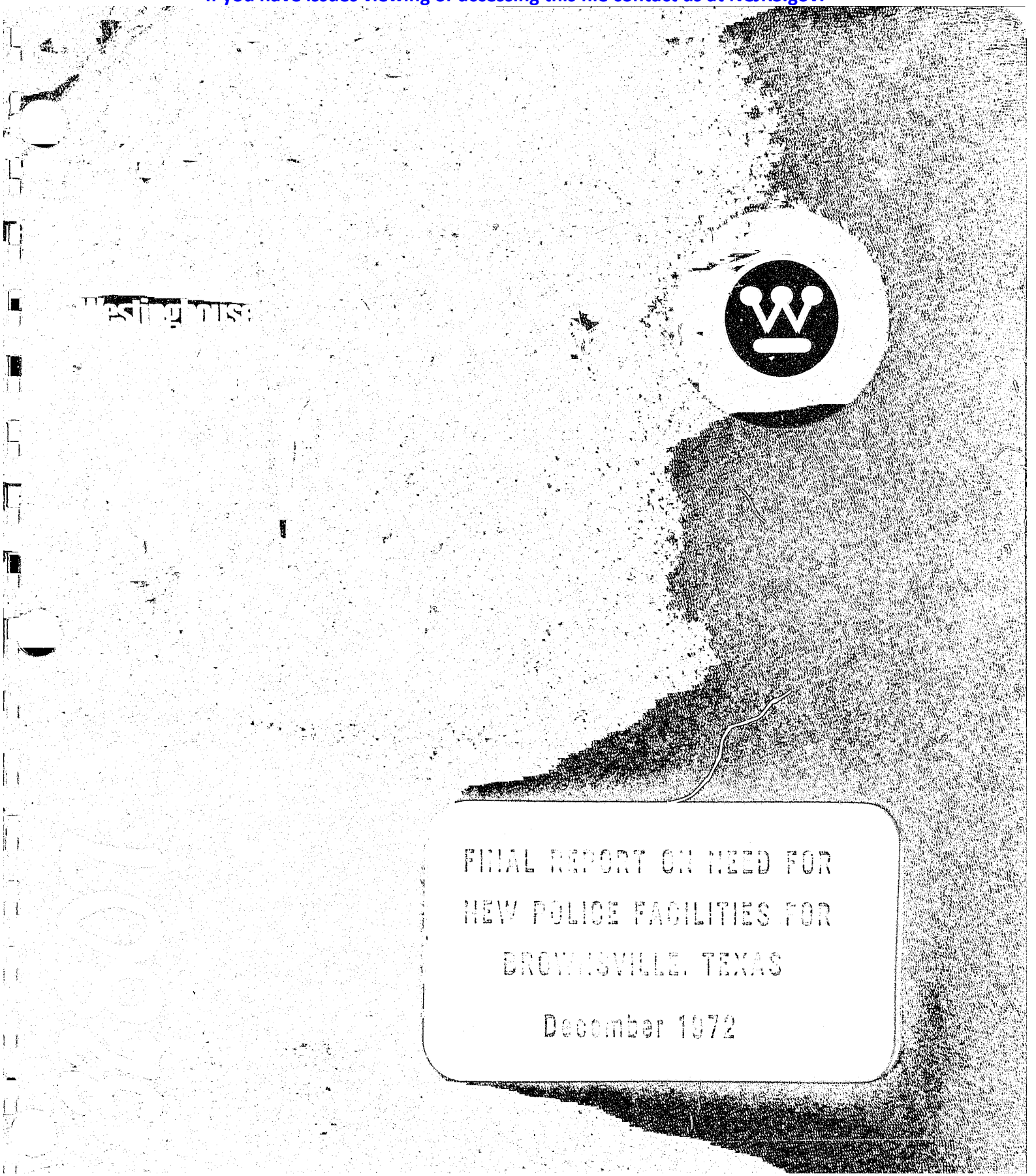

FINAL REPORT ON NEED FOR NEW POLICE FACILITIES FOR BROWNSVILLE, TEXAS

December 1972

Westinghouse Justice Institute

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FOREWORD

This report presents a study on the need for new police facilities in the rapidly growing city of Brownsville, Texas. Mr. Andres Vega, Jr., Chief of Police of Brownsville, requested the study. The request was originally made to the Criminal Justice Council of the State of Texas. Dr. Donald R. Trilling of the Westinghouse Justice Institute (WJI) performed the study under contract J-LEAA-016-72, sponsored by the Law Enforcement Assistance Administration (LEAA) of the U.S. Department of Justice.

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1. INTRODUCTION

The rapidly growing city of Brownsville, located at the southern tip of Texas at the international boundary, is a gateway to Mexico, a burgeoning tourist and retiree attraction, and an expanding center of commerce in which a constantly increasing need for police services is projected. This study analyzes the city's current and projected needs for police service; examines the adequacy and the efficiency of use of the facilities available in Brownsville for supporting the city's police department; and makes preliminary recommendations for facilities which should be acquired to support the department through the next 20 to 30 years.

The conclusions of the study are based primarily upon personal investigations performed, interviews held, and documents studied, as follows:

- Examination and observation of the facilities (in typical operation) by a member of the Westinghouse Justice Institute
- A series of interviews and discussions with Cameron County and Brownsville officials and with members of the Brownsville Police Department
- Study of the following documents:
  - The city budget
  - Numerous fact sheets from Brownsville and its Chamber of Commerce
  - The Brownsville Urban Transportation Study of 1970 (Texas Highway Department)
  - Materials from Texas Criminal Justice Council
  - Materials from various Federal agencies, including LEAA, HEW, and the Defense Civil Preparedness Agency
  - The documents from intensive research by the Brownsville Police Department
  - Building program studies for Denver Police (by Interplan, Inc.) and for Portland, Maine, Police (by Johnson-Hotvedt).

2. SUMMARY OF CONCLUSIONS

The prime conclusions of this study are:

(a) A new facility for the Brownsville Police Department is unequivocally recommended. This will be necessary to remedy the 40 or more deficiencies in the present facilities that came to light during this study and cited in Chapter 5. With a total of 135 to 258 men projected for the Brownsville Police Department in 1990, and based on the requirement of 120 net square feet for each uniformed officer, the facility will require 27,000 to 49,000 square feet. If construction can be completed in 1974, a cost estimate of $30 per square foot can be used leading to a total cost, exclusive of site, parking area, and outside service area costs, in the range of $811,000 to $1,472,000.

(b) Development of the new police department facility should be undertaken at once.

(c) Planning of the new facility should give full consideration to the advantages and overall economies of expanding the building program to combine a Public Safety Center. Thus, police, court, and civil defense activities in a single facility can result in many operating efficiencies, and some portions of the funding could likely be obtained from matching Federal funds.

(d) The site for the new facility should be fully available to the public and easily accessible to the expressways through the city.

(e) The new building should be designed to eliminate the conditions in the present building of crowding and inefficiency resulting from a lack of space (see Chapter 5). A number of facility-related problems also should be considered:

- The need for a multifunction area to serve as a holding area in instances of mass arrest
- Improving or eliminating the unsatisfactory arrangement for holding prisoners at the county jail
- Treating alcoholism as a medical rather than a criminal category
- Constructing the new facility with a high degree of flexibility to accommodate possible differences in growth in size and/or function including such features as

multipurpose space for temporarily housing other municipal functions later to be moved, phased construction, soft walls, and easy extension of utilities

- Include plans for the security system for the building at the beginning, not as an afterthought.

3. CITY AND ENVIRONS OF BROWNSVILLE, TEXAS; ITS SPECIAL POLICE RESPONSIBILITIES

3.1 Description

Brownsville, the County Seat and largest city of Cameron County, is in the extreme southern tip of Texas, along the Rio Grande River which bounds the city on the Mexico side. Travel distance to Mexico City is 672 miles; to the Texas cities of Dallas and Houston, 517 and 353 miles respectively. Tourism supports motels, travel facilities, restaurants, and other services. Hunting, river and deep-sea fishing, excursions to Mexico, golfing, sightseeing, and lounging in the warm winter sun are among the attractions of the area. Padre Island, extending from Corpus Christi to the southern tip of Texas, is one of the nation's fastest growing tropical beach areas.

Brownsville is an international gateway through which flows a continuous exchange of goods and people between the United States and Mexico. The county-owned Gateway Bridge, the privately owned Brownsville-Matamoros auto and railroad bridge, U.S. 77, 83, and 281, and Mexican Highways 101 and 40 conveniently facilitate this movement of goods and people.

The Brownsville International Airport is served by Braniff International, connecting Brownsville with most air terminals in Texas. Across the border in Matamoros the Aeronaves de Mexico provides flight service to various points in Mexico.

Two railroads, the Southern Pacific and the Missouri Pacific, provide freight service to the Brownsville area. The Missouri Pacific railroad connects with the Mexican National Railroad in Matamoros, across the B&M Bridge Company river crossing.

Port Brownsville, the city's deep-sea port, located about five miles northeast of the city center, is connected with the Gulf of Mexico at Port Isabel by a 17-mile ship channel. The port, which serves not only the Rio Grand Valley but also the northeastern area of Mexico, handles over five million cargo tons a year. Port Brownsville supports a large shrimping operation from its own shrimp and fishing harbor away from the main turning basin. The port is also the southern terminus of the U.S. inland waterway system, with connections to the Gulf Coast and the Mississippi, Missouri, and Ohio River systems.

Natural gas and oil are the principal mineral resources in the Brownsville area. Others are "burning" clay, sand, and salt in surface saline deposits. The widely diversified farming is favored by a year-round growing season based on advanced knowledge of irrigation and soil

conservation. The principal money crops, valued at $30 to $40 million annually, are citrus fruits, cotton, potatoes, and winter and spring vegetables. Feed crops are produced and cattle are fattened for market.

Raw materials are available to Brownsville in the area and in Mexico. Natural gas and water supplies are available, and industrial sites can be obtained along transportation facilities. The 48 million population in the region (600-mile radius) comprises both a labor supply and an active market.

The Gulf of Mexico, the warm climate, and Mexico began drawing tourists to the area in the 1950s. The tourists have consisted mainly of Midwestern retired, elderly people trying to escape the Northern cold to a relatively inexpensive area. They still comprise the majority of tourists in the Valley. Padre Island and the cities in the area have begun attracting a younger, higher-income group with a greater propensity to consume.

The improvement of relations between the United States and Mexico has increased the economic significance of the border region and boosted economic cooperation between the two countries. Some Mexican citizens work and buy goods in the U.S. while many U.S. citizens cross the border to buy Mexican goods and services. U.S. firms are locating industrial plants along the border, both on the U.S. and the Mexican side, to take advantage of border programs stimulating industry. The increasing interaction between the two countries has important implications for the City of Brownsville and the burdens of its police department.

3.2 Special Responsibilities of Brownsville Police Department

The Brownsville Police Department has all of the duties associated with any American city, plus a number that are particularly unique to it. The city now includes 20.6 square miles and 147 miles of city streets. Its official SMSA population for 1970 was 52,522, and it is presently estimated to be 62,000, taking into account the additional four square miles recently annexed. Its neighboring city of Matamoros across the border has a population of about 180,000.

The total burden on the police force cannot be understood apart from the city's position on the border, the high transient population, and its very high, almost explosive rate of growth of people and industry. This growth is attested to by many fast-rising economic indicators, e.g., population, bank deposits, phones, electrical connections, retail sales, and inbound and outbound cargo tonnage at the port.

A particular set of responsibilities for the police results from the interaction of the two cities of Brownsville and Matamoros, and Brownsville's unique position as the gateway crossing. This includes both the problems of additional traffic, and a number of special duties which the Brownsville Police Department is called upon to execute because it is on the border.

The inbound traffic through Brownsville Port of Entry has seen a constant, steady increase, numbering over 12 million pedestrians and passengers in buses and automobiles during the Fiscal Year ending June 30, 1971. According to one estimate, this results in a floating population around the Brownsville area of an additional 25 thousand persons. Twice a year the two bridges over the border are opened up. On these occasions (the Charro days, one week prior to Ash Wednesday, and the three days associated with the Cotton Festival and Mexican Independence Day on September 16) an estimated 25,000 individuals, who normally would not be allowed to, or would not have the inclination to do so, cross the border.

The role of the city as a center of tourism places additional burdens on the police department. A new city zoo, opening September 3, 1971, drew 313,000 visitors its first year. The city of Matamoros is building a dog track. All of those who wish to visit the rapidly developing beach resorts, a few miles to the east, must do so via Brownsville. Amigoland, a major amusement park of Disney World proportions (638-acre tract), is now being planned. In the words of its developer, its location at Brownsville will enable it to draw from a population of over 8 million in a radius of 300 miles, and over 48 million in a radius of 600 miles, all within easy driving distance.

In the winter months, tourists numbering perhaps as many as 10,000 flock in to camping, trailer, and apartment bases to savor the warm climate.

As the cognizant police authority of a border city, personnel of the force often have to go on trips as deep as 200 miles into Mexico, in search of stolen property, or seeking witnesses, or accompanying people who are looking for others. They often work with Customs officials, looking for stolen goods (including, in one case, three stolen railroad tank cars). The department is called upon to prepare over 500 letters per month to Mexican authorities, attesting to the ownership of cars, or providing affidavits on citizenship.

4. BROWNSVILLE POLICE DEPARTMENT

4.1 Organization

The department has grown steadily in response to both an increasing crime rate (a nationwide phenomenon), and the expansion in population and commercial activity in Brownsville. In 1950 the force consisted of 36 officers; in 1960 it was 45 officers; in 1970 it consisted of 67 officers and 19 clerical personnel, and now it has an authorized strength of 83 officers, although only 77 are presently employed.

The force is organized around the Chief, six lieutenants, and 14 sergeants. Each of the three primary shifts, and the relief shift, are under the command of a lieutenant, as is the Detective Division. The sixth lieutenant is in charge of personnel and training, the Record Bureau, research, and various interfacing activities with the Municipal Court officials. Each shift includes two sergeants and eleven patrolmen. Plainclothes personnel include seven detectives (one of whom is presently assigned to the Miracode operation) and four sergeants (one of whom, the Property and Evidence Officer, handles the fingerprint and photo lab).

4.2 Duties and Performance Conditions

The activity of the police force has expanded extensively in all areas. In terms of the present level, for 1971 the auto registration was 54,954 (up from 39,308 in 1962) and the school registration was 16,659 (up from 12,819 in 1962). During 1971, the police handled:

- 28,888 call complaints (up from 26,366 in 1969)
- 5,114 criminal arrests (up from 4,949 in 1969)
- 6,218 traffic citations (up from 5,187 in 1969)
- 2,025 juvenile offenders (up from 1,309 in 1969)
- 1,596 accident investigations (up from 1,402 in 1969).

The last several years have typically included about 100 illegal entry cases, several hundred shoplifing cases, 100 to 200 burglaries, 65 to 75 runaways, upwards of 500 charges of drunkenness, and a number of other offenses in lesser volume. There is an occasional homicide. Most of the narcotics cases are turned over to Customs, although there are frequent incidents where the two forces work jointly.

The Juvenile Delinquency Division of the police force works closely with the City of Brownsville Juvenile Board. The case count for the first six months of 1972 was 517 offenses, of which 55 were given Juvenile Court hearings. During that period, 111 were arrested for shoplifting about $555 of merchandise. The authority for jailing a juvenile must come from the Juvenile Protection Department.

In addition to its regular patrol, investigative, and traffic control duties, the force is responsible for collecting money from the parking meters; providing security at school zones; inspecting the dog pound and providing dog catcher service; maintaining street signs under the supervision of a patrolman; maintaining traffic signals and street lighting; and one patrolman is assigned to warrant detail and also serves as bailiff of the Municipal Court.

The force now has 18 patrol cars including those of the detectives and the chief. All but one have been driven over 50,000 miles; some of them are constantly inoperative. (One has been demolished and not replaced; three or four per day are in the shop awaiting repairs.) All have sirens but only two have flashers. In addition, three motorcycles, not radio equipped, are in use.

Approximately 125 burglar alarms from various business establishments are connected directly into the police communications room (all sounded at once during Hurricane Beulah). The communications network appears to be inadequate for the present load. However, Brownsville is soon to be incorporated into a major communications network for the entire lower Rio Grande Valley.

The Brownsville Police Force appears to be efficient and of high morale. This is especially significant in light of the very poor physical conditions under which they must operate, and the low pay scales which, over the last ten years, have led about 30 highly rated men to transfer to other police departments and to the nearby Federal agencies (e.g., FBI, Customs, U.S. Marshalls, Border Patrol, Immigration and Naturalization Service) for better pay.

Nevertheless, the force continues to be effective and unusually dedicated. Confronted with the unavailability of funds for paying for the services of informants (an informant plays a central role in about 90 percent of their narcotics and fugitive cases), police or detective personnel have more than once supplied the money out of their own pockets, at great personal sacrifice.

5. CRITICAL INADEQUACY OF THE PRESENT FACILITY

In 1964, the police department acquired its present site and structure, a former Lutheran Church. The extent of support for renovation of the building was a $10,000 appropriation, one master carpenter, and volunteer work by the policemen, other police department personnel, and trustees. The force began to outgrow the building almost immediately; the problems worsened with the increasing size and responsibilities of the force.

It was apparent from the beginning of this study that a host of inadequacies exist in the facilities available to the Brownsville Police Department. These are noticeable by contrast to the modern-minded, rapidly growing municipality the department is striving to serve. These inadequacies fall in the following categories:

1. Building exterior
2. Building interior
3. Public movement within the building (including court operation)
4. General facilities and equipment.

5.1 Exterior

The building's main redeeming feature is its ready availability to the public. More than offsetting this are the following:

1. With the only official space for abandoned or impounded cars being a dirt lot more than four miles from headquarters, it turns out that the public is often denied parking space at headquarters because the space is occupied by these illegal-status vehicles.
2. There is no place to store recovered bicycles. They are presently being chained to a clump of trees at the side of the building.
3. The gas pumps are unguarded, unprotected, and easily accessible to miscreants.
4. From a site viewpoint, the centroid of activity of most interest to the police is moving farther and farther away to the north and northeast (e.g.,

new shopping centers and apartment complexes). The travel distance is approximately five miles to the known trouble spots in that direction. On the other hand, it could be ill-advised to move the police headquarters very far from the river.

5.2 Interior

The space shortage and lack of facilities inside police headquarters is critical, frequently imposing cause for operational inefficiency upon an otherwise willing staff. See Appendix B for the layout and Appendix C for photographs.

1. For lack of any other place, the coin counter is kept in the lockup. When it is operating, its noise overrides all other sounds in the detectives' office next door.

2. Because of inadequate space, the Breatholizer is kept in Lt. Garcia's office, which has become the testing place for DWI offenses--an unsatisfactory arrangement in all aspects.

3. Coins from the parking meters, amounting to about $3,500, are kept in bags in an unsecured anteroom adjacent to the Chief's office.

4. The evidence locker is woefully small, less than 130 square feet.

5. There is only one men's room, consisting of two urinals and one toilet, in a room of about 62 square feet, to serve a building which is headquarters for a force of from 70 to 100 men and an extensive public clientele.

6. The ladies' room was formerly a children's toilet; the facilities are scaled for children.

7. The lockup is one big room of less than 130 square feet. There are no provisions for separating men from women, or the violent from the passive.

8. The photo and fingerprint lab is too small (less than 55 square feet) to permit the taking of standup pictures.

9. File cabinets, placed wherever room could be found in any office, are now distributed through three different rooms.

10. One lieutenant and two patrolmen of the Detective Division operate out of one room with two desks, one typewriter, and one file cabinet, all crowded into 101 square feet.

11. The entire Detective Division, 14 men, works out of the two offices consisting of three desks, two typewriters, and three 4-drawer filing cabinets, occupying less than 220 square feet. There is no place to assemble the Division for briefings.

12. There are no rooms for a confidential interrogation of informants. There are no special entrances or exits by which an informant may enter and leave the building privately. The room where informants are interviewed has windowed doors.

13. The encoding and working of fingerprints, an operation which requires great concentration, is performed in a room where five clerk typists operate and where extensive public intrusion is the norm.

14. The office of the duty lieutenant (Shift Commander), about 120 square feet, doubles as a storage room for raincoats, traffic jackets, and equipment that must be taken out of patrol cars which are to be taken to the garage.

15. There are no rooms in which to interrogate the accused, the victims, or witnesses; the detectives' office is presently serving for this.

16. There are no conference rooms anywhere in the building.

17. There is no place to have a roll call or a muster.

18. There are no lockers for the men. There are no showers. The officers must come to work in uniform.

19. There are no lounges or dining areas. The office girls take coffee breaks and eat their lunches at their desks, in constant exposure to the public.

20. In case of emergency requiring extra police officers at headquarters (150% level of manning), there is no place to stage personnel, no place for those on around-the-clock duty to sleep, no place for them to go, and no place for them to eat in police headquarters, or nearby, since all restaurants are shut down. They often end up sleeping in the chief's office.

21. There is no internal facility in which to conduct training classes. One must be borrowed from time to time from the Baptist church across the street.

22. The Report Writing Room, in which it is not unusual to seat a prisoner or four or five juveniles on the bench for interrogation, has open doorways on two sides of the room, and there is nothing to prevent them from running out.

23. When the generator runs, the sound intrudes upon the nearby offices, especially the detectives' offices.

24. There is steady traffic of officers through the Communications Center to the property room.

25. It is extremely difficult to hear incoming phone calls in the communications room because of the Teletype and the 125 burglar alarm signals.

26. A secretary is critically needed by the Detective Bureau to take calls, relieve the men from the need to type reports, and to maintain the filing system; but even if she could be hired today, there would be no place to put her.

5.3 Public Movement and Interaction, and the Municipal Court

There are extensive problems in the handling of the flow of public visitors, and the interaction of the public with police personnel.

1. There is no greeting mechanism by which members of the public can be intercepted and assisted with their business at headquarters, and given direction as to where to go or who to see.

2. The public has unchallenged access to the entire building.

3. There are no waiting areas for persons desiring to pay tickets and fines.

4. The officers and the staff are constantly exposed to the public, which tends to tie up officers unnecessarily.

5. Municipal Court is held in the headquarters building in a courtroom of 456 square feet. During court session, the parties to the proceedings mill around the station and wait to be called. Saturday morning sessions have been described as little short of bedlan.

6. The public and the officers use the one small men's room (62 square feet) containing two urinals and one toilet.

7. There is no work area for the judge of the Municipal Court.

8. There are no witness rooms, and no work area for the city attorney. He must use the hallways, the street outside, or a car, for interviewing witnesses.

5.4 Other Problems With the Facilities and Equipment

Following are some of the deficiencies noted in equipment. While they relate only indirectly to the building, they are listed here as part of the general facilities and equipment discussion.

1. The switchboard operator has no mechanism for knowing from moment to moment whether the detectives are in or out. This is especially awkward for handling delicate contacts with informants.

2. The only lockable file is in the detective area. If an article which constitutes evidence is obtained between Friday night and Monday morning, this logistics problem inserts two additional people into the chain of evidence.

3. Most of the typewriters in the building are obsolete if not worn out; they should be replaced.

4. There is no place to keep keys in an orderly manner. They currently take up one drawer of a file in the Dispatch Room.

5. Additional walkie-talkies are needed for surveillance work.

6. The walkie-talkies are on the same frequency as the patrol car transmitters, and the two often interfere with each other in surveillance activities.

7. Detectives should have vehicles of different make and licensing than that of the patrol cars ("Everybody knows we drive Dodges").

8. Most patrol vehicles are not equipped with blinker lights.

9. The three motorcycles are not radio equipped.

10. Only limited riot equipment is available. While there have been no riots yet, some strike activity should be expected under the increasing industrialization of the community. The police have a minimum of helmets, shields, and gas masks, but for lack of adequate storage space, they are kept in a hallway where they are subject to public vandalism and pilferage.

11. A better system for dictating reports is needed. Under the present system, too many officers are still typing their own reports instead of dictating them. In addition, many reports are dictated over the radio by officers on patrol. This tends to block the channel, and results in numerous inaccuracies. About four man-hours each, for the first and second shift, are lost in just correcting or repeating previously dictated portions of reports.

12. The burglar alarm system is occasionally overloaded. About half the burglar alarms sound off on site, and the others sound only at the central station, but nobody knows which is which. A uniform policy is needed, so that an officer knows what to expect on each detail to which he is assigned.

13. Because of lack of space and lack of clerical support, the records system is in need of considerable upgrading.

6. RECOMMENDATIONS FOR NEW FACILITY

6.1 Development of Preliminary Estimates

6.1.1 General Approach

A new facility is unequivocally recommended for the Brownsville Police Department. The shortcomings of the present facility, listed in Section 5, may be summarized with the statement that, even at its present size, the police force has, in a revamped church, barely a third of the space commonly acknowledged as requisite for efficient operation. Further, it is apparent that the efficiency of operation of the municipal court is also impaired by the limitations of the building.

The following sections develop a preliminary estimate for space requirements and cost, and present recommendations concerning certain features of the new facility. These are intended only to supply guidance for long-range planning. All aspects of the discussion require review and refinement; they are not architectural recommendations. Such recommendations must be supported by a detailed study which furnishes architectural guidelines known as a *building program*.

A building program is prepared to ensure that the new facility can remain in use for 20 to 30 years. To plan the space requirements of the facility and ensure its viability over that period, it is necessary to forecast what the case load will be on the police department over that time, evaluate that load to see what size and type of staff will be necessary to cope with it, and then interpret the requirements of that projected staff into spatial needs for the building. Through this procedure the square footage, system performance, functional location, and the details of the new facility are articulated with great precision and detail. This provides guidelines for the architect to follow in designing the building.

The preparation of a building program, which requires painstaking work by skilled professionals, is beyond the scope of this study. However, to provide the gross estimates needed for planning, a similar procedure is followed here.

The approach for preparing these preliminary estimates of facility space and costs is as follows:

- Make projections of population gain in the area for the next two or three decades.

- To the resulting future population figures, apply accepted proportions for police personnel to obtain the projected nominal police force size.

- Refine the nominal projection by adjusting for nationally increasing trends in criminal activity, thus obtaining the projected police force size which the new facility will need to support during its useful life.

- Derive a space factor per patrolman in modern but economically defensible police facilities.

- Apply this factor to the projected size of police force to obtain the size of facility which can adequately support the expanding force through the next decades.

- Estimate the facility cost by applying to the facility size (just determined) an appropriate per-square-foot construction cost for Brownsville for the period 1973-74.

6.1.2 Population Projections

Since the population of Brownsville is increasing rapidly, making population projections is hazardous. Fortunately, the Texas Highway Department has just completed a comprehensive analysis of the expected population for the Brownsville area (under Michael Vourcous), which has been made available to us. The projections of that study provide an invaluable basis for an estimate of force size. While these projections only go to the year 1990, and the life of the building should extend well beyond that, under the extra uncertainties imposed because of the explosive growth conditions, it seems reasonable to adopt 1990 as the planning horizon for the capacity needs of the new facility. Through that period, the size and nature of the population, as well as the city's financial base, will be changing rapidly. Both may be different than anticipated, even before 1990.

Another advantage of using the highway department study is that the geographic area covered includes the area immediately adjacent to the present Brownsville city limits, all of which has been annexed or likely will be annexed to Brownsville within the next five years. It thus applies to what will be the full responsibility of the Brownsville Police Force at that time. An adjustment of the Brownsville 1970 census

to cover the study area results in a population figure of 60,138. It should be noted that while this area comprises only 9.2 percent of the county, it contains 46.3 percent of the total Cameron county population.

The report from which this work was prepared was the Urban Transportation Study, Volume 3. At this writing, it was not finalized or approved. It will therefore be necessary to describe briefly the methods used, and the results obtained from each. Once these are presented, it will be possible to draw conclusions for purposes of estimating the needs of the new police facility. They may differ with the conclusions eventually adopted by the Texas Highway Department.

Four different methods were used for estimating the 1975 and 1990 populations of the City of Brownsville and Cameron County:

(a) The Arithmetic Method

(b) The Geometric Method

(c) The Natural Increase and Migration Method

(d) The Relationship Method.

Each method is to be documented in a comprehensive manner in Volume 3 of the Urban Transportation Study. Capsules of each have been extracted and paraphrased from the working draft of that volume and are given in the following paragraphs. In each case, the Brownsville 1970 census was adjusted to cover the study area.

- Arithmetic Method. *The Arithmetic Projection assumes that past population growth has followed some law of growth in which population is explicitly a function of time, and that future growth will follow a pattern predictable from this past relationship. This is done by finding a constant absolute increment per unit of time from past growth and applying it to the future. This was done by finding the total growth from 1940 to 1970, then dividing by 30 years to obtain the average annual growth. This average was then multiplied by the number of years to be projected and added to the population for 1970.* (The results of the Arithmetic Projection show a projection of 83,400 for 1990.)

- Geometric Method. *The Geometric Projection method is similar to the Arithmetic Projection method in its basic assumption. The difference is that the geometric projection method uses the geometric means of percentage growth per decade instead of a straight line function. Here again, the population growth considered was from 1940 to 1970. The geometric mean of these percentages is then calculated and used to obtain the 1975 and 1990 population forecasts.* (This method produced a projection of 96,900 for 1990.)

- Natural Increase and Migration Method. *The Natural Increase and Migration Projection method is based on the fact that population changes occur within an area due to two factors: the natural increase and the net migration. Natural increase is the total number of births less the total number of deaths. Net migration is the number of people moving into an area less the number moving out. This, then, involves the use of vital statistics of births and deaths, which when correlated with the population census figures, will obtain a net migration figure. The vital statistics of births and deaths in Brownsville and Cameron County from 1940 to 1970 were studied by the Texas Highway Department and analyzed to obtain rates on births, deaths, and net migration. These rates were then applied to the present population of the county and the study area to obtain the population projections for 1975 and 1990. This was done by obtaining the geometric mean of the percentage increase of the births, deaths, and migration in the decades from 1940 to 1970.* (The results of this method give a projection of 114,500 for 1990.)

- Relationship Method. *The Relationship Projection method is based on the premise that there is a direct relationship between population growth in a given area to that growth in a larger area within which it lies. For this method, the percentage of the State population residing in Cameron County and in the*

City of Brownsville were determined from the decades from 1940 to 1970. A trend was established from these percentages by obtaining their geometric mean and using this to make the projections. In order to establish a basis for the projections for 1975 and 1990, it was necessary to use the projections of the State population made by the University of Texas Bureau of Business Research for these two years. (The results of this method give a projection of 89,437 for 1990.)

It may be seen that the range of projections developed from these four methods is from about 83,400 to 114,500 inhabitants in 1990. Because of the changing nature of the industry and tourist base of the area, it is reasonable to assume that the arithmetic method is not representative of the Brownsville experience, and is not applicable. The Advisory Committee of the Urban Transportation Study in December 1970 adopted a projection of 90,000 based on the results of all four methods, and the experience up to that time. However, from the vantage point of late 1972, it would appear that the Natural Increase and Migration Method has been most typical of recent developments. This method recognizes most directly the influx of industry, and the expected impact of the tourist attractions of the developing beaches, the new zoo, and Amigoland. It resulted in a projection of 114,500.

Since we cannot predict the 1990 population within any close limits, we will make an upper estimate and a lower estimate as planning guidelines for the new police facility. These estimates will not define upper and lower levels; they will, as do all statistical projections, represent the expected value within reasonable zones of uncertainty, such that the population in 1990 actually could exceed considerably or fall well short of these respective estimates. They represent our best judgment based on the available data, for arriving at an adequate indication of the necessary concomitant growth in the police force.

The upper estimate will be 114,500, and the lower estimate will be 90,000. It will be necessary next to compare these figures with the 1970 population to estimate the amount of growth in the population and thus in the police force.

It has been noted that when the 1970 census figure for Brownsville is adjusted for the study area, a population figure of 60,138 results. The increase from a base of 60,000 to 90,000, or even 114,500, in 20 years, leads to quite a remarkable rate of growth. However, the base

used by the Highway Department for 1970 was 65,018, a figure developed by their Origin and Destination Survey, which recognizes the nonpermanent residents in the area. These would not be included in the census count.

The latter base of 65,000 has two advantages which cause us to use it here: (1) because it includes nonpermanent residents in the area, it is more representative of police activities, and (2) because it is a higher base, it will lead to more conservative estimates of growth. Taking this base and applying it, it is seen that the linear total growth over the 20 years based on the upper estimate amounts to 76.2 percent. Based on the lower estimate it amounts to 38.5 percent.

6.1.3 Projections of the Size of the Police Force

We now have a population base estimate from which to develop the size of police force needed for 1990. This must include the effects of the growth in crime rate as well as the growth in population.

To recognize the impact of population growth on the required police force, it is necessary to review the status as of 1970. In that year, the Brownsville Police Department had 67 officers and 19 clerical personnel. Using the adjusted population figure of 65,000 inhabitants for the study area, this is seen to represent a ratio of 1.03 officers per 1000 inhabitants. This figure rates quite low compared to the national figure. The Uniform Crime Reports show 1.5 officers per 1000 for that year for cities between 50,000 and 100,000 population.

Comparison of the whole police department, including clerical staff, gives a slightly different but equally favorable set of figures. The ratio for total police employes per 1000 inhabitants was slightly over 1.3, compared to a national figure of 1.8 for similar sized cities. The percentage of civilians to the total force was 22 percent compared to 13.3 percent for the cities of similar size nationally. Since this figure is one which has been trending upward (it was 12.2 percent in 1968), Brownsville is leading the national trend in utilizing lower-cost civilians where possible to release uniformed officers for actual police functions.

Expressing our lower estimate and then our upper estimate for the 1990 population as factors of the 1970 population, and applying the associated growth of the police force to the 1970 staffing level of 67 uniformed officers, the results are as follows:

1970 force x population growth factor = 1990 Projection 1

67 x 1.385 (lower estimate) = 92.795
67 x 1.762 (upper estimate) = 118.054
} uniformed officers

This projection is the staffing level required under conditions of a zero increase in crime rate.

As a practical matter, however, the rate of crime continues to increase in the United States. Again, referring to the Uniform Crime Reports, the estimated crime rate for 1970 was 2940.5 offenses per 100,000 inhabitants. This crime rate had increased over 1969 by 10.6 percent, had increased over 1965 by 81.3 percent, and had increased over 1960 by 143.9 percent. While there are indications that the rate of crime is slowing, it is not known when or if it may stabilize at a fixed level. There is strong indication that stabilization is approaching in some of the large cities.

Experience over the last 10 years suggests a rate of increase of 10 percent per year. A 5 percent estimate would be conservative. However, it may also be argued that the rate may very well be stabilized by not later than 1980, the mid-point of the 20-year framework in which the problem is being considered, and that the crime rate may even decline after that. If that happened to be the trend, the resultant total growth would be lower than five percent.

In addition to the general growth in crime rate, it should also be noted that the crime rate tends to be higher in larger metropolitan areas and lower in smaller ones. This tendency suggests that Brownsville, as it continues to grow, may find its crime rate growing with it at an even faster rate.

Thus, it can be seen that there are two forces at work which may be expected to lead to a growth in the crime rate. This in turn will require a commensurate growth in the police personnel required to cope with it, on a per capita basis. For purposes of planning the needed capacity of the new police facility, we shall include the following recognition of this growth: two projections, a low and a high police-force-growth-rate, will be used--two percent per year per capita and four percent per year per capita. A two percent per annum growth rate results in a growth of 45 percent after 20 years, and a four percent growth rate results in a growth of 119 percent after 20 years. Applying a similar computation to the results found above, thus recognizing how the force will have to be increased over the next 20 years to cope with rising crime rates, we find:

- Projection 1 x low growth rate = projected force
- 93 (lower estimate) x 1.45 (2% rate) = 134.85
- 118 (upper estimate) x 1.45 (2% rate) = 171.10
- Projection 1 x high growth rate = projected force
- 93 (lower estimate) x 2.19 (4% rate) = 203.67
- 118 (upper estimate) x 2.19 (4% rate) = 258.42

This results in four possible estimates of the size of the Brownsville Police Force in terms of uniformed officers for 1990:

Number of Officers	
135	assumes low population growth and 2% growth in per capita force
171	assumes high population growth and 2% growth in per capita force
204	assumes low population growth and 4% growth in per capita force
258	assumes high population growth and 4% growth in per capita force.

In following subsections, these are referred to as the low two percent, high two percent, low four percent, and high four percent figures. To these figures must be applied the appropriate percentage of civilian employes, presently at 22 percent.

6.1.4 Conversion to Space Requirements

Arriving at detailed estimates of space requirements for the new police facility normally requires development of the building program for the facility. Nevertheless, some estimate of square footage is still required to make preliminary budget estimates.

A program is underway in the Law Enforcement Assistance Administration (LEAA) of the U.S. Department of Justice to establish standards for police facilities, but the results are not yet available. In order to get some estimate of the required square footage, two of the most recent

and best-executed building program studies to be done in the police area were reviewed: (1) the Denver Police Department study conducted by Interplan, Inc., for a new administrative headquarters; and (2) a study of the Portland, Maine, Police Department, conducted by Johnson-Hotvedt.

Although the Denver Police Department is approximately 14 times as large as the Brownsville Police Department, the needs for square footage and form of space are comparable, function by function, with other police departments. The Portland Police Department has nearly twice the police force of Brownsville, but, like Brownsville, Portland has no precinct stations.

Like Brownsville, the Denver Police Department is expected to experience a rapid growth in the next 20 to 30 years--from 1200 uniformed officers in 1971 to possibly 3200 in the year 2000. Since the new administrative building would have to be built to allow for this growth, the ratio of square footage per employe varies through time, depending on the extent to which the growing force occupies the building to full capacity. In the case of this building program, the net square footage for employes during the maximum shift varied from 220 square feet per employe to 160 square feet per employe. The design capacity for the building, or the utilization that was intended for maximum efficiency, was 201 square feet per maximum-shift employe. This is expected to occur around 1980, with a certain amount of compression following, eventually resulting in the 160-square-foot-per-employe figure. The employe count used in these figures includes civilians. The square footage figures do not include the jail or parking areas, nor those of district patrol and traffic functions centered outside the building. About half the total force reports to the administrative building.

A more useful guideline can be prepared by calculating the square footage allocated specifically to each uniformed officer, corrected to allow for the total space provided for all of the uniformed officers on the force as a group. These figures result in a range between 114 square feet per officer at minimum space efficiency and 107 square feet per officer at design capacity.

In the case of Brownsville, where a much smaller force is involved, it will be more difficult to achieve the high density that is possible in Denver with a large downtown building. Nevertheless, if the design capacity figure of 201 square feet per maximum shift is adopted and applied to what would be the Brownsville equivalent of maximum shift employes, the resulting space requirement would be 40 x 201 or 8040 square feet. Dividing this by the present strength of 77 officers results in a figure of about 105 square feet per uniformed officer.

Turning to the new Portland Police Headquarters, it is in a building which also serves the Fire Department and a Youth Aid Division. In comparison to the above, the police portion of the building has a square footage ratio of almost 264 square feet per uniformed officer. However, this includes about 10 to 15 percent for expansion, an internal garage, a Youth Affairs Bureau, an extensive cafeteria, classroom, and library complex, and a large detention facility. If we delete these, the result is about 132 square feet per uniformed officer.

Taking the average findings between the two building programs that were examined results in a figure of 120 square feet per officer. We shall adopt this as a defensible value for long-range planning purposes, since it represents less than a 20-percent deviation from either of the examples used. To this would have to be added the lockup, the space for the court, parking, and some other facilities.

For the actual planning of the building, the 120 net square feet per uniformed officer guideline cannot be taken too literally. The direct application of the square footage figure projected for Denver and Portland to the Brownsville Police Force does involve some assumptions. It assumes that the ratio of maximum shift personnel in the police building to those on the street or off-shift will be approximately the same for each force. It also assumes that the mix of activities for a large metropolitan police force is comparable to that of Brownsville. Finally, it assumes that the ratio of maximum shift supporting personnel at police headquarters to officers in the street is comparable. (In 1971 the percentage of civilian employes in Denver was, like Brownsville, around 22 percent. The figure for Portland was less than 14 percent.) In spite of reservations about these assumptions, for the level of precision required, applying the average of the Portland and Denver square footage figures to Brownsville will provide useful planning estimates.

Applying the figure of 120 square feet per uniformed officer to the 1970 Brownsville Police Force leads to a requirement of 8040 net square feet. Using the same figure, the present 1972 force of 77 would require 9240 net square feet. The present net space is approximately 2540 square feet. Since the 120 square feet per uniformed officer represents the objective for what would be an efficient building, it may be seen that the present police force is operating in less than one-third of the space it should be allocated for conditions of maximum efficiency.

Applying the 120 square feet per uniformed officer to the projections made in the preceding section (6.1.3), the resulting square footage for 1990 would be:

135 x 120 = 16,200 net square feet, for a lower population estimate and 2% growth in per capita force

171 x 120 = 20,520 net square feet, for a higher population estimate and 2% growth in per capita force

204 x 120 = 24,480 net square feet, for a lower population estimate and 4% growth in per capita force

258 x 120 = 30,960 net square feet, for a higher population estimate and 4% growth in per capita force.

To these figures must be added the necessary areas for the lockup, the court, and other functions. Assuming 1400 square feet for a common courtroom and muster room, and 500 square feet for a cell area, the figures become in net square footage:

18,100 square feet for low, two percent

22,420 square feet for high, two percent

26,380 square feet for low, four percent

32,860 square feet for high, four percent.

These figures represent the net building area for the specific program functions. These areas will generate other program needs such as toilets, janitorial maintenance, storage, and mechanical equipment spaces. To incorporate these additional spaces, 12 percent of the specific program areas must be added to arrive at the net square footage for the building, which is as follows:

20,272 square feet for low, two percent

25,110 square feet for high, two percent

29,546 square feet for low, four percent

36,803 square feet for high, four percent.

For a building of this type, an ideal efficiency factor between net and gross building areas would be 75 percent. The additional 25 percent includes wall thickness, corridors, stairs, etc. To obtain gross square footage of the building, from the previous set of figures, 33.33 percent is added to the net figures. The gross building square footage thus becomes:

27,029 square feet for low, two percent

33,480 square feet for high, two percent

39,395 square feet for low, four percent

49,071 square feet for high, four percent.

6.1.5 Construction Cost Estimates

Having estimated the gross square footage of the building, it is next necessary to translate this into costs. This is done by evaluating national data for construction costs for police headquarters facilities, and applying corrective factors to the national average to have them relate to construction costs in the Brownsville, Texas, area, and to the proposed size and complexity of this facility. This process leads to an estimate for the construction cost of the proposed building of approximately $29 per square foot, if constructed within the next 12 months. However, it is more likely that much of the construction will be done sometime during 1974. The national experience has been that construction costs are escalating at a rate of about seven percent per year. A figure of about $31 per square foot would be appropriate for construction during 1974. Assuming construction will span the last half of 1973 and the first half of 1974, the average of these two figures, or $30, should be used. Applying this number to the previously determined square footage, we get:

$ 810,870 for low population estimate and 2% growth in per capita force

$ 1,004,400 for high population estimate and 2% growth in per capita force

$ 1,181,850 for low population estimate and 4% growth in per capita force

$ 1,472,130 for high population estimate and 4% growth in per capita force.

These figures are for the inside of the building; they do not include site acquisition, parking areas, or external service areas.

It must be kept in mind that these figures are only to be used as a guide for gross planning purposes. The actual square footage projection which will eventually be used must be based upon a definitive analysis of the actual police functions as performed in Brownsville, Texas, and upon a building program developed from the analysis. Such an effort will then provide the detailed estimates necessary for final planning and design.

The cost of the new facility is a rather large one, but must be considered as part of the price of having a growing city. There are ways by which some of the actual outlay can be deferred for a time, such as phased construction, or construction of multiple-purpose areas which can house other municipal functions for a period of five to ten years, until the growing police force needs the space. Such measures can only be determined by an architectural consultant, hired for this specific purpose. Nevertheless, some added suggestions are presented in 6.2.

6.1.6 Summary of Projections

In order to provide some planning guidelines for the new facility needs for the Brownsville Police Department, projections were made of the future size of the police department (up to 1990). Using these as a basis, size and cost of the new facility were estimated.

Because the city is experiencing a period of extraordinary growth, making projections at this time is unusually difficult. Nevertheless, using the forecasts of population prepared by the Texas Highway Department, and modifying these to reflect increases in the crime rate, projections were made. The resulting estimates (Section 6.1.3) indicated the size of the 1990 police force may be expected to be as low as 135 uniformed officers or as high as 258 uniformed officers, depending on how the rates of change in population and crime actually turn out.

The next step was to estimate the size and cost of the facility needed to house a police force of the size estimated. Since there are no standards available by which this can be readily derived, two recent building programs were taken as a base, and were appropriately adapted to provide a conversion factor for planning building size. This resulted in an estimate of 120 net square feet per uniformed officer on the force. Applying this to the projected 1990 police force, and converting from net to gross, resulted in a projection for the building size of between 27,029 and 49,071 gross square feet.

Assuming the construction would take place during 1973 and 1974, and using the figure of $30 per square foot as the appropriate one for that time for Brownsville, a cost between $810,870 and $1,472,130 results. This does not include site acquisition, parking lot, or outside service areas.

Because there is a considerable amount of uncertainty attached to these figures, it is recommended that Brownsville consider phased construction or construction to service police purposes in combination with other municipal functions, which can later be phased out to make room for a growing police force. Although there is a higher than normal degree of uncertainty attached to this forecast, it must be kept in mind

that the best indications are that by 1990, the Brownsville Police Department will need a facility which, if built in 1973-74, must be valued at between $811,000 and $1,472,000.

6.2 Additional Recommendations

In addition to the four estimates of space and cost developed and presented in Section 6.1, the following recommendations for the new facility are proposed for consideration on the part of the Brownsville Police Department.

6.2.1 Present Deficiencies

In Section 5, over 40 deficiencies in the present building were cited. It is recommended that the new building be designed to remedy all of them.

6.2.2 Public Safety Building

Since the present police facility also includes certain court functions, and serves as a communications hub during emergencies, it is suggested that the City of Brownsville consider making the new facility a Public Safety Building, and take advantage of the many efficiencies that would come about by co-locating the functions of the police department, courts, and civil defense. Under this arrangement, it would be possible to consider creating a Civil Defense Center in the basement of the new building, complete with an emergency communications center from which all civil disaster officials can operate, an area for staging rescue workers, an area for the storage of emergency gear, and also perhaps an area where the emergency force can be held in readiness. Under the Emergency Operating Center program of the Defense Civil Preparedness Agency, 50 percent matching funds are provided for such facilities. This would necessitate establishing the eligibility of Brownsville with the Civil Defense Director of the State of Texas and investigating the complete requirements of the program.

6.2.3 Site

Consideration should be given to finding a site for the new facility which is fully available to the public, but which also has quick access to high-speed highways or expressways through the city.

6.2.4 Prisoner Holding Facilities

The holding cell area envisioned under Section 6.1.4 provides room for approximately six prisoners, under temporary detention. This does not allow for any kind of holding area for mass arrests. It is suggested

that such be provided through specially constructed space that assures ample security, but is primarily used for some other function, such as the Muster room.

6.2.5 Arrangement with the County Jail

The present system of charging the Brownsville Police budget for jail days on the basis of a midnight-to-midnight period appears to be highly unfair and prohibitive to the effective functioning of the police.

6.2.6 Holding of Alcoholics

A large number of the individuals detained in the holding cell are habitual intoxicants. While this perhaps is done for their own protection, it is a form of implied punishment which is now realized to be unduly harsh and improper. Brownsville is not alone in this; it is a national practice that is only now being recognized as inhumane and ineffective. Citing a recent finding concerning arrests for drunkenness:

> *This population of homeless and socially isolated men accounts for 40 percent of all annual arrests for non-traffic offenses. Handling this group within the criminal justice system has proved ineffective and costly, amounting to more than $100 million a year for arrest and incarceration expenditures.* (DHEW Publication No. (HSM) 72-9019)

New legislation is being prepared for the Texas Legislature, along the lines of the Uniform Alcoholism and Intoxication Treatment Act drafted by the National Conference of Commissioners on Uniform State Laws, to change the legal status of intoxication and alcoholism in the State. It will be a number of years before an appropriate health service system can be established for the handling of chronic public inebriates. However, the sooner this is undertaken, the sooner this portion of the burden on the Brownsville Police Department will begin to diminish. It is suggested, therefore, that the Brownsville Police Department start to work with the local Public Health officials to develop a program for handling alcoholics as a medical rather than a criminal problem. Further information on the various measures which can be taken, and details on the use of formula monies which can be made available for this, can be obtained by contacting:

Mr. Kenneth Beahan, Director
Texas Commission on Alcoholism
809 Sam Houston State Office Building
Austin, Texas 78701
(512) 475-2577

6.2.7 Building Flexibility

The forecast for future needs of police personnel and space for facilities to house them, were made under conditions where the population and the industrial base are in a considerable state of flux. The error rate associated with these forecasts may be high. It is therefore important that the new police facility be designed to be as flexible as possible, to accommodate change that is certain to come but cannot yet be planned for. As noted in Section 6.1.5, this can be accomplished by:

- Phased construction
- Combining other municipal functions in multipurpose space in the building
- Including space which can be adapted to uses other than the purpose originally planned for it
- Including the capacity for economical expansion, such as soft walls and provisions for easy extension of utilities.

6.2.8 Security

Because of the emerging presence of disruptive forces in our society, a host of new features are being developed which can be built into the building and which will vastly improve its security against miscreants, rioters, saboteurs, and terrorists. Examples of these are: the minimization of large glass fronts; placing the communications center in the least vulnerable part of the structure; separate passageways for the public and police operations; and variable door control. Such features are typically not expensive but they do require extensive planning even prior to the design phase. The Police Department is thus strongly urged to plan security as an integral part of the architectural plans, not insert it as an afterthought.

APPENDIX A

Interviewees

Chief Andres Vega, Jr.

Honorable Harry Lewis, Municipal Judge and Civil Defense Coordinator and Director

Lt. Ruben S. Garcia

Detective Lonnie R. Florence

Lt. Roy P. Tamayo, Chief of Detectives

Lt. Douglas E. Ward, Shift Commander

Lt. Raymond Roussett, Shift Commander

Additional Contacts and Discussions

Mr. Kirby Lilljedahl, City Manager

Chamber of Commerce of Brownsville, Texas

Honorable Myrlin O. Johnson, District Judge

Mrs. Francis Pinkerton, Director of Probation, Cameron County

Mr. Charles Tapia, Head of Adult Probation, Cameron County

Sheriff-elect Gus O. Krausse, Cameron County

Mr. Margel Vicars, Texas Criminal Justice Council

Mr. Saddi A. Ferris, Texas Criminal Justice Council

Mr. Michael Vourcous, Texas Highway Department

Mr. Kenneth Beahan, Director, Texas Commission on Alcoholism

Mr. Robert M. Beauregard, National Institute on Alcohol Abuse and Alcoholism, U.S. Department of Health, Education and Welfare

Mr. James Mulcahy, Defense Civil Preparedness Agency, U.S. Department of Defense

Mr. John Lucy, Law Enforcement Assistance Administration, U.S. Department of Justice

Mr. Robert Barnes, Law Enforcement Assistance Administration, U.S. Department of Justice

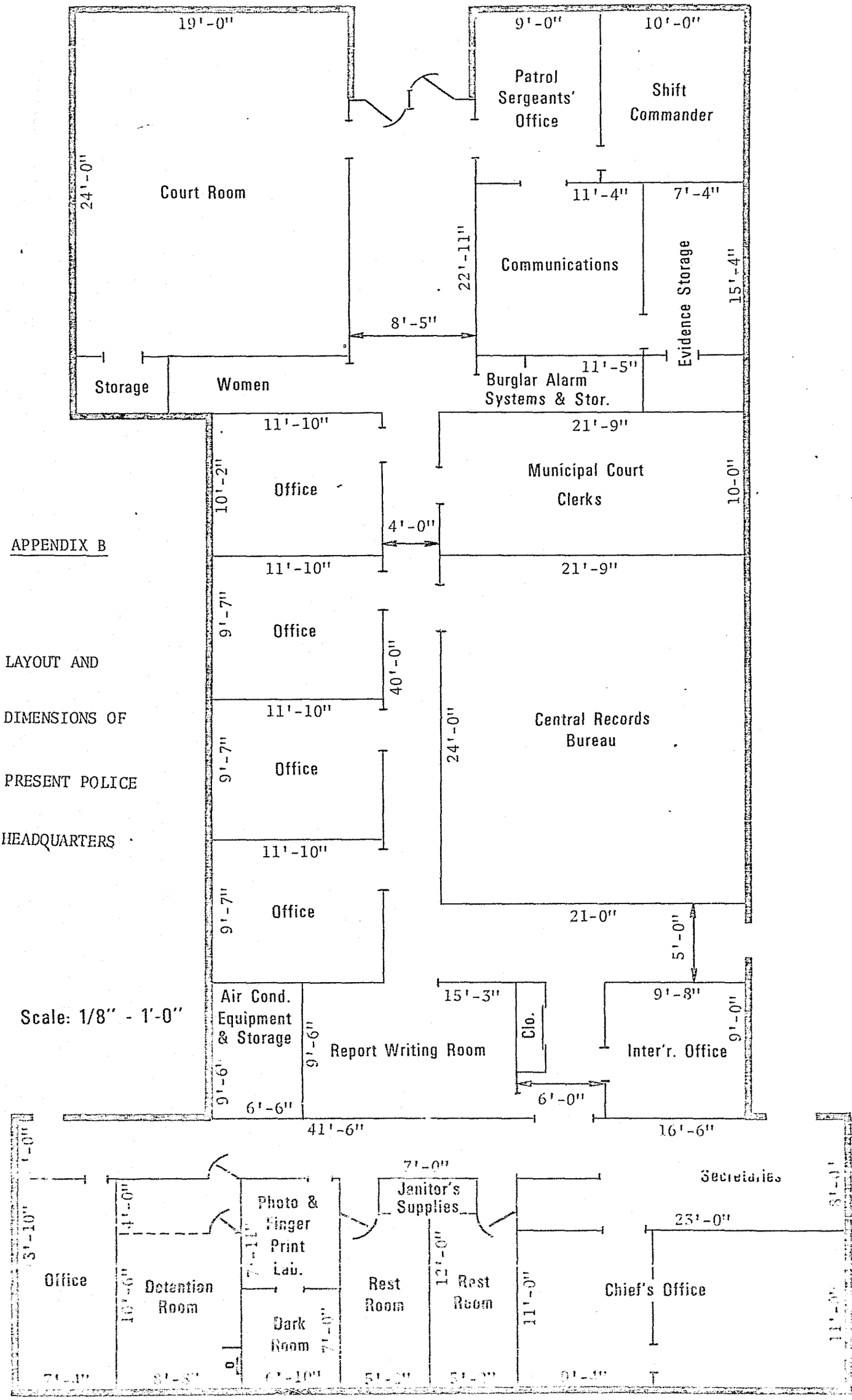
Mr. Victor D. Langhart, Interplan, Inc., Denver, Colorado

Mr. Steve Alpert of Johnson, Hotvedt and Associates, Inc., Boston, Massachusetts

Mr. Hillary Candella and Mr. Jorge Delgado, Ferandino/Grafton/ Spillis/Candella, Miami, Florida

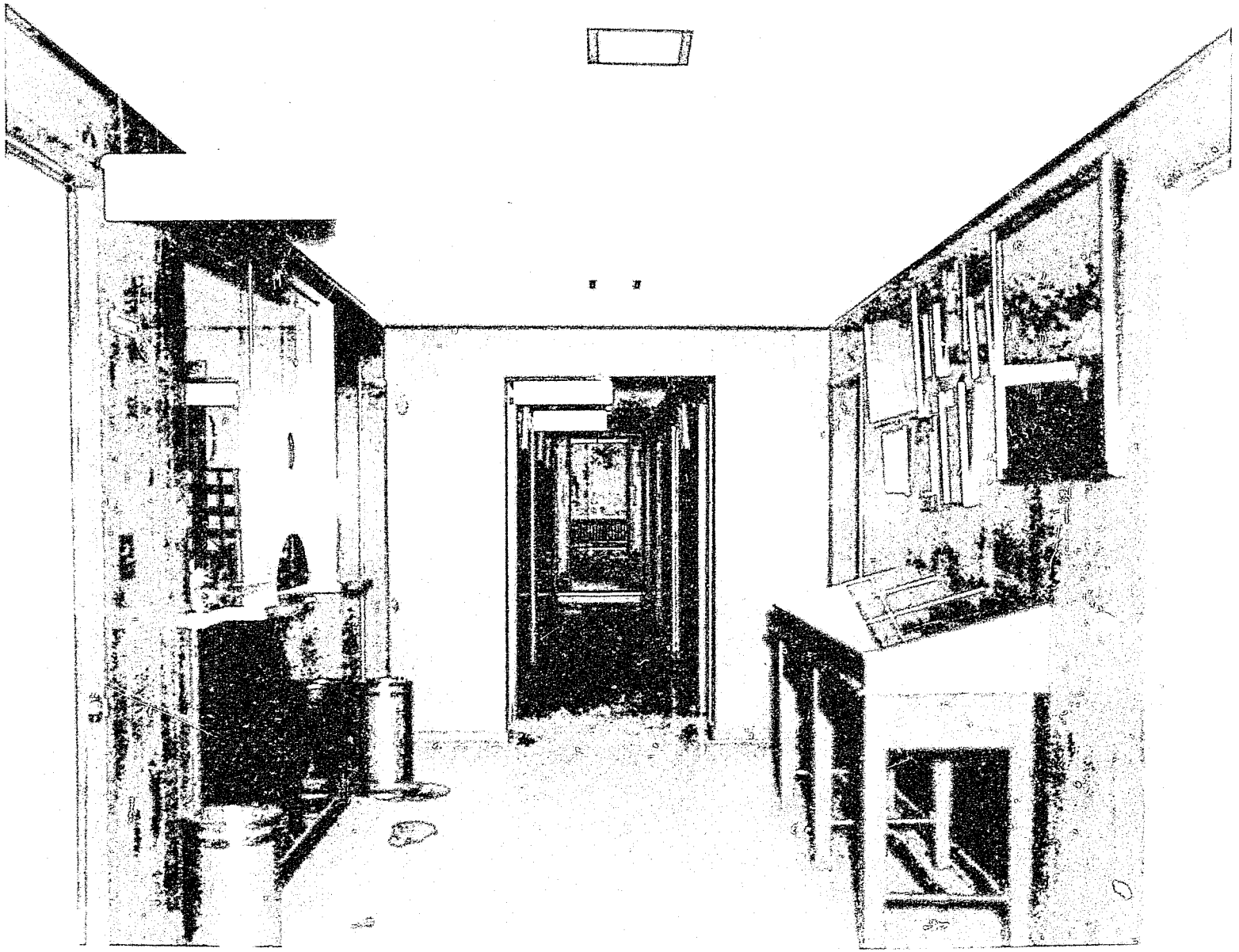
APPENDIX B

LAYOUT AND DIMENSIONS OF PRESENT POLICE HEADQUARTERS

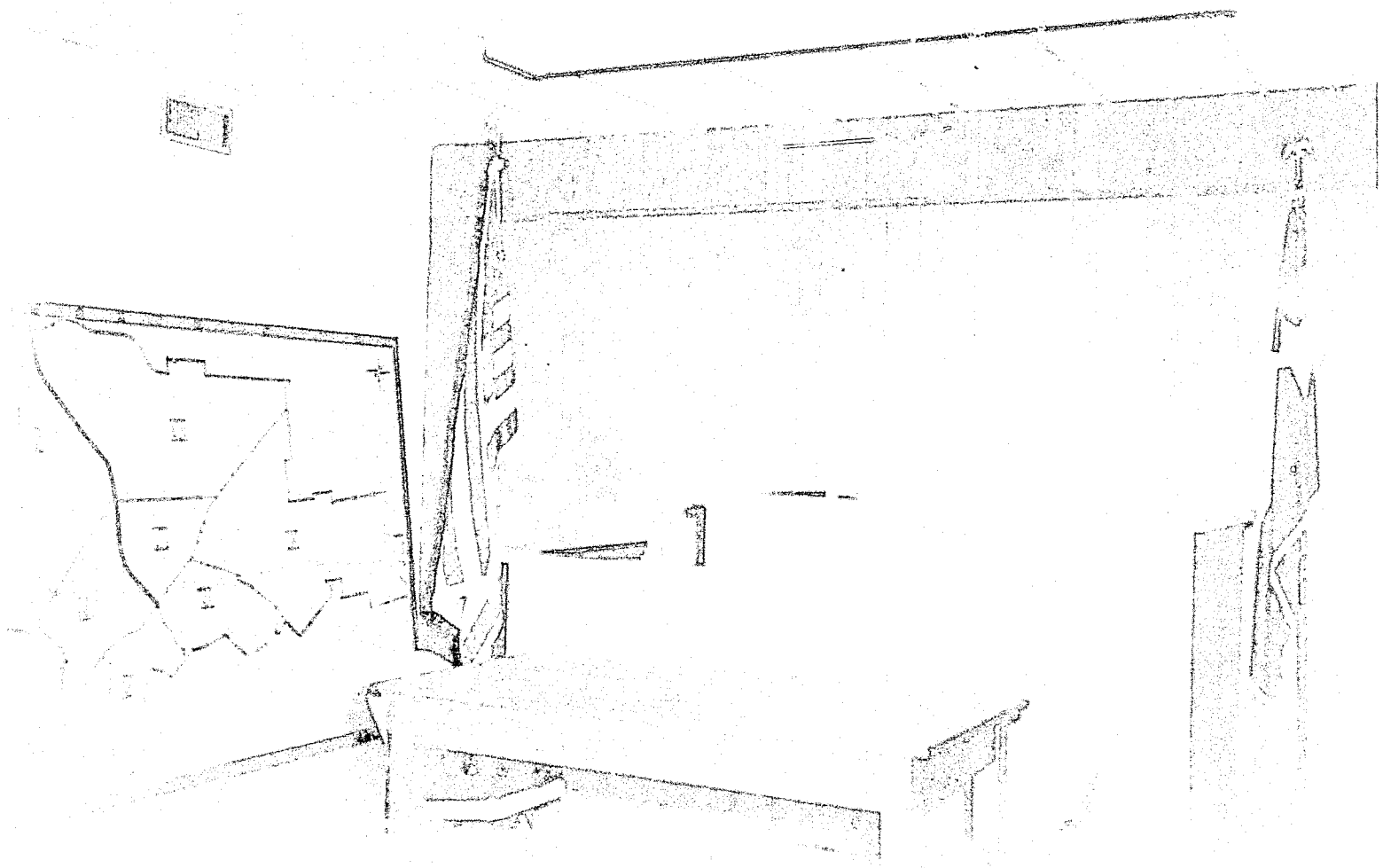


APPENDIX C

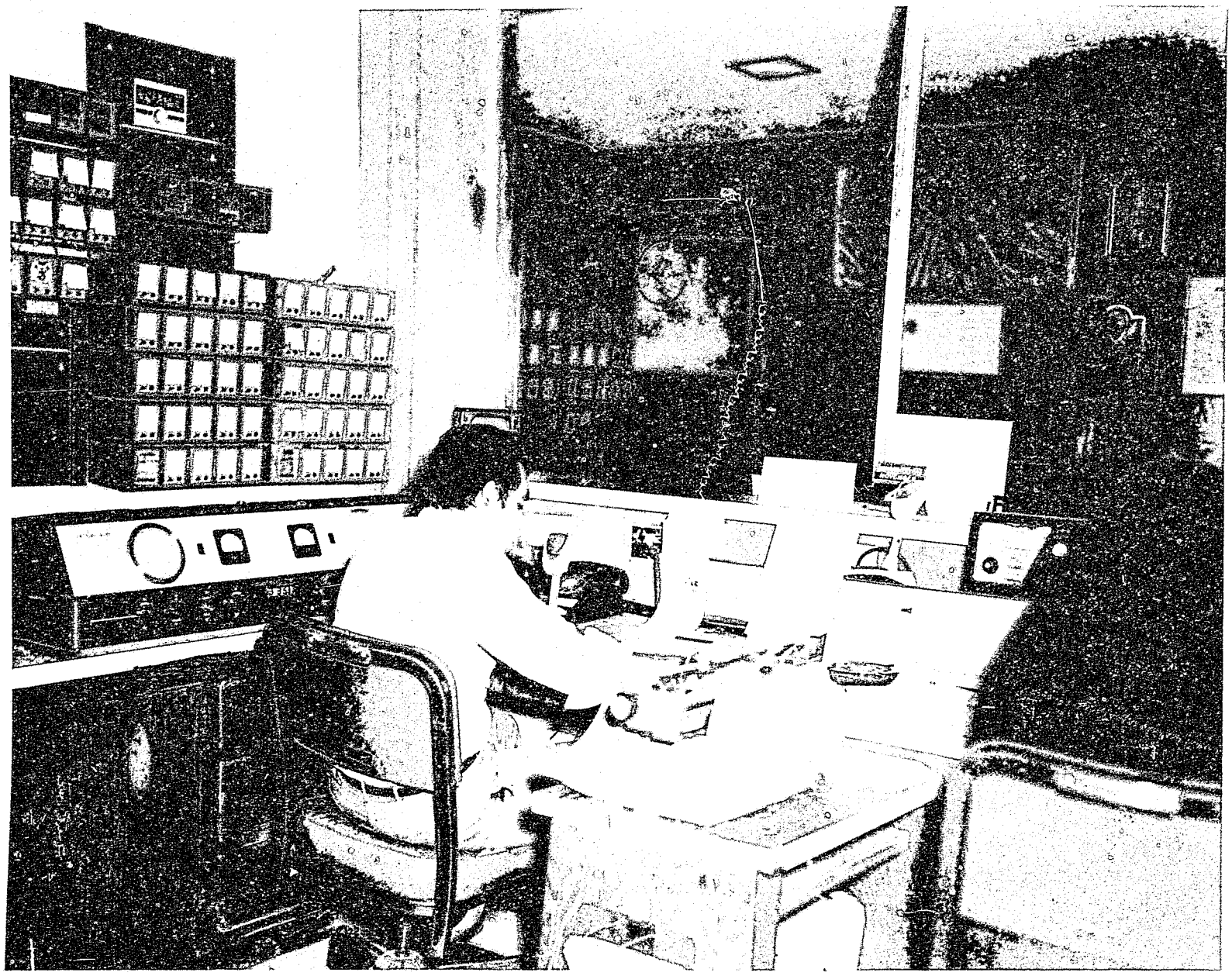
Photographs



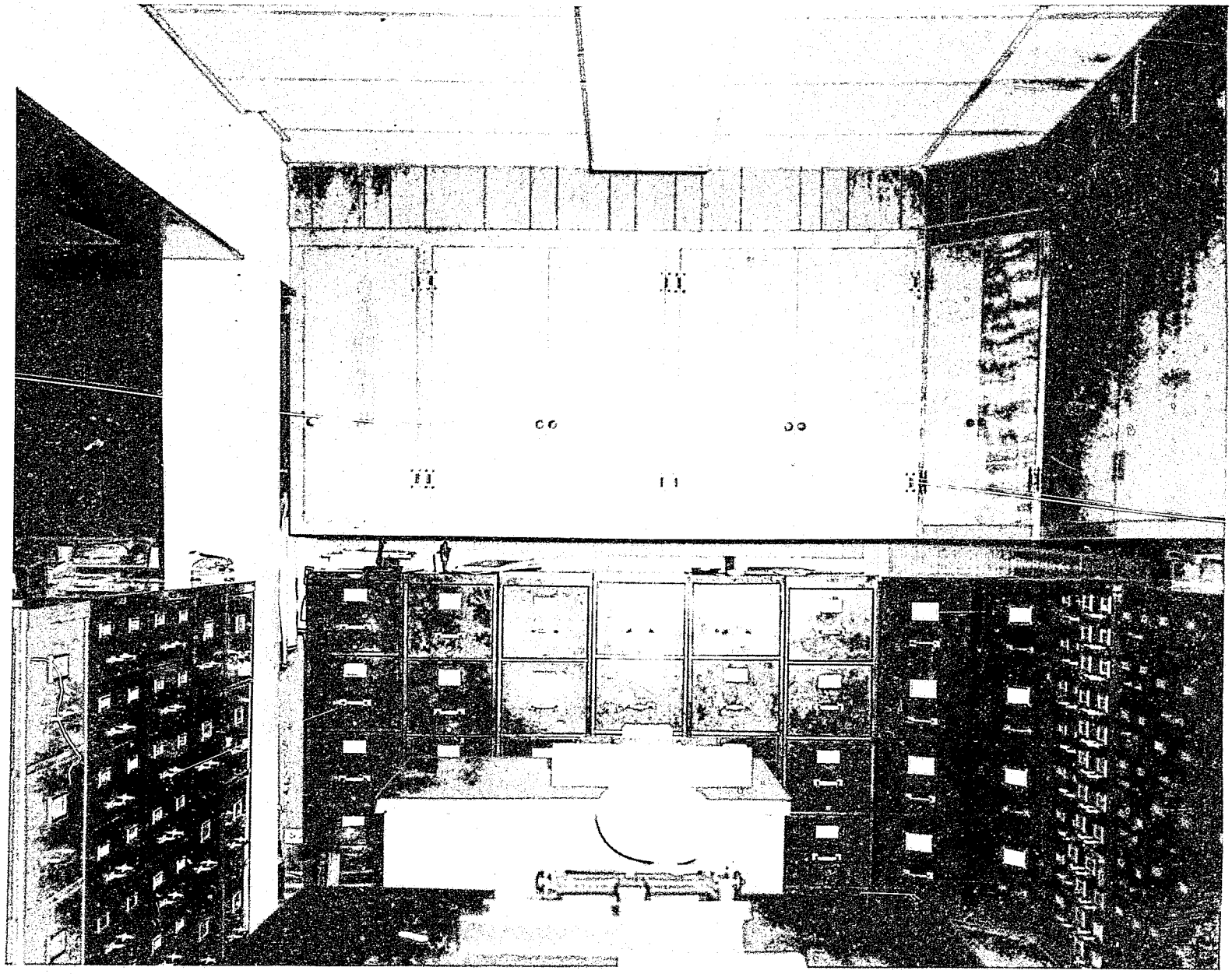
Lobby, From Entrance



Front of Court Room



Communications Center



Records Room

END

7 illustrations