HALIFAX MEMORIAL LIBRARY

BUILDING FEASIBILITY STUDY

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TABLE OF CONTENTS

TABLE OF CONTENTS

I INTRODUCTION

The purpose of this study is to examine the possibility for continued use of all or a portion of the existing Halifax Memorial Library Building on its present site and within the context of the Halifax Regional Library system. This study will examine and assess the present operation and building and its potential to accommodate the demands of expansion, and propose a course of action for the future.

The terms of reference of this study are of particular importance and as such are stated herein. These assumptions, which form the basis of this study, are as follows:

a. The Halifax Memorial Library Building and its site have significant public and architectural importance and as such, the retention of the shell of the original 1951 building is considered central to the development of any design solution for this site.
b. The Halifax City Regional Library Board has expressed its desire to remain in this location rather than seek an alternate site for the main library building.
c. Since this is a feasibility study of the Halifax Memorial Library Building and site, it is not intended to be an in depth study of the Halifax Regional Library System.

On the basis of the above, this study will assess the feasibility of renovating a portion of the existing 1951 Building and constructing additional space on this site as a long term solution. It is hoped that this feasibility study will assist the Halifax City Regional Library Board in confirming its present location as the most appropriate site for the Halifax Memorial Library Building, provide the background for the development of a needs assessment and library building programme, and finally to assist the Library Board in the realization of this project.

II ANALYSIS OF EXISTING BUILDING

2.1 GENERAL

The Halifax Memorial Library Building is situated in downtown Halifax on the site bounded by Grafton Street, Brunswick Street and Spring Garden Road. This building and the Halifax North Memorial Library Building on Gottingen Street are both operated by the Halifax City Regional Library.

The Original Halifax Memorial Library Building, opened in 1951, consists of a three-storey steel frame structure clad with stone facing. This building plan was arranged around three sides of a large central entrance stair. This plan arrangement isolated the spaces in each wing from the spaces in adjacent wings with the general result that the spaces were self-contained and inflexible.

A renovation of this building and a subsequent addition were constructed in 1973 and 1974. This addition consisted of a three-storey steel frame structure clad with precast concrete. An elevator was also installed at this time as part of the addition. The lowest level contained the mechanical equipment rooms and some useable public space in addition to the technical services department. These existing areas were renovated to include the childrens library and staff facilities and the new addition contained an open stack area as well as receiving and expanded technical services. The existing reading room on the main floor was maintained however the existing childrens area in the south wing was converted to administrative offices and the reference room in the north wing to the circulation reading room and work area. As on the first level, the new addition contains open stack space. On the third floor, the childrens area previously located in the south wing has been relocated to allow the reference collection to occupy the entire floor of the existing building. Again, the new addition contains open stack area at this level.

(See Appendix 'A' - Existing Building Plans)

II ANALYSIS OF EXISTING BUILDING

2.2 FLOOR AREA ANALYSIS BY DEPARTMENT

Table I

SPACE SUMMARY - EXISTING BUILDING

DEPARTMENT	FLOOR (AREA SF)				BUILDIN
	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	FOURTH FLOOR	
Administration		1,428			1,428
Reference Services	108		6,787 (2224-Closed St)	1,128 (Closed Stack)	8,023
Childrens Services	5,907				5,907
Adult Lending Services	887	7,780		1,128 (Closed Stack)	9,795
Community Services	1,541				1,541
Building Services	140 (Loading Dock)				140
Staff Facilities	888				888
Display			117		117
Storage (General)	39				39
Building Circulation Public Facilities	1,544	967	791	201	3,503
Mechanical	2,007	36		371	2,414
Total	13,061	10,211	7,695	2,828	33,795
Building Gross Area (Mechanical Shaft and Wall Thickness)	14,875	11,718	9,039	3,056	38,688

II ANALYSIS OF EXISTING BUILDING

2.2 FLOOR AREA ANALYSIS BY DEPARTMENT

Table I : Existing Floor Area Analysis by Department

In the above table the Departments of the building are listed together with the floor areas they occupy on each floor, as well as the total area for each department in the building. Appendix 'A' - Existing Building Plans indicates the three floors and mezzanine of the existing building and the floor areas occupied by each department.

a. Net Useable Area - 27,878 s.f. (72.9%)

b. Gross Area (including circulation and mechanical space) - 33,795 s.f. (87.5%)

c. Building Gross Area (including mechanical shafts and wall thicknesses) - 38,688 s.f. (100%)

III DEPARTMENT DESCRIPTIONS AND ANALYSIS EXISTING AND PROPOSED SERVICES

3.1 ADULT LENDING SERVICES (CIRCULATION)

General Description

The adult lending Department containing 9795 s.f. of space is located on the lower, main and mezzanine levels of the existing building. Adult lending services provides information to a wide range of borrowers from older children to older adults. Some of the more heavily used areas include:

a. Personal/Family Living
b. Home Maintenance/Automobile Repair
c. Business/Work Needs
d. Leisure Interests
e. Service to Disabled Persons
f. Audio/Video Collections
g. Foreign Language Collections

Space Assessment

The Adult Lending Department consists of three major components; the collections, public service areas and staff work areas.

(Note: areas indicated below have been programmed by the Halifax City Regional Library and are taken from documents dated August 5, 1986)

A. Collections (15860 s.f.)

Books/Magazines (14700 s.f.)

The collection size as determined in 1985 was 126,438 volumes. Projected space requirements indicate a twenty-five year projection of 284,486 volumes reflecting an approximate doubling in the collection size at the twenty year period. A planning density of fifteen volumes per s.f. has been used in the space program projections.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.1 ADULT LENDING SERVICES (CIRCULATION)

Special Collections (425 s.f.)

This is a special deposit collection from the National Library of Canada. Foreign language collections multi-lingual collections and talking books would be included in the proposed book collection space above.

Audio Visual (525 s.f.)

The present Library collection is limited to audio tapes and records, video cassettes and compact discs, however there is an increasing public demand for this service complicated by the rapid changes in these technologies.

Paperbacks (210 s.f.)

An increase in area of fifty percent has been anticipated for this collection.

B. Public Services (5915 s.f.)

Audio/Visual Viewing and Listening (2200 s.f.)

This is a new service that presently does not exist and has been requested by the public to provide access to materials for persons unable to acquire equipment in the home. Space allocated includes areas for video monitors and both individuals and group viewing and listening areas. A talking book service is also provided for the disabled.

Browsing and Display (600 s.f.)

The present space for browsing should be doubled in area and the display space for recent books and library materials requires enlarging to 450 s.f.

Catalogue (300 s.f.)

The public catalogue in adult lending is heavily used at peak periods, and requires the area to be enlarged to 300 s.f. The microfiche/online catalogue will be the only access when recon is complete.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS EXISTING AND PROPOSED SERVICES

3.1 ADULT LENDING SERVICES (CIRCULATION)

Information/Reception Desk (1130 s.f.)

This area presently acts as a central directional point for the library. Expanded displays of library programs, educational opportunities etc. are required in this area.

Seating (1685 s.f.)

Study space and comfortable reading areas are presently the focus of serious public complaint. Services are cramped and over crowded. The reference department is seen as the area most suitable for quiet study. Adult lending services has therefore focused expansion on comfortable seating areas as well as tables and chairs. This seating area should be interspersed throughout the stack area.

C. Staff Work Areas (5480 s.f.)

Circulation Desk (600 s.f.)

This area contains the book check-out, lost and found, book returns and fine payment as well as a telephone/information area.

Processing Areas (1850 s.f.)

This area handles all receiving and sorting of materials, book sensitizing, book repairs and mail service. This area also includes a book drop and shut-in service.

Office/Conference (1100 s.f.)

Offices are required for Coordinator, Librarians and Assistants. Separate offices are required for staff members and a conference room is also required.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.1 ADULT LENDING SERVICES (CIRCULATION)

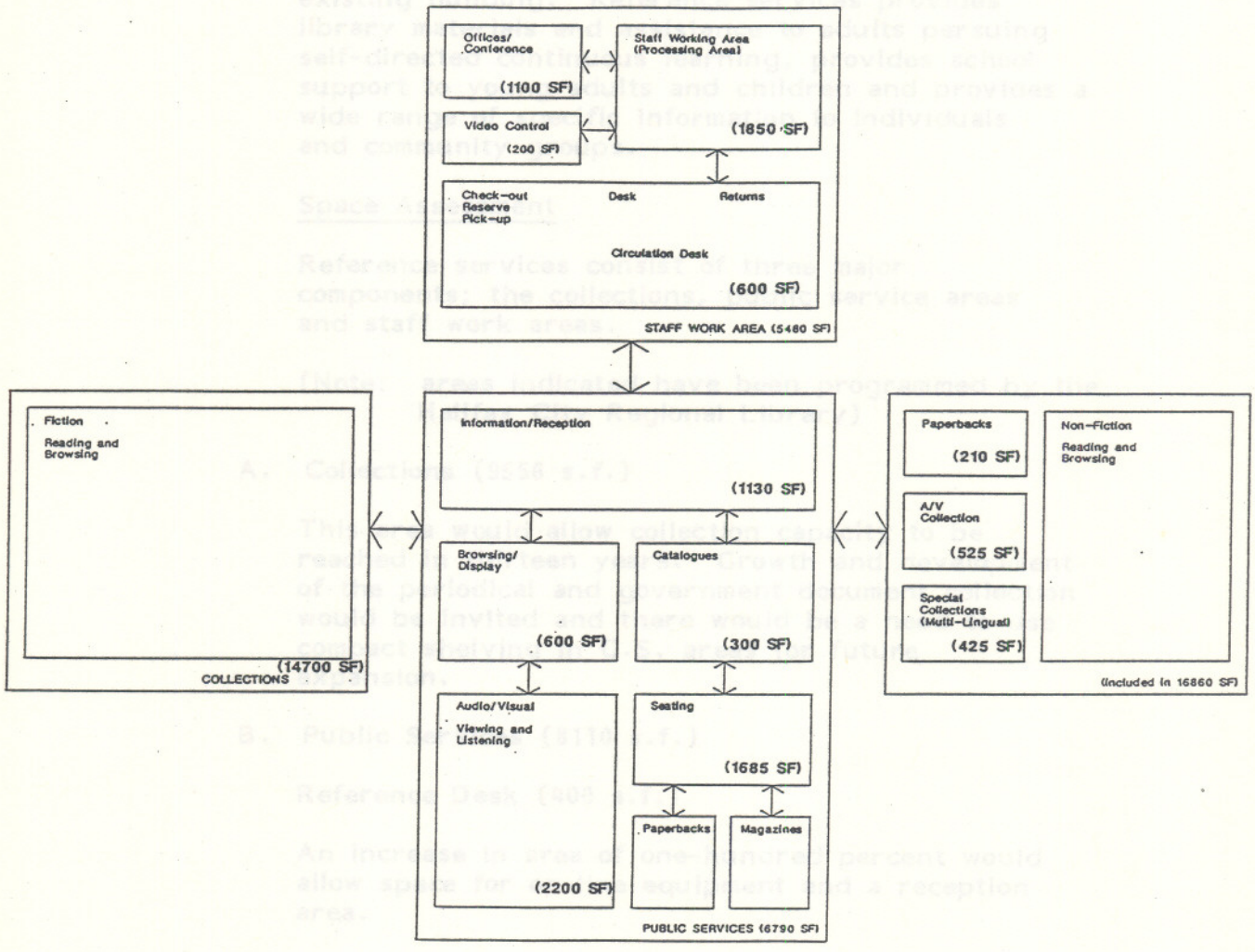
Video Control (200 s.f.)

Note: Areas calculated are based on a staff FTE figure of 29.85 and an average of 125 s.f. per person and indicate a total requirement for Adult Lending Services of 3750 s.f. This results in reduced collection space and a smaller processing area as well as elimination of a conference room. This would require that deliveries of materials from other outlets be received and sorted at a central delivery area and distributed to departments on booktrucks).

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.1 ADULT LENDING SERVICES (CIRCULATION)

Space Relationship Diagram



III DEPARTMENT DESCRIPTIONS AND ANALYSIS EXISTING AND PROPOSED SERVICES

3.2 REFERENCE SERVICES

General Description

Reference services, containing 8023 s.f. of space, is located on the second floor and mezzanine of the existing building. Reference services provides library materials and assistance to adults persuing self-directed continuous learning, provides school support to young adults and children and provides a wide range of specific information to individuals and community groups.

Space Assessment

Reference services consist of three major components; the collections, public service areas and staff work areas.

(Note: areas indicated have been programmed by the Halifax City Regional Library)

A. Collections (9556 s.f.)

This area would allow collection capacity to be reached in thirteen years. Growth and development of the periodical and government document collection would be invited and there would be a need to use compact shelving in C.S. areas for future expansion.

B. Public Services (8110 s.f.)

Reference Desk (400 s.f.)

An increase in area of one-hundred percent would allow space for on-line equipment and a reception area.

Seating (6840 s.f.)

This area would be increased to accommodate seating for 216 persons plus 12 reading chairs.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.2 REFERENCE SERVICES

Catalogues (120 s.f.)

This reflects an increase of one catalogue station.

Support Equipment (750 s.f.)

This would be the optimum size to accommodate the increases in microfilm equipment.

C. Staff Work Areas (2000 s.f.)

Serials Unit (400 s.f.)

This would be the optimum area for mail sorting, Kardex and Magazine processing.

Staff Offices (1300 s.f.)

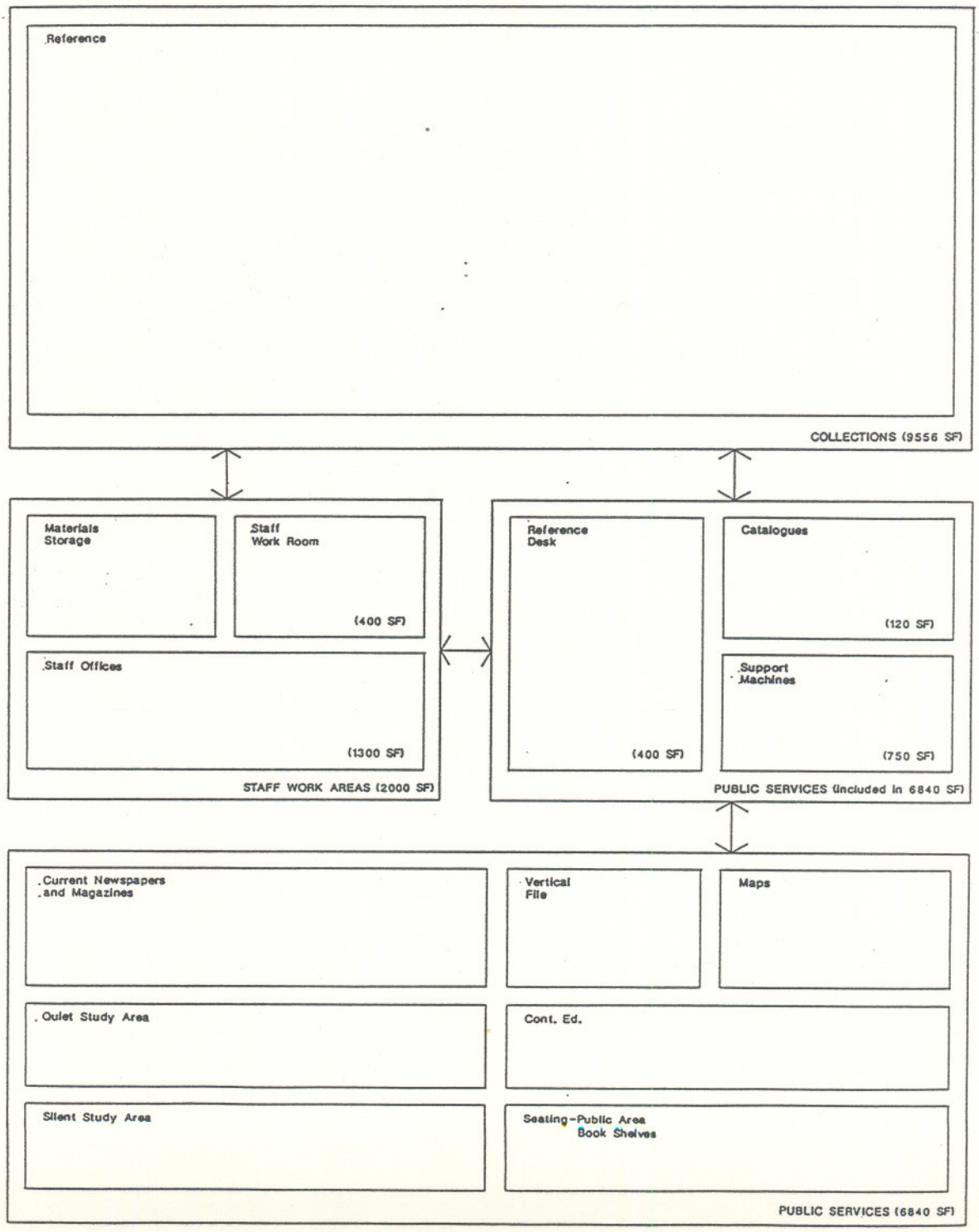
This area would accommodate 12 staff with offices for two Librarians and a coordinator.

Reference Office (300 s.f.)

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.2 REFERENCE SERVICES

Space Relationship Diagram



III DEPARTMENT DESCRIPTIONS AND ANALYSIS EXISTING AND PROPOSED SERVICES

3.3 CHILDRENS/YOUNG ADULT COLLECTION

The Children's collection containing 5907 s.f. of space is presently located on the lower floor of the existing building. Childrens/Young Adult Services provides collection materials and programming services to pre-schoolers, school age children and young adults, as well as assistance to parents, teachers and day-care workers. This service also caters to french speaking children, impaired and handicapped children and young adults, and community groups and institutions.

Space Assessment

The Childrens/Young Adult collection consists of the collection area, public service areas, childrens programs area and staff work areas.

(Note: Areas indicated have been programmed by the Halifax City Regional Library).

A. Collections (9696 s.f.)

The collections area includes open shelving space for childrens books from grades 1 to 12, with racks for special collections, paperbacks, videos, magazines, records and toys.

B. Public Services (3920 s.f.)

The public services area would contain two audio visual monitors, eighteen reading chairs for browsing and magazines, an information/reception area and microfiche catalogue and formal and informal seating for 168 people.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS EXISTING AND PROPOSED SERVICES

3.3 CHILDRENS/YOUNG ADULT COLLECTION

C. Childrens Programs Area (3000 s.f.)

The Area contained in childrens programs includes a puppet room for 100 children, a story hour room for 50 children, a young adult room that can double as a staff conference room, a project room for educational games and a computer literary room to be shared between adults and children.

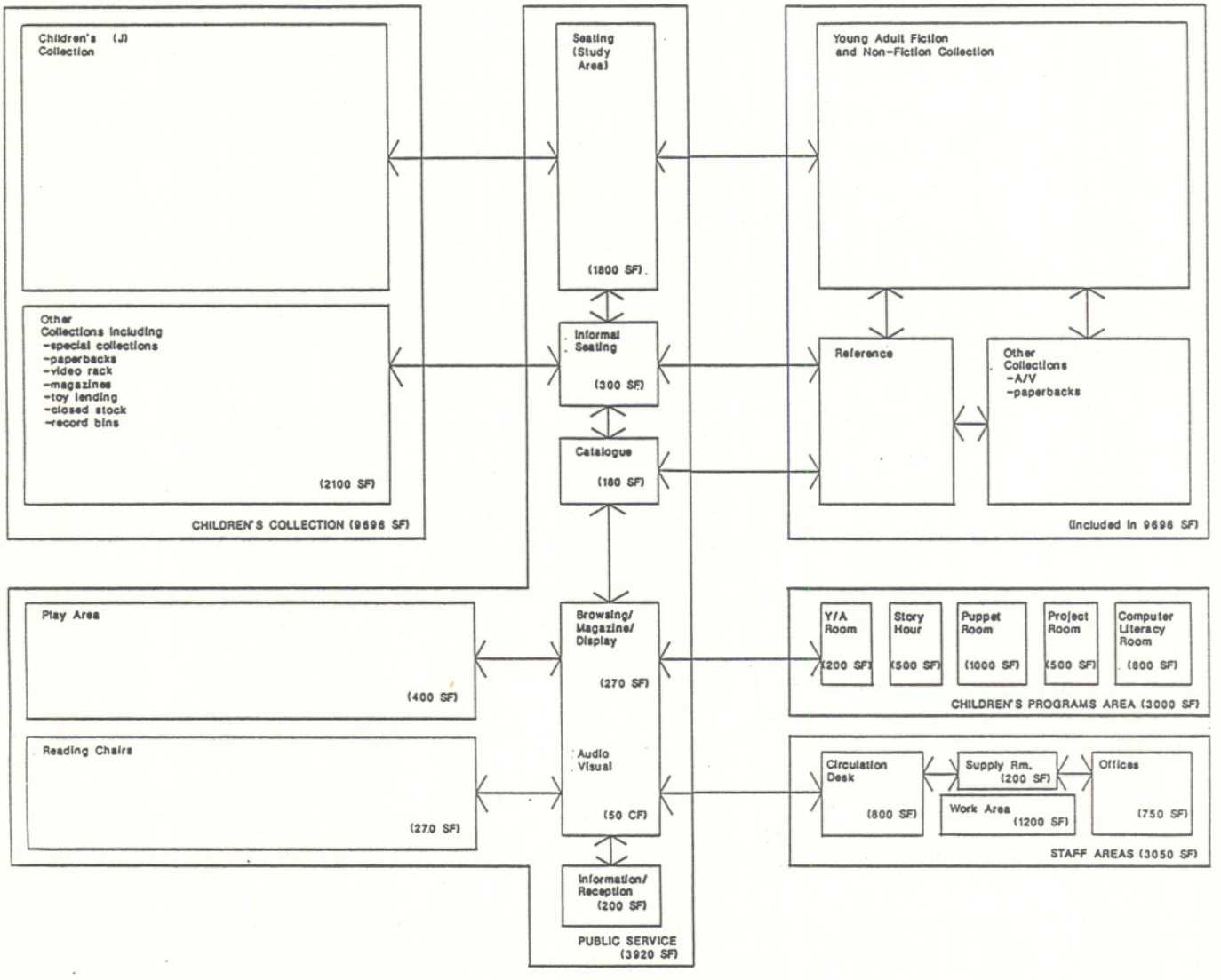
D. Staff Work Areas (3050 s.f.)

Included in this area are a circulation desk, a supply room, clerical work space, a coordinators office, offices for three librarians and four library assistants.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.3 CHILDRENS/YOUNG ADULT COLLECTION

Space Relationship Diagram



III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.4 COMMUNITY SERVICES

General Description

(Needs to be supplied by Library Staff)

Space Assessment

Community Services largely consist of shared program and meeting rooms with some dedicated support space.

Shared space such as the Program Room Display Areas, Computer Literacy Area and Meeting Rooms should be accessible from both childrens and adult areas without having to enter or exit either. These areas also require access to telephones and washrooms and a separate access for after-hours community use.

a. Meeting Rooms (4) (1500 s.f.)
   Program Room (2000 s.f.)

A large program room with four adjacent small meeting rooms seating ten to fifteen people each is required. It should be possible to increase the size of the program room by an additional room as required. Similarly, the meeting rooms should be able to be combined. The program room should be entered through adult lending and Childrens and Young Adult Services public areas. Access to the meeting rooms should be provided when the remainder of the library is closed. Individual access is required to each meeting room to maintain simultaneous use for both community and library-sponsored programs. The large program room would be for library sponsored programs only. Meeting rooms require storage space for furniture and the program room requires audio-visual capabilities in addition to furniture storage and a kitchenette.

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

3.4 COMMUNITY SERVICES

b. Computer Literacy Area (incl. in Childrens Program Area)

Tutored and individual learning for people of all ages would take place in this area.

c. Storage Area (400 s.f.)

Displays, supplies, brochures, tables and chairs would require storage space.

d. Public Display Area (400 s.f.)

This area would include bulletin boards, pamphlet racks and moveable display panels.

e. Printing Area (500 s.f.)

Printing equipment, paper storage and countertop workspace would be contained in this area.

f. Offices (3) (600 s.f.)

Three connecting offices are required for graphics layout, a director's office with microcomputer and an office with combined meeting space.

3.5 ADMINISTRATION (2000 s.f.)

This area would include three offices of 150 s.f. each, a boardroom of 250 s.f. dedicated to the administration area and a general office/computer area of 1300 s.f. Printing services are included with Community Services. A kitchenette is required for the boardroom and a reception area for public waiting.

3.6 MAINTENANCE (6000 s.f.)

The maintenance area consists of a storage area, a work space and a delivery entrance. Present storage areas need to be doubled to meet present demands,

III DEPARTMENT DESCRIPTIONS AND ANALYSIS
EXISTING AND PROPOSED SERVICES

and the freight entrance requires enlargement to four times its present size. The freight entrance must accommodate delivery and unpacking of library materials received from other branches. Presently, this work takes place in individual department work areas. A maintenance storage room should be available on alternate floors of the new building with general storage available on every floor.

3.7 STAFF FACILITIES (2244 s.f.)

The existing staff area should be enlarged by half to cope with present staff levels. Locker areas should be doubled to cope with present staff needs.

IV HALIFAX REGIONAL LIBRARY SITE ANALYSIS

4.1 CITY OF HALIFAX - LAND USE BYLAWS
(See Appendix 'C' - City of Halifax - Land Use Bylaws)

The existing site is presently zoned P - Park and Institutional Zone and conforms with article 67 (1) (d) - Library usage.

The remaining requirements for lot area, frontage etc. must conform with article 70 i.e. the requirements of the R-3 Zone.

Minimum Lot Area (R-3) P. 46 (1((a)

The minimum lot area required is 8100 s.f. with a minimum continuous street frontage of at least 90' on one side.

The exisiting site is approximately ± 41,200 s.f. (This does not include the site of Grafton Park the exact boundaries of which are not known at this time - Refer to letter from the City of Halifax also attached under Appendix 'C'). Street frontages on Brunswick ± 247', on Spring Garden Road ± 50', on Grafton Street ± 80'.

Distance From Lot Line (R-3) P.46 (2)

a. The distance between any proposed building and the official street line or property line shall be not less than 20', however may be reduced to 10' if contained within the arms of an 80 degree horizontal angle.
b. The distance between the proposed building and side yard property line is 10' if contained within the arms of an 80 degree horizontal angle.
c. The proposed building may extend to the official street line or property line provided that the height of the proposed building does not exceed 5' above the natural ground level along or at any point on the property or official street line. (This may allow for a parking podium to exist under the proposed building and perhaps below Grafton park. This will have to be verified with the City of Halifax and is dependent upon ownership of the land. If land is to be utilized for parking below Grafton park, this would have to be designated short term public parking).

III HALIFAX REGIONAL LIBRARY SITE ANALYSIS

4.1 City of Halifax - Land Use Bylaws

Schedule 'F' allows for a resolution (in council) to vary the setback and height requirements (R-3) (P47 2(e))

Size of Building (R-3) P.48 (3)

No height restrictions are imposed on this site and the overall building volume is determined by angle controls as set out under article (3)(a). A vertical angle of 60 degrees from the lot line at the north and 30' from the official street line on the other three sides governs the maximum possible volume to be constructed. This feasibility study has assumed that it is not necessary to construct a building of more than four floors in height plus penthouses on this site.

Open Space (R-3) (P.50)

Under 'P' zoning there is no minimum requirement for open space. The site within the setback lines may have 100% coverage within the 60 degree angle controls.

IV HALIFAX REGIONAL LIBRARY SITE ANALYSIS

4.2 SUMMARY

A building of four floors in height covering the entire building site would provide approximately 151,600 s.f. of gross building area, not including parking below grade or mechanical space above. It is unlikely that the entire building site would be used to this extent as requirements for open space and daylighting would require consideration, however, a building of 100,000 s.f. not including parking and mechanical space would appear to be achievable in this location.

If the shell of the original library building is to be maintained, other considerations such as distance from set back lines to the future building, parking and open space must be taken into account. The distance between the existing building and the proposed 20' setback line does not allow for a reasonably sufficient building depth on Brunswick Street. The resulting depth of approximately 25' would seriously compromise any spatial arrangement within the new construction, and would not provide for any open space between the existing building and a proposed new building. Parking below grade must be organized around the existing building and results in some inefficiencies in its layout.

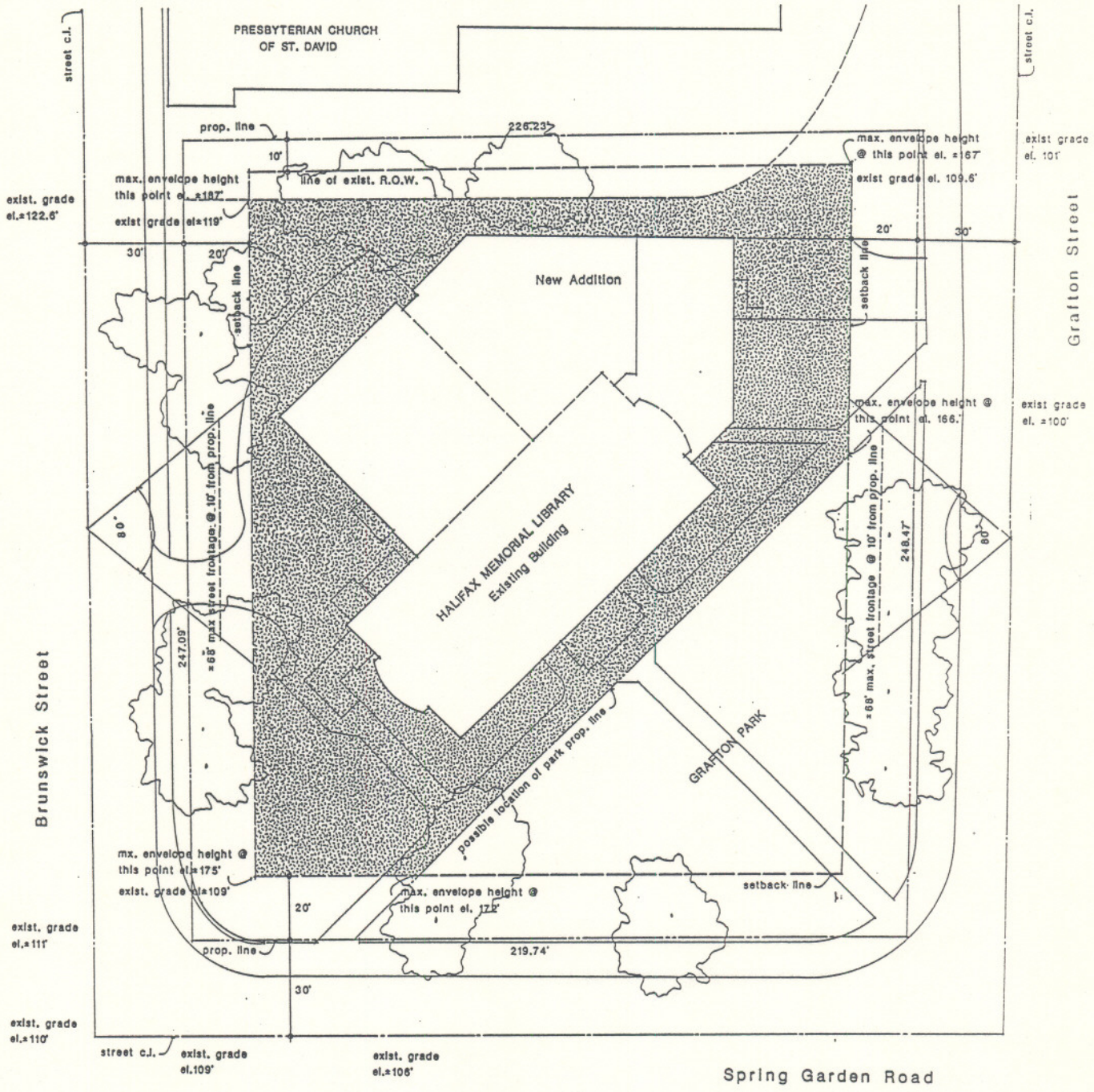
Two approaches to the development of the site appear to be possible. (Refer to Section VI - Options for Future Expansion). The first alternative would be to work within the existing building volumes as defined by the City of Halifax Land - Use Bylaws. (See attached drawing - Existing Site Plan Showing Setbacks).

As noted above, compromises in building configuration and open space would be inherent in this scheme.

The other alternative would be to enlarge the buildable site, specifically on the Brunswick Street face, as allowed for under Schedule 'F' of the Land-Use Bylaws. This would allow for a greater building depth on the west side of the site, and preliminary discussions with City of Halifax officials have indicated that this may be achievable. Section VI of this report - Options for Future Expansion, will investigate both of these alternatives in more detail.

IV HALIFAX REGIONAL LIBRARY SITE ANALYSIS

4.2 SUMMARY



Existing Site Plan
Showing Setbacks

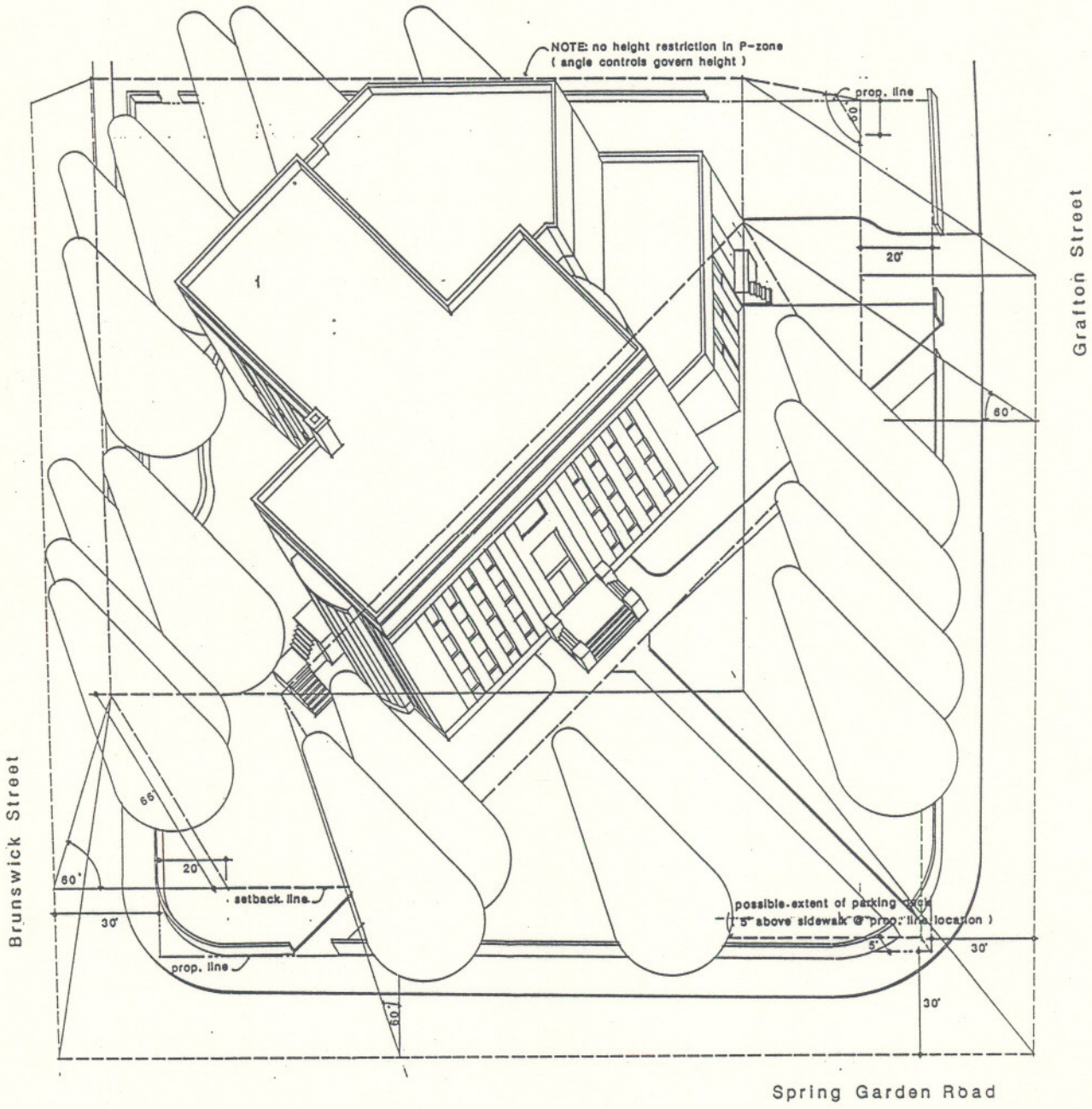
0 25 50 75

22

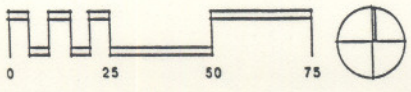
Area of Total Site (excluding Grafton Park)	41,200 SF
Area of Total Building Site (within setback lines)	37,900 SF
Area of Existing Building Footprint	13550 SF
Area of Available Building Site (total site less building footprint)	22,350 SF
Maximum Building Volume @ 4 Floors	151,600 SF

IV HALIFAX REGIONAL LIBRARY SITE ANALYSIS

4.2 SUMMARY



Building Volumetric Study Showing
Setbacks and Angle Controls



V PROJECTED AREA REQUIREMENTS

The following space estimates are based upon space allocation figures provided by the library in September of 1986. This information was prepared by the co-ordinators and other departmental supervisors. Technical Services was not discussed as part of this new building and would remain at the North-End Library. Three building sizes were investigated, each totalling respectively 80,000 s.f., 90,000 s.f. and 100,000 s.f. Severe limitations on the extent of future expansion were encountered in both the 80,000 s.f. and 90,000 s.f. models. The 100,000 s.f. scheme was recommended by the library with the following limitations placed upon the major collections.

Reference Collection - This scheme assumes that collection capacity will be reached in 13 years with some limits on the size of the government document collection. There is a need to use compact shelving in the G.S. stacks at the 15 - 20 year point.

Adult Lending - The collection capacity would be reached in 10 years.

Childrens Collection - This is the capacity that this collection would reach in a building of 100,000 s.f.

V PROJECTED AREA REQUIREMENTS

TABLE 2

DEPARTMENT	EXISTING AREA (SF)	PROJECTED AREA REQUIREMENTS (20 years growth)	
		Net Square Foot	DGSF (1:1:15) (incl. circulation & public facilities)
ADMINISTRATION	1,607	2,000	2,300
1. Offices (3)		450	
2. Boardroom		250	
3. General Office/ Computer Area (Printing Area See Community Services)		1,300	
MAINTENANCE	44	4,000	4,600
1. Storage		2,000	
2. Office/Work Area		1,200	
3. Entrance/Delivery		800	
STAFF FACILITIES	1,000	2,244	2,580
1. Staff Rooms/ Locker Area		2,244	
ADULT LENDING SERVICES	11,026	25,525	29,354
COLLECTIONS		15,860	18,239
1. Audio Visual		525	
2. Books/Magazines		14,700	
3. Paperbacks		210	
4. Special Collections		425	

V PROJECTED AREA REQUIREMENTS

TABLE 2

DEPARTMENT	EXISTING AREA (SF)	PROJECTED AREA REQUIREMENTS (20 years growth)	
		Net Square Foot	DGSF (1:1:15) (incl. circulation & public facilities)
PUBLIC SERVICES	132	5,915	6,802
1. A/V Viewing and Listening		2,200	
2. Browing and Display		600	
3. Catalogue		300	
4. Information/Reception		1,130	
5. Seating		1,685	
STAFF WORK AREAS		3,750	4,313
1. Circulation		600	
2. Processing		1,850	
3. Offices		1,100	
4. Video Control		200	
REFERENCE SERVICES		19,666	22,616
REFERENCE COLLECTION	9,031	9,556	10,989
PUBLIC AREAS		8,110	9,327
1. Reference Desk		400	
2. Seating		6,840	
3. Catalogues		120	
4. Support Equipment		750	
STAFF AREAS		2,000	2,300
1. Serials Unit		400	
2. Staff Offices		1,300	
3. Reference Office		300	

V PROJECTED AREA REQUIREMENTS

TABLE 2

DEPARTMENT	EXISTING AREA (SF)	PROJECTED AREA REQUIREMENTS (20 years growth)	
		Net Square Foot	DGSF (1:1:15) (incl. circulation & public facilities)
CHILDREN SERVICES		19,666	22,616
CHILDREN COLLECTION		9,696	11,150
1. Shelving/Collection		7,596	
2. Special Collection		200	
3. Paperbacks		450	
4. Video Rack		250	
5. Magazines		200	
6. Toy Lending		300	
7. Closed Stack		500	
8. Record Bins		200	
CHILDRENS PUBLIC SERVICE		3,920	4,508
1. Audio Visual		50	
2. Reading Chairs		270	
3. Browing/Magazine/Display		270	
4. Information/Reception		200	
5. Play Area		400	
6. Microfiche Catalogue		180	
7. Seating (Tables-Chairs)		1,800	
8. Informal Seating		300	
9. J. Stack Area		180	
10. Y.A. Area		270	
CHILDRENS PROGRAMS AREA		3,000	3,450
1. Puppet Room		1,000	
2. Story Hour Room		500	
3. Y.A. Room		200	
4. Project Room		500	
5. Computer/Literacy Room		800	

V PROJECTED AREA REQUIREMENTS

TABLE 2

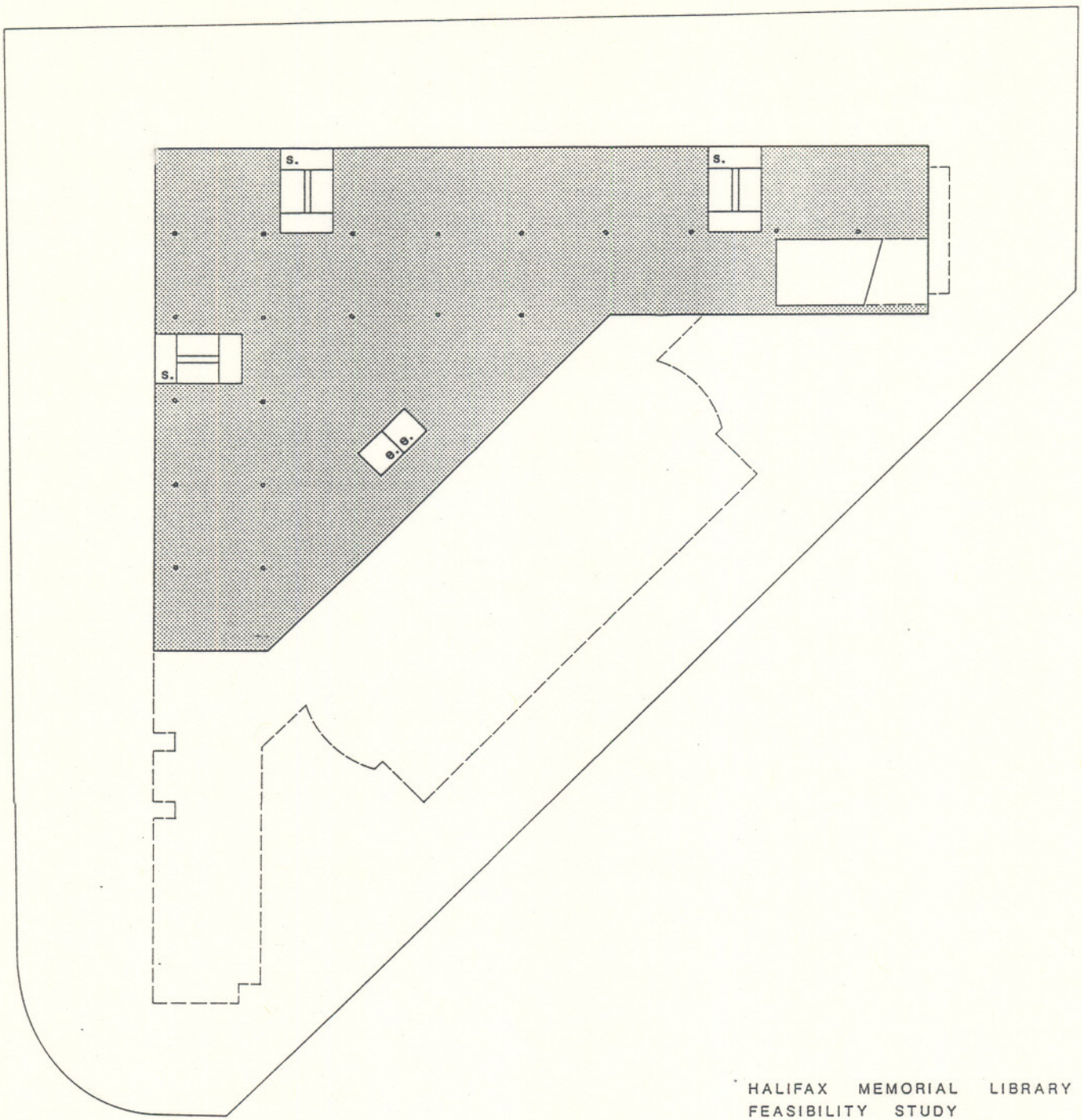
DEPARTMENT	EXISTING AREA (SF)	PROJECTED AREA REQUIREMENTS (20 years growth)	
		Net Square Foot	DGSF (1:1:15) (incl. circulation & public facilities)
CHILDRENS STAFF AREAS		3,050	3,508
1. Circulation Desk		800	
2. Supply Room		200	
3. Work Office		1,200	
4. Coordinators Office		120	
5. Librarians Offices		330	
6. Library Assistants Offices		400	
COMMUNITY SERVICES		5,400	6,210
1. Meeting Rooms (4)		1,500	
2. Program Room		2,000	
3. Computer/Literary Room (Incl. in Childrens Programs Area)			
4. Storage Area		400	
5. Public Display Area		400	
6. Printing Area		500	
7. Offices (3)		600	
TOTALS		78,501	90,276 BGSF (20%) (Incl. Mechanical and Building Structure)
			108,331

VI OPTIONS FOR FUTURE EXPANSION

6.1 SCHEME 'A'

Brunswick Street

Grafton Street



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'A'

SCHEMATIC PLANS
LEVEL ONE
fl. elev. 95.0

N

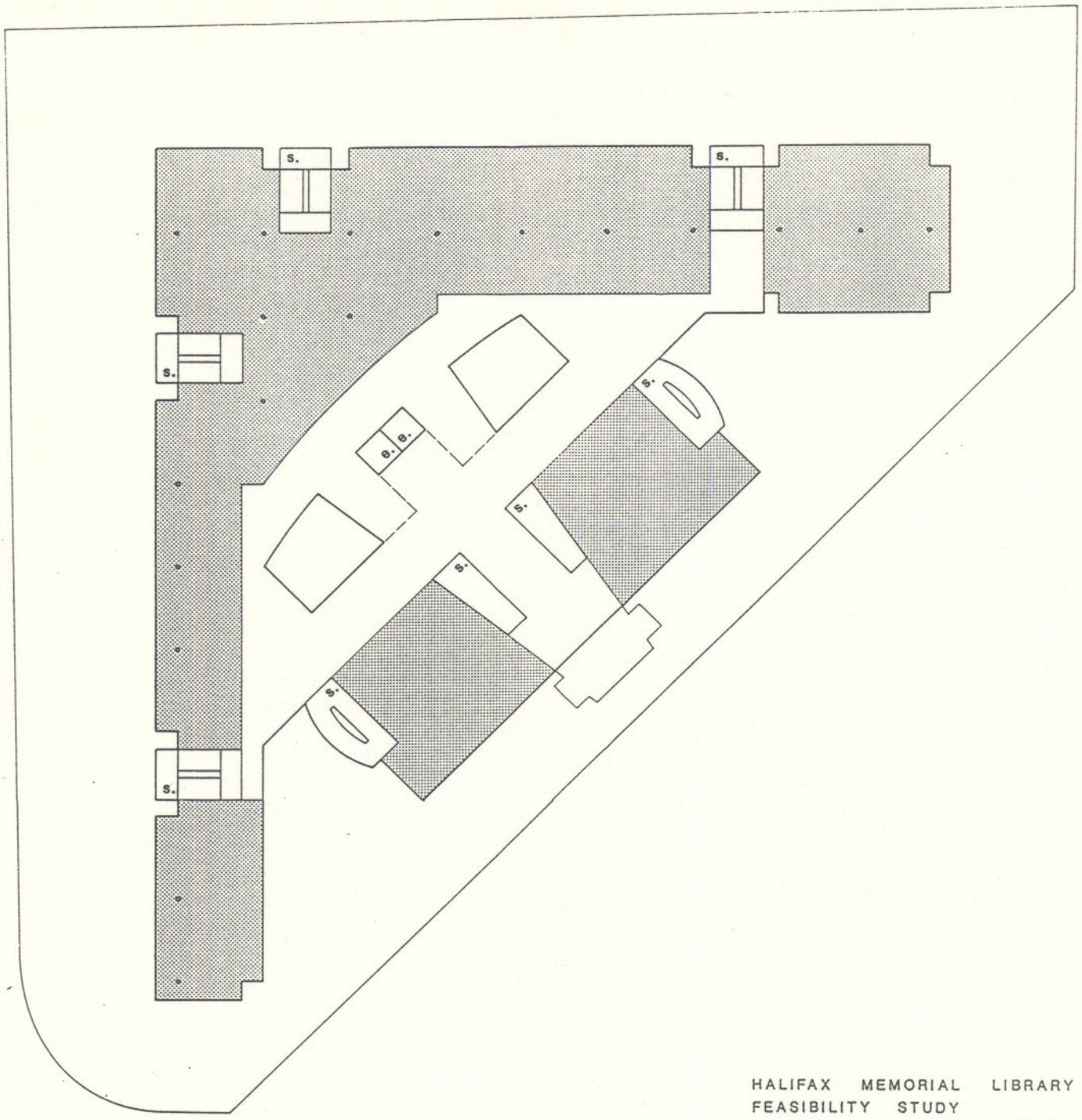
10 0 10 30 50 70

note: shaded area indicates useable space

PARKING
12 400 GSF

Brunswick Street

Grafton Street



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'A'

SCHEMATIC PLANS
LEVEL TWO
fl. elev. 105.7

N

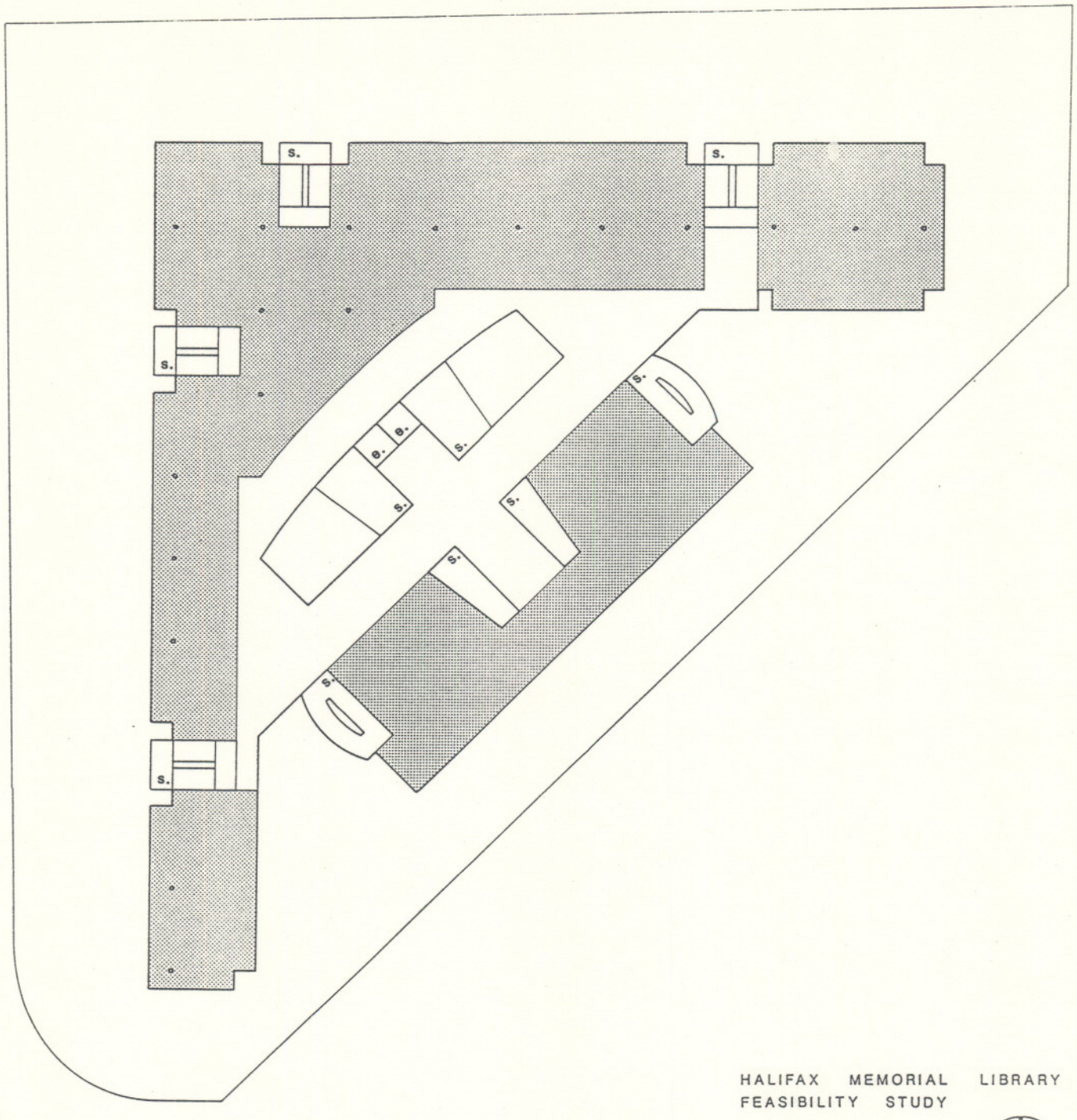
10 0 10 30 50 70

PUBLIC SERVICES

note: shaded area indicates useable space

20 000 GSF

Brunswick Street



Grafton Street

HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY
SCHEME 'A'

SCHEMATIC PLANS
LEVEL THREE
fl. elev. 116.7

N

10 0 10 30 50 70

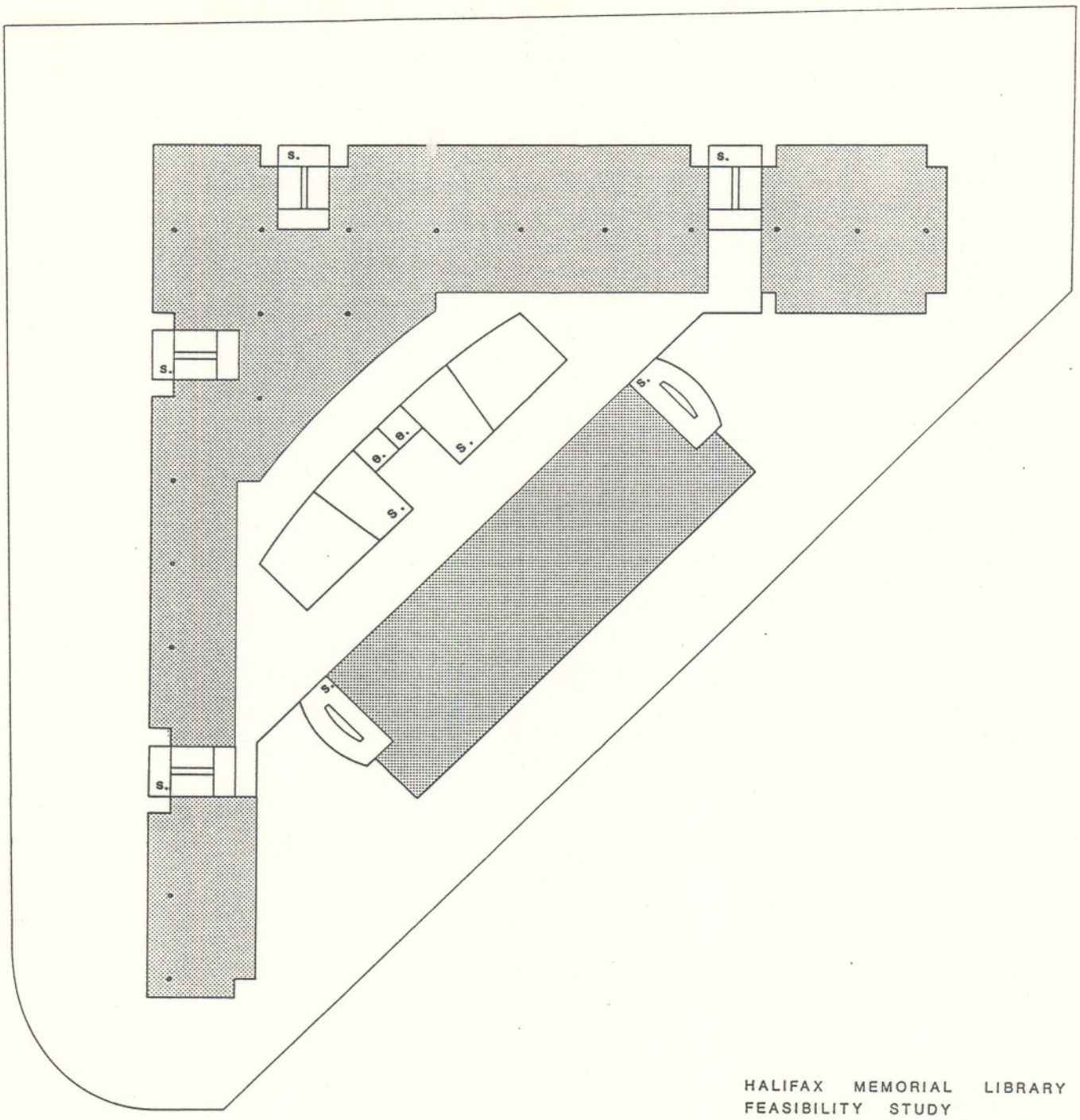
PUBLIC SERVICES

note: shaded area indicates useable space

20 000 GSF

Brunswick Street

Grafton Street



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'A'

SCHEMATIC PLANS
LEVEL FOUR
fl. elev. 127.7

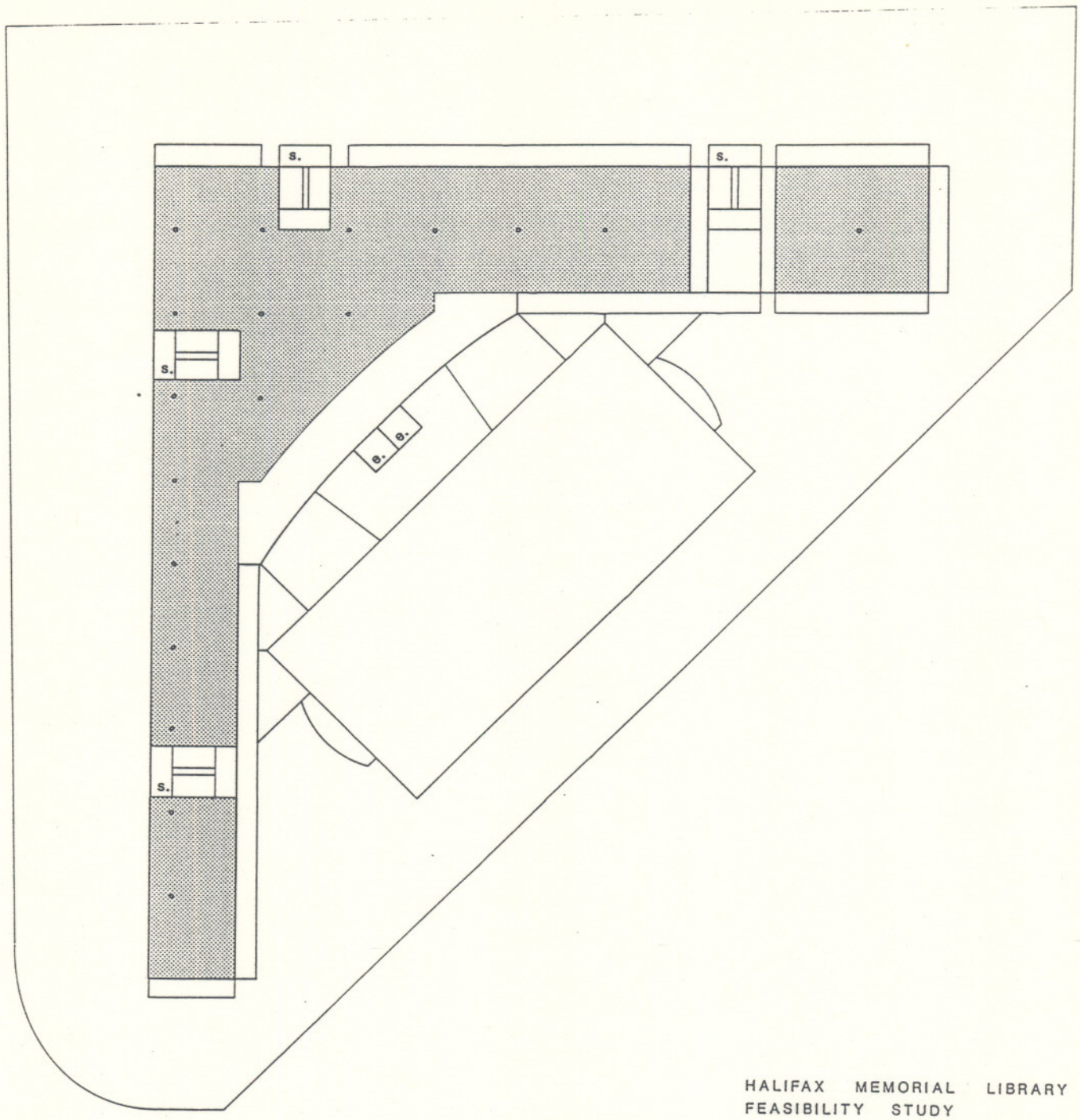
N

10 0 10 30 50 70

PUBLIC SERVICES

note: shaded area indicates useable space

20 000 GSF



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'A'

SCHEMATIC PLANS
LEVEL FIVE
fl. elev. 138.7

N

10 0 10 30 50 70

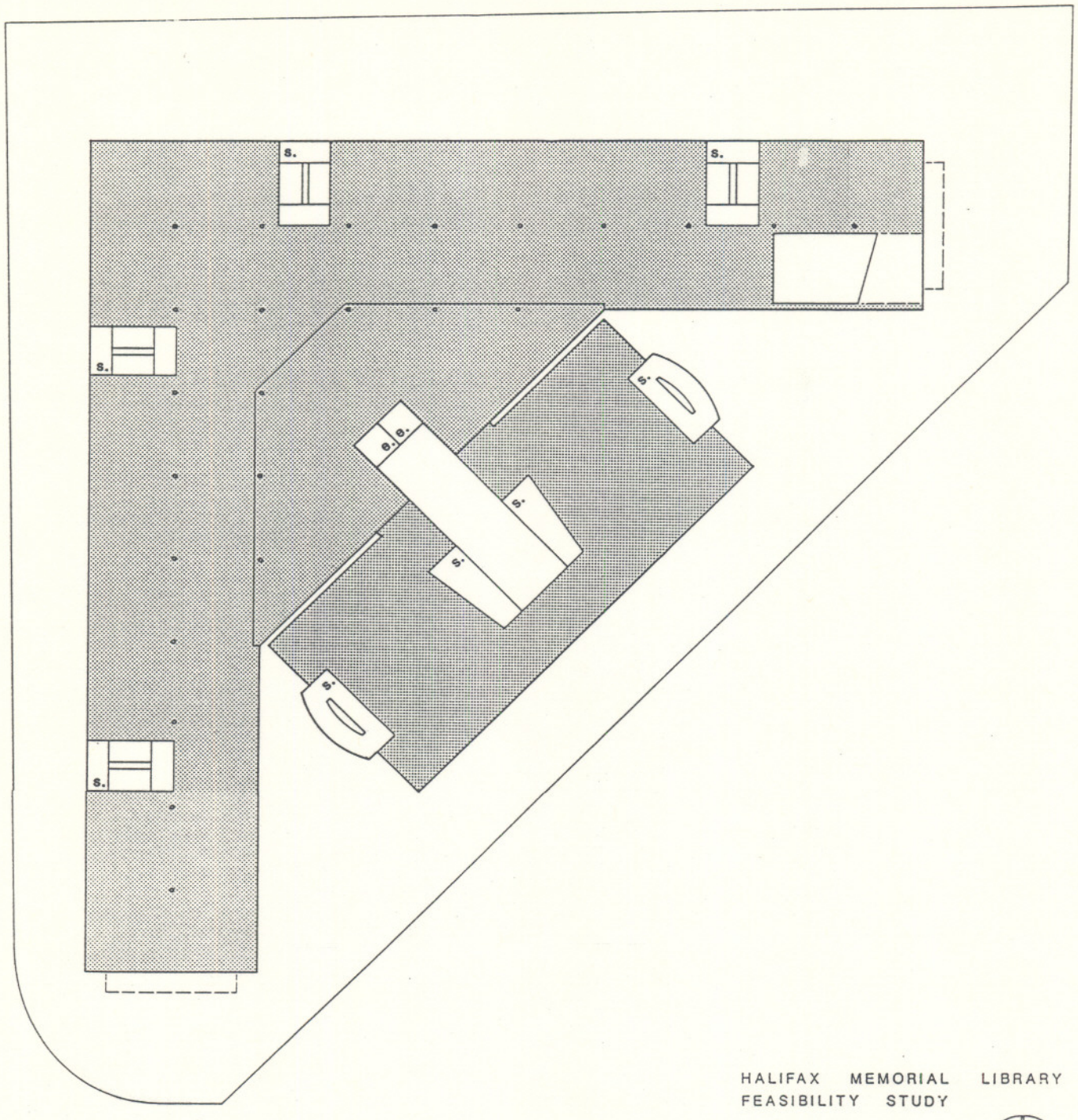
PUBLIC SERVICES

note: shaded area indicates useable space

10 000 GSF

VI OPTIONS FOR FUTURE EXPANSION

6.2 SCHEME 'B'



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'B'

SCHEMATIC PLANS
LEVEL ONE
fl. elev. 95.0

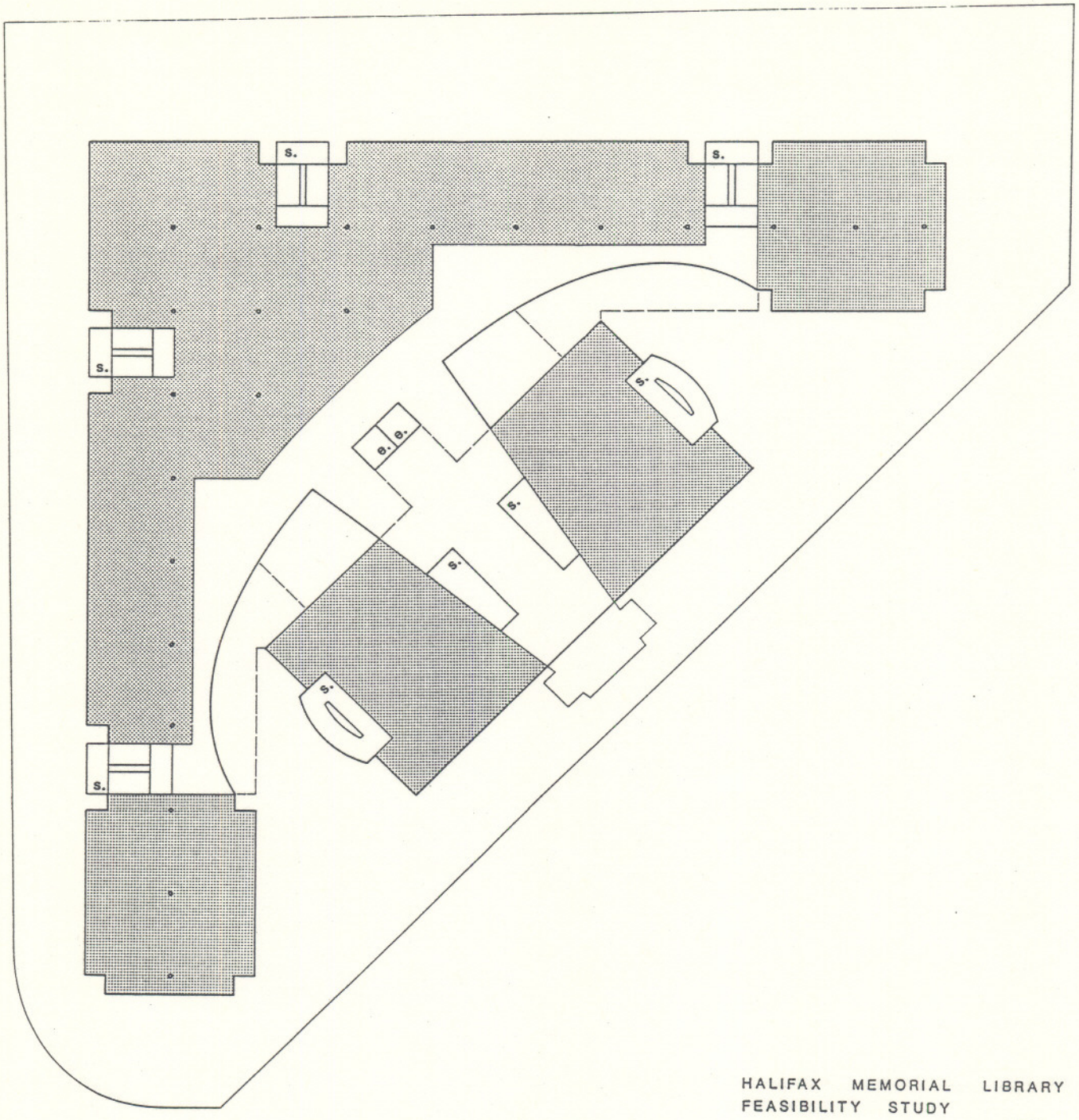
N

10 0 10 30 50 70

note: shaded area indicates useable space

PARKING PUBLIC SERVICES

22 500 GSF



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'B'

SCHEMATIC PLANS
LEVEL TWO
fl. elev. 105.7

N

10 0 10 30 50 70

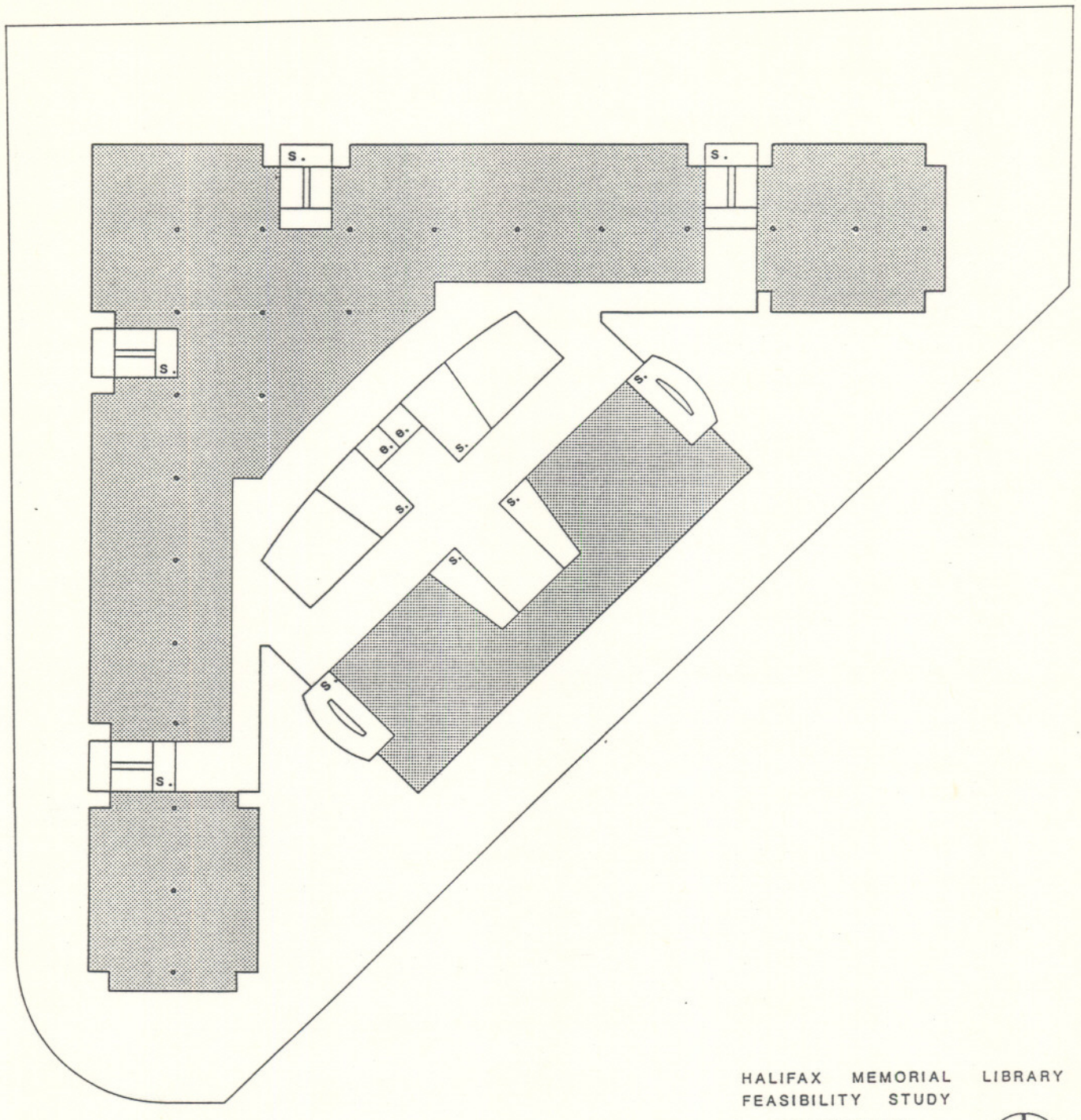
PUBLIC SERVICES

note: shaded area indicates useable space

21 000 GSF

Brunswick Street

Grafton Street



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'B'

SCHEMATIC PLANS
LEVEL THREE
fl. elev. 116.7

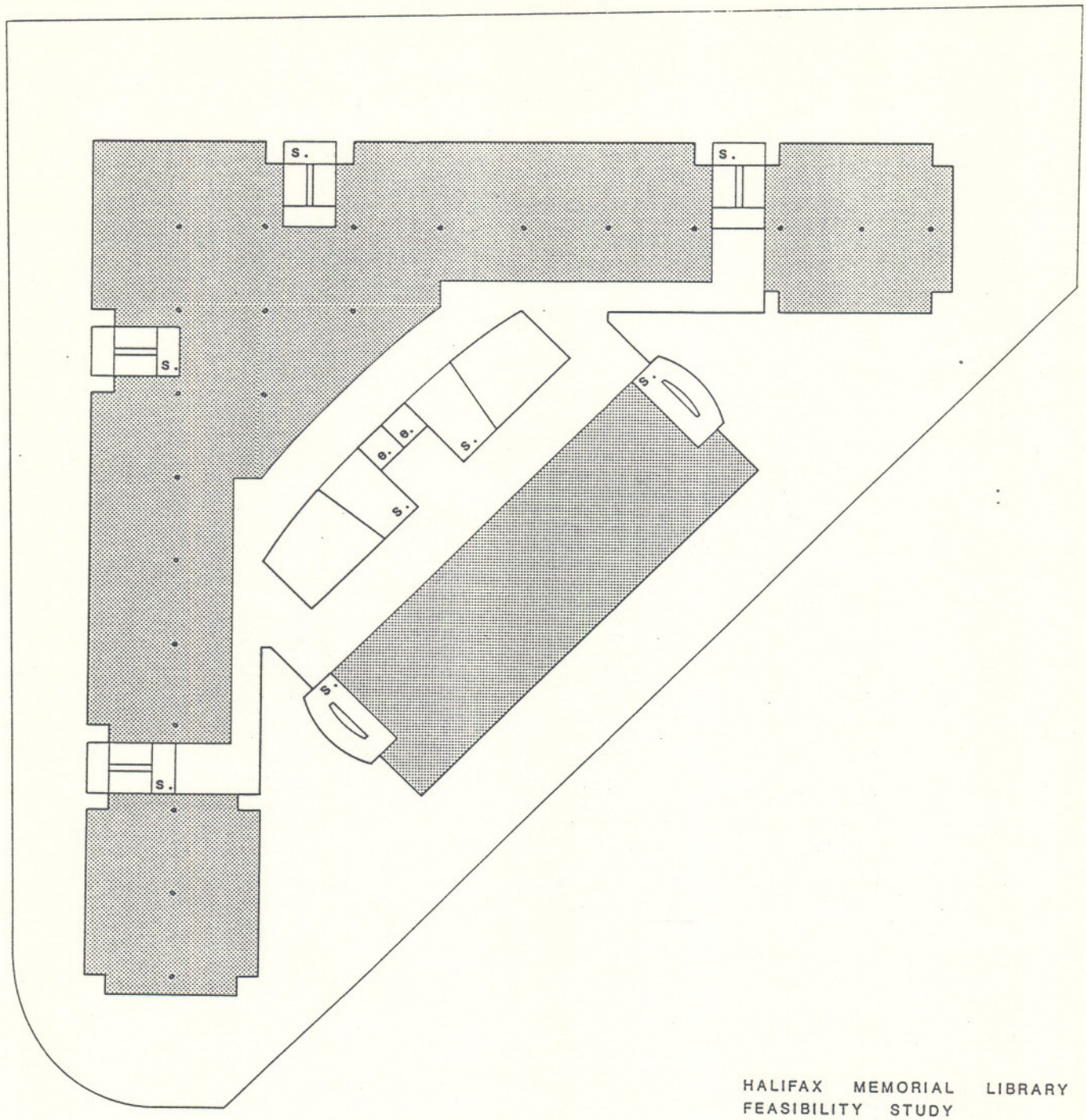
N

10 0 10 30 50 70

PUBLIC SERVICES

note: shaded area indicates useable space

22 500 GSF



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'B'

SCHEMATIC PLANS
LEVEL FOUR
ft. elev. 127.7

10 0 10 30 50 70

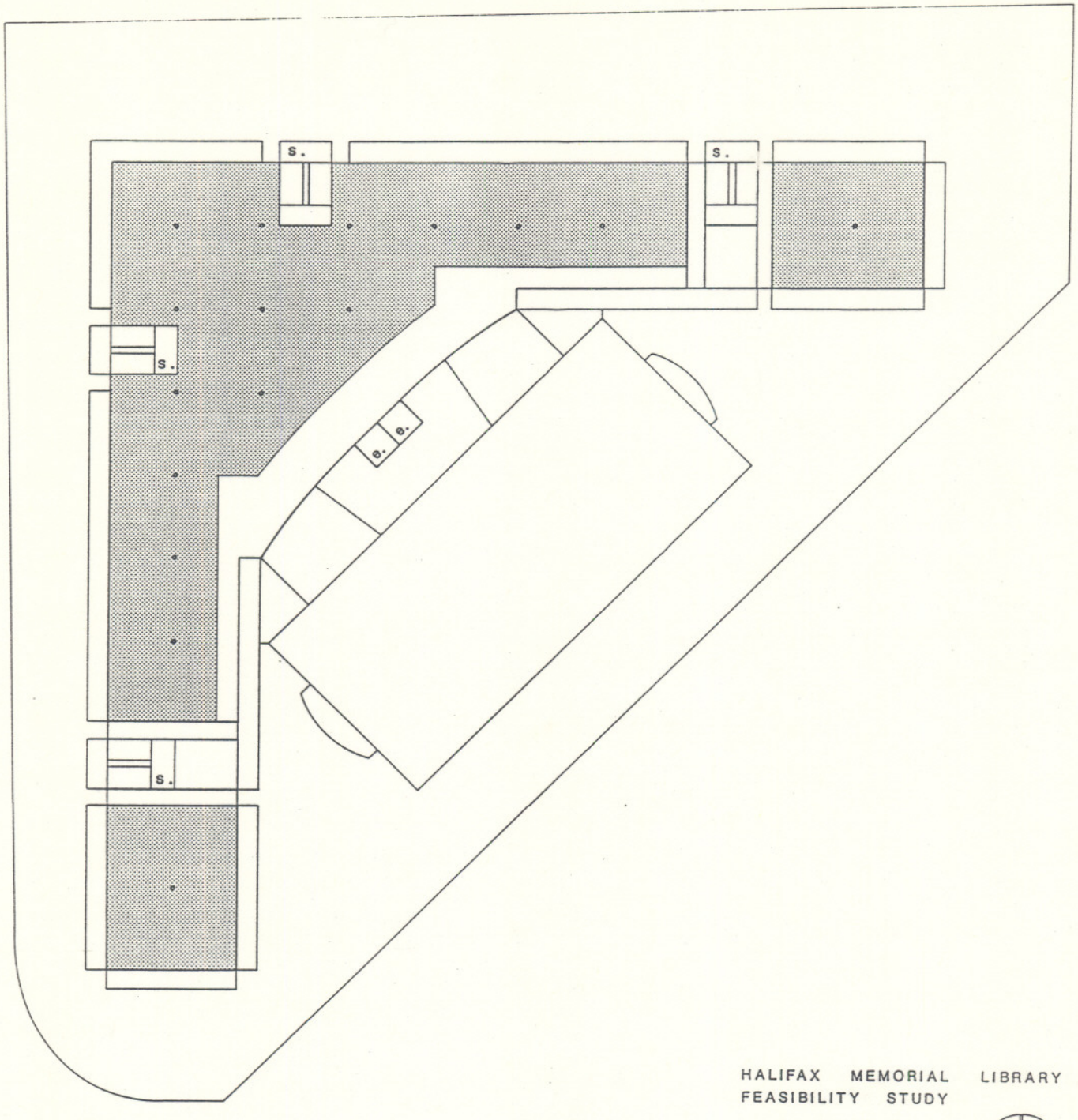
PUBLIC SERVICES

note: shaded area indicates useable space

22 500 GSF

Brunswick Street

Grafton Street



HALIFAX MEMORIAL LIBRARY
FEASIBILITY STUDY

SCHEME 'B'

SCHEMATIC PLANS
LEVEL FIVE
fl. elev. 138.7

10 0 10 30 50 70

N

PUBLIC SERVICES

note: shaded area indicates useable space

12 000 GSF

VII CONCLUSIONS AND RECOMMENDATIONS

As stated in the introduction to this report, we have examined the present library operation, assessed the existing building in terms of its potential to accommodate future expansion and based upon the available site area, have investigated two options for future action. Also noted, is the desire of the Library Board to remain in its present location and its desire to retain the shell of the original 1951 building. The shell of this building has been considered central to the development of both design solutions investigated for this site.

Although the structural loading capacity of the existing building is adequate to accommodate any plan changes that may be required in the interests of future expansion, the existing spatial relationships as determined by the present building configuration do not allow for a fundamental rearrangement of the space that would be required if further use of this site is to be considered. As such, the proposed plan options have considered only the future use of the shell of the 1951 Building. The continued use of the 1973-74 additions and the main reading rooms would seriously compromise any future expansion, and have therefore been deleted in both Scheme 'A' and Scheme 'B' options.

A space analysis of the existing building has been undertaken to assist in the development of the space program for the Halifax Library, and departmental descriptions and an analysis of existing and proposed services have been developed with the Library Board. Areas indicated in Section III have been based on a 100,000 sf model as suggested by the Board. Space allocation figures provided by the library in September 1986, and based upon the building model of 100,000 sf have been developed under Sections III and V of this report and total 90,275 sf (net) and 108,331 sf (gross). The major departments include the childrens services, the adult lending services, reference services and community services.

A site analysis has indicated that approximately 150,000 gross square foot of space is achievable on this site with a building volume no greater than four storeys in height and in compliance with the City of Halifax Zoning By-Laws respecting setbacks and angle height controls.

Based upon the above investigations including analysis of the existing building, a preliminary development of the space program and an analysis of the existing site, two options for future expansion have been developed. (refer to Section VI).

VII CONCLUSIONS AND RECOMMENDATIONS

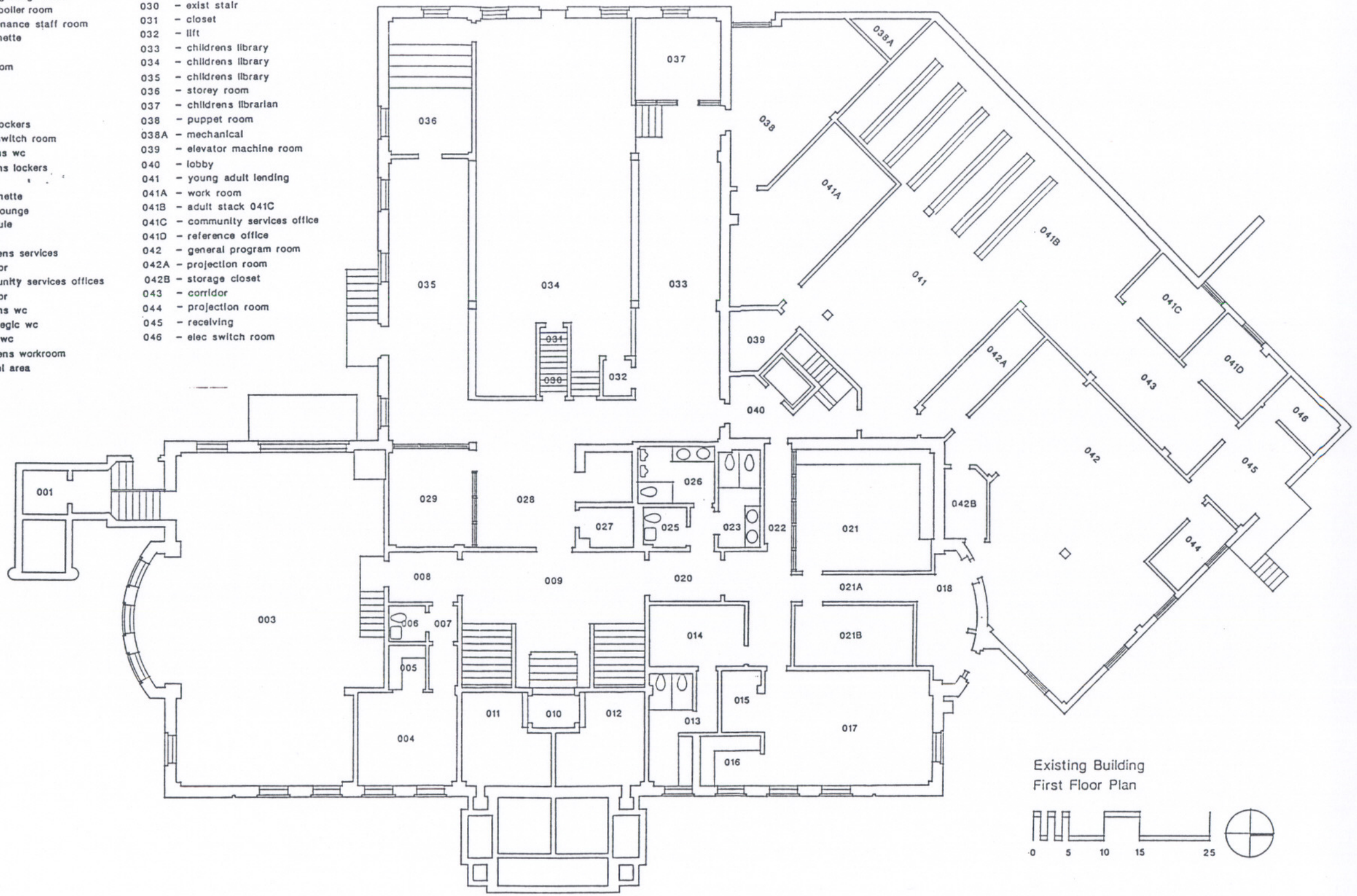
Scheme 'A' - Section VI - Options for 'Future Expansion is based on the City of Halifax Zoning By-Laws for setback requirements along Brunswick Street of twenty feet. Although a building of 82,950 gross square feet is achievable under these restrictions, the plan arrangement that would result along Brunswick Street, only twenty-five feet in depth, seriously compromises any realistic arrangement of the space. The typical floor plate in this scheme is also somewhat smaller than may be ideal for the logical separation of the main collections. The cost of this scheme, $9,607,000.00, is itemized under Appendix 'B' - Construction Cost ProForma and Outline Specification.

Scheme 'B' is similar to Scheme 'A' with the exception of the reduction of the twenty foot setback along Brunswick Street to ten feet. This variance in the setback by-law would allow the west side of the building to be increased in depth from twenty-five feet to forty feet and as such would allow for a more functional plan arrangement on each floor. This would also allow a greater floor plate area consistent with the average collection size and would provide greater open space around the shell of the 1951 Building. Preliminary discussions with City of Halifax officials have indicated that the Brunswick Street setback may be relaxed to ten feet.

Approximate costs for theis scheme would be in the order of $11,529,000.00 and are itemized under Appendix 'B' - Construction Cost ProForma and Outline Specification.

001 – exist. garbage room
003 – exist. boiler room
004 – maintenance staff room
005 – kitchenette
006 – toilet
007 – anteroom
008 – hall
009 – hall
010 – hall
011 – staff lockers
012 – elec. switch room
013 – womens wc
014 – womens lockers
015 – coats
016 – kitchenette
017 – staff lounge
018 – vestibule
020 – hall
021 – childrens services
021A – corridor
021B – community services offices
022 – corridor
023 – womens wc
025 – paraplegic wc
026 – mens wc
027 – childrens workroom
028 – control area

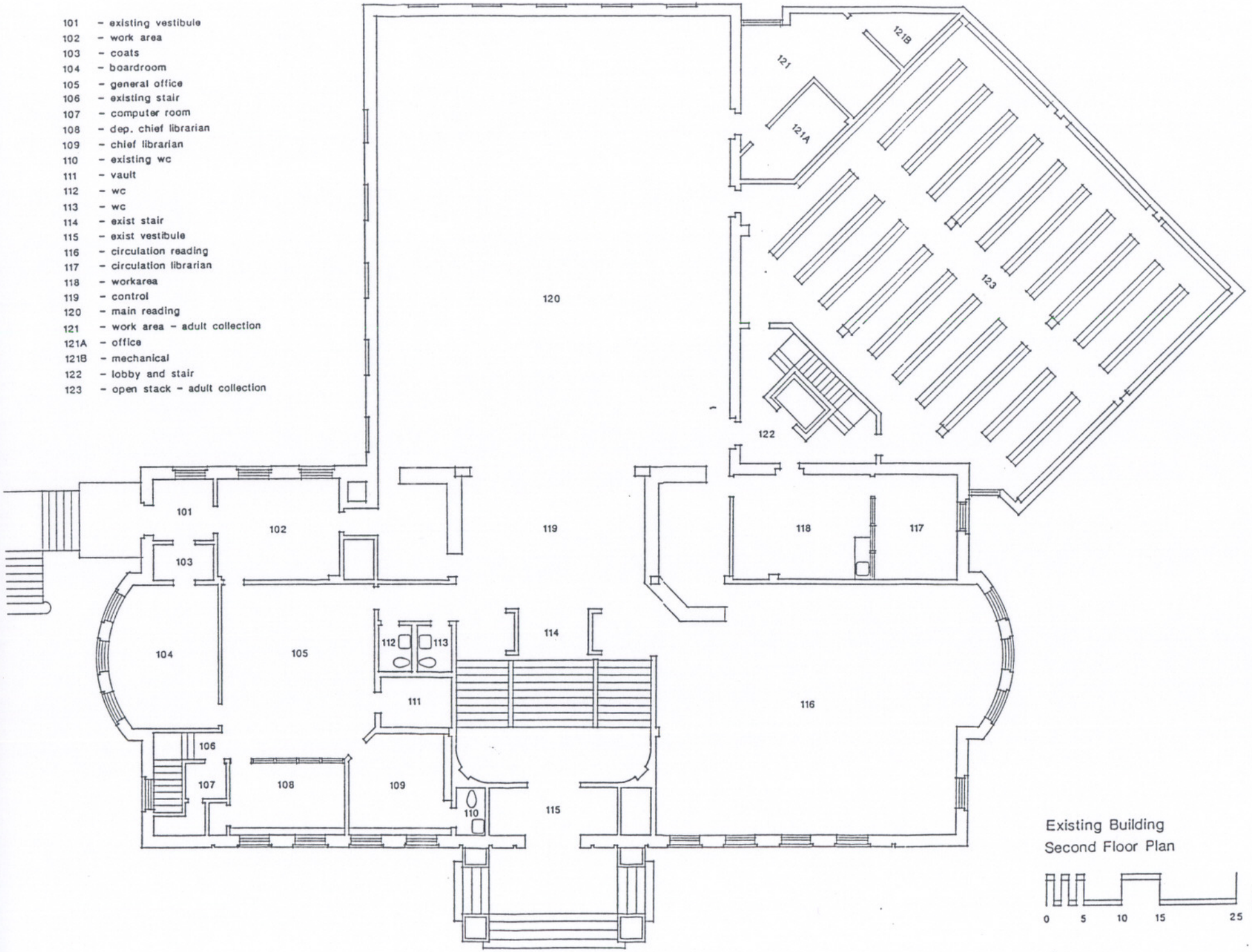
029 – work area
030 – exist stair
031 – closet
032 – lift
033 – childrens library
034 – childrens library
035 – childrens library
036 – storey room
037 – childrens librarian
038 – puppet room
038A – mechanical
039 – elevator machine room
040 – lobby
041 – young adult lending
041A – work room
041B – adult stack 041C
041C – community services office
041D – reference office
042 – general program room
042A – projection room
042B – storage closet
043 – corridor
044 – projection room
045 – receiving
046 – elec switch room



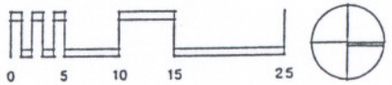
Existing Building
First Floor Plan

0 5 10 15 25

101 – existing vestibule
102 – work area
103 – coats
104 – boardroom
105 – general office
106 – existing stair
107 – computer room
108 – dep. chief librarian
109 – chief librarian
110 – existing wc
111 – vault
112 – wc
113 – wc
114 – exist stair
115 – exist vestibule
116 – circulation reading
117 – circulation librarian
118 – workarea
119 – control
120 – main reading
121 – work area – adult collection
121A – office
121B – mechanical
122 – lobby and stair
123 – open stack – adult collection

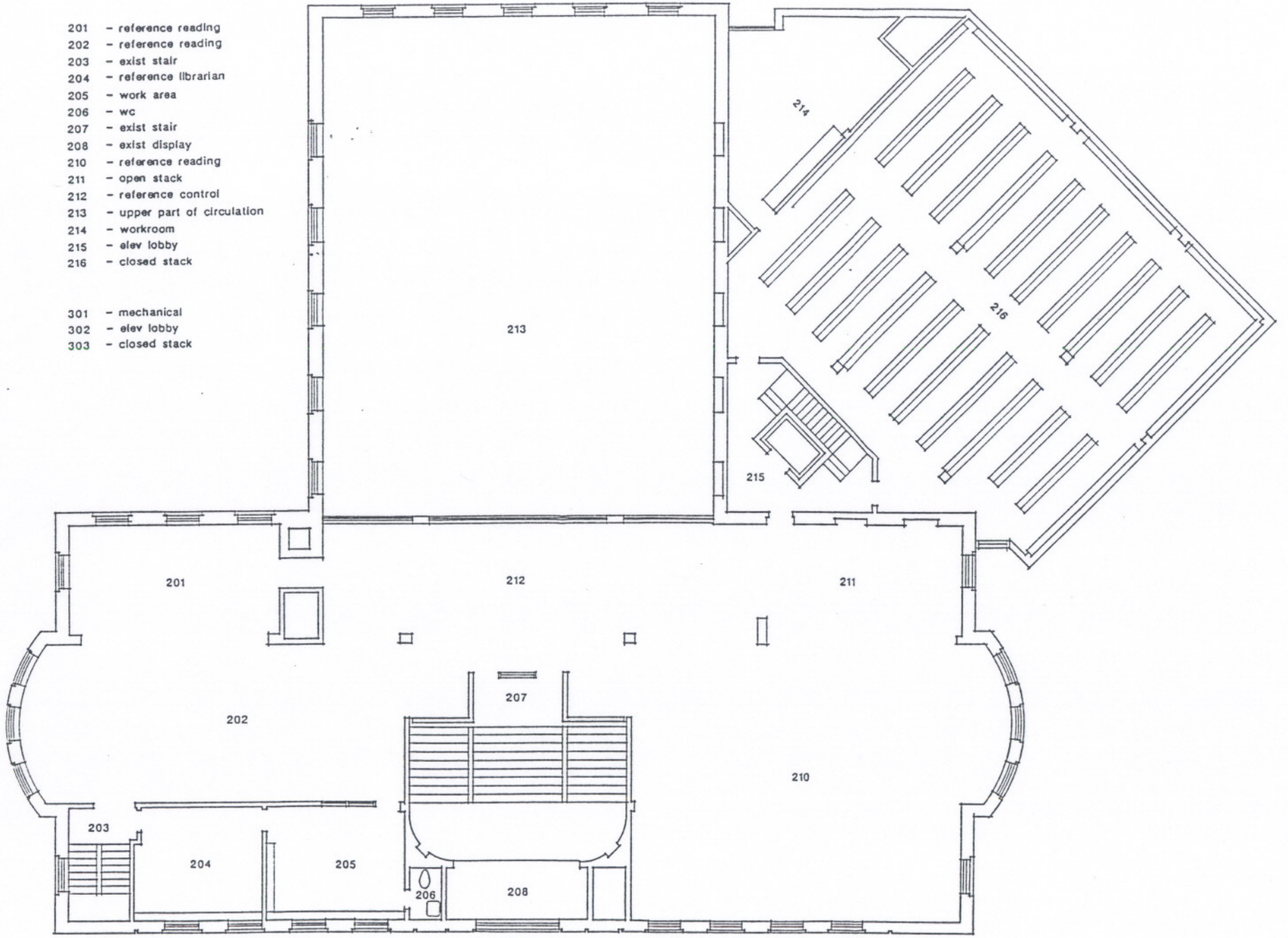


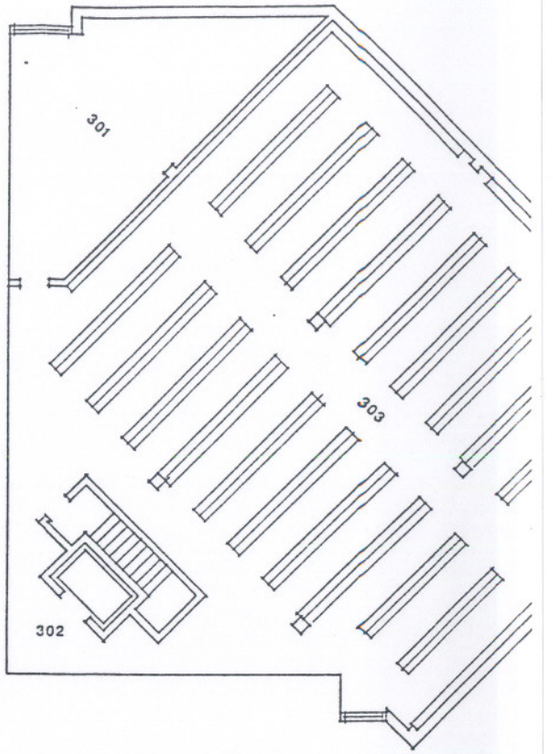
Existing Building
Second Floor Plan



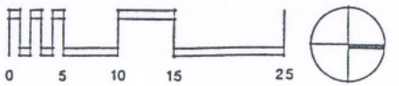
201 – reference reading
202 – reference reading
203 – exist stair
204 – reference librarian
205 – work area
206 – wc
207 – exist stair
208 – exist display
210 – reference reading
211 – open stack
212 – reference control
213 – upper part of circulation
214 – workroom
215 – elev lobby
216 – closed stack

301 – mechanical
302 – elev lobby
303 – closed stack





Existing Building
Third Floor Plan Fourth Floor Plan



APPENDIX 'A' - EXISTING BUILDING PLANS

APPENDIX 'B' : CONSTRUCTION COST PROFORMA AND OUTLINE SPECIFICATION

ALTERATIONS & ADDITIONS

TO THE HALIFAX MEMORIAL LIBRARY

AT

HALIFAX, NOVA SCOTIA

Prepared by:

Hanscomb

Hanscomb Consultants Inc.
7001 Mumford Road
Tower 2, Suite 3030
Halifax, Nova Scotia
B3L 4R3

Prepared for:

Duffus Romans Kundzins Rounsefell
Halifax Professional Centre
5991 Spring Garden Road
Halifax, Nova Scotia
B3H 1Y6

October 1987

1.0 INTRODUCTION

Project:	HALIFAX MEMORIAL LIBRARY ALTERATIONS & ADDITIONS	Date:	OCTOBER 1987	Sheet N°:	1

1.0 INTRODUCTION

1.1 General:

This Building Feasibility Cost Estimate represents all direct and indirect construction costs with the exceptions listed in item 8.1 below.

The proposed new library addition will be five stories with a lower level for underground staff parking. The existing newer library additions will be demolished for both Schemes "A" and "B". The old (Memorial) or original library building will be retained and totally renovated.

2.1 Documentation:

Information received for purposes of establishing this Feasibility Estimate:

- sketches of prosposed Schemes "A" & "B"
- preliminary site plan
- program review report

3.1 Information:

Oral information received from the design consultants and has been used as an integral part of the resources used in preparation of this document.

4.1 Methodology:

From all previously mentioned documentation and information, quantities were measured and then priced out at rates considered competitive for a project of this size under a stipulated lump sum form of contract in Halifax, Nova Scotia.

5.1 Cost Base:

All costs are expressed in fourth quarter 1987 dollar terms. That is, as if the project were tendered in October 1987.

6.1 Escalation:

An Escalation Contingency of 5% has been included in this estimate.

7.1 Contingencies:

A Design Contingency of 7.5% and a Construction Contingency of 5% have been included in this estimate.

1.0 INTRODUCTION

8.1 Exclusions: The following items have been excluded from this program estimate:

8.1.1 Professional fees and expenses;
8.1.2 Legal fees and expenses;
8.1.3 Fund raising costs, etc.;
8.1.4 Financing costs;
8.1.5 Work in conjunction with abnormal soil conditions;
8.1.6 Loose furniture and equipment;
8.1.7 All library stacks;
8.1.8 Display cases;
8.1.9 Opening and closing ceremonies;
8.1.10 Drapes and rods;
8.1.11 Asbestos removal;
8.1.12 Swing space for existing library furniture, books, and equipment.

9.1 Taxes: Both Provincial and Federal sales taxes are included.

10.1 Gross Floor Areas:

Scheme "A"

New Addition	66,450 SF
Alterations to Existing Building	16,500 SF
TOTAL GROSS FLOOR AREA	82,950 SF

Scheme "B"

New Addition	80,150 SF
Alterations to Existing Building	22,000 SF
TOTAL GROSS FLOOR AREA	102,150 SF

Project:	HALIFAX MEMORIAL LIBRARY ALTERATIONS & ADDITIONS	Date:	OCTOBER 1987	Sheet N°:	3

TOTAL COST BREAKDOWN PER SCHEME

	PROJECT COST
Scheme "A"	$ 9,607,000 - $115.82/SF
Scheme "B"	$11,529,000 - $112.86/SF

Hanscomb

2.0 BUILDING FEASIBILITY COST ESTIMATE
ELEMENTAL BREAKDOWN

Hanscomb

Project:	HALIFAX MEMORIAL LIBRARY ALTERATIONS & ADDITIONS	Date:	OCTOBER 1987	Sheet N°:	4

SCHEME "A"

ELEMENTAL BREAKDOWN

			COST ESTIMATE	COST PER SF
1.	Substructure	66,450 SF	$ 132,900	$ 2.00
2.	Structure	66,450 SF	$ 764,175	$ 11.50
3.	Exterior Cladding	66,450 SF	$ 1,063,200	$ 16.00
4.	Interior Partitions	66,450 SF	$ 398,700	$ 6.00
5.	Vertical Movement	66,450 SF	$ 215,965	$ 3.25
6.	Interior Finishes	66,450 SF	$ 664,500	$ 10.00
7.	Fittings & Equipment	66,450 SF	$ 215,965	$ 3.25
8.	a) Electrical	66,450 SF	$ 764,175	$ 11.50
8.	b) Mechanical	66,450 SF	$ 1,262,550	$ 19.00
9.	Overhead & Profit 12%	66,450 SF	$ 876,015	$ 13.18
		NET BUILDING COST	$ 6,358,141	$ 95.68
10.	Site Development		$ 1,818,000	
	a) General	$ 50,000		
	b) M&E Site Services	$ 50,000		
	c) Alterations (16,500 SF)	$ 990,000		
	d) Demolitions	$ 728,000		
11.	Contingencies - 17.5%		$ 1,430,825	
		TOTAL PROJECT COST	$ 9,606,966	$115.82

Hanscomb

Project:	HALIFAX MEMORIAL LIBRARY ALTERATIONS & ADDITIONS	Date:	OCTOBER 1987	Sheet N°:	5

SCHEME "B"

ELEMENTAL BREAKDOWN

			COST ESTIMATE	COST PER SF
1.	Substructure	80,150 SF	$ 160,300	$ 2.00
2.	Structure	80,150 SF	$ 921,725	$ 11.50
3.	Exterior Cladding	80,150 SF	$ 1,282,400	$ 16.00
4.	Interior Partitions	80,150 SF	$ 480,900	$ 6.00
5.	Vertical Movement	80,150 SF	$ 260,488	$ 3.25
6.	Interior Finishes	80,150 SF	$ 801,500	$ 10.00
7.	Fittings & Equipment	80,150 SF	$ 260,488	$ 3.25
8.	a) Electrical	80,150 SF	$ 921,725	$ 11.50
8.	b) Mechanical	80,150 SF	$ 1,522,850	$ 19.00
9.	Overhead & Profit 12%	80,150 SF	$ 1,051,246	$ 13.12
		NET BUILDING COST	$ 7,663,622	$ 95.62
10.	Site Development		$ 2,148,000	
	a) General	$ 50,000		
	b) M&E Site Services	$ 50,000		
	c) Alterations (22,000 SF)	$1,320,000		
	d) Demolitions	$ 728,000		
11.	Contingencies - 17.5%		$ 1,717,034	
		TOTAL PROJECT COST	$11,528,656	$112.86

Hanscomb

APPENDIX 'B' : CONSTRUCTION COST PROFORMA AND OUTLINE SPECIFICATION

Substructure:
- Bulk excavation of medium soil.
- Limited funds for rock excavation.
- Reinforced concete column pads & strip footings.
- Reinforced concrete foundation walls including waterproof membrane and protection board.
- Perimeter drainage system.

Structure:
- Reinforced concrete frame 20 x 20 grid using either drop panel or drop beam system.
- 5" slab on grade lowest floor slab.
- Structural steel roof system.
- Structural steel for alteration work within the existing library.

Exterior Cladding:
- Clay brick or pre-cast architectural panels.
- Concrete block back-up wall.
- Tinted double glazed window thermally broken aluminum.
- Aluminum framed main entrance door glazed.
- Insulated exterior metal doors painted in pressed steel metal frames.
- Good quality roofing system. Sheet rubberized product with pre-finished metal flashing where visible.

Interior Partitions:
- Drywall and stud partitions (metal)
- Limited glazed partitions
- Concrete block partitions for fire separations.
- Mixture of wood and metal doors.

APPENDIX 'B' : CONSTRUCTION COST PROFORMA AND OUTLINE SPECIFICATION

Vertical movement:
- Cast-in-place stairs including main entrance stairs.
- High quality balustrade with glazing.
- High quality hydraulic elevator.

Interior finishes:
- Sealer to concrete floors.
- Carpet and high quality sheet vinyl products.
- vinyl wallcovering (limited).
- Paint to drywall & concrete block.
- Special painting e.g. murals.
- Tiles to wet areas including floors & walls.
- Suspended drywall to ceilings.
- Suspended ceiling tiles.

Fittings & Equipment:
- Reception desk and other built-in desk/information counters.
- Washroom accessories (good quality).
- Limited coat racks & shelves.
- Loading desk equipment.

Mechanical:
- Standard systems but including limited amount of climate control equipment, fire protection throughout.

Electrical:
- Standard systems, allowance for some special lighting.

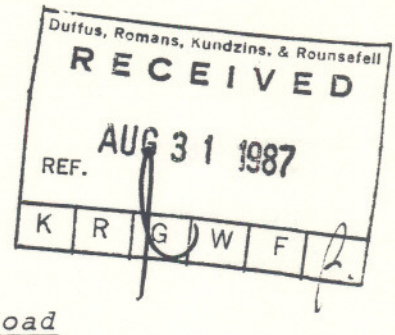
Site Development:
- Sod landscape some new planting trees and shrubs.
- New electrical and mechanical services.
- Concrete walk way.
- Limited exterior lighting.

APPENDIX 'C' - CITY OF HALIFAX - LAND USE BYLAWS

City of Halifax

Development and Planning Department
Office of the Director

August 28, 1987



Mr. Dennis Ramsay
Duffus, Romans, Kundzins, Rounsefell
5991 Spring Garden Road
Halifax, Nova Scotia
B3H 1Y6

Re: Halifax Regional Library - Spring Garden Road

Dear Mr. Ramsay:

Further to our past discussions on this property, our staff has researched the original grant from the Queen. Along with the right to erect a public library for use by the citizens of Halifax comes the restriction that the land southeast of the diagonal walk across the lands can be used for no other purpose whatsoever other than a "Public Square or Garden".

Therefore, any thoughts of developing that portion of the property should be dismissed. New construction must be located northwest of the sidewalk across the property.

If you have any questions, please call.

Yours very truly,

W. D. Campbell
Development Administrator

WDC:mn

Mailing Address:
P.O. Box 1749
Halifax, N.S.
B3J 3A5

Location:
Third Floor
Duke St. Tower
Scotia Square

Telephone:
Director (902) 421-6522
Development
Administrator (902) 421-6523
Telex 019-22641

P ZONE

PARK AND INSTITUTIONAL ZONE

67(1). The following uses shall be permitted in any P Zone:

(a) public park;

(b) recreation field, sports club, public hall, and other like community purposes;

(c) a cemetery;

* (d) a hospital, school, college, university, monastery, church, library, museum, court of law, or other institution of a similar type, either public or private; (* Refer to #31 in Amendment Section)

(e) uses accessory to any of the above uses.

(2). No person shall in any P Zone carry out, or cause or permit to be carried out, any development for any purpose other than one or more of the uses set out in subsection (1).

(3). No person shall in any P Zone use or permit to be used any land or building in whole or in part for any purpose other than one or more of the uses set out in subsection (1).

68. Notwithstanding Section 1, one of each of the following uses for each degree granting university may be located on land owned or leased from such degree granting university:

(a) barber shop

(b) bank

(c) newsstand

(d) coin-operated vending machines

(e) dry-cleaning distribution station

(f) beauty parlor

(g) book store and branch thereof

provided that:

(i) these uses shall be for the exclusive use of the students and staff of such university or their guests; and

(ii) there shall be no advertising or identification of the use on the outside of the building; and

(iii) there shall be no visible indication from the exterior of the building that the commercial uses described in this Section are carried on; and

(iv) there shall be no direct access from the exterior of the building to any of the commercial uses described in this Section other than emergency access places in case of fire; and

(v) the total net floor area measured in square feet covering the uses (a) to (f) in this Section for each university shall not exceed the number of students registered for degree purposes at such university multiplied by a factor of 1.5.

69. No person shall in any P Zone erect, place, or display any billboard or sign except those permitted in an R-1 Zone.

70. Buildings erected, altered, or used for P uses in a P Zone shall comply with the requirements of the R-3 Zone as detailed in Sections 44 to 48 inclusive.

NOTE: Refer to building line plan (attached) for possible special setback requirement(s)

R-3 ZONE

MULTIPLE DWELLING ZONE

(Third-Density Residential)

44(1) The following uses shall be permitted in any R-3 Zone:

Residential Uses:

(a) R-1, R-2 and R-2A uses hereinbefore set out;

(b) boarding house;

(c) lodging or rooming house;

(d) apartment house;

(e) uses accessory to any of the foregoing uses, if not specifically prohibited;

Other Uses

* (f) in any one building one office for rendering professional or personal services, provided that the net area for such purposes does not exceed 700 square feet; (* Refer to #25 in Amendment Section)

* (g) special care home; (* Refer to #10 in Amendment Section)

(h) greenhouse;

(i) the office of a Consulate located in a single family dwelling provided such dwelling is used by the Consulate as his private residence;

Commercial Uses:

One each of the following uses only if located in an apartment house which contains not less than one hundred self-contained dwelling units and located in the area described in Schedule "B" annexed to this Part;

(j) retail foodstuff store of not more than 600 square feet;

(k) restaurant of not more than 900 square feet of dining area, exclusive of kitchen, storage, washroom, staff areas, and the like;

One each of the following uses only if located in an apartment house which contains not less than one hundred self-contained dwelling units and which is erected on a lot of more than one acre:

(l) barber shop;

(m) beauty parlour;

(n) dry cleaning distribution station;

(o) valet service;

(p) restuarant;

(q) florist shop;

(r) newsstand;

(s) health club;

(t) coin-operated vending machines;

(u) retail foodstuff store of not more than 600 square feet;

PROVIDED that:

(i) these uses shall be for the exclusive use of the residents of such apartment house or their guests;

(ii) there shall be no advertising or identification of the uses on the outside of the building;

(iii) there shall be no visible indication from the exterior of the building that the commercial uses described in this section are carried on;

(iv) there shall be direct access from the exterior of the building to any of the commercial uses described in this section other than emergency access places in case of fire.

(2) No person shall in any R-3 Zone carry out, or cause or permit to be carried out, any development for any purpose other than one or more of the uses set out in subsection (1).

(3) No person shall in any R-3 Zone use or permit to be used any land or building in whole or in part for any purpose other than one or more of the uses set out in subsection (1).

(4) Where any building is used in an R-3 Zone for any of the purposes described in clause (f) of subsection (1) of this section, no display window shall be permitted, nor shall any evidence of the use of such building for such purposes be visible from the exterior of such building; PROVIDED, however, that nothing contained herein shall prohibit the display of a sign not exceeding one square foot in area, which bears the name and profession as set forth in clause (f) of subsection (1) of this section, of any person occupying such building.

44A Notwithstanding the provisions of subsections 44(1) and 44(4), an apartment house located in the area described as the "South End" area as shown on Zoning Map ZM-16, and which contains 100 or more self-contained dwelling units may include those commercial uses which are permitted in Section 59A(1), except a bowling alley, a motion picture theatre and a service station, provided that such uses are located on the ground floor of the apartment house and are separately accessible from the building exterior.

B Exterior advertising of the commercial uses described in Section 44A shall be permitted, provided that such advertising is non-illuminated.

* C An apartment house which is located within the area described as the "South End" area as shown on Zoning Map ZM-16 shall, of the total amount of dwelling units, be required to include at least one dwelling unit of a minimum of 800 square feet in floor area for every three dwelling units, each of which is less than 800 square feet in floor area.

D An apartment house which is located within the area as shown on Zoning Map ZM-16 described as the "Peninsula Centre" area shall, of the total amount of dwelling units, be required to include at least one dwelling unit of a minimum of 800 square feet in floor area for every two dwelling units, each of which is less than 800 square feet.

E Notwithstanding any other provision of this Bylaw, an apartment house which is located within the areas described as the "South End" and "Peninsula Centre" as shown on Zoning Map ZM-16, shall be required to provide one parking space for each dwelling unit which is 800 square feet or greater, and one parking space for every two dwelling units, each of which is less than 800 square feet.

F A lot which abuts a street at more than one location or which abuts two or more streets shall not be used for R-3 uses in the "South End" area, except for corner lots which abut at least two streets on a continuous uninterrupted line. (* Refer to #21 in Amendment Section)

5. Buildings erected, altered, or used for R-1 or R-2 uses in an R-3 Zone shall comply with the requirements of R-1 or R-2 Zones respectively, as set out in Sections 27 to 34 inclusive and Sections 35 to 43 inclusive.

46(1). No person shall erect or display any billboard or illuminated sign in an R-3 Zone.

(2). A nonilluminated sign may be erected in an R-3 Zone if, in the opinion of the Inspector of Buildings, such sign is of reasonable proportion and will not constitute a hazard to the public or a nuisance to the owners of the property in the area.

7. Where any building is erected or altered or used for R-3 uses in an R-3 Zone, such building shall comply with the following requirements:

MINIMUM LOT AREA

(1). (a) The minimum lot area upon which such building is located shall be 8,100 square feet with a minimum continuous street frontage of at least 90 feet on one street;

(b) The Council may, after public hearing if deemed necessary, permit modification of the minimum lot area and continuous street frontage, as provided in clause (a) of this subsection, if, in the opinion of Council:

(i) the amenity, convenience, character, and value of neighbouring properties will not be adversely affected; and

(ii) conditions necessitating such modification are unique to the lot and have not been created by either the owner of such lot or the applicant.

DISTANCE FROM LOT LINE

(2). (a) The distance from any part of such building and any official street line or lines abutting upon such lot shall be no less than 20 feet measured at right angles to any such official street line or lines; provided, however, that such distance may be reduced to not less than 10 feet measured at right angles to any such official street line or lines if that part of the building which is less than 20 feet from any such official street line or lines is entirely contained within the arms of an 80 degree horizontal angle as determined in subsection (3) of this Section.

(b) The distance from any part of such building and any lot line of such lot other than an official street line shall be not less than 10 feet measured at right angles to such lot line.

(c) All windows and doors serving habitable rooms in such building shall be located not less than 10 feet from any lot line of such lot measured at right angles to such lot line.

(d) Notwithstanding the provisions of clauses (a) and (b) of this subsection, the distance from any part of such building, not containing any windows or doors serving habitable rooms, to any official street line or lot line, may be less than the distance prescribed in said clauses (a) and (b) or may extend to any such official street line or lot line of the lot upon which such building is located, provided that:

(i) the height of such part of the building does not exceed 5 feet above the natural ground level measured at any point on any official street line abutting such lot and extending for a horizontal distance of 10 feet measured at right angles to any such official street line;

(ii) the height of such part of the building does not exceed 5 feet above the natural ground level measured at any point on any lot line of such lot other than an official street line; and

(iii) the building is so designed that it does not interfere with traffic safety.

(e) The Council may, after public hearing if deemed necessary, permit the height requirements, as provided in subclause (ii) of clause (d) of this subsection, to exceed 5 feet if, in the opinion of Council:

(i) the amenity, convenience, character, and value of neighbouring properties will not be adversely affected; and

(ii) conditions necessitating such increase are unique to the lot and have not been created by either the owner of such lot or the applicant.

NOTE: Refer to building line plan (attached) for possible special setback requirement(s).

SIZE OF BUILDING

(3). (a) Subject to the provisions of subsection (2), such building or any part thereof shall not project beyond the angular planes determined by constructing such angular planes over such lot

(i) from each lot line at natural or finished ground level, whichever is the lower, at a vertical angle of 60 degrees above the horizontal and measured perpendicular to such lot line or, in the case of a curved lot line, perpendicular to the tangents of all points of such lot line; provided, however, that where the natural ground at the lot line is more than 5 feet above the finished ground level established at any point on the wall opposite the lot line and where the horizontal distance to the face of any part of such wall or its vertical projection is less than 50 feet, the angular planes shall be constructed over the lot from all points on the intersections of the vertical projections of the lot line and the horizontal projection of the finished ground level; or

(ii) in the case where a lot line of such lot coincides with an official street line, from the center line of such street or from any intervening line parallel to such center line; provided, however, that

(A) the distance from the line on which the plane is constructed and the lot line does not exceed 30 feet; and

(B) the vertical angle of 60 degrees is constructed perpendicular to the line on which the plane is constructed or, in the case of a curved line, perpendicular to the tangents of all points of the curved line.

(b) Notwithstanding the provisions of clause (a) of this subsection and subject to the provisions of subsection (2), any part of such building may project beyond any prescribed 60 degree angular plane if:

(i) the projection through the plane subtends a horizontal angle not exceeding 80 degrees formed by lines drawn from a point on the line on which the 60 degree angular plane is constructed opposite to the center of the projection; and

(ii) the extremities of the projection are enclosed by the arms of such 80 degree horizontal angle.

DISTANCE BETWEEN EXTERNAL WALLS

(4). (a) For the purposes of this subsection:

(i) "base line" means, in the case of a wall rising from the ground, the natural or finished level of the ground adjoining the base of the wall, whichever is lower, and in all other cases means the lowest line of the wall above the natural or finished level of the ground, whichever is lower;

(ii) a wall supported by construction above posts, pillars, or other open construction shall be deemed to rise from the ground and the base line of the wall shall be deemed to be the line on which the projection downward of the face of the wall meets the natural or finished level of the ground, whichever is lower;

(iii) where external walls are not parallel to each other but the angle of divergence does not exceed 85 degrees, such walls shall be deemed to face each other.

(b) The provisions of this subsection (4) shall only apply if any part of such building is erected within the arms of horizontal angles of 65 degrees constructed outwards at the natural level of the ground, from the nearest extremities of external walls that face each other; provided, however, that where the two extremities of one such wall are, respectively, equidistant from the opposite extremities of the other wall or where the two extremities of one wall are equidistant from the nearest extremity of the other wall, the 65 degree horizontal angle may be constructed from either pair of equidistant extremities.

(c) The distance between any external walls of such building that face each other shall be not less than 50 feet, and any part of such building shall not project beyond any of the angular planes determined by constructing such angular planes outwards from the base line of each such external facing wall of each part of such building at a vertical angle of 40 degrees above the horizontal and measured perpendicular to such base line or, in the case of a curved base line, perpendicular to the tangents of all points of such curved base line.

(d) Where two external walls of such building face each other and neither wall contains any door or window serving a habitable room, the provisions of clause (c) of this subsection shall not apply but the distance between such walls shall not be less than six feet.

BALCONIES, CORNICES, EAVES, AND CANOPIES

(5). Notwithstanding the provisions of subsections (3) and (4) of this Section, separate individual balconies, which are open on three sides, cornices, eaves, and canopies may project through the angular planes as determined in such subsections; provided, however, that any part of such projection shall be not less than 10 feet from any lot line of such lot.

48. Where any building is erected, altered, or used as a boarding house, lodging or rooming house, an apartment house or special care home * in an R-3 Zone, such building, in Section 47, shall comply with the following requirements: (Refer to #10 in Amendment Section)

POPULATION DENSITY

(1). The population density of such building shall not exceed:

(a) 250 persons per acre if located in the area described in Schedule "A", Section 81; and

(b) 125 persons per acre if located in an area other than that described in Schedule "A".

OPEN SPACE

(2). (a) The lot upon which such building is located shall contain a minimum of:

(i) 120 square feet of open space for each person occupying such building in a dwelling unit containing two or more bedrooms, of which at least 100 square feet shall be landscaped open space; and

(ii) 80 square feet of open space for each person residing within such building in a dwelling unit containing one bedroom, of which at least 70 square feet shall be landscaped open space; and

(iii) 50 square feet of landscaped open space for each person residing within such building in a bachelor unit if located within the area described in Schedule "B", Section 82; and

(iv) 80 square feet of open space, of which at least 70 square feet shall be landscaped open space, for each person residing within such building in a bachelor unit if located within an area other than that described in said Schedule "B".

(b) The occupancy of such building shall be calculated on the basis of one person for each habitable room contained therein.

(c) For the purpose of this subsection, the roof, or any portion thereof, of any part of such building that has no residential accommodation included below such roof or portion thereof may be calculated as landscaped open space; provided that:

(i) no part of such roof is more than 5 feet above the ground level of at least one lot line of such lot; and

(ii) such roof, or portion thereof, is capable of being used as landscaped open space.

* 48A. A minimum of 35 percent of the lot area of any lot on which a building is erected, altered or used as a special care home, shall consist of landscaped open space. (* Refer to #10 in Amendment Section)

CITY OF HALIFAX

R-3 ZONES

EXPLANATION OF THE NEW CONTROLS

THE REASONS:

The City of Halifax Zoning By-law came into effect in May 1950. It is generally agreed that a completely new By-law is required to regulate development in a rapidly changing City where methods of building and pressure for land have altered considerably in the intervening 15 years. During recent years and especially since 1961, pressure for high density residential development has resulted in an urgent need to devise a new set of regulations for this kind of development prior to the completion of a development plan and a revised Zoning By-law.

The high density controls which the new regulations will replace were very limited in their scope and tended to be so rigid that modifications from them became the rule rather than the exception. It is felt that the new controls provide more of the flexibility which is essential for good high density residential development and yet maintain clear ceilings on the maximum development permitted on any piece of land.

THE OBJECTIVES:

In cities which have a limited land resource, such as Halifax, pressures for maximum utilization of land are often considerable. In these circumstances, it is essential to regulate the intensity and form of residential development so that the limited amount of land available is used in a way which safeguards total community interests. The primary objectives of residential controls are these:-

(i) to strike an acceptable middle point between the desires of developers for maximum use and the desires of residents for good environments;

(ii) to produce stable values for property owners and uniform standards for property developers;

(iii) to produce a flexible system which would not require every building to conform to a preconceived shape and size regardless of individual site conditions;

(iv) to safeguard the general health, safety and welfare of the citizens; and

(v) to protect the character of parts of the City where high density residential development will take place, especially during a transition from lower to higher densities.

THE METHODS:

1. Minimum Lot Area and Frontage

In the high density zones of the City (referred to in the By-law as R-3 zones) a minimum lot area of 8,100 square feet will be required and a continuous frontage of at least 90 feet will also be required. However, a modification of these provisions can be applied for provided the applicant can satisfy basic conditions relating to the amenity and character of the neighbourhood and the difficulties of his particular site.

In normal circumstances, a continuous yard measuring 20 feet between the building and the ~~lot boundary~~ will be required ~~on all sides~~. Under special conditions the 20 feet may be reduced to 10 feet on the street frontage ~~only~~. No opening to any residential accommodation will be permitted at a distance of less than 10 feet from any boundary.

To make it easier for construction of underground car parking accommodation, a provision has been included which would allow a kind of platform or podium to be built over, if necessary, the entire lot. This platform would not normally project further than 5 feet above ground. However, subject to conditions similar to those required for a change in lot area and frontage, this maximum height of 5 feet may also be exceeded.

2. Population Density

The R-3 zones, as they existed in the City before the introduction of these new regulations, have been subdivided into two groups. The boundary between these groups runs generally along North Street, Robie Street (including the west frontage along Robie Street between Cunard and Coburg) then along Inglis Street to the Harbour. Within this "central" or "inner" area, the population density must not exceed 250 persons per acre. Outside that area, the population density must not

exceed 125 persons per acre. The acreage referred to in this maximum figure is what is known as a "gross" acre. This means that for the calculation of the population density the developer is allowed to include up to one-half (or 30 feet, whichever is the maximum) of street width fronting his site. The effect of this provision is to add a bonus for sites according to the amount of street frontage. Thus, the nearer a developer can approach an entire City block, completely surrounded by streets, the greater the number of people and therefore the number of units he will be able to obtain. It is important to note that permanent open space, if abutting the site to be developed, may also be included to the same extent as allowed for a street in calculating the density.

In calculating population density an occupancy factor is applied to each unit. This factor is one person per habitable room. A habitable room is a normal living room, dining room or bedroom, but not a small kitchen, bathroom or closet. For normal apartment layouts, a bachelor unit would count 1 person, a 1 bedroom unit 2 persons, a 2 bedroom unit 3 persons and so on.

3. Size of Building

So that the form of the building may be regulated in a manner which does not interfere with existing or potential development on other nearby sites, a system of angular planes has been devised. Diagrams attached to this explanation show how these planes work and indicate their effect on the building.

The planes should enclose every part of the building but insignificant projections such as eaves, canopies and balconies may penetrate the angular planes as long as they are not closer than 10 feet to any lot boundary. The platform referred to earlier may penetrate any of the angular planes, subject to its height and use.

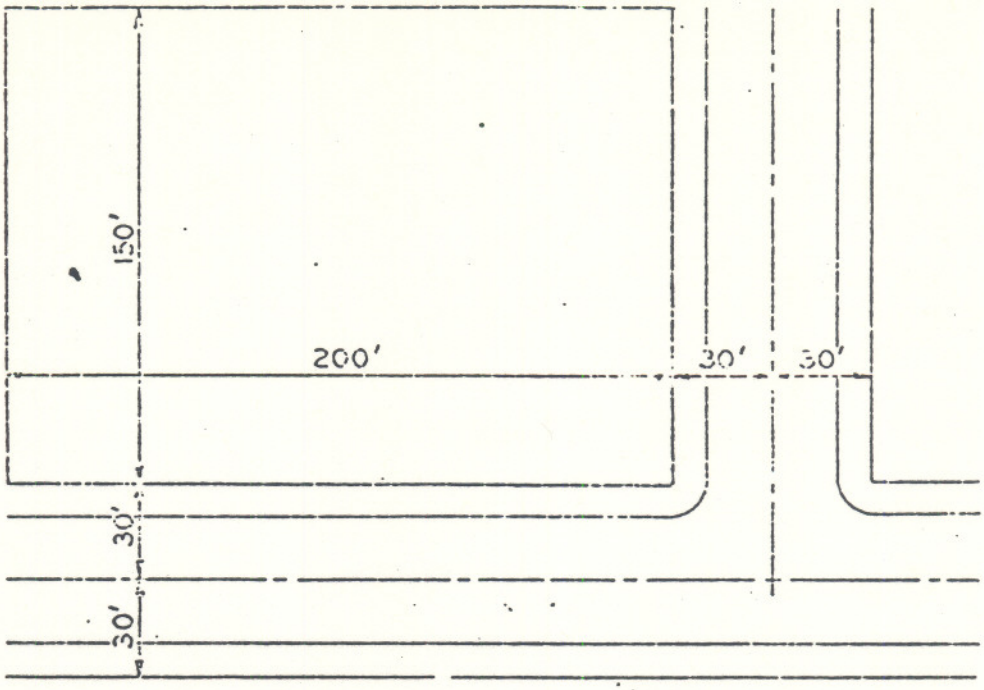
4. Open Space

Where high population densities are involved, it becomes necessary to ensure that at least a minimum amount of open land is protected around the apartment building. This land should serve a dual purpose - to enable residents and their children to find some recreation outdoors and to

encourage a high quality of environmental landscaping between buildings. The open space standards which are included in these R-3 controls are based on a certain minimum area for each person housed within the building. This minimum area varies according to apartment size and is less for bachelor or one bedroom apartment units than units with two bedrooms or more. Part of the amount of space required for each person may be contained within the building in the form of balconies, roof terraces, etc., but the majority must be satisfied on the ground. It is not necessary to landscape this open space with grass and trees, but it is essential that it should not be used for car parking or entrance driveways and so on. Where the developer exercises his option to construct a platform over the entire site, the open space provision, otherwise required on the ground may be placed on the roof of this platform.

THE EXAMPLES:

Following are a number of examples showing the actual application of the new controls to a theoretical site. The examples are not exhaustive and are intended to show only the kinds of variations which can be achieved on a given site. They all assume development to the maximum possible density, but it should be noted that development to lesser densities allows greater flexibility in layout and more freedom to satisfy car parking requirements.



A WORKING EXAMPLE: Assume a corner lot, 150' x 200' with 60' wide streets, in the inner (250 p.p.a.) part of the R-3 zone. How many units can be built on this lot and what is the amount of open space that must be set aside?

STEP ONE: To find the number of people who may be housed on the lot:

lot size = 150' x 200'

lot area = 30,000 sq. ft.

area of allowable street = (150 x 30)+(200 x 30)+(30 x 30) = 11,400 sq. ft.

therefore, effective gross area = 41,400 sq. ft.

at population density = $\frac{41,400 \times 250}{43,560}$

= 240.

POSSIBILITY A

STEP TWO: Having calculated the number of people, the next step is to convert persons into units.

For the purposes of this first illustration, a simple assumption is made that all the units will be bachelor units. An occupancy factor is applied on the basis of one person per habitable room. Since bachelor units will normally have no more than one habitable room each:

240 persons @ 1 person/habitable room/unit

= 240 units

STEP THREE: This step shows how open space is calculated. Assuming balconies will be used, the amount of open space required at the ground level is computed as follows:

240 bachelor x 70 sq. ft. per unit
= 16,800 sq. ft.

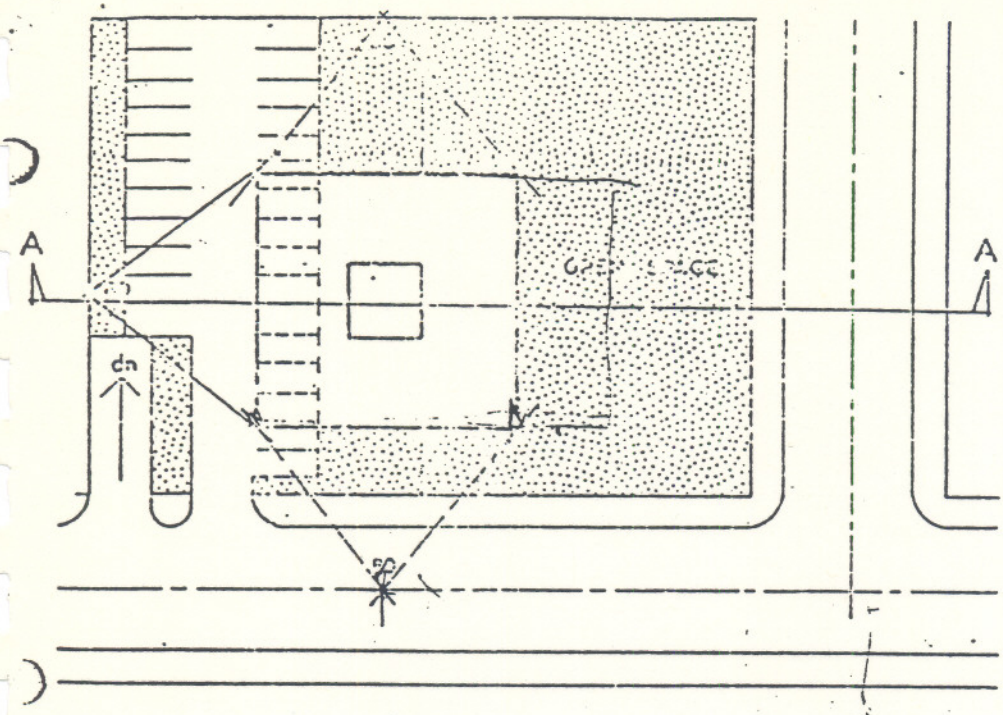
for balcony space, figure as follows:

240 bachelor x 10 sq. ft. per unit
= 2,400 sq. ft.

As an alternative to individual balconies, roof terraces or indoor recreation rooms could be provided for communal use by the tenants.

A sketch design to suit these requirements is shown over leaf.

POSSIBILITY A

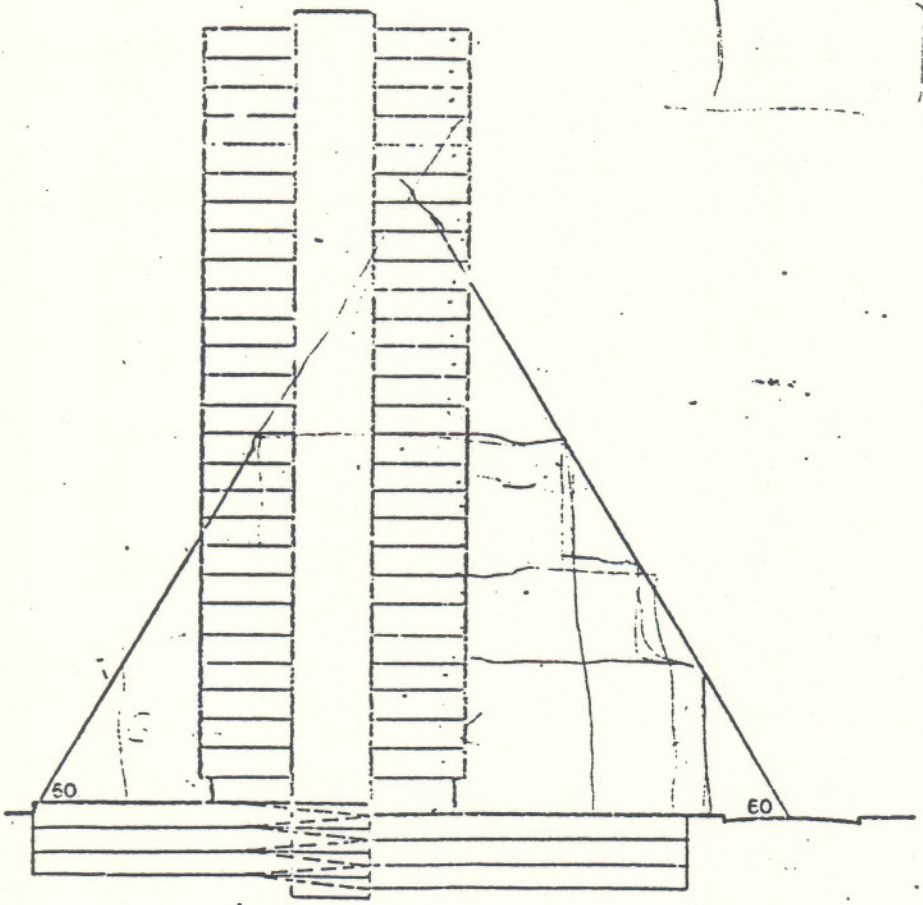


PLAN

30,000 sq.ft. lot.

240 units : all bachelor

27 floors, 9 units per floor
27 cars parked on surface
225 cars parked below ground



SECTION A-A

scale : 60 ft. = 1 inch

POSSIBILITY B

STEP TWO:

For the purposes of this second illustration, an assumption is made that the units will be equally divided between one bedroom and two bedroom types. The number of units is figured (on the basis of one person per habitable room) as follows:

each 1 bedroom unit contains 2 persons

each 2 bedroom unit contains 3 persons

thus 2 units contain 5 persons

The average occupancy is thus 2.5 persons per unit

therefore the number of units is $\frac{240}{2.5}$

$= 96$ units

This produces 48 1 bedroom units
and 48 2 bedroom units.

STEP THREE:

As before, open space is calculated on the basis that balconies will be used. Open space required at ground level is as follows:

48 1 bedroom x 140 sq. ft. per unit =	6,720
48 2 bedroom x 300 sq. ft. per unit =	14,400
	21,120

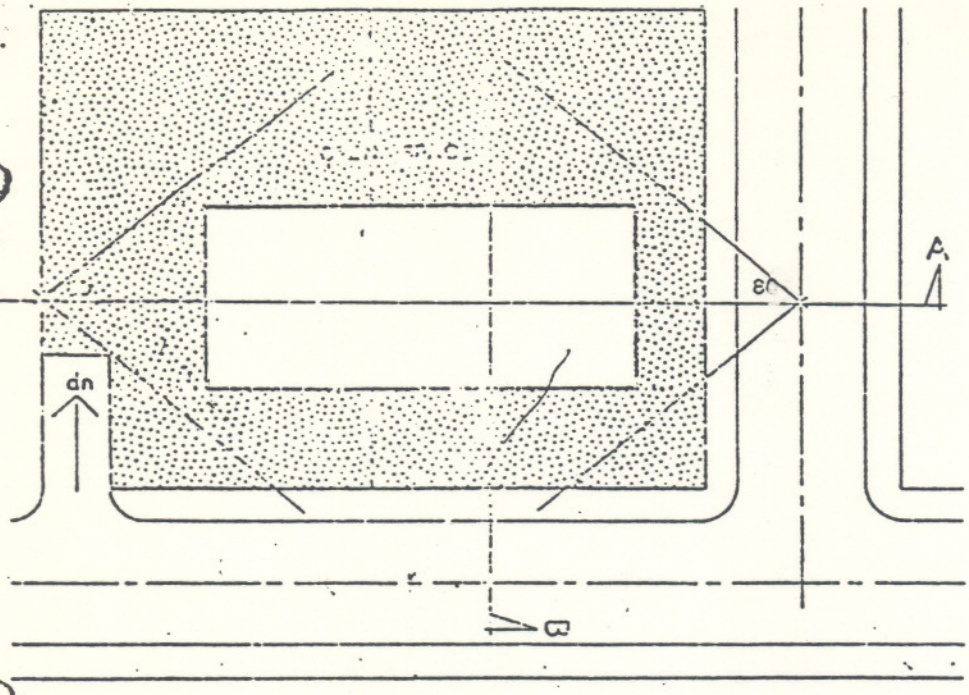
for balcony space, figure as follows:

48 1 bedroom x 20 sq. ft. per unit =	960
48 2 bedroom x 60 sq. ft. per unit =	2,880
	3,840

This requirement would be satisfied if each unit were supplied with a 9' x 4' balcony. Alternatively, roof terraces and indoor recreation rooms for all the tenants could be provided.

A sketch design to suit these requirements is shown overleaf.

POSSIBILITY B

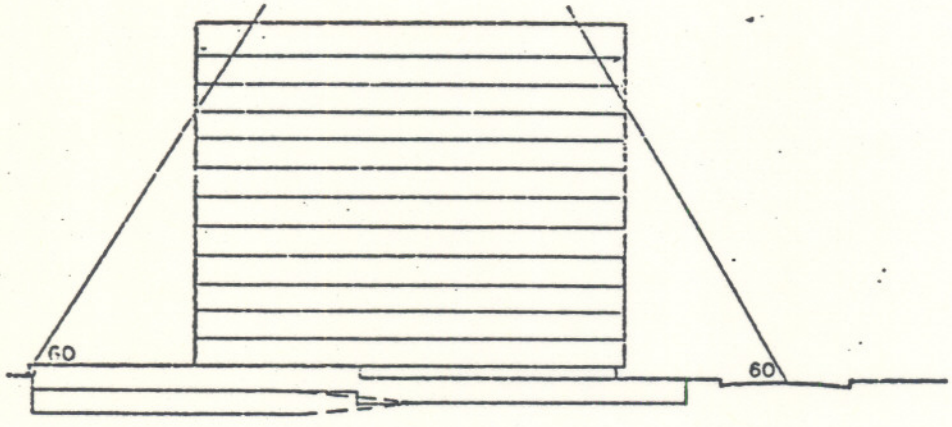


PLAN

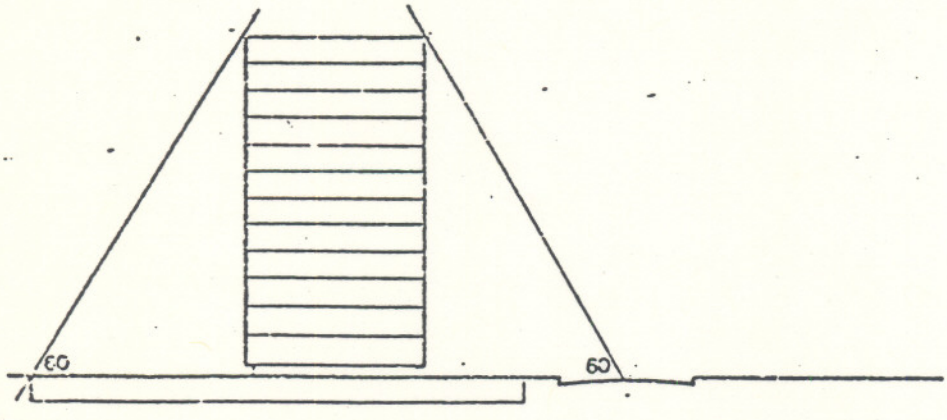
30,000 sq.ft. lot.

96 units : 48-1bedroom
48-2bedroom

12 floors , 8 units per floor
96 cars parked below ground



SECTION A-A



SECTION B-B

scale : 60 ft. = 1 inch

POSSIBILITY C

STEP TWO:

For the purposes of the third illustration, it is assumed that a mixture of units in the ratio of 2 bachelor : 4 x 1 bedroom : 2 x 2 bedroom : 1 x 3 bedroom, is required. Again, on the basis of one person per habitable room, the occupancy and No. of units is figured as follows:

2	bachelor units	contain 2 persons
4	1 bedroom units	contain 8 persons
2	2 bedroom units	contain 6 persons
1	3 bedroom unit	contains 4 persons
thus, 9	units	contain 20 persons

The average occupancy is thus 2.22 persons/unit.

The number of units is thus: $\frac{240}{2.22} = 108$ units

This gives:

24	bachelor
48	1 bedroom
24	2 bedroom
12	3 bedroom
108	units

STEP THREE:

To calculate the amount of open space necessary, assuming balconies will be used, find open space required at ground as follows:

24 bachelor	x 70 sq.ft. per unit	=	1,680 sq.ft.
48 1 bedroom	x 140 sq.ft. per unit	=	6,720 sq.ft.
24 2 bedroom	x 300 sq.ft. per unit	=	7,200 sq.ft.
12 3 bedroom	x 400 sq.ft. per unit	=	4,800 sq.ft.
			20,400 sq.ft.

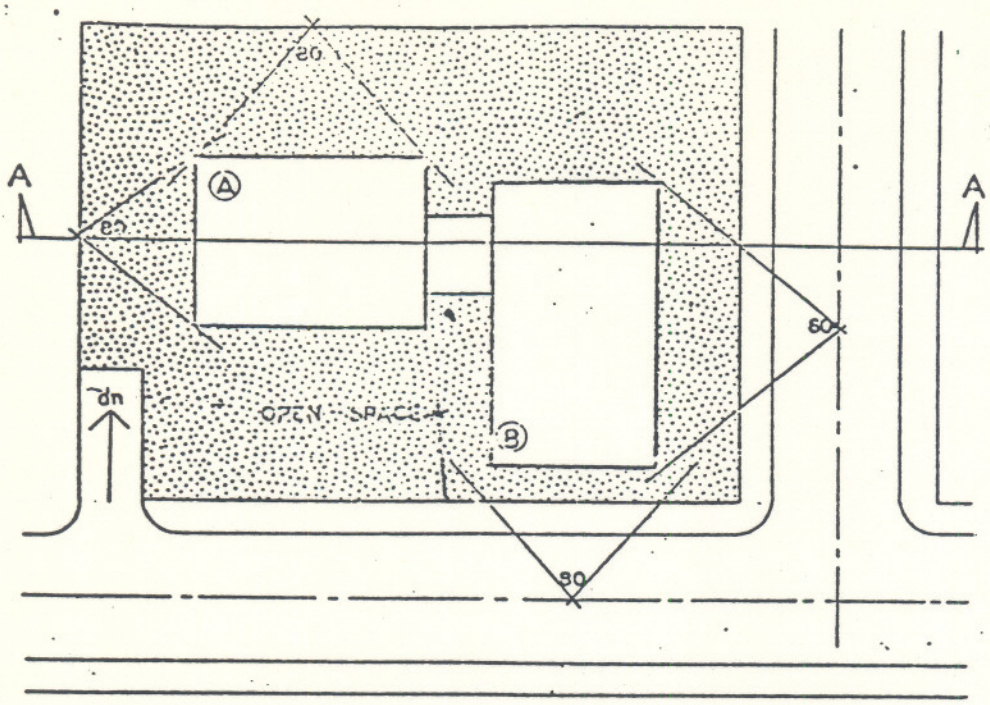
for balcony space, figure as follows:

24 bachelor	x 10 sq.ft. per unit	=	240 sq.ft.
48 1 bedroom	x 20 sq.ft. per unit	=	960 sq.ft.
24 2 bedroom	x 60 sq.ft. per unit	=	1,440 sq.ft.
12 3 bedroom	x 80 sq.ft. per unit	=	960 sq.ft.
			3,600 sq.ft.

This requirement would be satisfied if each unit were supplied with a 9' x 4' balcony. Alternatively, roof terraces and indoor recreation rooms for all the tenants could be provided

A sketch design to suit these requirements is shown over leaf.

POSSIBILITY C

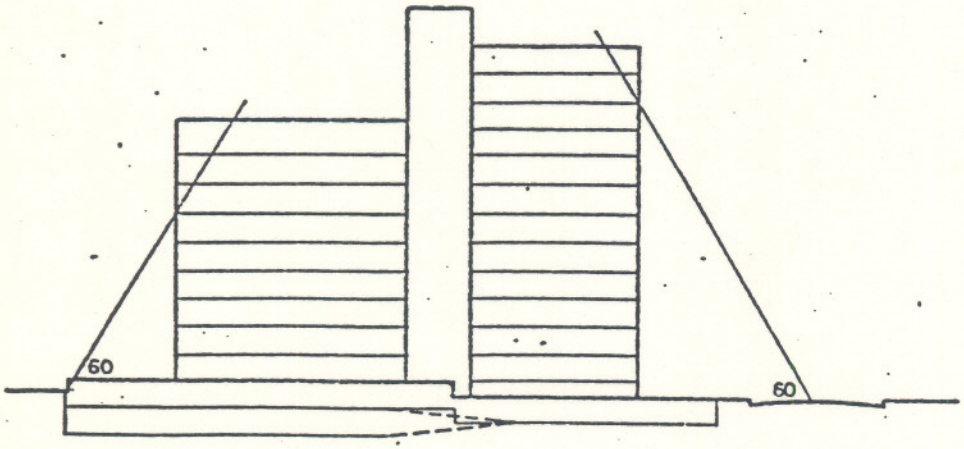


PLAN

30,000 sq. ft. lot.

108 units : 24 bachelor
48-1 bedroom
24-2 bedroom
12-3 bedroom

Ⓐ 9 floors, 4 units per floor
Ⓑ 12 floors, 6 units per floor
108 cars parked below ground

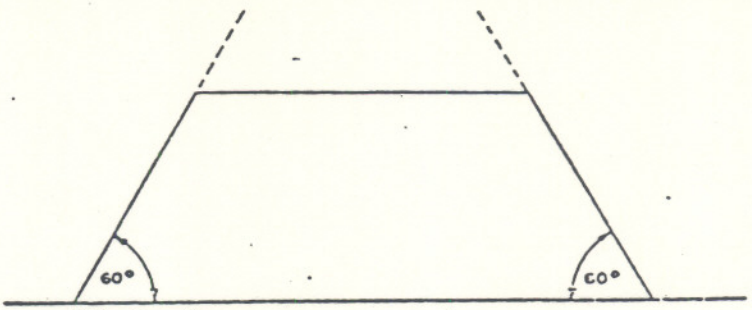


SECTION A-A

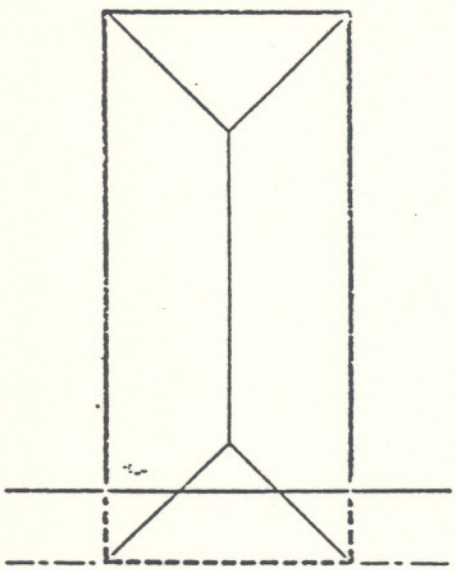
scale : 60 ft. = 1 inch

ANGULAR PLANES

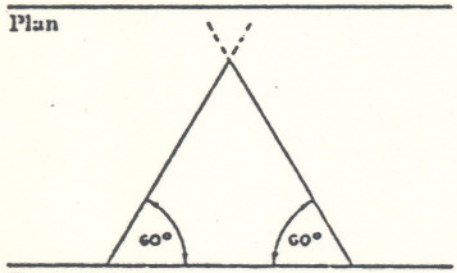
INSIDE LOTS



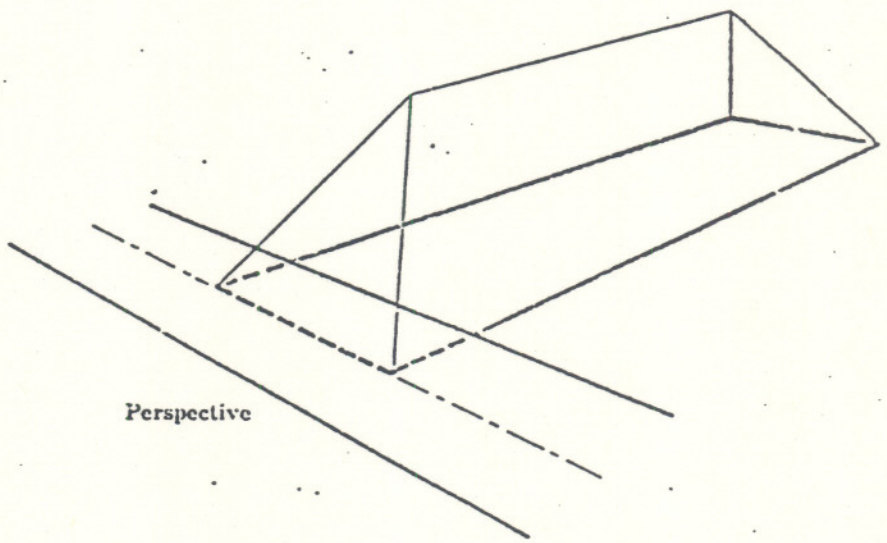
Side elevation



Plan

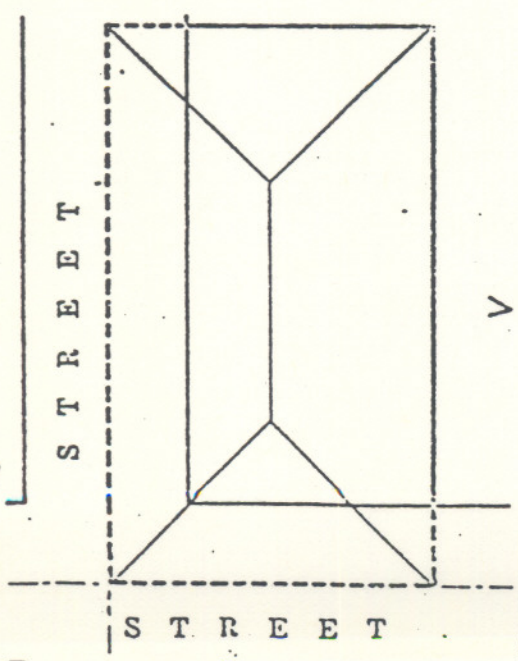


Front elevation

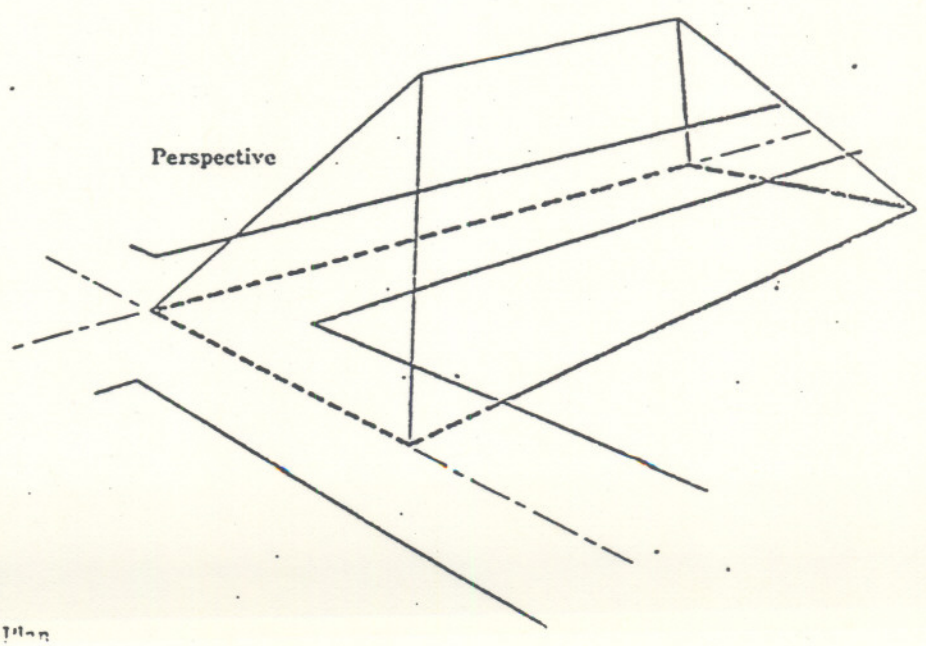


Perspective

CORNER LOTS



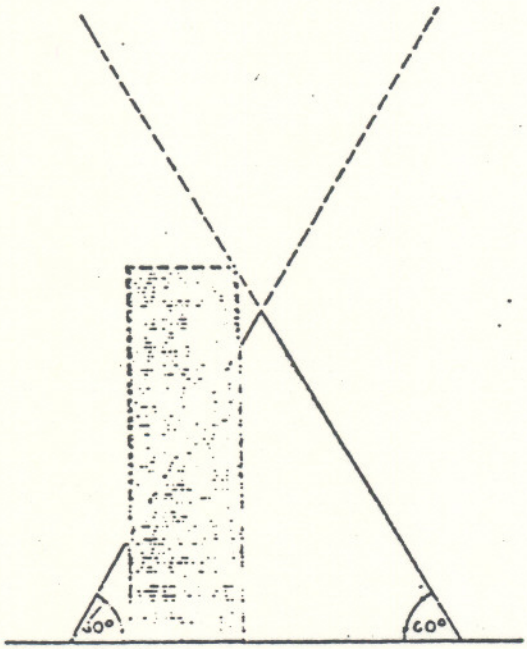
Plan



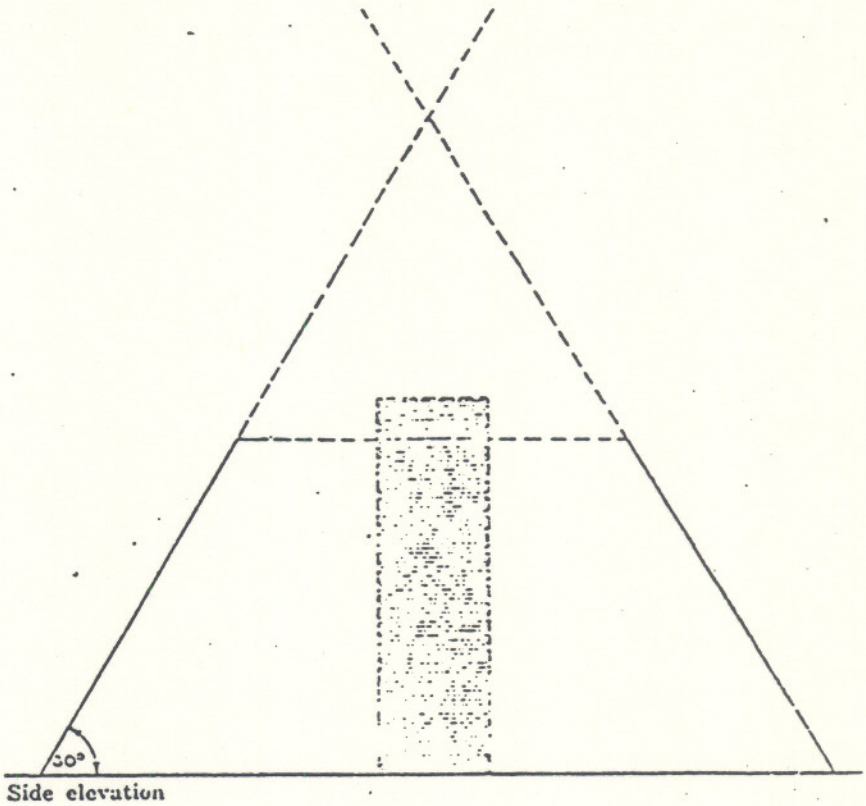
Perspective

ANGULAR PLANES

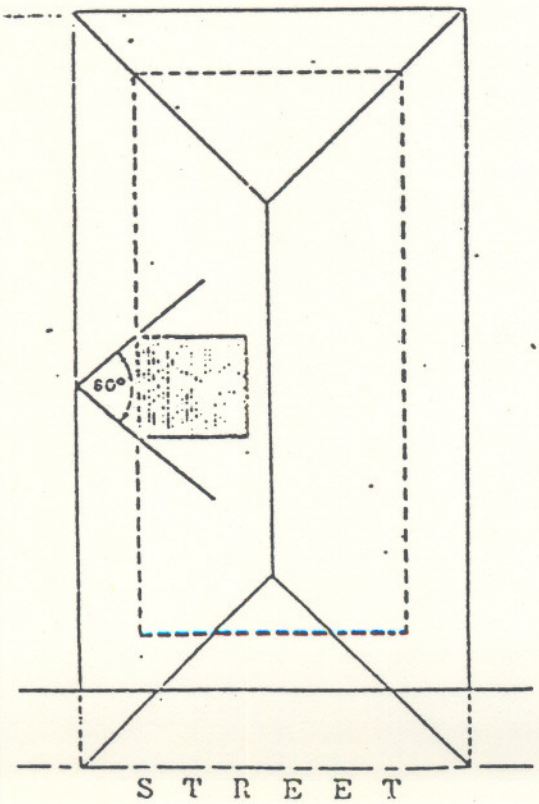
III



Front elevation



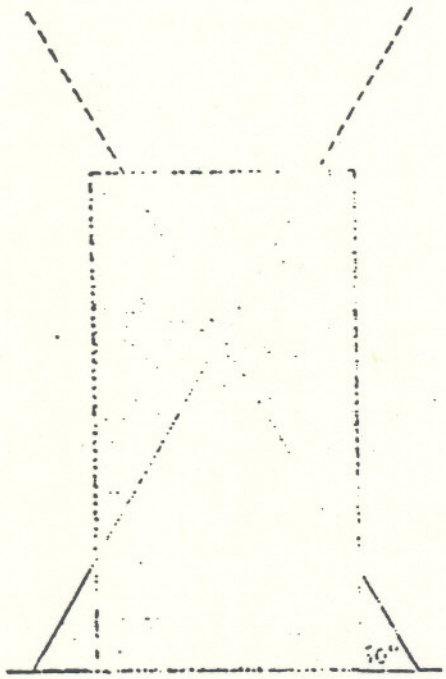
Side elevation



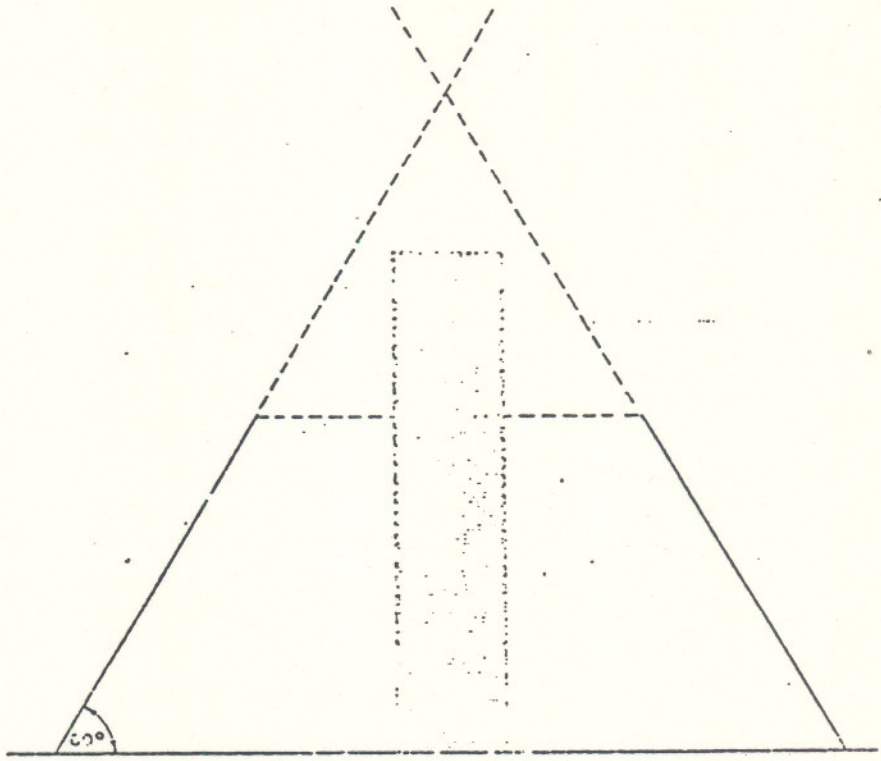
PROJECTION THROUGH AN ANGULAR PLANE

This diagram illustrates how part of a building may penetrate one of the side angular planes. No attempt is made to show how other parts of the building, or other buildings, might also be erected on the site.

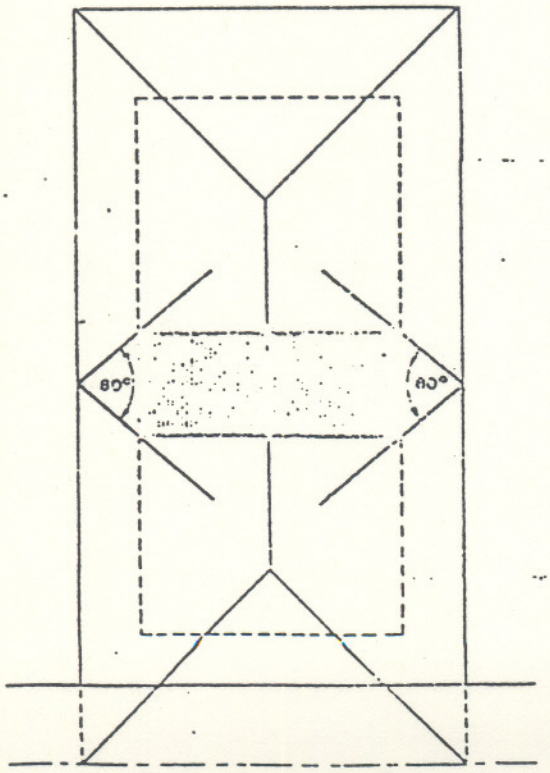
ANGULAR PLANES



Front elevation



Side elevation

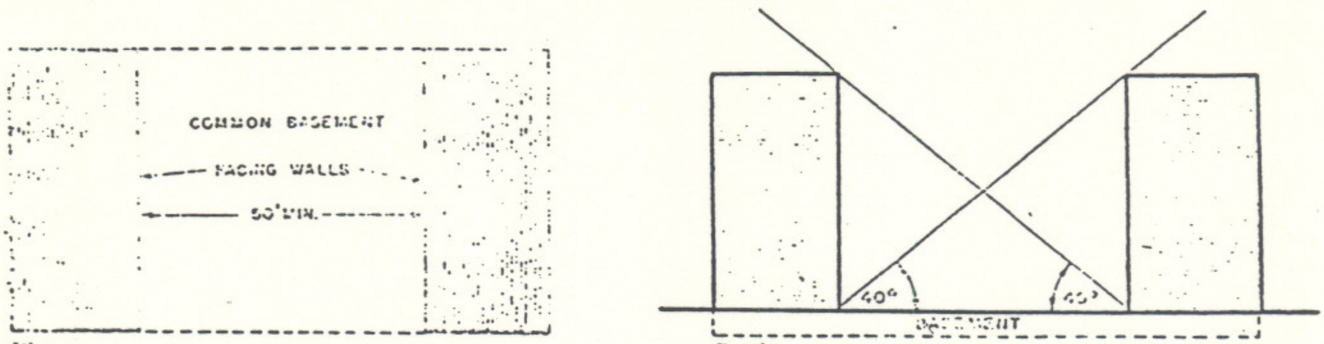


PROJECTION THROUGH TWO ANGULAR PLANES

This diagram illustrates how part of a building may penetrate both of the side angular planes. There is no penetration of the front and rear planes.

ANGULAR PLANES *special cases* IV

A



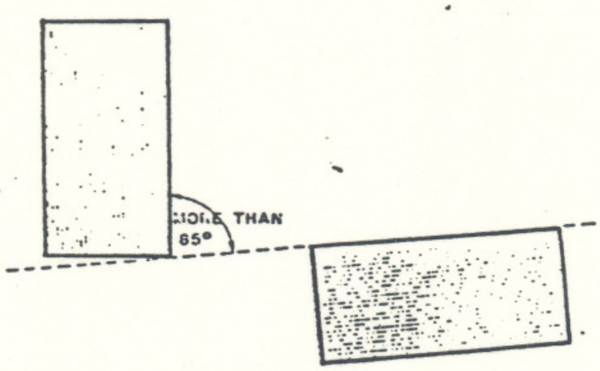
Plan

Section

Angular Planes regulating the space between facing walls of different parts of the same building

B

Plan



Walls with an angle of divergence greater than 85° are deemed not to face each other

C

Plans