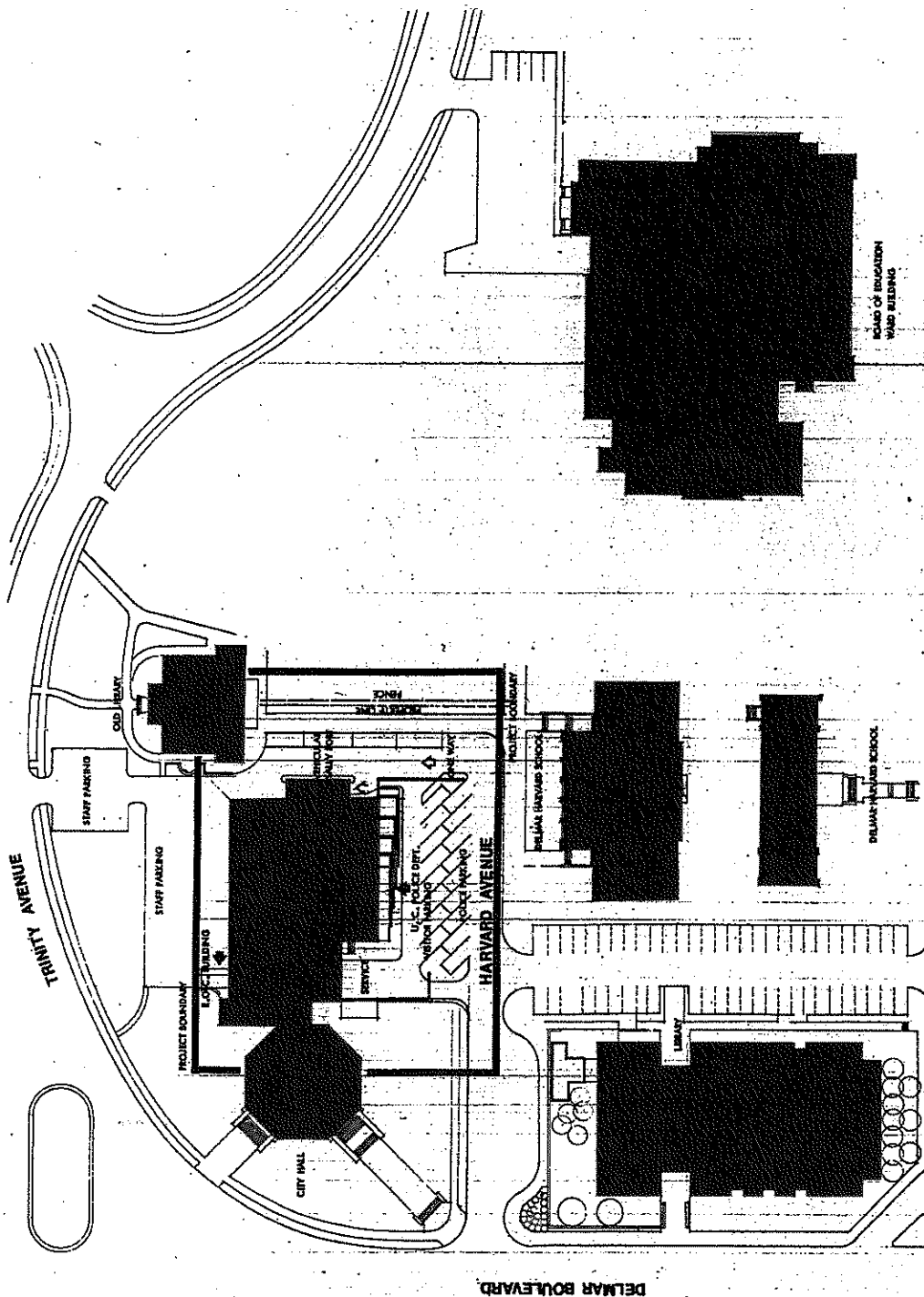
Phase one includes relocating the fire department into a new facility, or temporary facilities and beginning construction. Construction would begin in the space vacated by the fire department which includes the first and second floors. If the investigative and juvenile workers were relocated to the third floor all of the second floor could be renovated during phase one. On the first floor the road patrol, public entry and sally port would be constructed. Site development on the east side of the building

would also be a part of phase one construction.

B. Phase Two

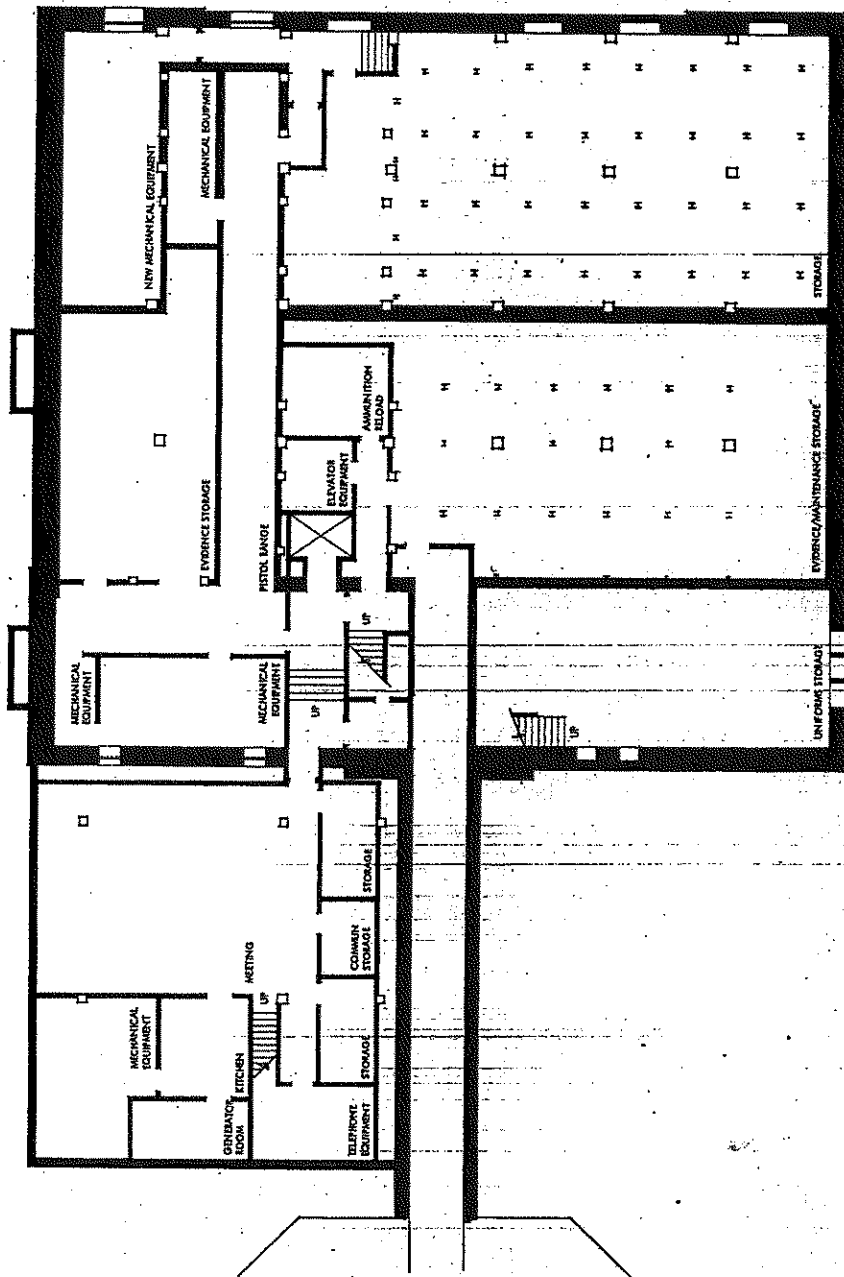
When the second level is completed, police administrative officers on the first floor, ICAP and other relocated offices on the third floor could be moved to the second floor. When this is accomplished, construction could begin on the lock-up facility on the first floor, as well as finalizing other project needs.

It is important to note that occupying a building while construction is going on is very disruptive. If there were some way of temporarily relocating police and fire functions that now occupy the Annex Building (leaving the communications center where it is), there could be at least a 10% savings in construction (a penalty for phasing), and construction could begin much earlier which lowers the cost due to escalation. If the police cannot be relocated, consideration ought to be given to temporarily relocating the fire department. Although a phasing penalty would still exist, the cost increases due to escalation could be reduced because construction could begin earlier.

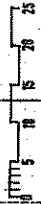


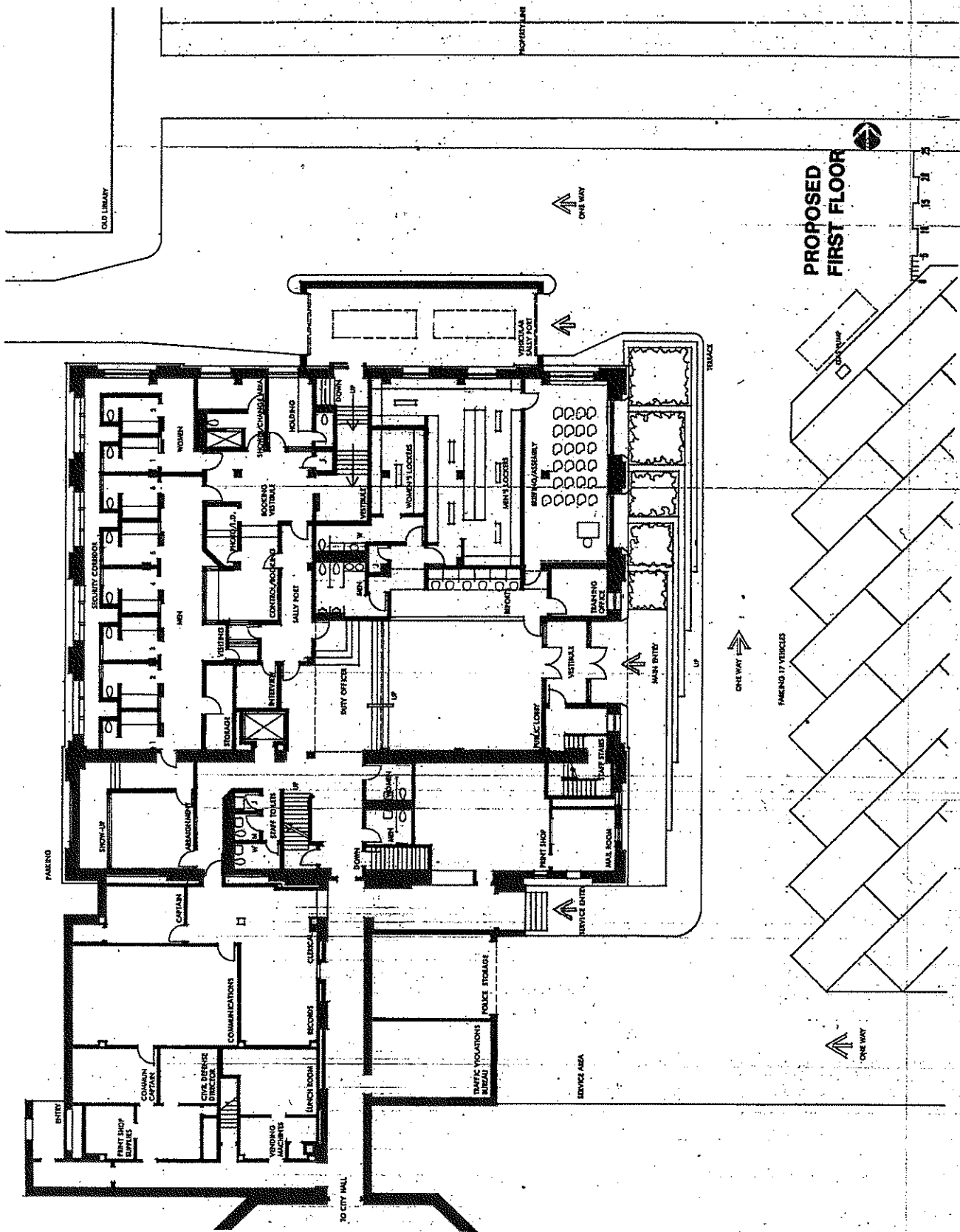
PROPOSED SITE PLAN



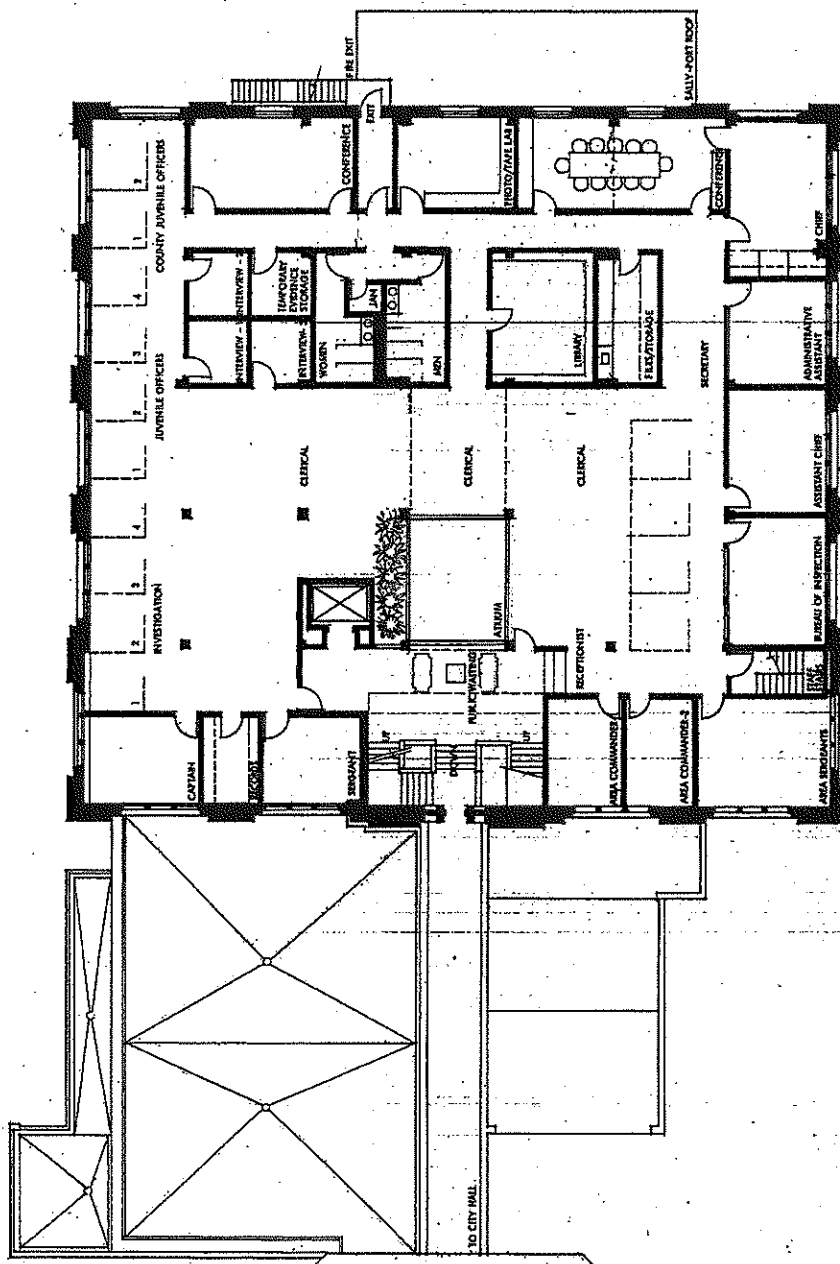


PROPOSED
BASEMENT FLOOR 2





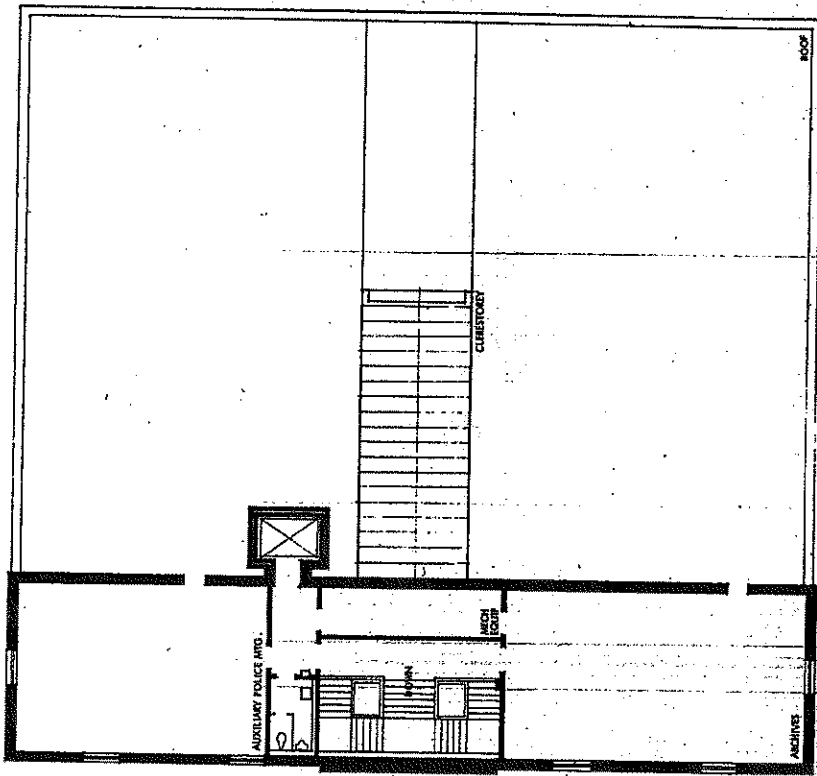
PROPOSED
FIRST FLOOR



PROPOSED
SECOND FLOOR



PROPOSED
THIRD FLOOR



EXISTING SKYLIGHT

CLERESTORY LIGHTING

ROOF

PHOTO/TAPE LAB

STAFF TOILETS

CLERICAL AREA
INVESTIGATION

ATRIUM

DUTY OFFICER

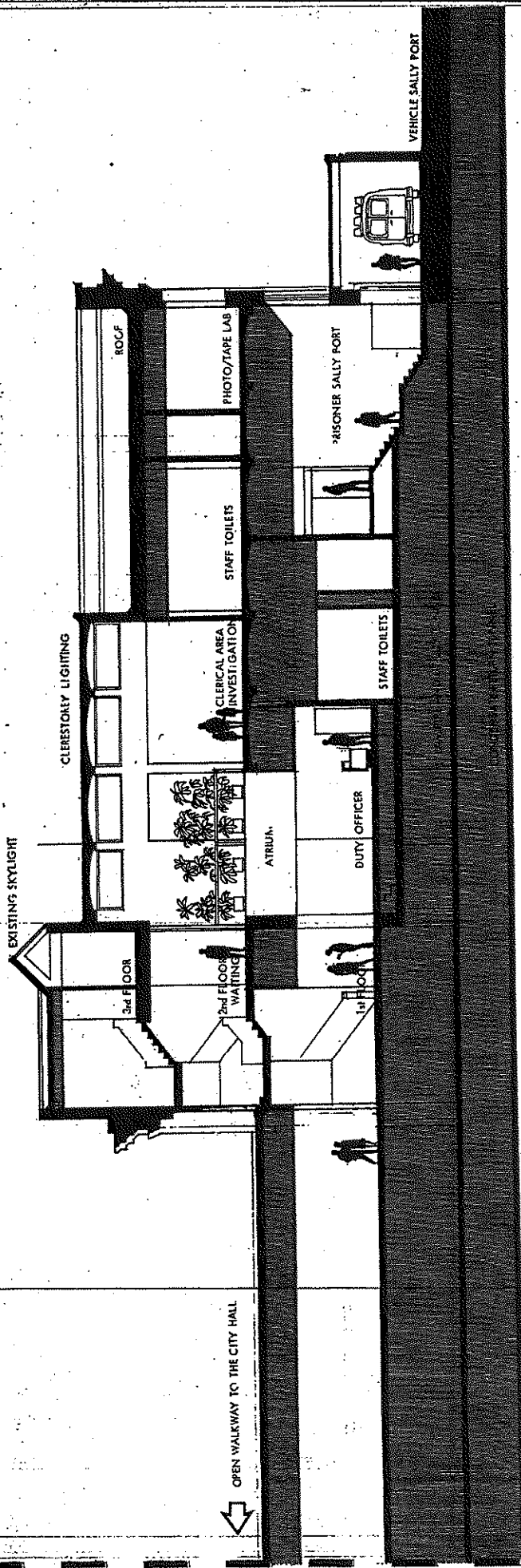
PRISONER SALLY PORT

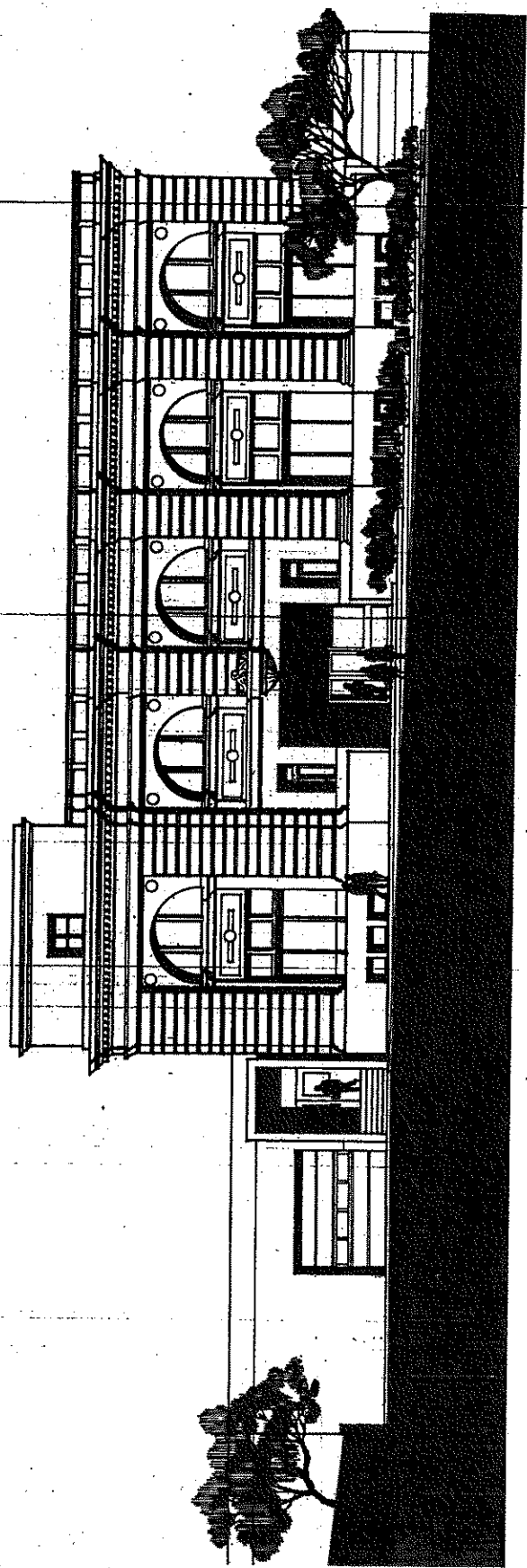
STAFF TOILETS

VEHICLE SALLY PORT

OPEN WALKWAY TO THE CITY HALL

PROPOSED PRINCIPAL SECTION





Construction Cost Estimate

Sitework	51,600
Demolition	174,200
Concrete	21,400
Masonry	220,400
Structural Steel	14,300
Carpentry	6,100
Moisture Protection	3,700
Glass, Glazing & Doors	176,400
Finishes	147,400
Specialties	3,700
Special Construction	45,100
Plumbing	85,000
Fireprotection	45,000
Heating, Ventilating, and Air Conditioning	440,000
Electrical	245,000

TOTAL DIRECT COSTS

1,679,300

* GENERAL CONDITIONS @ 7% 117,511
 GENERAL CONTRACTOR'S PROFIT @ 8% 143,748
 DESIGN & CONSTRUCTION CONTINGENCY @ 15% 291,033

TOTAL CONSTRUCTION COSTS BASED ON JANUARY 1, 1980 PRICES

\$2,231,597

-or-

\$2,232,000

100,000

190,000

25,000

\$2,547,000

TOTAL PROJECT COSTS

MOVABLE FURNISHINGS
 PROFESSIONAL FEES (Architect, Engineers, Consultants, etc.)
 OFF SITE UTILITIES (ALLOWANCE)

* General Conditions are miscellaneous costs not related to direct construction. They include telephone, general weather protection, superintendents office, temporary toilets, clean-up, barricades and numerous other field items.

\$95,200

Alternate No. 1 - Replace existing engine house floor slab - add
If the engine house floor were replaced, about 4,300 square feet of
usable floor space would be gained in the basement. This space would
cost about \$22.00 per square foot based on today's prices.

The above prices exclude printing costs, legal fees, and financial costs.

If a bond issue were held in November of 1980, and if construction could not begin before
completion of a new fire station, then escalation should be based on 11 months for bond
passage, 16 months to design and build a new fire house, and 6 months to the mid point of
construction of this project.

If this schedule were applied escalation will be 33%. Using \$2,547,000 as a base project
cost, the escalated cost will be \$3,387,510.

Project Schedule

TIME TO ACCOMPLISH PROJECT IN MONTHS

TASKS

NOV. 80 JAN. 81 JAN. 82 MAR. 82 MAR. 83

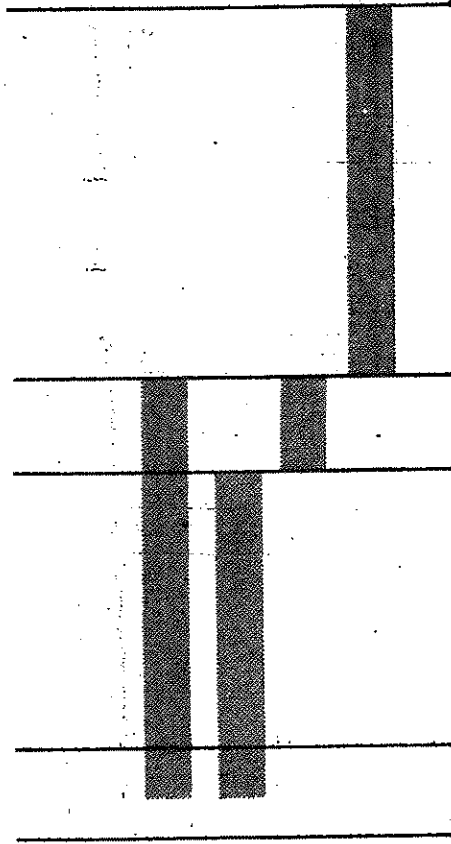
1. Pass Bond Issue

2. Design & Build New Fire Station

3. Annex Building Design

4. Bidding

5. Construction



Schedule Based on Renovation Beginning when New Fire Station Occupied

Summary Observations

The proposed building design and site development plan, as illustrated in this report, demonstrates the feasibility of renovating the Annex Building for police facilities. If the facility were properly developed, it could meet the department's needs and represent a substantial improvement to the civic complex site. The facility has the potential to be a distinguished building instead of a service attachment to City Hall, and the development can be achieved without compromising the important historical determinants.

Although the report concludes that it is feasible to upgrade the Annex Building, it is recognized there are trade-offs in the proposal. Because certain existing conditions will affect development potential, there will be some planning and design features that are desirable, while others less so. The project is feasible because the desirable features outweigh the undesirable ones.

Based on the design illustrated in this report, the following observations note the advantages and disadvantages for renovating the Annex Building. They reflect one approach to renovation; another approach, however, might result in other conclusions.

Advantages

1. The Annex Building has more available space for police operations than would be programmed for a new facility. The Annex Building and police allocated space in the emergency operations center represent about 36,000 square feet. This includes space in the Annex Building assigned to the print shop and mail room. A new facility would require 20-25,000 square feet.
2. The project has the possibility for improving the site around the Annex Building, therefor enhancing the civic complex. Additional parking can be achieved; vehicular and pedestrian circulation can be improved; landscape potential is greater as

illustrated by the terraced plaza; and, better public identity can be achieved. The image of the police department and the City would be improved.

3. Present deficiencies can be resolved in the existing building. The need to provide a secure lock-up facility and improved space relationships among various police departments can be achieved in the existing building. There is available space to accommodate future department programs and organizational changes.
4. Maintaining the proximity of the police department can be preserved, especially the relationship to municipal courts.
5. There are construction cost savings to be achieved through renovation, but they are considered marginal. Potential cost savings are significantly reduced by escalation caused by construction delays.
6. The Annex Building can be renovated with respect to the historical needs of the civic complex.

Disadvantages

1. The Annex Building was not designed for a police facility, and therefore, cannot be made as efficient as new construction.
2. Although the proposed design solution illustrates that the police program can be met, the location of the existing elevator, stairs and communications center limit design potential. This condition is not unique to this project, as every renovation proposal must respond to existing conditions.

3. Renovation will be expensive due to escalation caused by construction delays, and the need to replace all mechanical systems. Construction phasing requirements represent at least a 10% increase in cost over conventional methods.
4. Renovation will be disruptive to police operations during construction. It can be minimized, but it cannot be avoided.